
The integration of action research and project management in the implementation of two strategic work based learning projects (strategic asset management and carbon reduction) in a large institution; resulting in a contribution to strategic goals, and an increased understanding of institutional portfolios and their interdependencies.

A thesis submitted to the University of Southern Queensland in partial fulfilment of the requirements for the degree of Doctor of Professional Studies

David Povey

W0096092

Revised: December 2012

Abstract

This Work Based Learning (WBL) doctoral thesis, describes a study undertaken by the Author as a mature student with significant knowledge and background in Property and Facilities Management, performing in a senior executive role as the Director of Facilities at the University of Southern Queensland (USQ) in Australia.

At the outset I was seeking an appropriate opportunity to re-engage with structured learning that would deliver not just personal knowledge, growth and development but also add value to the workplace by creating opportunities to apply the academic dimensions in an operational setting and leveraging off those synergies, thereby enhancing divisional performance and project outcomes. That opportunity presented as the Doctor of Professional Studies (DPST) program at USQ.

The DPST program required the identification of suitable workplace projects as a platform for undertaking the program. As a result of my early analysis I had identified professional, personal and institutional contexts influencing the mapping of my doctoral journey. The congruence of these contexts produced a 'common ground' and it was there that I identified two significant, strategic issues at the University that required addressing. The literature associated with contemporary Facilities Management indicated that these remain fundamental issues for the FM body of practice and face all FM practitioners to a greater or lesser extent.

The work based projects undertaken were; the development of an institutional Strategic Asset Management capability to enable the alignment of the institution's property portfolio with the strategic goals and operational needs of the institution (SAM Project), and; the management and reduction of the institution's carbon emissions in support of increasing sustainability drivers and responsibilities (Carbon Reduction Project).

The alignment of these two strategically significant projects with the WBL opportunity proved to be beneficial and productive, resulting in significant knowledge and capability development for the participants and the organisation. The learning from these projects has

touched staff and students at every level of the organisation and indeed extended beyond the boundaries of the organisation in the case of the Carbon Reduction Project.

The study was undertaken using action research methodology to provide the overarching academic environment, with formal project management methodology applied as a way of governing and managing project implementation across the multiple dimensions of the projects. The integration of these approaches resulted in a series of academic papers at the start and conclusion of each project and the use of regular project reporting (reflecting both operational and academic progress) and the maintenance of a Learning Journal as part of my own reflective learning development. The various dimensions of both projects are fully described, as are the key outcomes and learning.

This thesis provides a case study of each project and further makes a contribution to professional practice and the body of knowledge through: the implementation frameworks developed and adopted through the study; through the outcomes and knowledge developed through the project implementations including a discussion of 'portfolio mindedness', through the integration of action research and project management methodologies, through my reflections and learning as a researcher practitioner seeking to affect significant change in a large institution, and; as an exponent of WBL undertaking a personal learning journey.

The key artefacts from this study have been included within the thesis as embedded content. In this way they reflect the chronology of the work and also provide substantive content for the thesis. The term 'artefact centric' has been used to describe this form of thesis and is one of the generally accepted formats for a WBL thesis.

As a result of the SAM and Carbon Projects, the USQ has gained a significant understanding of the footprint of its physical portfolio, and the effect of that portfolio on the organisation's bottom line. Further it has adopted a carbon reduction strategy that will achieve 64% reductions against the 2009 carbon emissions baseline (if fully implemented).

As a result of the work (delivering the projects within an operational environment enhanced by the academic dimensions of WBL and Action Research) I and the members of the Campus Services team, being the primary actors within this study, have gained significant knowledge

and understanding, beyond that which might have been attained from a traditional operational delivery model, including increased reflective practice competency. Part of that knowledge and learning relates to the concept of portfolio mindedness, and the importance of such a holistic approach to the appreciation and management of institutional portfolios.

In summary, the thesis describes a portfolio-focused approach to carbon emissions and strategic asset management, linking the two portfolios as one representation of the institutional footprint, and then expanding that concept to acknowledge the relationships which exist between institutional portfolios, and the consequent benefit for institutions and practitioners in adopting a portfolio minded approach in order to maximise the contribution to the organisation's strategic goals.

Table of Contents

Abstract	iii
Figure Descriptions.....	x
Artefact Descriptions.....	xi
Acknowledgements	xii
Certification of Dissertation.....	xiii
1 Overview – Introducing and positioning the thesis	14
1.1 Chapter outline.....	14
1.2 Introduction.....	14
1.3 Thesis content	15
1.4 Thesis framework	17
1.5 Thesis Context	18
1.5.1 Institutional Context.....	19
1.5.2 Professional Context.....	22
1.5.3 Personal Context.....	23
1.6 Approach	25
1.7 Format.....	31
1.8 Rich modelling	35
1.8.1 The Learning Journey.....	35
1.8.2 Structure ‘prompt’	35
1.8.3 The Projects	36
1.8.4 The Project Phases.....	36
1.8.5 The presence of artefacts	36
1.8.6 Figures versus charts versus tables.....	37
1.8.7 Learning Journal excerpts.....	37
1.9 Summary	37
2 Pre-project – Reflecting on my learning journey and mapping the way forward	40
2.1 Chapter outline.....	40
2.2 Introduction.....	40
2.3 The integration of artefacts	41
2.4 Reflecting on my learning and development, and Artefact 1	41
2.4.1 Artefact 1.....	43
2.5 Linking the historical with the aspirational, and Artefact 2.....	79
2.5.1 Artefact 2	80
2.6 Developing a model of the elements, their relationships and Artefact 3	94
2.6.1 Artefact 3	96
2.7 The context for my projects	102
2.8 Conclusion	103

3	Project Implementation - Strategic Asset Management (SAM)	105
3.1	Section outline	105
3.2	Project introduction	106
3.3	Environmental context and constraints	108
3.4	The integration of artefacts	108
3.5	The role of annexes, extracts and critical commentary	109
3.6	SAM Project ‘establishment’ phase	110
3.6.1	Introduction	110
3.6.2	Getting Started and Artefact 4	113
3.6.3	Artefact 4	115
3.6.4	Mapping the elements of SAM and Artefact 5	124
3.6.5	Artefact 5	125
3.6.6	SWOT analyses and Artefact 6	128
3.6.7	Artefact 6	130
3.6.8	Embedding an Action Learning approach and Artefacts 7 & 8	131
3.6.9	Artefact 7	133
3.6.10	Artefact 8	134
3.6.11	Phase conclusion	135
3.7	SAM project ‘implementation’ phase	136
3.7.1	Introduction	136
3.7.2	The Project Plan and Artefact 9	136
3.7.3	Artefact 9	138
3.7.4	The Governance Group	153
3.7.5	The Working Group	153
3.7.6	The Project Schedule and Artefact 10	154
3.7.7	Artefact 10	156
3.7.8	Project Baseline	158
3.7.9	Academic Reporting and Artefact 11	159
3.7.10	Artefact 11	161
3.7.12	Operational Reporting	164
3.7.13	Phase conclusion	166
3.8	SAM Project closing phase	167
3.8.1	Introduction	167
3.8.2	Operational outcomes	168
3.8.3	Strategic outcomes	169
3.8.4	Academic Outcomes	169
3.8.5	Vice Chancellor’s Committee Discussion Paper and Artefact 12	169
3.8.6	Artefact 12	171
3.8.7	Project Closure Report and Artefact 13	190
3.8.8	Artefact 13	191
3.8.9	Phase conclusion	197

3.9 SAM Project conclusion	199
4 Project Implementation - Carbon Reduction.....	205
4.1 Section outline.....	205
4.2 Project introduction.....	206
4.3 Context and constraints	207
4.4 The integration of artefacts	208
4.5 Carbon Project ‘establishment’ phase	209
4.5.1 Introduction.....	209
4.5.2 Getting Started and Artefact 14	214
4.5.3 Artefact 14.....	216
4.5.4 The Project framework and Artefact 15	229
4.5.5 Artefact 15	231
4.5.7 Embedding an Action Learning approach and Artefacts 16, 17 and 18.....	237
4.5.8 Artefact 16.....	239
4.5.9 Artefact 17	240
4.5.10 Artefact 18.....	241
4.5.11 Phase conclusion	242
4.6 Carbon Project ‘implementation’ phase	243
4.6.1 Introduction.....	243
4.6.2 The Project Plan and Artefact 19	244
4.6.3 Artefact 19.....	245
4.6.4 The Governance Group and Artefact 20.....	260
4.6.5 Artefact 20	262
4.6.6 The Working Group and Artefact 21.....	264
4.6.7 Artefact 21	266
4.6.8 The Project Schedule and Artefact 22	267
4.6.9 Artefact 22	268
4.6.10 Project Baseline and Artefact 23	269
4.6.11 Artefact 23.....	274
4.6.12 The Campus Ecological Transformation Sub-project (CETS) and Artefact 24.	275
4.6.13 Artefact 24.....	277
4.6.14 Academic Reporting and Artefact 25	278
4.6.15 Artefact 25.....	280
4.6.16 Operational Reporting and Artefact 26	282
4.6.17 Artefact 26.....	285
4.6.18 Phase conclusion	286
4.7 Carbon Project closing phase	287
4.7.1 Introduction.....	287
4.7.2 Operational outcomes.....	288
4.7.3 Strategic outcomes.....	288
4.7.4 Academic Outcomes.....	289

4.7.5	Project Closure Report and Artefact 27	289
4.7.6	Artefact 27	291
4.7.7	Vice Chancellor’s Committee Discussion Paper and Artefact 28	298
4.7.8	Artefact 28	300
4.7.9	Phase conclusion	309
4.8	Carbon Reduction Project conclusion	311
5	Post-project – Summary of Learning and reflecting on my contribution	318
5.1	Chapter outline	318
5.2	Introduction	318
5.3	Recapping the thesis thus far	319
5.4	Bringing it all together	321
5.5	The ‘Knowledge’ strand	322
5.5.1	SAM academic paper and Artefact 29	322
5.5.2	Artefact 29	324
5.5.4	Carbon academic paper and Artefact 30	343
5.5.5	Artefact 30	344
5.5.6	Other ‘knowledge’ arising from the projects	379
5.5.7	Format, title and portfolio mindedness	381
5.6	The ‘Action’ strand	386
5.7	The ‘Learning’ strand	390
5.7.1	Learning Portfolio	390
5.7.2	Learning Plan	391
5.7.3	Learning Journal and Quality Review	392
5.7.4	Thesis Structure and Content	394
5.7.5	Personal Learning	395
5.8	Contribution	397
	References	405
	Bibliography	411
	Annexures	418
	Annex A – Learning Journal	418
	Annex B – Quality Review Template	571
	Annex C – SAM Working Group Agenda	572
	Annex D – SAM Project Control Group Agenda	573
	Annex E – VCC Sustainability Presentation	574
	Annex F – Carbon Reduction Working Group Agenda	576
	Annex G – Summary of Environmental Initiatives	577
	Annex H – SAM Paper for EmeraldInsight Publication	580
	Annex I – Summary of Key SAM Initiatives	595
	Annex J – Reflection of outcomes against the original Learning Plan	597

Figure Descriptions

Serial	Description	Phase or Project	Chapter	Page
1	<i>DPST structure related to this thesis structure</i>	Overview	1	17
2	<i>Organisational chart extract</i>	Overview	1	20
3	<i>Campus Services Organisational Chart</i>	Overview	1	21
4	<i>Chapter to content outline</i>	Overview	1	34
5	<i>Contextual common ground</i>	Pre-project	2	102
6	<i>Mind map of the project dimensions and elements</i>	SAM	3	111
7	<i>Learning matrix</i>	SAM	3	131
8	<i>Gantt chart</i>	SAM	3	154
9	<i>SAM baseline rating</i>	SAM	3	159
10	<i>SAM project SharePoint site</i>	SAM	3	165
11	<i>SAM challenges review</i>	SAM	3	199
12	<i>SAM mitigation review</i>	SAM	3	200
13	<i>Initial project Mind Map</i>	CARBON	4	209
14	<i>Revised Mind Map of the project elements and dimensions</i>	CARBON	4	212
15	<i>Concept Communication model</i>	CARBON	4	213
16	<i>Learning matrix</i>	CARBON	4	237
17	<i>Gant chart</i>	CARBON	4	267
18	<i>GHG emissions baseline</i>	CARBON	4	270
19	<i>Total emissions per m² by campus</i>	CARBON	4	271
20	<i>Emissions from vehicle use by FTE staff member by campus</i>	CARBON	4	272
21	<i>Carbon Reduction Project SharePoint site</i>	CARBON	4	282
22	<i>Waste Audit summary results</i>	CARBON	4	283
23	<i>Carbon challenges review</i>	CARBON	4	311
24	<i>Carbon mitigation review</i>	CARBON	4	314
25	<i>Bringing it all together</i>	Post-project	5	321
26	<i>Portfolio relationships</i>	Post-project	5	384

Artefact Descriptions

Serial	Description	Phase or Project	Chapter	Page
1	<i>Learning Portfolio</i>	Pre-project	2	43
2	<i>Learning Plan</i>	Pre-project	2	80
3	<i>DPST Getting Started</i>	Pre-project	2	96
4	<i>SAM Getting Started Paper</i>	SAM	3	115
5	<i>SAM Elements</i>	SAM	3	125
6	<i>SWOT Analyses</i>	SAM	3	130
7	<i>Quality Review Template</i>	SAM	3	133
8	<i>Learning Journal Extract</i>	SAM	3	134
9	<i>Project Plan</i>	SAM	3	138
10	<i>Project Schedule</i>	SAM	3	156
11	<i>Academic Reporting</i>	SAM	3	161
12	<i>Vice Chancellor's Committee Discussion Paper</i>	SAM	3	171
13	<i>Project Closure Report</i>	SAM	3	191
14	<i>Getting Started Paper</i>	Carbon	4	214
15	<i>Project Framework – Academic Paper Extract</i>	Carbon	4	231
16	<i>Quality Review Template</i>	Carbon	4	239
17	<i>Learning Journal Extract</i>	Carbon	4	240
18	<i>Action Research Applied - Academic Paper Extract</i>	Carbon	4	241
19	<i>Project Plan</i>	Carbon	4	245
20	<i>Project Control Group Minutes</i>	Carbon	4	262
21	<i>Working Group Minutes</i>	Carbon	4	266
22	<i>Project Schedule</i>	Carbon	4	268
23	<i>Environmental Audit Proposal Extract</i>	Carbon	4	274
24	<i>Campus Ecological Transformation Proposal Extract</i>	Carbon	4	277
25	<i>Academic Reporting</i>	Carbon	4	278
26	<i>Media Release</i>	Carbon	4	285
27	<i>Project Closure Report</i>	Carbon	4	291
28	<i>Vice Chancellor's Committee Reduction Strategy Paper</i>	Carbon	4	300
29	<i>SAM academic paper</i>	Post project	5	324
30	<i>Carbon academic paper</i>	Post project	5	344

Acknowledgements

To Professor Ken Stott, through your enthusiasm and vision for the Professional Studies Program at the University of Southern Queensland you were the catalyst which started me on this journey; thank you.

To Dr. Neil Peach, your mentoring and guidance over the past four years have kept me focused, motivated and on track. Your contribution has been invaluable. Your ability to understand the way that I perceive the world and to communicate within that frame of reference, whilst simultaneously challenging and expanding it, has been greatly appreciated. You were always able to see through the undergrowth at the times when I had lost the path and was hacking at the bushes. I acknowledge the extraordinary role you have played in my learning journey; thank you.

To friends and colleagues, who have made contributions to my journey and perhaps revisited their own professional and learning aspirations and activities; thank you and good luck on your own journeys. I particularly thank the staff of Facilities Management at every level, who understood and engaged with not just the tasks and goals of the projects undertaken, but also the philosophy that underpins them. They are a credit to themselves and the USQ and are a truly professional community.

To my wife and children, who have sustained me in this journey through their direct support, understanding, faith and sacrifice and in particular their acceptance of a part time father and husband. Thank you. I will make it up to you.

To my parents who constantly expressed a sense of pride, excitement and confidence in my undertakings; thank you. Your unwavering support means a lot to me.

In closing the acknowledgements, I thank the University of Southern Queensland, for supporting my activity and recognising the learning and organisational value of the projects undertaken.

Certification of Dissertation

I certify that the ideas, experimental work, results, analyses, software and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

Signature of Candidate

Date:

ENDORSEMENT

Signature of Supervisor

Date:

1 Overview – Introducing and positioning the thesis

1.1 Chapter outline

This Chapter has the following form:

- Introduction
- Thesis content
- Thesis framework
- Thesis context
- Approach
- Format
- Rich modelling
- Summary

1.2 Introduction

This thesis is the culmination of my learning journey to date. As the latest and arguably the most significant element of that journey, it describes not only the historical background to my learning but the delivery of two significant work based learning (WBL) projects, undertaken as a practitioner researcher in the Doctor of Professional Studies (DPST) program at the University of Southern Queensland (USQ).

This thesis captures the key actions, interventions, reflections, knowledge and learnings arising from my own learning journey and positions them within the Action Research framework that was used to underpin delivery of the WBL projects.

Cherry (1994) in her monograph on Action Research cites Turner (1989) in likening a thesis to a stout piece of rope - one which you should be able to pull on at any point and find that it doesn't come away in one's hand and that each strand of the rope is an integral part of the whole. She suggests that there are three constituent strands to this whole, being action (making a noticeable difference to the world); knowledge (collective wisdom) and learning (developing individual and collective capability). These strands are a useful frame of reference for presenting and reporting the outcomes of my work and will be adopted at various points within the thesis, and particularly in Chapter Five.

Cherry (1994, p. XIV) also notes that the central role of the thesis writer is "*to discover what the whole is*" and therefore my journey (with its various challenges and decision points) to discover 'the whole' must be represented by this thesis. As a consequence, the design and

development of this thesis (in order to represent that 'whole' most effectively) has been an important part of my personal and professional learning journey.

My approach to this thesis (it's content and structure, and the process used to prepare it) goes to the heart of the values and the aspirations that drove me to undertake my doctoral learning journey as part of a work based learning program. These values and aspirations are well reflected by McNiff when she said:

I care passionately about what I am doing, because I care passionately about the people I am supporting, and I care about my own visions and values. My position as a manager is strengthened, I believe, because I see myself as a learner, in company with others whose learning I am supporting (McNiff, 2000, p.236)

This thesis has been developed and compiled to reflect my journey as a learner and very specifically as a work based learner, as this is understood in its contemporary context (Armsby, 2000; Costley, 2010; Garnett, 2010; Garnett, 2009; Lester, 2004). The next part of this section summarises the content, structure and process used to prepare this thesis, and then the following section will pick up more fully on the work based learning context of this thesis.

1.3 Thesis content

In regard to content, this thesis contains material covering Cherry's three strands [action, learning and knowledge] and it is constituted of materials (artefacts) that I have developed for a range of audiences and at different points in time throughout this journey. It contains documents that were prepared not just for academic assessment but also for specific organisational, professional and personal reasons. It also contains documents that were prepared several years ago, at the beginning of my doctoral learning journey, and whilst I may feel uncomfortable about these inclusions (when I review those artefacts and reflect that I would have written things quite differently now), I believe that their inclusion is an essential component in recognising and validating the importance of my own personal and professional development as a practitioner researcher.

To some extent this discomfort arises as a consequence of the (professional and personal) development and growth that has occurred during the learning journey, or more precisely the need to disclose or evidence that development in the form of Artefacts. However, this is an integral part of doctoral learning and should not be excluded from this thesis. In this regard both Cherry (1999) and Trafford and Lesham (2002) make use of poetry (from T. S. Eliot) to describe the journey of doctoral learners.

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time

(Eliot, 1943, p. 38)

What we call the beginning is often the end
And to make an end is to make a beginning

This is where we start from

(Eliot, 1973)

Both of these quotes give an insight into the cyclical nature of learning (Dick, 2002; Illeris, 2008; Turnbull, 2009), including professional development. They also bring into clear light, from my personal perspective, the importance of acknowledging what I didn't know at the beginning of this doctoral learning journey. I can achieve this acknowledgement through reflection of the learning outcomes.

This insight requires me to expose and reflect on the phases (or cycles) of my own learning and requires me to have the confidence to incorporate materials (in the form of artefacts) within this thesis which are not a reflection of my current standard or depth of learning. I am able to do this because of the values which prompted me and sustained me with the energy to undertake this doctoral learning journey in the genuine belief that it will enrich and deepen my learning.

Lifelong learning is characterised by Jarvis as:

A combination of processes throughout a lifetime whereby the whole person experiences social situations, the perceived content of which is then transformed cognitively, emotively or practically and integrated into the individual's biography resulting in a continually changing (or more experienced) person (Jarvis, 2007, p. 1)

I have compiled this thesis at a time when I am (and as a result of becoming) a more 'experienced' person.

That experience and learning has allowed me the confidence and capacity to set out my actions, interventions, reflections, knowledge and learnings (in a predominantly chronological manner) and as previously mentioned incorporate a diverse range of artefacts developed throughout the course of my learning journey.

1.4 Thesis framework

In this section I will introduce the thesis framework. I will start by reaffirming that the overall framing of this thesis has been developed as a further reflection of the actual process I have followed as a practitioner researcher, from the commencement of my doctoral learning journey through to completion, and resulting in a generally chronological alignment of the framework.

The considerations around the thesis framework were further informed by the structure of the DPST program at USQ. The resultant thesis form essentially comprises four key steps (a) preparing a Learning Portfolio (b) preparing a learning plan (c) planning, development and implementation of the projects set out in my learning plan and (d) reviewing learnings and preparing this thesis.

The structural relationship of this thesis to the DPST framework is illustrated below in Figure 1.

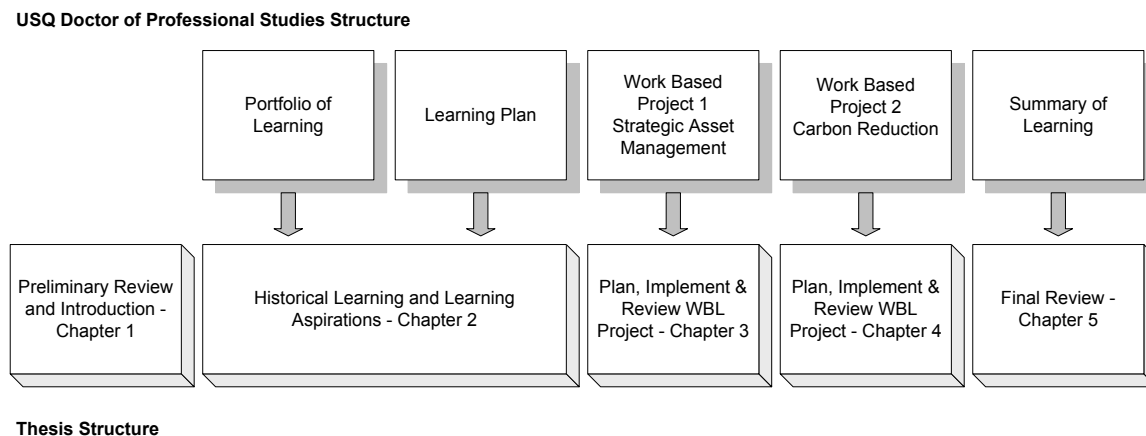


Figure 1: DPST structure related to this thesis structure

There are similarities between this structure and that proposed by Williams (2004) and which he calls a 'rich modelling' layout. In essence, he proposes an early phase, middle phase and final phase, which he 'bookends' with an introduction and finishes with a discussion. Williams' phases are reflected in this thesis with the early phase being covered in Chapter Two; the middle and final phases are embedded in Chapters 3 and 4 (with each

Chapter covering the planning, implementation and review of two related but separate projects); Chapters One and Five are the 'bookends' for these phases and provide the 'experienced' commentary and reflections that bring the phases and projects together as a whole.

A number of other 'design' aspects of this thesis are also based on Williams' approach to thesis writing and this is covered in more detail in the Thesis Format section later in this Chapter.

This concludes the preliminary discussion of the thesis framework, noting that a full discussion of the final format is provided later in this Chapter.

The next section will build on the initial framework discussion by setting the thesis against the Institutional, professional and personal contexts. These contexts held varying levels of influence over the type of doctoral study, the selected work based projects and the resultant thesis, and together these sections provide the rationale for the final form of this thesis.

1.5 Thesis Context

This section provides particular details of the context in which this thesis and the development work that it describes, has been undertaken.

Armsby (2000, p. 40) makes it clear that "work based learning is context bound and grounded in practice" and my use of the word 'development' follows Armsby, in that her position on work based doctoral studies is one that strongly resonates with my own values and aspirations, as noted earlier. Specifically Armsby (2000, p. 36) says that "another way of describing work based learning research and development is project planning and development". My one reservation with that translation is that in a professional practitioner environment, 'project planning and development' would not generally have a personal learning association and so the initial interpretation may not be as inclusive as the original work based learning identifier.

Notwithstanding my caution around the term, the 'planning and development' work set out in this thesis arose from the contextual 'common ground' found at the intersection of my personal aspirations and ambitions, my professional experience and standing, my organisational position and responsibilities, and my relationships with a wide range of work colleagues. This is distinctly different to the more traditional academic research based doctoral approaches, and may be the work based learning equivalent to 'a gap in the literature' or 'research problem'.

As noted earlier, I chose to use contemporary thinking (in regard to work based learning) to provide the framework and structure by which I would design and moderate my own

learning journey; mapping the next stage of that journey from my position on the previously described contextual 'common ground'.

My approach is consistent with the findings of Lester and Doncaster (2002), as reported by Lester (2004, pp. 3-4), in that one of the key reasons practitioners like me see benefit in current work based learning programs, is that it provides a framework for "taking forward an area of application, maintaining a high level of thinking and action within and around it, and encouraging reflective and critical thinking that goes beyond the immediate practice thinking".

Lester's framework has had a profound impact on my own approach to my planning and development work and permeates all dimensions of the work described in this thesis. This impact will be seen in the way in which I have prepared for this learning journey (described in Chapter Two), designed, developed and implemented two, significant work based learning projects (described in Chapters Three and Four) and concluded this learning journey through reflection and review of my achievements and learning (Chapter Five).

The next part of this section describes more fully the institutional, professional and personal contexts for the 'planning and development' work of this thesis.

1.5.1 Institutional Context

During the life of this study I have been employed at the University of Southern Queensland, initially in the role of Group Manager Facilities Management and later as the Executive Director Campus Services. The role involves overall responsibility for the University's built environment and property portfolio. My position within the organisation is shown in the partial organisation chart below at Figure 2. The chart shows the top few layers of the University's administrative structure and the functions and staff numbers associated with my role.

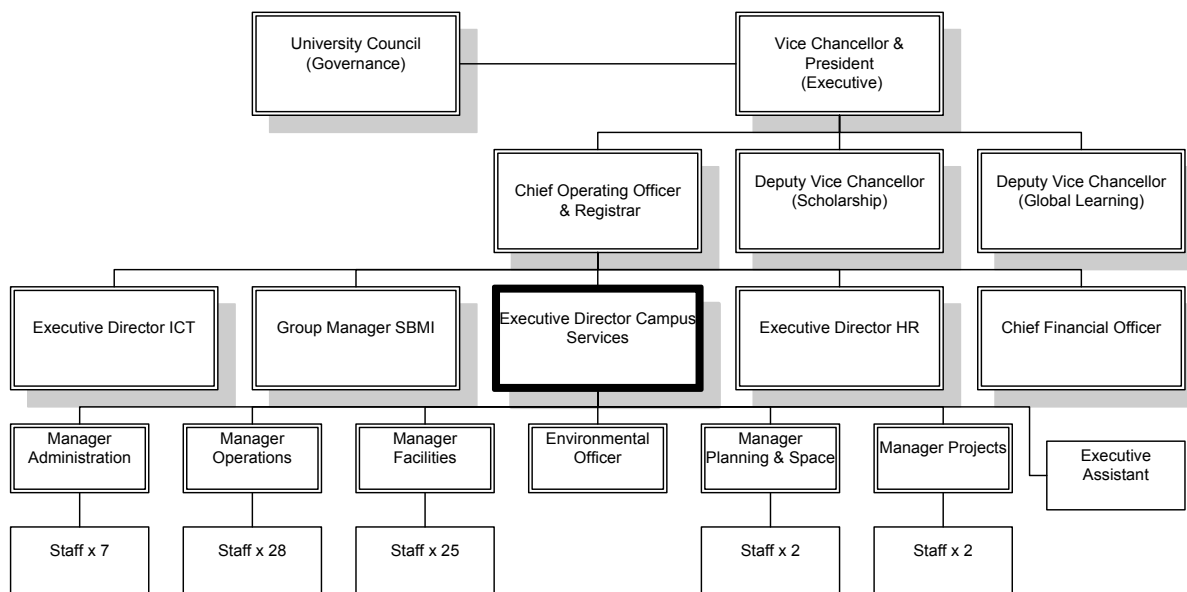


Figure 2: Organisation chart extract

It can be seen that the position of Executive Director Campus Services is one of five direct reports to the Chief Operating Officer, responsible collectively for the delivery of key corporate services to the organisation, often paraphrased as ‘enabling the enterprise environment in which the teaching and learning occur’. The Chief Operating Officer and peers in the ‘group of five’ have played important parts in the progression of my work based doctoral development projects.

The University Council is also included in the diagram and its role is to provide governance oversight of the University executive and operations. The Council is supported by a small number of sub-committees and these were directly involved, as part of their remit, in the development projects set out in this thesis.

To provide further understanding of the context in which the study and the WBL projects were undertaken, the supporting campus services structure is provided below at Figure 3.

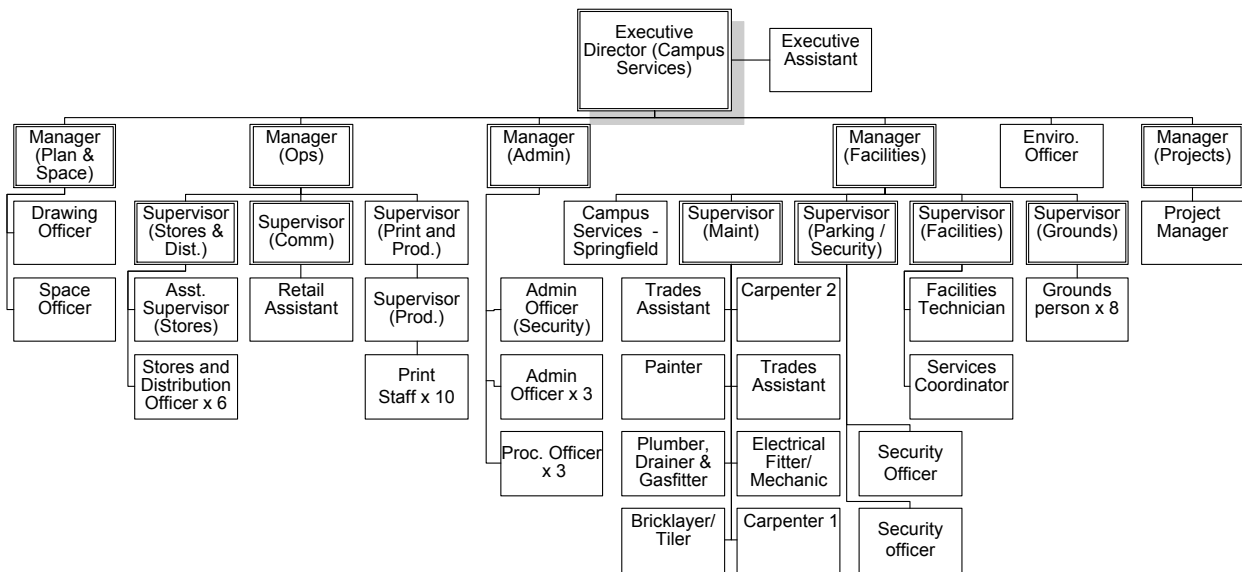


Figure 3: Campus Services Organisation Chart

Figure 3 provides an indication of the nature and scale of the team that I was organisationally responsible for during the course of my doctoral learning journey. As illustrated, within the Campus Services Section there are numerous managers, supervisors and staff many of whom participated in the development projects set out in this thesis.

My work as a practitioner researcher and learner worker has heightened the need for me to more fully understand and appreciate (from a positive critical review perspective) my role within the organisation, as well as the operation of my organisation from both an internal and external perspective.

My understanding in that regard has been heightened as a direct result of the interplay between the academic framework (and demand for research rigour) required of my work based learning degree and the operational demands of the organisation in regard to timeliness, budget and performance. Dick (2002, p. 167) refers to the trade off, in action research, between “discovering general truths and being relevant to the local situation”. Armsby contends that:

The work based learner is both helped and hindered by his or her organisational context. But the context is part of the reason for the research and hence cannot be denied. Work based learners must grapple with being a part of the problem, situation or development they are investigating (Armsby, 2000, p. 35)

In designing and developing my work based projects I was compelled to look ‘below the surface’ of the organisational charts above and to develop an appreciation of USQ’s

organisational dynamics. The learnings and findings from this exploration are set out in the later chapters of this thesis.

1.5.2 Professional Context

My professional life to date is more fully described in Chapter Two. However, to set the professional context for this study I will comment that my career and interests have been based around facilities management and estates management across a range of organisations and institutions. Therefore my priority in identifying and selecting the work based projects was that those projects should be in the field of facilities management, or estates management, and preferably projects which addressed contemporary issues in those fields and would potentially make a contribution to professional knowledge and practice. The final desirable criteria from my perspective was to undertake projects that would be of strategic significance for the USQ, thereby creating a valuable contribution to my host organisation and potentially ensuring appropriate recognition and support for the work.

Professional journals¹ and conferences regularly host discussion of strategic asset management (SAM), ranging from small organisations through to internal entities and retail chains, each with their own understanding and application of SAM. Within the University sector there is also significant discussion and varying degrees of understanding and capability, ranging from simple asset maintenance planning through to fully integrated strategic asset management frameworks linking the asset portfolio to the 'product' of the organisation. Indeed that discussion has led to the development of the Tertiary Education Facilities Management Association (TEFMA) SAM guidelines being developed (discussed further in Chapter Three). The currency of the SAM debate and the lack of a SAM framework at USQ prompted the exploration of this capability development as an appropriate, strategic level project for the work based learning vehicle.

At the time of developing the Learning Plan (provided in Chapter Two) there was a need to identify a second project. During my investigation to identify a first project, I had also observed the number of articles relating to energy efficiency and carbon reduction projects that also appeared in the FM Journals. I was also mindful of the changing environment with regard to state and federal legislation, essentially driving the prudent management of carbon emissions at all levels nationally.

To digress momentarily with a personal observation as an FM practitioner; on arrival at USQ in 2008, I was struck by the general lack of awareness (at a regional, institutional and individual level) of the need to manage environmental footprints and particularly carbon emissions. Further, there was an apparent lack of basic resources and infrastructure in

¹ Examples of such Journals include: Australia and New Zealand Property Journal; Solutions for the Built Environment FM; Facilities (EmeraldInsight online).

support of those objectives. The areas of most progress and visibility were rainwater collection tanks and solar panels (photo-voltaic and water heating). My frame of reference for this observation relates to the New Zealand environment where carbon reduction, reuse, recycling and waste management initiatives generally appear as integrated elements in societal infrastructure at all levels.

This personal perspective, the legislative drivers, the Facilities Management community interest and the USQ aspiration to be carbon neutral by 2020, combined to suggest a sustainability (later to become carbon reduction) project would be a suitable second work based learning project. The key point of difference for this project compared to the majority of articles I had reviewed was the organisational level focus rather than a single building or piece of infrastructure, and it was this holistic perspective that attracted me and would potentially make the contribution to professional knowledge and practice.

1.5.3 Personal Context

Just as the previous sections have highlighted the importance of the institutional and professional contexts in which work based planning, development and implementation occurs, this section highlights the importance of the personal context for such work.

The personal context for work based learning has several dimensions. One dimension, relevant to my own doctoral learning, highlights that any research is a form of human activity and that our minds are the 'instruments' through which all data is generated and then interpreted (Cherry, 1999). This can lead to the view implicit in Usher and Edwards (1994) question as cited by Armsby (2000, p. 40) "Can research ever be anything more than a subtle form of writing the self?" My work at the beginning of the doctoral learning journey to develop and present a Learning Portfolio and a Learning Plan (as set out in Chapter Two) awakened my awareness and appreciation of this personal dimension, its significance in undertaking this doctoral learning, and its contribution to rigour in research.

Another relevant dimension highlights the potential bias introduced by the multiple roles held by the individual practitioner-researcher within their work place and the potential influences and ramifications created by their organisational position. This is further influenced by the individual's previous experiences, organisational aspirations and so on; all of which will impact on and influence that individual's efforts to develop rigorous and meaningful conclusions and findings (Allison, Fall 2000; Armsby, 2000; Lester, 2004; Zuber-Skerritt, 2007). My personal learning in designing, developing and sustaining a nexus between my work (including my professional independence and integrity) and my research (from an academic perspective) has been both rewarding and effective and this aspect is further explored in the following section of this chapter.

In light of the dimensions described above and the discussion already provided in the earlier sections of this chapter, it is perhaps useful to pause and summarise the various

considerations that influenced my decision to engage in my particular, personal doctoral learning journey and the attendant work based learning projects. These considerations included:

- My particular point of personal development and circumstances (described in the Learning Portfolio provided within Chapter Two)
- The needs of the host organisation, as defined within the USQ Strategic Plan 2009-2013 under Goal 9 – Enterprise (paraphrased as: an efficient enterprise operation, and; carbon neutrality by 2020)
- The alignment of the potential work based learning projects and Action Research approach with those organisational needs and my particular role responsibilities and spheres of influence
- The alignment of the projects with my areas of professional interest
- The potential for the learning and outcomes from those projects to make a contribution to the body of professional practice and knowledge (described in the Learning Plan within Chapter Two)
- The synergy inherent in the work based learning paradigm in facilitating an environment of academic and operational activity that would deliver the desired organisational and individual learning and operational outcomes
- The opportunity to develop the USQ Facilities Management team through their engagement and participation with the projects
- The potential contribution to my professional future through the delivery of these significant strategic projects and the subsequent award of Doctor of Professional Studies

These considerations were then used as the foundation for the multi lateral negotiations, which took place on the contextual ‘common ground’ mentioned earlier. As a result I formulated a plan of action designed to satisfactorily meet the needs of the various stakeholders who occupied this ‘common ground’ with me. Clearly, I was an equally significant stakeholder in the planning, along with my immediate work supervisor, academic supervisor and numerous colleagues and staff.

The notion that this negotiated approach constitutes a proxy for the traditional ‘gap in the literature’ approach (adopted for framing other doctoral research) has been introduced already in this Chapter, and it is considered in more detail later in this Section.

Further, this negotiation process not only established the operating framework and boundaries for the eventual activities and achievements of my doctoral learning journey over the ensuing years, but it also introduced me to the demanding personal implications of undertaking an Action Research approach to project delivery in a large organisation; demands captured by such terms as ‘practitioner researcher’ and ‘learner worker’.

Following a review of the literature in regard to reflective practices (Turnbull, 2009; Cherry, 1999; Kitchener, 2006; Westberg, 2001; Peters, 2009) and as part of the negotiation process (and in this case it was a self-negotiation), I resolved that I would actively maintain a learning journal to enhance my capacity to deal with the complexity associated with the new environment I was about to enter.

The development of the required self discipline and the consequent maintenance of a Learning Journal has proved to be of significant benefit, not only to my professional development (through increased self reflection) in the longer run, but also in heightening my day to day capacity to contribute more effectively to the work based learning projects I undertook as part of this doctoral learning. Armsby says that:

It is the specific or individualised context of the organisation that contributes to the development of theory. However, insider researchers will bring their subject expertise and, experiential knowledge to the problem and this is likely to influence the development of theory. Through reflective practice, influences on the development of theory can be acknowledged” and further “Through written self-criticism and continued efforts to become aware of one's own subjective constructions, a more reasoned methodology can be developed (Armsby, 2000, p.37)

Evidence of the reflective practice that underpins and complements my approach to the planning and development of the work based projects, is provided in the succeeding chapters of this thesis. Later, in Chapter Five, I also outline my ‘thinking on my thinking’ in order to demonstrate my progression and development as a more ‘experienced’ person as well as a practitioner researcher.

I have provided the institutional, professional and personal contexts informing my choice of work based learning projects. The next section considers my approach to the study against those same contexts.

1.6 Approach

In regard to the processes and methodology informing my study and the subsequent development of this thesis, my process is founded on the approaches, processes and actions associated with work based learning and action research (Armsby, 2000; Armsby, 2012; Cherry, 1999; Costley, 2010; Dick, 2002; Garnett, 2009; Lester, 2004; McNiff, 2000; Williams, 2004; Zuber-Skerritt, 2002) and the personal learning philosophies espoused by

Kitchener (2006), Peters (2009) and Whitehead (2012).

A particularly relevant description of work based learning is provided by Armsby who states:

In work based learning, research, development and reflective practice are located within a real social and work based community that gives them meaning rather than in a hypothetical or devised scenario. The focus is on 'real' research and development projects and reflection on 'real' pragmatic and applied activities is what makes work based learning meaningful to practitioner researchers...a variety of influences within the organisation and the individual affect the worker researcher's perceptions and choice of methodology. These must be acknowledged and considered to enable a real project outcome or product (Armsby, 2000, p. 42)

This expression of work based learning is particularly relevant to the situation I found myself in, seeking to identify and develop significant projects, within a complex and dynamic organisational environment, using myself and other staff as practitioner researchers.

Raelin expresses a similar definition of work based learning:

Work based learning expressly merges theory with practice, knowledge with experience. It recognizes that the workplace offers as many opportunities for learning as the classroom. Such learning, however, needs to be centered around reflection on work practices. Hence, it offers managers faced with the relentless pace of pervasive change an opportunity to overcome time pressures by reflecting upon and learning from the artistry of their action. It is no longer acceptable to offer the rationale, "We don't have a minute to think." Managers can no longer react to change; they must anticipate and work with it. Reflection with others offers the key to competing successfully in the twenty-first-century marketplace (Raelin, 2008, p. 2)

This expression of the benefits of work based learning reflected my own operationally focused management practice prior to engaging with the DPST program and 'struck a chord' with me in regard to my professional aspirations.

Lester (2004) describes doctoral level work based projects, and contends that such projects should act as "a vehicle for real-world developments and for high-level professional capability". He further states that such projects may need to:

Be adequate for the 'swamps,' 'messes' and 'wicked problems' encountered by senior professionals in their practice situations. It may draw on technical and disciplinary knowledge, but it also needs to engage fully with the knowledge-in-use that thinking practitioners develop and use in the course of their work (Lester, 2004, p. 7)

As part of my initial assessment and negotiation (described earlier), I formed a view that the chosen projects would fulfill at least some of the expectations described by Lester. My experience as set out in this thesis confirms my earlier projections but it has only been by doing the work (designing, developing and implementing the projects) that I have been able to arrive at this evidenced conclusion. This highlights the uncertainty that is most likely to arise in work based learning projects that are established on the common ground between organisational, personal and academic perspectives. As such the researcher is not starting with a 'known gap' in the literature and just as importantly is not starting with an environment over which they have complete, or even strong, control.

I have come to understand and experience that the common ground on which work based learning is undertaken is indeed thixotropic. I have learned that this compels an approach that is open and flexible, shaped by the context and environment, but at the same time is able to eventually solidify to a point where conclusions and 'warranted assertions' can be validly demonstrated.

Such an approach can bring to light unexpected and unplanned learnings. Consider for example that I have undertaken planning and development work on two interrelated but somewhat different projects. These projects were initially linked because they are both contemporary 'problems/issues' in facilities management and go to a concern with understanding the 'physical footprint' of organisations. Through this doctoral learning I have come to understand that they are linked in regard to the need for those responsible for their implementation and management, to be able to conceptualise (and then to give operational import to) a 'portfolio' perspective of facilities management in contemporary organisational settings.

A portfolio perspective is something that has been used in several disciplines to enhance management capacity to improve organisational performance. Marketing, risk and finance are examples of disciplines outside of facilities management that have utilised such a perspective and just as physical scientists have recognised that understanding and managing a tree is different to managing a forest, portfolios comprise a multiplicity of 'individual units' and managing the sum of the parts is significantly different to managing the individual units. In my discussion in Chapter Five of this thesis and in regard to the knowledge contributions of my work, I will discuss the ramifications of 'portfolio mindedness' in the operations of facilities management and the manner in which this unanticipated dimension of my work has emerged during the doctoral journey.

As a further illustration of being open to new connections and learnings, later in this chapter I will set out the rationale that has led to my specific development and formatting of this thesis. It was unexpected on my part that I would again encounter the notion of 'portfolio mindedness' albeit this time in an academic application. That is, the way in which some academic authorities use the term portfolio to describe a particular way of bringing together thesis presentations for professional doctorates (Scott, 2004).

Such a 'portfolio' thesis comprises individual artefacts/documents that may have been prepared for different audiences at different times, but the portfolio thesis brings the disparate components together in a manner that makes the 'whole' greater than the sum of the parts. As noted, the issue of 'portfolio mindedness' will be considered further in Chapter Five when I seek to bring together the different strands of my learning as an end to this particular stage of the journey.

This is but one example of the added value or enrichment that has occurred during this learning journey, partly as a result of my willingness to adopt an 'open' and 'flexible' approach and to be alert to the potential and opportunity to learn and make a doctoral contribution. At this point in the journey, I can now see anew that I have implemented what Dick (2002, p. 160) calls "data driven" research. He describes this approach as arising from an affirmative answer to the following question - "Do you wish to deal with the research situation and the people in it as they are, as far as possible putting aside your preconceptions so that you are more open to experiencing the research situation fully?"

Dick goes on to describe such an approach as responsive to the situation, and flexible, and offering particular advantages to those higher degree candidates who wish to research their own practice, improve the situation in which the research is undertaken (in my case the USQ Facilities Management and Enterprise workplace) and improve their research capacities. These advantages are highly aligned to the personal situation and values underpinning my adoption of a work based learning framework for my doctoral work. He also highlights two key risks, which appear to be founded on the higher levels of uncertainty associated with the method. Specifically they include:

- not knowing where the data will lead you, and
- it is not just the researcher's understanding that emerges but so does the research methodology.

I too would have identified these as risks at the outset, but given the strong alignment between my approach, my values as alluded to earlier, the three contexts previously described and my experiences in implementing the two work based learning projects, I now see these 'risks' as distinct advantages of the methodology.

An important clarification of my approach is that whilst I have endeavoured as much as possible to adopt a 'data driven' stance to my planning and development work, I will often use 'action research' as a term that describes my research method. This will become apparent in the subsequent chapters and to avoid any confusion some preliminary explanation is warranted. Again, I will use Dick because his position on this issue closely represents my own approach, not only in the use of the term but also in its application.

Dick also says:

I hold that most aspects of research design are open to choice. For example, I do not believe that action research must be participative, or qualitative, or published....I think of it as a family of research methodologies that pursue the dual outcomes of action and research....I regard its cyclical/spiral process and pursuit of both action and research as defining characteristics of action research.....Action research can be described as a regular cycle of planning, action and review (Dick, 2002, p. 160)

This is what I mean when I refer to Action Research in this thesis and it is also what I have endeavoured to give effect to in the planning and development work described in this thesis.

Further, just as this doctoral learning journey has enabled me to explore and develop key issues and problems in contemporary facilities and organisational management, it has also been a learning journey in regard to key issues and problems in contemporary work based learning and action research. My application of action research has been a vital and significant part of my learning journey and is an area in which I have endeavoured to make a contribution to thinking and practice.

My previous work and learning (described later in Chapter Two) had exposed me to the cyclical nature of models of learning, quality improvement and business improvement.

Consequently, I was able to relatively quickly accommodate the benefits of research founded on this type of 'cycle of improvement' and learning.

In practice, I then started to connect Action Research's cycle with my existing business and organisational knowledge of Project Management and progressively developed mechanisms which supported the needs of my planning and development work and also embedded the Action Research approach within the project implementation.

In this regard my work is consistent with Armsby's view that:

Worker researchers need to know how to develop and use methodologies to enable them to become the kind of learners required by today's organisations" and that "work based learning is evolving its own epistemologies and hybrid methodologies in an area of knowledge, which is undergoing change...Increasingly, multi-methodologies (Mingers and Gill, 1997) are being used to cope with the complexities of multi and inter disciplinary and work based research (Thorne, 1999); (Armsby, 2000, p. 41)

Consistent with the expressions of Dick, Armsby and Raelin I have been acting as a practitioner researcher (or a worker researcher) throughout this journey. In parallel I have been working as a senior manager in a large educational institution where I have undertaken significant operational projects, coupled to doctoral learning and developed this thesis (and the associated reports, papers and journals), through a multilevel range of interactions (and their interrelationship) with my work supervisor, my academic supervisor, external stakeholders and specialists, work peers, staff and colleagues. One objective of my approach and the culmination of my work is the creation of a significant case study with sufficient detail within it to be of relevance and value to other FM practitioners.

As Bassegy described "The relatability of a case study is more important than it's generalizability" (Bassegy 1981, p.85). In other words, case studies are more valuable to the reader, where that reader is able to relate to the context and situation of the study. The primary structure and content of my thesis has been deliberately selected to achieve the relatability of my work, particularly to other practitioner researchers working in the field of Estates and Facilities Management, with the broader aspects of the thesis representing a more generalisable contribution.

In addition, and as one aid to the relatability, I have maintained a learning journal and spent substantial time reviewing and reflecting on my own abilities and skills whilst seeking to

grow my capacity to more effectively implement my work and my research projects.

Learning as reflection has been a significant learnt process in my journey and I concur with Turnbull (2009, p. 29) in reinforcing "the importance of experiencing yourself as a learner, in order to maintain your continuous professional development".

To conclude this section, my overarching approach to the planning and development work outlined in this thesis has been founded on the contemporary notions of work based learning and action research. This has provided the scope for me to become a more 'experienced' person and to make a material contribution to my workplace and to the professional theory and practice of contemporary facilities management.

In the next section I will expand on the thinking that has informed the format of this thesis (beyond the initial framework discussion) and describe more fully the thesis content.

1.7 Format

Earlier in Section 1.4, I introduced the thesis framework. I will now discuss the thesis format in more detail and link that to the approach and contexts discussion.

Notwithstanding the use of action research as an overarching approach in my planning and development work, I have not employed a traditional 'gap in the literature' driven study (as previously explained) and nor was I inclined towards a conventional thesis format. By the latter I mean the 'five chapter' PhD model that has proved so beneficial for many doctoral students and set out so effectively by Perry (2000).

Whilst reviewing and developing my thinking on the format of this thesis, I encountered literature on doctoral explication thesis (Zuber-Skerritt, 2007), portfolios (Scott, 2004) and rich modelling layout (Williams, 2004) as ways of more accurately reflecting both the context and approaches of worker researchers in professional doctorates.

In a discussion of the Doctor of Management by Explication offered by the Senior Executive Action Learning (SEAL) program to associates of the International Management Centres Association Zuber-Skerrit observes that:

A thesis by explication has to firstly clarify, explain and interpret the theme that the candidate has identified in relation to her/his achievements in the written documents supporting the thesis; and secondly develop a principle argument, conceptual model or theory that constitutes an original contribution (Zuber-Skerrit, 2007, p. 27)

The SEAL program was a professional development program for senior managers who reflect on their management practice and conceptualise their professional achievements in their company. Zuber-Skerrit (2007, pp. 26-35) also notes responses that she received from those interested in this program regarding her definition and I have listed a few of these responses below:

I strongly believe that more good comes out of effective research into how to generalize the gains that practicing managers produce in real situations than a project that has an academically sound foundation but produces marginal results. If you like, it is in the warts of the manager's work that true progress is made, rather than in the polished research of the academic.

The candidate's already accomplished work is the bedrock – the source – from which the explication flows. No accomplished work – nothing to explicate – however one wishes to interpret explication.

An explication is not a ragbag of previous work, but a coherent discussion of and reflection on one, two or maximally three themes emerging from a body of published work (i.e. work documents published internally and/or in professional journals as appropriate). It is a “wrap” or argument pulling everything together thematically, conceptually, theoretically, and emphasizing the author's contribution to knowledge and meaning.

Zuber-Skerrit also contends that:

For most doctoral candidates, writing a DET (Doctoral Explication Thesis) would likely be more difficult than writing a traditional PhD thesis by research that follows standard procedures. However, for certain senior managers with a great deal of lived experience, knowledge and wisdom, producing a DET is more

meaningful, challenging and enjoyable, and they would not have the time nor interest to do a PhD and academic research (Zuber-Skerrit, 2007, p. 35)

Practicing senior managers have considerable valuable experience, knowledge, skills and insights in management and leadership issues, and that action research is more appropriate than traditional, academic research for them because they can use it to best achieve both of the vital aims of good social science research: improving practice, professional development and organisational learning, as well as advancing knowledge in and of their field (Zuber-Skerrit, 2007, p. 26)

These last observations were certainly true of my own situation and views. Consequently the material from Zuber-Skerrit gave me the confidence to move away from a traditional format and to structure my thesis in a way that would most appropriately reflect the nature of my work based planning and development work.

In essence I was seeking a thesis format that reflected the balance between the academic and the professional. This was further supported by Scott's outline of what he called the 'portfolio' format for professional doctorates. He describes particular advantages for this format including that it provides a means by which a number of different pieces of work with different styles and intended for different audiences, can be collected together for assessment purposes. Scott (2004, p. 151) notes that a commentary may also be included in the portfolio and that such commentary may be chronological, autobiographical, conceptual or developmental and the structure of the "portfolio therefore allows a greater possibility of work being submitted for assessment which embraces both academic and workplace concerns...".

As a further development of the portfolio format of theses, Williams (2004) describes and gives several examples of the incorporation of artefacts into the body of doctoral theses. These artefacts may be attached or embedded into the text and may be complete documents or extracts. Williams also commends the use of graphical and other devices to enhance interest and readability and this aspect is picked up further in the following parts of this section.

With the views of Scott, Williams and Zuber-Skerrit in mind, I developed the thesis format by building on and synthesizing these perspectives into a thesis that synergises the elements

of explication, rich modelling and portfolio approaches. I see this as the most effective way to align my work with my research and also to align and represent the value and academic contribution of the thesis. From a personal and professional perspective this approach has also allowed me to bring all of the work together as a single integrated representation of the ‘whole’ recognising the interconnectivity and value of the numerous elements.

As a consequence of that decision (and as mentioned earlier) my adopted thesis format predominantly follows the sequence of activity and implementation of the study, separated into the three key phases of, pre-project, project implementation and post-project. Similarly, the project chapters (three and four) contain a further refinement of the three phase approach consistent with the implementation methodology (Project Management) applied to the projects. These project phases are ‘establishment’, ‘implementation’ and ‘closing’ and are discussed further within the project specific chapters. The full and final form of the thesis is represented below by Figure Four.

As can be seen, figure 4 has three parallel lines of information. The top line is the framework and defines the flow of the chapters. The second line provides summary detail on the contents of each chapter and the bottom line links the higher lines to the three strands of action, learning and knowledge, put forward by Cherry (1999), as the three strands that need to be tied together to make the ‘stout rope’ of the action research thesis.

Povey Thesis Structure

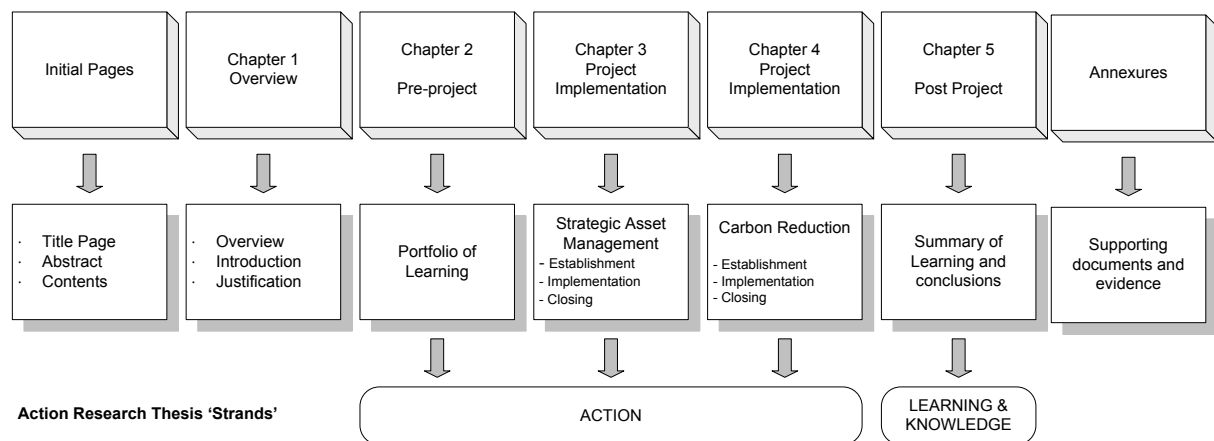


Figure 4: Chapter to content outline

The artefacts contained within the thesis were written generally in the order presented (noting the parallel operation of the two projects) during the initial three years of my doctoral learning journey, and then the overall thesis design was developed and the commentary added in the last year.

The initial pages, Chapter One and Chapter Five are the ‘bookends’ for this thesis (as described by Williams) and are the final pieces of the commentary, written just prior to examination; they have been written by me as an ‘experienced’ practitioner researcher.

The work and the learning associated with the design and development of this particular thesis format, and also that required to construct the critical commentary which links and binds the portfolio of artefacts (and embedded extracts) to professional practice, academic and organisational knowledge and personal learning, has been a slightly unexpected additional dimension to my original learning plan.

Cherry (1999) reinforces this dimension of the thesis writing process as more than just a representation of the project delivery and results; it is a learning experience in its own right and thereby an extension of the material specifically set out in the final Chapter of this thesis.

Successfully linking diverse documents (prepared for different purposes, for different audiences and at different times) is a complex process and in my work, I have always been an advocate for the use of pictures and diagrams to aid in the expression of ideas and concepts. Consequently I was encouraged by Williams' (2004) discussion of 'Rich Modelling' and 'Rich Pictures' and its potential role in doctoral theses.

Consequently, this thesis uses a modest level of rich modelling and pictures to position the thesis content in terms of its type, and also against the study timeline. By so doing it is hoped to reinforce the reader's understanding and relationship with the thesis. The icons used in this thesis are illustrated below.

1.8 Rich modelling

As mentioned above rich modeling is used to position the thesis content in terms of its type, and also against the study timeline. The icons used in this thesis are illustrated below.

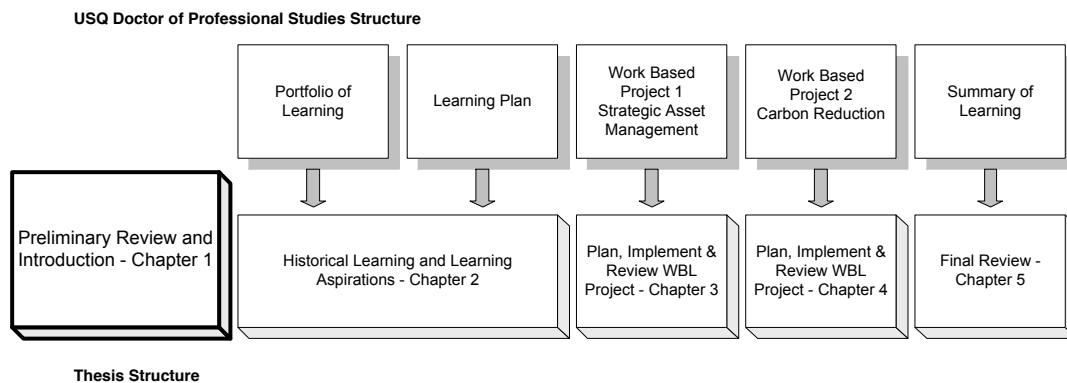
1.8.1 The Learning Journey

Consistent with the metaphor of learning as a lifelong journey, this thesis will use the rich picture 'learning highway' below to graphically position the chapter (or section) against my own learning journey.



1.8.2 Structure 'prompt'

To assist in navigating the thesis, I have also placed a modified version of Figure 1 at the start of each Chapter. This will reinforce the Chapter content and the role of the Chapter as part of the Thesis whole and thereby assist the reader in their navigation. To achieve this, the relevant thesis element will be highlighted (as shown below).



1.8.3 The Projects

As previously discussed the projects undertaken were Strategic Asset Management and Carbon Reduction. Two project icons will be used to identify the project content as follows:



The ‘city’ icon represents the built environment and will indicate content pertaining to the Strategic Asset Management (SAM) project.

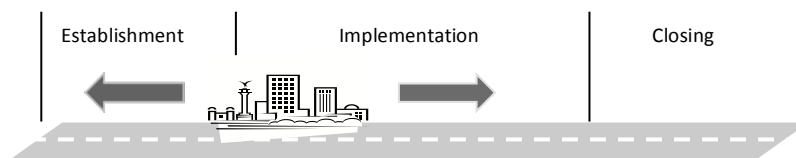


The ‘vehicle’ icon (with internal leaf) represents carbon emissions and indicates content pertaining to the Carbon Reduction Project.

The SAM and Carbon icons will be used individually at the start and conclusion of each project chapter and will be appropriately positioned along the learning highway as the relevant section progresses.

1.8.4 The Project Phases

As previously mentioned the projects comprised three key stages; being establishment, Implementation, and closing. Within the project chapters the ‘highway’ icon will be enhanced to indicate the project phase.



The SAM (city) and Carbon (vehicle) icons will progress along the ‘learning highway’ (set against the background phase indicator scale for additional clarity) to link the particular content under discussion to the appropriate point in the project life.

1.8.5 The presence of artefacts



The 'Stonehenge' symbol is used wherever an artifact has been included in the body of the thesis (rather than as an annex). Its presence indicates that the proceeding material is an actual artifact created through the life of the project and is included as an integral component of the thesis text and must be read in that context.

The image of Stonehenge is perhaps one of the most enduring English icons of all time and has relevance for me in terms of historical personal connections, this Doctoral study as a 'monumental' life undertaking, and in the representation of artefacts within this thesis.

To further assist the reader in recognising the 'change in content and style' introduced by the artefacts, they are each presented on a new page with 'ARTEFACT' in the header description.

1.8.6 Figures versus charts versus tables

The rich environment presented by this thesis, contains a significant number of different format elements. To reduce the volume of element 'terms' and thereby improve the readability of the thesis, the term 'Figure' has been consistently used to describe all charts, tables and figures.

1.8.7 Learning Journal excerpts



The 'book and pen' symbol indicates the use of an excerpt from my Learning Journal. This will generally be a selected representation of the text for that particular entry. The full text can be found in the complete Learning Journal provided at Annex A.

To conclude this section on Rich Modelling; the design of this thesis format brings together developments in various thesis structure approaches (i.e. rich modelling, explication, portfolio and artifact centric) consistent with contemporary thinking and developments in approaches to work based learning and action research.

1.9 Summary

This thesis describes the planning and development associated with two work based projects undertaken as part of the Doctor of Professional Studies program at the University of Southern Queensland. It also contains information about the progression of my personal/professional learning journey towards becoming an 'experienced' worker learner/practitioner researcher. In so doing it seeks to bring together the action, learning and knowledge associated with these projects and my learning journey.

The values that influenced my decision to engage with this program and the context for my work have been described earlier in this chapter. In summary the nature and focus of particular projects was established as a consequence of:

- My particular point of personal development and circumstance (described fully in Chapter Two)
- The needs of the host organisation as defined within the USQ Strategic Plan 2009-2013, Goal 9 - Enterprise
- The apparent synergy of the work based learning paradigm in facilitating an environment of academic and operational activity that would fulfill both the needs of the USQ (as the academic authority and as the business enterprise in which the work based projects would be delivered) and
- My own professional and personal development aspirations.

I see the resolution of these various stakeholders needs and interests occurring on the 'common ground' of my doctoral learning journey, and this negotiated space has for me, provided a legitimate proxy for the 'gap in the literature' approach that is frequently adopted by doctoral students for determining the focus of their research and studies.

My planning and development work has been undertaken using the principles and techniques of contemporary approaches to work based learning and action research supplemented with contemporary project management thinking and processes for operational implementation. This approach is consistent with the literature in each of these key areas (as set out earlier) and aligns with the institutional, professional and personal contexts in which I have operated.

Not only have the projects aligned with the contexts as previously described, including the contemporary academic methodologies and approaches, but the projects I have undertaken address current concerns and issues in facilities management. I will review, reflect and explore more fully on the implications of these projects for contemporary organisational management and facilities management in Chapter Five of this thesis.

Through that review and reflection, the broader understanding of the relationships and placement of the projects within the overall field of facilities management and in particular the relationships and dependencies between strategic asset management and carbon management will be considered, leading to a broader discussion of the role of 'portfolio mindedness'.

Additionally, I will also reflect on the implications, for research practice, of the approach/method I have used to manage what Dick (2002, p. 167) characterises as "the tension between local relevance and impact and the academic rigour and generalisability of the work/research".

In summary, this thesis sets out a journey of action, learning and knowledge that makes a contribution to professional practice and knowledge through:

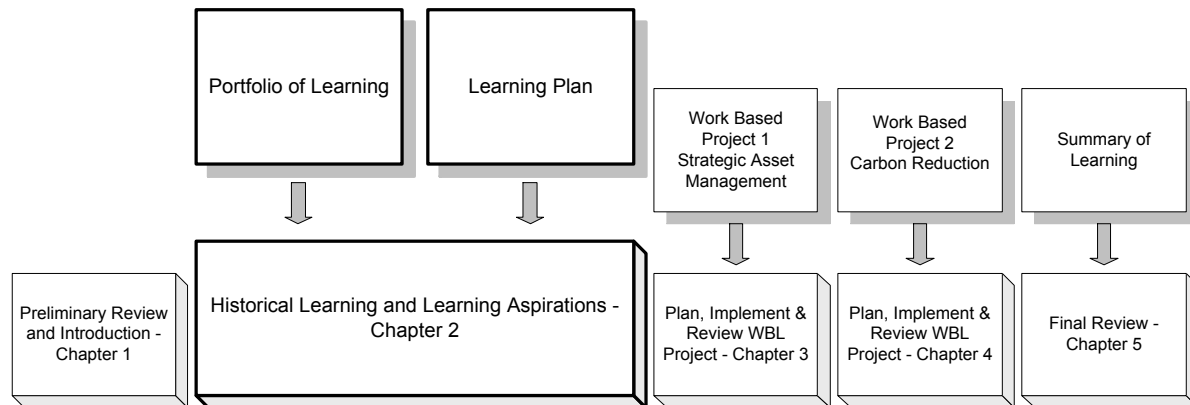
- The organisational, technical, systemic and social solutions arising from the strategic asset management and carbon reduction projects, contributing to the field of facilities management knowledge and practice.
- The reflections, observations and strategies developed for delivering the two strategic and significant work based learning projects within a large and complex institutional environment
- The development and application of the overarching approach, as well as associated tools and techniques created for the delivery of the projects, which will be of use for other researcher practitioners, especially working in the facilities management field.
- The development and design of this thesis as an appropriate form of representation for doctoral work based learning
- The institutional and personal learning arising from the undertaking of this doctoral journey and its associated planning and development work

With these objectives in view, the next Chapter starts at the beginning of my doctoral learning journey and sets out my initial work to establish a strong grounding (through reflections on my past experiences and achievements, and future learning aspirations) as the launch pad for my work based planning and development work.

2 Pre-project – Reflecting on my learning journey and mapping the way forward



USQ Doctor of Professional Studies Structure



Thesis Structure

2.1 Chapter outline

This Chapter of the Thesis has the following form:

- Introduction
- Reflecting on my learning and development and Artefact 1
- Linking the historical with the aspirational and Artefact 2
- Developing a model of the DPST elements, their relationships and Artefact 3
- The context for my projects
- Conclusion

2.2 Introduction

This Chapter will reflect on the more significant elements of my learning journey and experiences up to the time of submitting the Learning Portfolio in August 2009. Learnings and experiences through the undertaking of this study and associated project delivery are described elsewhere in the relevant sections of this thesis as results, reflections and conclusions.

Through that reflection, this Chapter will position my engagement with the DPST program (and the particular WBL projects selected as part of that engagement) with my personal learning and professional practice background essentially creating the professional and

personal contexts for my journey. The amalgam of these contexts is expressed via the Learning Portfolio provided at Artefact 1.

Having established the relevance and the logical evolution represented by my engagement with the DPST, there is discussion through the Learning Plan provided at Artefact 2, of what experience and learning is being targeted through the DPST and why that is relevant for my professional practice aspirations.

The Learning Plan goes on to introduce the workplace projects that might be available to deliver not only the DPST outcomes, but also strategically significant organisational benefits.

The Chapter then moves on to discuss the importance of understanding and identifying the mechanical elements of the DPST environment. The development of a documentation framework that identified and communicated the operational (real world operational project delivery) document elements and the academic elements (i.e. reports, journals, artefacts) was a milestone. This is described in the DPST 'Getting Started' Paper provided at Artefact 3.

Finally, the Chapter finishes with a summary of the organisational and personal context for the projects and a formal conclusion section, summarising the key points from the chapter.

2.3 The integration of artefacts

The artefacts embedded in this section provide a chronological progression of the project itself through the use of the documents created at the time.

The artefacts are included in their original unedited form and are an integral element of this thesis; as such the contents of the artefact will not generally be reproduced elsewhere and must therefore be read in detail.

Each artefact will be discussed and placed in context within the project. This will be achieved by the inclusion of an introduction section 'sandwiching' the actual artefacts.

Where appropriate, additional commentary will be included linking the artefacts and providing further content, critical review and references to supporting documents provided within the annexes and/or learning journal entries.

2.4 Reflecting on my learning and development, and Artefact 1

The development of the Learning Portfolio (provided at Artefact 1) was the first deliverable required by the DPST program. At the outset, the requirements of this document, and to some extent the value, were underestimated. However, as work progressed on the Learning

Portfolio the value of the reflection (required to develop the document) emerged and for me, the personal value of the Learning Portfolio was that it provided:

- An instrument to recall and to document professional practice achievements of the past 10 - 20 years
- An instrument to identify patterns and themes and from those observations, identify areas of professional strength and weakness
- An opportunity to reflect on and position historical behaviour within an academic frame of reference; in my case The Johari Windows Model was used (referenced in the Artefact).
- An opportunity to further test oneself through independent review and validation of those experiences and competencies
- An instrument to consider the current personal and professional environment
- An opportunity to consider personal, academic and professional goals; and
- An opportunity to develop a strategy and a delivery mechanism for achieving those goals

The Learning Portfolio develops the logical connection between the past, present and future and concludes with a preliminary discussion of the proposed projects (aspirational future) and leads on to the development of the Learning Plan, providing an expanded consideration and detailing of the projects and intended learning.

Post project reflection on the Learning Portfolio and the Learning Plan is provided in Chapter Five.

2.4.1 Artefact 1



Learning Portfolio

Name: David Michael Povey

Address: *(blanked for privacy)*

Home Telephone: *(blanked for privacy)*

Mobile Telephone: *(blanked for privacy)*

Office Email: *(blanked for privacy)*

Home Email: *(blanked for privacy)*

Employer: University of Southern Queensland, Toowoomba, QLD 4350

Employer Telephone: 07 4631515

Award being sought: Doctor of Professional Studies

Portfolio Draft: ver. 3a

Date: 08 August 2009

Proposed start date: June 2009

Introduction

Welcome to my portfolio submission.

This document is prepared in response to the requirements of the Doctor of Professional Studies Degree. In developing this portfolio I have been required to dig deep and consider various events and stages of my professional and personal life, and to consider those events with a much more rigorous focus than I had ever applied before. The consequence of which is that I have learnt more about myself through this process than I ever expected, and also I have found a logical thread running through my life that has made some sense of the events leading up to today. It is fair to say that I had considered most of my life to be a product of circumstances rather than design, although I do acknowledge my own role (as we all must ultimately) in making various life choices along the way, both good and bad. Now, as I review and reflect, it appears to have been a logical evolution, shaped by circumstance certainly, but not perhaps driven by it as I initially thought.

In the following sections I will provide both factual and contextual information demonstrating how my relevant life experience, subsequent reflection and learning meet the five principles of recognised prior learning (RPL). Part B will provide an overview of my life, identifying key developmental milestones and discussing those in the context of my personal development and associated reflection, learning, application and engagement with the subsequent learning opportunities. This will be discussed using the Johari Window self awareness tool (Luft and Ingham, 1955). Part C describes my education, training and relevant work based learning and experience using 'Blooms Taxonomy' as a reference framework². Part D presents a preliminary Learning Plan consistent with the portfolio claim and my professional development aspirations.

Life Story and learning experience

I was born in Downend; a quiet suburb of Bristol, in the UK in 1961. My parents were ordinary working class folks with traditional values regarding morals and work ethics. I recall as a child my parents both working two jobs to 'make ends meet'. In part their value sets had been acquired during their military service; they were both in the Royal Air Force and indeed this is how they met.

From an early age my life has been about work and duty. I have always felt the desire and obligation to work hard and to do my share. I generally shied away from leadership opportunities as a youth and it wasn't until later life that I began to develop self confidence and ambition.

My first indication that I might be capable of assuming a higher level of responsibility came at junior school (age 10) when I was appointed Head Boy. I possessed leadership qualities

² The reference for Blooms Taxonomy was taken from <http://www.businessballs.com/bloomstaxonomyoflearningdomains.htm>

that were apparent to the teaching staff but not to me, consequently they may be described using Johari Quadrant theory as being in the 'blind self' quadrant. When reflecting on my surprise at this award and referencing this against the typical factors that may classify the 'blind self' quadrant I conclude that it was through a lack of confidence and peer encouragement that I had no awareness of my potential for the Head Boy appointment. The appointment as Head Boy was my first milestone in developing self confidence and leadership competencies.

At age 11 I started secondary education at Kingsfield Grammar School, later to become Kingsfield Comprehensive under an initiative of the Government of the day. This was a very different experience as the school required a significantly higher level of self management than I had encountered previously. The size of the school also restricted the opportunity for staff and student interaction and I noticed a distinct distancing in the teacher/pupil relationship. The necessity and benefits of proactivity, self management and good communication were quickly apparent and I regularly observed pupils that were not forthcoming being overlooked. I resolved to be proactive in the classroom and I engaged with the teaching staff as much as I reasonably could. Reflecting back on that time it was a deliberate effort to expand the 'open' quadrant of the Johari Window.

On completion of 5 years at Kingsfield I moved into the world of adult employment. Societal and family expectations were that I should go directly into the workplace either as an apprentice or by joining the military. I accepted an apprenticeship at Satchwell Control Systems, part of the GEC group. In fact it was titled traineeship, as it was three years duration and not four. I thrived in that environment and quickly settled into the company culture. Satchwell was an enlightened organisation and perhaps ahead of its time in the way it treated its employees with respect and empowerment. During this period I was able to continue studying and attended Technical College on day and evening release to gain various trade and technical certificates (described later). I progressed through the various departments and levels within the Bristol Office and ultimately held the post of Manager Projects specialising in Building Automation Systems (BAS). As I reflect on my time at Satchwell I can see that the frames of my Johari window changed their proportions as time passed and I and others became more aware of my own abilities. Initially, I had a smaller 'open quadrant' as I was something of an unknown, coupled with a large 'unknown self' quadrant as my confidence and ability to perform in that diverse technical environment was not understood by me. I consciously elected to be as open and honest about my skills and competencies as possible in order to avoid embarrassment and also to elicit the best training possible, and so I conclude that the 'hidden self' quadrant would have been relatively small. My time at Satchwell proved to me that I could perform well in the world of adult employment and formed the foundations of my subsequent career path in Facilities Management.

After several years at Satchwell, I moved to competing companies, including Staefa Controls, Landis and Gyr, and York International. I held various positions within these companies but predominantly in the technical sales area. Contrary to traditional sales roles the technical sales allowed me to reconcile my engineering skills with the freedom and autonomy of being mobile. During this period I learnt about customer focus, human relations skills and techniques, self management, records management, technical writing and being results focused. Reflecting on this time, I can conclude that I was operating a flexible Johari Window, in that I would consciously manage the quadrant proportions according to my audience. A fellow team member would see a dominant 'open quadrant' whereas a contractor client would see more of the 'hidden self' quadrant, adjusted over time as trust and experience developed. At the end of this period I understood that I preferred technical management over the independent sales role. Consequently, I sought to develop my management and business related skills and to return to a management position.

This opportunity came with a return to Satchwell as they offered me a position in GEC (NZ) Ltd as the Branch Manager in Porirua. GEC (NZ) Ltd requested somebody to introduce and promote the BAS product in NZ. I decided this was an exciting opportunity and would be good experience for me both professionally and personally. As it transpired, the development opportunities came from unexpected sources. Unlike its UK parent, the company was run as if it were privately owned. The business unit supporting the BAS products consisted of 2.5 FTE, including myself; stock holding was nil and everything was 'order on demand' via the UK with lead times between 6 and 8 weeks; there was no demonstration kit or samples. After 12 months of trying to overcome these challenges my frustration with the unwillingness to invest and support the BAS was overwhelming and I was ready to leave. Notwithstanding that frustration, the overall management experience in that difficult environment had provided me with growth and learning opportunities; in particular, corporate culture, supply chain management and human relations.

From GEC (NZ) Ltd, I joined the RNZAF as an Officer Cadet leading to a Works Officer posting on graduation. Works Officer's are responsible for the built Facilities at an air base, including the runway. Basic Officer Training was perhaps one of the most enjoyable periods of my life. It was constantly challenging, focused on achieving the goals of the training, clear, logical, non-political and gave one a sense of self worth and pride in being assessed as worthy to be part of the history, culture and ethos that is the modern day RNZAF. I graduated top of class; the first time a Works Officer had ever done so (refer Annex C). Through this period I learnt much about myself, particularly the diversity and volume of work that I could process, the level of responsibility that I could effectively assume and perform at, and my ability to self plan and time manage. As I reflect on this experience I note some parallels with my school days, in that I never anticipated graduating of class. Analysing this repeated self-underestimation, I conclude that the new and diverse military environment had modified my Johari Window consistent with Johari theory as applied in a new team environment. In particular, the Open quadrant was small as others knew little about me, the Blind quadrant

was also small for similar reasons, the Unknown quadrant was large due to my uncertainty about the volume and diversity of activity to be undertaken and my ability to perform at the required level, and the Hidden quadrant was large as I was operating in a self-protection mode in order to increase my chances of successfully completing officer training.

In summary I moved around NZ serving in different roles within the Works Flights at RNZAF Ohakea, RNZAF Auckland, RNZAF Wigram, RNZAF Shelley Bay and Defence HQ in Wellington. I was privileged to serve in the Multinational Force and Observers in the Sinai Egypt for 13 months. I also participated in various exchange opportunities with the RAAF. My final roles were in Wellington based at Defence HQ serving as 'Deputy Director Land and Facilities Management' and finally 'Acting Director Land and Facilities Management' (ADLFM). At Annex F, I have included a copy of my officer evaluation during this time for context. The Director Land and Facilities Management position is the most senior post available within the Works and Services Branch of the NZ Military and involved tri-service coordination of land, facilities and infrastructure related projects and policy. My appointment to this senior leadership role prompted me to self reflect and through some basic SWOT analysis I identified some intellectual and professional growth opportunities and developed a learning plan. Consequently, I started a 'Master of Property Studies' Degree at Lincoln University, NZ and I became a member of the Education Committee of the Property Institute of New Zealand (PINZ). I had obtained professional practice registration with PINZ some years earlier (refer Annex J).

Three years later I was head hunted for a position within the New Zealand Fire Service (NZFS) as 'National Property Manager'. This seemed like an appropriate move to build upon the various experiences, studies and learning of the past 3 years. The role involved the stewardship of a portfolio of 564 fire stations across NZ, including estates policy development, asset management planning, maintenance advice, contract development, refurbishment/alterations/extension projects, new builds, acquisitions and disposals. This activity was set in an intensely political environment at all levels within the organisation. During this period I was able to integrate my study and work obligations and my final dissertation was based on benchmarking using the NZFS portfolio data.

In July 2004, I accepted the role of 'Facilities Manager' at Victoria University of Wellington (VUW). This role was 2iC to the 'Director, FM' and was later retitled to 'Deputy Director FM'. This role sharpened my skills in the areas of contract development and management, Change Management, Strategic Asset Management and Emergency Response. I also obtained significant experience in managing/dealing with people at all levels during my time at VUW.

In April 2008 I moved to the University of Southern Queensland (USQ) to the newly created role of Group Manager, Facilities Management. This role has overall responsibility for all

Facilities Management³ planning and operations at USQ and provides a leadership role to the previously fragmented departments that make up the FM group. This is a senior leadership position and contributes directly to the strategic planning for the University.

Summary

My current role as a member of the USQ senior leadership team provides me with organisational positioning to support my engagement with the DPST degree program (at the required Doctoral level) through daily operations, and the opportunity to link significant high level projects to the work based learning component of the DPST program.

The preparation of this portfolio and the associated reflection has also helped to crystallise my view of the future and identified some areas of development if I am to achieve my longer term goal of fulfilling a more generalist management role at the level of CEO or COO. The synergy between the DPST program and the opportunities provided by my current position will enable me to undertake that development as an integral part of the DPST program.

My career to date has been a steady progression, albeit not always linear. This has provided a solid foundation for personal and professional development, to the extent that I routinely review and assess my own approach and performance in various contexts. This self awareness and reflection compliments the professional development I have achieved in the field of Facilities Management and underpins my participation in the DPST program. In Part C I will expand upon the specific professional development I have achieved and link it with my overall career and personal development. These three elements together form the basis of my RPL claim.

Education, training and experience

(i) Assessed, certified education and training

The primary focus of this section is the most recent formal and professional education activity undertaken. I have included for context details of my earlier education and qualifications at Annex A and copies of general evidence at Annex C.

Master of Property Studies, with Distinction; 2003, Lincoln University, NZ

I first became aware of the Master of Property Studies in 1997 and quickly recognised that it provided a very credible and solid academic platform of direct relevance to my chosen career in Facilities and Property Management. In particular, I hoped that it would position

³ Facilities Management has responsibility for providing a built environment appropriate to the current and future needs of the organisation. This includes buildings, grounds, roads, infrastructure, maintenance and servicing; plus space planning and allocation, security and printing services.

me for the highest 'Property' role in the NZDF, being Director of Land and facilities Management.

The aim of the degree as espoused by Lincoln University is to produce graduates employable at the highest levels of the property industry who are capable of making sound, reasoned and well-informed judgement regarding all types of property assets. It focuses on a comprehensive understanding of property economics and finance and develops the knowledge and skills to evaluate and manage property as both individual and assets and portfolios.

The degree encourages participants from different professional backgrounds and is structured to benefit any professional in the property or related field requiring a comprehensive and professionally challenging masters-level degree. The diversity of my fellow students was especially beneficial for me and I learnt a great deal from the regarding commercial property development and management practice. It also gave me the opportunity via the created networks to visit other facilities and projects to observe both design and construction elements and systems and practice.

This degree is by examination only and is designed to be studied part-time, off-campus. The course of study is 160 credits made up of 6 courses each worth 20 credits, plus a dissertation worth 40 credits.

Students are expected to complete the Master of Property Studies within four years⁴ and usually undertake one course each semester.

Completion of the degree is based upon the successful completion of the following courses:

VAPM 671 Property Investment and Portfolio Analysis

This course considers investment performance criteria and techniques for evaluating both individual property investments and property portfolios. It also includes the structure of various property vehicles and the application of portfolio theory in the analysis of risk and return. I was able to apply this knowledge in my property acquisition activities for the NZFS.

VAPM 672 Property Market Analysis

This course focused on the advanced study of urban property markets, including their causation, operation and the techniques available for their analysis and interpretation. In my roles at NZDF and NZFS it was difficult to apply this knowledge, largely as a result of the mission focus (not for profit) and the general unwillingness of 'Operational Staff' to consider the idea that there might be value in aligning property procurement and disposal with the movement of the Property Market, where such alignment would not compromise operational service levels.

⁴ Taken from Lincoln University Web Site: <http://www.lincoln.ac.nz/story3759.html?#courseOfStudy>

VAPM 673 Property Asset Management

This course involved an in-depth study of strategic property asset management concepts, theories and techniques as applied to individual properties, property investment portfolios and in a corporate real estate setting. The corporate real estate setting made this directly relevant and provided me with knowledge that I had not previously been aware of. It allowed me to better understand the dynamics of an organisation; to identify the various elements and understand their needs; this in turn allowed me to take a proactive leadership role in anticipating those needs and to better position Facilities Management as a strategic enabler. This was particularly so at Victoria University of Wellington where I introduced the principles of Strategic Asset Management and associated predictive modelling and financial forecasting (refer Annexes T and U).

VAPM 674 Property Development

This course considered the property development process, including analysis of demographic, economic and socio-political forces and their effects, the options for and process of project delivery, and the assessment of property development outcomes, within a risk environment. This again was directly relevant and introduced me to some delivery vehicles that I had not previously been involved with. One example of that is the Guaranteed Maximum Price (GMP) contract.

BMGT 671 Leadership in Organisations

I elected to take this course in lieu of FINC 671 – Corporate Finance. I did not consider FINC 671 to be particularly beneficial as I already had extensive exposure to corporate finance from my involvement with NZDF, plus a large proportion of the material within the course had been covered in the other corporate real estate and property investment papers. I sought and was granted permission to substitute FINC 671 for BMGT 671. I considered that the leadership course would be more beneficial in achieving my long term goals and that it would equip me with a critical set of people and leadership skills and knowledge.

This course considered numerous aspects of leadership in an organisational context and included; the nature of leadership, traits and skills of leadership, leadership as reading the environment: situational and contingency theories, leadership as transaction, leadership as transformation, a diagnostic understanding of human performance, leadership at the staff selection stage, training, socialisation and creating a culture, managing teamwork, performance management and work motivation, making the tough decisions - restructuring and saying goodbye, self-care and maintaining balance.

This course was particularly useful in my time at NZFS, VUW and now at USQ. At all three organisations I have been involved in change management processes that have utilised my learning from this course. In addition the knowledge gained has helped me to adapt to, and

be successful within, the complex political and dynamic environments that exist within Universities.

COMP 671 Information Technology

This course focused on the organisational use of Information Systems, the Systems Development Life Cycle, end-user computing, outsourcing, project planning and project management, data warehousing and data mining, architectures of information systems and the information technology on which those information systems are implemented, integrated applications, security, cryptographic security, the Internet and electronic commerce and Information Systems as enablers of strategy.

At the time this course was extremely useful as I was heavily involved in the implementation of a JD Edwards enterprise resource planning (ERP) system. My focus was on the adaptation and integration of the standard JDE 'out of the box' solution for the creation of a National Property Database and asset register for the NZFS. Given this was an enterprise wide system I also sought to introduce extra functionality in regard to financial processing, forecasting, lease management, contact database and so on. This course also gave me the technical platform to confidently engage in a similar project at VUW and again at USQ as I introduced BEIMS⁵ software into the Facilities Management Division there.

Dissertation "Determining Portfolio Performance in the New Zealand Fire Service"

The dissertation brought together all of the study and projects I had previously worked on and it was a great opportunity for me to do something of significant benefit for the organisation. Determining firstly the performance and then the efficiency of the property portfolio provided a useful tool for strategic planning and also encouraged a proactive approach to NZFS property management.

In the course of developing the dissertation I learnt an enormous amount about benchmarking and the use of key performance indicators. The dissertation formed a platform for the work I did at NZFS and subsequently undertook at VUW by introducing Strategic Asset Management (SAM), plus the work I am currently engaged with at USQ in regard to improved reporting via KPI's and enhanced participation in the Tertiary Education Facilities Management Association's annual benchmarking exercise.

Summary

This Masters was undertaken at a time when I held senior roles within the NZDF and the NZFS and I completed the program in four years. I received the degree in May 2003 and I have actively applied much the learning's in different professional settings over the past 9

⁵ BEIMS is a Facilities Management software package that provides an asset database, maintenance and capital job tracking and creation, and various management and operational reporting functions.

years. This Masters program constitutes the major component (7 points) of my RPL claim as detailed in Part D.

Green Star Accredited Professional Exam

This professional accreditation is operated by the Green Building Council (GBC) of Australia and allows the individual to participate as a member of a project team engaged in a construction project seeking a Green Building rating from the GBC. The exam is externally managed and involves testing the applicant's familiarity and understanding of the GBC Green Building Guide. Involvement with GBC is consistent with my personal environmental interests and my USQ roles both as Group Manager and Chair, Environment and Sustainability Committee.

Coordinated Incident Management System Level 4 (CIMS), NZ

This course provides training and scenario based experience in emergency management, using the coordinated incident management system model in use by the NZ emergency services and military. This course was part of my strategy for introducing an emergency management capability into VUW and my attendance was designed not only to develop my own knowledge and skills but also to lead by example and demonstrate a senior commitment to emergency preparedness. I have included at Annex L, a copy of a General Staff Award for Excellence that I received for my efforts in this area.

Summary

The Green Star and the CIMS programs (refer Annexes I and H respectively) represent professional development, undertaken at a time when I held responsibilities for initiatives in these areas. I am not making a specific RPL claim in relation to these programs. I have included for context only a summary of other professional development and training courses (refer Annex B).

(ii) Work based experience

In this section I will highlight recent work based experiences that highlight my readiness to undertake the learning plan set out in Part E. This section will also evidence consistent development of personal and professional growth to date, clearly and logically connecting that growth with the proposed learning plan. It will also identify relevant linkages between the formally assessed education and the application of this knowledge and the subsequent review, evaluation and learning derived. I will present this evidence against a framework of SWOT analysis. These experiences are incorporated into my RPL claim at Part D.

University of Southern Queensland; 2008 to current

Context

I arrived at USQ on 21 April 2008. My position was a new one, or more correctly the re-establishment of a previously disestablished role some years earlier. At the time the University was embarking on a restructuring project named 'Realising our Potential' or RoP as it was commonly known.

Facilities Management was the first Group to engage with RoP and was perhaps one of the 'cleanest' groups to deal with in terms of identifying and delivering on the desired RoP outcomes. The desired outcomes had been developed largely on the recommendations of an external evaluation prepared by Mr. Sam Ragussa an FM consultant and former Director FM at Griffiths University. For the University, FM was required to deliver on 43 recommended actions arising from an independent review of FM. The more significant items included the introduction of strategic asset management, standards and policy development, space auditing and management, improved project management, and improved communication. For FM staff the biggest challenges centred on emotional and equity issues related to redundancies, the uncertainty and mistrust created by the process and in particular the belief that RoP was a stepping stone to the full outsourcing of FM, and for some a concern that FM could not adequately maintain the University under the new model.

As a result of the perceived conflict between the University and the FM staff, the atmosphere within FM was one of general hostility and despondency. However, there were a number of key personnel that genuinely saw RoP as an opportunity for FM to move to a more efficient and professional model.

Assessment

My initial evaluation of the situation identified the following:

Strengths:	Weaknesses:
<ul style="list-style-type: none"> • Some staff very motivated, displaying a sense of pride in themselves and the University and a sense of optimism for the future • Basic structure was in place • Strong support from upper management (COO) • Clear set of outcomes to achieve • Being a new position there would be some flexibility with boundaries 	<ul style="list-style-type: none"> • Some staff were apathetic, disengaged and simply looking out for themselves • Some of the staff was actively engaged in disruptive behaviour such as open criticism, scathing, not attending communication or development activity, and regularly taking sick leave. • A small number of RoP outcomes such as the removal of portering services, did not represent the best solution in my view.

<ul style="list-style-type: none"> • The new position was included as part of the Senior Leadership Committee (vital if FM is to be proactive as a business enabler) and signaled understanding and commitment from the Vice Chancellor and COO • My newness to USQ coupled with the flexible boundaries might give me a window of opportunity in which I might get things done more easily • Alignment of the required outcomes with my previous experience and competencies allowed me to begin with an initial understanding of likely strategies, acknowledging the detail was not defined. 	<ul style="list-style-type: none"> • Incomplete separation of previous responsibilities and transfer of linkages from the CFO (who previously headed up both FM and Finance) • Budget reduction targets may limit development funding • ‘Silo’ mentality within FM • Mistrust within groups and group tiers • No confidence in HR • Nobody within FM had been part of an FM Group elsewhere and had the benefit of knowing how a functional group might look, feel and operate. Ownership and communication of the vision would not be delegated for some time.
<p>Opportunities:</p> <ul style="list-style-type: none"> • Redistribute areas of responsibility to assist in defining roles • Revise the structure to allow more focus on key development areas • FM to contribute at the strategic level and become a business enabler • Through rationalisation and removal of inefficiencies, maintain or improve apparent service levels to the USQ community • Develop team work, cooperation and communication within FM, and between FM and the USQ community • Introduce a customer service focus • Develop an understanding of FM and individual contributions to the Strategic Goals of the University • Contribute to the positive development of HR processes and capabilities in the wider USQ environment, based upon my experience and learning from VUW of Wellington, NZ 	<p>Threats:</p> <ul style="list-style-type: none"> • Low morale and disaffected employees consistently undermining initiatives • That I may make bad decisions through a lack of familiarity with USQ • Failure to build key relationships • USQ HR processes, knowledge and experience were not particularly well suited to support the RoP project; i.e. BUILD forms, redundancy selection, performance management, redundancy negotiation and subsequent on cost, separation of HR and line management leading to an undermining management. • Lack of familiarity with legislation, custom and practice in the Australian industrial environment. • Budget reduction targets may limit ability to deliver on new initiatives and team building activity

<ul style="list-style-type: none"> Through quality leadership develop an environment of trust and self worth within FM 	
---	--

Interventions

My personal and professional experience, education and development allowed me to develop a comprehensive, planned, strategic response to the issues to ensure that the objectives of the organisation and the staff were achieved. Having consideration to the identified opportunities from my SWOT analysis and the required FM deliverables of the RoP project, the scope of my interventions over the last 12 months have focus on the following key areas :

Opportunity	Intervention
Redistribute areas of responsibility to assist in defining roles	Redistributed specific responsibilities between positions to exploit synergies and similar activity/skill sets
Revise the structure to allow more focus on key development areas	Developed a revised organisational structure to support the key initiatives of Strategic Asset Management and improved contract management. I also created an Administration Manager role to support staff and team development activity.
FM to contribute at the strategic level and become a business enabler	I have participated in several strategic projects and reviews; Springfield Building 2; Student accommodation proposal at Fraser Coast Campus; USQ Strategic Plan development; Project AUQA; Environment and Sustainability Committee; Sustainable Industry Park project group. Conducted a review of the pool car fleet resulting in the introduction of smaller greener vehicles adorned with USQ marketing livery.
Through rationalisation and removal of inefficiencies, maintain or improve apparent service levels to the USQ community	Introduction of an online client interface for logging and tracking maintenance requests. Improvements to the FM web pages. Increased engagement and consultation with faculty Managers. Positive response to

	support requests. Improvements to various service contract specifications; in particular cleaning. Encouraged obstructive staff to accept early retirement opportunities available under the RoP project.
Develop team work, cooperation and communication within FM, and between FM and the USQ community	Introduced a structured meeting hierarchy to ensure communication occurred at all levels within FM at regular intervals. Conducted a planned series of 'whole of FM' workshops designed to build team work and understanding of the strategic goals and FM's contribution to those. Encouraged FM managers and supervisors to attend various meetings and projects as the FM representative.
Introduce a customer service focus	Restructured admin team, cross trained to ensure customer service levels maintained in all areas of interaction. Online request system introduced. Embedded service culture via workshops. Online booking system for pool cars under development.
Develop an understanding of FM and individual contributions to the Strategic Goals of the University	Introduction and group discussion of the USQ strategic plan, leading to a workshop during which all FM staff developed ideas about how FM can contribute to each goal. From there I introduced the individual performance plans (USQ BUILD) and incorporated 2 or 3 items from the strategic contribution list for each individual, thereby completing the linkage between individual contribution and strategic plan.
Contribute to the positive development of HR processes and capabilities in the wider USQ environment, based upon my experience and learning from VUW of Wellington, NZ	Modification of the standard USQ BUILD form. In consultation with HR, realigned the use of the BUILD process for performance managing (negative issues) to allow the positive development focus to be separate from the negative performance management process

Results

The results of these interventions are that:

- FM staff now has a strong sense of team and corporate contribution (refer Annex C)
- Morale is positive (refer Annex C)
- Linkages between the strategic plan and individual contributions are clear
- An FM operational plan has been developed connecting strategic goals to operational outputs and budget forecasting (refer extract at Annex M)
- Team workshops occur every 3 months
- A training matrix (refer Annex D) has been established to ensure all staff have appropriate training and development opportunity
- All FM staff completed the internal BUILD process at the start of 2009
- FM is perceived as a professional service provider with service levels increasing over the 2008/2009 period
- Space audits have been undertaken at all three campuses (refer Annex O)
- A proposed \$50M investment at Springfield Campus was deferred on the basis of my advice regarding space utilisation and capacity of the existing buildings (refer Annex P)
- Space Policy amended and approved
- Space request template introduced

Learning and development outcomes

There are several dimensions to my key learnings and professional development during the USQ work based experience. I will focus on two of the most significant. The first of these dimensions relates to my role as a member of the senior executive team of a large organization with specialist responsibility for the whole area of assets and facilities management. This has meant that I have been working on giving effect, in the FM Division, to a comprehensive facilities management reform agenda, incorporating the major components of contemporary facilities management theory and practice, at the same time as bringing to the senior executive table the ramifications of asset and facilities management within the mainstream of organization strategy and operations. This has required that I operate in multiple roles, bridging the technical and operational as well as the specialist and generalist perspectives. This setting is typical of the challenges confronting many discipline specialists in organisational settings as they endeavour to foster the contribution of their discipline in harmony with the overarching objectives of the whole organization. My success during this period is reflected in the evidence previously presented and I believe demonstrates my success in learning to perform consistent with the attributes of a superior manager as identified by (Bradberry, 2009) in his study of 150,000 managers reviewed against 30 key competency areas. Bradbury identified three critical habits. 1. The

superior manager gets everybody headed in the right direction from the very beginning, 2. The superior manager maintains a steady flow of communication, and 3. The superior manager ensures that feedback both positive and negative is delivered in small digestible doses.

The second dimension of my learning goes to the issue of translating 'what' knowledge in relation to the major elements of facilities management, into 'how' knowledge at a broad strategic scale in a large complex organisational setting. Blooms Taxonomy of Learning Domains is a useful framework here. Concepts, theories and principles of Strategic Asset Management, Portfolio Management, Space Management, Maintenance Management, Contracting and Service Delivery represent a broad portfolio of industry knowledge that I have been developing vigorously over the past two decades. I have acquired the requisite technical and theoretical skills previously as detailed in Part C and I have been responsible for practical applications of one or another of these specific expertise areas in previous assignments as described in Part B. In this setting I have been directly responsible for a comprehensive range of discipline/expertise specialisations and I have been directly responsible for assisting other senior officers who report to me, to commence the development of meaningful, operational approaches to give effect to each of these key areas. In essence, this has been a major action learning project and involving all of the elements of action learning as described by Revans (1982) and developed further by the World Institute for Action Learning⁶. In addition to the technical level of knowledge previously required, I have had to build the capability to do this 'through' other staff and to grow their own professionalism in the conversion of 'what' to 'how'. Again, this reflects a high level of professional management and is evidenced by the results of June 2009 FM Health Check survey (refer Annex N) as well as the project plan referenced in the preceding material.

Victoria University of Wellington (VUW), NZ; 2004 to 2008

Context

I arrived at VUW in JUL 2004. At that time, the University had a limited Emergency Response (EM) response capability comprising a small team of volunteers established in 1976, known as Vic Rescue, committed to respond to any (non-security) University emergency. They were in essence akin to a combined onsite Fire/Ambulance unit with limited capabilities. The team leader for Vic Rescue was also the Fire and Emergency Coordinator (FEC) for the University and was a direct report to me as the Deputy Director of FM. He initially made me aware of risk presented by the local Wellington scenario in the event of a major earthquake. A major earthquake of Mw 7.6 is expected at anytime due to the 700 year return period. Consequently, I arranged a meeting with Rian van Schalkwyk, *Manager, Emergency Management*, Greater Wellington Regional Council to verify some of the information I had

⁶ The WIAL URL is: <http://www.wial.org>

been given. Rian provided me with some 'unofficial' projections for Wellington based on a magnitude 7.6 quake:

- 65% of CBD buildings would collapse or be unusable
- Power would be out for between 4-6 weeks and longer in suburban areas
- Potable water represents the biggest problem as the infrastructure crosses the Hutt Valley fault line in approximately 240 locations, consequently water may not be restored for 3 to 6 months.
- Road and rail access from/to the city will be completely destroyed and even a 4 wheel drive track would probably take 5 days to establish, given that all earth moving equipment will be focused on clearing the CBD and searching for survivors
- Road access would be prioritised to clear the CBD and to bring in Bulk food supplies as there is no production or significant storage in Wellington
- Logistical support would likely be provided via ships
- Fire resulting from gas pipe ruptures would be significant and fire crews would not be able to contain these, assuming they were able to access the buildings at all
- In real terms the University would not receive external support for some time

This information impressed upon me the strategic and operational significance of being prepared to respond to this scenario and I began the Emergency Management (EM) project in 2005.

Assessment

My initial evaluation of the situation identified the following:

Strengths:	Weaknesses:
<ul style="list-style-type: none"> • Existing Vic Rescue staff very motivated • Training of Vic Rescue staff was to an international standard • I had the authority to implement the changes required for an EM response capability within my existing budget • General support from FM staff and other individuals around the University • My previous military experience and competencies allowed me to begin with an initial understanding of likely strategies and solutions • I had the resources required to establish a basic EM structure if I could achieve staff engagement 	<ul style="list-style-type: none"> • Some staff were disinterested and didn't see the need for the project • Vic Rescue were volunteers and did not receive any financial compensation or support and in recent times received little investment in training and equipment. They did not feel valued • No budget allocated to EM • One junior staff member assigned to fire and emergency generally • Individuals not engaged with EQ preparedness at home or work

<ul style="list-style-type: none"> • My direct team were motivated 	<ul style="list-style-type: none"> • No training or exercise structure in place, with only Vic Rescue doing any training • Individuals were not comfortable to perform in the EM environment (immediacy, consequences, responsibility).
<p>Opportunities:</p> <ul style="list-style-type: none"> • Determine a set of service levels against various scenarios to guide planning and investment • Research, analyse and synthesise the various EM structures and systems available and develop a VUW package • Build into all Position Descriptions an obligation to participate in EM activities and perform a leadership role in the event of an EM incident • Establish structured and evolving training sessions and exercises • Raise the profile of EM preparedness • Bring in external training expertise for credibility and specialist knowledge • Use accredited facilitators for training sessions • Engage with the wider Wellington community to share resources and information (Community engagement opportunity for VUW) • Develop team work, cooperation and communication within the EM team and between them and the Wellington Emergency Management Office (WEMO) • Through the planning and increased understanding of EM preparedness, develop an understanding of business continuity risks and help to make the University more resilient • Contribute to the positive development of EM preparedness for individuals in the wider VUW environment • Through quality leadership develop an environment of trust and confidence within the EM team that will have secondary benefits in the 	<p>Threats:</p> <ul style="list-style-type: none"> • Unfamiliar to most staff • Staff may be unwilling to assume responsibility for making decisions in an emergency • Initial systems and structures must be within existing FM budget • Failure to build key relationships • Failure to appropriately engage senior leadership • Controlling the growth of the project. • Lack of familiarity with legislation, custom and practice in the Australian industrial environment. • Budget reduction targets may limit ability to deliver on new initiatives and team building activity

normal workplace <ul style="list-style-type: none"> Acknowledge and motivate Vic Rescue 	
---	--

Interventions

My personal and professional experience, education and development allowed me to develop a comprehensive, planned, response to the issues at both the strategic and operational levels. Having consideration to the identified opportunities from my SWOT analysis the scope of my interventions over the life of the project were:

Opportunity	Intervention
<ul style="list-style-type: none"> Determine a set of service (or capability) levels against various scenarios to guide planning and investment 	<ul style="list-style-type: none"> A set of initial assumptions and service level targets were developed and passed through the Senior Management Team (SMT) for endorsement. At that time there was little knowledge of or engagement with EM and consequently the endorsement was deferred back to the Dir FM.
<ul style="list-style-type: none"> Research, analyse and synthesise the various EM structures and systems available and develop a VUW package 	<ul style="list-style-type: none"> I reviewed my NZDF literature and identified a number of possible models and templates that might aid. I consulted with emergency services and learnt that they operated a model called Coordinated Incident Management System (CIMS). This system was in use across the whole country by all emergency services I engaged a training specialist to provide myself and the Fire and Emergency Coordinator (FEC) with a session on CIMS I undertook a desk top scenario using CIMS and identified areas of 'fat' in the model. I developed a version of CIMS that was leaner to suit VUW but could still integrate with and be understood by external agencies I developed a simple structure/responsibility chart to communicate roles and responsibilities (refer Annex R)
<ul style="list-style-type: none"> Build into all Position Descriptions an obligation to participate in EM activities and 	<ul style="list-style-type: none"> All FM PD's were modified to include an extra duty around EM HR were engaged to make a change in University PD's in regard to all University staff in an emergency

<p>perform a leadership role in the event of an EM incident</p>	<p>situation, in that any staff member may be seconded or tasked as required to meet the needs of the situation.</p> <ul style="list-style-type: none"> I introduced EM awareness into HR's staff induction training
<ul style="list-style-type: none"> Establish structured and evolving training sessions and exercises 	<ul style="list-style-type: none"> I tasked the FEC with developing a suite of training exercises and a supporting package of documents to aid staff in engaging with and benefiting from those exercises. Documents included info sheets on role, responsibilities, duties, how do I do it advice, structure, post exercise evaluation, observer sheets etc. Emphasis was placed on people understanding and being familiar with their own role before attending the exercise Training and exercise schedules were developed to include 3 events per year. One would be a desk top for the EM Team in the EOC, one would be a physical, integrated exercise using casualties for all EM response members and the third would be a whole of University exercise involving all facets of the response capability (Refer Annex R). The Vic Rescue team was already engaged in regular low level training exercises focused around urban search and rescue techniques. They were tasked to undertake this training publicly where possible and to widen the focus to include the full range of response capability based on the scenarios within the EM Response Plan Formal and externally accredited CIMS training was provided and this was embraced by staff. Not only did they understand the importance of this project but they saw CIMS and its potential wider application as a new and 'real' personal competency.
<ul style="list-style-type: none"> Raise the profile of EM preparedness 	<ul style="list-style-type: none"> EM advice and awareness of the University systems and capabilities were included in the HR staff induction briefings An EM web page was established with advice for individuals Vic Rescue participated in all public events such as

	<p>open day, careers day and orientation</p> <ul style="list-style-type: none"> • Vic Rescue training was undertaken during the day and in a public area wherever possible. This helped with raising awareness, gave staff and students confidence and also aided in ensuring a regular pool of volunteers was available • Water and food containers were provided to every staff member to be filled by them and kept in their office • EM kits were put together by Vic Rescue and offered for sale to staff at discounted prices
<ul style="list-style-type: none"> • Bring in external training expertise for credibility and specialist knowledge 	<ul style="list-style-type: none"> • Two different providers were sourced to ensure we had the most robust view of EM best practice. One was used for the CIMS training and the other was used to develop and assist with the exercise scenarios
<ul style="list-style-type: none"> • Use accredited facilitators for training sessions 	<ul style="list-style-type: none"> • Facilitators were selected for their credentials and credibility. One provided similar support and training to the NZ Fire Service and NZ Police, the other was the Emergency Management Academy of New Zealand
<ul style="list-style-type: none"> • Engage with the wider Wellington community to share resources and information (Community engagement opportunity for VUW) 	<ul style="list-style-type: none"> • Local Civil Defence group meetings were attended by the VUW FEC, where he was able to comment on and manage expectations around the accessibility of VUW resources in a major event • Numerous discussions were held with Wellington Regional Council regarding water supply restoration times (one of the biggest risks for VUW and Wellington) which led to a policy decision to install water tanks in all new buildings sufficient to service the needs of that facility for 5 days
<ul style="list-style-type: none"> • Develop team work, cooperation and communication within the EM team and between them and the Wellington Emergency Management Office (WEMO) 	<ul style="list-style-type: none"> • Contacts were identified in the Wellington Regional Council and also within WEMO and meetings were held regularly • WEMO personnel attended and acted as observers on a number of exercises
<ul style="list-style-type: none"> • Through the planning 	<ul style="list-style-type: none"> • Sinclair Knight Merz was engaged to undertake a

<p>and increased understanding of EM preparedness, develop an understanding of business continuity risks and improve the Universities preparedness and resilience</p>	<p>comprehensive evaluation of standby electrical capacity at VUW. FM identified services that could be shed during an emergency or reduced level of operation. GAP analysis was undertaken and a plan to introduce additional standby power capability was created and integrated into Capital funding programs</p>
<ul style="list-style-type: none"> • Contribute to the positive development of EM preparedness for individuals in the wider VUW environment 	<ul style="list-style-type: none"> • An EM web page was established with advice for individuals • Water and food containers were provided to every staff member to be filled by them and kept in their office • EM kits were put together by Vic Rescue and offered for sale to staff at discounted prices • Staff information and awareness sessions were held and various videos were played including “Academic Aftershocks” from the California State University, covering their 1994 earthquake • We produced walking time maps for staff indicating how long they should allow walking to various suburbs and linking that to clothing, footwear, food and water needs. For many it would be a significant undertaking
<ul style="list-style-type: none"> • Through quality leadership develop an environment of trust and confidence within the EM team that will have secondary benefits in the normal workplace 	<ul style="list-style-type: none"> • The earlier exercises rotated staff through the key positions in the incident team in order to best align capabilities with role. • Later exercises did not rotate staff but allocated primary and backup personnel to specific roles and these assignments were retained and consistent going forward. This gave staff an increased opportunity to improve in that role and to build self confidence. • Teamwork improved in all aspects of FM and the structured response to an event was applied in many non-critical situations, such as a burst water main. The benefit of a structured, risk prioritised approach supported by a team of relevant and empowered individuals was very clear
<ul style="list-style-type: none"> • Acknowledge and 	<ul style="list-style-type: none"> • Vic Rescue training was regularly undertaken during

motivate Vic Rescue	<p>week day lunch time to maximise exposure</p> <ul style="list-style-type: none"> • Vic Rescue became a standing part of university events such as orientation and open day • I allocated some operating and capital funds to Vic Rescue • Capital funds were used to upgrade and expand their equipment portfolio • Operating funds were used to send them on National Training exercises, team events, catering for training nights and staff awards • I made myself available to occasionally attend training events in the evening and at the weekends. I also attended team social functions • Morale increased significantly and when I left VUW the team was fully subscribed with 15 members and a further 10 on the waiting list
---------------------	--

Results

The results of these interventions are that:

- The University accepts at all levels the importance of EM preparedness (refer to Annex L)
- VUW have a robust emergency response capability (including physical resources, plans and procedures) that has provided the model for other NZ Universities
- Incident Management Training and exercise is an embedded part of the organisation
- EM Team positions are each supported by a minimum of two individuals and seen as core duties
- The university operates a fully functional EOC, connected to WEMO and local emergency services by direct radio and Sat Phone links.
- Food and water supplies are adequate to accommodate a 5 day interruption with water storage being introduced to new projects
- There is a capital program in place to redress gaps in standby power generation capability
- Initial response teams are well trained, exercised and confident in their duties
- University staff awareness is high and the EM capability has been seen as a positive act on the part of the employer
- Individuals are more aware of the risks and prepared in their home circumstances
- An annual allocation is made to maintain the EM capability

- Through the EM project, the need for comprehensive Business Continuity Planning became clear. Consequently an organisation wide BCP project was initiated
- A detailed review of the organisation's Insurance was undertaken with particular focus on Business Interruption (BI) cover. This was found to be inadequate in terms of the period of longevity for BI claims. The cover would expire before the University buildings could be rebuilt particularly in an environment where most of the Wellington CBD was destroyed and resources scarce.
- Recurrent funding provision, both Capital and Operating, is now made available to support EM and BCP initiatives

Learning and development outcomes

There were a number of learning and development outcomes through this project.

At the time, the concept of emergency management as a profession was emergent (Wilson and Oyola-Yemaiel, 2001) and particularly so within the tertiary sector in NZ. Previous activity in this area had been focused on general civil defence without specific focus on the particular immediate situation and needs of the University and then overlaid with consideration of Business Continuity. My first area of learning and development was the acquisition of sufficient knowledge to undertake this project. This required research across a diverse range of subjects, but in particular; the risk afforded by the Wellington earthquake and tsunami environment; the condition and composition of the VUW asset portfolio; identification of critical infrastructure and its capacity; identification of existing staff awareness and systems of engaging staff; awareness and attitudes of the senior executive; identification of internal priorities; levels of existing resource and capability. This data required considerable analysis, evaluation and synthesis in order to develop an implementation strategy. It involved the translation of 'what' knowledge in relation to the major elements of EM and BCP, into 'how' knowledge at both the operational and strategic levels in a large complex organisational setting. Concepts, theories and principles of Emergency Management and Business Continuity Management were new and have become very relevant aspects of Facilities Management and within the NZ University environment this project was considered 'leading edge'. I acquired the requisite technical and theoretical skills (as detailed in Part C). In this setting I have been directly responsible for a comprehensive range of discipline/expertise specialisations and I have been directly responsible for assisting other senior officers who report to me, to commence the development of meaningful, operational approaches to give effect to each of these key areas. This has been a major action learning project involving all of the elements of action learning. In addition to the technical level of knowledge acquired, I have had to build the capability to do this 'through' other staff and to grow their own professionalism in the conversion of 'what' to 'how'. Subsequent to completion of this project I was invited to present a 'case study' at the 2nd Annual Integrated Emergency Management Conference in

Wellington on 19-20 FEB 2007 (refer Annex S). I also hosted visits and enquiries from other NZ Universities that were seeking to establish similar capabilities.

The second area of learning and development relates to the implementation and embedding of the EM and BCP imperatives in a way that would be sustainable and politically acceptable to the organisation.

Having cognisance of the SMT response (deferral to Dir FM) to the service level paper, I reassessed my strategy and sought to identify significant elements that could be done within my immediate authority. Consequently the EM capability evolved quietly but consistently in the background and I was able to practically demonstrate that it was not a costly exercise to develop a significant EM response capability. The creation of the Emergency Operations Centre was done by the redesignation of an area of the FM store, essentially improving the space utilisation of the store and creating a significant, new and critical capability. Following completion of the EOC I created an opportunity to engage the VC and the Senior Leadership Team with the project by hosting a social opening with guests from Wellington Regional Council, the Emergency Management Office and local Emergency services. This created the Senior Leadership engagement that had previously been missing and allowed the project to increase in momentum.

In my role as Deputy Director FM with specialist responsibility for the organisation's ability to respond to and recover from a significant emergency or business disruption event, and as a member of the senior management team of a large organization, I had been working on giving effect, across the whole organisation, to a comprehensive EM and BCP capability being of strategic and operation significance, incorporating the major components of EM and BCP theory and practice. At the same time I was raising in the senior management forum the significance of EM and BCP (in particular the risks of not engaging with these areas as well as the strategic benefits of being proactive) within the mainstream of organization strategy and operations. This required that I operate in multiple roles, bridging the technical and administrative, the specialist and generalist, and the executive and management and the strategic and the operational perspectives. This setting is typical of the challenges confronting many discipline specialists in organisational settings as they endeavour to foster the contribution of their discipline in harmony with the overarching objectives of the whole organization. As mentioned in Part C, my success during this period was recognised by a General Staff Excellence Award (refer Annex L).

New Zealand Fire Service; 2001 to 2004

Context

In 2001 I accepted the position of National Property Manager at the National Service Centre (NSC) of the New Zealand Fire Service. This position formed part of the NSC Senior Management Team and had responsibility for a National portfolio of around 550 fire

stations. The NSC provided management and technical expertise in support of the NZFS National HQ which largely focused on Governance and specific Fire related operational issues.

Major property investment decisions were based on a business case application to the Chief Financial Officer (CFO) who worked closely with the National Commander. Minor property investment and operating costs were part of the aggregated responsibilities of the Regional Fire Commanders, and often delegated down to local Fire Chiefs. This environment resulted in a portfolio of buildings that varied considerably in terms of utility and condition. There were also inconsistent service levels being applied and used to justify funding. There were significant variances in use ranging from social centre to inner city apartments being leased to friends of the resident brigade; some had swimming pools or children's playgrounds, whilst others were nothing more than a single vehicle garage.

This was the beginning of my interest in portfolio performance where financial return was not the key driver and led to the topic selection for my dissertation as part of the Master of Property Studies programme, and the consequent development of a portfolio performance evaluation model for the New Zealand Fire Service.

The project brought together much of the study and work experience that I had to date and presented an opportunity for me to make a significant contribution to the strategic planning processes of the organisation.

The topic of portfolio management has traditionally been linked with investment management, and in many ways this is quite appropriate. The retention of a property portfolio is not something one does lightly, there has to be a purpose, a reason why, but financial return is not always the reason. In many public-sector organisations the property portfolio exists to facilitate an operational output. The extent to which the property contributes to those outputs may vary. For example, a residential housing portfolio may be the best example of a direct contribution as the residential property is the deliverable. A public library may be a step back from that as it is provided to facilitate a service or deliverable rather than be the deliverable. As the linkage to operational outputs becomes extended the focus on good property management may also assume less significance for the organisation, to the extent that the performance of the property element may be overlooked or given secondary importance.

Determining firstly the performance and then the efficiency of the property portfolio provides a useful tool for strategic planning and also encourages a proactive approach to public sector property management.

It was intended to develop a model that would aid in identifying 'problem' properties and assist in prioritising the efforts of the property personnel for whom I had responsibility. The performance of individual sites could also be represented as a monthly report against the

selected performance indicators, thereby raising the profile of property performance and encouraging a more proactive approach within the organisation. This would also bring some visibility to the widely varying standards being applied across the country.

If a robust performance model could be developed the consequences for the organisation's capital and operational funding processes might also be significant, with an improved ability to allocate on the basis of need or maximum benefit. The organisation would also have the opportunity to trial various structures for managing the properties to determine the most efficient and effective model.

It was also intended to determine whether the performance of the property is related to the level of operational activity. For that reason, the second part of the model was developed analogous to the traditional Modern Portfolio Theory⁷ model with the following substitutions; the site performance score is the individual property return and the operational demand is the market.

In the course of developing this model I learnt an enormous amount about benchmarking and the use of key performance indicators.

Assessment

My initial evaluation of the situation identified the following:

Strengths:	Weaknesses:
<ul style="list-style-type: none"> • Existing Property Dept staff were very competent and had considerable organisational knowledge • Good support from the General Manager of NSC for the project • Previous learnings from the NZDF would be helpful in this pseudo military environment and also for the parallel corporate real estate focus • Operational statistics were readily available • I was undertaking the Master of Property Studies at the time and that material was all directly relevant • I could use this project to satisfy the requirements for the MPropS 	<ul style="list-style-type: none"> • Staff were competent but disinterested. I was the third National Property Manager they had seen, with the previous two each lasting about a year • There was acceptance within the property unit that the Regional Commanders would do what they wanted and the best we could achieve was to influence them in some way, or more realistically, be there to undertake the work they required to ensure it was done properly • There was open hostility to the benchmarking project and the concept that I had any authority over the regional funds or that I should try to influence the

⁷ MPT was developed by Harry Markowitz and published under the title "Portfolio Selection" in the 1952 *Journal of Finance*. MPT suggests that rather than looking at the projected risk and return of one particular stock, an investor can benefit from diversification into many stocks and achieve a reduction level of risk across the whole portfolio.

<p>dissertation and in so doing ensure an additional level of rigour to the model</p>	<p>Regional Commanders decision making</p> <ul style="list-style-type: none"> • The political complexity of the environment • No condition data existed • The existing MS Access database was incomplete and had limited functionality
<p>Opportunities:</p> <ul style="list-style-type: none"> • Determine a set of service levels and standards upon which to base all new build and refurbishment projects • Raise the profile of the Property Unit and let it be seen to be a unit which adds value • In concert with an ICT project to introduce the JD Edwards ERP system, introduce a property management database and lease management module • Engage with the Unions in a positive way and develop relationships • Undertake a condition assessment of the portfolio • Develop a model to inform future planning for maintenance and capital programmes • Possibly introduce a different funding distribution model to represent utilisation and activity levels • Possibility to identify common activities and develop standing offers or centralise those services to ensure they were undertaken • Increase transparency and reduce incidence of redirected funding 	<p>Threats:</p> <ul style="list-style-type: none"> • Scope creep • Unable to acquire the data necessary • Selection of KPI's • The potential to create industrial issues was great. The two unions had an enormous hold on the uniform staff of the NZFS with 99.9% membership and they were proactive at identifying any item that might be leveraged to their benefit. They were also concerned that poor performing stations may lead to losses for their members. • Some staff at the National HQ did not support the NSC and actively sought to discredit its operation. The NSC had been established in 1998 and in that separation of governance and management functions, had taken a number of responsibilities away from senior long serving uniform staff. This change had not been effectively managed and resentment was clearly evident. In 2006 the NSC was disestablished and functions returned to the National HQ. • Given the diversity of the NZFS portfolio; locations, size and scale, operational activity levels, permanent or volunteer; was a single model even a reasonable thing to try and achieve?

Interventions

My personal and professional experience, education and development allowed me to develop a comprehensive, planned, response to the issues at both the strategic and operational levels. Having consideration to the identified opportunities from my SWOT analysis the scope of my interventions during my time at the NZFS were:

Opportunity	Intervention
<ul style="list-style-type: none"> Determine a set of service levels and standards upon which to base all new build and refurbishment projects 	<ul style="list-style-type: none"> I assessed the extent to which standard designs existed and the relevance of those. I distributed the standards to the Regional Commanders seeking feedback and comment both as a means to improve check content quality and appropriateness and also as a revalidation of the use of standards. I engaged a local architect to create a space database and query tool in order to identify some space metrics. He lifted data from 100 station designs and allocated the GFA against space types. Station establishments were added to create space per FTE metrics. These helped with the management of space expectations on future projects
<ul style="list-style-type: none"> Build the relationship with the National Commander and the CFO 	<ul style="list-style-type: none"> The National Commander also performed the role of the CEO. This often created a conflict of interest and it was clear that in some situations this was not the ideal blended role The National Commander clearly did not prioritise property as a strategic enabler and consequently my meetings with him were infrequent and short The CFO was supportive of the benchmarking performance project and made several years of financial data available to me
<ul style="list-style-type: none"> Raise the profile of the Property Unit and let it be seen to be a unit which adds value 	<ul style="list-style-type: none"> In addition to working on the modelling, we became actively involved in minor works (on behalf of the Regions), bringing additional quality and rigour to those projects and also releasing Regional staff to focus on more operational matters.

	<ul style="list-style-type: none"> I created a monthly report via the NSC GM, that was circulated to the Regional Commanders, National Commander and the CFO
<ul style="list-style-type: none"> In concert with an ICT project to introduce the JD Edwards ERP system, introduce a property management database and lease management module 	<ul style="list-style-type: none"> My focus was on the adaptation and integration of the standard JDE 'out of the box' solution for the creation of a National Property Database and asset register for the NZFS. Given this was an enterprise wide system I also sought to introduce extra functionality in regard to financial processing, forecasting, lease management and a contract database. My studies with COMP 671 Information technology were invaluable in this undertaking and allowed me to contribute meaningfully to both the specific and the broader project Much of the data required to populate the property database would be applied in the benchmarking performance model Given the tight scope constraints of the JDE implementation there was no willingness to consider developing the benchmarking model within that project, or to create the business intelligence dashboard that ideally be used to represent the outputs of the model
<ul style="list-style-type: none"> Engage with the Unions in a positive way and develop relationships 	<ul style="list-style-type: none"> I arranged to meet with the local Union representations and leaders over the course of the first 6 months. This was usually done in a Wellington café. My aim was simply to establish a 2-way connection in anticipation of future challenges. This was not done under any veil of pretense but in an open and transparent way in an atmosphere of mutual respect and benefit, acknowledging that property was a small but important issue for their membership.
<ul style="list-style-type: none"> Undertake a condition assessment of the portfolio 	<ul style="list-style-type: none"> The need to establish an understanding of the portfolio's condition using a common framework for referencing was paramount.

	<p>This was the case whether I developed a benchmarking model or not.</p> <ul style="list-style-type: none"> • I developed a comprehensive ratings guide (refer Annex W) that identified the key elements of interest and provided photographs of that element in various stages of repair. This allowed the audit to be undertaken by local personnel using a 'standard' set of eyes • To properly inform and launch the audit I hosted a property workshop in June of 2002 (refer Annex V) to take the regional property staff through the model and the process. We also tested it as a group at a local station and made amendments as appropriate • To further minimise variations I visited each of the regions and walked through one audit with the personnel undertaking the work. This approach to the audit achieved a high level of regional participation and ownership
<ul style="list-style-type: none"> • Develop a model to inform future planning for maintenance and capital programmes 	<ul style="list-style-type: none"> • The combination of condition assessment and benchmarking provided a clear guide to maintenance prioritisation • Potential economies of scale around maintenance project implementation were identified within regions as they had a complete view of their maintenance needs for the first time
<ul style="list-style-type: none"> • Possibly introduce a different funding distribution model to represent utilisation and activity levels 	<ul style="list-style-type: none"> • I had several discussions with the CFO regarding the refocusing of operational funds to a centrally prioritised building maintenance programme. These discussions seemed to hold some promise but met with overwhelming opposition once they entered the Regional Commanders forum. Consequently I was unsuccessful in achieving this outcome
<ul style="list-style-type: none"> • Possibility to identify common activities and develop standing offers or centralise those 	<ul style="list-style-type: none"> • Through the process some common maintenance activities were identified that might have been suited to central procurement

services to ensure they were undertaken	and coordination. Once again my attempts to refine or dissect the Regional funding allocations were in vain
<ul style="list-style-type: none"> • Increase transparency and reduce incidence of redirected funding 	<ul style="list-style-type: none"> • I was successful in increasing transparency through analysis of actual expenditure and predicted need via the model. However, this did not achieve any response or change of practice within the organisation during my time there
<ul style="list-style-type: none"> • Develop a national property network at the operational level to effect changes at ground level 	<ul style="list-style-type: none"> • In light of the difficulty I was experiencing with Regional Commanders, I decided to operate in parallel from the ground up. I did this by establishing a national property group, involving the practitioners from the Regions. As discussed above, the first of these meetings used the condition assessment exercise as a launch pad. • Other opportunities identified allowed the group to have some input to the JD Edwards ERP Property Module development; plus knowledge sharing around broader FM and Property technical areas.

Results

The results of these interventions are that:

- The NZFS had for the first time a comprehensive understanding of the condition of its portfolio and improved Capital and Operating forecasts
- The establishment of a property group comprising representatives from each Fire Region
- Technical and documentation standards were introduced and being applied on new builds and refurbishment projects
- A performance model was developed (refer Annex X) that considered 15 key performance indicators across a range of financial and operational areas linking back to three base denominators of area, fire call outs and staff head count (FTE)
- Outputs from the model were used by the Property Section as one tool in the evaluation of Capital Bids from the Regions

- A copy of the model was provided to the Station Resource Planning Team (SRPT) for their use as appropriate. The SRPT had responsibility for initial station location planning based on population distribution, required response times, etc. The model provided some value to them in terms of informing proposals to relocate existing stations (relocate actually means to close an existing facility and open a new facility with the same station name)
- The JDE ERP was implemented successfully and a property management tool created within that environment including asset database and lease management

Learning and development outcomes

There were numerous dimensions to my learnings and professional development during the NZFS experience. Again, I will focus on two of the most significant rather than describe them all. Note also that I have not included reference to, or claim for any technical knowledge acquired in order to create the benchmarking model as this is included within Part C under the Master of Property Studies RPL claim.

The first of these dimensions relates to my role as a member of the senior management team within the service delivery arm of a National organization. As the National Property Manager I had specialist responsibility for the whole area of assets (land and building), and property and facilities management across the whole of NZ. This was in an environment where a parallel operational command structure existed, creating responsibility overlaps, conflicting priorities and cultural misalignment. This meant that I was working on the introduction of the benchmarking model in particular and best practice asset and facilities management in general, within both the property section and the wider organisation, in an environment of open resistance and where I had minimal legitimate authority to do so. This required that I operate in multiple modes, bridging not only the technical and operational as well as the specialist and generalist perspectives, but perhaps more importantly also bridging the political and cultural gaps. Whilst this is typical of the challenges confronting many discipline specialists in organisational settings I have never encountered it as clearly as I did during the NZFS experience. Whilst I am satisfied with the progress that I did make during this period, were I to have this opportunity again, I would place increased importance on the political environment and networking in order to engage early support and understanding. My successes were generally limited to areas that were not perceived as threatening to the Regional Commanders. This was due in part to my misplaced confidence in the role/credibility of the National Service Centre and a consequent lack of understanding of the influence and agendas of the Regional Commanders.

The second dimension of my learning relates to emotional intelligence and leadership aptitude as it was applied in the identification and development of 'property' individuals within the Fire Regions and the engagement of those individuals with the central property initiatives. For many, they did not see themselves as anything more than local handy men. Through the condition assessment exercise and the development of the benchmarking

model I was able to share the theories and principles of Strategic Asset Management, Portfolio Management, Space Management, Maintenance Management, Contracting and Service Delivery with all of the Regional property representatives and start to develop a professional, national team with common vision and purpose. The connection between emotional intelligence (EI) and leadership experience is proven (Barbuto and Burbach, 2006) and it was certainly key to my success in establishing an empathy with the regional staff and effecting a transformation in attitudes and performance, even in the face of Regional Commander opposition. I was very interested in 2006 to undertake leadership behaviour profiling; the results of this exercise also demonstrate a high level of EI and leadership aptitude (refer Annex G).

Learning plan and future aspirations

My learning plan will continue to develop the two key areas of my career and life to date, those of Facilities Management and Corporate Leadership.

It is my intention to identify significant USQ strategic projects as part of my existing role that will provide enough scope for a Doctoral level approach. This will be done in consultation with the Chief Operating Officer to both ensure the projects are meaningful to and supported by USQ, and also that the projects are sufficiently significant for my doctoral program. Current projects under consideration are:

Project 1	Carbon Zero
Context	USQ strategic Plan goal to be carbon neutral by 2020; Federal and state legislation driving carbon emissions reductions and increasing corporate reporting requirements
Scope	Develop an organisation wide project to achieve the strategic objective of Carbon Neutrality by 2020. This project would involve all facets of facilities management, project management, leadership, project planning and management, acquisition of environmental knowledge, evaluation and analysis of systems, tools and solutions and the successful application of that in the USQ environment.
Timing	Start end of 2009, execute through 2010
Probable value	3 units
Key Deliverables	<ul style="list-style-type: none"> • USQ adopted operational plan in support of strategic goal. • Evidenced emissions reduction • Achievement of legislated reporting requirements • Demonstrated reduction in energy consumption

	<ul style="list-style-type: none"> Options paper for offsetting residual emissions Journal article or conference paper; potentially via TEFMA or Property Institute of NZ conference or journal. There may also be a possibility of connecting to the Pacific Rim Real Estate Society⁸.
--	--

Project 2	Strategic Asset Management (SAM)
Context	The RoP project required the introduction of SAM. For FM, this involves the alignment of the property portfolio and the FM service structure to most effectively support the current and future needs of the organisation.
Scope	Undertake GAP analysis to identify the 'missing elements' of the wider SAM package. Research SAM templates and develop a USQ model. Develop the various policies, guidelines, SLAs and standards required to underpin a SAM Plan. Develop a predictive funding model based on condition, replacement costs by building element, area, service level and life cycle.
Timing	Started 2008, execute through 2009, complete by end of 2010
Probable value	3 to 4 units
Key Deliverables	<ul style="list-style-type: none"> Condition assessment of property portfolio Client survey to inform FM service levels Predictive cost modelling informing OPEX and CAP funding programmes Introduction of new policy (e.g. Maintenance, Security) Introduction of new standards (e.g. Fit out, furniture, tech equipment) Increased efficiency of space utilisation (monitoring and reporting, achieve targets) Proposals to VC for the maximisation of revenue from space Defer construction of new space until general space utilisation improves Journal article or conference paper; potentially via TEFMA or Property Institute of NZ conference or journal. There may also be a possibility of connecting to the Pacific Rim Real Estate Society

⁸ PRRES specialises in the development of property professionals and academics. Further information can be found at: <http://www.prrs.net/>

I have not identified a specific third project. However I anticipate that it would be a project of an appropriate level of complexity and sophistication that it will broaden my understanding of the wider university and provide me with an enhanced learning opportunity perhaps in an area of general management rather than FM and also the opportunity for increased senior leadership exposure. Consequently I will be seeking increased input from the COO regarding the third project.

Aspirations: Within 3 years complete the DPST. Within 4 to 5 years, secure a position within one of the 'Sandstone Universities' as Director FM or as Chief Operating Officer.

END OF ARTEFACT 1

2.5 Linking the historical with the aspirational, and Artefact 2

The Learning Portfolio (refer Artefact 1) exposed some key professional and personal themes. These were:

- Consistency of operation within the FM professional body of practice
- The progressive expansion of technical and professional knowledge in the FM area (i.e. Emergency response capability, estates portfolio management)
- The demonstrated relationship between professional practice and academic development. That is, initially employed with a trade focus, moving through to project management, general management, and then strategic management. In parallel, educational activity aligned with the roles; trade and higher trade qualifications, the award of a Masters in Property Studies as a mature student, aligned from a timing perspective with the move to strategic management roles.
- A demonstrated interest in continuing educational and professional development for self and others; and
- A demonstrated leadership focus and competency

The identification of these historical themes served to validate the appropriateness of engaging with the Doctor of Professional Studies program as a continuation of my learning journey, and in particular the context in which that learning would occur. The key benefits and alignment identified were:

- The DPST allowed a mix of academic and professional development
- The use of appropriate work based projects to
 - Develop social, technical and academic knowledge for me and the participants
 - To engage FM staff as primary participants in the projects building knowledge, confidence and teamwork
 - To raise the profile of the FM team and identify it as a strategic enabler
 - To engage the organisation in strategically significant competencies
 - To contribute at a strategic level to the organisation's goals
 - To develop an experience and knowledge base for my continued professional development
- The study and project implementation would be generally flexible driven primarily by the operational imperatives rather than academic timelines

The development of the Learning Portfolio had identified two major, strategic projects to act as the catalysts for the doctoral study. These two projects (plus an unidentified possible third project) and the target learning elements and outcomes would be expanded further in the Learning Plan provided at Artefact 2.

2.5.1 Artefact 2



LEARNING PLAN

1.	Name: David Povey Home address: <i>(blanked for privacy)</i> Postal code: QLD 4350 Telephones: <i>(blanked for privacy)</i> Email: <i>dave.povey@usq.edu.au</i>
2.	Company name: University of Southern Queensland Company address: West Street, Toowoomba Post code: QLD 4350 Mentor's name: Bernard Lillis Telephone: <i>(blanked for privacy)</i> Email: chiefoperatingofficer@usq.edu.au
3.	Tutor: Dr. Neil peach, Faculty of Business Telephone: Email: neil.peach@gmail.com
4.	Expected award: Doctor of Professional Studies
5.	Time period of Learning Plan Beginning of studies: Completion of learning at work studies:
6.	Draft number of Learning Plan: 1
7.	<i>I agree this Learning Plan outlines a coherent programme of study that is appropriate for the award of Doctor of Professional Studies.</i> Student signature: _____ Date: _____

	Supervisor signature:	Date:
8.	<i>I agree that the work-based learning proposed has the potential to deliver the volume and level of learning as stated in this learning plan.</i>	
	Student signature:	Date:
	Supervisor signature:	Date:
9.	Internal examiners signature:	Date:

The Doctor of Professional Studies (DPST)

Motivation

In the last 10 years I have held senior management positions within large government corporate organisations. In particular, the New Zealand Defence Force, The New Zealand Fire Service and more recently two significant Universities. I currently hold the position of Group Manager Facilities Management at the University of Southern Queensland (USQ).

During that time I have expanded my technical knowledge of Facilities and Property Management through the successful completion of a Master of Property Studies and the undertaking of several high level projects on behalf of those organisations. I am therefore very supportive of work based learning and the relevance and value that can be derived from appropriate projects. I have also become increasingly aware of the need to understand and engage in the personal, organisational and professional subtleties and the dynamics (including politics and power distribution, as well as organisational strategy and development) which exist within large organisations, if one is to be effective and successful. Consequently my learning has developed across a range of disciplines, but has perhaps focused on Facilities Management and General Management.

The DPST provides an opportunity to further develop my skills and knowledge in these two primary areas of focus, utilising significant organisational projects that are of direct relevance and value to my current employer. In addition, I will need to engage with the whole organisation plus external entities if the projects are to be delivered successfully and the benefit maximised.

Other motivating factors include:

- The DPST will provide acknowledgement and accreditation of my work based performance in a way that is robust and attractive to a future employer.
- I will be required to revalidate my knowledge in the field of Strategic Asset Management (SAM) (Project 1) and gain new insights and learning, particularly

around the Tertiary Education Facilities Management Association (TEFMA) standards.

- I will be required to gain significant understanding of sustainability and in particular managing organisational change to achieve carbon footprint reduction (Project 2). Whilst I have some knowledge and experience in these areas I am far from expert and will benefit enormously from this project. I also consider this project to be extremely important for the University in meeting its obligations in terms of legislative compliance and global citizenship.
- The DPST will assist me to instill a level of robust academic rigour to projects to which I may otherwise have applied a more operational approach.
- Attaining a Doctorate is something that I have wanted to achieve since I completed my Masters.
- Attaining a Doctorate qualification may help me in day-to-day relations with my academic colleagues.
- The DPST will provide me with a level of intellectual stimulus that would not be generally available in my day-to-day work and as such is a welcome professional development opportunity.

Learning Plan Delivery Dates

I anticipate that it will take about 18 months to complete the balance of the DPST, being the Learning Plan, Projects and Reflective Report. The following dates are indicative of the key stages:

Recognised Prior Learning	Completed
Portfolio	Completed
Learning Plan (LP)	AUG 09 - SEP 09
Project 1 - SAM	OCT 09 - JUL 10
Project 2 – Carbon Zero	FEB 10 - NOV 10
Project 3 – to be identified by:	AUG 10
Updated Learning Plan submitted	SEP 10
Project 3 (provisional timing)	SEP 10 - JUN 11
Reflective Report	APR 11 – OCT 11

Learning Plan Resources

I have scheduled time at the start and end of each day to progress the projects and update DPST required documentation. I will also work Saturdays and Sundays as required to maintain progress. I envisage the weekends will primarily be used for research.

I have a laptop PC in my USQ office and a modern desktop PC in my home office, both running MS Office software. I work on the various documents at both locations using a USQ memory stick to transport the various files. Backups are held in both locations.

Analytical Capacity

In preparing the portfolio I have started to refresh my research skills and this will be a fundamental part of the proposed learning. I will research and analyse a variety of different methods and experiences relevant to both Project 1 and Project 2. I have recently undertaken an EndNote course to assist in the identification, storage, retrieval, categorisation, and referencing of relevant literature, web pages, articles and journals. This is a tool that will be of value in my everyday professional life and was extremely helpful whilst writing the portfolio. It will be invaluable for the research and referencing required within the DPST.

Throughout I intend to present my work and manage the projects using established Project management tools and methodology. This may require some refreshing of MS Project functionality and project management theory.

I will be utilising 'SWOT' and 'GAP' analysis as appropriate.

I am conscious that the deliverables of this Learning Plan include case studies, papers and presentations potentially to peak professional bodies. I will be developing and documenting the projects to facilitate academically sound and informative outputs in fulfillment of this aspiration.

Stakeholder Engagement

I have the full support of my family and my employer in this undertaking (refer Annex A). I have also enlisted the involvement of Mr. Andrew Frowd (refer Annex B) the outgoing President of TEFMA to oversight and inform Project 1 – SAM; noting that Mr. Frowd is not providing formal TEFMA endorsement due to TEFMA policy constraints. I am currently seeking external engagement with Project 2 - Sustainability and that may in part, be in the form of collaboration with the Australian National University. I will engage with various stakeholders within Facilities management and across the wider USQ community in the fulfillment of this Learning plan.

Composition

The 24 Units required to complete the Doctorate will be made up as follows:

Recognised Prior Learning	10 Units	Completed
Portfolio	1 Unit	Completed
Learning Plan (LP)	1 Unit	This document
Project 1 - SAM	4 Units	Pending approval of LP
Project 2 – Carbon Zero	3 Units	Pending approval of LP
Project 3 – to be identified	3 Units	To be identified
Reflective Report	2 Units	Pending approval of LP

Work-based Learning Projects

Project 1 – Implementation of the TEFMA SAM Guidelines at USQ

Project 1	Strategic Asset Management (SAM)
Context	The RoP project required the introduction of SAM. For FM, this involves the alignment of the property portfolio and the FM service structure to most effectively support the current and future needs of the organisation as described by the USQ Strategic Plan.
Level	<p>This project is of strategic importance to USQ and will potentially contribute to the achievement of a number of goals within the USQ Strategic Plan, specifically:</p> <ul style="list-style-type: none"> • Goal 2 – Student experience • Goals 1,3 and 4 through the provision of flexible appropriate environments • Goal 5 – Staff by improving the condition of the space and aligning the level of service received with staff needs • Goal 6 – Educational Partnerships through consideration of alliances and development space in campus master planning • Goal 7 – Social Justice and Equity by prescribing spaces that are attractive and functional for students of all cultures and socio economic backgrounds. • Goal 8 – Engagement and Development through the inclusion

	<p>of joint venture community projects and consideration of those opportunities as part of strategic FM planning</p> <ul style="list-style-type: none"> • Goal 9 – Deliver positive social, environmental and economic dividends through the cost effective and environmentally responsible planning, development and operation of the property portfolio <p>The project embeds the tertiary sector’s current understanding of strategic asset management best practice. The outcome of this project will directly influence:</p> <ul style="list-style-type: none"> • property acquisition and disposal decisions • operating expenditure investment • space allocation and utilisation • standards and qualities defining the built environment at USQ
Scope	<p>The project will require me to undertake extensive research and gain an expert understanding of the new TEFMA guidelines for Strategic Asset Management as well as wider research into alternate models and concepts. The research gathered will be collated and assimilated into a USQ model and the variances identified and recorded.</p> <p>I will also need to obtain skills appropriate to the production of the case study itself and the presentation paper.</p> <p>Key stages of this project include:</p> <ul style="list-style-type: none"> • Establish the project team and the project within USQ. • Research and knowledge of the TEFMA SAM guidelines. • Research other SAM models and undertake a literature review. • Undertake SWOT analysis of USQ’s current situation. • Undertake GAP analysis to identify the ‘missing elements’ of the wider SAM package. • Develop a USQ model based on TEFMA but tailored to suit USQ’s needs, including; <ul style="list-style-type: none"> ○ Appropriate asset service levels ○ Appropriate soft services ○ Funding sources and constraints ○ Condition of assets ○ Space utilisation ○ Planned introduction/removal of courses and programmes ○ Strategic priorities

	<ul style="list-style-type: none"> ○ Planned revitalisation or retirement of assets ○ Changing technology impacts ○ Fleximode delivery impacts <ul style="list-style-type: none"> • Develop the identified “GAP” materiel (various policies, guidelines, service level agreements (SLAs) and standards required to underpin the SAM Plan) • Embed the policies and standards within the organisation including appropriate communication • Development of a predictive funding model based on condition, replacement costs by building element, area, service level and life cycle.
Timing	Start 2009, execute through 2010
Value	4 units
Key Deliverables	<ul style="list-style-type: none"> • Project plan • Project update reports (frequency to be agreed with the Chief Operating Officer (COO) but notionally monthly) • Condition assessment of property portfolio • Client survey to inform FM service levels • Predictive cost modelling informing Operating and Capital funding programmes • Introduction of new policy (e.g. Maintenance, Security) • Introduction of new standards (e.g. Fit out, furniture, tech equipment) • Increased efficiency of space utilisation (monitoring and reporting, achieve targets) • Proposals to the Vice Chancellor for the maximisation of revenue from space • Amended policy i.e. defer construction of new space until general space utilisation improves • Case study providing feedback to TEFMA for their consideration regarding any amendments or clarifications of the SAM Guidelines • Journal article or conference paper; potentially via TEFMA or the Property Institute of NZ conference or journal
Key areas of Learning	<ul style="list-style-type: none"> • Best practice Asset Management • Project management applied in a multi-faceted technical environment

	<ul style="list-style-type: none"> • Corporate Leadership, particularly the creation within the organisation of an understanding and acceptance of the impacts of adopting Strategic Asset Management (including the financial impact, associated lead times, the concept of service levels, work flows and approval routing) • Academic writing
Evidence to be provided	<ul style="list-style-type: none"> • Project Plan • Project Reports including briefing papers and recommendations to senior management • Project Timeline • Project Team Meeting papers • Emails/letters • SWOT and GAP Analysis • Case Study and/or Conference Paper • Journal notes • Copies of various documents associated with the Key Deliverables above • USQ Strategic Asset Management Plan (document) • Reflective Report, bringing together the experiences and learning derived through this project.

Project 2 – Moving USQ towards Carbon Neutrality by 2020

Project 2	Carbon Zero
Context	<p>USQ has adopted sustainability as a key theme of the University. Consequently, the USQ strategic Plan includes an objective to be carbon neutral by 2020. Federal and state legislation is also driving carbon emissions reductions and increasing corporate reporting requirements. To facilitate the move to more sustainable technology and infrastructure various funding sources have emerged, targeted at energy and emissions reduction projects, and generally accessed via bid processes.</p> <p>If USQ is to achieve this significant and ambitious objective it will need to take a coordinated and informed approach, utilising all of the resources at its disposal, including the full support of its staff and students. This project will take the lead role in achieving that outcome for the University.</p>

Level	<p>This project is of strategic importance to USQ and will contribute directly to the achievement of Strategic Plan Goal 9 – Enterprise, objective 3: <i>A carbon neutral operation across all 3 campuses by 2020.</i></p> <p>The project will encompass the latest principles of environmental sustainability with particular focus on the reduction of carbon emissions. The outcome of this project will directly influence:</p> <ul style="list-style-type: none"> • asset acquisition and disposal decisions • operating expenditure investment • capital funding investment • space design • procurement practice • standards and qualities defining the built environment at USQ • general housekeeping and habits of staff and students • USQ policy and process • investment in technology • investment in infrastructure • USQ consideration of carbon offset solutions <p>The project will involve the acquisition, analysis and synthesis of current knowledge regarding environmental practice, Federal and State level legislative direction and environment, carbon offset and sequestration solutions, communication and engagement strategies and technical understanding sufficient to inform reduction project selection.</p> <p>This project requires a comprehensive and inclusive approach at every level of the organisation, across the strategic and operational, governance and management, and the staff and student environments.</p>
Scope	<p>Develop an organisation wide project to achieve the strategic objective of Carbon Neutrality by 2020. This project would involve all facets of facilities management, project management, leadership, project planning and management, the acquisition of new and current knowledge of environmental opportunities and solutions, and in particular carbon emissions and offsets, knowledge, evaluation and analysis of systems, tools and solutions and the successful application of that in the USQ environment.</p>

Timing	Start early 2010, execute through 2010
Value	3 units
Key Deliverables	<p>This will be achieved through the structured delivery of an emissions reductions framework and management plan:</p> <ul style="list-style-type: none"> • Environmental Audit • USQ adopted operational plan in support of strategic goal. • Evidenced emissions reduction • Achievement of legislated reporting requirements • Demonstrated reduction in energy consumption • Options paper for offsetting residual emissions • Journal article or conference paper; potentially via TEFMA or Property Institute of NZ conference or journal.
Key areas of Learning	<ul style="list-style-type: none"> • Environmental sustainability best practice • Energy/environmental audit and efficiency concepts • Technical skills regarding assessment of energy efficiency proposals • Project management with a focus on corporate change and engagement • Corporate Leadership, preferably within the higher education sector and particularly how to implement this magnitude of change and acceptance within the organisation, (including defining appropriate levels of communication and involvement throughout the project and the bringing together of the various strands and elements at the project conclusion with a commitment at both Governance and Management levels). • Academic writing
Evidence to be provided	<ul style="list-style-type: none"> • Project Plan • Project Timeline • Project Team Meeting papers • Emails/letters • Environmental Audit extract • Sustainability Action Plan • Templates developed • Sub-projects undertaken (e.g. energy efficiency project) • "SWOT" and "GAP" Analysis • Case Study and/or Conference Paper • Journal notes

	<ul style="list-style-type: none">• Copies of various documents associated with the Key Deliverables above• Reflective Report, bringing together the experiences and learning derived through this project.
--	--

Project 3 –Strategic Level Management Project

At this stage, I have not identified a specific third project. However I anticipate that it would be a project of an appropriate level of complexity and sophistication that it will broaden my understanding of the wider university and provide me with an enhanced learning opportunity perhaps in an area of general management rather than FM and also provide the opportunity for increased senior leadership exposure.

In my discussions with the COO regarding Projects 1 and 2, I did introduce my desire to engage with a more generalist third project and I invited him to start considering what that project might be.

I will aim to have more definition of the third project by September of 2010.

Learning Plan and Project Reporting

I will provide an updated Learning Plan in September 2010. This will reflect the details of Project 3 and refine the details and progress made with regard to Projects 1 and 2.

I will also provide a 4-8 weekly project progress report (refer Annex C) in which I will represent specific progress against stated milestones and other relevant factors/and information. This may include supporting attachments where appropriate. The progress report will also serve to record initial learnings and commentary through the reporting period and aid in the production of the Reflective Report in 2011.

Summary of Learning

On completion of the projects, I will provide a robust, appropriately structured, reflective report demonstrating my learning at the Doctoral level. In reality this will be a work in progress throughout the life of this Learning Plan, rather than a single exercise upon completion.

I will present the report using a framework similar to that used in the portfolio submission and will include the following sections.

- Context
- Assessment
- Interventions

- Results
- Learning and development outcomes

In particular my report will provide details of:

- The context of the projects and the environment in which the learning has occurred.
- The scope of the projects, from inception through to delivery.
- Commentary on the opportunities, failures and successes in the form of a SWOT analysis of the final project deliverables.
- Critical analysis of actions and reflection and the rationale for those actions.
- Descriptions of the various processes and methods applied.
- Linkages to evidence provided
- Resources utilised
- Referencing and Bibliography
- Acknowledgements and responsibilities

Indicative Reading

The following provides an indication of the reading to be undertaken and will expand significantly and be defined fully in the bibliography and referencing of the reflective reports.

Project 1

Australian Parliament, Joint Committee of Public Accounts and Audit, (1998) "Asset management by Commonwealth agencies"

Cable, (2004) "Key performance indicators for federal facilities portfolios"

Gabbi, (2006) "Quantitative methods applied to asset management"

Institute of Public Works Engineering Australia, (2006) "International infrastructure management manual"

Loistl, (2003) "Asset management standards, corporate governance for asset management"

National Research Council (U.S.), (2008) "Core competencies for

Federal facilities asset management through 2020 transformational strategies"

OECD. (2001) "Asset management for the roads sector"

TEFMA, (2009) "Strategic asset management guidelines"

Project 2

Baumert, K.A., Herzog, T. and Pershing, J. (2005) Navigating the Numbers: Greenhouse Gas Data and International Climate Policy

Button, C. E., (2008) "Towards carbon neutrality and environmental sustainability at CCSU"

Kates, R.W., Parris, T.M. and Leiserowitz, A.A. (2005) "What is sustainable development? Goals, indicators, values, and practice"

Moser, S. C. & Dilling, L. (2007) "Creating a climate for change: communicating climate change and facilitating social change"

Orr, D. (1991) "Rating colleges", Conservation Biology"

Rappaport, A. (2008) "Campus greening: behind the headlines"

Sharp, L. (2002) "Green campuses: the road from little victories to systemic transformation"

Smith, A. (1993) "Campus Ecology: A guide to assessing environmental quality and creating strategies for change"

Venetoulis, J. (2001) "Assessing the ecological impact of a university"

Project Management

Baca, C. (2005) "Project manager's spotlight on change management"

Books24x7 & Project Management Institute. (2004) "The project management tool kit 100 tips and techniques for getting the job done right"

Books24x7 & Project Management Institute. (2008) "A guide to the project management body of knowledge"

Coakes, et al. (2005) "Knowledge management in a project climate"

Heldman, K. (2004) "PMP professional project management study guide"

Kendrick, T. (2009) "Identifying and managing project risk: essential tools for failure-proofing your project"

Corporate Leadership

Doppler, K. & Lauterburg, C. (2001) "Managing corporate change"

Dosi, et al, (2005) "Understanding industrial and corporate change"

Dunphy, et al, (2007) "Organizational change for corporate sustainability: a guide for leaders and change agents of the future"

Feiner, M. (2004) "The Feiner points of leadership: the fifty basic laws that will make people want to perform better for you"

Fleming, et al. (2004) "The big end of town: big business and corporate leadership in twentieth-century Australia"

Stace, D. & Australian Graduate School of Management Centre for Corporate Change. (1995) "Transitions, turnarounds and transformations: alternate paths in strategic change"

Energy Efficiency

Australia. Department of Resources, Energy and Tourism, et al. (2008) "Energy savings measurement guide: how to estimate, measure, evaluate and track energy efficiency opportunities"

Australia. Department of Resources, Energy and Tourism. (2008) "Energy efficiency opportunities"

Diesendorf, M. (2007) "Greenhouse solutions with sustainable energy"

Environment Australia. (2002) "Energy efficiency"

Randolph, J. & Masters, G. M. (2008) "Energy for sustainability: technology, planning, policy"

Taylor, R.P. et al, (2007) "Financing energy efficiency lessons from Brazil, China and beyond"

END OF ARTEFACT 2

2.6 Developing a model of the elements, their relationships and Artefact 3

The development of the Learning Plan (refer Artefact 2) had identified two major projects to act as the catalysts for the doctoral learning. The review of relevant literature had already started under the headings provided in the Portfolio and Learning Plan.

The next step in the process was to understand the relationship between the projects, the academic and operational environments and to identify their key elements in a visual framework that provided clarity and confidence for both the Academic Supervisor and me.

The 'Getting Started' paper, provided at Artefact 3 is my earliest representation of the integration between the action research approach and the project management methodology. Building an understanding of the operational form of that relationship had been an early priority and my Learning Journal records:



10 JAN 2010: *"Reading indicated need for cycles of plan, act, observe, reflect... Logical cycle, analogous to QM principals and models... But how best to represent and accommodate that within the project schedules... Need for all stakeholders to engage with the cycles; show this on the project schedule or program; cycle at task or whole project level?"*

The paper includes initial representation of the PDCA cycle overlaid against a traditional task and project management Gant chart format. This was useful to understand how the two methodologies might be integrated but proved to be problematic in its implementation, primarily due to the workload it created as a result of its low level operational positioning. In practice, and as the two projects progressed, the PDCA cycle was applied in a less prescriptive and structured form, and this is illustrated later in the PDCA cycles for the Carbon Reduction Project contained within Artefact 15. This essentially elevated the cycle from a prescribed task level to a more fluid review cycle, able to be applied to any aspect of the project.

The framework provided at Annex A to Artefact 3 became the foundation structure for the entire DPST undertaking and is a key document, representing a milestone in the student/supervisor collaboration and crystallising the 'mechanics' of the project.

I speculate that the desire for clarity of the 'study mechanics' is perhaps a common and pressing one for mature students returning to study; particularly those from an operational or commercial background. My Learning Journal at the time records:



09 JUL 2010: *“Progress meeting with Supervisor. Discussed: Project milestone plan setting and assessment framework development and relationship to enrolled unit value; three phases of the project from DPST perspective; the feedback from Professor Frank Lyons regarding the fundamental need for a rigorous and robust framework generating sufficient evidence and artefacts to award the Doctorate...Great progress and very positive to have an increased level of confidence and certainty around this framework.”*

The paper was presented to my supervisor as an expression of the key academic and operational project elements and deliverables, set in the context of their interrelationship, and (perhaps more importantly at the time) their suitability as an academic framework and series of deliverables that would satisfy the requirements of the DPST program.

2.6.1 Artefact 3



Getting started

In considering what documents and artefacts are required to be developed and retained; the focus had largely been on the project management documentation. However the overall DPST required additional layers of evidence and consideration, in the form of academic and self-reflective practice.

One of the challenges to getting started has been to understand what is require in real terms and how those elements will integrate with each other and be maintained with appropriate frequency.

There was clearly a benefit for both myself and my supervisor to develop a document map that represents not only our agreed evidentiary framework, but also the attributes and characteristics of each element. In considering this I have developed a map (refer to Annex A) that is founded on the three key dimensions of the DPST, these are; Action Research; Project- Academic, and Project- USQ Operational.

Action Research is the methodology that will be applied to the execution of the two operational projects contained within my Learning Plan and must therefore be research as a topic in its own right and properly considered before commencing either project in any substantive way.

The projects, whilst real world and with clear operational deliverables will require additional documentation and alterations from the traditional project management approaches as a result of the increased academic focus required to meet the needs of the DPST; hence, the identification of Project- Academic and Project- USQ Operational. Under Project Academic, I have identified two main documents. The first is a Project Introduction that will portray the high level dimensions of the project and also link those dimensions to the key learnings from my readings and research. By way of illustration the Project Dimensions table for the Strategic Assets Management Project had been included at Annex B.

The second key document is the 'Monthly Report' (refer Annex C) to my DPST Supervisor. I intend to maintain two individual monthly reports; one for each project contained in the Learning Plan. The reports serve a multitude of purposes, including; as an aid to my self discipline; as a planning enabler, allows reflection on progress and learning through the report period and; compliments the Learning journal (refer Annex D). It also engages my Supervisor in my activities in a structured way and leads to a more informed and beneficial exchange during our monthly meetings.

To capture my thoughts and insights during the literature review I will maintain a Readings Journal that will take the form of a simple table and bullet point observations and comment. Key points from this Journal will be carried forward to the Learning Journal.

Under the heading of Project- USQ Operational, I refer to the more traditional project management documentation, such a project plans, timelines, scope statements etc. These are the documents that would be produced to manage any significant project at USQ.

Linking Action Research to the Project Plan

Basic elements

The core model of Action Research as described by Bob Dick (2000) consists of 4 elements repeated in a cycle until an appropriate outcome is achieved. The four elements of the cycle as shown at Fig. 1 are plan, act, observe and reflect. Gerald Susman (1983) suggests a fifth step at the beginning of the first cycle involving problem analysis. For the purpose of this planning model I have not adopted that fifth stage.

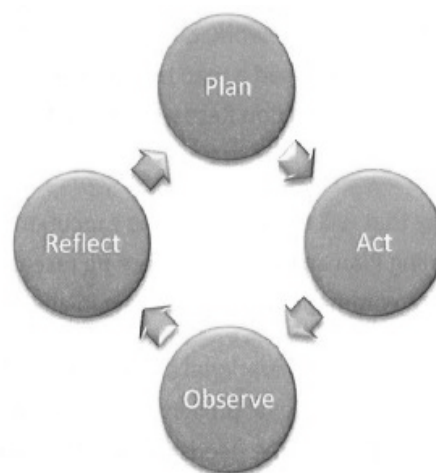


Fig.1

Traditional project management theory and practice utilises Gantt charts to present the project timeline at a task and sub task level (refer Fig. 2 for an illustrative example).

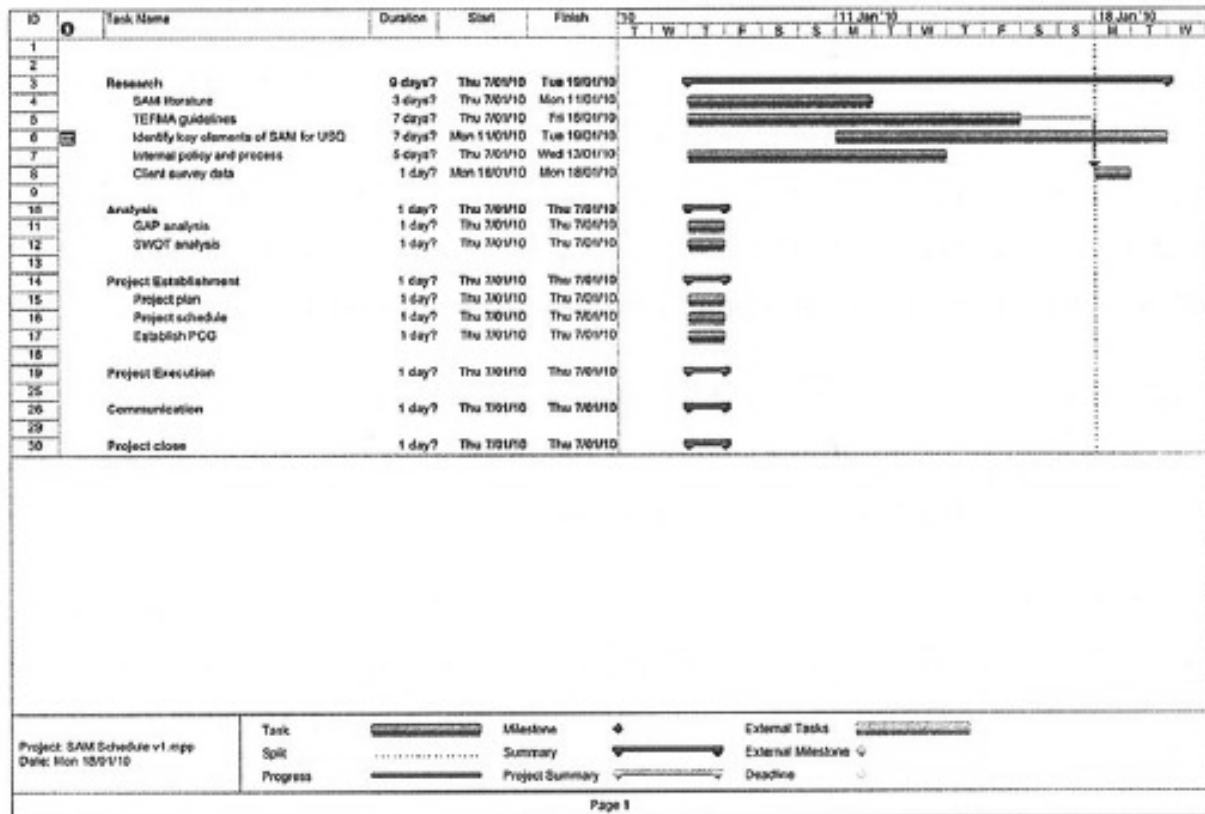


Fig.2

Dick (2000) emphasises the importance of allowing enough time for the observation and reflection (reference). It logically follows then that the reflective cycle must be represented and provided for within the project timeline and preferably the project Gantt chart, acknowledging that this may impact on the operational utility of the Gantt chart if it is allowed to become too busy.

The next consideration is the extent to and level at which the cycle should be undertaken. For example, should the cycle be undertaken at the highest 'whole of project' level? Should it be undertaken at the individual task level; perhaps even at the sub-task level if considered appropriate based on risk or benefit? Indeed, are there some conditional criteria for determining when the cycle should be formally applied in order to avoid wasted effort and reduced focus on the significant elements of the project?

Provided at Fig. 3 is a possible representation of the model, showing the cycle applied a fixed points through the project lifecycle and independent of the individual task progress.

This approach allows the entire project to be reviewed at set times through the project life. This would involve the individual consideration of each task but within a common review window established in the project program. The decision to engage with individual tasks is perhaps more subjective based on the progress and stage of the task at the time of the review window.

ID	Plan	Act	Observe	Reflect	Plan	Act	Observe	Reflect
Task 1	[Shaded Bar]							
Task 2	[Shaded Bar]				[Shaded Bar]			
Task 3	[Shaded Bar]							

Fig. 3

Provided at Fig. 4 is a slightly different model, representing the Action Research cycle being integrated at the task level. The same model could be expanded to the sub-task level if appropriate.

The key difference here is that there is not one whole of project review window, but a multitude of macro Reviews (cycles) occurring at the task and sub-task level. This approach requires a more dynamic awareness of the progress and stage of each task but may allow the cycle to be applied to greatest effect and benefit given it is uniquely aligned with the task. Pre-selection of the tasks to which this cycle should be applied would be beneficial in terms of managing the project work load.

ID	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Task 1	Plan	Act			Observe			Reflect
Task 2		Plan	Act	Observe	Reflect			
Task 3	Plan	Act	Observe	Reflect	Plan	Act	Observe	Reflect

Fig.4

Whilst the model at Fig.4 moves us closer to the Gantt chart as an operational planning tool for project delivery, it would represent a significant additional workload in terms of a formal cycle process if executed at a task level.

In order to formalise and embed the cycle of Action Research in a way that balances the resource constraints of the projects, the cycles will be applied at a Project Dimension level and undertaken by members of the Project Control Group as a standing agenda item for the PCG meetings. The frequency of the PCG meetings is described on the respective project schedules. Fig. 5 represents the adopted approach.

Dimension	PCG April	May	PCG June	July	PCG AUG	SEP	PCG OCT	NOV
Governance	P	O	R P					
• Multiple Tasks	A							
Community	P	O	R P	O	R P	O	R P	
• Multiple Tasks	A							
Operations	P	O	R P	O	R P	O	R P	
• Multiple Tasks		A		A		A		

Fig. 5

The most notable difference with this model is the separation of the 'Act' phase of the cycle. This is intended to illustrate a close connection with the more practical aspects of the 'Act' (being task delivery) and 'Observe' phases, which will continue across a longer time period and perhaps more consistently than the more prescriptive and formal 'Review' and 'Plan' phases, to be undertaken during the PCG meetings.

Annex A to Getting Started

Action Research	Project - Academic	Project - USQ Operational
<div> <p>Document Framework</p> <ul style="list-style-type: none"> •Map of the various documents and their roles and relationships (this document) </div> <div> <p>Reading Journal</p> <ul style="list-style-type: none"> •Notes journal to identify thoughts and ideas generated from readings </div> <div> <p>Reflective Journal</p> <ul style="list-style-type: none"> •Record significant reflection/change (situation, analysis, intervention, results, learning) •Dynamic (Maintained as needed) </div> <div> <p>Concluding article for publication</p> <ul style="list-style-type: none"> • Project specific •Academic standard •Case study •Demonstrating principals of Action Learning </div> <div> <p>DPST concluding article for publication</p> <ul style="list-style-type: none"> •Purpose to satisfy final unit (2 credits) •Academic standard •Case study •Focus on experiences through the DPST projects regarding action Learning </div>	<div> <p>Project Introduction and Model</p> <ul style="list-style-type: none"> •High level model showing the dimensions of the project •Dimensions of the project linked to research (rationale) •Links research and academic to operational </div> <div> <p>Monthly Project Report</p> <ul style="list-style-type: none"> •Self discipline •Regular update for DPST supervisor •Demonstrate progress/risks against key steps and processes •Summarise learning for that period </div> <div> <p>Other supporting documents</p> <ul style="list-style-type: none"> •As appropriate to support Monthly Report </div>	<div> <p>Project Plan</p> <ul style="list-style-type: none"> •Standard format Project Plan •Project Schedule, risks, scope, responsibilities, stakeholders, control structure etc •Dynamic (Maintained as needed) </div> <div> <p>Other supporting documents</p> <ul style="list-style-type: none"> •As required by USQ policy and process </div>

END OF ARTEFACT 3

2.7 The context for my projects

As discussed in Chapter One, the projects identified and implemented arose from the contextual common ground as shown at Figure 5 below.

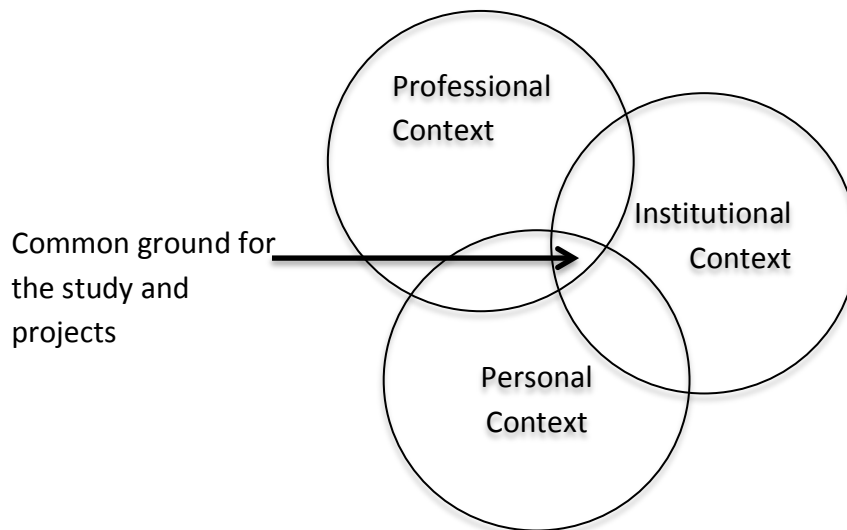


Figure 5 – Contextual common ground

My preliminary observations (in the role of Group Manager Facilities Management) in 2008 indicated that good space management (by University sector standards) practice was not being achieved or meaningfully pursued at USQ. This was the visible symptom that betrayed the presence of a wider malady and it became apparent that there were no Facilities related planning linkages in place between the USQ corporate entity (typically responsible for identifying capability and capacity growth, academic product development, staff levels, student growth and markets, and new operational locations) and the Facilities Management area, required to support the corporate body through the provision of the built environment.

These observations led to the early expression of simple outcome statements, typical of an organisational and operational focused approach. They are effectively statements of what we needed to do and are in part analogous to the problem statements that might be found in a more traditional research based thesis.

In the case of this study the statements were: 'Develop a carbon reduction strategy for USQ' and 'Implement Strategic Asset Management'.

Clear outcome based statements are perhaps likely to be more prolific and potentially successful within a commercial organisation as they prima facie, imply clarity and certainty of outcome. Such clarity in turn suggests confidence around deliverability, budgets and timing.

The environmental reality may be quite different of course and if we consider the two statements which initiated this study we might reflect briefly that the goal statement of defining a carbon reduction strategy (if it is to be considered, robust and sustainable) is not indicative of the work required to arrive at that outcome, i.e. the environmental base line audit, waste and carbon audits, Green House Gas (GHG) emissions inventory, carbon data collection past, present and future, infrastructure solutions feasibility reports and implementation projects.

Similarly, in the case of the Strategic Asset Management (SAM) outcome statement; condition audits, data systems development, planning templates, policy development, and staff knowledge development are but some of the sub-tasks and competencies required.

To summarise, the outcome statements do not contain description of the detailed tasks required to achieve the particular outcomes. Therefore the full details of the problem solution could not be known at the outset.

Further, both the Carbon and SAM solutions would need to be socialized and embedded across multiple facets of the organisation if those outcomes are to be achieved and sustained such that they become part of the 'business as usual' paradigm. This suggested that early engagement of key staff in the development and delivery of the solutions would be an essential part of the project activity.

These facets are key to the delivery methodology deployed and are discussed throughout the thesis.

2.8 Conclusion

The development of the Learning Portfolio (refer Artefact 1) identified key themes and an underpinning logic in regard to the historical development of my academic and professional history. The identification of those themes provided a validation for me in terms of the DPST program and my interest in developing myself and my colleagues within the workplace.

The work based projects proposed initially within the Learning Plan (refer Artefact 2), were derived from the personal and professional themes arising from the Learning Portfolio and also arising from my role within the host organisation and the strategic agenda of that organisation; in essence the common ground indicated above at Figure 5. Consequently they have been demonstrably accepted and endorsed (discussed in detail later in this thesis) at multiple levels within the organisation including senior executive and governance.

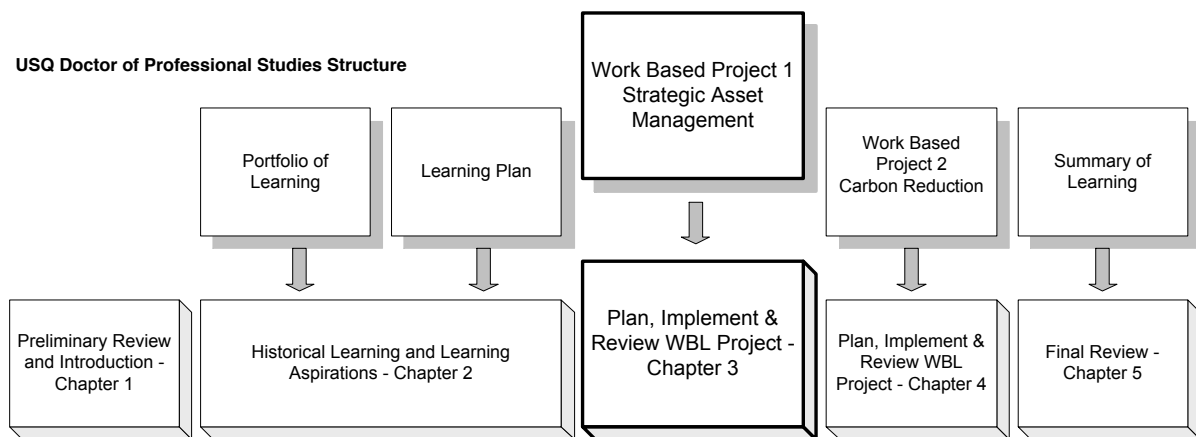
The 'Getting Started' document (refer Artefact 3) was the final step in constructing the study and created an initial definition and understanding of the study framework, elements, methodology and relationships.

Of equal importance as an outcome, the two projects have provided the platform for technical, social, professional and academic development of the participants in this study, being primarily myself, but also the FM staff who were closely engaged with project delivery, and those more broadly affected within FM and other units of the University. The delivery of these projects has provided learning at all levels and is discussed in subsequent chapters of this thesis.

The undertaking of my journey and the specific SAM and Carbon Reduction Project, has been a logical and rational progression for me, consistent with historical and aspirational themes and resulting in significant personal learning and learning capability development. In their own right, the delivery of the two work based projects with the outcomes achieved, represents a level of professional and institutional success, which validates the effort invested.

I will now move on to discuss the specific project implementations, starting with the SAM Project.

3 Project Implementation - Strategic Asset Management (SAM)



Thesis Structure

3.1 Section outline

This Chapter has the following structure

- Project introduction
- Environment context and constraints
- The integration of artefacts
- The role of annexes, extracts and critical commentary
- SAM Project establishment phase
 - Introduction
 - Getting Started and Artefact 4
 - Mapping the elements of SAM and Artefact 5
 - SWOT analyses and Artefact 6
 - Embedding an Action Research approach and Artefacts 7 & 8
 - Phase conclusion
- SAM Project implementation phase
 - Introduction
 - The Project Plan and Artefact 9
 - The Governance Group
 - The Working Group
 - The project schedule and Artefact 10
 - The project baseline
 - Academic reporting and Artefact 11
 - Operational reporting

- Phase conclusion
- SAM Project closing phase
 - Introduction
 - Operational outcomes
 - Strategic outcomes
 - Academic outcomes
 - Vice Chancellor's Committee paper and Artefact 12
 - Project Closure Report and Artefact 13
 - Phase conclusion
- SAM Project conclusion

3.2 Project introduction

In 2007 the University of Southern Queensland initiated a significant change process with two key objectives. The first was driven by an enterprise wide initiative to rationalize and reduce operating expenses. The second was to critically review and revise the unit structures, capability and focus. Facilities Management was one of the areas subject to the rationalisation.

To inform the restructure, an independent review of the Facilities Department was undertaken in July 2007 by a credible FM practitioner; a former Director of Facilities Management from another Queensland University and also a former President of the Tertiary Education Facilities Management Association. The review produced a critical commentary and a series of 50 plus recommendations including the creation of a new Group Manager Facilities role to implement the findings of the review and to provide a single point of focus and leadership for the Facilities Management Division.

In April 2008 I was appointed to the role of Group Manager Facilities Management and given the task of effecting the required changes. The changes were significant at every level and required full consideration of each dimension of the Facilities Management Division, including divisional focus, planning, communication, position descriptions, levels, personnel numbers, personnel fit to the new positions, capital funding programs (equipment, vehicles and buildings) prioritisation methodology and bid processes, minor works funding processes, budgets (capital and operational). In addition to these structure and capability reviews the University was considering a significant investment through the construction of a new building at its Springfield Campus; a campus which at the time was leased (not owned).

The foregoing imperatives provided a significant case for the development of a Strategic Asset Management capability at USQ, whereby systems and processes would be established and professional knowledge and capability would be cultivated, in order to ensure that the University's property portfolio was developed and managed in a way that optimised the

benefits of that portfolio to the organisation. This scenario provided the substance of the institutional context for the SAM Project.

It is useful to understand the scale of the USQ portfolio before proceeding too much further; USQ has three campuses, occupying 94.3 Hectares of land⁹, with 115,000 m² of developed gross floor area and a book value of approximately \$320M. In 2011, the organisation's total revenue was approximately \$230M.

Mid 2009, I became aware (through a serendipitous conversation with the head of the new 'Doctor of Professional Studies' program at the USQ) of the potential value of undertaking the SAM project within the professional doctorate work based learning environment.

I have described in Chapter One, the targeted benefits of undertaking this project as part of a WBL initiative, but I summarise them again below:

- The opportunity to formalise the project at an enterprise level with an enhanced value proposition (comprehensive project scope, project outcomes, enterprise benefits)
- The opportunity to value add, through the inclusion of academic process and input to what would otherwise have been a purely operationally biased project
- The opportunity for me and the members of the Facilities Management team to expand not only our technical and professional knowledge but also (through the inclusion of academic rigor) be exposed to higher order learning and project implementation techniques and tools

It was not until late in 2009, following completion of the restructures and rebuilding of the Facilities Management team had been initiated, that work on the SAM project started. Part of my rationale for engaging the team as participants in the project was the healing potential of shared learning and collaboration arising from the work based approach.

In order to meet the operational needs of the organisation and the academic needs of my doctoral journey, the SAM project was developed along the following two main delivery themes:

- The creation of an implementation model and framework that would enhance the strategic role of FM at USQ (in particular the planning, developing, operating and maintaining the USQ built environment) through the development of an enterprise level SAM capability.
- The project would be implemented using an action research framework to capture key outcomes and findings; at the same time, formal project management techniques would be used to govern activities and actions across multiple project dimensions.

⁹ Data correct at March 2012

The integration of the action research and the project management methodologies, in a real world operational environment appeared problematic at first. However, the two methodologies were demonstrated to be compatible and appropriate for large scale projects where the operational staff are also the actors in the research and the change, are responsible for developing the data, and the interpretations and solutions are an inherent element of the project. This methodology is discussed in more detail in Chapters One and Five.

3.3 Environmental context and constraints

As previously discussed the USQ had recently completed a significant realignment project resulting in staff and product rationalisation. Consequently the environment was quite hard on any new initiatives as senior management sought to intercept any activity or project that might be a covert conduit for a gradual creep in resources to pre-realignment project levels. The SAM project was therefore to be fully funded from existing operational funding allocations.

The restriction on funding opportunities was a major factor in defining both the scope and the implementation methodology. There was some ability for outsourcing elements of the work involved, although I was reluctant to do so as it conflicted with my team engagement and development objectives. Similarly, there was limited funding for procuring the systems needed to capture, analyse and sustain the information associated with the significant asset base that comprised the USQ property portfolio.

The dependency on internal staff for project implementation was something of a risk. Team members were very competent in their specific areas and generally motivated individuals; however there was no existing knowledge of SAM within the team, or the principles and mechanics that comprise an effective SAM solution. Consequently, I had to 'sell' the vision, concept and approach as part of my early engagement actions. I am appreciative of the team member's positive engagement with the project.

3.4 The integration of artefacts

I discussed the use of artefacts in Chapter One. As a reminder, the artefacts embedded in this section provide a chronological progression of the project itself through the use of the documents created at the time. They are included in their original unedited form and are an integral element of this thesis; as such the contents of the artefact will not generally be reproduced elsewhere and must therefore be read in detail.

Each artefact will be discussed and placed in context within the project. This will be achieved by the inclusion of an introduction section 'sandwiching' the actual artefacts.

To assist in presenting the relationship and sequence of the artefacts as clearly as possible, the SAM Project Chapter will be presented in sections (illustrated in the 'Outline' provided at the start of this chapter) aligned with the three main phases of the project, being; establishment, implementation and closing.

Each phase section will host its own introduction and conclusion providing critical reflection on that phase from the perspective of the completed project and a more mature author. Additional discussion and reflection, particularly on the learning achieved from the SAM project, are contained in Chapter Five of this thesis.

In summary then, artefacts that are fundamental to the study and the learning experience (operational and academic) are integrated within this chapter as embedded text. Artefacts that are more mechanical in nature, or secondary to the study are included as annexes and referenced accordingly. This is clarified further in the following section.

3.5 The role of annexes, extracts and critical commentary

The artefacts included in this section do not of themselves provide a complete representation of the project and the various learnings and outcomes resultant from it.

Where appropriate, additional commentary will be included linking the artefacts and providing further content, critical review and references to supporting documents provided within the annexes and/or learning journal entries.

These sections of commentary will primarily address key operational and implementation aspects of the study not addressed by the integrated artefacts, and will be particularly useful where:

- The inclusion of further integrated artefacts may be unhelpful to the flow of the discussion
- The insertion point is the most appropriate and relevant use of the referenced item
- The referenced item may be of potential interest to other practitioners

That concludes the SAM project introduction and we move now to the project establishment phase (noting the position of the 'SAM' icon on the highway).

3.6 SAM Project 'establishment' phase



3.6.1 Introduction

This section deals with establishing the SAM project both operationally and academically.

The term 'establish' is used within this context to mean identify and set in place the elements (generally frameworks and authorities) required to define and deliver the project.

This section contains several artefacts pertinent to these early establishment activities.

The SAM project was the first of the two WBL projects to be initiated and as such the framing of the relationship between the operational and academic dimensions was an essential step in developing an understanding of how to structure and deliver the project. This relationship was described in the DPST Getting Started paper provided in Chapter Two at Artefact 3.

Having created the high level operational to academic framework the next stage was to identify the SAM project elements.

The initial mind map used to identify the possible elements and dimensions of the project is provided below at Figure 6. This would later be included as an Annex to the SAM Getting Started paper provided later in this Chapter at Artefact 4.

The project dimensions mind map sought to describe the operational, strategic and organisational dimensions that would influence and be influenced by, the project. Reflecting on this exercise at the end of the study, this map could be considered a dimensions portfolio for the SAM project, identifying as it does high levels areas of influence and interest.

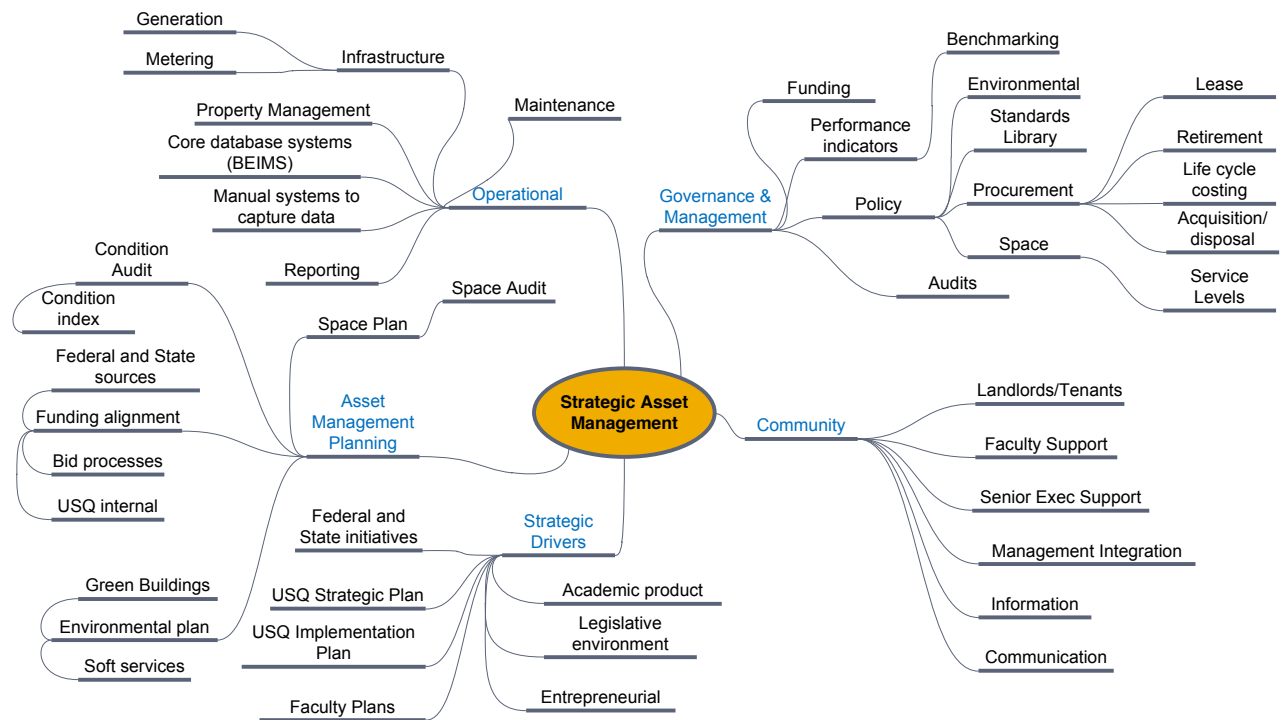


Figure 6 – Mind map of the project dimensions and elements

The elements and dimensions from this exercise were then developed and consistently applied throughout the project documentation and implementation.

One of the challenges in defining the Sam project was how to translate the co-learning achieved via the Action research approach into the corporate environment. My Learning Journal (provided at Annex A) reflects:



15 JAN 2010: *“How to represent co-learning of the organisation rather than individuals participating in the project? Is this through improved corporate performance (KPI’s metric s) and demonstrated in documentation such as policy and procedures?”*

A number of the policy and procedure instruments discussed in this reflection are included in Figure 6 as elements of the mind map and subsequently as elements of the project.

The production of the SAM Getting Started (Artefact 4) paper was a milestone and its contents enabled the progression of several key activities including; the development of the draft Project Plan provided in the implementation section; the configuration of the management and governance framework; the initiation of the quality review (action research, plan, do, check, act, template) and early identification of the strategic interfaces required to enable and sustain the outcomes of the project.

The next stage of implementation took the SAM elements identified from the literature and overlaid them against the USQ environment. As an example of the USQ environment (from a SAM perspective) my Learning Journal reflects:



13 JAN 2010: *“Meeting to discuss FoSc space needs and current new initiatives. Two projects have existing federal funding, one for refurb, and one for new build. Dean suggests another bid for further new build. Need to rationalise existing space before building new. Dilemma created as we are funded for a new building and theoretically the funds (projects) cannot be merged or cross subsidised... At the highest level there is not always a robust process being followed. Uncertainty regarding aspects of governance, particularly preliminary approval before commitment stage is reached.”*

A pragmatic approach was then taken to integrate and rationalise some of the SAM elements, and test them against the USQ need, noting the aspiration to achieve a best practice outcome.

The USQ need (expressed through the project) was assessed against a number of environmental dimensions including; portfolio size, age, condition, resources available for the maintenance and operation of the SAM systems, capital funding processes and attitudes, space demand and utilisation, the quality and nature of internal communication, internal planning maturity and effectiveness and the generally competitive environment for organisational attention. The three output SAM Element models of this analysis are provided at Artefact 5, and structured across the operational, tactical and strategic tiers of business operation. This stage was essential in bringing together the various literature into a physical crystallization of what data and documents were actually required to achieve the SAM outcomes.

Also included in this section at Artefact 6, is the high level SWOT analysis undertaken at the project outset; in part to act as an opportunity for the Working Group members to become familiar with and start to think about the project, but also as a way of celebrating the strengths of the existing FM structure and capability. This was particularly important given the restructuring exercise and was a positive tool in engaging the team as actors in this project.

The SWOT analysis identified a number of opportunities and consequent additional task elements that had not been initially identified through the initial mind mapping.

The final artefact (Artefact 7) in this section is the Quality Review template. This was developed to formally embed the Action Research principles of Plan, Do, Check, Act. However, it needed to be presented in a way that was seen to be adding operational value

for it to be accepted by the team members as a valid functional task. This is discussed in more detail within the introduction section of Artefact.

The engagement of the SAM project within the WBL environment created a number of considerations (documentation, academic content and rigor, degree of transparency and recording, reporting levels) which might not have existed in the same way and/or possibly been of secondary import in a purely operational environment, as a result of other organisational commitments and pressures.

Establishment of the project properly occurred with the completion of the 'Getting Started' paper.

3.6.2 Getting Started and Artefact 4

Artefact 4 was developed at an early stage and sought to understand current professional practice in the field of Strategic Asset Management, particularly from the perspective of the Facilities Management practitioner.

The artefact also introduces the concept of relationship maturity between the Facilities area and the parent organisation and references Jensen's (2008) typology. Jensen's four-quadrant model is used as one indicator of the USQ baseline and improvements achieved through this study.

In reviewing the literature, a number of common elements emerged as being integral to a functional SAM capability. The paper identifies a number of these and describes them in a form that was subsequently used for the development of the operational Project Plan (the production and approval of a Project Plan is a requirement within USQ for formal enterprise projects and a fundamental requirement with Project Management methodology and practice). The Project Plan is included later at Artefact 9.

The paper goes on to position the USQ SAM project both within the body of knowledge as it applies to professional practice, and also within the USQ environment.

It was apparent that this project could deliver technical solutions and data that would be consistent with SAM best practice, but if that data and the principles of SAM more generally, were not embraced at an enterprise level then SAM would not be sustainable at USQ, or at best, the benefits of SAM would be diluted or lost. Interestingly, consideration of the 'change' aspect of the project would become as significant a factor as the technical aspects.

The need to obtain organisational commitment and engage senior executives in the project was apparent at an early stage and influenced the governance and management framework for the project and the nature and format of the key communication deliverables. In

particular, the SAM paper that was eventually presented to the Vice Chancellor's Committee and the USQ Council Finance and Facilities Sub-Committee.

The artefact goes on to describe key project dimensions and subordinate goals/tasks, developed via a collaborative mind mapping exercise (refer to Figure 6). The mapping was conducted by me and selected members of the project implementation team (working group). The project dimensions developed through the mapping (Asset Management Planning, Strategic Drivers, Operations, Governance & Management and Community) are used throughout the SAM artefacts to provide convenient group identifiers for the various stages and elements of the project.

The artefact reinforces the integration of Action Research and Project Management as the primary means to achieve operational and academic outcomes, and this is discussed in more detail in Chapter Five.

3.6.3 Artefact 4



Strategic Asset Management at USQ – Getting Started

What is FM?

Yui (2008) stated that FM is a hybrid of Strategic Management and Project Management and that FM cannot survive by integrating a diversified scope of operations.

The International Facilities Management Association (IFMA) adopts the following definition “*Facility Management is a profession that encompasses multiple disciplines to ensure functionality of the built environment by integrating people, place, process and technology*”.

The IFMA definition references FM as a profession and aligns more closely with the role of FM within the University environment. Further expansion of that definition might be appropriate in that FM has a key role to play as a strategic enabler. (Noor and Pitt, 2009) concluded that FM is a complex dynamic profession that can add value to an organisation by merging and integrating with the core needs of that organisation.

One of the key approaches (comprising a suite of processes, systems and resources) that allow FM to be a strategic enabler has been termed ‘Strategic Asset Management’.

Understanding Strategic Asset Management (SAM)

In their Strategic Asset Management Plan 2005-2008, Griffiths University define SAM as: “*the planned alignment of physical assets with service demand. It is achieved by the systematic management of all decision-making processes taken throughout the life of the asset*”. This is a common definition and if seeking a single sentence definition is appropriate. For those seeking an increased understanding of the elements of SAM expanded definitions are useful.

The University of Tasmania (UTAS) refers to Total Asset Management: *The University has adopted the philosophy of Total Asset Management (TAM), which provides a framework to manage all assets from an organisational perspective. The key focus areas to manage assets under a TAM framework comprise:*

- *provide an asset base that matches and supports the business needs of the University;*
- *consolidate existing corporate capital assets and optimising asset utilisation;*
- *meet statutory compliance obligations; and*
- *align asset operating costs with business planning and service delivery requirements.*

It is a matter of debate whether the reference to compliance obligations should be included within a SAM Plan or considered from a more operational perspective. Certainly the costs of

compliance and associated planning around legislative changes would be represented in some measure within the Plan, if only at a financial level.

The South Australian State Government (Australia, 1996) describes Asset Management as; *a process to manage demand and guide acquisition, use and disposal of assets to make the most of their service delivery potential, and manage risks and costs over their entire life.*

This definition captures a significant number of the elements of SAM in that it refers to the planning around acquisition and disposal, and also the management of demand on the asset which can also be a factor in University environments (e.g. Space Management).

The Western Australian State Government (Australia, 2005) has a similar Asset Management Plan. Their document states; *Managing government assets requires a strategic approach, to enable government to meet community needs, provide and sustain public assets and to achieve service outcomes. Asset management assists government, through its agencies, to meet its desired outcomes effectively and efficiently by:*

- *making the best possible use of existing assets;*
- *maximising value for money when investing in new assets; and*
- *making decisions to invest in, retain or divest assets that take into consideration and protect the needs of current and future generations.*

This Strategic Asset Management Framework is designed to assist agencies to make informed decisions on the assets it needs to support service delivery

Other definitions include: *Strategic Asset Management is a tool for achieving optimum product or service delivery outcomes through more effective asset solutions, and more efficient asset management* (Knowledge Group Consulting);

To summarise, Strategic Asset Management is an approach adopted by the Facilities Management professional that elevates Facilities Management to the role of a strategic enabler. Its purpose is to enable the organisation to achieve its goals through the provision of appropriate asset solutions. In determining those solutions the FM professional (through the SAM process) will consider; opportunities within the wider asset portfolio, life cycle costing, procurement choices (purchase, lease, disposal, BOOT or PPF schemes), Policy, Project constraints (timing, quality, cost), Reuse opportunities, Revenue creation, Value-add opportunities.

The key to successful SAM is in the embedding of the linkages necessary to achieve the earliest advice for the FM professional of a changing asset or service level on the part of the organisation. This is essential given the lead times associated with the decommissioning, refurbishment or creation of new built assets. It also permits the FM department to have time to thoroughly evaluate the changing demand to ensure all options have been fully considered. The other significant benefit to the organisation is full transparency of the costs of the service level proposal through the SAM information. Too often the organisation will engage with an exciting new proposition without considering the full implications and costs of implementation.

Through SAM the FM professional will add value to the strategic decision making of his organisation, moving from a position of 'supplier' to 'strategic partner' and being engaged at the earliest point in concept development.

At the University of Southern Queensland (USQ) the operation of FM (and within it the implementation of SAM) has only recently been established in a manner which would enable it to encompass the scope of functions envisaged by these definitions. Specifically, it was only in 2008 that the position of Group Manager Facilities Management was created to oversight and coordinate core FM functions. Previously FM delivery had been under three different managers with casual and consequently ineffective horizontal integration and no systematic approach to, or consideration of, the vertical integration of FM elements in terms of the operational, tactical and strategic tiers associated with each element and the information flow between those tiers. There was no awareness of concepts such as Strategic Asset Management or FM as a strategic enabler. Work on space audits and backlog maintenance assessments were undertaken in an ad hoc fashion when circumstances or projects warranted, and were not considered part of the normal work program or planning platform for the FM team. FM at USQ was therefore highly reactive and operationally focused.

In this regard Jensen (2008) describes four different types of relationships between FM and Corporate Strategic Planning as follows:

- Integrated strategic (fully integrated, formal and informal);
- Proactive strategic (interdependent planning occurs in parallel with mutual exchange of information);
- Reactive Strategic (FM reacts to but does not influence organisational strategic planning)
- Passive Non-strategic (FM has an administrative relationship and provides support but is not involved in the strategic planning process)

At USQ in 2008, FM was very clearly located in the Passive Non-strategic quadrant of Jensen's typology. Whilst SAM is not a guarantee of an increased ability to influence the organisation's strategic planning it will certainly add value and permit that planning to occur in a more informed manner. As a result of this service gap and empowered by my role as Group Manager Facilities Management I have initiated actions and systematic activities that underpin SAM capability within an FM team. In 2008 I initiated the first space audits of Springfield and Toowoomba Campuses and this is now an agreed cyclical process with an appropriate policy to support its application. I also developed a condition assessment guide and template to move the backlog maintenance assessment to a more robust and systematic condition audit format. With these building blocks in place, this structured project (called Strategic Asset Management at USQ) now envisages the full implementation of the primary elements of SAM at USQ with the intention of improving horizontal and vertical integration of FM activities.

The USQ SAM project

There is now a well developed body of literature as well as an extensive body of operational knowledge in relation to SAM. The most recent and perhaps directly relevant for USQ is provided by the Tertiary Education Facilities Management Association (2009) who undertook a review of the approaches to SAM. The review considers best practice in the US, UK and Australasia. The findings of the review led to the development of the TEFMA Strategic Asset Management Guidelines that will form the starting point for this project.

The TEFMA guidelines provide a thorough but generic model that will be more or less applicable to a particular organisation. The specific application and operationalisation of the guidelines will present unique challenges for any organisation depending upon their current alignment. The primary challenges of such an implementation for USQ and therefore the primary challenges of this project are:

1. Designing a SAM Framework that is compatible with the USQ organisational culture and at the same time achieves the improvements in asset performance that warrant the investment in such an approach.
2. Implementing the SAM Framework in a setting where there are many competing priorities which are often seen as more important than developing strategic FM capability.
3. Achieving improved asset performance when approaches to organisational performance are emergent and there is a real risk that these emergent organisational priorities and decisions will not be informed by SAM (as it is not implemented yet) and may adversely impact on the planned outcomes of this project.
4. Transitioning FM staff at all levels towards a more strategic approach in an environment of high operational demand.
5. Creating the engagement, systems and process required in partner areas within the University to ensure that strategic interfaces are created and provide the two way data flow required to achieve the objectives of the project.

To respond to and hopefully overcome most if not all of these issues, my approach to the delivery of this project will be based on established project management principles as described in the Project Management Book of Knowledge. Particular actions for this project involve;

1. Establishment of a Project Control Group (PCG) to provide governance and oversight of the project.
2. Members of the PCG include the Senior Manager responsible for Corporate Planning and the Chief Financial Officer. These two individuals through their respective roles and responsibilities have the greatest ability to create the internal strategic partner interfaces required for SAM.
3. Through membership of the PCG, external peer review will be provided by Mr. Andrew Frowd, recently retired President of TEFMA and current Director of Facilities Management for the Queensland University of Technology. Mr. Frowd will provide a perspective that will help to reduce the risk of the project becoming skewed through the internal realities of the USQ environment.
4. Establishment of a Working Group (WG) comprising members of the FM staff at all levels able to consider and resolve the challenges and needs of the

project primarily at the operational and tactical levels but also able to consider and contribute to the strategic linkages.

5. The project has been thoroughly communicated through the WG and staff engagement is developing.
6. Task and timelines are regularly discussed inside and outside of the formal meetings and progress monitored using standard project management methodology.
7. PCG and WG meetings are formally scheduled on the corporate calendar system via Outlook.
8. A Project Manager has been appointed to assist in managing the project and this also provides a professional development opportunity for that individual.
9. Individual one-on-one meetings will be conducted as required to progress individual tasks and support resources.
10. Establishing a clear scope and framework for SAM at USQ so that efforts can be prioritised and adjustments made as learning and capability grow. Part of this measure includes a focus on establishing the SAM systems, processes and framework rather than capturing the huge volume of data that will eventually populate some of the SAM elements.
11. Comprehensive documentation and explanation of each stage of the process.
12. Regular reporting to the Chief Operating Officer and Vice Chancellors Committee.

In regard to point 10 above, most of the extant frameworks for SAM (as referenced in the introduction) comprise a handful of 'headline' factors which plot the scope and ambit of the SAM envisaged for a particular organization. In regard to USQ's setting there is no reason at this stage to specifically limit the scope of SAM headline factors found in the literature. The five headlines most appropriate for USQ are considered to be:

1. Operational
2. Governance and Management
3. Community
4. Strategic Drivers
5. Asset Management Planning

For this project the 'Operational' heading covers ground level activity and interface. The 'Governance and Management' heading incorporates issues regarding both on-going management as well as 'in project' arrangements aligned more with the tactical activities and interfaces. Under the heading of 'Community' I consider the wider relationships and transactions that may be required beyond existing functional transactions. The 'Strategic Drivers' area aligns with the strategic level of Jensen's model and considers both the internal and external strategic environment. Finally, under the heading of 'Asset Management Planning' I consider a number of elements and vehicles for data input and modeling that will represent a significant aspect of the SAM Project deliverables.

To summarise, under each of these headlines best practice suggests that key 'functions' of SAM are listed. The functions adopted for this project are highly consistent with the literature but have been framed to fit with existing USQ practice

as well as nomenclature. The full listing of headline factors and functions adopted for USQ are illustrated in Figure One below.



Figure 1.

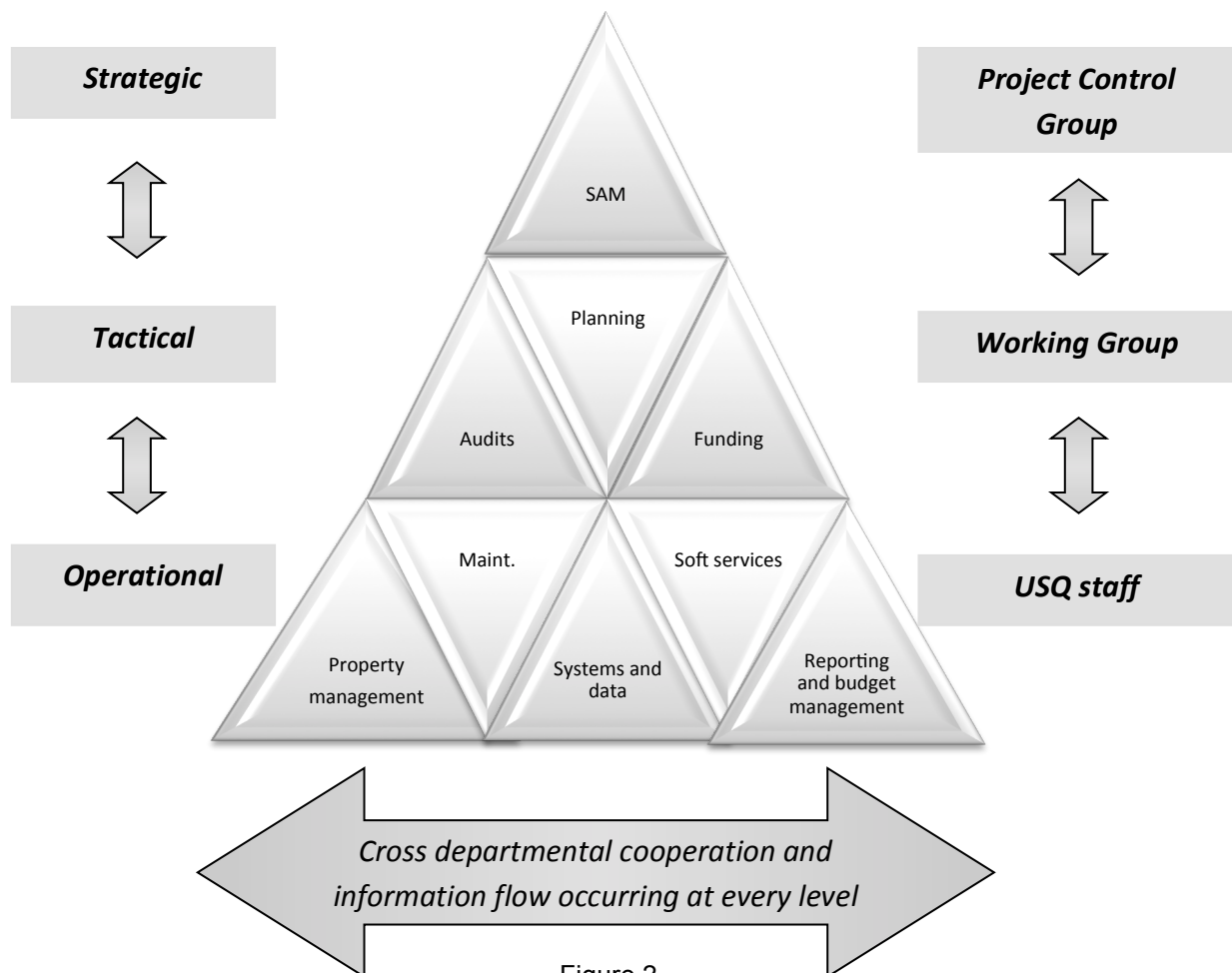
Further project dimensions detail, linkages and integration points with other strategic elements of the University are shown at Annex A – SAM Project Dimensions Brainstorming Map.

To some degree Figure One above provides a roadmap of the ‘content’ or the ‘what’ of this project. This road map has been developed following a careful assessment of the literature in parallel with an assessment of the current operating environment within which the project is being undertaken. The proposed roadmap in Figure One is highly consistent with the literature and has only been fine tuned; (1) so that heading and functional names fit USQ nomenclature and; (2) to take account of particular existing ways of doing things which it is considered will not materially alter the outcome envisaged for strategic asset management.

A project of this nature requires consideration of much more than just the ‘content’ (the ‘what’ of a project) and one of the major considerations is recognition of the outcomes or results seeking to be achieved through the project. In this regard, the project is not dissimilar to the aspirations of those seeking to implement integrated facilities management in organizations, as described by Jensen (2008). Jensen describes a process of capability development which has both a horizontal and a vertical axis for enhanced integration of facilities functions. The horizontal axis represents the need for communication, coordination and resource sharing across

and between functional units. The vertical axis envisages the progression of capability in each functional area from operational through tactical and culminating in strategic capability.

Using Jensen's conceptualisation of the integration of the facilities management function as a basis, the roadmap for the key functions of strategic asset management at USQ has been incorporated into a model which also brings the 'how' of the project into view. This is set out in Figure Two below.



This model brings the 'what' and the 'how' of the project together and provides a more complete representation of all the factors at play in seeking to implement this project. In particular, it will be noted that; (1) the functions of strategic asset management have been categorised into strategic, tactical and operational layers and (2) the organisational structure intended to steward the project has been placed into the capability growth continuum (from operational to strategic) in order to provide a clearer context for members of each of the groups to more fully understand their role and purpose in the project.

The design of the organisational structure for implementing this project has been informed by an analysis of the existing operational and organisational setting at USQ and recognises that achievement of strategic asset management capability rests with those outside of the facilities area as well as inside it. For this reason, the Project

Control Group has been structured to include key operatives from organisational functions which are critical to the achievement of strategic asset management. In this regard, there are two key areas of strategic linkage. These are Corporate Finance and Corporate Planning. Finance sits at the source of capital and Operating funding and must have an appreciation of the data and information underpinning any FM funding. Corporate Planning act as the planning hub for the whole organisation and can provide primary advice on projected service levels changes and can also mandate Faculty and Business Unit planning requirements (such as may be required for SAM interface). For these reasons the Chief Financial Officer and the Group Manager Sustainable Business Management and Information have joined the USQ SAM Project Control Group.

It is intended to review the working model illustrated in Figure Two during and at the end of this project in order to identify modifications and improvements which enhance understanding of the key factors at play in the implementation of strategic asset management. It is hoped that this model will represent an ongoing resource to USQ in framing both the 'what' and 'how' issues for SAM going forward. Also, it may be of benefit to organisational change agents in other settings seeking to achieve integration of FM functions so as to deliver more organisational value.

The overarching approach to this project as well as other projects being undertaken in my DPST is set out in my paper titled 'Getting Started' and this is included at Annex B. This overarching approach sets the context for the adoption of an action research methodology underpinned by the rigorous application of project management as the primary operational tool to implement the major organisational changes implicit within this initiative. The PDCA cycle is common to both Action Research and Project Management (as well as organisational quality and improvement frameworks) and it is proposed that by applying this process that; (1) actual improvements in SAM will be further refined and deliver improved organisational performance and; (2) the SAM model will be further enhanced and developed for future use both inside and outside USQ. To support the action research approach and to link it strongly with the project management methodology, a "Quality Review Template" has been developed (refer to Annex C) for use by members of the Project Control and Working Groups as the final action item on each meeting agenda. This mechanism will provide members with a structured opportunity to reflect on the project and consider improvement opportunities and at the same time, it becomes an important adjunct to the action research framework for the whole project.

Also, during the life of this project I will maintain a learning journal (refer to Annex D) to collect information gained through not only meetings and other specific project interactions but also, through readings and other learning sources. This learning journal will be used to further support the PDCA cycle by providing additional material for review at both project meetings and meetings with my academic supervisor.

In summary, this project has developed a working model for implementing SAM at USQ. This working model is set out in Figure Two above. An action research approach will be employed to guide the activity proposed for each of the functions of FM identified in the SAM working model and set out in the full project plan (see

Annex E). The project will be overseen by a Project Control Group and given operational impetus by the members of the Working Group. These members will be able to provide regular feedback into the progress of the project through group project meetings and supplemented by the completion of the quality improvement template. Monthly reporting will identify progress against plan and highlight learnings and blockages. Enhanced by the PDCA cycle it is anticipated that material improvement in USQ's SAM capability will be achieved through this project. In addition it is hoped that learnings will also be highly relevant and transferable to other like organizations seeking to improve their SAM environments.

Annexes:

- A. SAM Project Dimensions Brainstorming Map
- B. DPST 'Getting Started' Paper and Annexes
- C. SAM Project Quality Review Template
- D. Learning Journal Template
- E. SAM Project Plan (Full)

END OF ARTEFACT 4

3.6.4 Mapping the elements of SAM and Artefact 5

This stage of the process sought to identify the project's key deliverables in the form of hard 'real world' documents, systems, plans, registers and other elements necessary to implement and sustain the principles and outputs of SAM.

As previously discussed, converting the numerous and various content from the literature into a hard document and data format was problematic. There were a number of reasons for this including:

- The volume, depth and breadth of potential SAM elements
- The scale of some SAM frameworks appeared considerable and disproportionate to the USQ portfolio
- Data and system requirements must be sustainable in the USQ context, noting the project constraints that had already be communicated
- Many texts described the various documents and their content, but few presented them in a clear framework
- Some literature referred to individual documents that were very similar to other documents within that system and for USQ at least could readily be integrated or rationalised.
- The literature did not provide a 'ready-made' solution suitable for USQ (for example vehicles)

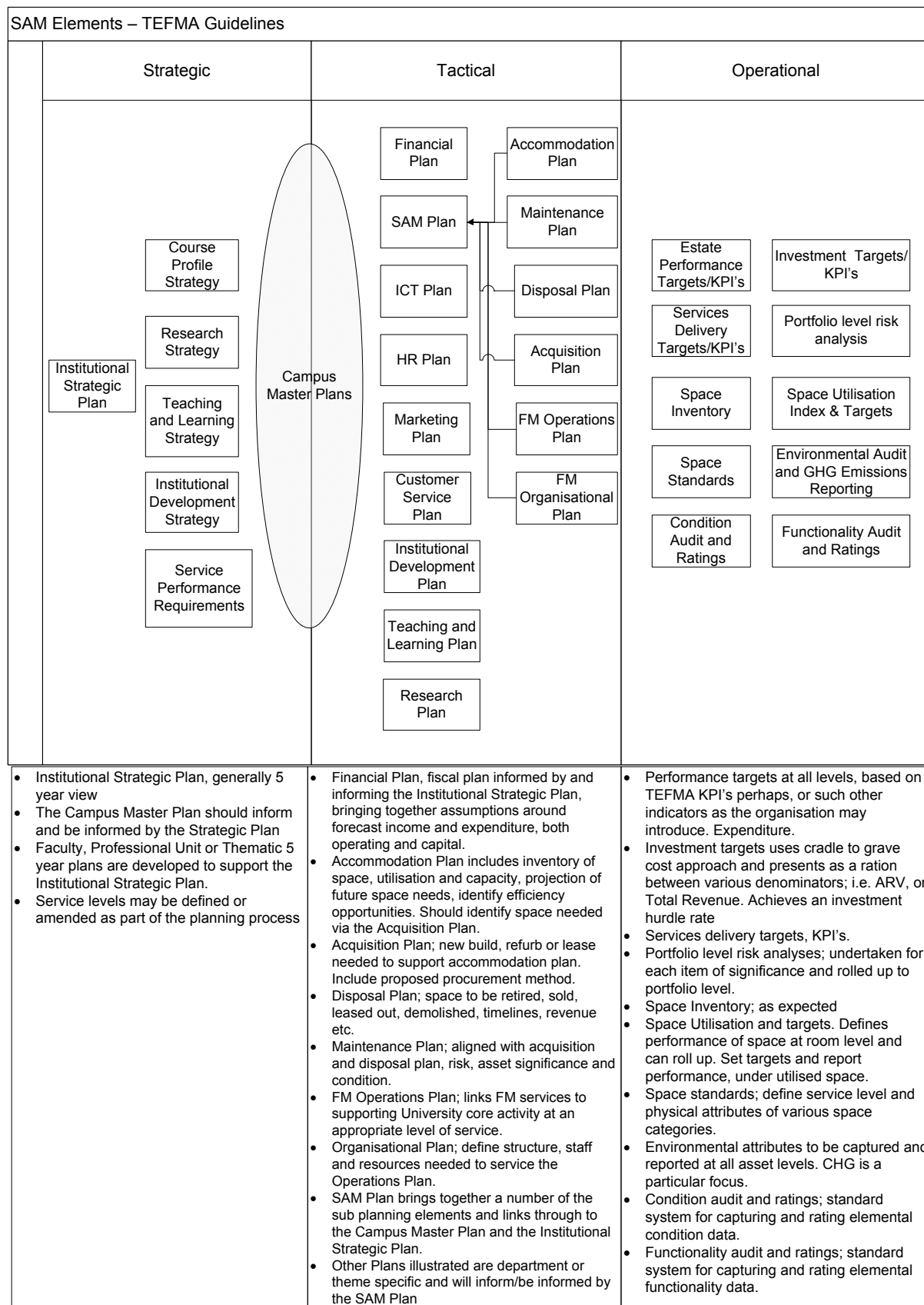
Noting that the preference was to base USQ's model primarily on the recently introduced TEFMA system, a model was developed of the TEFMA SAM elements. To assist in understanding where and how these elements might be developed, delivered and sustained, they were distributed across the operational, tactical and strategic dimensions.

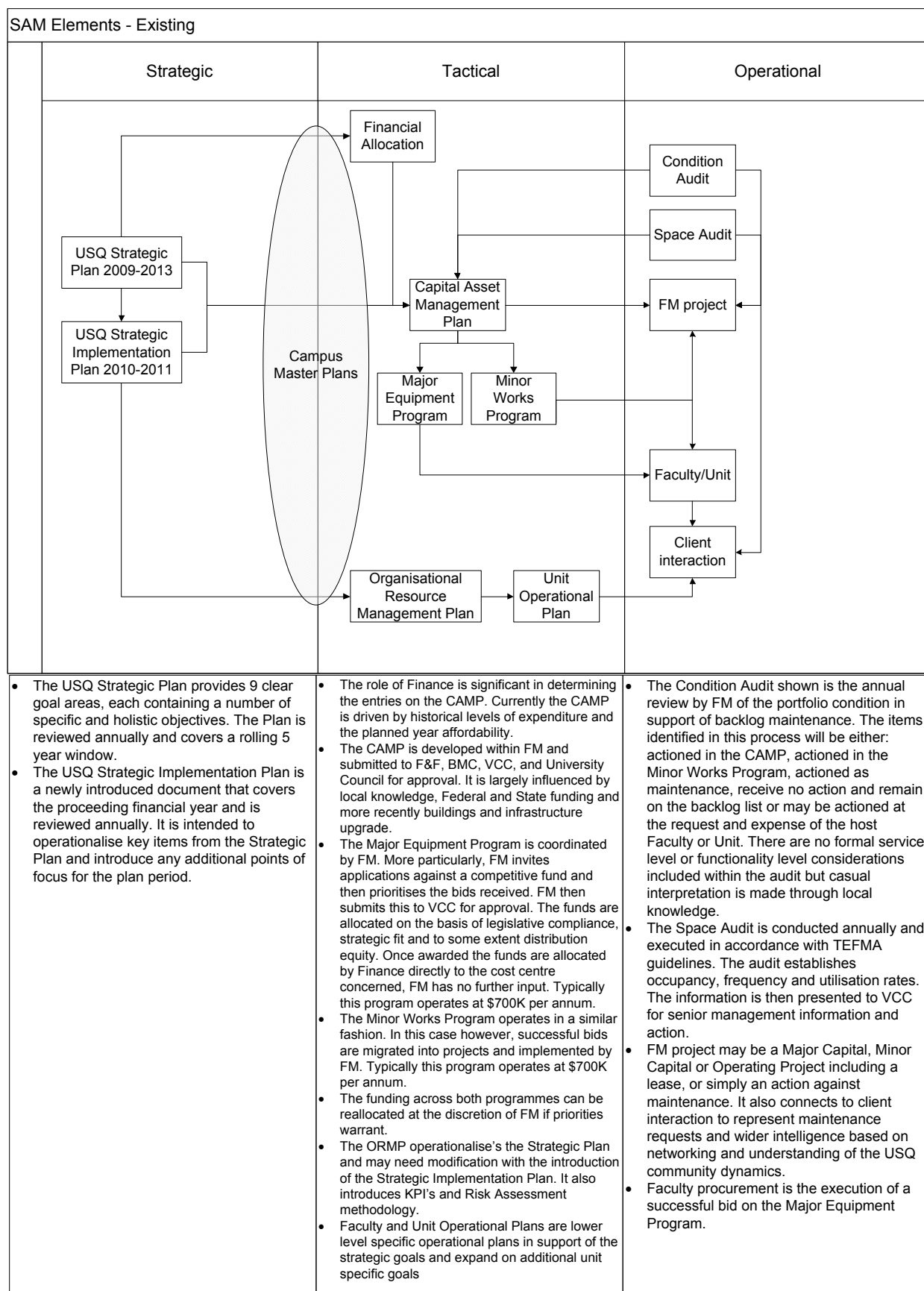
An equivalent diagram was developed for the existing (pre-project) USQ environment, containing elements owned and operated across FM, Finance and Planning departments.

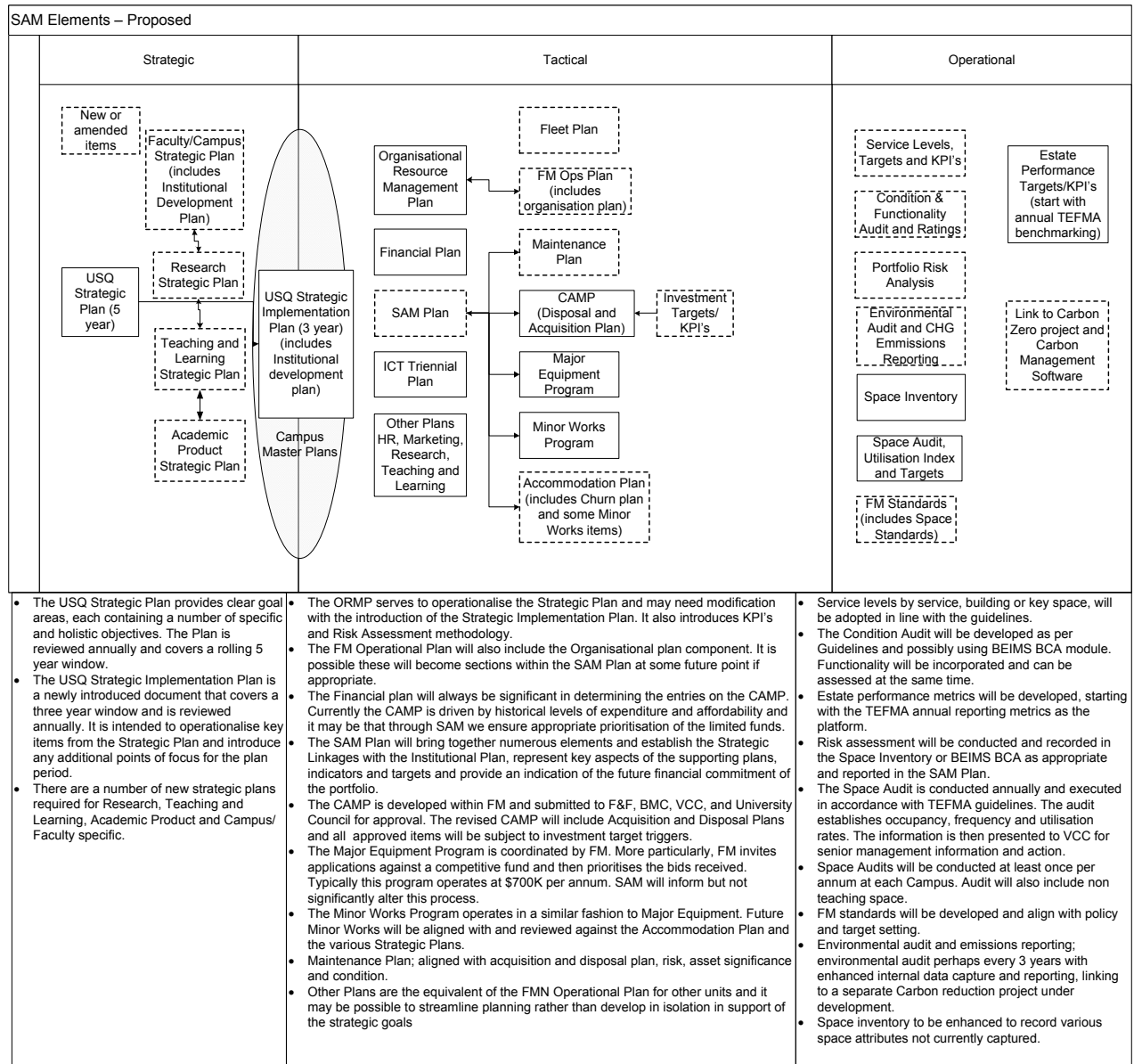
Finally, a USQ proposed model was developed. This model sought to provide an achievable and acceptable outcome by retaining the key elements of SAM both structurally and functionally, and building on the strengths and capabilities that already existed within the organisation. Further, it was recognised that there could be an ongoing maturing of some of the elements both through implementation and post project, as the principles and instruments of SAM became better understood and embedded within the organisation.

In addition to defining project deliverables, the development of these clear and concise representations was particularly beneficial in engaging the Working Group and for wider communication of the project within the University environment.

3.6.5 Artefact 5







END OF ARTEFACT 5

3.6.6 SWOT analyses and Artefact 6

The SWOT analysis was used as another tool in the development and refining of the project deliverables.

Most of the Working Group had not used a SWOT analysis before and so the exercise was undertaken collaboratively with the Working Group. This had the effect of familiarizing them with this particular business tool; of engaging them further with the development of the project deliverables; of increasing their understanding and awareness of the USQ SAM environment and the target standard that we were seeking to create; to identify a number of existing activities and systems that would be identified as strengths within the SWOT and celebrate those.

At the time, I was very concerned that the exercise would not damage further (noting the 2008 restructuring of FM) the confidence of the FM team, and indeed it should be an opportunity to strengthen it if at all possible. The need for this caution was born out in the SWOT under the weaknesses section, described as a 'mind set is very conservative due to historical circumstances'.

Other items under the weaknesses section tend also to relate to the team and the environment, perhaps again as a result of the influence exerted by the restructuring.

That said; there were a major number of strengths listed and these were not contested at the time. As the project progressed it became apparent that the degree of maturity of some of those strengths was less than might have been concluded from the initial workshop. On reflection, the ability to identify both the elements of the SWOT and also a maturity rating (or a satisfaction rating) would have been helpful in terms of providing increased utility from the SWOT.

The threats quadrant tended to focus on the scale of the task at hand, set against the daily workload of the team members. This was a realistic set of concerns given the project constraints (existing resources and funding) and would have a greater or lesser impact on the project at different points in its life. In this context the members of the Working Group are to be congratulated for their industry and commitment to the project.

The opportunities quadrant reflected the proposed SAM USQ elements that did not exist, plus improvements that could be made to those that did.

One key opportunity and a critical component of achieving the principles and benefits of SAM were the improvements planned for the Minor Works, Capital Equipment and Capital Works Plans. In essence these three funding programs form the basis of the Universities 'built environment' funding activity. The opportunity was to improve the strategic consideration applied to these projects to ensure strategic alignment and maximise the

value realised. This could involve cancelling, deferring, rethinking, or progressing with the proposal as appropriate.

The development of the SWOT provided a further summarised and concise instrument for crystallizing the elements and benefits of the SAM project for USQ.

3.6.7 Artefact 6



This SWOT analysis reflects a summary of the strengths weaknesses, opportunities and threats that apply to the SAM Project at the highest level and in the context of the full set of tasks described within the Project Schedule.

Strength	Weakness
<ul style="list-style-type: none"> • Technically competent FM team • Motivated FM team • Basic FM systems in place • Adapted to change over the past 2 years • BEIMS software in place • Client service focus exists • Outsourced specialist services already • Asset database developed • Condition audit conducted last year • TEFMA benchmarking and familiarity • Most contracts have KPI's • COO, GM SBMI and CFO engaged with the project • External peer review 	<ul style="list-style-type: none"> • Strategic level projects unfamiliar • Non-construction structured project management unfamiliar • Mind-set default is very conservative due to historical circumstances • No additional funding for the project execution • Corporate reporting is not robust in all areas and contains significant manual data entry/manipulation. • Existing resources have little capacity for additional work and are reprioritising to achieve SAM tasks
Opportunity	Threat
<ul style="list-style-type: none"> • Develop SAM framework using industry best practice model • Connect to corporate planning framework via SBMI • Link to WPPIUD and/or Data warehouse/BI project • Enhance CAMP process • Enhance Major Equipment and Minor Works processes • Move to earliest facilities planning through Faculty and Unit 5 year plans • Streamline procurement for Capital Works, improve responsiveness • Capture various infrastructure not currently considered • Link with carbon reduction project • Improve policy and guideline framework • Improve governance and management framework (clarify, streamline) • Develop standards library to aid in service level and expectation management • Embed environmental principles in standards and procurement areas • Improve communication • Service levels to manage expectations and define targets • Improve portfolio and building information to prioritise expenditure • Improved financial forecasting • FM as a strategic enabler 	<ul style="list-style-type: none"> • Funding constraints • Timing • Business as usual work load • Outputs of SAM may not be accepted • SAM linkages rely upon other areas of the University • Magnitude of work around condition data collection and other tasks • Data collection processes may require too much manual input to sustain in the short-term • Database options for housing required data, indices assessments etc.

'Opportunities' have been represented within the project task schedule. 'Weaknesses' and 'Threats' have been migrated to the Risk Register (with some editing).

END OF ARTEFACT 6

3.6.8 Embedding an Action Learning approach and Artefacts 7 & 8

As described previously, the SAM project was conducted in an operational environment using operational staff as the primary actors and competing against day to day operational reality for time and attention, wholly consistent with Armsby's (2000) characterisation of the work based learning environment.

In this setting it is often difficult to either find, or justify the time to pause and reflect on the work undertaken, and consistent with the discussion of Raelin and Coghlan (2006) it becomes critical that there is opportunity for reflection. My response to this was to formally embed reflection as an integral part of the project. Not to do so denies the opportunity for learning, be it personal, professional or institutional.

In the case of the SAM project it was my intent that learning opportunities would occur as described below in Figure 7. The learning matrix will be discussed further in Chapter Five and expanded for a more detailed representation of the project learning outcomes.

<i>Learning Area</i>	<i>Learning Instruments</i>	<i>Primary beneficiaries</i>
Institutional	Project deliverables, systems and processes, internal linkages and understanding	USQ
Professional	Technical knowledge, planning frameworks, tools, systems and instruments, change management	Team members and Author
Personal	People skills, academic learning, self-reflection	Author

Figure 7 – Learning matrix

The Quality Review Template (provided at Annex B) was developed using the principles of the Action Research (PDCA) cycle, presented in a format that allowed the cycle to be connected to a particular task or sub-task. This was done to make the use of the template as easy and relevant as possible for the Working Group members. Members were able to reflect on any aspect of the project by simply not linking it to a specific task and using the 'observation' field. This allowed for any situation or circumstance to be represented.

The reflection was included as a standing agenda item for each Working Group meeting to validate the process in the minds of the members and legitimize the time spent. An example of the Working Group Agenda is included at Annex C, illustrating the inclusion of the reflective cycle as part of the meeting pro-forma. Actions were developed from the feedback to adapt the project deliverables or to address other improvement opportunities. An example of a completed Quality Review template is included at Artefact 7. Together these items evidence the action research approach applied through the Working Group forum.

Artefact 8 provides an excerpt from the Learning Journal maintained throughout the SAM project and evidences my learning and reflection throughout the life of the project. As previously stated, the Learning Journal is provided in full at Annex A and discussed in more detail in Chapter Five. The extract is provided here for completeness when describing the mechanisms for capturing learning against the three areas illustrated in Figure 7.

3.6.9 Artefact 7



Dimension	Task	Sub-task	Date
Observation	ALL		
Analysis	NEED TO ALLOCATE "BLOCKS" OF TIME TO ACHIEVE TASK RESOLUTION		
Reflection			
Project Impact	TIMELY ACHIEVEMENT OF TASKS.		
Forward action	IMPLEMENT TIME MANAGEMENT PRINCIPLES AS DISCUSSED WITH DAVE		

Dimension	Task	Sub-task	Date
Observation			
Analysis	SAM PROJECT COMMUNICATION TO TEAM		
Reflection	IMPORTANT THAT ALL FOM STAFF UNDERSTAND THE BROADER BENEFITS OF SAM FOR THEM & USQ		
Project Impact	LOCAL BUY-IN		
Forward action	COMMUNICATE AT NEXT TEAM CATCH-UP.		

Dimension	Task	Sub-task	Date
Observation			
Analysis			
Reflection			
Project Impact			
Forward action			

Completed by: NATHAN JONES Date: 24/5/10

END OF ARTEFACT 7

3.6.10 Artefact 8



Situation/Reading	Asset transfer	Date 23 Mar 10	Project SAM
Content/events/observations	Two requests for data from COO and Clark. No explanation of purpose, but clearly to support discussions.		
Analysis	From the response to the data provided there is little understanding of the legal framework at the campus (lease, library etc). I have asked the COO at what stage I will be fully involved with this project		
Reflection	I suspect that representations or assumptions have been made that will be significantly different to the reality of the lease and library arrangements.		
Project Impact/significance	Minor		
Forward action	Once included in the discussions proper, I will seek to affirm understandings and realign as necessary.		

Situation/Reading	Meeting of the sustainable budget model working group	Date 29 April 2010	Project SAM
Content/events/observations	Meeting to progress the review of the current budgeting model. Earlier meetings had developed a set of principles that reinforced the current model was ok. This was not well received by Faculties. The discussion was largely around the inequity of Faculties getting less than 50% of revenue. Anecdotal comment from OER re. traditional overhead versus production centre allocations inflamed the debate.		
Analysis	A lack of understanding seems to exist re the allocation of revenue and the way that centralised costs are managed at USQ. There is some duplication of function apparent across some areas.		
Reflection	Many of the statements seemed based on the false assumption that Faculties meet all their own costs. Highlights the gap when full cost of operation is not transparent or embedded.		
Project Impact/significance	<ul style="list-style-type: none"> Funding envelopes could vary and SAM projections need to work within the constraints of the organisation. May lead to internal rent charge or other funding model changes 		
Forward action	<ul style="list-style-type: none"> Meeting with COO, GM SBMI, Director Budgets and Reporting and me to discuss areas of duplication and opportunity. Consider sustainable funding within SAM project Caution changes that weaken strategic (SAM) focus Publish space costs for Faculty info. 		

END OF ARTEFACT 8

3.6.11 Phase conclusion



The research and reflection required to develop the Getting Started paper (Artefact 4) was fundamental to the early construction of the SAM project in terms of ‘what’ to do and ‘how’ to do it. The paper remained a valid and relevant guiding document throughout the project.

The dimensions model developed provided an accurate perspective of the project dimensions and sub task hierarchy, set within the strategic, tactical and operational levels. This was valuable in guiding and reinforcing the responsibilities and activities of the Project Control Group and the Working Group. The concepts and content of the dimensions model also migrated to the detailed Project Plan (Artefact 9). This dimension based approach would be replicated later for the Carbon Reduction Project and is discussed in detail in Chapter Four.

The ‘mind map’ (Figure 6) remained substantially unchanged, noting that a minor number of tasks were not completed. The status of each task is fully described in the Project Closure Report provided at SAM (Artefact 13).

In the nature of an action learning approach some tasks were modified as an outcome of the PDCA cycle (captured via the Quality Review templates) and new tasks were added. On occasion, signs of fatigue were evident from the participants and the willingness of the Working Group to include new tasks was observed to diminish with time.

At the establishment phase, the project sought to achieve comprehensive improvements in all areas of SAM at USQ. Significant improvements were made and these are reflected in the baseline and closing assessment ratings. Whether it was reasonable to establish such a comprehensive set of targets given the constraints of the project is on reflection questionable.

The project may have benefited from a more focused and less voluminous set of targets at the outset, prioritising the outputs to better align with the resource constraints and demands of the operating environment. This may have included staging the same deliverables across a longer period, although that is not without its own risk as new demands and initiatives may overtake the project.

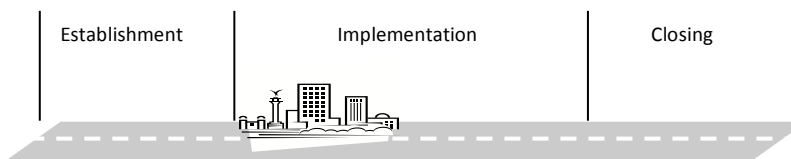
Various dynamics were at play during this phase of the project that led to the shaping of the project as a comprehensive SAM implementation. These included:

- The inter-relationship of the various elements
- The learning opportunity provided by the project (allowing the FM team as participants in the project to improve their technical and professional knowledge and competencies)

- Organisational activities and changes particularly in funding and structural areas that required an improved understanding of the property portfolio and an enterprise wide SAM capability

In concluding this phase then, the project was established logically and comprehensively in order to achieve the desired outcomes, but was perhaps ambitious given the resource constraints that existed.

3.7 SAM project 'implementation' phase



3.7.1 Introduction

This section will discuss various aspects of the project delivery and (in addition to embedded artefacts) will make use of excerpts from the Learning Journal and provide critical commentary on project implementation with appropriate references to the operational artefacts included in the annexes.

The significance of the operational documents provided as annexes is not diminished, particularly in support of the project management methodology; however the inclusion of such functional, operationally focused documents would potentially interrupt the academic flow of this thesis. The material will be of interest to practitioners and provides a practical resource for those researching options for the 'how' of project implementation.

Project implementation started in earnest following the acceptance of the DPST Getting Started paper (Artefact 1) by the academic supervisor. Approval of that paper provided clarity of the academic and operational relationship, and the roles of Action Research and Project Management, which in turn enabled the initiation of the operational implementation.

As a consequence, the Project Plan was developed and distributed for internal approval.

3.7.2 The Project Plan and Artefact 9

The Project Plan uses best practice project management methodology to inform its construction¹⁰ and includes a significant breadth of topics that would typically be considered

¹⁰ The adopted plan format was developed using the On-Q template with changes appropriate to the USQ need. On-Q is the project management framework of the QLD Department of Transport and Main Roads.

in an operational corporate environment. These include document control, document approval checklist, project stakeholders, project purpose, project scope (including exclusions, constraints and assumptions), impacts, business process, control structure (including governance structure and process, scope management, risks and issues, cost management, time management, resource management, communication, procurement and quality management), safety, operational issues, performance measurement and benefits realization.

It is fair to say that Project Plans have not routinely been used within the operational environment of Facilities Management at USQ, except for the largest construction projects; even then, the external 'professional services' providers generally developed them. The SAM project therefore provided a significant opportunity to develop and socialize a more structured approach to project Management, including the use of Project Plans and other project management associated documentation. The working group embraced this opportunity and a task was added to the project to develop a standard suite of project management document templates.

As a brief reflection, the Project Plan served to provide clarity of and confidence in the project for Senior Management approval, but was of less relevance through the implementation, perhaps in part due to the extensive management and governance framework established to deliver the project. As a general observation, the breadth (or scale) of a Project Plan should be appropriate to the risk or complexity of the project.

3.7.3 Artefact 9



Strategic Asset Management at USQ Project plan

Action

statement

Date	Name	Position	Action required (Review/Endorse/Approve)	Due date

Prepared by: David Povey
Title: Group Manager Facilities Management
Division: Facilities Management
Location: Building O3, Room 117, Toowoomba Campus
Version no: 1.0
Version date: 22 March 2010
Status: Initial Draft
Project . no: tba
File no: tba

Document control sheet**Contact for enquiries and proposed changes**

If you have any questions regarding this document or if you have a suggestion for improvements, please contact:

Project Manager: David Povey

Phone: Office:07 46311910 or Mobile: 0448 944069

Version history

Version no.	Date	Changed by	Nature of amendment
1.0	22/03/10	DP	Initial draft.

Project plan approval checklist

<input type="checkbox"/>	Project governance is documented. Project customer, sponsor and manager have been identified and accept their responsibility.
<input type="checkbox"/>	There are clear justifications for the project: <ul style="list-style-type: none"> the real underlying problem to be addressed has been identified what the project is expected to achieve has been determined. (For example potential costs and benefits based upon the current knowledge and understanding). the products or services to be delivered, and how they specifically address the have been clearly determined.
<input type="checkbox"/>	Communication plan (if required) is attached

<input type="checkbox"/>	<p>Background details include (in summary format if possible):</p> <ul style="list-style-type: none"> • who initiated the project and how • the underlying problem to be addressed • current situation (problems, needs or opportunities) • the project deliverables • potential costs and benefits based upon the current knowledge and understanding the history of the project • any other initiatives carried out previously to address related issues.
<input type="checkbox"/>	The scope outlined in the business case is confirmed or updated. Any scope creep is noted.
<input type="checkbox"/>	Internal and external impacts, and possible mitigation strategies, are identified.
<input type="checkbox"/>	The business case investigations, research methodology and engagement are clear.
<input type="checkbox"/>	The risk management plan is attached (including environmental, cultural heritage, political and safety risks).
<input type="checkbox"/>	The broad strategy to deliver the project is clear.
<input type="checkbox"/>	Adequate project controls are included (inc integration, scope, time, cost, quality, HR, communication, risk and procurement management).
<input type="checkbox"/>	Environmental management, cultural heritage management and safety are addressed.
<input type="checkbox"/>	Operational issues asset transfer or ownership, commissioning, handover support, maintenance, warranty and management strategies identified.
<input type="checkbox"/>	Project performance measurement and benefits realisation are clear.
<input type="checkbox"/>	Functional requirements or business process analysis. Attached (summary of the business process changes or the functional requirements).
<input type="checkbox"/>	Funding source is clear.
<input type="checkbox"/>	The recommendation is clear for example reason why the project should proceed to the next stage and identify the impacts of not proceeding.
<input type="checkbox"/>	<p><u>Deliverables</u></p> <p>Appendix A – project schedule Appendix B – project dimensions Appendix C – human resource management plan Appendix D – communication plan Appendix E – risk register Appendix F –project controls</p>

In signing this approval:

- I agree that the document meets the standard required for the project plan deliverable (requirements above).
- I understand the financial and other impacts associated with approving this project plan.
- I authorise progression to the implementation stage.

Project client (accountable for ensuring the stated benefit(s) of the project to the business have been measured and achieved)

Name Bernard Lillis

Position Chief Operating Officer

Signature _____ Date _____

Project sponsor (accountable for representing the organisation and delivering the project)

Name David Povey

Position Group Manager Facilities Management

Signature _____ Date _____

The following key stakeholders critical to the project's success have endorsed this document.

Name tba

Position Asset Manager (aka Facilities Manager) Facilities Management

Signature _____ Date _____

Name Barry Mottram

Position Chief Financial Officer

Signature _____ Date _____

Name Steve Ivey

Position Group Manager, Sustainable Business Management

Signature _____ Date _____

Introduction

Purpose of this document

The purpose of the project plan is to:

- detail how the project will be managed
- provide a baseline for the measurement of progress
- revise the information where appropriate.

References

The requirement for this project is referenced as an outstanding action item by the USQ Audit and Risk Committee. It was initially identified by Price Waterhouse Coopers (PWC) in their audit of 2002 as a requirement to improve Estates Management, and more recently in the Ragussa review of 2007 as a need to introduce the principles of SAM.

Definitions

Terms, abbreviations and acronyms	Meaning
SAM	Strategic Asset Management acronym.
Strategic Asset Management	Strategic Asset Management is the holistic operation of an asset portfolio in support of organisational objectives, having regard to the needs and constraints of that organisation whilst acting as a strategic enabler. A significant element of SAM relates to planning and forecasting.
TEFMA	Tertiary Education Facilities Management Association
USQ	The University of Southern Queensland
VC	The Vice Chancellor of USQ
PMA	Post Meeting Actions

Project purpose

Background and current situation

There are two historical reviews that have acknowledged the need for USQ to adopt SAM as part of the Facilities Management approach and these are described in the references.

This project has been initiated by the Group Manager FM in response to those earlier recommendations and as part of an overarching strategy to move USQ FM to a best practice model.

There has been no previous engagement with the USQ community around this project.

Some elements of the project deliverables will be evidenced through the annual TEFMA benchmarking returns, other elements will attract new KPI's using the project completion date as the baseline.

Many aspects of the wider principles of SAM have already been addressed, including a partial asset condition assessment and the development of improved space planning, management and utilisation audits. This project will build on that work and provide a coherent consolidated outcome.

The recently published TEFMA SAM guidelines will be examined, with further consideration of researched alternatives, in order to develop an optimal model for USQ. External peer review and professional input will be sought from Mr. Andrew Frowd, Director of FM at QUT.

The principle gap to be addressed by the project relates to the forward planning and scheduling of asset refurbishment and replacement through a predictive model that considers life cycle, life cycle costs, condition, service level and criticality.

Outcomes and benefits

The project has the following deliverables:

- Predictive financial model for asset retirement/refurbishment/replacement
- Improved value for money from the FM dollar
- Condition assessment of the property portfolio
- Policy review, amendment and development as appropriate
- Standards and templates review and development as appropriate
- Implementation of balanced (scheduled versus reactive) maintenance regime
- Improved space utilisation
- Proposal to the VC regarding space planning and management
- Case study for Higher Education Sector

The project embeds the tertiary sector's current understanding of strategic asset management best practice. The outcomes of this project will directly influence:

- property acquisition and disposal decisions
- operating expenditure investment
- space allocation and utilisation
- standards and qualities defining the built environment at USQ

Links with USQ objectives

This project will contribute to the achievement of USQ Strategic Goals as follows:

- Goal 2 – Student experience
- Goals 1,3 and 4 through the provision of flexible appropriate environments
- Goal 5 – Staff by improving the condition of the space and aligning the level of service received with staff needs
- Goal 6 – Educational Partnerships through consideration of alliances and development space in campus master planning
- Goal 7 – Social Justice and Equity by prescribing spaces that are attractive and functional for students of all cultures and socio economic backgrounds.
- Goal 8 – Engagement and Development through the inclusion of joint venture community projects and consideration of those opportunities as part of strategic FM planning
- Goal 9 – Deliver positive social, environmental and economic dividends through the cost effective and environmentally responsible planning, development and operation of the property portfolio

This project is consistent with FM's objective to operate within a best practice environment and act as a strategic enabler for the University.

Scope of project

In scope

Research and analysis of SAM principles and standards

All activities required to achieve the outcomes and benefits at Para. 2.2.

Conduct a condition audit at an appropriate level, including the identification or development of a database and associated reporting/analysis tool to derive quality management information

GAP and SWOT analysis around SAM models and the USQ situation

Development of a SAM model for USQ

Development of building indices and key performance indicators and associated reporting regimes

Review and amendment of relevant USQ policy

Reasonable conference attendance, site visits, external consultation, travel and accommodation in support of the project

Out of scope

Procurement of additional software systems

Commissioning of external contractors for the undertaking of a condition audit

Undertaking of any remedial works identified

Related projects

There are synergies between this project and the Campus Sustainability project but there are no dependencies.

Constraints

USQ policy will be followed in the delivery of this project.

This project is intended to be delivered using internal FM resources, noting that the vacant Asset Manager position may have an impact on this constraint.

Financial plans will be adapted to meet the sustainable resource levels available.

Various elements of this project may require additional approval outside of that defined within the project plan.

Urgency

The project is an outstanding item from the Audit and Risk Committee and is required to be complete in 2010.

The project represents a foundation stone for effective estates management at USQ and early completion will allow increased confidence and benefit realisation.

Assumptions

- Resources (staff and funding) will be available to support this project
- Senior management will continue to support this project
- Ongoing funding will be available to sustain the recommendations of this project
- Other internal priorities will not supersede this project

Impacts

The project has the following potential impacts:

- Culture change to a more planned service level approach
- Culture change within the FM community to accept the FM standards and service level approach to be developed within this project
- Transparency of portfolio costs consequently affecting financial allocations (+/-)
- Improved decision making using objective criteria and life cycle costing
- Possible impact on Faculty funding e.g. internal space charging, carbon charge
- Structured approach to reactive and planned maintenance recognising a cost effective balance between the two
- Increased use of software systems for planning, requesting and recording FM asset activity
- Policy development and/or amendment
- FM staffing adjustment may be required to sustain best practice SAM operation

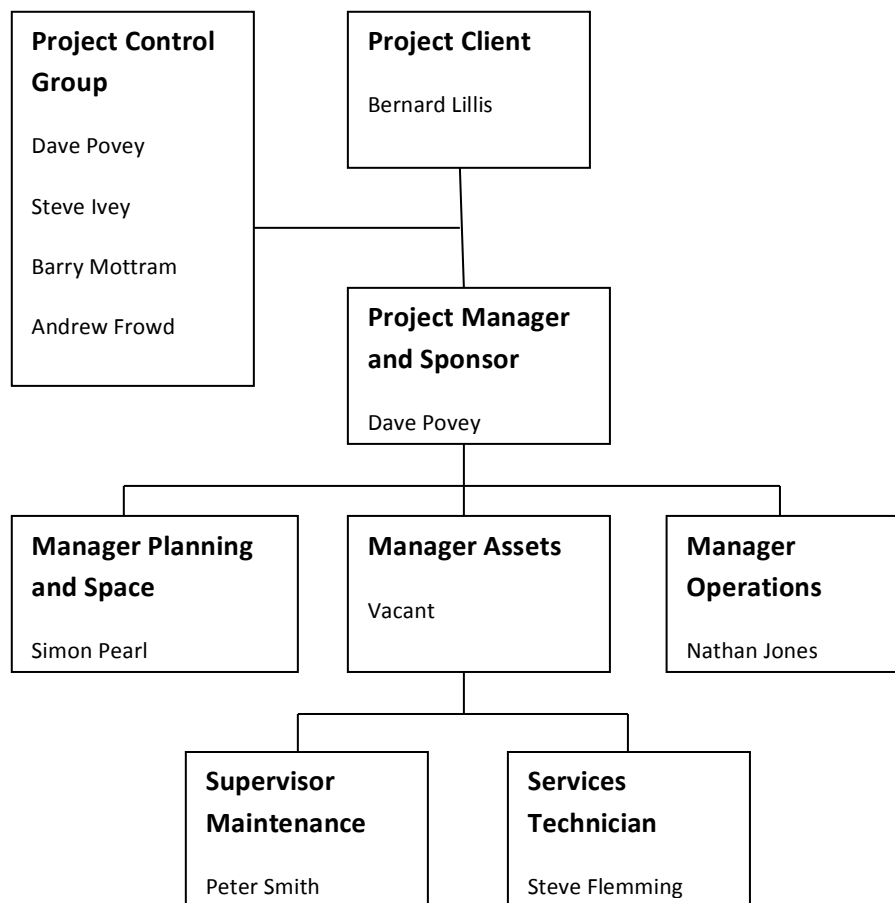
Business processes or requirements

Likely areas of business process affected by this project are:

Funding of maintenance and capital works will be impacted in both the amount of funding and the criteria for assessing new requests for capital development. In both cases the information provided via the SAM project will significantly improve and inform the decision making and prioritisation process.

There is the potential for planned maintenance regimes to be introduced at optimal levels in order to extend and maximise the life of the asset in contrast to existing levels (in some cases) which may only seek to achieve legislative compliance.

The University may review Faculty and Business Unit funding models to encourage the cost effective and optimal use of the portfolio and services.

Project control structure

6.1 Governance

Project client

Bernard Lillis, Chief Operating Officer

Project sponsor

Dave Povey, Group Manager FM

Project manager

Dave Povey, Group Manager FM or delegated to Asset Manager if appointed

Governance structure

Governance will be provided via the project control group with regular reporting to the Client; the Chief Operating officer.

Independent peer review will be provided through the inclusion of Mr Andrew Frowd Director of FM, Queensland University of Technology in the PCG.

Stakeholders

Stakeholder area	Stakeholder representative	Responsibility	Interest context	or
Finance	Barry Mottram	Chief Financial Officer has ownership of all elements of finance	Connects funding and financial forecasting	with and
Planning and Quality	Steve Ivey	Group Manager Sustainable Business acts as steward for strategic planning	Impact alignment with strategic goals	and with
Operations	Nathan Jones	Service contracts, mail, security, cleaning	Service levels, integration of forward planning	
Asset Management	Steve Flemming Peter Smith Asset Manager (tba)	Specific responsibility for ongoing management of built assets	Core planning and operation tool for the Asset Manager	

Scope management

Changes to project scope will be managed using the change control document in Appendix F.

Risks and issues**Risks**

Risks have been identified, analysed, and graded as per the tables in the attached Risk Register. The proposed treatment of each risk is also contained in the Risk Register. The Risk Register constitutes the Project Risk Management Plan and can be found in Appendix E.

Issues

The Project Manager will maintain a project change and issues register with assigned responsibilities. This will be reviewed at the PCG meetings. The Register can be found at Appendix F.

Time management

Initial time allocations are described in the attached project schedule. Progress will be reviewed by the PCG and the schedule updated as necessary. Time variations will be handled using the change form in appendix H project controls

Cost management

A project will be established and all costs linked to that project identity, noting that the majority of costs will be absorbed into the FM operating budget as part of continual improvement activity.

Initially it is anticipated that costs will be met within the 2010 FM budget and that no additional or specific funding will be required. This may be subject to change as the project progresses, in which case a funding submission to the Chief Operating Officer will be provided.

Internal resource time may also be tracked using the BEIMS where it is apparent that the commitment is significant or impacting on normal duties.

USQ procurement policy and financial delegation authorities will apply in the delivery of this project.

Human resources management

FM internal resources will be utilised in the delivery of this project.

This project will provide professional development opportunities for members of the PCG and the implementation team.

No specific project training is required and knowledge pertaining to SAM principles will be obtained via on the job training, research and familiarisation with the standards available.

Communication and change management

The GM FM will establish the project control group and circulate relevant documents accordingly, along with a suggested project time line.

Regular update reports will be provided to the COO and distributed within the USQ community as appropriate (suggest possibly F&F Committee or VCC only).

Regular updates will be sought from the team members to the GM FM.

Regular updates will be distributed within the FM management environment.

Audit and Risk Committee will be made aware of progress by the Group Manager Sustainable Business.

Finance units will be made aware of relevant aspects of the project by the Chief Financial officer.

Internal communication

PCG meetings will be minuted using the Universities standard template with PMA's being assigned.

Changes to the project will be discussed and agreed within the PCG and documented appropriately.

Behavioural and process change will be identified and suitable training provided and transitional support structures established as appropriate. All activity will occur within the existing baseline of FM. Where appropriate, Position Descriptions will be amended.

Procurement management

It is not envisaged that this project will require procurement activity. However, should this be required all procurement will occur in accordance with the University's procurement policy.

Quality management

Quality Management will be the responsibility of the PCG and the Project manager. This Project Plan and associated attachments will be updated as necessary by the Project Manager.

Safety

There are no particular health and safety considerations required for this project. Existing USQ health and safety requirements will be followed in the delivery of this project.

Operational issues

Operational issues that may impact on this project are:

- Resource levels
- Resource skills and competencies

- The BEIMS database and specifically population of the asset register within that.
- Time commitment to populate the planned maintenance calendar
- Use of out-sourced contractors for specialist maintenance
- Mixed portfolio in terms of leased and owned buildings and land

Project performance measurement

Success criteria	Owner	Measurement method	KPI	Target
GAP analysis	DP	Evaluation	Achieved	JUN 2010
Creation of Facility Condition Index	DP	Completeness	Achieved	AUG 2010
Forecast model	DP	Completeness and utility of high level model	Achieved	SEP 2010
Creation of SLA	DP	Completeness	Achieved	SEP 2010
Strategic and Faculty linkages	DP	Completeness and utility	Achieved	SEP 2010

Product benefits realisation

Success criteria	Owner	Measurement method	KPI	Target
Improved space utilisation	DP & COO	Space audits	% utilisation rates	Ongoing
Improved Capital Planning	DP	Capital Management reflects planning	Asset Plan increased Feedback via BMC	SEP 2010
Prioritised maintenance expenditure	DP	Planned and reactive maintenance reduction via GL	\$/m ²	AUG 2010
Recommendations for optimised portfolio	DP	Space to student ratio via space database	m ² /eftsl	OCT 2010

Appendix A – Project Schedule

Appendix B – Project Dimensions

Appendix C – Human Resource Management Plan

Appendix D – Communication Plan

Appendix E – Risk Register

Appendix F – Project Controls

END OF ARTEFACT 9

3.7.4 The Governance Group

The Governance Group was developed to have governance oversight of the project. That is, to ensure that the project remained within its terms of reference, to remain on target in regard to time/quality and cost metrics, to resolve any significant queries or challenges and to seek value add opportunities.

The group membership comprised me (acting in a number of roles: as the Director of Facilities Management, as an agent for change and also as researcher), the Chief Financial Officer, the Group Manager Sustainable Business Management and Information, and an external, independent member being the Director of Facilities from a large Queensland University.

The Governance Group operated through the collaborative workspace to schedule meetings, host agendas and minutes from meetings. Some examples of the Governance Group documentation are included at Annex D. The group functioned well and the inclusion of the external member was a useful adjunct providing independent peer review and resulting in a number of concepts and assumptions to be challenged through the project. One example related to the risk rating system used for the condition assessment database where a TEFMA standard existed but was not known to working group members who had consequently developed a USQ specific version. A further example is captured in my Learning Journal (provided at Annex A), which records:



11 MAY 2010: *“External rep rang to talk through project documents. He commented that we had everything in the project plan that was needed. He also acknowledged the difference in the TEFMA approach to some of the other SAM models, particularly around predictive modeling... Initial confirmation of project alignment from our external peer review member so that is significant.”*

3.7.5 The Working Group

The Working Group was established to service the human resource needs of project implementation, to provide learning and professional development opportunities for members of the Facilities Management team, and to build ‘ground level’ ownership of the systems, processes and data to ensure the sustainability of the SAM project outcomes. To illustrate with a specific instance, my Learning Journal records:



14 FEB 2010: *“As part of the HR development need in order to support the SAM project I have authorised two FM staff members to attend BEIMS training;*

particular focus is the creation of the scheduled maintenance task library and calendar. I have also approved external study for the HVAC Technician and the Maintenance Supervisor to gain broader FM knowledge including asset management... Positive on many levels including staff engagement, motivation and development”

Members were selected from each area within Facilities Management and were generally at Manager or Supervisor level, with trade staff co-opted as necessary.

The Working Group members were expected to complete the quality review template at the end of each meeting. As previously discussed this provided a formal instrument for the action research methodology to become embedded into the project implementation.

An example of the Working Group documentation is included at Annex C.

3.7.6 The Project Schedule and Artefact 10

The Project Schedule (identifying tasks against time) was developed initially from the dimensions identified in the early mapping and included subordinate tasks and sub-tasks. In accordance with project management methodology this was presented and maintained in the form of a Gantt chart. An illustrative example of the Gantt chart is included at Figure 8 below. The detail of the task items is provided later in this section at Artefact 10.

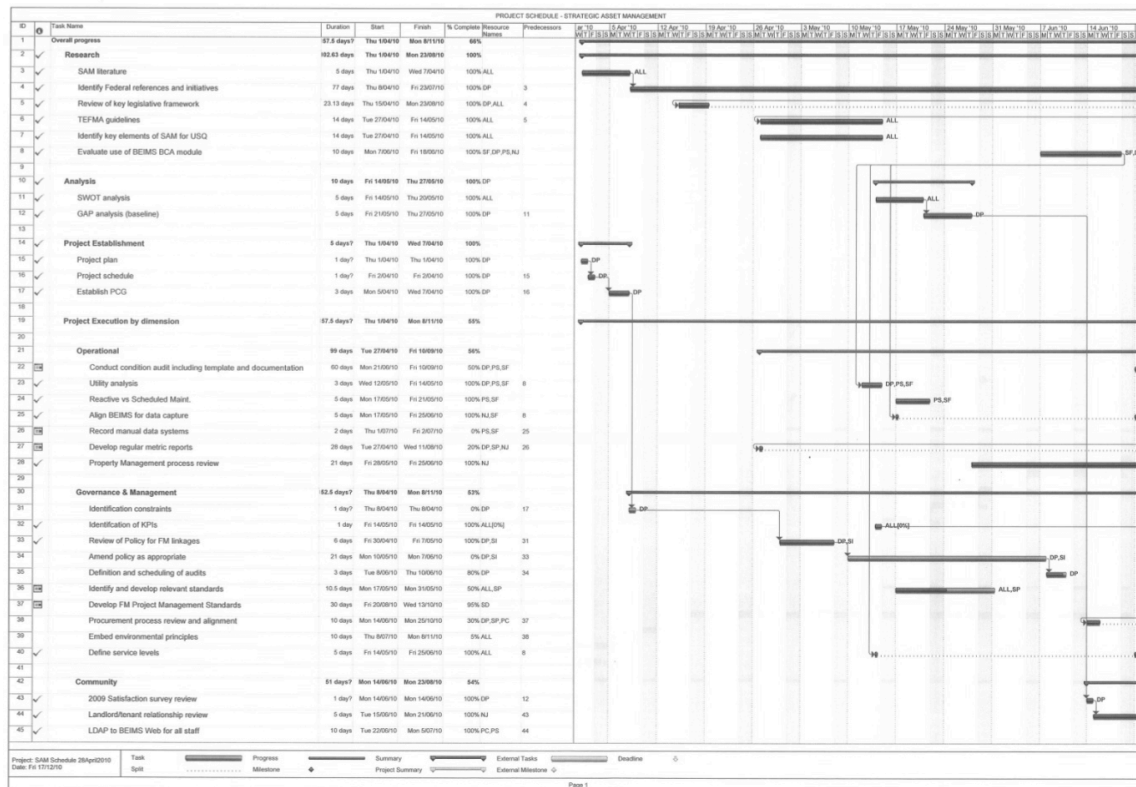


Figure 8 – Gantt chart

The Gantt chart was a physically large document, so for ease of use, the tasks would often be exported to a spreadsheet (as provided at Artefact 10 at the end of this section).

The schedule was routinely updated at each Working Group meeting and was literally read through line-by-line (except where that item was 100% complete) and the progress percentage updated. At the same time the resources assigned to that task and any associated problems or risks would be discussed.

Subsequent to those updates the members of the Working Group could run a resource focused task report from the Project Management Software to use as a 'to do' list and program their workload in regard to the project within their own 'business as usual' environments.

This approach revealed some interesting dynamics with some members of the group clearly uncomfortable in the transparent, structured project environment, complicated further by the diversity of seniority of the membership.

Observed indicators included over stating progress against tasks, understating risks and problems, over estimating (too early) completion dates and reticence of contribution during the meetings.

In the early stages, some of the Working Group meetings were problematic and consistent with a group juggling their workload and priorities and perhaps not fully committed to the project. My Learning Journal reflects:



14 FEB 2010: *“Working Group Meeting: Group debating semantics from TEFMA guidelines. No progress re tasks (updating or actual). Discussing project risks when I entered... Lack of progress due in part to the significant absences last week. But clearly S and N in some part have no ownership yet. I expressed concern that they had been assembled for 40 minutes with no evidence of any progress. I also re-emphasised the need for proactive ownership of the tasks. Work is expected to proceed outside the meetings. I will set up one-on-one meetings to assist each member and kick start the activity. I invited them to update task with sub tasks if that added value for them; I did not at this stage require that level of granularity, but would if progress was not made...I refocused the meeting to the agenda and moved quickly through any questions.”*

To respond to these dynamics, one on one meetings were held to build confidence, Working Group meetings (whilst structured) were conducted in a relaxed collegial way, success was celebrated and challenges were shared, and due consideration and recognition of the Facilities Management workload was made, with consequent adjustments to the project schedule.

3.7.7 Artefact 10



Initial task schedule in tabular form

Task	Duration	Start	Finish	% Complete
Research	42 days	1/04/2010 8:00	28/05/2010 17:00	2%
SAM literature	5 days	1/04/2010 8:00	7/04/2010 17:00	5%
Identify Federal references and initiatives	5 days	8/04/2010 8:00	14/04/2010 17:00	0%
Review of key legislative framework and trend	25 days	15/04/2010 8:00	19/05/2010 17:00	0%
TEFMA guidelines	2 days	20/05/2010 8:00	21/05/2010 17:00	30%
Identify key elements of SAM for USQ	5 days	24/05/2010 8:00	28/05/2010 17:00	0%
Analysis	10 days	31/05/2010 8:00	11/06/2010 17:00	0%
SWOT analysis	5 days	31/05/2010 8:00	4/06/2010 17:00	0%
GAP analysis	5 days	7/06/2010 8:00	11/06/2010 17:00	0%
Project Establishment	5 days?	1/04/2010 8:00	7/04/2010 17:00	40%
Project plan	1 day?	1/04/2010 8:00	1/04/2010 17:00	100%
Project schedule	1 day?	2/04/2010 8:00	2/04/2010 17:00	100%
Establish PCG	3 days	5/04/2010 8:00	7/04/2010 17:00	0%
Project Execution by dimension	120 days?	1/04/2010 8:00	15/09/2010 17:00	2%
Operational	120 days	1/04/2010 8:00	15/09/2010 17:00	4%
Conduct condition audit	60 days	1/04/2010 8:00	23/06/2010 17:00	0%
Utility analysis	3 days	1/04/2010 8:00	5/04/2010 17:00	0%
Power study (co or tri-generation)	120 days	1/04/2010 8:00	15/09/2010 17:00	5%
Water and power metering	120 days	1/04/2010 8:00	15/09/2010 17:00	5%
Reactive vs. Scheduled Maint.	5 days	1/04/2010 8:00	7/04/2010 17:00	0%
Align BEIMS for data capture	5 days	1/04/2010 8:00	7/04/2010 17:00	0%
Record manual data systems	2 days	1/04/2010 8:00	2/04/2010 17:00	0%
Develop regular metric reports	10 days	1/04/2010 8:00	14/04/2010 17:00	5%
Property Management process review	21 days	1/04/2010 8:00	29/04/2010 17:00	0%
Governance & Management	80 days?	8/04/2010 8:00	28/07/2010 17:00	1%
Identification constraints	1 day?	8/04/2010 8:00	8/04/2010 17:00	0%
Identification of KPI's	1 day?	15/04/2010 8:00	15/04/2010 17:00	5%
Review of Policy for FM linkages	5 days	9/04/2010 8:00	15/04/2010 17:00	0%
Amend policy as appropriate	21 days	16/04/2010 8:00	14/05/2010 17:00	0%
Definition and scheduling of audits	3 days	17/05/2010 8:00	19/05/2010 17:00	0%
Identify and develop relevant standards	20 days	20/05/2010 8:00	16/06/2010 17:00	0%
Procurement process review and alignment	15 days	17/06/2010 8:00	7/07/2010 17:00	0%
Embed environmental principles	10 days	8/07/2010 8:00	21/07/2010 17:00	5%
Define service levels	5 days	22/07/2010 8:00	28/07/2010 17:00	0%

Community	34 days?	14/06/2010 8:00	29/07/2010 17:00	0%
2009 Satisfaction survey review	1 day?	14/06/2010 8:00	14/06/2010 17:00	0%
Landlord/tenant relationship review	5 days	15/06/2010 8:00	21/06/2010 17:00	0%
Faculty representative network	3 days	22/06/2010 8:00	24/06/2010 17:00	0%
Committee and reporting review	10 days	25/06/2010 8:00	8/07/2010 17:00	0%
Linkages to other core USQ processes	10 days	9/07/2010 8:00	22/07/2010 17:00	0%
Web pages and regular reporting	5 days	23/07/2010 8:00	29/07/2010 17:00	0%
Strategic Drivers	70 days	1/04/2010 8:00	7/07/2010 17:00	0%
Define linkages with USQ strategic Plan	3 days	1/04/2010 8:00	5/04/2010 17:00	0%
Develop template for Faculty FM Plans	5 days	1/04/2010 8:00	7/04/2010 17:00	0%
Draft process for submission of Faculty FM Plans	5 days	8/04/2010 8:00	14/04/2010 17:00	0%
Define options and process for connecting with academic product	60 days	15/04/2010 8:00	7/07/2010 17:00	0%
Asset Management Planning	58 days	17/05/2010 8:00	4/08/2010 17:00	0%
Develop annual space plan	15 days	24/06/2010 8:00	14/07/2010 17:00	0%
Map audit to building condition indices	15 days	15/07/2010 8:00	4/08/2010 17:00	0%
Identify USQ funding bid processes	5 days	17/05/2010 8:00	21/05/2010 17:00	0%
Align programs with funding sources and document	5 days	24/05/2010 8:00	28/05/2010 17:00	0%
Enhance bid templates and migrate to improved system	5 days	31/05/2010 8:00	4/06/2010 17:00	0%
Establish linkages to BEIMS	10 days	7/06/2010 8:00	18/06/2010 17:00	0%
High level SAM funding model	15 days	21/06/2010 8:00	9/07/2010 17:00	0%
Project Communication	90 days?	30/04/2010 8:00	2/09/2010 17:00	0%
Monthly PCG meeting	1 day?	30/04/2010 8:00	30/04/2010 17:00	0%
Monthly report	1 day?	3/05/2010 8:00	3/05/2010 17:00	0%
Monthly PCG meeting	1 day?	31/05/2010 8:00	31/05/2010 17:00	0%
Monthly report	1 day?	3/06/2010 8:00	3/06/2010 17:00	0%
Monthly PCG meeting	1 day?	30/06/2010 8:00	30/06/2010 17:00	0%
Monthly report	1 day?	2/07/2010 8:00	2/07/2010 17:00	0%
Monthly PCG meeting	1 day?	29/07/2010 8:00	29/07/2010 17:00	0%
Monthly report	1 day?	2/08/2010 8:00	2/08/2010 17:00	0%
Monthly PCG meeting	1 day?	31/08/2010 8:00	31/08/2010 17:00	0%
Monthly report (final)	1 day?	2/09/2010 8:00	2/09/2010 17:00	0%
Project close	35 days	3/09/2010 8:00	21/10/2010 17:00	0%
Final report to client	10 days	3/09/2010 8:00	16/09/2010 17:00	0%
Established e-versions	5 days	17/09/2010 8:00	23/09/2010 17:00	0%
Journal paper	10 days	24/09/2010 8:00	7/10/2010 17:00	0%
Case study paper	10 days	8/10/2010 8:00	21/10/2010 17:00	0%

END OF ARTEFACT 10

3.7.8 Project Baseline

As with any journey it is often useful to know where you are starting from and where you intend to go. The evaluation of the SAM starting point was a vital stage in project implementation and took two primary forms.

The first was essentially 'mechanical' and based on the elements of SAM derived from the literature.

SAM element maps (Artefact 5) were developed representing; the existing (pre-project) USQ framework, the literature suggested (maximum) framework and a USQ proposed framework. The proposed framework was a considered reflection of the numerous possible elements, balanced with the USQ environment and need. The Working Group and the Governance Group prior to confirming the project target outcomes considered the proposed framework against the SWOT analyses.

The second area of baseline applied a more objective approach to the both the systemic and competency based assessment of SAM at USQ. Two models were used; the first was the Tertiary Education Facilities Management Association benchmarking tool. This was used because the working group was familiar with the tool and it is uncomplicated in its structure. It provides a quick and high level assessment of SAM maturity and is the subject of ongoing improvement.

The second methodology was the 'Institute of Asset Management, UK' self assessment tool based on PAS 55¹¹. The working group undertook the self assessment using the PAS 55 guidelines and both the pre-project baseline and the post-project results are detailed and discussed within Chapter Five of this thesis. Figure 9 below illustrates the form of the assessment.

¹¹ PAS 55 is the British Standards Institution's specification for the optimal management of physical assets; it provides a 28-point specification for establishing and verifying a connected, optimised and whole of life asset management system.



Figure 9 – SAM baseline rating

3.7.9 Academic Reporting and Artefact 11

In order to promote self-discipline and closer engagement between the academic supervisor and me, and consistent with the nature of a work based learning project, a project reporting template was developed.

The template evolved during the first reporting cycles particularly in how to represent learning through that period. My Learning Journal records:



04 JUN 2010: *“Meeting with DPST Supervisor: Primary discussion re SAM. Main points: Reduced content in monthly reports; Need for a baseline; Need to demonstrate organisational change... the linking of the baseline with the project outcomes will provide a measure of the elemental progress achieved through the project.”*

The final version, included a section for learning narrative, but this was often a referral to the Learning Journal extract included as an attachment to the report. The role of the baseline was clarified to be: reporting a change in the level of SAM competency (or maturity) using the PAS55 system and was included in all project closure phase reports. Reporting of the baseline from the perspective of operational delivery of a series of tasks focused on percentage complete against time using standard project management reporting practice.

The layout of the adopted academic report followed a hierarchical structure from high level information at the start, flowing on through operational or task matters and concluding with academic. For example, the use of the high level project dimensions on the first page provided a user friendly interface for assessing the areas of progress and/or risk. The visual interaction was amplified further by the use of red, amber, or green colour coding (traffic light principle) to indicate risk.

A sample of a completed report template is provided at Artefact 11.

The use of the template not only simplified the reporting task and improved consistency and quality of the report content, but the discipline of drafting the report created further reflective opportunities that added value to the project and my learning.

The report was generally submitted one week in advance of the monthly academic supervisor meeting and provided the most effective platform for that interaction, allowing for discussion of both the project progress and the learning achieved through that period.

3.7.10 Artefact 11



DPST Project Progress Report

Project Title: SAM	Project #:
Student name: Dave Povey	Project Sponsor: Chief Operating Officer, USQ

Reporting Period: SEP-NOV 10	Report #: 9
-------------------------------------	--------------------

Summary Status: Project behind schedule and losing momentum. Good progress with Condition Audit framework and documents. Similar with PM framework. Issues relate to resource availability time impacts.	66%
<i>Significant issues to resolve</i>	<i>Some issues to resolve</i>
<i>On track, no problems</i>	

Key Dimensions Progress:	
Asset Management Planning	31%
Operations	56%
Strategic Drivers	95%
Governance & Management	53%
Community	54%

<p>Headlines:</p> <p>Activity since last report:</p> <ul style="list-style-type: none"> Accommodation Plan template developed using FoSc Sub metering project stage 1 complete. TRC response re Water Meters taken up with Councillor Marks (lack of strategic fit) FM PM template and document suite developed Building Condition Assessment guide and data template developed LDAP connection established (allows user login via USQ connect and id tracking) Significant work on Springfield purchase (not a specific task within SAM) but epitomises the role of SAM
--

Tasks, Milestones, Outcomes delivered this period		Completion dates	
Tasks, Milestones, Outcomes	Comments	Plan	Actual
BEIMS BCA populated	All buildings and elements now populated		SEP 10
Legislative compliance review	Follow up actions arising	JUN 10	OCT 10

against Property Council Guidelines completed	separately in JAN 11		
Condition Audit guide and data capture template developed	Audit scheduled for 1 st quarter 2011	AUG 10	NOV 10
Standards index reviewed	Needs further work	MAY 10	Ongoing
Policy schedule review completed	Communicate recommendations to SBMI, cc COO in JAN 11		OCT 10
Sub metering stage 1 complete	Commence stage 2 in FEB 11	DEC 10	OCT 10
Accommodation Plan	Done for FoSc, needs to be done across whole of USQ	AUG 10	NOV 10
Working Group and PCG Meetings disrupted due to availability and lack of progress	Additional meetings to match revised timeline from JAN 11 onwards		Ongoing
Tasks, Milestones, Outcomes scheduled for next period		Completion dates	
Tasks, Milestones, Outcomes	Comments	Plan	Forecast
Definition and scheduling of audits	Single calendar style presentation		JAN 11
Suggested policy amendments	Draft text to SBMI		JAN 11
New faculty Planning template to be embedded in SBMI planning round	Get confirmation from SBMI or action separately		JAN 11
Substantive completion of all framework and template related tasks			JAN 11
Prioritisation meeting with Supervisor and possible progress assessment	Prioritise DPST related material. Possible IAM review to assess progress against baseline.		JAN 11
Consider predictive modelling	Explore software in or out source		JAN 11
<p>Major Risks and Issues:</p> <p>As previously stated, the schedule continues to be challenging to the point that I have suspended the project until 4 JAN, at which point the entire WG will commit to completing the project by the end of JAN 11. Frankly, this has taken longer than anticipated and the USQ internal environment has not allowed us to proceed at the pace intended. We have two vacancies, plus numerous other initiatives being delivered.</p> <p>Inability to replace the Manager Facilities role. 2011 budget relies upon not filling this position until late in the year.</p> <p>Work has yet to start on the longer term predictive modelling.</p> <p>There is emerging evidence that USQ stills associates growth with buildings. The increasing organisational overhead of the property portfolio in an pedagogical environment that professes to be online, e-learning, coupled with the declining importance and presence of on-campus students, are in direct conflict with each other. This will be explored further in a paper/presentation to USQ Council and sub-committees using Springfield as the catalyst to</p>			

explore that premise and 'blue sky' the alignment of the portfolio going forward.

Summary of Learning:

- Refer to attached Learning Journal extract (provided with Carbon Zero Reports for same period)

Attachments:

- Condition Audit Guide
- Accommodation Plan
- Project Management Suite - Structure
- Extract from data template Archibus
- Extract from Policy Review
- Revised Project Schedule

END OF ARTEFACT 11

3.7.12 Operational Reporting

Reporting of project progress from the ground level up occurred via the Working Group members providing detailed operational updates within the Working Group forum, as previously discussed.

Full Working Group documentation was routinely provided to the Governance Group for oversight, and all documentation was hosted on the University's collaborative web based workspace; a 'SharePoint'¹² site was created to host the project documentation and act as a communication hub for the project.

The COO and all members of both the working group and the governance group had full access to the SharePoint site and were able to review all documentation at any time including meeting agendas, tabled documents and minutes.

Reporting of project progress to the COO also became a standing item on the agenda of the existing monthly meetings between the COO and me. In those meetings the focus would be on general progress, cost management and emerging risks.

A screenshot of the SharePoint site home page (for illustrative purposes only) is included below at Figure 10.

¹² Microsoft SharePoint is a web-based application platform, typically used for web content and document management.

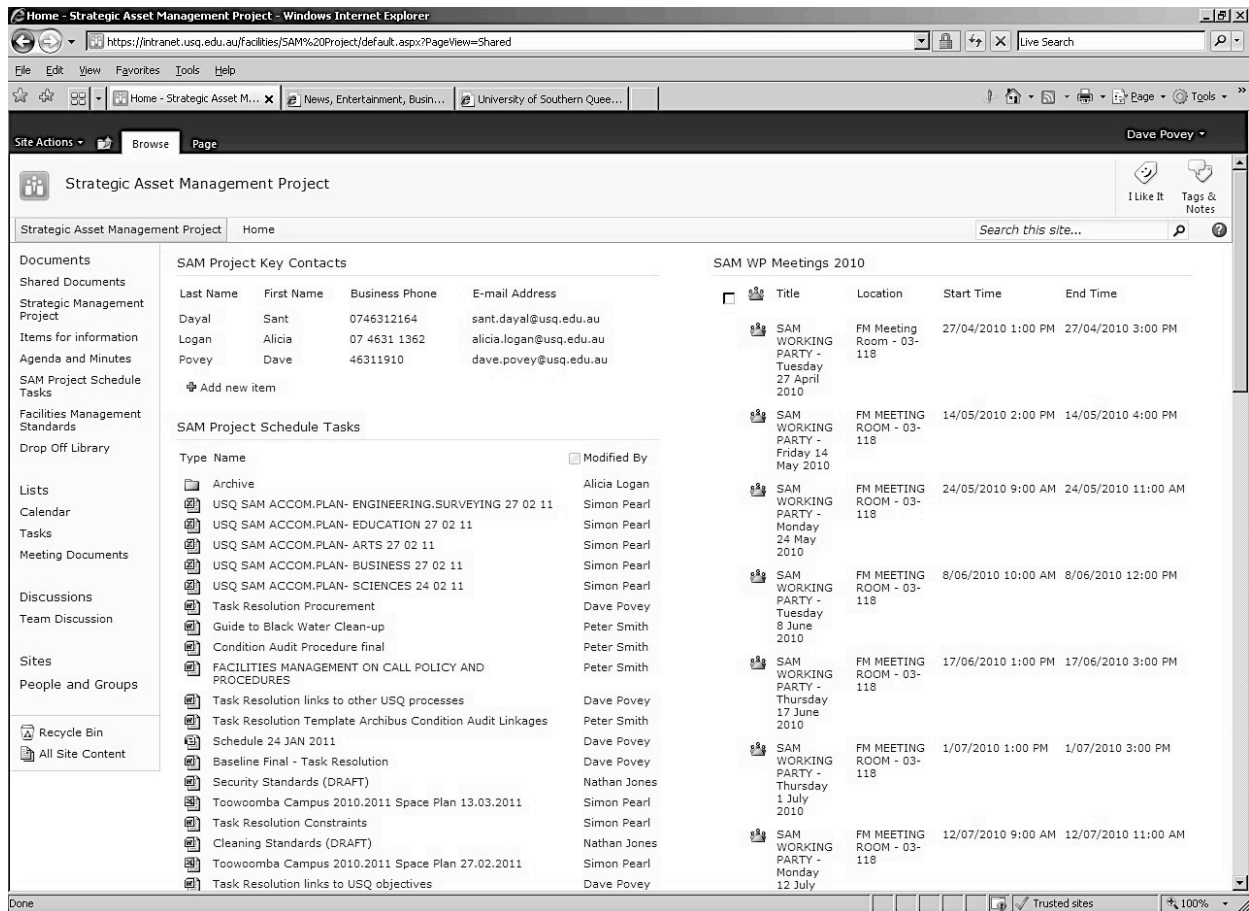


Figure 10 - SAM Project SharePoint site

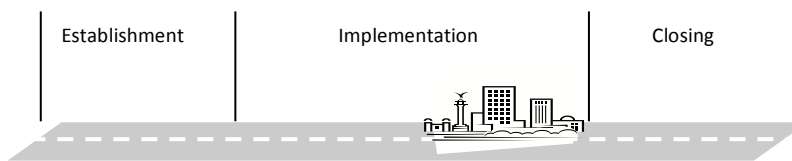
To some extent the use of the online collaborative workspace facilitated a reduced reporting burden to the COO. Whilst this had some advantages at the time by reducing the administrative workload, on reflection this may not have an optimal arrangement.

The COO’s own workload and operating environment meant that non-urgent items were unlikely to be attended. Relying on the COO to be proactive in engaging with the project status possibly contributed to the ‘patchy’ outcomes in regard to the creation of the strategic interfaces required under the project objectives. On reflection, a more formal briefing and report presentation, even bi-monthly, may have mitigated this risk.

Other forms of operational reporting were achieved by Facilities staff engagement. Progress briefings and discussion of the SAM project were regular items at the ‘quarterly’ Facilities Management workshops (every member of the Facilities Management Division is required to attend these half day workshops).

The socialisation of the project and acknowledgement of the key actors assisted in creating broader divisional ownership of the project. It also helped to create understanding of the value proposition of the project (at organisation and divisional levels), and facilitated positive group discussion and additional contributions that would otherwise have been missed.

3.7.13 Phase conclusion



This section will discuss various strengths and weaknesses of the project implementation approach. Further reflection on the SAM project is included in the SAM Project Conclusion section later in this Chapter and also in the Thesis conclusions provided at Chapter Five.

The work done through the establishment phase provided a robust platform for project implementation. In particular, the strengths were:

- The project scope was well defined and communicated
- The individual elements and deliverables were identified and considered
- The project constraints were known
- Organisational support was achieved through project approval and collaboration and the COO as project sponsor
- The Governance and Management framework was established and aligned, including external independent input
- The existing FM team were willing participants

The project suffered through the implementation phase due to a number of factors. In particular:

- The length of the project program became problematic. In the early stages it seemed like a mammoth task; individual task deadlines would be missed with no sense of consequence because there was plenty of time; focus and interest wavered over the extended period; other University activity intervened and made demands on project resources
- The constraint of self funding the project was at times a limiting factor in delivering on the objectives. For example: 1. Unable to resolve or procure the predictive modeling software; 2. Unable to backfill FM staff occupied on condition assessment work
- Organisational support in reality tended to be at the higher, in principle level, with few actual resources allocated outside of the FM team, increasing pressure on the Working Group
- Senior management were engaged with the Governance Group and the mechanics of the project but seemed to miss the higher intent and benefits (evidenced by the lack of strategic interfaces and the funding model changes). The linkages required to sustain and benefit from the project were not readily embraced by those outside the

project and this perhaps warranted more effort in terms of organisational change management

In summary, the project was a significant undertaking, implemented with an ambitious agenda, not just in term of the scale of the deliverables but also in the engagement of staff in a combined environment of learning and operational development.

Implementation was challenged by resource allocation, programming and senior management engagement. Notwithstanding, the project was implemented in a professional and effective manner to the credit of the participants.

3.8 SAM Project closing phase



3.8.1 Introduction

The closing phase of the SAM project was a critical stage in the projects implementation for the following reasons:

- The project had delivered many new SAM capabilities for USQ which needed to be sustained
 - Effective communication of the SAM capabilities and their value proposition for USQ was essential
 - Some strategic interfaces had yet to be created and raising awareness within the USQ community of these outstanding items was thought to reduce the risk of their 'falling away' as focus moved elsewhere
- Through the project the significance of the real estate portfolio to the organisation's financial bottom line had been made fully transparent and needed to be presented as a primary business rationale for engaging and sustaining the principles and mechanisms of SAM
- The Sam project represented a significant organisational investment and both the delivered and the outstanding items needed to be understood and communicated as part of good project management practice and USQ process
- The closing stage signaled an end to the project and became the mandate for disestablishing the Working Group and the Governance Group. Carry forward tasks would be addressed under business as usual activity
- The reassessment of the SAM maturity was required to determine progress against baseline

- This provided a further indication of areas for continued focus and effort
- The visible progress made against the baseline was a positive signal to the participants in the project (also members of the FM team) and was a beneficial motivational tool

One other factor worthy of mention relates to the Working Group's growing fatigue at this phase of the project. My response to this was to present a clear closing date for the project and to provide the team with a break.

The need for this intervention became evident around September 2010 and rather than keep pushing the project through to the Christmas vacation I made the decision to place the project on hold until January 2011 essentially giving the team a break to catch up on their other workload and think about things other than SAM. In turn there was a commitment from the team that there would be a focused and concerted effort to complete the project by the end of February 2011. My Learning Journal (Annex A) records the following:



26 NOV 2010: *"SAM Working Group routine meeting. Some progress with condition audit and PM templates. Most significant I note the weariness and loss of momentum. I told them all to relax until JAN but to plan for a big commitment in JAN to finish this project".*

At the start of 2011, the team reapplied themselves to the project with increased energy and industry.

In order to bring a formal close to the project in a way that provided the most informed and appropriate communication for each of the recipient audience areas of interest, the reports and papers were structured as follows; operational closure and performance; strategic outcomes and why SAM is important to USQ, and; academic outcomes, in the form of a paper for peer review and publication.

3.8.2 Operational outcomes

The operational culmination of the SAM project was captured in a Project Closure Report provided to the academic supervisor and also (in a slightly reduced form) to the Chief Operating Officer. The reduced version focused on the operational status and deleted the academic content. A copy of the full Project Closure Report is provided at Artefact 13.

The Project Closure Report adopted and developed the basic template used in the regular project reporting and adapted it to include a full schedule of the project tasks, a summary of each task status, carry forward actions required post project, linkages to the project plan

goal and a reference linking to project artefacts¹³ (for the purposes of DPST assessment at the time).

Discussion of the Project Closure Report is included in the introduction and conclusion sections for that artefact.

3.8.3 Strategic outcomes

The strategic culmination of the SAM project was captured in a paper to the senior management committee within the University. The paper was entitled Strategic Asset Management and took the form of a discussion paper with some key recommendations aimed at improving the development and use of the property portfolio in support of organisational outcomes.

The paper summarised the work that had been done through the SAM project, including a discussion on the SAM maturity baseline at the start of the project and the rating achieved at the time of closure. Of more strategic significance was the analyses of the property portfolio (using a range of data and metrics) against the organisational performance, demonstrating the divergence of the portfolio with the business.

This paper was initially introduced to the Vice Chancellor's Committee, and went on to the Finance and Facilities Sub-Committee of University Council and the recommendations in the paper endorsed for further investigation and action.

Discussion of the Project Closure Report is included in the introduction and conclusion sections for that artefact.

3.8.4 Academic Outcomes

The academic culmination of the SAM project was expressed in a paper to Emerald Insight for publication in the Facilities Journal¹⁴.

Discussion of the paper and the academic outcomes of the project are included in the Conclusion of this thesis at Chapter Five.

3.8.5 Vice Chancellor's Committee Discussion Paper and Artefact 12

As stated above, the strategic culmination of the SAM project was captured in a paper to the senior management committee within the University. This had been requested as the follow up action to a presentation made by me to the University Council some months

¹³ Artefact references in the Project Closure Report are not relevant to the artefact references in this thesis.

¹⁴ At the time of writing the paper had been peer reviewed and accepted for publication in 'Facilities' but had not yet been published.

earlier, introducing the SAM project and providing some key insights based on progress at that time.

The paper was entitled Strategic Asset Management and took the form of a discussion paper with some key recommendations. The paper described the work that had been done through the SAM project and as a direct result was able to illustrate the divergence of the USQ property portfolio with USQ's business. This was expressed using a number of key performance indicators based on official data provided within the USQ Annual Reports from 2004 to 2010 and included student load, staff levels, space utilization performance and financial outcomes.

The paper evidences the insidious manner in which the real estate portfolio had become misaligned with the business over the reported period and through the interpretation of the data reinforced the role of a SAM equipped Facilities Management Division as a strategic enabler. The paper uses content, metrics and presentation styles that are readily absorbed by senior management and governance. In particular the potential financial value lost to the University through inefficient use of the real estate portfolio.

The paper also reflects on the role of the real estate portfolio in terms of other USQ strategic goal areas thereby building the strategic enabler paradigm. These include; as a place to learn and teach, a place to work for staff, multicultural contributions, investment and revenue, the role of the portfolio across the three campuses and considerations for maximising the realised value.

The discussion around the three campuses and how the individual estate portfolios would be aligned and developed was of particular relevance at the time (and remains so today) as USQ was in negotiations to purchase the Springfield Campus¹⁵. The essential question became; will the USQ portfolio be managed and developed as a single complimentary estate, or as three independent estates aligned with the needs of their own campus and student base? This question goes to the heart of strategic alignment and the purpose for embedding a SAM approach. At the time of writing there is not a single response to the question, but a pragmatic appreciation of the efficiency (or inefficiency) applied to campus development as individual development needs arise.

The paper is of significance because it represents the highest level understanding of the USQ real estate portfolio (in Strategic Asset Management terms) within USQ and was the catalyst for increased consideration of SAM and Facilities in future enterprise initiatives.

¹⁵ The USQ Springfield campus started in 2006 as tenanted buildings within a private development known as Education City. USQ was challenged by the impediments of being a tenant and sought to purchase the campus. Negotiations took place between 2008 and 2011 with settlement occurring in 2012.

3.8.6 Artefact 12



VICE CHANCELLORS COMMITTEE INFORMATION PAPER

To Vice Chancellors Committee
From Group Manager FM
Date 2 March 2011
Subject **Strategic Asset Management (SAM) discussion paper**

RECOMMENDATION

The Group Manager FM recommends that:

1. The Vice Chancellors Committee consider, discuss and enact such elements of this paper as are considered appropriate.
 2. The Vice Chancellors Committee support the recommendations identified at Section 10 and establish a working party to implement those recommendations.
-

1. Executive Summary

USQ perceives and utilises real estate today in the same way it did 40 years ago. Consequently there is a significant divergence of investment levels in the property portfolio and the University's financial surplus to the extent that the increased portfolio cost consumes an increasing portion of the surplus. With the exciting changes and initiatives occurring within USQ around academic product and delivery (SAF, QTEPNet, and USQ for the connected community) there is a real opportunity to align the scale and use of the portfolio with the digital and distance focus of these new initiatives.

This paper is intended to initiate a change in thinking that will have a significant and positive impact on the University's surplus in the short term and reduces the need for further investment in new facilities in the medium term. The challenge for the organisation is that an equally significant adjustment to the USQ real estate 'paradigm' is required if it is to capture these benefits.

2. Introduction

This paper is provided as a follow up action to the joint VCC and USQ Council planning workshop held on 22 & 23 February 2011. At that forum the GM FM presented a power point presentation (copy at Annex A) on the progress at Springfield and, using that project as the catalyst, went on to provide some strategic information regarding the wider USQ property portfolio and to pose some questions for subsequent discussion.

Of direct relevance to that discussion is the focused consideration of SAM at USQ and the level of maturity within the organisation, and therefore the ability and effectiveness of the property portfolio to act as a strategic enabler. The development of this capability has been the focus of the FM group for some 12 months and has been manifest in the SAM project. The learnings from that project have informed this paper and analysis.

This paper has the following logical structure:

Section 3 will summarise the state of SAM within USQ and the progress made via the SAM project. It will also identify some key gaps still outstanding.

Sections 4, 5 & 6 will use various Annual Report data to present the core information underpinning the proposition that the portfolio may not be as aligned with USQ's strategic direction as it could be.

Section 7 discusses space efficiency and utilisation and identifies opportunities to release latent value.

Section 8 summaries the role of the property portfolio across various aspects of the business in order to set a context of significance and reinforce the impact of the portfolio as an enabler.

Section 9 builds on the previous sections and describes a set of basic principles that can provide a platform for Section 10.

Section 10 provides a table of suggested opportunities and actions to move the portfolio to a more sustainable position, aligned with strategic direction and maximising organisational surplus.

3. The SAM project

The Chief Operating Officer approved the SAM Project Plan in April 2010 and a Working Group of FM personnel was established for operational implementation. An independent Project Control Group comprising the CFO, GM SBMI, GMFM

and the Director of FM, QUT was also established to provide governance oversight.

The project assumed the following definition of SAM: Strategic Asset Management is the holistic operation of an asset portfolio in support of organisational objectives, having regard to the needs and constraints of that organisation whilst acting as a strategic enabler. A significant element of SAM relates to planning and forecasting.

The project has developed and implemented systems and, processes that contribute to the achievement of USQ Strategic Goals as follows:

- Goals 1,2,3 and 4 through the provision of flexible appropriate environments
- Goal 5 – Staff by improving the condition of the space and aligning the level of service received with staff needs
- Goal 6 – Educational Partnerships through consideration of alliances and development space in campus master planning
- Goal 7 – Social Justice and Equity by prescribing spaces that are attractive and functional for students of all cultures and socio economic backgrounds.
- Goal 8 – Engagement and Development through the inclusion of joint venture community projects and consideration of those opportunities as part of strategic FM planning
- Goal 9 – Deliver positive social, environmental and economic dividends through the cost effective and environmentally responsible planning, development and operation of the property portfolio

The goals and deliverables from the SAM project as stated in the Project Plan are:

- Predictive financial model for asset retirement/refurbishment/replacement
- Improved value for money from the FM dollar
- Condition assessment of the property portfolio
- Policy review, amendment and development as appropriate
- Standards and templates review and development as appropriate
- Implementation of balanced (scheduled versus reactive) maintenance regime
- Improved space utilisation
- Proposal to the VC regarding space planning and management

The project embeds the tertiary sector's current understanding of strategic asset management best practice. The outcomes of this project will directly influence:

- property acquisition and disposal decisions
- operating expenditure investment
- space allocation and utilisation

- standards and qualities defining the built environment at USQ

A project baseline was established to determine USQ’s level of SAM maturity using both the TEFMA 11 point model and the Institute of Asset Management (IAM) 23 element model. The IAM rating tool also aligns with BSI PAS 55:2008.

Through delivery of the SAM project the TEFMA rating has moved from a generous 46/65 being ‘Average Practice’ to a defensible 50/65 being ‘Good Practice’.

The IAM rating also demonstrates an improvement in maturity. The pre-project evaluation is presented at Fig 1. and the post project assessment at Fig. 2.

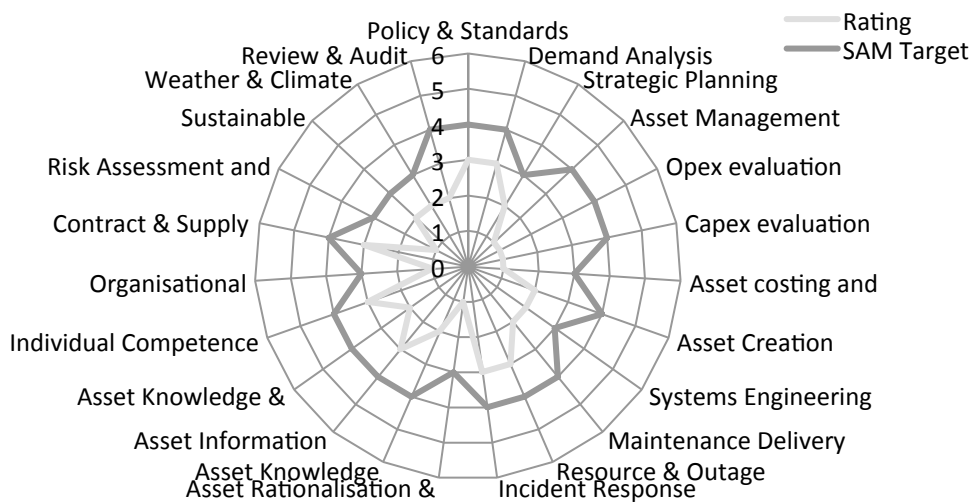


Fig.1 IAM evaluation – Project baseline

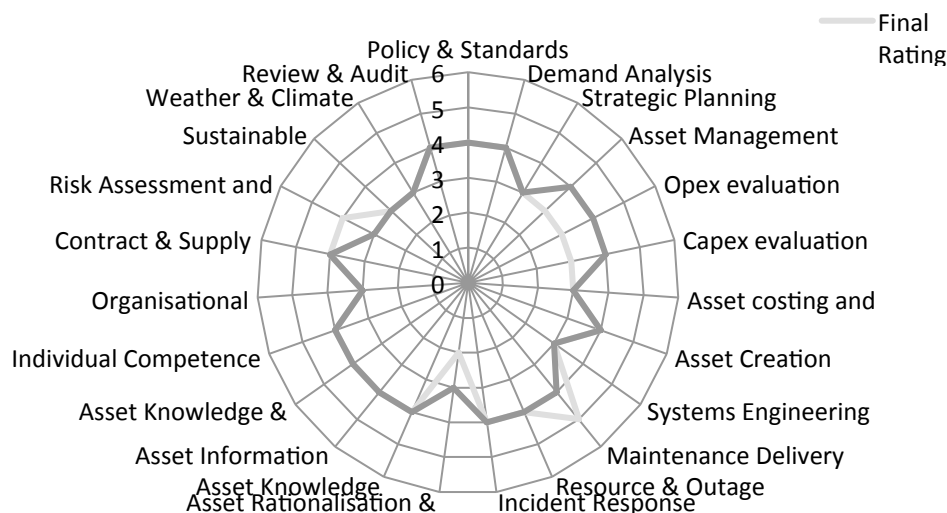


Fig.2 IAM evaluation – Project completion

Interpretation

The improvement in maturity has been significant and tangible. The project has highlighted key information and communication gaps that still need addressing and these include early planning and communication of FTE and EFTLS growth, new academic products that have a space impact, and strategic initiatives with a space component. The data and analysis from the SAM project has enabled the production of this paper and the presentation of the issues to USQ senior management and Council.

4. USQ's changing property investment against student growth

The following Figures 3a and 3b use key data sourced from USQ's Annual Reports and illustrate the investment 'tied up' in the physical portfolio against revenue and student and staff growth since 2004.

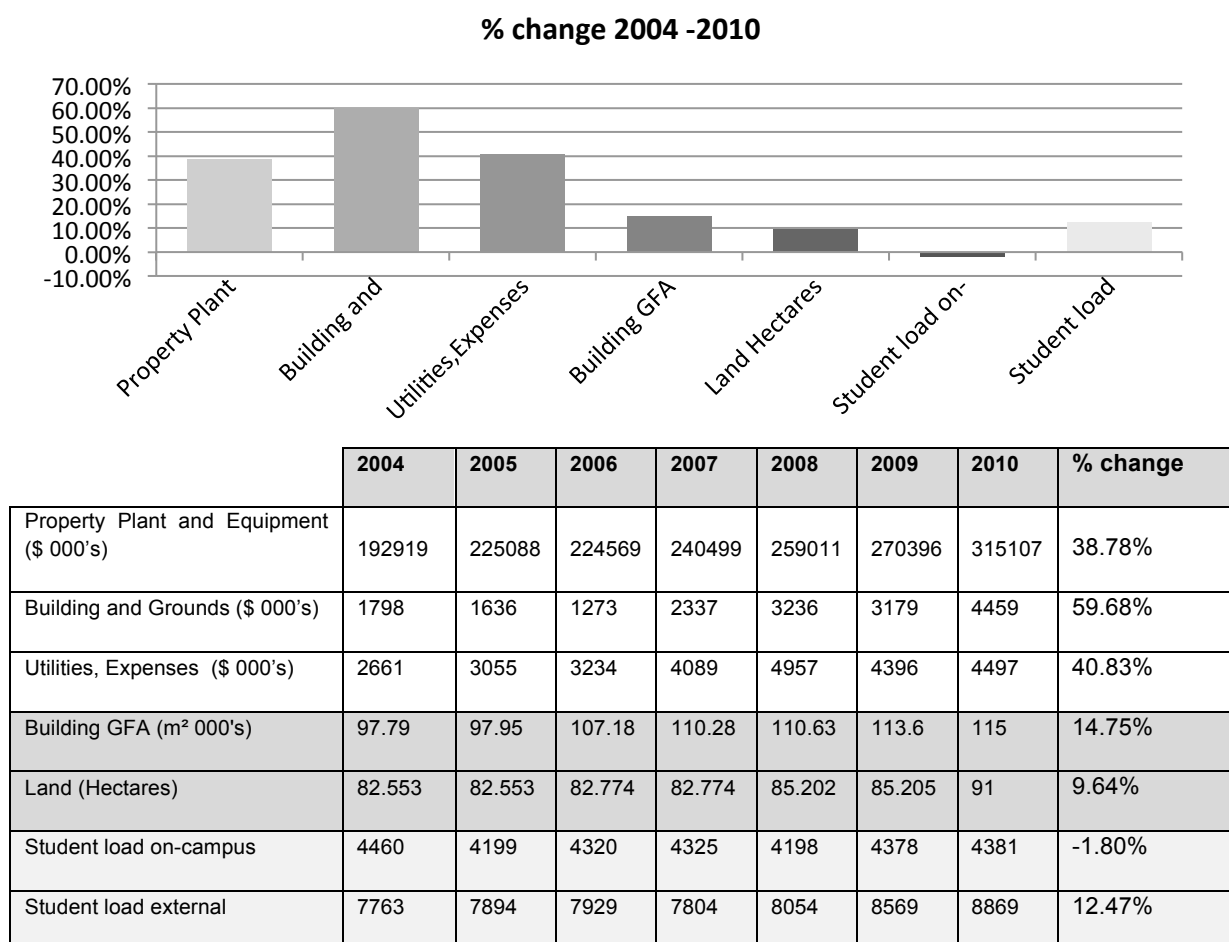
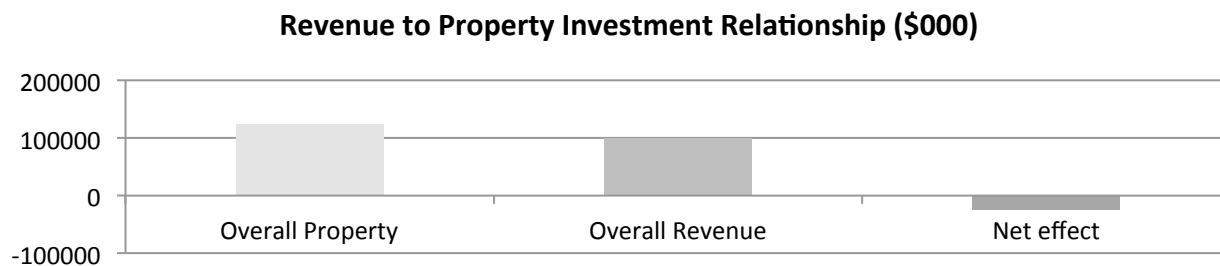


Fig.3a. Annual Report data 2004-2010



	2004	2005	2006	2007	2008	2009	2010	\$ change
Property Plant and Equipment	192919	225088	224569	240499	259011	270396	315107	122188
Building and Grounds	1798	1636	1273	2337	3236	3179	4459	2661
Utilities and Expenses	2661	3055	3234	4089	4957	4396	4497	1836
							Overall Property	124851
Revenue	124683	153317	160019	171568	205640	211794	225068	100385
							Net effect	-24466

Fig.3b.Revenue to property

Interpretation

Whilst percentage changes are similar, the impact of the higher PPE value is seen in Fig 3b, consuming \$24.4M of revenue increases that might have been otherwise deployed.

5. Other factors affecting the cost of property investment

The following Fig 4.uses key data sourced from USQ's Human Resources Division and Mitchell Brandtman - Quantity Surveyors. The data illustrates the % change in primary external factors influencing the property investment costs/figures presented in the Annual Reports.

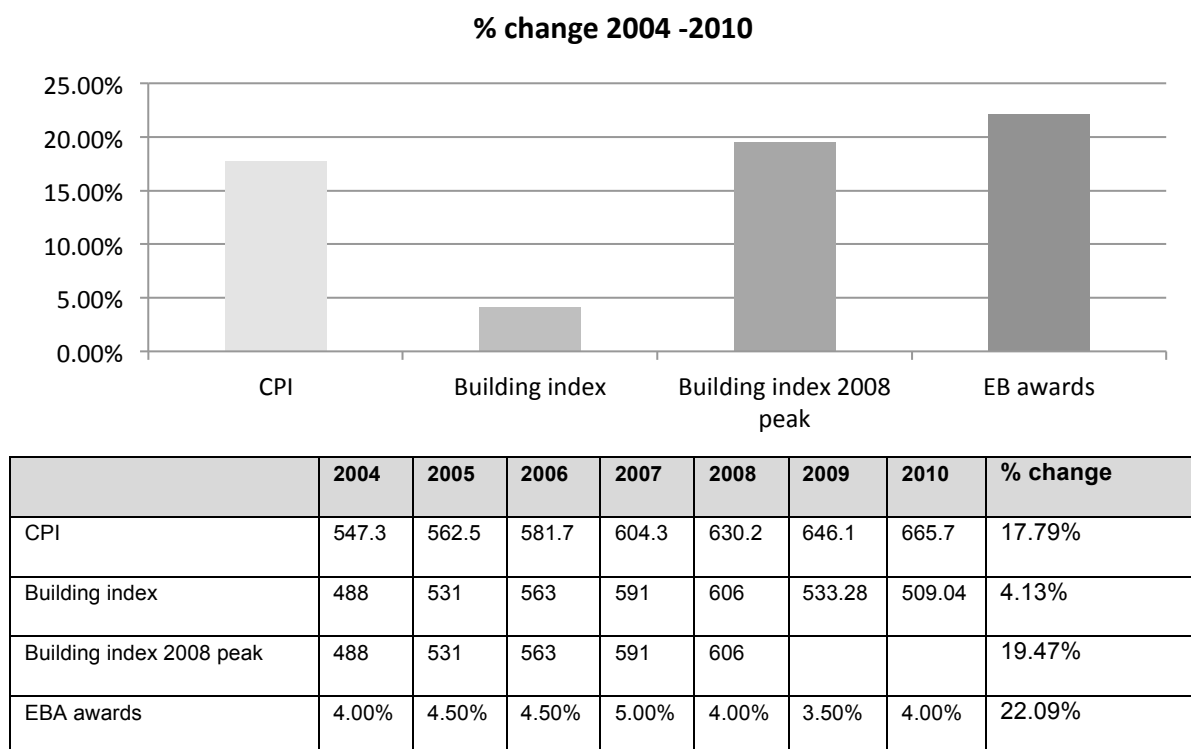


Fig.4. External influences

Interpretation

The relationship between the portfolio valuation, the increase in GFA (13.74%) and the Building index may need to be explored further as the portfolio appears to have increased in value (PPE up 38.8%) beyond that suggested by physical growth and the cost of construction index (4.13%, but even at the 2006 peak 19.47%). This interpretation assumes the valuation utilises Asset Replacement Value as the primary influence.

6. Key performance indicators

The following Figures illustrate the data using Student EFTSL and Staff FTE as the denominator and provide an alternate view of the relationship between the portfolio and the primary drivers of physical change.

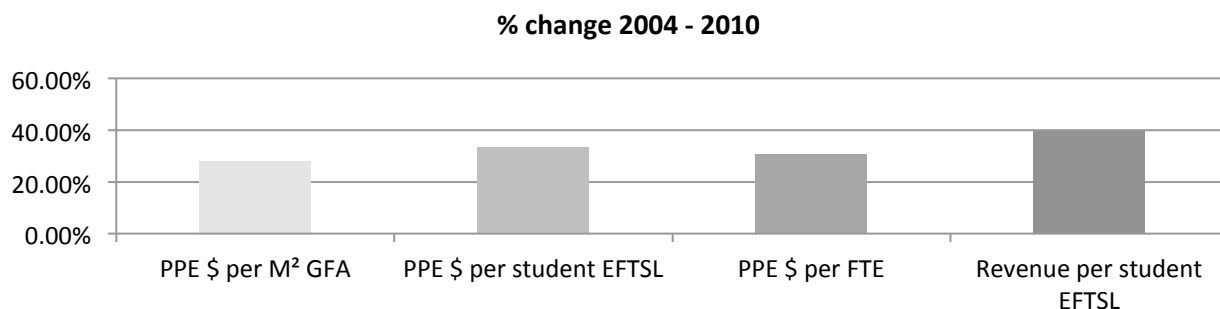
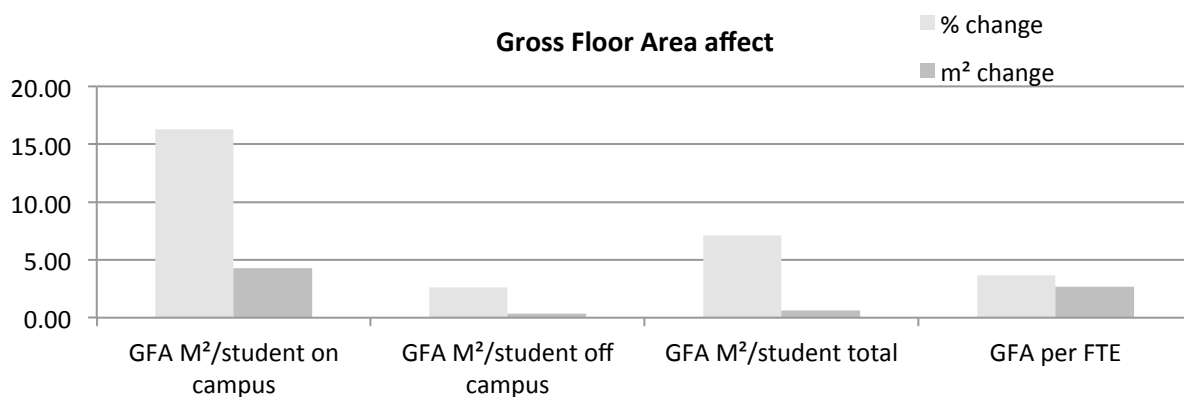


Fig.5a Key performance indicators

	2004	2005	2006	2007	2008	2009	2010	% change
PPE \$ per M ² GFA	1972.8	2298.0	2095.3	2180.8	2341.3	2380.2	2746.9	28.18%
PPE \$ per student EFTSL	15867.7	18614.6	18333.7	19828.4	21140.3	20884.8	23781.7	33.28%
PPE \$ per FTE	138194.1	163819.5	159835.6	163160.8	183826.1	188429.3	199687.6	30.79%
Revenue per student EFTSL	10255.0	12679.5	13063.9	14599.7	16511.6	16359.0	16989.0	39.64%



	2004	2005	2006	2007	2008	2009	2010	% change	m ² change
GFA M ² /student on campus	21.9	23.3	24.8	25.5	26.4	25.9	26.2	16.26%	4.3
GFA M ² /student off campus	12.6	12.4	13.5	14.1	13.7	13.3	12.9	2.61%	0.3
GFA M ² /student total	8.0	8.1	8.8	9.1	9.0	8.8	8.7	7.10%	0.6
GFA per FTE	70.1	71.3	76.3	74.8	78.5	79.2	72.7	3.64%	2.6

Fig.5b GFA affect by EFTSL & FTE

Interpretation

The rate of investment in and the allocation of space per student and staff member have increased in the 2004 – 2010 period. Not only is space costing more but we are giving more of it.

Understanding the allocation of space per EFTSL or per FTE is vital for resource planning and management of existing assets. There is clearly a different set of metrics for on campus and off campus students. Currently these are historical facts rather than target standards or service levels. What are the metrics to be applied to a blended learning student and how will we map our planning standards in the USQ Connected environment?

7. Space utilisation and efficiency

The Tertiary Facilities Management Association (TEFMA) has a standard for measuring space utilisation throughout its member institutions. At a portfolio level it provides a meaningful measure that has been widely adopted. There is debate around the utilisation target set at 55%. To reflect that debate and establish a meaningful target USQ has adopted a target utilisation of 35% (as described in the Space Policy).

Space utilisation is a measure of how 'smartly' an organisation is using its portfolio of space, measured in terms of frequency of use (% of the available time such as 0900 -1600, that the room is occupied) and occupancy levels (the number of people in the room at the time of the audit expressed as a % of the rooms legal capacity). The two results are multiplied together to give a utilisation %.

This differs from space efficiency which is principally a measure of how well designed the floor plan is and will generally be expressed as a ratio of Gross Floor Area to Useable Floor Area.

Efficiency of the space design

USQ's space efficiency is 76.9% compared to an Australian University mean of 66% and a New Zealand University mean of 67%. We can therefore conclude that we have relatively well designed buildings focused on utility and function. Given the age of the portfolio and the lack of iconic structures (these tend to have less efficient spaces) it is a reasonable conclusion.

Efficiency of the space use

Toowoomba

In 2009 USQ undertook the first space audit at Toowoomba. It focused on teaching spaces (rooms, lecture theatres) equating to 14710 m² of the Toowoomba built environment. The average space utilisation was 5.58%. Figures 6a and 6b are the tabulated results from the S1 2009 audit.

USQ Toowoomba Campus - Room Utilisation (non-centrally booked teaching rooms)

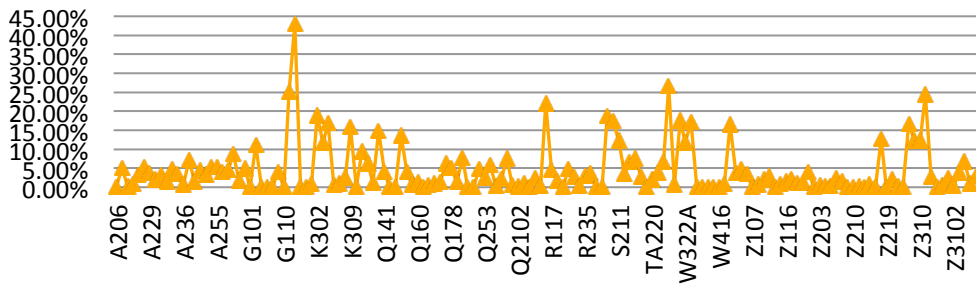


Fig.6a S1 2009, Utilisation results (non-centrally timetabled)

USQ Toowoomba Campus - Room Utilisation (centrally booked teaching rooms)

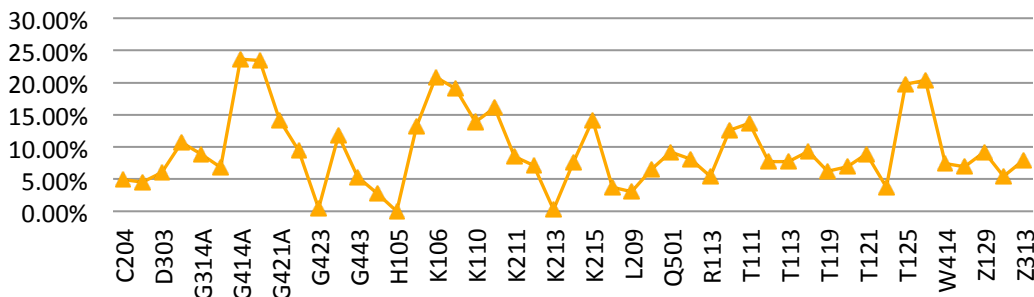


Fig.6b S1 2009, Utilisation results (centrally timetabled)

Springfield

In August 2008 USQ undertook its first space audit ever, prompted by discussion around a second building at Springfield Campus. The audit considered a teaching week of 40 hours and removed spaces leased to TAFE. The average space utilisation was less than 5%. Figure 6c provides detail of the results adjusted following Campus feedback.

USQ Springfield Bldg A Room Utilisation - Adjusted for Campus input (Minus TAFE Rooms 425 and 426)

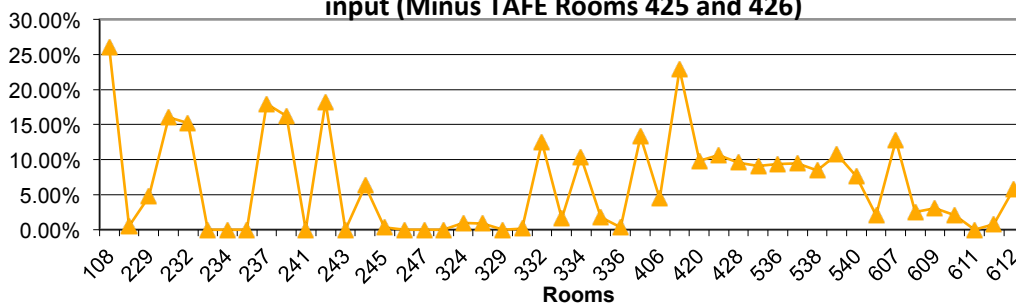


Fig.6c S1 2009, Utilisation results (centrally timetabled)

Fraser Coast and Stanthorpe

No space audits have been undertaken at either of these facilities. It is intended that an audit will occur at Fraser Coast in the 2011 round of space audits.

Space utilisation as a lost resource

Another way to think about under utilised space is to consider the volume of lost space in terms of a new build requirement.

In the Toowoomba Campus S1, 2009 audit, 14,710m² of primary teaching space was audited. The average utilisation rate was 5.58% (hereafter 6%). The spaces included labs, lecture theatres etc.

If we assume for a moment that 6% (being one sixth of our target) is the best we can do with our 14,710m² based on current practice, and that we are meeting the current classes and student volumes then it would be equivalent to holding a portfolio of (6 x 14,710m²) 88,260m² of primary teaching space (based on current practice and use).

Let's assume that service level A (SL A) = the number of classes and students served through the existing model at 6% utilisation of a 14,710m² space.

Let's also assume that service level B (SL B) = an increased number of classes and students that we could serve through an enhanced mode of operation, achieving 35% utilisation of the 14,710m² space.

To maintain SL A requires no effort and is the status quo.

To rise to SL B within the existing space allocation requires effort and changes in the way we allocate and operate, but allows us to achieve a higher return from the assets.

To rise to SL B with current planning and allocation methods (nothing changes as to how smartly we use the space) we would need to construct an extra 73,550m². At an average rate of \$2500m² this equates to a cost of \$183M, (excluding admin, services or circulation space and other construction cost elements).

Interpretation

USQ has a relatively modern and useable portfolio. However, there is clear opportunity to use the space more effectively. USQ should focus on capturing the untapped value and utility embedded within its existing portfolio before considering

any new build projects. One approach might be to place an immediate hold on all new build projects until the target utilisation rate of 35% is achieved.

Opportunities for releasing space and creating clusters suitable for repurposing (including revenue generation) should also be considered.

In the case of Springfield the benefit moves from recapturing sunken value to preservation of a resource. Development is limited to 103,000m² of GFA under the Master Area Development Plan (regulatory planning document) and therefore maximum use should be made of existing floor space before any consumption of remaining development allocation is considered.

8. The role of the Property Portfolio

The role of a property portfolio within the University environment is multi-faceted. The following identify the key areas and relationships with operational and strategic activity.

Place to teach, learn and research

The portfolio provides the physical environment in which our students learn and conduct research. USQ has goals around retention and engagement, and the student experience has been of significant focus. The built environment including the expansive landscaped grounds, contribute directly to those goals.

This contribution is complicated further as we move to Distributed Learning Centres and space with mixed use profiles catering for blended mode students and mature demographics. The majority of our campus is a legacy from a time where on campus was dominant.

A place to work for staff

The portfolio provides a workplace for significant numbers of staff and contributes to staff satisfaction levels. It is also a tangible sign of the employer's commitment and regard for the staff, and the type or organisation that the employer aspires to be.

Brand and image

USQ is a regional and international university. The significant portfolio contributes to the brand and identity of the University and also provides a significant presence that may afford comfort to prospective students around the stability and commitment of the University.

The built environment also signals USQ character and iconic buildings are perhaps notably absent. The current draft development of the SAF building represents perhaps the most icon endeavour to date.

Multi-culture

A portfolio which accommodates the needs of the various cultures attending USQ is likely to win praise from its students and ultimately attract further students. The PVC Student Management recently advised the USQ Council and VCC planning forum that international recruitment is focusing on the Middle East and being very successful. To what extent will USQ embrace the various cultures that make up the mix of students and staff and represent that in the built form? Possible illustrations here include worship facilities, community facilities, specialised toilets, multi-lingual signage.

The risks and costs of culturally specific facilities, where disparity exists between the cultural groups, are high. Questions are being asked amongst the University sector legal fraternity regarding possible anti-discrimination issues arising from providing facilities to only one culture group. A more sustainable and lower risk path might be to target a balanced cultural mix with quality, neutral (flexible) facilities in support.

Investment and revenue

The various land and buildings provide a range of investment equivalents and revenue creating opportunities that support the University's operation and future development. Land may be held for future development potential, for value increase as an investment in its own right, or perhaps to provide reverse sensitivity buffers against adjoining property. This suggests that holding the portfolio at its current size is not the primary challenge. The primary challenge is perhaps reducing or offsetting the cost of holding the portfolio.

Strategic enabler

The role of the portfolio is to support the operation of the University. For that to happen in the most effective and appropriate way the needs and intent of the organisation must be developed and communicated in a timely fashion. The most appropriate form of real estate delivery can then be determined according to the need or goal. This may include re-purposing existing space, new build, demolition, leasing, or other commercial or joint venture undertakings. The objective of such a consideration is always to maximise revenue to the university and minimise holding costs.

Some of the deliverables from the SAM project can assist with this communication and include; Faculty FM Planning Template, Faculty Space Plan.

Thing to consider in linking the built environment to success:

- Timing
- Scope and scale
- Term, or life of the need
- Profile, capacity, criticality
- Funding sources
- Budgetary constraint
- Return on investment
- Iconic
- Specialisation
- Flexibility
- Risks

Campus master planning – autonomy or integration?

As USQ continues to grow in business terms (such as financial and load), and in physical terms (increased GFA, Springfield, Fraser Coast, Stanthorpe and potentially other distributed centres), it becomes increasingly important that we understand the role of each part within the whole if we are to maximise the efficiency and effectiveness of each and minimise casual duplication and waste. Such an understanding will also inform all other areas of the organisation.

Campus models

Do we have an understanding (or standard) of what we believe our campuses should offer to students and staff? Currently we have significant investments in sport and recreation at Toowoomba largely built on historical activity and a Student Guild perspective, yet we offer no physical education programs and have low numbers of student sport teams (relative to the assets).

Catering and University related retail varies enormously, perhaps appropriately so for the moment, but what are the trigger points for growth in these areas and what are the standards?

Springfield

The relationship between Springfield and Toowoomba has assumed more importance of late with the purchase proposal and the acquisition of significant land for future growth. However, there is not yet an understanding of how that limited resource will be used having regard to existing services and facilities at Toowoomba.

Does Springfield have a particular theme or portfolio of academic activity and offerings that distinguishes it from Toowoomba, or is it intended to be a duplicate but serving the needs of the Springfield and Western corridor populous? Is there a way to focus the role and development at Springfield that adds value across all of USQ?

The campus at Springfield is limited to the extent that it is a finite footprint both in terms of land area at 3.3ha and Gross Floor Area at 103,000m². Currently the campus has 10,000m² developed. The Education Gateways Building (Building 2) is currently designed at 10,000m². If we assume that Building 2 proceeds, USQ will have consumed 20% of its development capacity at Springfield. This is a limiting factor and highlights the need for a prioritised and considered approach to physical property expansion at Springfield. It also highlights the necessity for good space utilisation in order to reduce the pressure for new build and consumption of the development allocation.

Fraser Coast

Fraser Coast has different challenges. The first being that it is significantly further away from Toowoomba than Springfield, although the effect of this is reducing as we move to a more digital environment. At 4ha the land area will eventually exceed that of Springfield although it is leased and there are other pressures to use parts of the land for broader community purposes. The benefits of accepting those requests or retaining expansion area for the University will have to be carefully considered, or options to cover both needs identified (such as rights of buy back or limited term leases).

The relationship with the Fraser Coast Regional Council is very strong and there is significant engagement around current shared facilities and possible future joint venture opportunities.

Referring back to the need for a Campus Standard, perhaps the most significant physical omission from the campus is student accommodation.

9. Guiding principles and opportunities

The following points are intended to be indicative and provide thought provoking discussion rather than recommended actions.

Planning integration

Planning at every level must identify the space needed to support the goal. Business cases should reflect the cost of capital and contain hurdle rates for ROI and space utilisation.

A transparent and logical trail should be seen extending back from the CAMP, through SBMI planning, operational plans through to the USQ Strategic Plan.

The ORMP could include space utilisation KPI's and the FM space audit might be considered by internal audit.

Staff and student hours:

Maximise the window available for staff and student occupation of the assets. This can spread the load and allow longer occupation of reduced space.

A more distributed attendance profile will assist in the creation of shared spaces, hot desks, allow for fewer spaces and ease the pressure on infrastructure (such as parking).

Challenges potentially occur with support services and building operating costs.

Space rationalisation

Intensification and consolidation of space should be a priority. The shape of this will be affected by the progress made in the adjustment of the working window. The principle being that we make greater use of the space and cluster those spaces thereby releasing blocks of spare space for repurposing.

Repurposing space

Released space should be used to meet new or emerging space needs to support strategic activity. If there is no demand in this area then it should be applied to revenue creation in the form of hire, licences or leases. The minimum outcome would be to cover holding costs. In some cases demolition or disposal may be appropriate but this would be considered in each case e.g. K series of temporary buildings.

Revenue and commercialisation opportunities

Immediate opportunities are available in regards to catering, food retail, sports and recreation management. These have traditionally been the exclusive domain of the Student Guild as part of the University's support for the Guild SLA. Recent analysis of the opportunity costs associated with these premises has highlighted significant revenue opportunities and these services and facilities should be moved into a more commercial model as soon as possible.

Initial discussions have been held with Toowoomba Regional Council regarding their possible interest in operating the sport ovals and Toara Park (and possibly CBRC) as community facilities on a lease from USQ. This is one example of the strategic partnering opportunities available to us in order to retain the asset and service level but move the costs and risks.

Campus Planning

Campus plans should be developed to reflect the fully developed end state (to the extent possible) and indicate the development of facilities (USQ and community) at various stages as well as the academic delivery elements.

To the extent possible, buildings will not be discipline or Faculty specific to allow for future flexibility and effective utilisation of space.

10. Suggested actions

The following actions are recommended for consideration.

Area	Action	Comment
Linking organisational planning to the physical portfolio	Planning integration to establish links between the Strategic Plan, the ORMP and the built environment, linking through to MNW and CAMP programs	GM FM and GM SBMI to action
Space Utilisation improvement	Reconsider working window for academic and professional staff (i.e. 0800-2200)	Create opportunity for more shared spaces, hot desks, lower demand peaks across campus. This would need staff engagement and could also include some creative solutions that would be attractive to staff.
	Reconsider working window for academic delivery (i.e. 0800-2200)	Create opportunity for more shared spaces, hot desks, lower demand peaks across campus. Would need staff and student engagement.
	Put new build projects on hold	Hold all new build until target utilisation rates are achieved.
	Set Faculty and Business Unit space reduction targets	Similar to budget measures when savings are needed. Might also be over a longer timeline to allow for incremental improvements.
	Review all space against a space establishment standard (e.g. level and space allowance matrix) and act upon the findings	Develop a standard space allocation (exists in part) and remodel to the standard once impact of the working window adjustments are known. This area will also need to consider future space impacts for blended mode students.
	Review for duplications of space and offices	withdraw duplicated facilities for individuals and repurpose

	Align spaces to class attendance sizes (retaining some flexibility)	Partition or modify space to be more closely aligned with actual attendance.
	Review timetabling practice (class to space alignment and timing adjustments)	Ensure booking are made against typical attendance levels not maximums. Schedule fewer total spaces against an expanded working window to maintain capacity.
	Integration opportunities around common subjects	Can we merge any classes?
	Class reduction through online options or mixed mode	Perhaps have 30 spaces available and the balance online
	Use of alternate spaces such as learning commons or quad	Make more use of technology enabled spaces
	Withdraw and repurpose under utilised spaces including some computer labs	Remove a number of low use spaces immediately, develop clusters of mass that may be repurposed.
	Increased sharing of Labs	Can labs be more generic and shared? FoSc experience in the remodelling suggested they can be.
	Conduct space utilisation audits against common spaces and offices and apply a similar approach to under utilised non-teaching space.	This will be initiated in 2011
Campus standards and planning	Development of a campus standard indicating facilities norms at various stages of campus development	This will not be an absolute prescription but will provide guidance and options for key facilities development and assist in equitable consideration of CAMP bids
Understand and define the relationship and role of the campuses	Establish a Working group to consider the opportunities.	This may be something that is understood by SEG or VCC already and perhaps just needs expressing appropriately.
Multicultural	Establish a position for USQ in regard to supporting multiculturalism through its property portfolio	This is significant and may require a small working arty to consider the various risks, benefits and costs.
Investment and revenue	Maximise external revenue from non core facilities such as CBRC, sports fields, released building space	Having concentrated the business use, maximise revenue opportunities from the balance of the portfolio through licence, leasing and operations; retaining assets

		rather than disposal to allow for future growth or need.
Revenue	Explore the particular services and assets that currently do not return a margin and that might be attractive to an external operator and migrate appropriately.	COO and GM FM
	Recover space for hire, lease or licence purposes	Dependent upon intensification of use

ANNEXES

A. GM FM Power Point presentation from joint VCC/Council forum

RESPONSIBLE OFFICER

David Povey

Group Manager

Facilities Management

END OF ARTEFACT 12

3.8.7 Project Closure Report and Artefact 13

The operational culmination of the SAM project was captured in the Project Closure Report. As discussed earlier in this section, there were two versions of the closure report produced. The full version (as included in Artefact 13) was provided for academic assessment within the DPST program. The 'lighter' version, minus the academic references, was provided to the Chief Operating Officer as the project client.

In any project there is a risk that not all the project objectives will be met. That risk increases as a result of the project characteristics; i.e. the duration of the project, the constraints applied, the complexity, the resources allocated and other environmental factors impacting on project delivery. Williams (1999) discusses the causes and impact of project complexity and introduces 'uncertainty' as one expression of complexity. If extrapolated further, the uncertainty of action research in a work based environment would inherently lead to project complexity.

The Project Closure Report consequently summarises the status of the individual tasks and importantly identifies any outstanding tasks or actions required to be undertaken post closure. This is particularly important for the SAM project where the project sought to establish the SAM framework and capability at USQ, but understood that the population of the numerous data sets required to create the information base which supports SAM decisions would need to occur progressively over time, as resource allowed.

Examples of this pragmatism include;

- The development of Accommodation Plans; the plan templates and linkages were established during the SAM project and populated for two Faculties, but the balance of the business units and Faculties will be completed post SAM project closure
- Review of University policy to reinforce SAM linkages and objectives; an assessment of all policy was completed and 'indicators' for suggested changes recorded in a spreadsheet. This was forwarded to the responsible policy unit for follow up action (including internal consultation) and policy amendments as appropriate

These examples also illustrate the value and alignment of the Action Research approach, where the plan, do, observe, reflect cycle allows for the adjustment of the research outputs (project deliverables) to reflect continuous learning and allow for an improved outcome.

In the case of the Accommodation Plans mentioned above the original intent was to produce all the plans as part of the project, but it became apparent that this could not be achieved (using only in-house resources) and still deliver on the other tasks comprising the project. Similarly, the original intent with the policy review was to redraft the affected policy and have it approved through management and governance as part of the project. This became problematic as the working group had only one member that could redraft policy and coincidentally the University was undertaking a full review of existing policy and introducing a new policy library. These factors would conspire to reshape the task objective within the project and create a carry forward action post project.

3.8.8 Artefact 13



DPST Project Closure Report

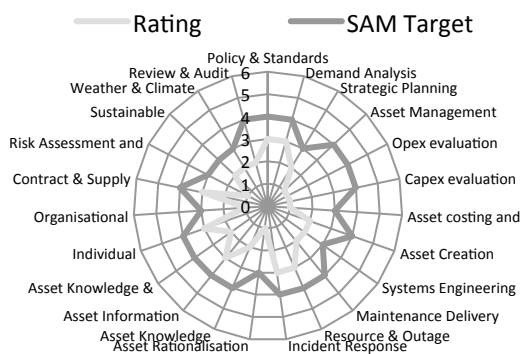
Project Title: Strategic Asset Management (SAM)	Project #:
Student name: Dave Povey	Project Sponsor: Chief Operating Officer, USQ

Reporting Period: SEP 09 – MAR 11	Report #: 10
--	---------------------

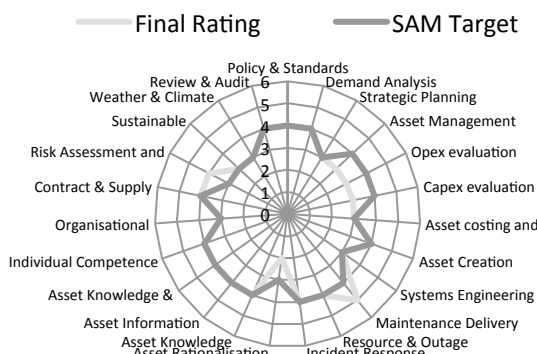
Project Introduction: Through this project USQ has sought to adopt the principles and practice commonly referred to as 'Strategic Asset Management'. Increasingly Facilities Management (FM) and the assets provided by FM, perform in the role of strategic enabler. The purpose of SAM is to enable the organisation to achieve its goals through the optimal provision of appropriate asset solutions. In determining those solutions the FM professional (through the SAM process) will consider; opportunities within the wider asset portfolio, life cycle costing, procurement choices (purchase, lease, disposal, BOOT or PPF schemes), Policy, Project constraints (timing, quality and cost), reuse opportunities, revenue creation, and value-add opportunities.

At the outset of this project USQ was immature and incomplete in regard to SAM and this is evidenced by the baseline rating, undertaken via self assessment using the Institute of Asset Management guidelines. Through this project the elements of SAM have been created, developed and embedded at USQ and with limited exception, met or exceeded the target competency to be achieved.

SAM baseline rating:



SAM project close rating:



Project Goals: The Project Plan required the following deliverables:

1. Predictive financial model for asset retirement/refurbishment/replacement
2. Improved value for money from the FM dollar
3. Condition assessment of the property portfolio
4. Policy review, amendment and development as appropriate
5. Standards and templates review and development as appropriate
6. Implementation of balanced (scheduled versus reactive) maintenance regime

7. Improved space utilisation
8. Proposal to the VC regarding space planning and management
9. Case study for Higher Education Sector

Status:**Achieved:** 2,3,4,5,6,8**In progress:** 1 tba,7**Amended:** 9 becomes VCC SAM paper**Failed or cancelled:** Nil**Overall Project - Closing Summary:**

93%

At the time of closing the project it was 93% complete. The single outstanding item of significance is the predictive funding model. Options for developing this will be considered separately and will include discussion with APV and Assetic Software in order to explore the cost/benefit of leveraging off the recently amended valuation methodology. Independent solutions are also available but the apparent benefits of a single source approach must be explored.

Further effort will be applied to raising awareness of SAM at the Senior level and of the importance of planning integration. Both of these dimensions have been initiated and that momentum will be maintained.

The project has moved USQ FM forward significantly both in terms of the unit level, with improved data, information, systems and processes, and also the knowledge and experience of the individuals within FM.

From a strategic engagement perspective the project has been able to culminate with two significant deliverables to the University Council and Senior Management. The first was in the form of a presentation at the recent Council and Senior Management Strategic Planning Forum, and the second is in the form of a more detailed 'blue sky' paper leveraging off the introductory propositions made in the earlier planning forum (refer to Annexe A) . The latter paper highlights the divergence of an increasing investment in the real estate portfolio and the University surplus and suggests a number of possible actions for consideration, particularly aligned with current University business and pedagogical strategic direction. This represents the culmination of the SAM project and the crystallisation of SAM principles as they apply to USQ. To my knowledge, this is the first fully mature discussion within USQ that addresses the portfolio alignment with organisational strategy and as such is potentially the beginning of a new real estate paradigm for the organisation.

	<i>Significant issues to resolve</i>		<i>Some issues to resolve</i>		<i>On track, no problems</i>
--	--------------------------------------	--	-------------------------------	--	------------------------------

Key Dimensions and tasks - closing status:**Asset Management Planning**

81%

<i>Tasks, Outcomes</i>	<i>Milestones,</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID Note 2</i>
Develop Accommodation Plan by major unit		Templates developed and completed for FoSc.	Populate GFA data and create for non Faculty units	1,2,5,7	80%	1-2-a 1-2-b
Enhance data to capture	Archibus	Complete	Data to be populated by	7,2	100%	1-3-a

room attributes		Information Officer following condition audit			
Map audit to building condition indices	Complete	Nil	1,2,3,5,6	100%	1-8-a
Identify USQ funding bid processes	Complete	Migrate to FM info	1,2,4	100%	1-7-a
Align programs with funding sources and document	WIP	Link to planning cycle	1,2	80%	1-7-a
Enhance bid templates and migrate to improved system	Complete	Migrate to Sharepoint approved FM standards	2,5,7	100%	1-4-a to 1-4-c
Establish linkages to BEIMS	Complete	Covered under 'Align BEIMS for data capture'	1,2,3	100%	5-1-a 5-1-b 8-1-a to 8-1-d
High level predictive funding model	Parallel developments within Finance involving a change in valuation methodology have impacted this output.	Leverage off recent APV changes or consider other software solutions e.g. Assetic or in house.	1,2,7	50%	Note 1
Operations				98%	
<i>Tasks, Milestones, Outcomes</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID</i>
Condition audit template and documentation	Complete	Audit planned for April	1,2,3	100%	5-2-a
Utility analysis	Complete	Nil	1,2,3	100%	5-7-a to 5-7-d

Reactive vs Scheduled Maint.	Complete	Nil	6	100%	5-6-a to 5-6-d
Align BEIMS for data capture	Complete	Explore Project Management Module (BEIMS & Archibus) Explore BEIMS Asset Management Plan Module	1,2,3	100%	5-1-a to 5-1-b 8-1-a to 8-1-d
Record manual data systems	WIP – linked to metric reports	Document manual data sources once Metric report finalised	1,3,7	10%	Note 1
Develop regular metric reports	WIP - Developing template	Finalise report and dashboard	2,6,7,8	60%	5-3-a
Property Management process review	Complete	Migrate to FM standards	1,2,7	100%	5-4-a to 5-4-d
Strategic Drivers				100%	
<i>Tasks, Milestones, Outcomes</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID</i>
Define linkages with USQ strategic Plan	Complete	Nil. Update as necessary	1,2,3,4,7,8	100%	6-1-a to 6-1-b 13-1-a to 13-1-h
Develop template for Faculty FM Plans	Complete	Migrate to FM standards	1,2,5,7	100%	6-4-a
Draft process for submission of Faculty FM Plans	Complete	SP to update task resolution	1,2,5,7	100%	6-3-a
Define options and process for connecting with academic product	Complete	Connection via Faculty Planning template	1,2,5,7	100%	6-4-a
Governance & Management				80%	

<i>Tasks, Milestones, Outcomes</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID</i>
Identification constraints	Complete	Migrate across to FM info	1,4,8	100%	5-6-d
Identification of KPIs	Complete	Migrate across to FM Standards	2,6,7,8	100%	4-8-a to 4-8-f
Review of Policy for FM linkages	Complete	Forwarded to SBMI for action.	4	100%	4-10-a to 4-10-d
Amend policy as appropriate	WIP – FM policy	FM policies to be updated in-house	4	30%	Note 1
Definition and scheduling of audits	Complete	Nil	2,3,4,5,8	100%	4-2-a
Identify and develop relevant standards	WIP	FM Standards to be finalised by end of April	2,5	85%	4-6-a To 4-6-l
Develop FM Project Management Standards	Content complete	Migrate to FM Standards and review format and indexing	2,5	100%	4-5-a To 4-5-j
Procurement process review and alignment	Complete	FM recommendations with Finance	2	100%	4-9-a to 4-9-c
Embed environmental principles	WIP	Final review to reflect in standards	4	25%	Note 1
Define service levels	Complete	Create Service Level Summary for FM Web pages	1,2,3,4,8	100%	4-6-k
Community				95%	
<i>Tasks, Milestones, Outcomes</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID</i>
2009 Satisfaction survey review	Complete	Nil	2,6,8	100%	
Landlord/tenant	Complete	Implement developed	1,2,8	100%	3-4-a 3-4-b

relationship review		procedures			
LDAP to BEIMS Web for all staff	Complete	Nil	2	100%	3-5-a
Committee and reporting review	Complete	Review sent to SBMI. Add to FM info in standards area	8	100%	3-2-a 3-2-b
Linkages to other core USQ processes	WIP	Finalise this table for inclusion as FM info document	1,2,4,7,8	25%	3-6-a
Web pages and regular reporting	Complete	Nil. Update as needed	2	100%	3-7-a to 3-7-c
Drawing Board	Complete	Nil. Update as needed	2	100%	3-3-a

NOTES

1. These items are works in progress and no final artefacts are available at this time.
2. Artefacts and other supporting documentation are provided on a separate CD labeled "POVEY DPST – SAM Project".

ANNEXES

A. Blue Sky Paper and Presentation

END OF ARTEFACT 13

3.8.9 Phase conclusion



The Project Closure Report provided a detailed and transparent assessment of the state of the project at the time it was closed off.

At the time of close off, overall progress was assessed at 93%. Of itself this appears to be a reasonable completion rate for a project of this magnitude and duration and indeed the working group, governance group and client were accepting of the progress made and the final outcomes.

As the Director of Campus Services and the primary actor in this study, it is important for me not to lose sight of the residual tasks and determine which of those is required to be continued independently of the project.

This is possibly a common facet of work based learning projects where the researcher may have an ongoing operational responsibility for the project as well as an academic interest, and is one of the key differences between work based learning and traditional research doctorates characterised by Armsby (2012) as ‘immersed and in service’.

The major carry forward items from the SAM project were:

- The development of a predictive funding model: This was a key aspect of the project in terms of applying the asset knowledge and translating that into a 20 year funding model based on asset service level, criticality, condition, etc. This was not achieved due to the project constraint of no additional funding; this prevented proprietary software from being introduced. In addition, changes were occurring in the Finance area around asset valuation methodology and potential opportunities for internal collaboration were identified.
- Policy development and amendment: As previously discussed these were identified and passed to the responsible internal unit for action. The policy changes are required to reinforce the SAM principles and practices and are seen as essential endorsements of the processes and systems established under this project.
- Facilities Standards: This task was under-estimated significantly by the working group and has become something of a leviathan. The standards library has been split into areas of operational responsibility and continues to be worked on as time permits by the responsible individuals. Unfortunately in a post project environment for fully loaded operational staff this is always likely to be a lower priority. Consequently it may need a specific resource allocated to complete the first version.

The template was an effective mechanism for capturing and communicating the status of the project and reducing the risk of the remaining tasks being ‘missed’ as the team members refocused on their operational environments. Equally it provided an effective link

between the project detail and the artefacts to facilitate the robust progressive assessment of this WBL project.

Examples of templates developed through this project and now operational within USQ include, space/facilities change request, Accommodation Plan, Faculty Planning Template (not all faculties yet and still to be integrated with corporate planning cycle), Condition Audit, and Project Plan.

It is interesting to note that a number of templates and documents developed through the project by members of the working group and endorsed at the time, have yet to be operationally deployed by those same members of the team. This raises the question of why a series of tools, developed and embraced through the project should not be operational post project. The answer may lie in the workload of the individuals concerned preventing the proper introduction of these tools; or perhaps the environment at USQ which is at times considered to be bureaucratic and over burdened, or is it that willing team members were complying with the requirements of the project and simply delivering the specified outcomes without accepting or understanding the value.

The continued and progressive introduction of the SAM tools and interfaces will continue to be a priority for me.

The application of a number of the tools developed in this project go beyond the SAM functionality and have provided templates and systems that may be adopted to numerous dimensions of the Facilities Management area. Examples of where this has happened already include; the use of online shared environments is now standard for FM projects and group collaboration, meeting agendas and minutes are now standardised against the SAM project format, FM standards are being expanded beyond the technical to encompass service level descriptions and even vehicle selection and allocation standards.

As previously mentioned, there remain some strategic linkages that are yet to be built and embedded. These go beyond the hard systems and planning templates, almost to a philosophical understanding and acceptance of the benefits and role of SAM.

I have sought to build that understanding through hard systems and the engagement of senior management as participants in the project. This strategy has been partially successful but further action is needed to fully develop and sustain the value proposition of the required strategic linkages.

As previously discussed, the Working Group and the Governance Group both functioned well but signs of fatigue were evident in the latter half of the project.

The framework and implementation model included in Artefact 4 remained appropriate and was a useful way to crystallise the various elements of SAM for multiple audiences (Working Group, Governance Group, FM staff, wider USQ communication).

The adopted SAM Elements Model (Artefact 5) remains the USQ template with the exception of the Minor Works and Capital equipment Plans, which have been deleted as

part of the funding model changes referred to earlier. Work continues in introducing and developing the remaining framework elements.

In particular, the SAM Plan (as a distinct document) is currently being developed using a hybrid of the Queensland Government guidelines¹⁶ and additional content developed from this USQ SAM project.

The Fleet Plan (as a distinct document) is the subject of some ongoing discussion as, through the SAM project, USQ is now considering the operation of the vehicle fleet as a single entity rather than as unit 'owned' assets, paradoxically in stark contrast to the changes that have occurred within the broader funding model.

The elements within the Operational tier of the SAM Elements Model do not always constitute a standalone document and may be integrated; for example; the service levels were included in the condition audit as an element to be considered when prioritising Facilities. Consideration of condition and required service level essentially provides a 'fit for purpose' assessment.

As previously discussed, the strategic culmination of the SAM project was captured in a paper (Artefact 12) to the Vice Chancellor's Committee, being the most senior management committee within the University. The paper subsequently went to the USQ Council Finance and Facilities Sub-Committee, being the highest governance committee other than University Council.

The recommendations of the paper were endorsed by both committees and referred back to management for implementation as appropriate. As a consequence of the paper and its endorsement, the University has established a separate space rationalisation and utilisation improvement project that is anticipated to run from 2012 - 2014.

3.9 SAM Project conclusion



Figure 11 below describes the primary challenges and objectives of the SAM Project as identified at the project inception and comments on the accuracy and outcome of those projections:

Challenge	Reflection
1. Designing a SAM framework that is compatible	The framework was designed and implemented. The missing elements relate to Planning and Policy. These elements were identified and developed but at the time of writing had been adopted by the responsible business unit.
2. Implementing the framework in a competitive	The technical elements of the framework have been implemented with the exception of the predictive model, which has not been approved for funding.

¹⁶ Unlike other government entities, there is not a legislative requirement for USQ to produce a SAM plan as it is a Statutory Authority; however it was considered appropriate by the Working Group to produce a document that is, as a minimum, consistent with the Queensland standard.

environment	The communication and planning connections improved during the project but have not been sustained at an appropriate level. Committee membership changes and changes in senior leadership at the USQ may have contributed to this.
3. Achieving improved asset performance in a dynamic organisational performance environment.	USQ has adopted several new initiatives that have created competition for time and resources across a number of existing projects, including SAM. That said, key performance indicators for the property portfolio are in place, i.e. space audits, utilisation rates.
4. Transitioning FM staff to a more strategic approach.	This was the least challenging element with staff very positive and proactive throughout the project. The challenge for me as an agent for change was to appreciate that the staff didn't know, what they didn't know due to the lack of corporate exposure and broader FM and SAM experience.
5. Creating the engagement, systems and processes required in partner areas to ensure the strategic interfaces required are put in place	<p>This took the form of five primary interface vehicles:</p> <ol style="list-style-type: none"> Planning instruments Policy amendments and introduction Meeting and Committee membership Business case development Reporting integration <p>The planning and policy elements were developed under the project but have yet to be actioned by the responsible unit. Meeting and Committee membership is essential for the earliest information and advice on strategic direction and initiatives; this has improved slightly but is not yet complete. Business case development has improved with some policy in place and templates being applied more frequently, but still not a single coordination point or template established. Reporting integration has improved with SAM data forming part of the USQ 'dashboard' project providing key institutional metrics via a data-warehouse.</p>

Figure 11 – Project challenges review

In summary then, the project challenges and aspirations as originally identified were largely realistic.

The actions described below in Figure 12, were undertaken within the project to establish an appropriate implementation framework and also to mitigate identified risks. Figure 11 also reflects on the effectiveness of those measures.

Action	Reflection
1. Establishment of a PCG for governance	The PCG was established and worked well, primarily keeping the project strategically aligned, rather than operational performance.
2. Membership of PCG to include 'key' Planning and Finance executives	The key executives were included in the PCG which assisted with implementation of the project but there was not the ownership and implementation of the strategic interfaces within their own areas necessary to maximise and sustain the benefits of the project.

3. External peer review member	This was very successful and provided independent input on a number of occasions and more broadly than the scope of the project, via general discussions at the PCG.
4. Establishment of a Working Group comprising members of FM staff (now Campus Services) at all levels	This was very successful and created real ownership of the SAM elements from day one. It also provided a collaborative forum for staff at varying levels to share a learning experience on the back of a significant operational project. The benefits of engaging so many of the team in this project have been tangible as they embrace the principles of SAM and attain higher standards of professional practice for the Division and themselves as individuals.
5. Communication through the Working Group and engagement	Engagement was always there but fluctuated through the life of the project. Initially, it might be described as cautious engagement and for some trepidation, engagement peaked after the 3 rd working group meeting when the project was more clearly understood, and various task were allocated to individuals. Towards the end of the project some members of the team became quite weary, in part due to the volume and scale of the task and the elapsed time, and in part due to the competing operational work load.
6. Tasks and timelines discussed outside of WG meetings	This approach allowed the project to be treated as business as usual (to an extent). This was helpful in socialising the project and reducing the fear factor for some members of the team.
7. Meeting formally scheduled	This was an essential default position but at times meant that meetings would be cancelled or postponed due to lack of progress or unavailability of personnel.
8. Project Manager appointed; the project can be a professional development opportunity for that individual	On reflection, this may have been an error. Developing the individuals PM capabilities on the back of such a significant project was always a risk. That said the individuals capabilities and limitations were not adequately understood at the outset. In theory, this project should have provided a safe and supportive environment for that professional development to occur, but perhaps for reasons peculiar to the individual it was not able to do so.
9. Individual meetings to progress tasks and support resources	This was linked with item 6 and worked effectively, allowing the scheduled meetings to remain at a 'higher level' and not be dominated by task specific detailed discussion.
10. Establishing a clear scope and framework for SAM at USQ	This was achieved (noting earlier implementation shortfalls) and is in use today, including the development of the SAM Plans.
11. Comprehensive documentation	Achieved and appropriate to the project. There was some negative feedback on the amount of documentation required via the Working Group; in particular the Quality Review Templates and the Task Resolution Templates.
12. Regular reporting to the Chief Operating Officer (COO) and the Vice Chancellor's	Regular reporting to the COO occurred both verbally and in written form. Reporting to the VCC was less frequent and was generally included as an item in broader divisional reporting. This was an element that would have benefited from more attention

Committee (VCC)	and increased profile and may have assisted with the creation of the strategic interfaces in the areas of finance and planning discussed earlier.
-----------------	---

Figure 12 – Mitigation review

In summary, the challenge mitigation strategies suggested at the outset were appropriate but through the implementation phase may not have received as much emphasis or priority as they were subsequently shown to have warranted.

The main area of non-delivery has been in regard to the strategic interfaces required within finance and planning. Some of the finance elements are being developed or are now in place (including the business case standard), but the planning integration templates provided to the Planning and Quality Section have yet to be integrated. This creates a significant gap in regards to the staff numbers, student load and academic product planning data necessary to maximise the ongoing effectiveness and positive impacts of the SAM capability. To some extent this is disappointing as it has been a consistent focus of the project. My Learning Journal (provided at Annex A) hosts several items in regard to the planning integration, including the following:



26 AUG 2010: *“Meeting with GM SBMI re how to integrate FM planning with corporate planning. Refer to task resolution template on SAM”.*



23 SEP 2010: *“SBMI planning meeting. I note that the SAM faculty planning template (or content from that) is still not included in the corporate planning documents. That was a commitment by GM SBMI that I will follow up on. Important as the current documents do not have any real world linkages to inform FM planning, in that goals are still soft and non specific”.*



26 NOV 2010: *“Briefed COO on progress to date, particular discussion around the proposed SAM Framework and creation of new linkages with SBMI (planning and quality) processes”.*

The planning integration in particular has been raised to the Vice Chancellor (also the Chief Executive) for subsequent action, as it is pivotal to the success and sustainability of the SAM project.

In the case of the USQ SAM project it is questionable whether sufficient of the strategic interfaces have been substantively established to sustain the SAM capability.

The failure to achieve full success in establishing those interfaces may be attributed to:

- The less than 100% engagement of some senior management with the specific deliverables and outcomes of the project
- The general workload and new initiative environment of USQ through 2011, reducing the focus and resource assigned to the SAM project within the wider USQ environment and directly impacting on the FM resources trying to balance both project implementation and business as usual demands
- Significant changes at senior management level including committee structure and membership review.
- Budget model and funding changes designed to give Faculties more autonomy of funding but in so doing, move the University further away from a coordinated SAM approach.
- Consequent reductions in capital funding across facilities and ICT programs
- Various dynamics between senior management and University governance entities creating a tension, workload and risk aversion that impact on a range of initiatives and actions linked to SAM
- An outgoing CFO
- An outgoing VC

In the case of the CFO; on reflection it may have been prudent to replace him as a member of the Governance Group once his retirement was announced. This would have allowed him to have an increased focus on his exit tasks and duties, and allowed an alternate senior member of Finance Division to engage with the project with improved ownership and continuity. At the time, the expectation was that the project would be completed prior to the CFO departure and that he would be fully engaged up to that point.

These events demonstrate the broader environmental risks that can beleaguer a project, particularly one that takes place over an extended period (such as 20 months in the case of the USQ SAM project) and spans so many organisational elements. These elements are described by Lester (2004, p. 7) as the 'swamps, messes and wicked problems' that the professional can expect to encounter in their practice situations, as introduced in Chapter One.

The importance of adopting a WBL approach that recognises the potential impact of such environmental factors cannot be overstated and it is in this context that the Action Research model demonstrates its value. This will be explored in more detail within Chapter Five.

Notwithstanding the challenges, there is clear evidence that the SAM project created a SAM model and framework that enhances the strategic role of FM at USQ (in planning, developing, operating and maintaining the USQ built environment in close support of strategic imperatives). The internal success in developing the knowledge and systems required to claim a SAM capability is a matter of fact and is evidenced both in the artefacts and the actual operational activity occurring with the FM Division.

As a result of the project, the University of Southern Queensland has significantly matured in its understanding of its real estate portfolio. In particular it has now recognised the

importance of appropriate and effective investment, optimal utilisation of space, the latent opportunities residing within an under utilised or 'lazy' portfolio and the significance of SAM in support of organisational objectives and priorities.

The project was implemented using an action research framework to capture key outcomes and findings, at the same time formal project management techniques were used to govern activities and actions across multiple project dimensions.

This action learning study provides information, observations and learning that can be applied in other organisations seeking to develop a SAM focus. These outcomes cover, the technical, political, structural, and change management aspects of implementing SAM.

The project provides guidance on the considerations, implementation experiences, outputs and lessons of an organisation with extensive and diverse physical assets engaged with an enterprise level upgrade of its asset management philosophy and practice.

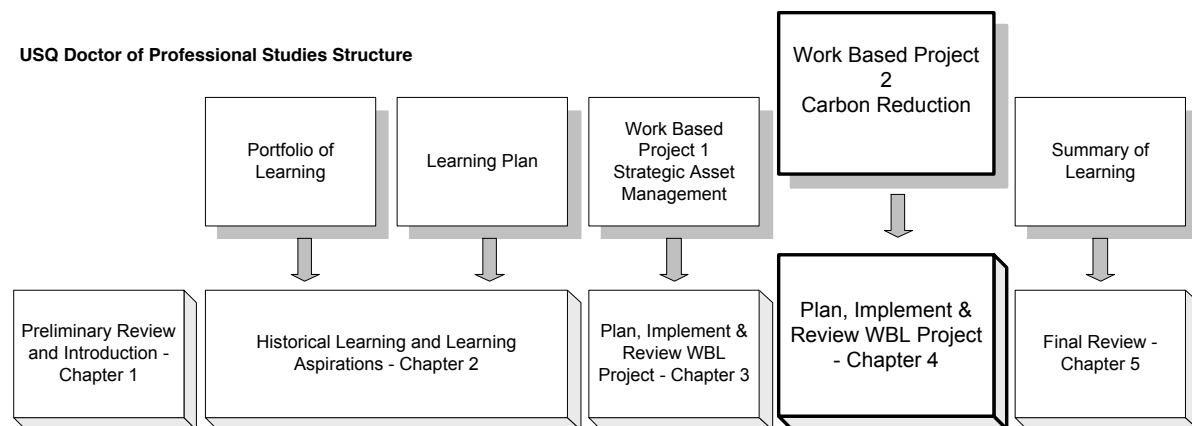
A more in depth discussion of the learnings and residual opportunities from the study are provided in Chapter Five, positioned against the action, knowledge and learning strands of Cherry's (1999) Action Research 'rope'.

I will now move on to discuss the Carbon Project implementation.

4 Project Implementation - Carbon Reduction



USQ Doctor of Professional Studies Structure



Thesis Structure

4.1 Section outline

This chapter will discuss the various activities comprising the Carbon Project development and implementation and has the following form:

- Project introduction
- Context and constraints
- The integration of artefacts
- Carbon Reduction Project establishment phase
 - Introduction
 - 'Getting Started' and Artefact 14
 - Project framework and Artefact 15
 - Embedding an Action Research approach and Artefacts 16, 17 & 18
 - Phase conclusion
- Carbon Reduction Project implementation phase
 - Introduction
 - The Project Plan and Artefact 19
 - The Governance Group and Artefact 20
 - The Working Group and Artefact 21
 - The Project Schedule and Artefact 22
 - The Environmental Audit (project baseline) and Artefact 23
 - The Campus Ecological Transformation sub-project and Artefact 24
 - Academic reporting and Artefact 25
 - Media release and Artefact 26

- Phase conclusion
- Carbon Reduction Project closing phase
 - Introduction
 - Operational outcomes
 - Strategic outcomes
 - Academic outcomes
 - Project Closure Report and Artefact 27
 - Vice Chancellor's Committee paper and Artefact 28
 - Phase conclusion
- Carbon Reduction Project conclusion

4.2 Project introduction

As previously discussed, in 2008 the University of Southern Queensland undertook a significant change process to rationalise and reduce operating expenses. Part of the work required to inform the change process included a complete review of the USQ strategic plan.

In terms of its organisational maturity around sustainability and environmental activity, it is fair to say that USQ was at an early stage of development. There was a clear willingness and sense of need, but no framework or collective approach to progress the topic.

A series of workshops was held to develop the strategic plan and it was in these forums that the commitment to carbon neutrality was first proposed and subsequently adopted.

The unambiguous commitment delivered via the USQ Strategic Plan 2009-2013 provided a clear mandate to develop the systems, processes, professional knowledge and capability necessary to develop and manage the University in a way that minimised carbon emissions.

As a reminder of the scale of the USQ portfolio; USQ has three campuses, occupying 94.3 Hectares of land¹⁷, with 115,000 m² of developed gross floor area and a book value of approximately \$320M. In 2011, the organisation's total revenue was approximately \$230M. The University has a vehicle fleet of approximately 76 and at the start of the project in 2009 a carbon emissions baseline of approximately 16,728 Tonnes CO₂-e.

As discussed in Chapter One, undertaking the Carbon Reduction Project within the professional doctorate work based learning environment provided the following benefits:

- The opportunity to formalise the project at an enterprise level with an enhanced value proposition (comprehensive project scope, project outcomes, enterprise benefits)

¹⁷ Data correct at March 2012

- The opportunity to value add, through the inclusion of academic process and input to what would otherwise have been a purely operationally biased project
- Possible linkages to academic outcomes through the synergy and facilitation with research projects
- The numerous opportunities for the University in engaging with a significant and topical societal challenge
- The opportunity for me and the members of the Facilities Management team to expand not only our technical and professional knowledge but also (through the inclusion of academic rigor) be exposed to higher order learning and project implementation techniques and tools

In 2009, work started on the Carbon Reduction Project with the commissioning of an environmental audit. The audit led to the production of a comprehensive report using the Global Reporting Initiative (GRI G3) environmental KPI matrix, plus a green house gas emissions inventory. The inventory would subsequently be adopted as the 2009 University carbon baseline.

The project then commissioned a review of the campus to determine what sustainable technologies and solutions might be viable at the Toowoomba Campus. This was intended to be a holistic overview focusing on those design and technology solutions that would contribute to the reduction of the University's carbon emissions. This was called the Campus Ecological Transformation Sub-project (CETS). Both the audit and the CETS are discussed in the implementation section of this chapter.

In order to meet the operational needs of the organisation and the academic needs of my doctoral journey, the Carbon Reduction Project was developed along the following two main delivery themes:

- The creation of an implementation model and framework that would engage staff and students at the USQ (in particular the planning, developing, operating and maintaining the USQ built environment) through the development and implementation of a primary enterprise level carbon reduction knowledge and capability and resultant environmental and social benefits.
- As with the SAM Project, the Carbon Reduction Project would be implemented using an action research framework combined with formal project management techniques.

The study participants, perhaps better understood the integration of the action research and the project management methodologies at this time, as a result of their earlier exposure and involvement with the SAM Project.

4.3 Context and constraints

As previously discussed the USQ environment was one of constraint and consolidation. It was intended that the Carbon Reduction Project (as the SAM Project before it) would be fully funded from existing operational allocations. This constraint on internal funding had limited impact on project scope and the implementation methodology, primarily because the Strategic Goal provided a specific and significant mandate which implicitly required new knowledge and potentially new systems to be created.

For example, the environmental audit would be outsourced and require separate funding. The systems required to collect, analyse and sustain the carbon and general environmental data did not exist and a solution to that hurdle was also found via the project.

The 'participant' role of internal FM staff for the project implementation was certainly very different in practice from that experienced with the SAM Project. Team members were already engaged with SAM and saw their contribution to the Carbon Project in a much more focused and localised way; specifically acting more as the conduit between their 'business as usual' roles and the project, than full participants with a collective sense of ownership for the whole. In practice then, the team played more of a support role to the project than they did previously; leaving me and the environmental officer (appointed part way through the implementation) to conduct the leadership, coordination and significant portion of the 'doing' functions.

4.4 The integration of artefacts

As discussed in Chapter One, the artefacts embedded in this section provide a chronological progression of the project itself through the use of the documents created at the time, and are included in their original unedited form. They are an integral element of this thesis and as such, the contents of the artefact will not generally be reproduced elsewhere and must therefore be read in detail. Each artefact will be discussed and placed in context within the project. This will be achieved by the inclusion of an introduction section 'sandwiching' the actual artefacts.

As with the previous SAM chapter, this Carbon Project chapter is presented in sections (illustrated in the 'Outline' provided at the start of this chapter) aligned with the three main phases of the project, being; establishment, implementation and closing. Each phase section will host its own introduction and conclusion providing critical reflection on that phase from the perspective of the completed project and my development as a more reflective manager and learner.

In summary then, artefacts that are fundamental to the study and the learning experience (operational and academic) are integrated within this chapter as embedded text.

In the next section, I start the discussion of the Carbon Project by describing the activities embodied in the 'establishment' phase of the project.

4.5 Carbon Project ‘establishment’ phase



4.5.1 Introduction

This section deals with establishing the Carbon Reduction Project both operationally and academically.

The term ‘establish’ is used within this context to mean identify and set in place the elements (generally frameworks and authorities) required to define and deliver the project.

This section contains several Artefacts pertinent to those early establishment activities.

The Carbon Reduction Project was the second of the two WBL projects to be initiated and as such the framing of the relationship between the operational and academic dimensions was influenced by the lessons of the first project.

The mind mapping technique remained an essential step in developing an understanding of the possible elements and dimensions of the project and the earliest version, described as a Sustainability Project in line with the original aspiration, is provided below at Figure 13.

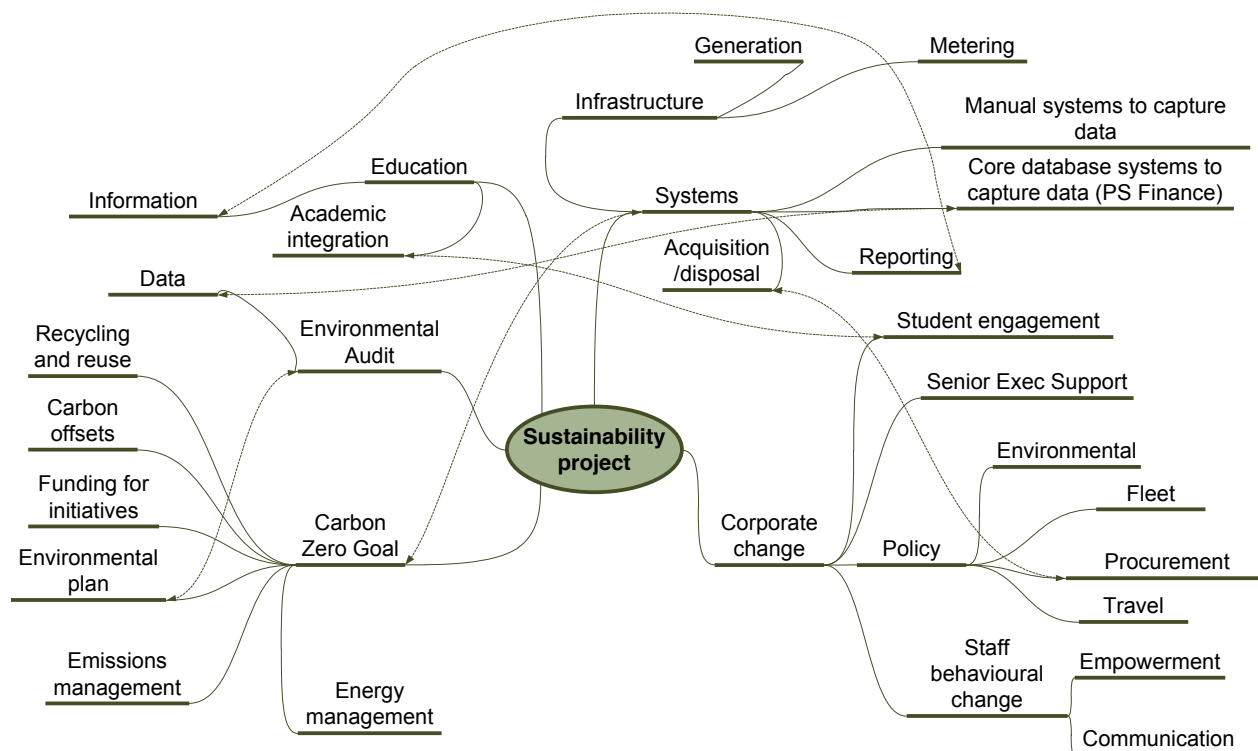


Figure 13 – Initial project mind map

As previously mentioned Figure 12 reflects an initial aspiration to implement a broader sustainability project and included high level elements and relationships appropriate to that goal. As the project developed it became apparent that USQ was not at a level of organisational capability where a full sustainability project (interacting with every aspect of the University's operations) was likely to be welcomed or successful; to some extent due to the significant demands on the University community exacted by the recently completed RoP realignment project. The environment was very political at the time and my Learning Journal records:



24 FEB 2010: *"VC raised the sustainability project and I offered to present a summary to VCC. Offer accepted so now need to work on a solid presentation"*



08 MAR 2010: *"I have developed a presentation for the VCC regarding a organisation wide Sustainability project. I showed it to COO for comment. He made me aware that the VC has asked DVC (S) to have stewardship of the delivery of sustainability... Some risk through reduced management influence. Improved risk through senior engagement and potential broader team support... If my contribution to the final project does not meet the needs of the DPST or it is delayed, I will refocus on the environmental component and in particular the carbon zero element."*



23 MAR 2010: *"Meeting to present outline of sustainability Project (PPT slides) and discuss... DVC(S) did not provide a particular path forward, but suggested that the 9 goal stewards should be represented on the project diagram... Understand political perspective but this assumes the goal steward concept is an effective model for actual delivery, and based on observation that is debatable."*

A copy of the original sustainability proposal developed for the Vice Chancellors Committee is included at Annex E.

The discussion around a broader sustainability project became increasingly political, to the extent that the presentation was not actually made to VCC. These dynamics were an indication of the environment that existed at the time and clearly represented a risk to the project. Adopting the principles of Action Research, this observation prompted a change of plan. The resultant action was to refocus the project on carbon reduction and 'park' the wider sustainability focus for a later time when the organisation might be better placed to engage in it; perhaps as a result of witnessing commitment and success around carbon

reduction projects. The opportunity for non-carbon reduction elements to be included in the reformed project remained and these were engaged as time and funds allowed. This stage of the project is discussed further in the academic paper provided in Chapter Five at Artefact 30.

The next stage in establishing the project took the carbon reduction elements (identified from the literature and the early sustainability mapping) and overlaid them against the USQ operational and political environment.

At the time, the University's 'Environment and Sustainability Committee' coordinated USQ's environmental activity.

As an example of the USQ leadership environment (from a carbon reduction perspective) my Learning Journal (Annex A) reflects:



18 JAN 2010: *"Some members of ESC do not contribute in a meaningful way. Significant effort has been made to encourage and engage with them (recognition, responsibility, consultation etc)... Perhaps the membership needs refreshing more frequently?... ESC is one of the foundation blocks of the project and must operate with maximum effectiveness... Suggest redrafted ToR for ESC to the VC's approval. Perhaps a 12 month term for the academic members? This will attribute value to the appointment, provide a limited time for them to make a difference, increase staff exposure and also allow the introduction of fresh ideas and perspectives."*

As an example of the USQ systemic environment (from a carbon reduction perspective) my Learning Journal reflects:



18 JAN 2010: *"Follow up re renewal of electricity accounts and management thereof, COO confirmed his understanding as the same as mine and generated email to CFO... Fell between the cracks or just not communicated internally within Finance... Many examples of these communication gaps exist, but this is significant for sustainability alignment... Electricity is >76% of USQ's carbon footprint and must be considered in that light, not simply a procurement process."*

The affect of this complex organisational environment in reshaping the project was to 1. Remodel the project elements; and 2. Develop a conceptual model to aid in defining and communicating the revised project scope, timing and boundaries. This latter model was called the Concept Communication Model.

The revised mind map is provided below at Figure 14 and presents the remodeled project elements and element classifications (later called project dimensions).

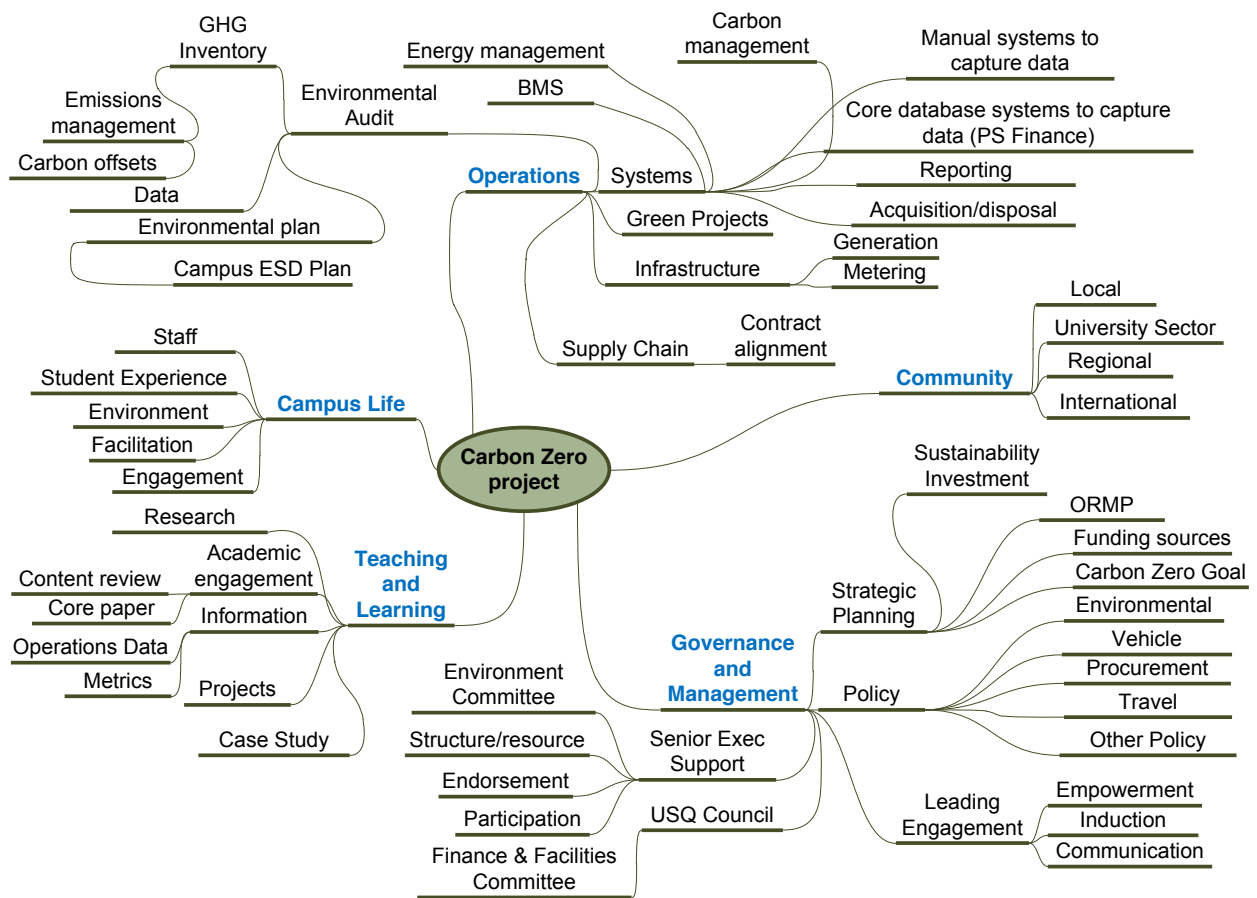


Figure 14 – Revised mind map of the project elements and dimensions

The elements and dimensions of the revised Carbon Zero Project mind map were used to inform the Carbon Getting Started paper provided later at Artefact 14, and subsequently the Concept Communication Model provided below at Figure 15.

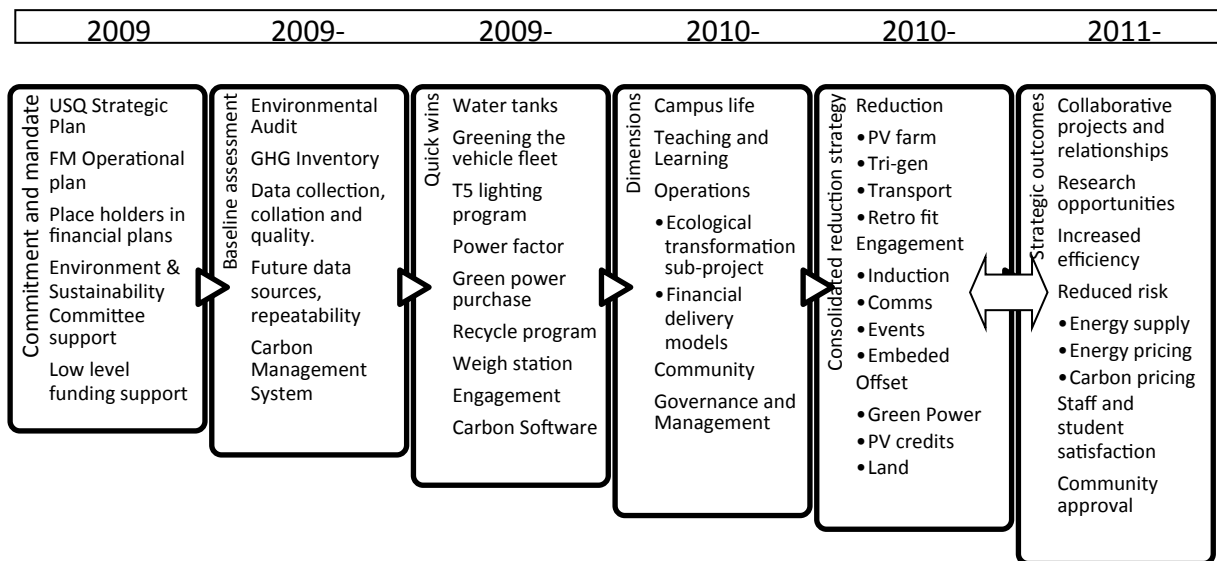


Figure 15 – Concept Communication model

The concept communication model was developed after the Getting Started paper and in response to an emerging need for a simple visualisation of the project. It unites the key elements of the project, set against a high level timeline and provides an indication of the parallel activities that make up the main elements of the project delivery. Further discussion of the Concept Communication Model is provided later in this section within Artefact 15.

The production of the Getting Started paper (Artefact 14) was a milestone and its contents enabled the progression of several key activities including; the development of the Project Plan (provided later at Artefact 19); the configuration of the management and governance framework; the initiation of the quality review (action research, plan do check act template) and early identification of the strategic interfaces required to enable and sustain the outcomes of the project.

The next artefact in this section is the Quality Review template (Artefact 16). This was developed to formally embed the Action Research principles of Plan, Do, Check, Act. However, it needed to be presented in a way that was seen to be adding operational value to be accepted by the team members as a valid functional task. Further it was desirable that the reflection should encourage not just a ‘gap’ approach but also a more positive and holistic opportunities reflection consistent with the perspectives put forward by Verdonschot (2006) in her discussion of reflection as a tool for innovation.

A populated sample from my learning journal is provided at Artefact 17 and is included to evidence a further source of reflection and learning (as discussed in Chapter One) that would feed into the action research cycle and refinement of the project deliverables. I will

discuss the role of the journal in detail in Chapter Five, but it was a key tool in developing my reflective practice and I found the guidance of Smith (2006) useful in this regard.

Moving back to the approach, Moriarty (2007) describes some of the key characteristics and lessons of an Action Research project as follows: 'There is no one blueprint, it is an approach or philosophy; not everyone will engage at the same level at the same time; Action Research implies change and there will be corporate drivers and resisters that will change over time'.

The observations of Moriarty were certainly experienced in this project and the relationship between the PDCA cycles and the actual effects on the project as a result are illustrated at Artefact 18, being an extract from the final academic paper. It is noteworthy that the PDCA cycle was prepared in the closing phase of the project and populated with the actual impacts and reflections drawn from events at the time.

The use of a PDCA Cycle format would be an enhancement to the Quality Review template for future Action Research projects. The Cycle aligns more directly with the operational implementation of the Cycle, whereas the Quality Review Template is perhaps more aligned with a reflective journal and requires further migration to achieve the operational linkages.

The move from Sustainability to a carbon reduction focus was formalised through the completion of the 'Getting Started' paper and I will discuss that milestone in the next section.

4.5.2 Getting Started and Artefact 14

This artefact was developed at an early stage and discusses the background to carbon reduction introducing aspects of global dynamics, climate change, legislative response and direction and connects those with the University commitment. In summary the Getting Started paper sought to provide the 'why', the 'how' and a high level summary of the 'what' of the project.

Through a review of the literature the artefact introduces material relevant to similar projects in other university environments and explores early thoughts as to how those experiences will be considered within the USQ project.

In reviewing the literature, a number of common elements emerged as being integral to a successful institutional change project around carbon reduction; Sharp's (2002) work in summarising the lessons from several university environments is most helpful in this area. Examples of the common elements include: public endorsement by the Vice Chancellor; clear targets; action steps and monitoring and simple strong messages. These common experiences and recommendations were largely adopted and migrated to the project as specific tasks (deliverables and methodology) within the operational Project Plan (as

previously discussed the production and approval of a Project Plan is a requirement within USQ for formal enterprise projects and a fundamental requirement with Project Management methodology and practice). The Project Plan is included at Artefact 19.

The paper goes on to position the USQ Carbon Project both within the body of knowledge as it applies to professional practice, the legislative and political environment, and also within the USQ environment.

As with the SAM Project, it was apparent that technical solutions and data integration in particular would need to be supported at an enterprise level for carbon reduction to be sustainable at USQ. The importance of the engagement component for this project was greater than that of the SAM Project; not just at an organisational level but also at a community level (staff and students) and this aspect is significantly represented in the task schedule.

The need to obtain organisational commitment and engage senior executives in the project was addressed through the governance and management framework for the project, and the nature and format of the key communication deliverables. In particular, the environmental audit, the GHG inventory, regular update reports and the final Carbon Reduction Strategy were all presented to the Vice Chancellor's Committee, the Finance and facilities Sub-Committee and the USQ Council as they became available.

The artefact goes on to describe key project dimensions and subordinate goals/tasks, developed via a collaborative mind mapping exercise (provided at Figure 13). The final mapping (provided at Figure 14) was conducted by me and selected members of the project implementation team (working group). The project dimensions developed through the mapping (Campus Life, Teaching Learning & Research, Operations, Governance & Management and Community) are used throughout the Carbon Reduction Project artefacts to provide convenient group identifiers for the various stages and elements of the project.

The artefacts reinforce the use of Action Research and Project Management as the two primary delivery methods and this is discussed in more detail in Chapter Five.

4.5.3 Artefact 14



Carbon Reduction at USQ

Introduction

This paper will initially outline the Global and Regional perspectives and imperatives on climate change and establish the consequent need for carbon emissions reduction.

The balance of the paper will discuss the rationale and methodology proposed for engaging the University of Southern Queensland in a specific and real world carbon reduction strategy, involving both reduction and offset solutions in order to make a contribution as a global citizen to the reversal of global warming and achieve a financially and ethically sound outcome. In so doing, the paper also sets out the nature and extent of the proposed contribution made by the project (both operationally and academically) to the body of existing knowledge in relation to corporate efforts to reduce carbon emissions.

The activities undertaken as part of the Carbon Reduction Project will be consistent with a wider Sustainability agenda, in readiness for USQ's engagement with wider Sustainability initiatives.

The International Climate Change Response

Governments and communities around the world have recognised that there is a global need to reduce the amount of GHG's produced and replace the GHG sinks that have been destroyed and stop global average temperature rise.

There are numerous international organisations committed to research, education and action around climate change. Perhaps the two most prominent and influential on a global scale are the Intergovernmental Panel on Climate Change¹⁸ (IPCC) and the United Nations Framework Convention on Climate Change Secretariat¹⁹ (UNFCCC).

The IPCC is tasked with reviewing and assessing the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. In particular climate change in IPCC usage refers to "a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties and that persists

¹⁸ IPCC and climate change material has been sourced from the IPCC web site at <http://www.ipcc.ch/organization/organization.shtml> and Wikipedia at <http://en.wikipedia.org/wiki/IPCC>

¹⁹ UNFCCC material sourced from the UNFCCC web site at http://unfccc.int/essential_background/items/2877.php and Wikipedia at <http://en.wikipedia.org/wiki/UNFCCC>

for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity”.

The UNFCCC is an international environmental treaty signed at the ‘Earth Summit’ in Rio de Janeiro in 1992. It contains no specific green house emission limits or targets but allows for subsequent protocols to be introduced that create these along with enforcement mechanisms. Perhaps the most famous of these protocols is the Kyoto Protocol.

The Kyoto Protocol

The Kyoto Protocol is a protocol to the UNFCCC aimed at fighting global warming with the goal of achieving "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

The Protocol was initially adopted on 11 December 1997 in Kyoto, Japan and entered into force on 16 February 2005. As of November 2009, 187 states have signed and ratified the protocol.

In December 2007, Australia ratified the Kyoto Protocol.

The mechanics of global warming

The earth receives a constant stream of energy from the sun, primarily in the form of visible light. Approximately 30% is reflected back into space, but the majority of the remaining 70% penetrates the atmosphere to warm the surface of the earth.

This effect has always occurred and was previously balanced by adsorption of GHG's by trees, oceans and farmlands referred to as GHG sinks. This gives earth its relatively steady climate.

More recently there is evidence that the earth is warming up faster than ever before and it is being caused by a build up of GHG's. The increase in GHG's, dominated by Carbon Dioxide (CO₂) but including many others, is a result of; human GHG production primarily from the combustion of fossil fuels and the reduction of many of the GHG sinks (particularly forests) This creates a situation of increasing GHG with reduced capacity for the earth to absorb / convert them.

For the energy scales to remain in balance the earth must release its energy and it does so in the form of infrared radiation. However, greenhouse gases accumulating in the atmosphere obstruct infrared radiation escaping. Instead of moving rapidly out of the atmosphere, the infrared radiation is removed far more slowly by air currents and clouds, eventually escaping into space above the greenhouse gas layer.

The effect of the trapped infrared radiation under the greenhouse gas layer is to affect a much slower rate of energy transfer that produces a gradual increase in the global mean average temperature.

CO₂ is the predominant GHG produced from the burning of fossil fuels. There are, however, a number of other gases that are also considered greenhouse gases. These can include:

- Methane (CH₄) – sources include fossil fuel combustion or produced from ruminants (cows etc).
- Nitrous Oxide (N₂O) – produced from the incomplete combustion of fossil fuels.
- Sulphur Hexafluoride (SF₆) – used as an insulation gas, particularly on electricity transmission lines.
- Hydro fluorocarbons (HFCs) – used as refrigerants.
- Per fluorocarbons (PFCs) – used in metal production processes.

These six gases are covered by the Kyoto Protocol and each have a Global Warming Potential in relation to CO₂.

Effects of Global Warming

During the past 100 years, global average surface temperature has increased by about 0.7°C. Since 1910 the average temperature of Australia has risen by about 1°C.

At the United Nations Climate Change Conference, COP 15 IPCC side event "IPCC Findings and Activities and their Relevance for the UNFCCC Process", Copenhagen, Denmark, 8th December 2009, Thomas Clocker presented a paper

The following is an extract of key observations from the IPCC Assessment Report 4, Summary of Impacts

- Sea ice: Arctic sea-ice declined by about 10 to 15% since the 1950s.
- Glaciers and permafrost: glaciers receding on all continents and permafrost thawing.
- Snow cover: snow cover in the Northern Hemisphere decreased by about 10% since the late 1960s and 1970s.
- Snow melt and runoff: increasingly earlier in Europe and western North America since the late 1940s.
- Lake and river ice: duration of lake- and river-ice cover in Northern Hemisphere mid- and high latitudes reduced by about 2 weeks and more variable.

Changes in biological systems:

- Range: plant and animal ranges had shifted toward the pole and higher in elevation.
- Abundance: some plant and animal population sizes had changed, increasing in some areas and declining in others.
- Phenology: timing of many life-cycle events, such as blooming, migration and insect emergence shifted earlier in the spring and later in the autumn.
- Differential change: species changed at different speeds and in different directions, causing a decoupling of species interactions (e.g., predator-prey relationships).

Possible effects for Australia²⁰

At the 2009 Campuses towards Sustainability Conference, Professor Ove Hoegh-Guldberg, of the University of Queensland Centre for Marine Studies, presented a session that summarised the impact themes for Australia as Ecosystem, Agriculture and Coastal Infrastructure. In particular he forecast likely effects to be; increased incidence of extreme weather events (heat, wind, rain, hail) and resultant bush fire, flooding and building damage; acidification of the ocean, coral bleaching from increased sea temperatures; sea level rise of 2-3m by 2100, noting that a 1m rise would destroy Brisbane port facilities and airports, loss of Kakadu wetlands at a 30cm rise in sea level; the loss of cloud forests, such as Daintree and associated flora and fauna:

Australian Federal and State initiatives²¹

The Australian Government is strongly committed to reducing Australia's carbon pollution through its Department of Climate Change and Energy Efficiency (DCCEE).

DCCEE has established GHG inventories at a National and State level and is monitoring performance against Australia's Kyoto Protocol obligations.

The Australian government has signaled its willingness to set a goal to reduce GHG emissions to 25 per cent less than 2000 levels, by 2020. This would translate to almost a 50% reduction in carbon emissions per capita. The setting of this ambitious goal is dependent upon International partners undertaking similar reduction activities and has not yet been substantiated. As a default the Government has set target reductions of between 5-15% less than 2000 levels by 2020. In addition, they have committed to 60% reduction against 2000 levels by 2050.

In August 2009, the Government introduced the Renewable Energy Target (RET) scheme, which is designed to ensure that 20 per cent of Australia's electricity supply will come from renewable sources by 2020. Various grants and loan schemes have been created to support these initiatives and remove / minimise financial hurdles.

The Government has developed a Carbon Pollution Reduction Scheme (CPRS) that essentially introduces a National carbon 'cap' and a trading mechanism that sees carbon emissions having a cost, to be borne by the generator of the emission. In essence, the producer of the emission would buy a permit for those emissions. The sum of all the permits issued would not exceed the National cap, and over time the cap would be progressively reduced. In April 2010, the Government placed this initiative on hold.

USQ commitment and mandate²²

The USQ is committed to supporting the Australian Government and the Global community in its efforts to reduce Carbon Emissions. In its Strategic Plan for 2009-2013, the USQ sets a target of carbon neutrality (scope 1 and 2) by 2020 and has

²⁰ A more comprehensive representation of the anticipated effects for Australia can be found at the CSIRO <http://www.csiro.au/resources/pfbg.html>

²¹ Material sourced via Climate Change Office <http://www.climatechange.gov.au/en/government/reduce.aspx>

²² Strategic Plan details can be found at the following URL <http://www.usq.edu.au/aboutusq/org/strategicplan>

set 10% per annum reduction/offset targets as milestones, resulting in a 40% reduction against the 2009 baseline footprint by the year 2013.

In the 2009-2013 Strategic Plan, USQ states;

- Goal 9, Enterprise.”To deliver positive social, environmental and economic dividends”
- Goal 9, objective 3 states; “A carbon neutral operation across all three campuses by 2020”

The Carbon Reduction Project will expressly address the requirements of Goal 9, objective 3.

The USQ carbon reduction project

This project will be the primary vehicle for the achievement of USQ’s 2013 target of 40% carbon footprint reduction against the 2009 baseline.

The project will primarily focus on carbon reduction initiatives (or set of initiatives) but will also consider appropriate carbon offsets as part of the overall package of measures required to achieve the strategic goal. The final mix of compensation, reduction and preservation measures (Hoffmann, 2008) is very difficult to predict at this early stage and the project planning and learning from this area in particular may be of value to other organisation’s embarking on similar reduction journeys. Hoffman developed a matrix for categorising companies against their strategy and activity; using this model we might consider that USQ would enter this project as a ‘reducer’ and ‘substituting compensator’ moving toward ‘preserver’ as alternate energy sources such as tri-generation are explored and implemented. The project will address all strategies and therefore USQ must inevitably be considered an ‘all-rounder’ using Hoffman’s model.

The project has been developed in line with USQ project management methodology and has the approval and engagement of the Chief Operating officer and other Senior Management, including the Vice Chancellor. The project will be delivered via a robust governance and management structure being the Project Control Group (PCG) and the Project Working Group (WG) respectively.

The project will not address the wider theme of sustainability, but acknowledges a direct connection with that theme and will be structured to enable integration with an umbrella sustainability project should USQ introduce same. The United Nations (UNESCO, 2006) produced a very interesting and relevant paper addressing the drivers and barriers for implementing sustainable development in higher education including suggested frameworks for the introduction of appropriate content to academic product. This will be of direct utility for USQ when considering the wider Sustainability project, and of some elemental utility for the carbon reduction project.

The project is a mix of technical solutions, education, awareness, engagement and corporate change, and as such will be challenging in a number of areas. The importance of creating an environment that creates ownership and accountability (Ian Christoplos and Merylyn Hedger, 2009) for the staff and students of the

University is also understood and reflected in the project dimensions and deliverables.

Liverpool John Moore University (LJMU) produced a very comprehensive carbon management plan in March 2010 that is similar in approach to this USQ project, and additionally provides a number of useful ideas around presentation formats and templates for the USQ Working Group to consider.

The experiences of Yale University are also relevant as they implemented an environmental project in 2005 (Rauch, 2009). Rauch describes the importance of defining goals that are achievable and measurable and developed with the input of those that must deliver on them. Rauch provides a simple change process map as described at Figure One.

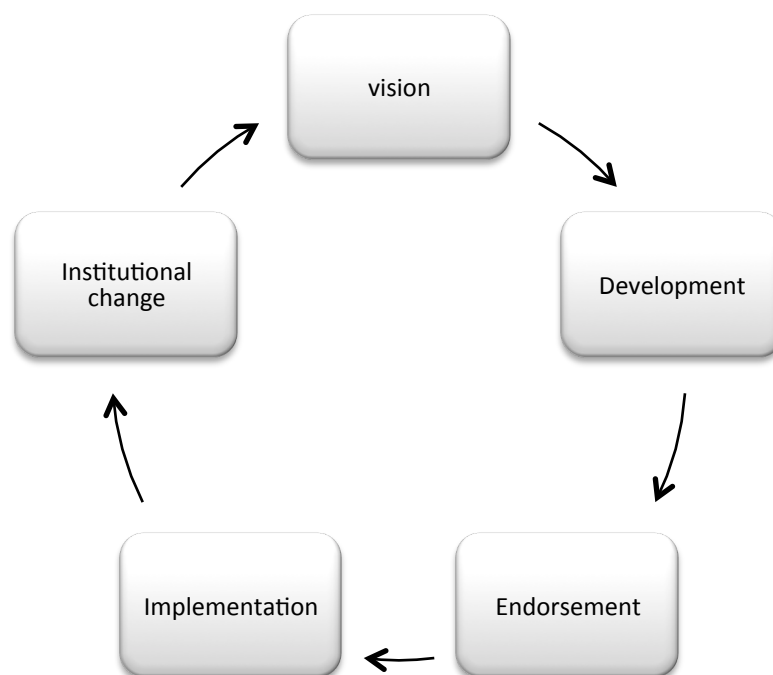


Figure 1- Institutional Change Cycle

If we consider USQ against the cycle provided at Figure One, we might review progress as follows. The vision has been described in the USQ Strategic Plan. The strategy and action plan has been developed and endorsed (noting that it now requires wider engagement with the USQ community). Significant elements of the project have been initiated but not fully implemented, and we are beginning to see already indicators of institutional change.

Rauch describes engagement with campuses and faculties and seeking individual commitments from each. The USQ project will develop the strategy initially and then engage faculties and units to adopt and refine the strategy to suit their own circumstances and knowledge. The key message from Rauch is to gain a consensus around a set of specific reduction goals and targets. The identification and setting of these goals and targets for USQ at the corporate level will be developed initially within the Carbon reduction strategy document and then introduced with consultation

at the Faculty and Divisional level. This will also align with the projects ability to provide meaningful and relevant data to the various stakeholders.

Another useful case study is available from the University of Michigan (Marans, 2010) and provides a human behaviour study as the University attempted to introduce an energy efficiency program. Key lessons for the USQ project include; public endorsement by the VC; clear targets, action steps and monitoring plans. Location and style of posters is crucial and simple strong messages are most effective. Motivate good behaviours, provide feedback on suggestions and implemented measures; create incentives and rewards. Empower staff at local level. Change to energy efficiency lighting, even at the desk lamp level.

Both the Yale and the Michigan experiences have been considered against the USQ environment and extrapolated into a number of key challenges for the USQ carbon reduction project.

The primary challenges for USQ and therefore the primary challenges of this project are:

6. Designing a carbon reduction strategy that is compatible with the USQ corporate mindset and financial situation
7. Designing a carbon reduction strategy that demonstrates and delivers value as perceived by the organisation. By this I refer to more than simply reducing the emissions. For a sustainable outcome there would ideally be corresponding reductions in operating costs and increased student attraction and staff retention.
8. Implementing the strategy in a setting where there are many competing priorities which are often seen as more important than reducing carbon emissions and certainly more important than carbon offsets (currently seen as cost with no value).
9. Achieving improved coordination of environmental efforts and increasing value returned.
10. Implementing the project as an additional task for all concerned rather than with dedicated resources.
11. The organisation's approach to the wider dimensions of sustainability is developing and there is a risk that I may subsequently be unable to manage or deliver this project in the way I have planned. This may adversely impact on the planned outcomes of this project
12. This project will consider feasibility studies for a number of technically based ESD sub-projects that will potentially be significant for the USQ carbon footprint. There is a risk that the USQ will not be in a position to fund the sub-projects (internally or externally).
13. Integration of environmental impact and carbon footprint within all FM activities requires development, education and engagement of FM staff.
14. Creating the engagement, systems and process required in partner areas within the University to ensure that strategic and operational interfaces are established and provide the two way data flowed required to achieve the objectives of the project.
15. There is a risk that the USQ may simply modify the strategic goal to suit other priorities or imperatives of the University.

To respond to and hopefully overcome most if not all of these issues, my approach to this project is similar to that of the Central Connecticut State University (Button, 2008) and involves

13. Establishment of the PCG to provide governance and oversight of the project comprising middle-senior level USQ staff from various areas, able to consider and resolve the challenges and needs of the project primarily at the strategic and tactical levels but most importantly, able to implement and affect change within their respective areas ensuring the sustainability of the reduction achievements.
14. Members of the PCG include the Senior Manager responsible for Corporate Planning and the Chief Financial Officer. These two individuals through their respective roles and responsibilities have the greatest ability to create the internal strategic partner interfaces required for sustainable procurement, funding and corporate reporting.
15. Through membership of the PCG, subject matter expertise will be provided by Professor Julie Cotter, Deputy Director of the Australian Centre for Sustainable Business and Development, USQ.
16. Establishment of the WG comprising mainly members of the USQ Facilities Management staff able to consider and resolve the challenges and needs of the project primarily at the operational and tactical levels but primarily to deliver on the outputs of the project.
17. PCG and WG meetings are formally scheduled on the corporate calendar system via Outlook.
18. Individual one-on-one meetings will be conducted as required to progress individual tasks and support resources.
19. I have already made provisional funding allocations within the capital asset management plan for the sub-projects from 2012 onwards. They may be removed at a later date, but I am able to represent that funding provision has been made and thereby remove a potential hurdle at the outset.
20. I have gained approval to take 10% green power from 2011. This is also an indicator of support for the project and an indication that senior management has an awareness of USQ environmental performance and responsibilities.
21. Establishing and promulgating through senior management and governance committees a clear strategy for carbon reduction that prioritises activities and reflects the changing footprint.
22. Public and media celebration of all significant 'wins' such as opening of cycle facilities, installation of weigh station etc. This will assist in demonstrating commitment, raise awareness and reduce the likelihood that USQ will soften on the carbon reduction imperative.
23. Focus on establishing the systems, processes and framework required to maintain USQ's carbon monitoring, management and reporting, and including a comprehensive GRI G3 return.
24. Comprehensive documentation and explanation of each stage of the process.
25. Regular reporting to the Chief Operating Officer and Vice Chancellors Committee.
26. Linkages with the Strategic Asset Management project will be established to: integrate carbon emission considerations with a whole of FM approach, and; assess the wider impacts of climate change (Freed, 2009) for the USQ property portfolio.

27. As part of a wider restructure of FM in support of both this project and the SAM Project, I have gained approval to appoint an Environmental Coordinator in 2011. This role will assist in the delivery of this project and in particular the staff and community education and engagement.

Project Structure

As referenced earlier, there are several case studies available that discuss experiences implementing environmental or sustainability initiatives within a large corporation. The National Wildlife Federation also provides a useful series of getting started 'Top 5' actions for reducing carbon emissions (Eagan et al, 2008).

Based upon my analysis of the readings in relation to the body of knowledge regarding corporate methodologies for reducing carbon emissions, I have discerned the key lessons and then developed a series of project dimensions. A full mind map of these dimensions is available at Appendix A. The main dimensions and sub-elements are described below in Figure Two.

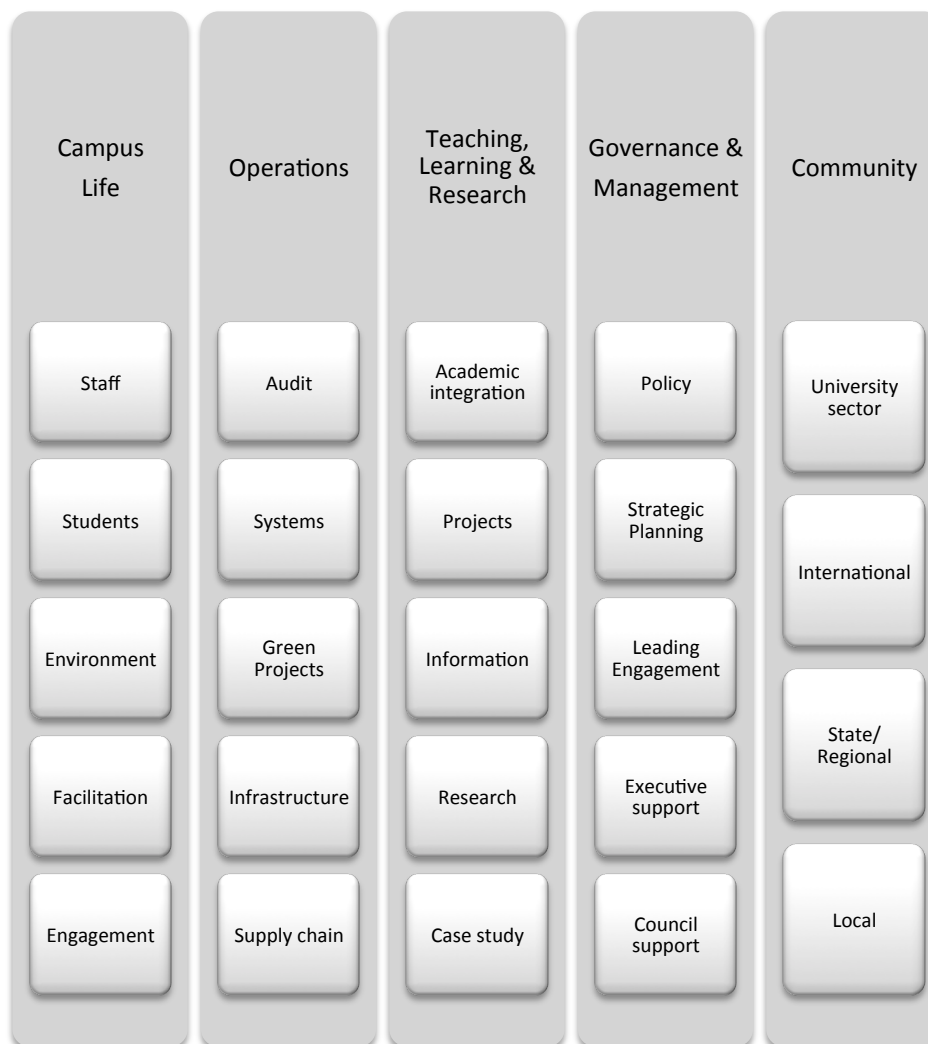


Figure 2 – Project Dimensions

Further project dimensions detail, linkages and integration points with other strategic elements of the University are shown at Annex A – Carbon Zero Project Dimensions Map.

To some degree Figure Two above provides a roadmap of the ‘content’, or the ‘what’ of this project. This road map has been developed following a careful assessment of the literature in parallel with an assessment of the current operating environment within which the project is being undertaken. The proposed roadmap in Figure Two is highly consistent with the literature and but has been adapted to reflect; (1) heading and functional names that align with USQ nomenclature and; (2) particular existing ways of doing things which it is considered will not materially alter the outcomes envisaged for the project; (3) the difference in scale and structure of USQ; and (4) additional elements not identified in the readings.

The dimension descriptions provided at Figure Two have also been applied to the project management documentation and reporting template in order to highlight progress against each project dimension. A copy of the reporting template is provided at Annex D.

Figure Three below illustrates the ‘how’ of the project, and sets target reduction levels against the 2009 baseline. The chart also indicates (through the use of shaded bars) the likely activity and timing by project dimension (as described at Figure Two). For example, the Operations dimension will receive much focus in the 2010 -2013 period implementing technology based solutions. This might be expected to play a reduced role later in the timeline where the focus may have increased in the areas of staff and student engagement. This overview is then used to develop the initial project schedule (or Gant) included within the Project Plan document provided at Annex C.

Carbon reduction and dimension impact

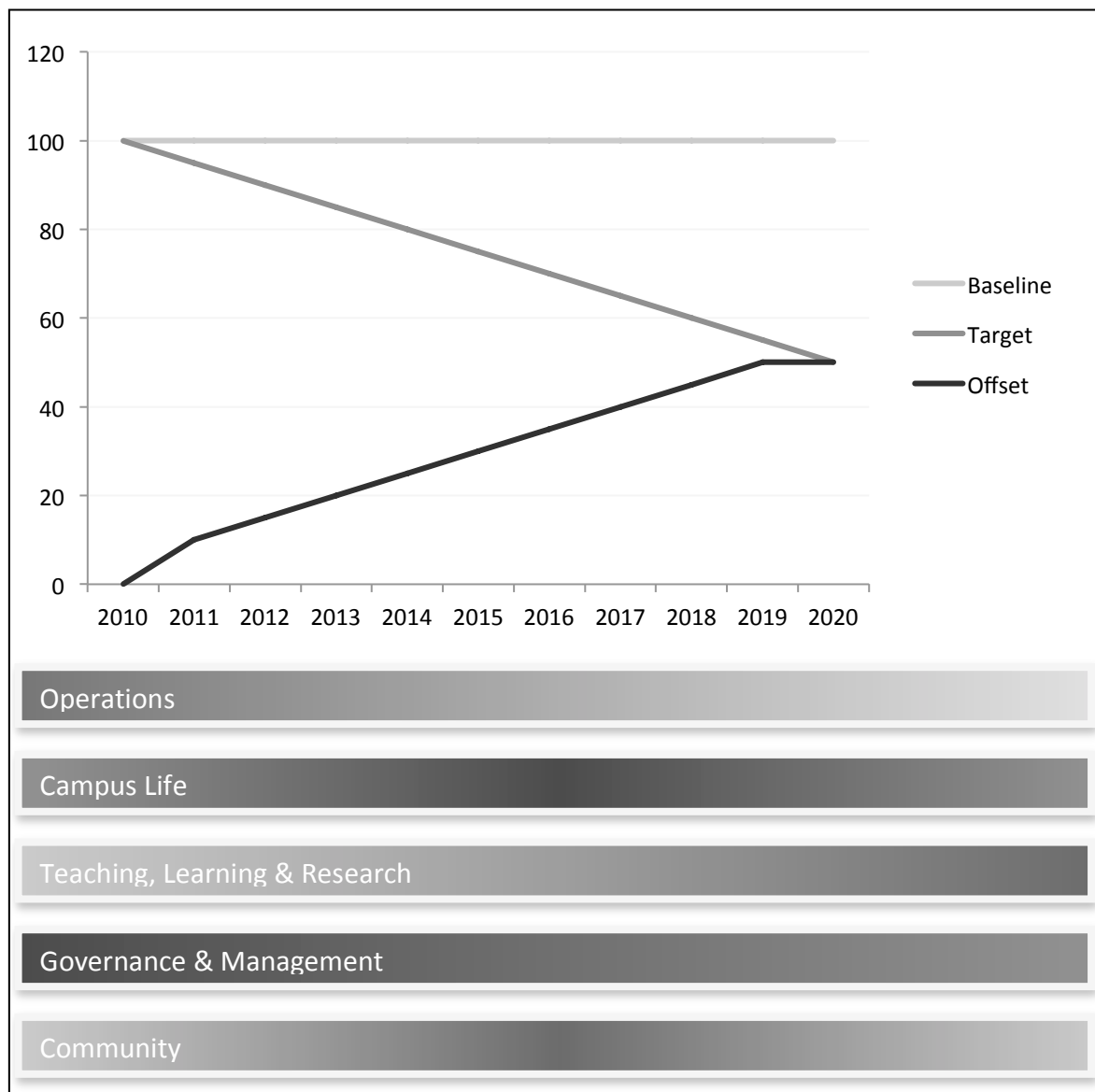


Figure 3

Figure Three also illustrates the gradual adoption of offsets, recognising that reduction to absolute zero may not be realistic. It also suggests that offsets adopted post real reduction activity may be purchased using the operating funds saved from the resultant savings. Alternatively the savings may be channeled into further reduction activities if the financial case is sound. This leads to the next consideration around the effectiveness of the investment and there will be careful consideration of the value to be achieved from a dollar spent on energy efficiency items versus a dollar spent on carbon offsets.

The design of the organisational structure for implementing this project has been informed by an analysis of the existing operational and organisational setting at USQ and recognises that the capability for real reduction in carbon emissions rests with all elements of the University. For this reason, the Project Control Group has been structured to include key operatives from organisational functions which are critical to

the reduction of GHG emissions. In this regard, there are two key areas of strategic linkage. These are Corporate Finance and Corporate Planning.

Finance sits at the source of procurement activity and is able to engage in, or require 'green supply chains' and thereby create incentives for suppliers to develop their own green products and strategies (Dangelico, 2009). Finance also centrally administer capital and operating funds and must be engaged with the reduction initiative, in order to both proactively pursue it and to 'police' GHG consideration in any procurement activity handled on behalf of other Units.

Corporate Planning act as the planning hub for the whole organisation and can provide primary advice on projected service levels changes and can also mandate Faculty and Business Unit planning requirements (including the development of Faculty and Unit level environmental plans). For these reasons the Chief Financial Officer and the Group Manager Sustainable Business Management and Information have joined the Project Control Group.

Through the structure described, the project addresses the importance of governance oversight and the achievement of a balanced mix of board members as suggested in the literature (Galbreath, 2009).

It is intended to review and reflect upon the working model proposed within this paper during and at the end of this project in order to identify modifications and improvements which enhance understanding of the key factors at play in the implementation of a carbon reduction strategy in a large corporation. It is hoped that this model will represent an ongoing resource to USQ in framing both the 'what' and 'how' issues for carbon reduction going forward. Also, it is intended to add to the body of knowledge and thereby benefit organisational change agents in other corporate settings seeking to achieve similar GHG reduction goals.

The project will employ an action research approach framed around the 'Plan Do Check Act' (PDCA) cycle and it will be through this process that both; the actual reduction initiatives and sub-projects will be further documented and refined and deliver improved organisational performance and; that the implementation model will be further enhanced and developed for future use both inside and outside USQ. To support the action research approach, a "Quality Review Template" has been developed (see Annex B) for use by members of the Project Control and Working Groups as the final action item on each meeting agenda. This mechanism will provide members with a structured opportunity to reflect on the project and consider improvement opportunities and at the same time, it becomes an important adjunct to the action research framework for the whole project.

In summary, this project will; develop a working model for implementing carbon reduction at USQ and; undertake the implementation activity. An action research approach will be employed to guide the activity proposed and set out in the full project plan (see Annex C). The project will be overseen by a Project Control Group and given operational impetus by the members of the Working Group. These members will be able to provide regular feedback into the progress of the project through group project meetings and supplemented by the completion of the quality improvement template. Monthly reporting will identify progress against plan and

highlight learnings and blockages. Enhanced by the PDCA cycle, it is anticipated that material reduction in USQ's GHG emissions will be achieved through this project, together with increased environmental awareness and engagement from staff and students. In addition it is hoped that learnings will also be highly relevant and transferable to other like organizations seeking to improve their own carbon footprints. The primary contribution to the body of knowledge will be the development and delivery of a 'development and implementation' model, aligned across the project dimensions (operational and academic) and including various templates and reports, supported by a reflective case study outlining the lessons learnt and the rationale underpinning the final model. In particular, the model will identify a Project Management based approach to representing the reduction strategy. This is one area where the current body of knowledge appears to be at an early stage.

Annexes:

- A. Carbon Reduction Project dimensions map
- B. Carbon Reduction Project quality review template
- C. Carbon Reduction Project Plan (Full)
- D. Carbon Reduction Project reporting template
- E. Carbon Reduction Project – sub project template

END OF ARTEFACT 14

4.5.4 The Project framework and Artefact 15

Artefact 15 is an extract taken directly from the final academic paper (the full paper is provided in Chapter Five at artefact 30) and provides a comprehensive explanation of the project delivery and communication framework created during the establishment phase.

The framework presents the projected timing and clustering of activities under the key project dimensions identified in the mind mapping exercises. It is particularly useful with the introduction of the high level time line for illustrating the various parallel activities undertaken in the delivery of the project including; 'placeholder' funding strategy to facilitate viable technology solutions; various outsourced activities (audit, GHG inventory, ESD studies), quick wins, and early community engagement activity.

This approach highlights again the differences between the SAM Project and the Carbon project with regard to resources and task critical paths.

The use of quick wins was particularly instrumental in building early staff and student engagement, and engendering USQ community support for the carbon reduction initiative. The benefit of developing popular opinion in favour of the project was observed in the willingness of senior executives to become involved in, or supportive of, the project. My Learning Journal reflects:



08 MAR 2010: *"I showed him (GM SBMI) the PPT slides and sought his feedback/comments. He identified an opportunity to strengthen the linkages with existing committee and PD responsibilities... GM SBMI was keen to involve his group and confirms that he sees it as a significant and very valid project for USQ."*

The quick wins occurred whilst the slower, more complex environmental audit and campus ecological transformation sub-project activities were being developed and implemented. This approach anticipated some of 'obvious' solutions (i.e. energy efficient lighting, water tanks, vehicle improvements, recycling, student garden) and by engaging in their swift implementation not only captured the environmental benefits as early as possible, but also avoided what might otherwise have appeared to be a period of project inactivity to the external observer.

This approach yielded some engagement rewards as reflected in the International Student Barometer²³ survey results for 2010 and 2011, where students rated USQ #1 for its environmental activities in 2010 and #11 in 2011 (a reduction of 1% in the student satisfaction ratings).

²³ In 2009 Universities Australia initiated a benchmarking exercise into the experiences and expectations of international students pursuing higher education in Australian universities. The project aimed to provide feedback to the sector, captured by a survey instrument, on the international student experience (source: <http://www.universitiesaustralia.edu.au/isb>).

The extract, provided below at Artefact 15, concludes with a brief introduction to the integration of Action Research and Project Management.

4.5.5 Artefact 15



Concept Communication

To aid in defining and communicating the project boundaries, a framework was established to both guide the project scope and manage the community expectations of this project.

The initial 2009 planning and development exercises had approached the project in terms of 5 key dimensions (Campus Life, Teaching and Learning, Operations, Community, and Governance and Management) derived from a comprehensive mind map developed by the Working Group. In essence, these early planning processes focused on the 'what' (content) rather than the 'when' and 'how' of delivery. The Concept Communication Model took those 'what' elements and re-packaged them in a form that would represent not just the 'what', but the 'when' and the 'how'. The result was a high level, Concept Communication Model that could not only identify key stages and elements, but also represent a logical delivery sequence.

The Concept Communication Model is shown below at Figure 1 and operates within an overarching Action Research framework, described later in this section. Each pillar of the model represents a main stage of the project, with key elements of each stage contained within the respective pillars. Each key element was delivered using industry standard Project Management techniques and principles as described within the Project Management Book of Knowledge²⁴. A full description of the model pillars and their relationships is set out below Figure 1.

²⁴ The Project Management Book of Knowledge or PMBOK, is the definitive text on project management techniques and methodology and is produced via the Institute of Project Management.

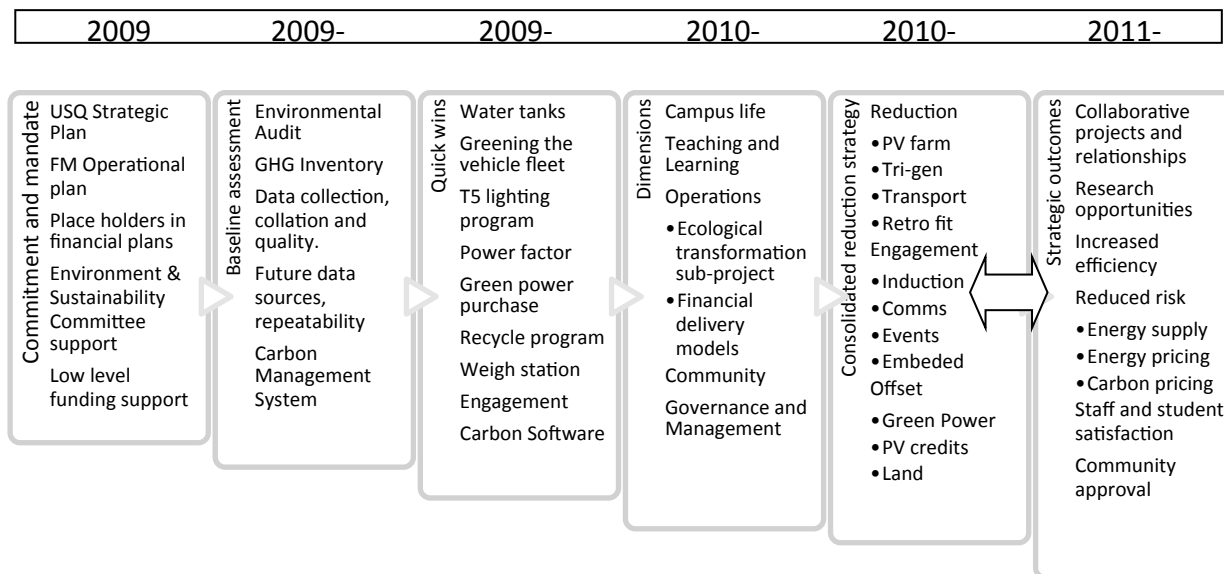


Figure 1

Commitment and Mandate Pillar

The USQ Strategic Plan provided a very clear mandate for the work of the project and in particular the undertaking of the Environmental Audit in 2009/10 and the associated waste audit and Green House Gas (GHG) inventory. Internal planning cycles reflected known and projected activity in support of the project.

Baseline Pillar

As previously discussed, the emissions baseline was determined from the GHG Inventory. Separate review and analyses of the data collection exercise led to some minor changes in the inventory metrics i.e. the refining of carbon boundaries; suggestions for the improvement of the data quality; improvements for data capture and collection processes and suggestions for future inventory development. The definition of GHG data boundaries represented a pragmatic approach reflecting the data available, the data that could reasonably be obtained and the significance of the data (% of overall emissions that the data was likely to represent).

All assumptions and boundaries were properly described in the Environmental Audit and GHG inventory for future reference and consideration, and in particular to ensure auditable transparency and exercise repeatability.

Quick Wins Pillar

This step in the process was intended to enable the fast tracking of initiatives and activities that would contribute to the project across any dimension. To illustrate, the ‘quick win’

need not contribute significantly to carbon reduction if it could be shown to have a wider environmental or community engagement benefit.

Quick wins were not just for energy and carbon reduction but also to encourage a positive funding environment in support of investment in larger projects (bids are likely to have a higher priority in a competitive internal funding arena if the staff and/or students want it). A specific example was the initiative to install rainwater catchment tanks and potable water technology to suitable buildings (generally smaller, stand alone; teaching or office). This action created a visible environmental sustainability outcome, particularly relevant for the Toowoomba campus (where drought has been an issue for several years) that sent positive signals to staff and students and contributed to their awareness and consideration of the environmental objectives of the University.

Other initiatives under this section included the retro fitting of high efficiency T5 lighting, achieved via a scheduled replacement program funded across five successive years; staged implementation of smart water, gas and power meters; review of instantaneous hot water units, passive shade options; changes to the Building Management System set points, and creation of an Eco-Trail around the campus.

Quick wins were generally determined by the following criteria: Campus Services ability to influence or affect; Campus Services capability and capacity to implement; the cost of implementation versus existing budget and delegation levels; anticipated benefit or return on investment; and risk assessment (formal or informal).

Notwithstanding the early clarification that the project scope did not include sustainability, the Project Control Group and Working Group were satisfied that such non carbon reduction specific activities could be undertaken where those activities could be accommodated as quick wins, were likely to engage staff and students and would not significantly compromise the carbon reduction focus and resources of the project.

Dimensions Pillar

The Dimensions pillar represents the summarised scope and contains the 5 key dimensions, or delivery areas identified earlier; being Campus Life, Teaching and Learning, Operations, Community, and Governance and Management. The 5 dimensions were then carried forward to the detailed project Gantt chart as useful identifiers for task categorisation and scheduling.

With regard to the elements of the Operations dimension, there are various financial delivery models available and so a specific element was included in this pillar to represent the range of funding choices associated with any given technical solution.

The most significant aspect of the Dimensions pillar is the identification of the Campus Ecological Transformation sub-project. This sub-project involved the commissioning of a

sustainability/energy consultant to undertake a holistic review of the University's Toowoomba campus, considering land holdings and characteristics, the built environment (buildings, plant and equipment and infrastructure), the local climate and the campus energy load profile. This was then considered against the various technologies and solutions available to develop a series of feasibility studies (i.e. photo-voltaic, solar-thermal, tri-generation, bio-mass, ground source heating/cooling, wind, and retrofit opportunities) and subsequent recommendations presented in the form of a consolidated 'Pathways to Neutrality' report.

The 'Pathways to Neutrality' report brought together the feasibility studies. These have subsequently been developed in the form of a Marginal Abatement Cost (MAC)²⁵ Curve that clearly informs the University's overarching carbon neutrality strategy and is provided under the 'Results' section of this paper. The various solutions resultant from the Campus Ecological Transformation Sub-project are subsequently shown in the Consolidated Reduction Strategy pillar.

Consolidated Reduction Strategy Pillar

Building on the dimensions, areas of interest and activity provided in the Dimensions pillar, the Consolidated Reduction Strategy pillar brings together possible specific and detailed activities under each of the 5 dimensions, develops them further and also introduces the feasible solutions identified by the Campus Ecological Transformation Sub-project. It should be noted that the Campus Ecological Transformation Sub-project excluded from its terms of reference the 'softer' staff engagement tools and activities designed to reduce energy use (such as energy breach notices, effects of increased communication, user specific energy reports, and the benefits of wider engagement with regional and industry partners).

The Consolidated Reduction Strategy pillar acknowledges that there are varying levels of feasibility, investment, risk and return associated with all of the carbon reduction options and develops an overarching strategy that delivers a coordinated approach across all project dimensions. It is from this pillar (stage of the model) that we begin to identify the specific elements of the 2011-2014 Carbon Reduction Strategy.

Strategic Outcomes Pillar

Through the delivery of this project it was anticipated that USQ would enhance relationships with Toowoomba Regional Council and indeed, it is exploring joint venture opportunities including shared participation at regional and local events including Earth Hour 2012 (as was 2011 event), shared attendance at respective Environmental Committee meetings, and preliminary planning around joint infrastructure projects. Discussions have also started regarding the development of regional level low carbon growth plans.

²⁵ 'Marginal Abatement Cost Curve': This is a diagrammatic method of demonstrating the best value for money options (cost versus carbon abatement potential) when investing in energy efficiency, carbon reduction or sequestration options. In short, it potentially provides a priority list for investment.

Other strategic outcomes included reduced risk around energy pricing volatility and continuity of supply (the latter reducing business interruption risk), improved community (staff, student and local) satisfaction as demonstrated by the 2010 and 2011 International Student Barometer Survey²⁶.

As noted above, the six pillars of the Concept Communication Model represent the essence of the project in terms of logical sequence and comprehensive action. The benefits of USQ establishing this planning flow have been:

- Simple visualisation of the project construction leading to detailed project schedule (Gantt) chart development
- Simple representation of sequence and content allowing leveraging off into detailed constructs
- Transparency of process for the Project Control Group, Working Group and USQ generally
- Minimised non-productive activity
- Robust data, independently obtained, developed and verified informing the reduction strategy
- Current technology and practice is reflected in all feasibility studies
- Current carbon abatement reporting methodology used in the presentation of the strategy
- The development of a robust 2011-2014 carbon reduction strategy, informed by specific projects and activities

The development of the 2011-2014 Strategy was a key deliverable of this project. The strategy is succinct, robust and focused on established carbon cost abatement methodology and is described in detail within the results section of this paper (Section 5).

In terms of the Concept Communication Model, the organisation has progressed through to the Consolidated Reduction Strategy pillar, with some elements of the Strategic Outcomes pillar already achieved, including the adoption of the 2011-2014 Reduction Strategy (as the primary deliverable of the project). That said, some elements within the Dimensions pillar are still works in progress (i.e. Teaching and Learning, ongoing Community engagement). This distribution of progress is perhaps to be expected as the various elements within the pillars have differing degrees of difficulty, controllability, and priority within the project's limited resource environment. The early decision to adopt an Action Research approach to this project has allowed the various diverse stages of progress and outcomes to be readily accommodated.

Movement through the Concept Communication Model and Action Research cycles will continue as individual elements are completed. It could be said that those elements that are

²⁶ International Students expressed >90% satisfaction rating for USQ's environmental activity.

specific, and within the ability of the project Working Group to implement have made the most progress. This is consistent with Rauch (2007) who in relation to his own endeavours, introducing an energy efficiency program at Yale University, commented on the importance of setting targets that are specific and achievable.

As discussed previously, the project was implemented using not only industry standard Project Management tools and processes but also the Action Research principles of “plan, act, observe and reflect”. Through the combination of these two methodologies (Project Management and Action Research) the project has provided a sound implementation and quality framework for delivering USQ’s Carbon Reduction Strategy through to 2014 and beyond.

END OF ARTEFACT 15

4.5.7 Embedding an Action Learning approach and Artefacts 16, 17 and 18

As with the SAM Project, the Carbon Project was conducted in an operational environment using operational staff as the primary actors and competing against day-to-day reality for time and attention. In this setting it becomes critical that the opportunity for reflection forms an integral part of the project. Not to do so denies the opportunity for learning, be it personal, professional or institutional.

In the case of the Carbon Project, the actors were familiar with the PDCA cycle from their SAM experiences. The Learning opportunity matrix for the Carbon Project is represented below at Figure 16.

<i>Learning Area</i>	<i>Learning Instruments</i>	<i>Primary beneficiaries</i>
Institutional	Project deliverables and enterprise wide systems	USQ
Professional	Technical knowledge, planning frameworks, tools, systems and instruments, change management	Team members and Author
Personal	Technical, leadership and people skills, academic learning, self-reflection	Author

Figure 16 – Learning matrix

The Quality Review template (Annex B) developed initially for SAM was adapted for use in the Carbon Reduction Project.

The quality review reflection was included as a standing agenda item for each Working Group meeting to validate the process in the minds of the members and legitimise the time spent. Actions were developed from the feedback to develop the project deliverables and to address other improvement opportunities, consistent with the Action Research methodology.

An example of the template is included at Artefact 16 and an example of the Working Group Agenda is included at Annex F, illustrating the inclusion of the reflective cycle as part of the meeting pro-forma.

The reflections from the PDCA Quality Review templates along with reflections and learnings from other sources, such as the Learning Journal were fed into the PDCA cycles operated throughout the life of the project.

The Learning Journal maintained throughout the Carbon Reduction Project evidences (in part) my learning and reflection throughout the life of the project. The role of the Learning

Journal is discussed in more detail in Chapter Five and a full copy is provided at Annex A. An extract of the Learning Journal relevant to the project is provided at Artefact 17.

The PDCA cycles are discussed in more detail within the final academic paper, and an excerpt from that paper illustrating the relationship between the learning and the operational elements is provided at Artefact 18. This excerpt reflects the first cycle within the project and captures the early project issues summarised previously in this chapter.

4.5.8 Artefact 16



University of Southern Queensland

**Carbon Reduction Project
Quality Review Template**

This template is intended as a guide for reviewing the delivery of the project at Project Dimension level. This may focus on a particular task or number of tasks and multiple tables may be used. Forward actions should be transferred to the appropriate project documents i.e. Risk Register, Change & Issues Register.

Dimension	Task <i>(optional)</i>	Sub-task <i>(optional)</i>	Date
Observation	What, where, when, who		
Analysis	Why, how		
Reflection	Interpretation, perspective, projection		
Project Impact	Consequences for the project +/-, risk profile change		
Forward action	What do we change now or do differently next time? New opportunities arising?		

Dimension	Task	Sub-task	Date
Observation			
Analysis			
Reflection			
Project Impact			
Forward action			

END OF ARTEFACT 16

4.5.9 Artefact 17



Situation/Reading	Discussion with COO	Date 8 Mar 10	Project Carbon Zero
Content/events/observations	I have developed a presentation for the VCC regarding an organisation wide Sustainability project. I showed it to COO for comment. He made me aware that the VC has asked DVC (S) to have stewardship of the delivery of sustainability		
Analysis	Natural extension and holistic approach. Aligns with ESC role and responsibilities. Some risk through reduced management influence. Improved risk through senior engagement and potential broader team support.		
Reflection	This broadening of my carbon zero focus is a natural extension of the project and necessary for the longer term benefit of USQ.		
Project Impact/significance	Moderate, unless a redefinition of the project is required		
Forward action	I will engage with DVC (S) and try to develop a collaborative project using his seniority to advantage. If my contribution to the final project does not meet the needs of the DPST or it is delayed, I will refocus on the environmental component and in particular the carbon zero element. Meeting scheduled mid March with DVC (S) to discuss. I have also written to the VC and made him aware of that meeting. I will also reference the project in the next FM newsletter and ESC Meeting.		

Situation/Reading	ESC meeting	Date 26 July 2010	Project Carbon Zero
Content/events/observations	Routine meeting of the ESC (copy attached), introduced Carbon workshops, gained approval for Carbon software, members confirmed the draft staff induction PPT, introduced Campus ECO Transformation Project		
Analysis	Members were excited re the audit and workshops for tomorrow		
Reflection	Very productive meeting with some valid points being raised by members		
Project Impact/significance	Major influence. The committee needs to sign off on the audit and endorse for VCC action. Approval of funds for carbon software is excellent and with the audit we now have the data to populate the software effectively. On that note we have the data to report at a corporate level against all the GRI G3 indicators. I must pursue and reinforce that commitment		
Forward action	Procure software, communicate final versions of the audit (post workshop), appoint ESD consultant for ECO Transformation project Develop Carbon Reduction Project paperwork soon and create the project on the back of a VCC mandate ideally. Push SBMI with regard to GRI G3 reporting (check as somebody said marketing is now responsible for Annual Reports?), consider annual engagement of OPUS to refresh GRI data and establishing the Carbon software		

END OF ARTEFACT 17

4.5.10 Artefact 18



Action Research Applied

Action Research was adopted for this project for two primary reasons; 1. It allowed for the regular review and refinement of the project and; 2. It is particularly suited to extended duration projects where the environment is dynamic, and results and solutions are not known at the outset. Figure 2 describes the key activities undertaken throughout this project, against a series of action research review (or strategy) cycles and lists key items against each stage of those cycles.



END OF ARTEFACT 18

4.5.11 Phase conclusion



The research and reflection required to develop the Getting Started paper (Artefact 14) was fundamental to the early construction of the Carbon Reduction Project in terms of ‘what’ to do and ‘how’ to do it. The paper remained a valid and relevant guiding document throughout the project.

The paper included more content on the positioning of the carbon reduction imperative as a global, national and local priority, linking finally to the USQ Strategic Goal. This was considered particularly important given the relatively low level of knowledge and focus applied to the subject by the general USQ community, and was perhaps the foundation of early ‘engagement’ activity.

As with the SAM Project, the dimensions model developed within the Getting Started paper, provided a reasonable starting perspective of the project dimensions and sub task hierarchy which proved to be valuable in guiding and reinforcing the responsibilities and activities of the Project Control Group and the Working Group. The concepts and content of the dimensions model also migrated to the detailed Project Plan provided at Artefact 19).

The initial ‘mind map’ (Figure 13) underwent some significant changes once the focus on carbon reduction was determined. The revised ‘mind map’ (Figure 14) remained substantially unchanged to the end of the project, noting that a minor number of tasks were not completed. The status of each task is fully described in the Project Closure Report provided at Artefact 27.

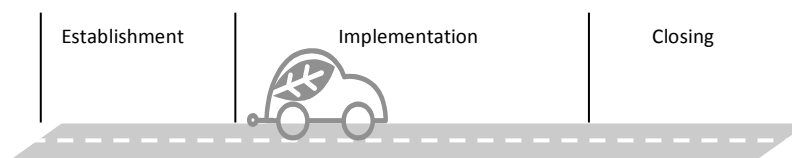
The refinement of the tasks (arising from the mind map), led to the adaptation of the dimensions model into the Concept Communication Model (Figure 15) which allowed for a more complete representation of the Carbon Reduction Project through the inclusion of key tasks, sub tasks and a meaningful timeline. This adaptation is further (and explicitly) reflected in the Action Research cycle provided at the end of Artefact 18 in the previous section.

The establishment phase of the Carbon Project was unlike that of the SAM Project. The SAM Project had a full and complex set of tasks, relying predominantly on an internal team of participants for its delivery. The SAM Project also benefited from dedicated governance and management groups to enable delivery of the required outcomes. In contrast, the Carbon Project was initiated through the commissioning of external consultants to undertake an environmental audit, whilst the project elements were developed in parallel. Dedicated governance and management structures would not be established until later in the project, relying initially on the existing Environment and Sustainability Committee for organisational oversight. In addition and as previously discussed, there was uncertainty of the scope of the original project with an aspiration to engage in a full sustainability project, which would

eventually be clarified to be a carbon reduction focus only. Finally the project sought to engage the wider internal FM team at a time when the SAM Project was being finalised and the individual's workloads were experiencing backlogs and fatigue was being experienced by all the participants, consistent with Moriarty's (2007) observations that not all participants will engage at the same level, and at the same time.

In bringing the establishment phase discussion to a conclusion, I reflect that the project was established logically and comprehensively, but suffered perhaps in terms of early scope clarity and implementation timing. I will now move on to discuss the implementation phase.

4.6 Carbon Project 'implementation' phase



4.6.1 Introduction

This section will discuss various aspects of the project delivery and (in addition to embedded artefacts) will make use of excerpts from the Learning Journal and provide critical commentary on project implementation with appropriate references to the operational artefacts included in the annexes.

As previously discussed, the significance of the operational documents provided as annexes is not diminished, particularly in support of the project management methodology; however the inclusion of such functional, operationally focused documents would potentially interrupt the flow of this thesis. The material will potentially be of interest to practitioners and practitioner researchers alike and provides a practical resource for those exploring options for the 'how' of project implementation, beyond the mechanics of project management.

Project implementation started in earnest following the acceptance of the Carbon Getting Started paper (Artefact 14) by the academic supervisor. Approval of that paper provided clarity of the academic and operational relationship, and the roles of Action Research and Project Management that in turn enabled the initiation of the operational implementation.

As a consequence, the Project Plan was developed and distributed for internal approval.

4.6.2 The Project Plan and Artefact 19

Consistent with the experiences of the SAM Project the Carbon Project Plan uses best practice project management methodology to inform its construction²⁷ and includes a significant breadth of topics that would typically be considered in an operational corporate environment. These include document control, document approval checklist, project stakeholders, project purpose, project scope (including exclusions, constraints and assumptions), background to the need for carbon reduction, impacts, business process, control structure (including governance structure and process, scope management, risks and issues, cost management, time management, resource management, communication, procurement and quality management), safety, operational issues, performance measurement and benefits realisation.

The Project Plan for the Carbon Reduction Project was developed after the Getting Started Paper and was consequently more mature, and was reinforced by the developed Concept Communication model. As a general observation, the Project Plan was the institutionally approved guiding instrument for me and the Environmental Officer and had less significance for the other participants due to their altered style of engagement, discussed earlier (SAM Project full ownership; Carbon project localised ownership).

²⁷ The adopted plan format was developed using the On-Q template with changes appropriate to the USQ need. On-Q is the project management framework of the QLD Department of Transport and Main Roads.

4.6.3 Artefact 19



'GHG emissions reduction at USQ'

Carbon Zero Project plan

Action

statement

Date	Name	Position	Action required (Review/Endorse/Approve)	Due date

Prepared by: David Povey
Title: Group Manager Facilities Management
Division: Facilities Management
Location: Building O3, Room 117, Toowoomba Campus
Version no: 1.0
Version date: 13 September 2010
Status: Initial Draft
Project . no: tba
File no: tba

Document control sheet**Contact for enquiries and proposed changes**

If you have any questions regarding this document or if you have a suggestion for improvements, please contact:

Project Manager: David Povey

Phone: Office:07 46311910 or Mobile: 0448 944069

Version history

Version no.	Date	Changed by	Nature of amendment
1.0	13/09/10	DP	Initial draft.

Project plan approval checklist

<input type="checkbox"/>	Project governance is documented. Project customer, sponsor and manager have been identified and accept their responsibility.
<input type="checkbox"/>	There are clear justifications for the project: <ul style="list-style-type: none"> the real underlying problem to be addressed has been identified what the project is expected to achieve has been determined. (For example potential costs and benefits based upon the current knowledge and understanding). the products or services to be delivered, and how they specifically address the have been clearly determined.
<input type="checkbox"/>	Communication plan (if required) is attached

<input type="checkbox"/>	<p>Background details include (in summary format if possible):</p> <ul style="list-style-type: none"> • who initiated the project and how • the underlying problem to be addressed • current situation (problems, needs or opportunities) • the project deliverables • potential costs and benefits based upon the current knowledge and understanding the history of the project • any other initiatives carried out previously to address related issues.
<input type="checkbox"/>	The scope outlined in the business case is confirmed or updated. Any scope creep is noted.
<input type="checkbox"/>	Internal and external impacts, and possible mitigation strategies, are identified.
<input type="checkbox"/>	The business case investigations, research methodology and engagement are clear.
<input type="checkbox"/>	The risk management plan is attached (including environmental, cultural heritage, political and safety risks).
<input type="checkbox"/>	The broad strategy to deliver the project is clear.
<input type="checkbox"/>	Adequate project controls are included (inc integration, scope, time, cost, quality, HR, communication, risk and procurement management).
<input type="checkbox"/>	Environmental management, cultural heritage management and safety are addressed.
<input type="checkbox"/>	Operational issues asset transfer or ownership, commissioning, handover support, maintenance, warranty and management strategies identified.
<input type="checkbox"/>	Project performance measurement and benefits realisation are clear.
<input type="checkbox"/>	Functional requirements or business process analysis. Attached (summary of the business process changes or the functional requirements).
<input type="checkbox"/>	Funding source is clear.
<input type="checkbox"/>	The recommendation is clear for example reason why the project should proceed to the next stage and identify the impacts of not proceeding.
<input type="checkbox"/>	<p><u>Deliverables</u></p> <p>Appendix A – project schedule Appendix B – project dimensions Appendix C – human resource management plan Appendix D – communication plan Appendix E – risk register Appendix F – project controls</p>

In signing this approval:

- I agree that the document meets the standard required for the project plan deliverable (requirements above).
- I understand the financial and other impacts associated with approving this project plan.
- I authorise progression to the implementation stage.

Project client (accountable for ensuring the stated benefit(s) of the project to the business have been measured and achieved)

Name Bernard Lillis

Position Chief Operating Officer

Signature _____ Date _____

Project sponsor (accountable for representing the organisation and delivering the project)

Name David Povey

Position Group Manager Facilities Management

Signature _____ Date _____

The following key stakeholders critical to the project's success have endorsed this document.

Name William Lovegrove

Position Vice Chancellor

Signature _____ Date _____

Name Barry Mottram

Position Chief Financial Officer

Signature _____ Date _____

Name Steve Ivey

Position Group Manager, Sustainable Business Management

Signature _____ Date _____

Introduction

Purpose of this document

The purpose of the project plan is to:

- detail how the project will be managed
- provide a baseline for the measurement of progress
- revise the information where appropriate.

References

This project is developed in direct response to:

- USQ's Strategic Plan 2009-2013, Goal 9 Enterprise, objective 3.

Definitions

Terms, abbreviations and acronyms	Meaning
GHG	Green House Gas
Strategic Asset Management	Strategic Asset Management is the holistic operation of an asset portfolio in support of organisational objectives, having regard to the needs and constraints of that organisation whilst acting as a strategic enabler. A significant element of SAM relates to planning and forecasting.
TEFMA	Tertiary Education Facilities Management Association
USQ	The University of Southern Queensland
VC	The Vice Chancellor of USQ
PMA	Post Meeting Actions
Scope 1 emissions	Vehicles, Gas, Liquid fuel
Scope 2 emissions	Purchased electricity
Scope 3 emissions	Waste, Air Travel, rental vehicle use, staff and student commuting and contractor emissions
CAMP	Capital Asset Management Plan
BMC	Budget Management Committee

Project purpose

The project is created to deliver on USQ's stated objective to achieve Carbon Neutrality by 2020.

Background and current situation

During the past 100 years, global average surface temperature has increased by about 0.7°C. Since 1910 the average temperature of Australia has risen by about 1°C. Although these increases appear to be minor they have a significant impact on the world's climate and the scientific community generally believe they are caused by the greenhouse effect.

The greenhouse effect is caused by greenhouse gases (GHG's) trapping some of the heat produced from sunlight shining onto the earth surface. This effect has always occurred and was previously balanced by adsorption of GHG's by trees, oceans and farmlands – or GHG sinks. This gives earth its relatively steady climate.

However, more recently there is evidence that the earth is warming up faster than ever before and it is being caused by a build up of GHG's. These GHG's, dominated by Carbon Dioxide (CO₂) but including many others, are produced primarily from the combustion of fossil fuels and the destruction of many of the GHG sinks (particularly forests) – both of which have increased significantly since the industrial revolution.

Governments and communities around the world have recognised that there is a global need to reduce the amount of GHG's produced and replace the GHG sinks that have been destroyed and stop global average temperature rise.

CO₂ is the predominant GHG produced from the burning of fossil fuels. There are, however, a number of other gases that are also considered greenhouse gases. These can include:

- Methane (CH₄) – sources include fossil fuel combustion or produced from ruminants (cows etc).
- Nitrous Oxide (N₂O) – produced from the incomplete combustion of fossil fuels.
- Sulphur Hexafluoride (SF₆) – used as an insulation gas, particularly on electricity transmission lines.
- Hydro fluorocarbons (HFCs) – used as refrigerants.
- Per fluorocarbons (PFCs) – used in metal production processes.

These six gases are covered by the Kyoto Protocol (UNFCCC or FCCC) and each have a Global Warming Potential in relation to CO₂.

The Kyoto Protocol

The Kyoto Protocol is a protocol to the United Nations Framework Convention on Climate Change (UNFCCC or FCCC), aimed at fighting global warming. The UNFCCC is an international environmental treaty with the goal of achieving "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

The Protocol was initially adopted on 11 December 1997 in Kyoto, Japan and entered into force on 16 February 2005. As of November 2009, 187 states have signed and ratified the protocol.

Under the Protocol, 37 industrialized countries (called "Annex I countries") commit themselves to a reduction of six greenhouse gases (GHG) (carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydro fluorocarbons and per fluorocarbons) produced by them, and all member countries give general commitments. Annex I countries agreed to reduce their collective greenhouse gas emissions by 5.2% from the 1990 level.

The Protocol allows for several "flexible mechanisms", such as emissions trading, the clean development mechanism (CDM) and joint implementation to allow Annex I countries to meet their GHG emission limitations by purchasing GHG emission reductions credits from elsewhere, through financial exchanges, projects that reduce emissions in non-Annex I countries, from other Annex I countries, or from annex I countries with excess allowances.

Australian GHG Legislation

The Australian Government is strongly committed to reducing Australia's carbon pollution.

If Australia takes no action by 2020 carbon pollution could be 20 per cent higher than in 2000, not 5 to 25 per cent lower as the Government intends. The Government's targets are equivalent to a reduction in every Australian's carbon footprint of nearly one third to one half. To help achieve the ambitious target of lowering these emissions to up to 25 per cent below 2000 levels, the Australian Government is developing and putting in place the policies necessary to support Australian businesses and households reduce their carbon footprints and; to create the new green-collar jobs of the future and to transform our economy.

The University of Southern Queensland

The USQ is committed to supporting the Australian Government and the Global community in its efforts to reduce Carbon Emissions. In its Strategic Plan for 2009-2013, the USQ sets a target of carbon neutrality (scope 1 and 2) by 2020 and has set 10% per annum reduction/offset targets as milestones.

Outcomes and benefits

The project has the following deliverables:

- Environmental Audit in line with GRI G3 reporting framework for 2009
- Definition of ongoing process for maintenance of reporting
- GHG emissions inventory establishing 2009 baseline
- Campus ecological master plan
- Policy review, amendment and development as appropriate
- Standards and templates review and development as appropriate
- Identification, planning and staged implementation of environmental projects

- Implementation of metering network
- Improved understanding and participation by the USQ community regarding carbon emission reduction
- Case study for Higher Education Sector

The project embeds the tertiary sector's current understanding of Campus Environmental Management best practice and draws on International knowledge and initiatives to further enhance the project. The outcomes of this project will directly influence:

- Asset, services and utility acquisition and disposal decisions
- Operating expenditure investment
- Operating procedures
- Standards and qualities defining the built environment at USQ

Links with USQ objectives

This project will contribute to the achievement of USQ Strategic Goals as follows:

- Goal 2 – Student experience will be enhanced through a sound Eco-friendly engagement at USQ
- Goals 4 through the consideration of research opportunities and engagement
- Goal 5 – Staff attraction and retention is enhanced by USQ's environmental responsibility
- Goal 6 – Educational Partners will respond positively to USQ's environmental performance
- Goal 7 – Social Justice is achieved at a global level as USQ becomes part of the solution to Global Warming.
- Goal 8 – Engagement and Development through the inclusion of joint venture community projects and consideration of those opportunities as part of Carbon reduction solutions
- Goal 9 – Goal 3, deliver a carbon neutral operation across all three campuses by 2020

Scope of project

In scope

Research and analysis relevant to the project deliverables

GAP and SWOT analysis

All activities required to achieve the outcomes and benefits at Para. 2.2.

Undertake an Environmental Audit and GHG Inventory including the procurement or development of a carbon database and associated reporting/analysis tool to derive quality management information (external provider)

Undertake a campus wide study identifying ecological/carbon reduction projects that will assist in the real reduction of carbon emissions at USQ (external provider).

Undertake Energy Audits against key buildings to provide indicative performance opportunities (external provider).

Expenditure against the existing CAMP environmental /energy efficiency project line items (i.e. high efficiency lighting; timers to water heaters)

Modification or expansion of existing FM software to achieve central metering

Development of key performance indicators and associated reporting regimes

Review and amendment of relevant USQ policy

Reasonable conference attendance, site visits, external consultation, travel and accommodation in support of the project

Application to BMC for additional elemental funding as necessary

Liaison with internal and external entities as necessary, including planning for subsequent and ongoing reporting against GRI G3.

Consideration of carbon sequestration options for residual footprint.

Out of scope

Projects identified through the campus wide ecological study will be individually assessed for feasibility and submitted via the CAMP or other appropriate mechanisms for individual consideration on their merits.

Related projects

There are synergies between this project and the Strategic Asset Management project but there are no dependencies.

Constraints

USQ policy will be followed in the delivery of this project.

This project is intended to be delivered using internal FM resources, except where indicated otherwise.

Financial plans and Task Gants will be adapted to meet the sustainable resource levels available.

Various elements of this project may require additional approval outside of that defined within the project plan.

USQ has indicated 10% carbon footprint reduction per annum is required.

Urgency

The project represents a foundation stone for effective carbon management at USQ and is consistent with State and Federal Government initiatives. USQ will be proactive rather than reactive in this regard.

Assumptions

- Resources (staff and funding) will be available to support this project
- Senior management and University Council will support this project
- Ongoing funding will be available to sustain the recommendations of this project
- Other internal priorities will not supersede this project

Impacts

The project has the following potential impacts:

- Culture change to a more sustainable and environmentally responsible organisation
- Transparency of carbon costs consequently affecting financial allocations (+/-)
- Improved information, decision making and reporting
- Possible impact on Unit funding e.g. USQ internal carbon charge may be considered to encourage reduction
- Emission impacts may be considered in all procurement decisions and costed accordingly
- Increased use of software systems for planning, requesting and recording FM asset activity
- Policy development and/or amendment
- FM staffing adjustment may be required to sustain environmental momentum

Business processes or requirements

Likely areas of business process affected by this project are:

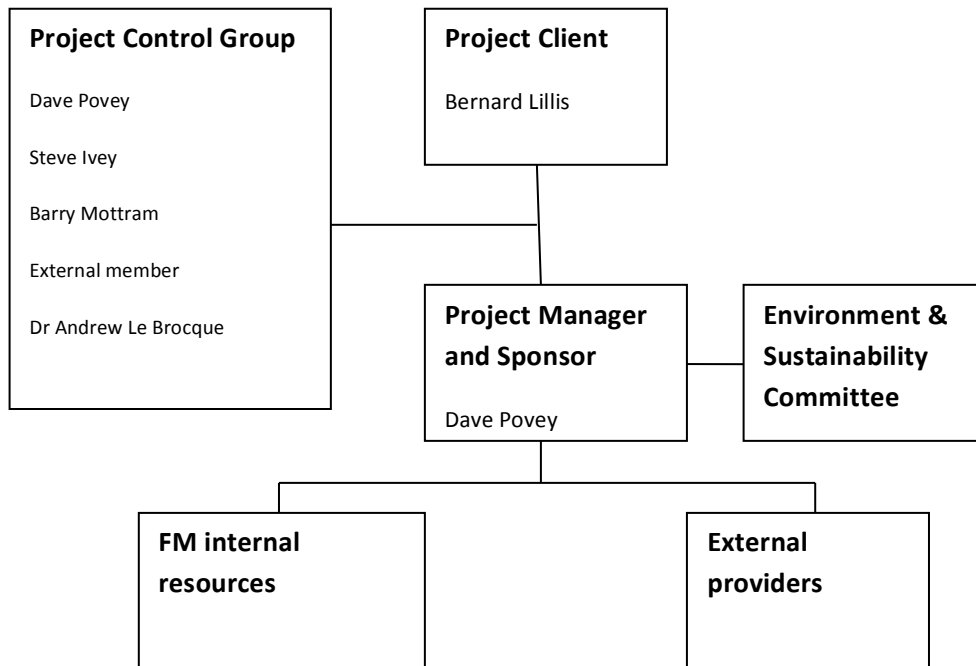
Funding of operating and capital works may be impacted in both the amount of funding and the criteria for assessing new requests for development. In both cases the information provided will significantly improve and inform the decision making and prioritisation process.

The University may review Faculty and Business Unit funding models to encourage the reduction of carbon emissions through an internal carbon tax.

Corporate reporting, particularly the Annual Report will be significantly enhanced as USQ provides a full Cat A report against the GRI G3 international reporting protocol.

Access to the Carbon Management systems and data can be provided to staff and students enhancing the learning and community engagement

Project control structure



Governance

Project client

Bernard Lillis, Chief Operating Officer

Project sponsor

Dave Povey, Group Manager FM

Project manager

Dave Povey, Group Manager FM or delegate

Governance structure

Governance will be provided via the project control group with regular reporting to the Client; the Chief Operating officer.

Independent peer review will be provided through the inclusion of an external environmental practitioner in the PCG.

Stakeholders

Stakeholder area	Stakeholder representative	Responsibility	Interest context or
Finance	Barry Mottram	Chief Financial Officer has ownership of all elements of finance	Connects with funding and financial forecasting
Planning and Quality	Steve Ivey	Group Manager Sustainable Business acts as steward for strategic planning	Impact and alignment with strategic goals
Facilities Management	Nathan Jones	Service contracts, waste, recycling, cleaning,	Service levels, integration of forward planning
Facilities Management	Steve Flemming Peter Smith Simon Pearl	Specific responsibility for ongoing operation of built assets New build planning	Energy efficiency and metering Design

Scope management

Changes to project scope will be managed using the change control document in Appendix F.

Risks and issues

Risks

Risks have been identified, analysed, and graded as per the tables in the attached Risk Register. The proposed treatment of each risk is also contained in the Risk Register. The Risk Register constitutes the Project Risk Management Plan and can be found in Appendix E.

Issues

The Project Manager will maintain a project change and issues register with assigned responsibilities. This will be reviewed at the PCG meetings. The Register can be found at Appendix F.

Time management

Initial time allocations are described in the attached project schedule. Progress will be reviewed by the PCG and the schedule updated as necessary. Time variations will be handled using the change form in appendix H project controls

Cost management

A project will be established and all costs linked to that project identity, noting that the majority of costs will be absorbed into the FM operating budget as part of continual improvement activity.

Initially it is anticipated that costs will be met within the 2010 FM budget and that no additional or specific funding will be required. This may be subject to change as the project progresses, in which case a funding submission to the Chief Operating Officer will be provided.

Internal resource time may also be tracked using the BEIMS where it is apparent that the commitment is significant or impacting on normal duties.

USQ procurement policy and financial delegation authorities will apply in the delivery of this project.

Human resources management

FM internal resources will be utilised in the delivery of this project.

This project will provide professional development opportunities for members of the PCG and the implementation team.

No specific project training is required and knowledge pertaining to carbon reduction and energy efficiency principles will be obtained via on the job training, research and familiarisation with the standards available.

Communication and change management

The GM FM will establish the project control group and circulate relevant documents accordingly, along with a suggested project time line.

Regular update reports will be provided to the COO and distributed within the USQ community as appropriate (suggest possibly F&F Committee or VCC only).

Regular updates will be sought from the team members to the GM FM.

Regular updates will be distributed within the FM management environment.

Audit and Risk Committee will be made aware of progress by the Group Manager Sustainable Business.

Finance units will be made aware of relevant aspects of the project by the Chief Financial officer.

Internal communication

The project will be established using SharePoint as the central repository.

PCG meetings will be minuted using the Universities standard template with PMA's assigned.

Changes to the project will be discussed and agreed within the PCG and documented appropriately.

Behavioural and process change will be identified and suitable training provided and transitional support structures established as appropriate. All activity will occur within the existing baseline of FM. Where appropriate, Position Descriptions will be amended.

Procurement management

The project will require procurement activity for external providers. All procurement will occur in accordance with the University's procurement policy.

Quality management

Quality Management will be the responsibility of the PCG and the Project manager. This Project Plan and associated attachments will be updated as necessary by the Project Manager.

Safety

There are no particular health and safety considerations required for this project. Existing USQ health and safety requirements will be followed in the delivery of this project.

Operational issues

Operational issues that may impact on this project are:

- Resource availability as a result of business as usual work loads
- Resource skills and competencies
- Time commitment to collate data and populate the carbon software
- Internal cooperation in establishing future collation processes and linkages
- Use of out-sourced contractors for audits and reviews

Project performance measurement

Success criteria	Owner	Measurement method	KPI	Target
Environmental Audit	DP	Evaluation of Quality and Content	Endorsed by ESC	JUN 2010
GHG Inventory	DP	Evaluation of Quality and Content	Endorsed by ESC	JUN 2010
Energy Audit for key buildings	DP	Evaluation of Quality and Content	Endorsed by ESC	NOV 2010
GRI G3 input to Annual report	DP	Evaluation of Quality and Content	Adopted by USQ	SEP 2010

Success criteria	Owner	Measurement method	KPI	Target
Carbon software and reporting	DP	Fully populated and operational	Achieved	DEC 2010
Campus ecological plan	DP	Evaluation of Quality and Content	Endorsed by ESC	FEB 2011

Project benefits realisation measurement

Success criteria	Owner	Measurement method	KPI	Target
Feasibility study of eco projects undertaken	DP	Study and recommendations submitted to COO	Actual	AUG 2011
Feasible eco projects planned	DP	Specific approvals and inclusion in plans	Actual	SEP 2011
Improved Project Planning	COO	Capital Asset Management Plan and projects generally reflect carbon considerations	Evidence via BMC	SEP 2011
Prioritised environmental expenditure	DP	Embedded within routine operational spend and also projects	Evidence	AUG 2011
Recommendation for offsetting residual footprint	DP	Practical and affordable		OCT 2011

Appendix A – Project Schedule

Appendix B – Project Dimensions

Appendix C – Human Resource Management Plan

Appendix D – Communication Plan

Appendix E – Risk Register

Appendix F – Project Controls

END OF ARTEFACT 19

4.6.4 The Governance Group and Artefact 20

The Governance Group was developed to provide governance oversight of the later stages of the project.

Earlier activity (i.e. the Environmental Audit, the GHG Inventory, the Waste Audit, the initiation of the CETS sub project) had been undertaken under the auspices of Facilities Management with the involvement and oversight of the Environmental and Sustainability Committee.

The role of the Project Control Group was to bring an additional level of value, to act as organisational champions and to provide governance oversight to the final stages of the project.

The group membership was very similar to the SAM Project given the key position holders selected and comprised me (acting in a number of roles: as the Director of Facilities Management, as an agent for change and also as researcher), the Chief Financial Officer, the Group Manager Sustainable Business Management and Information, and the Deputy Director, Australian Centre for Sustainable Business and Development as the subject matter specialist.

The Governance Group operated through the online collaborative workspace to schedule meetings, host agendas and minutes, papers and other documents and relevant links.

To recap, the Environment and Sustainability Committee had provided the early governance role. They were succeeded by the Project Control Group (established midway through the project) as the outcomes and solutions (as part of the emerging carbon reduction strategy) became increasing sophisticated from an organisational perspective. The role of the group was to add value to those emergent solutions and to positively represent the strategy in their respective spheres of influence. The role of this internal positioning and preparation in countering negative aspects of the organisational environment cannot be overstated. My Learning Journal (provided at Annex A) records:



21 JUL 2011: “Selling’ the projects in the current capital tight environment (Springfield purchase, SAF building) will be tricky... This report is extremely important and will be instrumental in the carbon reduction strategy and outcomes...plan for senior leadership engagement following ESC endorsement”



13 SEP 2011: “I had provided copies of the Tri-gen, PV, retrofit feasibility studies and wanted support for those independent business cases in

advance of the collective submission to VCC.. Neither party had read the documents. Dir. Budgets wanted to see the overarching strategy before commenting...It was clearly useful to engage these two prior to a more public exposure. By so doing we have avoided the initial lack of preparation experience and reactionary comments in a wider forum. If we can get a tick re the financial construction then we are left with funding mechanisms and the contract risk associated."

A sample of the Governance Group documentation is included below at Artefact 20.

4.6.5 Artefact 20



University of Southern Queensland



Carbon Reduction Project Control Group Meeting

Date and Time: Thursday 24 March 2011, 9.00am

Location: Facilities Management Meeting Room

Meeting Notes and Actions

ITEM No.	SUBJECT	COMMENTS	ACTIONS REQUIRED
1	Present	Dave Povey (Chair), Steve Ivey, Barry Mottram, Julie Cotter and Alicia Logan	
2	Apologies	Nil	
3	Welcome and Overview	<p>The Chair provided an overview of the project</p> <ul style="list-style-type: none"> • Primary vehicle for the delivery of Goal 9 of the Strategic Plan • SharePoint site will be the central repository for all documents related to the project • Additional information on cluster topics related to the project are also included such as the Environmental Audit, Carbon Control Carbon Management Software and the Campus Ecological Transformation Project • Project is not about broader sustainability issues, focus is on carbon reduction • Separate action plan is being developed for the Environmental Officer • ESD Master plan is being developed as part of the Campus Ecological Transformation Project • Line items have been included in the CAMP for future heating and cooling options • Members discussed the need for a longer strategic action plan, the 'spend to save' principle of the organisation and idea of introducing an internal carbon tax. • Steve Ivey lead discussion on the 'Benefit' funding model and the idea of creating incentives for behaviour change 	

		<ul style="list-style-type: none"> Members addressed the issue of staff and student engagement possible ideas a quarterly 'Carbon Update' Forum at the Allison Dickson Lecture Theatre and more developed web pages The chair highlighted the GRI G3 Report for 2010 which contained robust metrics on the environmental indicators 	
4	Review of the Project Plan	The chair outlined the structure of the two groups - Project Control Group which is essentially a governance group and the Working Party comprises of the staff how are responsible for implementing the project outcomes.	
5	Working Party	<ul style="list-style-type: none"> A regular project report will presented to the PCG to coincide with the monthly meetings for endorsement which be presented to VCC and a copy provided to Finance & Facilities for their information Task resolution template outlines the thought processes behind a decision, there will be one for each item on the gant chart Quality review template is a reflective tool for the working group 	
6	Other items	<ul style="list-style-type: none"> Members discussed the inclusion of Scope 3 emissions in the project Toowoomba campus will be the pilot for new initiatives with Springfield and Fraser Coast to be rolled out at a later date Need for a corporate commitment across all the campuses. The chair discussed the limitations of the MADP at Springfield and the need for a clear approach to development referencing new build plans, expansion of the central plant area and a EOT facility Steve Ivey discussed the need to capture the investment in the project. The chair responded by outlining major projects which had specific line items on the FM Capital and Minor Works Program. The carbon reduction project will ultimately move to an embedded state that links into our everyday operations Members discussed other university strategies re: GRI Reporting 	DP to amend the project plan to include Scope 3 emissions
7	Next meeting	Monthly with date to be advised	
8	Close		

END OF ARTEFACT 20

4.6.6 The Working Group and Artefact 21

The initial concept was that the Working Group would perform the same role as that of the SAM Project Working Group. That is to service the human resource needs of project implementation, to provide learning and professional development opportunities for members of the Facilities Management team, and to build 'ground level' ownership of the systems, processes and data to ensure the sustainability of the Carbon project outcomes.

In practice the group was formed much later in the project (compared to SAM) and consequently adopted a different shape and focus.

As previously discussed a different dynamic emerged to that of the SAM Project, with members of the Working Group displaying less ownership of the whole project and an increased focus on their individual tasks. The dynamic became such that I assumed a significantly greater role in the 'hands on' delivery of the project elements than was the case in the SAM Project. Reasons for this may include:

- A significant volume of work had been initiated or delivered prior to and outside of the Working Group (i.e. Environmental Audit, CETS sub-project) and this may have reduced engagement levels
- The project was possibly perceived as being 'my' project and that of the Environmental Officer, in part due to the previous point.
- The Carbon Reduction Project compounded existing workloads, with some elements of the SAM Project still ongoing
- The SAM Project had been in place for some time and members were developing a 'real world' backlog of deferred work, having given priority to the SAM Project. There was some reluctance to engage in another significant project without a break to catch up on the backlog
- Initially I observe the subject material being more ethereal for the members than the SAM content
- There was less confidence that the University would invest in the required solutions.

Members were selected from relevant areas within Facilities Management and were the same individuals that had been the operational points of contact for information and support throughout the early stages of the project. They were generally at Manager or Supervisor level. The membership was smaller than for the SAM Project as the connections with the Facilities Management areas had already been established and the number of areas requiring ongoing interaction was fewer.

The Working Group members were asked to complete the quality review template (Artefact 16) at the end of each meeting as a formal instrument for embedding the action research

methodology. This became harder to achieve in practice and more use was made of discussion and verbal feedback to inform performance reflections and suggested change cycles.

An example of the Working Group meeting Minutes is provided below at Artefact 21 and indicates the reduced team structure and refined operational focus for those members.

4.6.7 Artefact 21



University of Southern Queensland



Carbon Reduction Working Party Meeting

Date and Time: Thursday 24 March 2011, 1.30pm
Location: Facilities Management Meeting Room

Meeting Notes and Actions

ITEM	SUBJECT	COMMENTS	ACTIONS REQUIRED
1	Present	Dave Povey (Chair), Alicia Logan, Nathan Jones, Peter Smith and Steve Flemming and Natasha Herrmann	
2	Apologies	Nil	
3	Welcome and Overview	<p>The Chair provided an overview of the project</p> <ul style="list-style-type: none"> • Primary vehicle for the delivery of Goal 9 of the Strategic Plan • SharePoint site will be the central repository for all documents related to the project • Service and Infrastructure - Steve and Peter, Waste - Nathan • Progress report will be presented to the PCG for endorsement then go onto VCC and cc to F&F 	
4	Review of the Project schedule	<ul style="list-style-type: none"> • The chair discussed the project schedule with the working party • Funding for a Level 2 Energy Audit to come from Energy Efficiency Capital budget, walk through audit of 3-4 key buildings • Green power initiative - need to gain an ongoing commitment for three years time to increase to 30% 	<p>DP to update project schedule</p> <p>DP to construct a discussion paper around Green Power Initiative and internal carbon tax</p>
5	Task Resolutions	<ul style="list-style-type: none"> • Capture actions arising from the environmental and waste audit 	<p>AL & NJ actions arising from the environmental and waste audits.</p> <p>AL -Env. Audit and GRI G3 Reporting for the Annual Report</p> <p>SF -Smart displays</p>
7	Next meeting	Monthly with date to be advised	
8	Close		

END OF ARTEFACT 21

4.6.8 The Project Schedule and Artefact 22

The Project Schedule (identifying tasks against time) was developed initially from the dimensions identified in the early mapping and included subordinate tasks and sub-tasks.

In accordance with project management methodology this was presented and maintained in the form of a Gantt chart. An illustrative example of the Gantt chart form is included at Figure 17 below.

PROJECT SCHEDULE - CARBON REDUCTION																
ID	Task Name	Duration	Start	Finish	% Complete	2010										
						3rd Quarter			4th Quarter			1st Quarter		2nd Quarter		
						Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	Overall Completion	646 days?	Mon 3/08/09	Mon 23/01/12	48%	[Gantt bar spanning from 3/08/09 to 23/01/12]										
2																
3	Project preparation	422 days	Thu 29/10/09	Fri 10/06/11	49%	[Gantt bar spanning from 29/10/09 to 10/06/11]										
4	Research	422 days	Thu 29/10/09	Fri 10/06/11	49%	[Gantt bar spanning from 29/10/09 to 10/06/11]										
5	Initial Literature review	20 days	Thu 1/04/10	Wed 28/04/10	100%	[Gantt bar spanning from 1/04/10 to 28/04/10]										
6	Site visit ANU	3 days	Thu 29/10/09	Mon 2/11/09	100%	[Gantt bar spanning from 29/10/09 to 2/11/09]										
7	Site visit UTAS	3 days	Tue 22/06/10	Thu 24/06/10	100%	[Gantt bar spanning from 22/06/10 to 24/06/10]										
8	Green Universities Conference	3 days	Mon 22/02/10	Wed 24/02/10	100%	[Gantt bar spanning from 22/02/10 to 24/02/10]										
9	Identify Federal references and initiative	5 days	Mon 2/05/11	Fri 6/05/11	0%											
10	Review of key legislative framework and	25 days	Mon 9/05/11	Fri 10/06/11	0%											
11	Review existing ESC Action Plan	2 days	Mon 7/02/11	Tue 8/02/11	0%											
12	Meeting with COO & DVC to consider S	2 days	Tue 1/06/10	Wed 2/06/10	100%	[Gantt bar spanning from 1/06/10 to 2/06/10]										
13	Formalise Project Establishment	94 days	Tue 1/06/10	Fri 8/10/10	67%	[Gantt bar spanning from 1/06/10 to 8/10/10]										
14	Project plan	5 days	Tue 1/06/10	Mon 7/06/10	100%	[Gantt bar spanning from 1/06/10 to 7/06/10]										
15	Project schedule	5 days	Tue 8/06/10	Mon 14/06/10	100%	[Gantt bar spanning from 8/06/10 to 14/06/10]										
16	Establish PCG and WG	5 days	Mon 4/10/10	Fri 8/10/10	0%											

Figure 17– Gantt chart format

The Gantt chart was a physically large document, so for ease of use, the tasks would often be exported to a spreadsheet. A more detailed extract of the tabular format is included below at Artefact 22.

The schedule was updated at each Working Group meeting and the progress percentage updated. At the same time the resources assigned to a particular task and any associated problems or risks would be discussed. In addition, the Environmental Officer and I would make updates to the schedule out of session. This is a further reflection of the altered participant role and dynamic of the Working Group forum.

The effectiveness of the Gantt chart as a project management tool was reduced in the Carbon Project given the less complex (from a task volume, linkage and timing perspective) than that of SAM. The time dimension became less important and the primary value derived from its use was in the task tracking (progress and ownership).

4.6.9 Artefact 22



ID	Task Name	Duration	Start	Finish	% Complete
1	Overall Completion	646 days?	3/08/09	23/01/12	39%
2					
3	Project preparation	422 days	29/10/09	10/06/11	49%
4	Research	422 days	29/10/09	10/06/11	49%
13	Formalise Project Establishment	94 days	1/06/10	8/10/10	60%
14	Project plan	5 days	1/06/10	7/06/10	90%
15	Project schedule	5 days	8/06/10	14/06/10	90%
16	Establish PCG and WG	5 days	4/10/10	8/10/10	0%
17	Project Execution by dimension	560 days?	3/08/09	23/09/11	40%
18	Operational	550 days?	3/08/09	9/09/11	45%
19	Conduct environmental audit	324 days	3/08/09	28/10/10	92%
26	Conduct Waste audit	56 days?	1/06/10	17/08/10	100%
31	Eco transformation master plan	245 days	1/04/10	9/03/11	0%
37	Infrastructure - Metering	441 days	1/01/10	9/09/11	39%
40	Infrastructure - High efficiency lighting	296 days	19/04/10	6/06/11	50%
43	Infrastructure - Zip WH timers	191 days	2/08/10	25/04/11	30%
46	Supply chain review	5 days	1/04/11	7/04/11	0%
47	Carbon Management Software	190 days	15/06/10	7/03/11	39%
52	Energy Audit	65 days	1/03/11	30/05/11	0%
58	BMS initiatives for energy reduction	10 days	31/05/11	13/06/11	0%
59	Consider offset solutions and make recommendation	1 day?	3/03/11	3/03/11	0%
60	Governance & Management	300 days?	2/08/10	23/09/11	18%
61	Green power initiative	20 days	2/08/10	27/08/10	80%
62	Internal Carbon Tax initiative	20 days	1/04/11	28/04/11	0%
63	Presentation of Audit and GHG inventory to USQ Council and VCC	3 days	29/10/10	2/11/10	0%
64	2011 Funding provision within CAMP	5 days	16/08/10	20/08/10	100%
65	Report to SBMI recommending policy changes	16 days	1/12/10	22/12/10	0%
72	Definition and scheduling of external reporting obligations	3 days	11/02/11	15/02/11	0%
73	Definition and scheduling of audits	3 days	18/02/11	22/02/11	0%
74	Definition and scheduling of external funding rounds	5 days	22/02/11	28/02/11	0%
75	Identify and develop relevant standards	20 days	1/03/11	28/03/11	0%
76	Sustainable procurement integration	20 days	29/03/11	25/04/11	0%
77	Embed eco element into wider reporting	44 days?	16/09/10	16/11/10	63%
81	Define targets at Unit levels	10 days	12/09/11	23/09/11	0%
82	Community	431 days	1/10/09	26/05/11	33%
83	Earth Hour 2010 event	40 days	1/02/10	27/03/10	100%
84	Earth Hour 2011 event	40 days	31/01/11	26/03/11	0%
85	Promulgate regular eco performance reports	10 days	8/10/10	21/10/10	0%
86	Open browser access to information	5 days	1/04/10	7/04/10	0%
87	Linkages with ACTS	3 days	1/10/09	5/10/09	100%
88	Linkages with ASSHE	5 days	1/03/10	5/03/10	100%
89	Linkages with TRC	3 days	1/04/10	5/04/10	20%
90	Linkages to other State, Federal and International entities	10 days	10/02/11	23/02/11	0%
91	ESC Web pages	5 days	15/12/09	21/12/09	100%
92	Smart displays	20 days	1/04/11	28/04/11	0%
93	Metering and carbon reduction web additions	20 days	29/04/11	26/05/11	0%
94	Teaching and Learning	30 days	29/10/10	9/12/10	0%
95	Identify related on-campus research activity	15 days	29/10/10	18/11/10	0%
96	Develop process for linking research with real-time opportunities	15 days	10/11/10	9/12/10	0%

END OF ARTEFACT 22

4.6.10 Project Baseline and Artefact 23

As with the SAM Project it was necessary to define the starting point in able to set appropriate targets and monitor progress. The evaluation of the University's environmental footprint and in particular the carbon emissions component was a vital stage in project implementation and was developed through a number of avenues.

The first was the commissioning of an environmental audit and an extract from the Audit proposal is provided at Artefact 23.

The environmental audit had its origins in the USQ Strategic Plan development work undertaken late in 2008. The resultant USQ Strategic Plan 2009-2013 included a specific task to undertake an environmental audit. It would be unusual for such a high level document to reference a specific operational activity in this way. However, the inclusion is reflective of USQ's aspiration. Further, the clarity of the commitment provided a powerful mandate for funding and action.

The audit considered the USQ situation from a number of perspectives, including (but not limited to) carbon, flora, fauna, water, compliance, policy and systems. The report also presented its assessment in the form of the Global Reporting Initiative (GRI) sustainability reporting guidelines version 3 (G3) collectively known as GRI G3²⁸, noting that organisational reporting against this framework had been an internally approved USQ corporate commitment since 2008.

The audit produced significant insight to the organisation's environmental maturity and identified a series of opportunities for engagement both within the Carbon Reduction Project and also independent of it.

The Audit Report²⁹ provided the following:

- An overview of the audit process including defining the objectives, content and boundaries
- Key results of assessments relating to various environmental performance indicators, including a baseline carbon footprint
- An overview of sustainability initiatives currently being implemented by USQ and other Australian Universities; and
- Recommendations for strategic actions and opportunities for USQ to achieve its sustainability goals including carbon neutrality by 2020.

²⁸ GRI is a network-based organization. A global network of some 30,000 people, many of them sustainability experts, contributes to its work. GRI's governance bodies and Secretariat act as a hub, coordinating the activity of its network partners. GRI's Sustainability Reporting Framework enables all companies and organizations to measure and report their sustainability performance. Source: <https://www.globalreporting.org/Information/about-gri/Pages/default.aspx>.

²⁹ Source: Opus International Consultants (PCA) Ltd report entitled 'Environmental performance Report – Executive Overview, University of Southern Queensland 2009', dated 23 November 2010.

The Final Report was delivered through a series of elemental documents as followed:

- Scoping Report: This provided recommendations and criteria to assist in determining the boundaries for the green house gas (GHG) inventory and baseline reporting using the GRI G3 and to identify USQ's goals and priorities to be targeted by the audit
- Gap Analysis Report: This provided a review of existing management systems and data available at USQ and identified additional information required to complete the GHG inventory, baseline GRI G3 report and to develop action plans
- GHG Inventory for 2009: This provided the detailed process and results for the calculation of the USQ carbon footprint for 2009; and
- GRI Environmental Performance Indicator Summary Results 2009: This provided baseline performance data to assist in developing the University's corporate GRI G3 sustainability report. It also provided a basis for benchmarking and identified opportunities to improve USQ's overall environmental performance.

The most significant deliverable from the audit (for the refocused Carbon Reduction Project and the USQ strategic goal) was the completion of the 2009 green house gas inventory, provided below at Figure 18. This data was accepted as the carbon baseline for the University.

		2009 Baseline	
Emission source		Total Tonnes CO₂-e	% of total emissions
Scope 1 (direct activity emissions)			
Vehicle use (diesel and petrol)	Toowoomba	351	2%
	Fraser Coast	12	<1%
	Springfield	33	<1%
Fuel for Generators		12	<1%
Fuel for plant and machinery		10	<1%
Natural gas for stationary combustion		353	2%
Total Scope 1		771	5%
Scope 2 (indirect activity emissions)			
Purchased electricity	Toowoomba	13,336	80%
	Fraser Coast	725	4%
	Springfield	820	5%
	Mt Kent Observatory	25	<1%
Total Scope 2		14,906	89%
Scope 3 (all other indirect emissions external to the facility)			
Air Travel		543	3%

Waste to Landfill	464	3%
Rental vehicles	44	<1%
Total Scope 3	1,051	6%
Total GHG Emissions	16,728	100%

Figure 18 – GHG emissions baseline rating

Various physical and behavioral factors contributed to the GHG emissions results and care was taken not to represent the data out of context. It was interesting to see how quickly the performance of the three campuses would be compared (within the USQ community) without a proper interpretation of the results. To mitigate the risk of misinterpretation a number of different KPI's were developed to represent the carbon performance against familiar University metrics, i.e. carbon emissions per student; carbon emissions per staff member; carbon emissions per square metre of space. Illustrative examples of these KPIs are provided below in Figures 19 and 20.

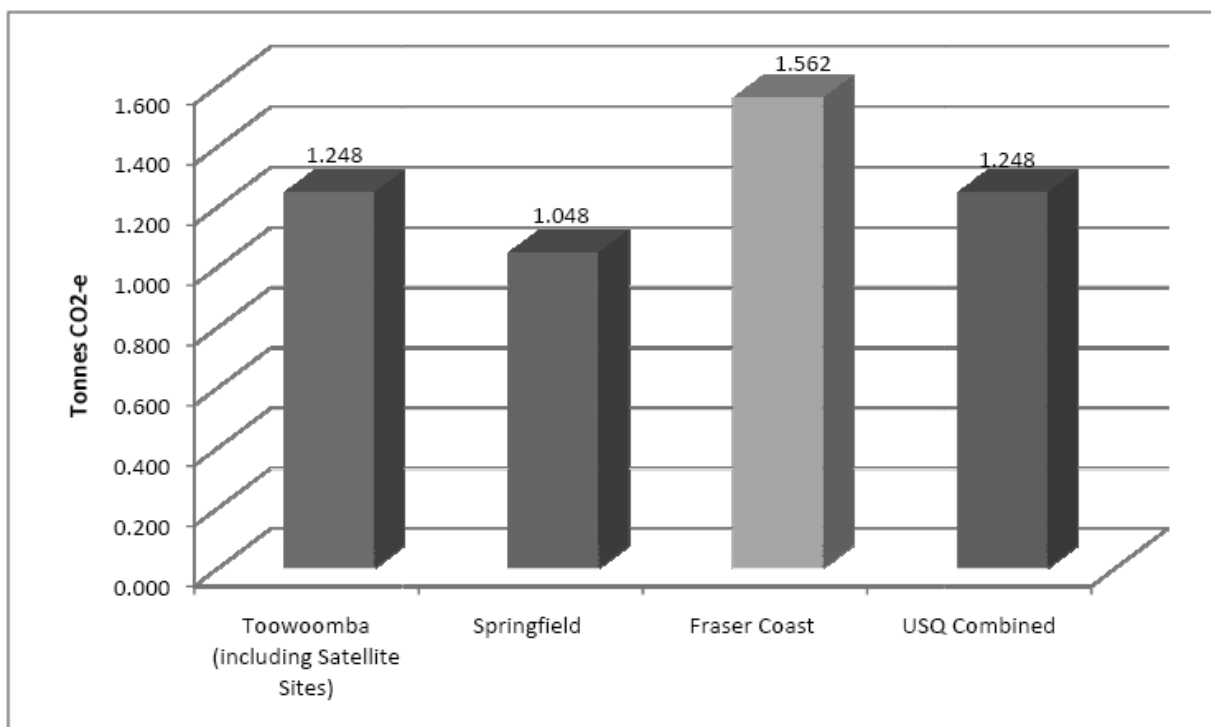


Figure 19 – Total emissions per m² by campus

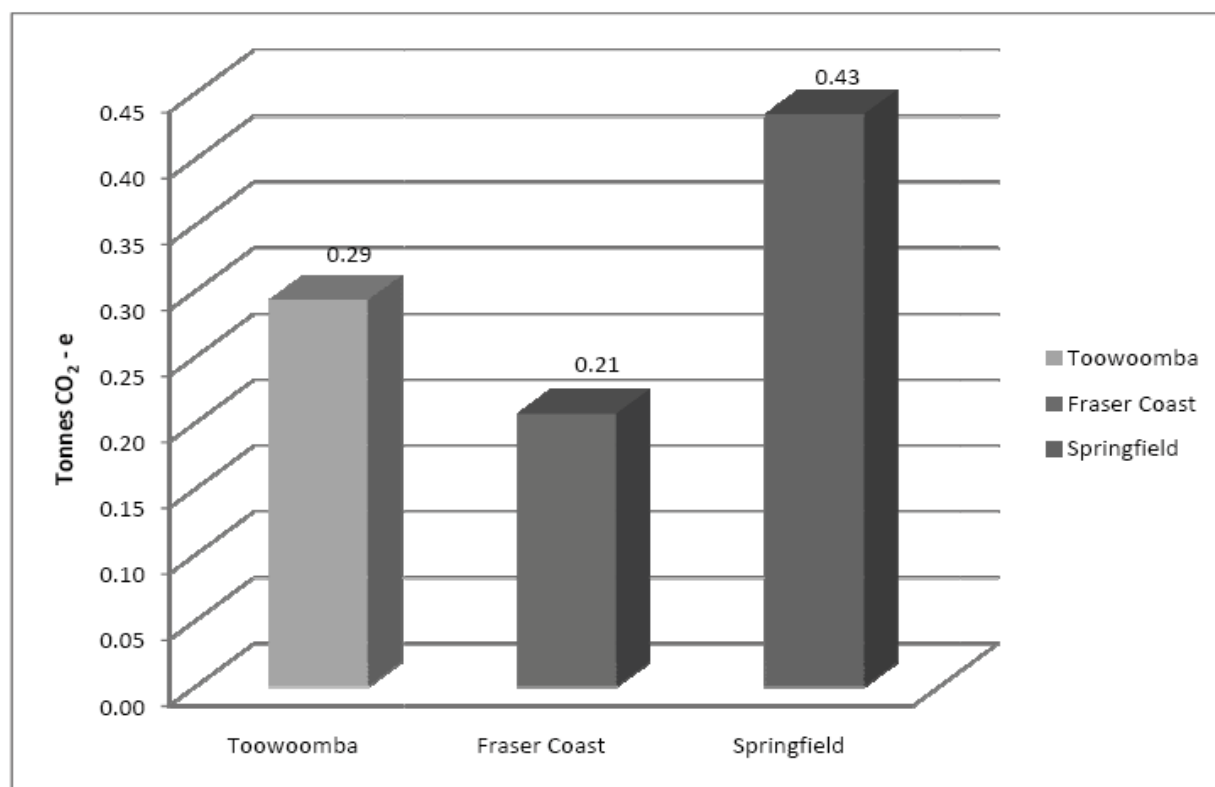


Figure 20 – Emissions from vehicle use by full time equivalent staff member, by campus

The development and application of the KPI charts (Figures 19 and 20 above) was essential in highlighting local operational and behavioral anomalies and understanding the portfolio more effectively. This is discussed in more detail in Chapter Five.

Some of the differences between the campuses impacting on the interpretation of the GHG Inventory results were:

Fraser Coast Campus

- Relatively small campus focused on the local community
- Few University vehicles
- Too far (4-5 hours drive) from Toowoomba for easy commuting
- Warm climate (sub-tropical)
- Flat terrain (promoting cycle use)
- High levels of air conditioning
- New building portfolio (less than 10 years)
- Moderate operating load (student numbers and hours of teaching)
- Shared library with local council
- No student accommodation on site

Springfield Campus

- Small leasehold campus with two buildings

- Moderate number of University vehicles
- Close enough (1.5 hours drive) to Toowoomba to facilitate easy commuting
- Warm climate but not as hot as Fraser Coast
- Minimal public transport in 2009
- High levels of air conditioning
- New building portfolio (less than 10 years)
- Heavy operating load (high student numbers and extended hours of teaching)
- Central chilled water plant owned by the Landlord, reducing the electrical load for USQ
- On site student accommodation owned and operated by the Landlord so not represented in the USQ data

Toowoomba Campus

- Large, primary campus with significant land areas and gardens
- Significant University vehicles including pool vehicle fleet
- Organisational centre serving all areas and markets and carrying support overheads
- Seasonal climate requiring heating and cooling
- Good public transport (bus and cycle facilities on campus)
- High levels of air conditioning and resistance load heaters
- Large building portfolio of varying age and quality
- Largest operating load (high student numbers, server rooms and teaching hours)
- Significant student accommodation
- Community facilities (Sports fields and centre)
- Organisational infrastructure and overhead not repeated at Fraser Coast and Springfield

Understanding the differences between the campuses not only enhanced the interpretation and communication of the carbon baseline results, but also further provided a substantive demonstration of the connection between the SAM and Carbon projects as two facets of the organisations physical footprint and reinforced my emerging understanding of portfolio mindedness. This is discussed further in the learnings provided in Chapter Five.

4.6.11 Artefact 23



The following is a sample from the Environmental Audit consultant's proposal document, provided primarily as evidence of the activity.

*University of Southern Queensland
Environmental Audit ~ Scoping Report*

Executive Summary

This scoping report represents the first stage of a broader environmental audit project to be undertaken for the University of Southern Queensland (USQ) by Opus International Consultants (PCA) Ltd (Opus). The environmental audit has been commissioned to assist USQ in the achievement of key sustainability strategies and objectives outlined in USQ's *Strategic Plan 2009-2013*. Specifically, the audit is to assist USQ in establishing sustainability reporting in accordance with the framework of the Global Reporting Initiative (GRI), to determine requirements for compliance under relevant legislation, and to achieve USQ's goal of being carbon neutral by 2020.

The purpose of the scoping stage is to clarify USQ's environmental goals and priorities, identify relevant legislative requirements, establish principles and criteria for defining the boundaries and content of the audit and subsequent sustainability reporting. This scoping report will include the identification and evaluation of potential indicators relating to environmental performance that USQ may choose to report.

This scoping report does not comprehensively address the requirements for sustainability reporting under the GRI framework, but focuses on defining boundaries and content (eg. indicators) relevant to environmental performance. Other matters covered by the GRI framework such as social and economic indicators, reporting on organisational profiles and management approaches, determining the level of adherence to the GRI framework and defining principles for report quality are beyond the scope of this report.

As part of the scoping stage, a meeting was held with the USQ Project Team on 7 October 2009 at the Toowoomba Campus. This scoping exercise has been primarily based on desktop research and no other USQ sites have been inspected as part of this process. No environmental systems or performance data from USQ was available for review as part of this scoping exercise other than that published in the online 2008 Annual Report. Following acceptance of the Scoping Report by USQ, subsequent stages of the environmental audit project will be completed with the next stage comprising a review of existing environmental management systems, existing data and a gap analysis.

In relation to USQ's goals and priorities for the environmental audit, it has been identified that demonstrating progress towards USQ's 2020 carbon neutral goal is a major priority along with ensuring compliance with relevant legislation. Recognising that limited data currently exists in relation to USQ's current environmental performance, it has been identified that data collection efforts should be focused on calculation of a baseline carbon footprint, waste volumes and types, and water use efficiency.

Key legislation identified as potentially relevant to the environmental performance of USQ's operations includes the *National Greenhouse and Energy Reporting Act 2007* (NGER Act), *Carbon Pollution Reduction Scheme Bill 2009*, *National Environment Protection (National Pollutant Inventory) Measure 1998* and the *Energy Efficiency Opportunities Act 2006*. This scoping report does not address the requirements of other environmental legislation that may apply to USQ in terms of permitting or authorising certain activities or development as it is assumed that USQ already holds all relevant permits and licences required for the establishment and operation of its activities. The legislative review provided in this report has focused on identifying obligations for reporting environmental performance.

4.6.12 The Campus Ecological Transformation Sub-project (CETS) and Artefact 24

The Campus Ecological Transformation Sub-project provided a very important contribution to the overall project and complimented the Environmental Audit. The Environmental Audit primarily described where USQ was in terms of environmental 'position' and presented only generic or indicative solutions for moving the organisation to where it wanted to be. The contribution from the CETS was to build on the results of the Audit and enhance the USQ's understanding of how it would move towards its carbon neutrality goal through the use of specific built technology solutions.

This was achieved through the undertaking of a holistic review of the physical Toowoomba Campus, considering energy load profile, audit results (relevant to carbon reduction such as waste volume data and the GHG inventory), climate data, local and regional facilities, building age, construction, condition, systems and infrastructure. These elements were then considered against a range of environmentally sustainable design technologies and solutions presented in the form of preliminary feasibility studies.

The particular deliverables from the CETS were:

- Creation of a site wide thermal model to calculate load (type, quantum, location and timing)
- Tri-generation and co-generation opportunity report
- Solar Energy opportunity report (photo-voltaic and water heating)
- Waste reduction and waste to energy opportunity report
- Ground source heating and cooling opportunity report
- Water saving opportunities
- Existing building energy reduction and retro-fit opportunity report
- Biomass and integrated food production report
- Centralised services and alternate HVAC opportunity report

Each of the preliminary feasibility reports was required to address:

- Scope and cost for the physical solution identified
- Identify the impacts for timing and staging of each option (relationship effects)
- Identify the relevant government policy environment and effects
- Provide advice in regard to possible delivery and funding approaches
- Consider type, extent and location of utility services and infrastructure relevant to the solution

The final report entitled 'Pathways to Neutrality' considered data collected during the Environmental Audit (in particular the water and energy data), and modeled the potential savings against each ESD solution and offered a possible prioritisation approach. This was

used to inform the development of the USQ Carbon Reduction Strategy 2012-2014, provided later at Artefact 28.

An extract from the CETS sub-project is provided at Artefact 24.

4.6.13 Artefact 24



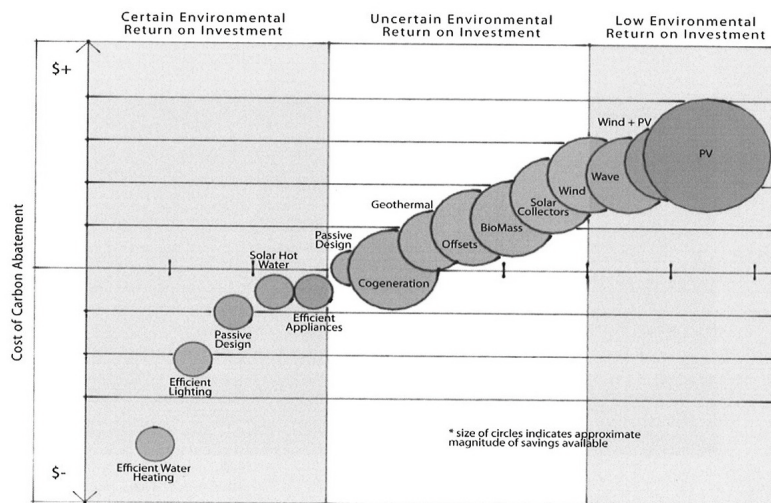
The following is a sample from the ESD consultant’s proposal document, provided primarily as evidence of the activity.

4 The Opportunity

The Ecological Transformation Master Plan is an opportunity to transform and shape the existing Toowoomba Campus through implementing Transformational Sustainability.

Transformational Sustainability is the core focus of Built Ecology, WSP Group’s global specialist sustainability brand. It represents our approach to creating new, higher performing and more cost effective sustainable outcomes through an approach of deeply embedding ourselves in the Mechanical, Electrical and Hydraulic engineering teams.

Via collaboration we believe we can deliver to the University of Southern Queensland the necessary conceptual advice, design analysis, master planning and infrastructure feasibility studies to develop a road map to the targeted “Carbon Neutrality”.



Built Ecology™

Cost of Carbon Evaluation Tool
Alkimos Sustainable City Bld

END OF ARTEFACT 24

4.6.14 Academic Reporting and Artefact 25

In order to maintain self-discipline and facilitate regular engagement between the academic supervisor and me, the template developed during the SAM Project was adapted for and found to be equally applicable to the Carbon project.

The template provided a useful tracking tool for operational tasks and also a platform for reflection adding value to the project and my learning. For example, the reflection would often be to strategise around the delivery and sustainability of the project, the performance of actors in the project, and the risks and opportunities identified through the reporting period.

The example provided below at Artefact 25 is the first report produced for the Carbon project and demonstrates the project status at December 2009 with associated issues and reflections. These include:

- Concern around the Environmental Audit implementation
- Workload challenges
- Options for increased resource and/or delegation
- The varying levels of engagement of the Environmental Committee members
- Progress on a number of operational fronts
- Need to communicate the project at the senior level and build the value and engagement

Oversight of the Audit continued to be problematic. My Learning Journal (provided at Annex A) records:



12 MAY 2010: *“Perhaps we were not clear on our expectations. This is late in coming and falls short of expectations. Not enough relationship perhaps? They seem to be almost mechanically stepping through their proposal rather than a holistic exercise...on the positive we can report against an increased number of G3 indicators”.*

As discussed in the SAM Project chapter, the final version of the template, included a section for learning narrative, but this was often a referral to the Learning Journal extract included as an attachment to the report. There was also a format change to include reporting of the project dimensions focused on percentage complete against time using standard project management reporting practice.

The template follows a hierarchical structure from high level information at the start, flowing on through operational or task matters and concluding with academic. For example, the use of the high level project dimensions on the first page provided a colour based user

friendly interface for assessing the areas of progress and/or risk. The visual interaction was achieved by the use of red, amber, or green colour coding (traffic light principle) to indicate risk.

The use of the template simplified the reporting task and improved the consistency and quality of the report content.

4.6.15 Artefact 25



DPST Project Progress Report

Project Title: Carbon Zero Project	Project #:
Student name: Dave Povey	Project Sponsor: Chief Operating Officer, USQ

Reporting Period: DEC 09	Report #: 1
---------------------------------	--------------------

Summary Status: Development of Project plan behind schedule	
<i>Significant issues to resolve</i>	<i>Some issues to resolve</i>
<i>On track, no problems</i>	<i>On track, no problems</i>

Headlines:

Notwithstanding the delay in producing the Project Plan, parallel activities have proceeded, including:

- Environmental web pages created.
- Consultation over which KPI should be adopted
- Receipt of revised scope from the consultant
- Additional resource allocated to the project

Tasks, Milestones, Outcomes delivered this period		Completion dates	
Tasks, Milestones, Outcomes	Comments	Plan	Actual
Received revised scope outline document from OPUS	Some confusion regarding OPUS role in undertaking waste audit	OCT 09	DEC 09
Alicia Logan brought up to speed with the project and will provide local coordination.	Alicia to source casual staff for data collection	NOV 09	DEC 09
Info re KPI's sent to stakeholders for input	This highlighted the lack of a PCG, albeit not necessarily the same group.	OCT 09	DEC 09
Tasks, Milestones, Outcomes scheduled for next period		Completion dates	
Tasks, Milestones, Outcomes	Comments	Plan	Forecast
Develop Project Plan		OCT 09	Jan 10
Appoint casual resource for data collection		NOV 09	JAN 10
Report on membership of ACTS	Complimentary activity, not core to the audit		JAN 10

Establish PCG	Contact members and hold initial meeting	NOV 09	JAN 10
Identify USQ contractors	ICT, FM, Faculties etc. Develop a pro-forma letter re sustainability and carbon emissions.		JAN 10
Select which KPI's will be adopted		OCT 09	JAN 10
Hold a meeting with Group Manager Sustainable Business to discuss membership of PCG		OCT 09	JAN 10
<p>Major Risks and Issues:</p> <p>Program delays through other workload. Mitigation: increase planning and delegation. Achieved: approximately one half day per week has been scheduled for this project and it is intended that much of the daily coordination will be delegated to Alicia Logan, with data collection being delegated to a casual employee engaged specifically for the task.</p> <p>Consultant Management: Alicia tasked to coordinate and keep on top of consultant deliverables.</p> <p>USQ information systems are not structured to provide all of the data necessary for an audit. Mitigation; discussion over the use of proxies and of possible changes to USQ systems and databases has been initiated with the CFO and CTO.</p>			
<p>Summary of Learning:</p> <ul style="list-style-type: none"> • Time management, self need to focus • Delegate and involve others • Importance of the Project Control Group to ensure this project has a USQ identity and is properly engaged with the USQ community • The consultant does not appear to be demonstrating the leadership and proactivity that was anticipated in this specialist area • Review of NGER in order to inform consideration of OPUS advice re legislation and KPIs. • Individual members of ESC have varying degrees of interest in contributing to this project 			
<p>Attachments:</p> <ul style="list-style-type: none"> • Draft OPUS Scope document • Email regarding KPIs 			

END OF ARTEFACT 25

4.6.16 Operational Reporting and Artefact 26

Ground level up reporting of project progress occurred via the Environmental officer (once appointed), the Working Group members, and me each providing our respective operational updates within the Working Group forum.

Full documentation was routinely provided to the Environment and Sustainability Committee acting initially as the governance body, and then later to the Project Control Group for oversight. All documentation was hosted on the University's collaborative web based workspace; a 'SharePoint'³⁰ site was created to host the project documentation and act as a communication hub for the project.

The COO, all members of the working group and the governance group had full access to the SharePoint site and were able to access full documentation at any time.

As with the SAM Project, reporting of project progress to the COO also became a standing item on the agenda of the existing monthly meetings between the COO and me. In those meetings the focus would be on general progress, cost management and emerging risks.

An illustrative screenshot of the SharePoint site home page is included below at Figure 21.

Last Name	First Name	Business Phone	E-mail Address
Logan	Alicia	07 4631 1362	alicia.logan@usq.edu.au
Povey	Dave	07 4631 1910	dave.povey@usq.edu.au

Title	Location	Start Time	End Time
Carbon Reduction - Project Control Group Meeting 24 March 2011	03-115	24/03/2011 9:00 AM	24/03/2011 11:00 AM
Carbon Reduction - Project Control Group Meeting 04 May 2011	03-115	4/05/2011 2:00 PM	4/05/2011 3:00 PM
Carbon Reduction - Project Control Group Meeting 14 June 2011 - CANCELLED	03-115	14/06/2011 9:00 AM	14/06/2011 11:00 AM
Carbon Reduction - Project Control Group Meeting 05 July 2011 CANCELLED		5/07/2011 9:00 AM	5/07/2011 11:00 AM
Carbon Reduction - Project Control Group Meeting 16 August 2011	03-115	16/08/2011 9:00 AM	16/08/2011 11:00 AM

Figure 21 – Carbon Reduction Project SharePoint site

³⁰ Microsoft SharePoint is a web-based application platform, typically used for web content and document management.

To some extent the use of the online collaborative workspace facilitated a reduced reporting load.

The Carbon Reduction Project was quite different in its structure to that of the SAM Project and this was reflected in the reporting or more accurately the production of project deliverables and their socialisation within the University.

The Environmental Audit was an early activity and well communicated. It involved access and consultation with numerous areas of the University and was well received by staff as a 'positive' action by the University on its journey to carbon neutrality. As a consequence, the draft reports from the Audit were discussed in workshops underwent the normal round of query, challenge and edit before presentation in their 'final' report form.

Similarly, the sub-audits contained within the parent environmental audit, being the 'Waste Audit' and the 'GHG Inventory' attracted a lot of attention and engagement; particularly the waste audit, where staff and student volunteers were engaged to sift through the university waste for a week, quantifying and cataloguing the material to establish a waste baseline. This would then be used to inform a waste management and recycling program and the later for the CETS sub-project. The waste audit results caused particular surprise within the University and are provided below at Figure 22.

Campus/Area	Waste Generation	Waste Diversion Rate	Potential Diversion Rate
Toowoomba Campus	2081.81 kg/week	14.6%	54.6%
Steel Rudd College	214.75 kg/week	0.0%	16.7%
McGregor College	374.63 kg/week	0.0%	40.0%
Concannon College	204.29 kg/week	0.0%	27.2%
Toowoomba Campus and Cannot be Identified	204.74 kg/week	Unknown	83.6%
Deemed Weight Material from Visual Inspections	3680 kg/week	22.7%	N/A Deemed Weights Used
Springfield Campus	141.90 kg/week	0.00%	47.6%
Fraser Coast Campus	155.44 kg/week	0.00%	46.8%
Fraser Coast Campus (inclusive of deemed weight recycling)	196.44 kg/week	20.9%	N/A Deemed Weights Used
Combined Assessment – ALL Sites and Activities (inclusive of Deemed weight results)	7098.56 kg/week	16.6%	33.7%

Figure 22 – Waste Audit Summary Results

The GHG Inventory touched many areas of the operational university in its search for quality data and highlighted a number of data gaps and system change and integration opportunities. For example the financial systems did not record quantities of electricity, gas, oil, diesel purchased as a distinct field, not the unit of measure as separate reportable field. They were embedded as text in the description field, which made the data collation and analyses challenging and labour intensive.

The socialisation of the project was further enhanced by the development of web pages around environmental matters and the inclusion of articles in the Facilities Management department newsletters. The project was in essence a good news story that was of genuine interest to the University community.

A copy of the media release associated with the launch of the green web site is included at Artefact 26. Further articles continued to acknowledge areas of progress and those responsible for that progress, which assisted in creating both divisional and community ownership of the project. It also helped to create understanding of the 'non-financial' value proposition of the project at organisational and divisional levels.

4.6.17 Artefact 26



Website to help USQ 'go green'

A new environment and sustainability website is helping the University of Southern Queensland (USQ) 'go green'.

A joint initiative between the Office of Facilities Management and the Environment and Sustainability Committee, the website gives USQ staff the tools to become more environmentally conscious while helping the University meet its sustainability goals.

"USQ is committed to environmental sustainability and reducing the impact that the University has on the environment," Group Manager of Facilities Dave Povey said.

"The University has undertaken a series of environmental activities through the last 18 months and a key element of our future activity will be improved communication and information.

"Through this website we hope to show some of our initiatives and also provide information on environmental issues and opportunities.

"It is an integral part of the change required to achieve the University's goal of carbon neutrality by 2020."

Mr Povey added that it was important that staff took the time to have a look at the website and engage with as many of the initiatives as possible.

"Everyone at USQ can do something to contribute to a greener workplace," he said.

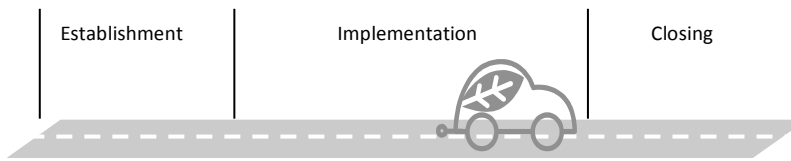
"Becoming environmentally sustainable involves continuous improvement, learning and innovation but most of all a sense of personal ownership."

For more information on what you can do to make USQ a greener place visit the website <http://www.usq.edu.au/environment>

Media Contact: Josh Ada, USQ Media, +61 7 4631 2559, 0400 025 429

END OF ARTEFACT 26

4.6.18 Phase conclusion



This section discusses various strengths and weaknesses of the project implementation approach. Further reflection on the project is included in the Carbon Reduction Project conclusion section of this Chapter and in the thesis conclusion provided at Chapter Five.

The work done through the establishment and implementation phases provided a flexible platform for project evolution and implementation across its various stages. In particular, the strengths were:

- The change in project scope from sustainability to carbon reduction was appropriate (given project constraints and organisational maturity), well timed and well communicated
- The carbon reduction focus of the project was well constructed and informed by quality data and independent ESD reports (Audits and CETS)
- The individual elements and deliverables were identified, considered and logically selected using mind maps, material from the body of knowledge and the outputs of independent ESD advice
- The project constraints were known and accommodated
- Organisational support was achieved through project approval, collaboration, senior executive support, regular communication resulting in wide community support and engagement
- The governance and management framework (initially via ESC and later via the Working Group and Project Control Group) was more dynamic than the SAM Project and more aligned with the particular stage of the project

The project suffered through the implementation phase due to a number of factors. In particular:

- Delays arising from the Initial uncertainty of the scope of the project (sustainability or carbon reduction).
- Competing resource demands from the SAM Project and the general workload of shared operational staff.
- Organisational support was generally positive but the collection of the data required for the GHG Inventory was a testing and demanding time, largely due to the lack of alignment and capability of existing systems and practice, in regard to carbon data applications.
- Senior management was engaged with the strategic goal of neutrality. However, the linkages required to sustain, and benefit from, the project were not readily

embraced by all areas of the organisation. This would become quite evident with the development of business cases to progress the CETS solutions (later migrated to the Carbon Reduction Strategy elements).

In summary, the project was a significant undertaking, flexible and adaptive in its implementation and delivering on the required outcomes. The project implementation was aided by the inherently positive, socially responsible nature of the project and encountered less internal resistance than might otherwise have been expected for a project of this scale.

4.7 Carbon Project closing phase



4.7.1 Introduction

The closing phase of the Carbon Reduction Project was a critical stage in the projects life and culminated in a number of significant outcomes and outputs.

- The project at this point has already delivered many new environmental and carbon reduction initiatives for USQ including but not limited to;
 - Effective communication of the carbon reduction activities and opportunities through web pages, newsletter items, specific events such as Earth Hour and a regular presence in other University events (open day, orientation etc)
 - Carbon management software (functional but not completed)
 - Carbon baseline
 - Data capture and integration improvements
 - Water retention and conservation (tanks, potable water systems)
 - Energy efficiency (lighting upgrades, hot water timers)
- The significance (and detail) of the organisation's carbon footprint had been made fully transparent and linked to the Strategic Goals of the University
- The draft Carbon Reduction Strategy for 2012 to 2014 was developed and founded upon sustainable generation technology and building retrofit solutions that would require significant infrastructure investment. This required specific executive support that would potentially test the Universities commitment to carbon neutrality.
- Both the delivered and the outstanding items needed to be captured and communicated as part of good project management practice and USQ process. This ensured accurate reporting and the carry forward of incomplete tasks.
- The closing stage signaled not simply an end to the overarching project, but provided the launch point for a series of subsequent projects (i.e. further engagement, PV array, tri-generation) and a step change in the understanding and engagement of the

University in terms of knowledge and attitude to carbon emissions and more generally, environmental performance.

In order to bring a formal close to the project in a way that provided the most informed and appropriate communication for each of the recipient audience areas of interest, reports and papers were structured as follows; operational and DPST closure report; the USQ Carbon Reduction Strategy, and; academic outcomes in the form of a paper for peer review and publication.

4.7.2 Operational outcomes

The operational culmination of the Carbon project was captured in a Project Closure Report provided to the academic supervisor and also (in a slightly reduced form) to the Chief Operating Officer. The reduced version focused on the operational status and omitted the academic content. A copy of the full Project Closure Report is provided at Artefact 27.

The Project Closure Report adopted and developed the basic template used in the regular project reporting and adapted it to include a full schedule of the project tasks, a summary of each task status, carry forward actions required post project, linkages to the project plan goal and a reference linking to project artefacts³¹ (for the purposes of DPST assessment at the time).

Further discussion of the Project Closure Report is included in the introduction section for that artefact.

4.7.3 Strategic outcomes

The strategic culmination of the Carbon Reduction Project was captured in a paper to the Vice Chancellor's Committee, being the senior management committee within the University. The paper was entitled "Environmental Sustainability – Carbon Reduction Strategy" and took the form of an information paper with some key infrastructure project recommendations designed to achieve significant carbon emissions reductions consistent with the Strategic goal.

The paper summarised the work that had been done prior to and through the Carbon project, including a discussion on the 2009 Audit and GHG baseline and projecting the impact of implementing the infrastructure proposed. Of particular significance was the 64% projected reduction by the end of 2014 if all projects were adopted.

³¹ Artefact references in the Project Closure Report are not relevant to the artefact references in this thesis.

This paper was initially introduced to the Vice Chancellor's Committee, and went on to the Finance and Facilities Sub-Committee of University Council and in both forums the strategy was endorsed.

Further discussion of the "Environmental Sustainability – Carbon Reduction Strategy" is included in the introduction section for that artefact (28).

4.7.4 Academic Outcomes

The academic culmination of the Carbon Reduction Project was expressed in a paper for submission to Emerald Insight. At the time of writing this thesis the paper is undergoing author editing to align with Emerald's submission parameters.

A full copy of the paper and discussion of the academic outcomes of the project are included in Chapter Five of this thesis (Artefact 30).

4.7.5 Project Closure Report and Artefact 27

The operational culmination of the Carbon Reduction Project was captured in the Project Closure Report. As with the SAM Project, there were two versions of the closure report produced. The full version (as provided at Artefact 27) was for academic assessment within the DPST program. The 'lighter' version, minus the academic references, was provided to the Chief Operating Officer as the project client.

The Project Closure Report summarises the status of the individual tasks and importantly identifies any outstanding tasks or actions required to be undertaken post closure. It also provided a detailed schedule of the primary tasks undertaken and a more complete indication of the scope and deliverables actually achieved through the project as compared to the initial list of project deliverables expressed in the Project Plan document.

At the time of closure the project had delivered approximately 83% of the tasks identified on the final project task schedule. Noting that the final task list expands at a detail level the broader areas of activity (deliverables) described in the original Project Plan.

The expansion of the project in terms of its achieved outcomes has been facilitated in part due to the Action Research approach and the ability to change and develop the project in response to the progressive learning gained through the implementation.

The structure of the report provides clarity of the percentage complete and a brief supporting narrative sufficient to place that percentage in context and identify specific action items (where appropriate). The task is then linked to the Project Plan goal ID for ease of reconciliation and understanding, and finally references a particular artefact to evidence the claim against progress.

The combination of operational and academic approach contained within the report was particularly effective and exceeded normal operational project reporting, where (in the USQ environment) artefacts would not generally be sought to evidence progress.

As can be seen from the report, there is a mix of operational and engagement activities to carry forward, including:

- Re-visit the internal carbon tax initiative
- Pursue policy changes
- USQ standards revision
- Continuous improvement of carbon and eco reporting
- Unit level targets and reporting for carbon emissions
- Increase partnering and collaboration
- Increased use of various media (web, social media, local press)
- Smart displays in public areas (one is now installed in the Student Learning Commons)
- Public access to the Carbon Management overview screens
- Eco champion network
- Completion of smart meter infrastructure (phase 3)

These items will transition to the business as usual environment and be developed and delivered as part of a growing competency and capability within the Campus Services division and as a changed way of thinking for the USQ community generally as it engages with the carbon reduction challenge within its internal, elemental spheres of activity and responsibility.

4.7.6 Artefact 27



DPST Project Closure Report

Project Title: Carbon Reduction	Project #:
Student name: Dave Povey	Project Sponsor: Chief Operating Officer, USQ

Reporting Period: OCT 09 – DEC 11	Report #: 18
--	---------------------

Project Introduction:

At the outset of this project USQ had expressed via its 2009-2013 Strategic Plan an aspiration to be carbon neutral by 2020.

As a result of the project, the University of Southern Queensland has, for the first time, gained an understanding of its carbon footprint and subsequently started to develop and embed the systematic management necessary to achieve the ongoing reduction of contributing emission sources. In particular it has now recognised the importance of appropriate and effective investment in alternative energy provision and low carbon systems infrastructure. In addition to the numerous operational and infrastructure improvements made and those yet to come, there has been significant development of the professional knowledge and expertise of the various members of the project team and the wider USQ community in dealing with carbon reduction management.

This project has identified a USQ specific strategy, which if fully implemented, is projected to achieve carbon reductions of >60% by the end of 2014.

Carbon reduction 2009 baseline CO₂-e rating:	Carbon reduction CO₂-e actuals:	
	2009	2010 2011
Scope 1 (direct)	771	835 719
Scope 2 (indirect energy)	14906	14048 12890
Scope 3 (all other indirect)	1051	1022 826
Total	16728	15905 14435

Project Goals: The Project Plan required the following deliverables:

The project has the following deliverables:

1. Environmental Audit in line with GRI G3 reporting framework for 2009
2. Definition of ongoing process for maintenance of reporting
3. GHG emissions inventory establishing 2009 baseline

<ol style="list-style-type: none"> 4. Campus ecological master plan 5. Policy review, amendment and development as appropriate 6. Standards and templates review and development as appropriate 7. Identification, planning and staged implementation of environmental projects 8. Implementation of metering network 9. Improved understanding and participation by the USQ community regarding carbon emission reduction 10. Case study for Higher Education Sector 			
<p>Status: Achieved: 1,2,3,4,7,8,9 Amended: 10 will be created from DPST paper</p>			
		<p>In progress: 5 and 6 Failed or cancelled: Nil</p>	
<p>Overall Project - Closing Summary: At the time of closure, the project has achieved 85% of all tasks. The 'Operations' dimension group of tasks has been very successful and feasible solutions have been identified and developed for USQ, consequently forming the backbone of the 2011-2014 Reduction Strategy. The 'Community', 'Campus Life' and 'Governance and management' dimension task groups have also seen significant progress with a number of items carried forward post project closure. Generally these carry forward items are the ones that align with the ongoing 2012 engagement activity. The 'Teaching and Learning' task group has laid the foundations of closer collaboration between academic and operational activities, adding value to both those activities and additionally, contributing to both the engagement goal and the University's research profile. The project has moved USQ Campus Services (CS) forward significantly in terms of improved data, information, systems and processes, and also the increased knowledge, experience and engagement of the individuals within CS. From a strategic engagement perspective the project has been able to culminate with two significant deliverables. The first was the presentation of the 2011-2014 reduction strategy to the NOV 11 meeting of the vice Chancellor's Committee, and the second is in the form of reductions achieved to date through the delivery of the project. Other noteworthy outcomes include; the positioning of the USQ community to engage with a wider sustainability project, and; specific research opportunities associated with the photo-voltaic and tri-generation infrastructure projects, and; academic access and use of the carbon management software and USQ data. These outcomes represent a comprehensive and holistic approach to carbon reduction management in a University environment and, if the strategy is fully implemented, would demonstrably place USQ at the leading edge of carbon reduction activities in the Australian University sector.</p>			<p>85%</p>
	<i>Significant issues to resolve</i>		<i>On track, no problems</i>

Key Dimensions and tasks - closing status:						
Operations					93%	
<i>Tasks, Outcomes</i>	<i>Milestones</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID</i>
Conduct environmental audit		Complete	Nil	Impacts on all	100%	
Conduct audit	Waste	Complete	Nil	1,4,5,9	100%	
Eco transformation master plan		Complete	Solution implementation	4,7,10	99%	
Review and enhance recycling initiatives		Public areas, kitchens, bins & signage done.	Environmental Officer to include more recycling content in engagement plan for 2012	7,9	100%	
Infrastructure Metering	-	1 st and 2 nd stages done.	Ongoing subject to funding	7,8,9	100%	
Infrastructure - High efficiency lighting		1 st and 2 nd stages done.	Ongoing subject to funding	4,7	64%	
Infrastructure - Hand Dryer/Zip WH timers	-	Complete		4,7	100%	
Supply chain review		Investigated but considered minimum value at this stage	Consider in future sustainability project		0%	Note 1
Carbon Management Software		Complete and operational	Refine dashboard format, finalise user testing	2,3,9	99%	
Energy Audit		Almost complete, draft report received	Finalise report and adopt recommendations as appropriate	3,7	86%	
BMS initiatives for energy reduction		Some initiatives in place, but the bulk awaits the Energy	Act on the Energy Audit recommendations	3,7	35%	

	Audit advice				
Consider offset solutions and make recommendation	Part of 2011-2014 Strategy; green power	Post 2014 consider other options depending on progress, market and legislation	3,5,7	50%	
Governance & Management				41%	
<i>Tasks, Milestones, Outcomes</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID</i>
Green power initiative	Complete	Maintain increased % for 2012 and 2013	3	100%	
Consider Internal Carbon Tax initiative	On hold due to other major budget model changes	Revisit at 2014 strategy review	3,5,9	0%	
Presentation of Project including Audit, GHG inventory and Software to USQ Council and VCC	Complete for VCC	Present to Council in 2012.	5,9	90%	
2011 Funding provision within CAMP	Complete	Project specific funding vehicles to be finalised	4,7	100%	
Report to SBMI recommending policy changes	Initial report complete	Detailed changes to be done	5,7,9	41%	
Definition and scheduling of external reporting obligations	Identification complete	Ownership and scheduling of reporting obligations	2,5,9	80%	
Definition and scheduling of audits	Complete	Discuss with internal audit, in-house or outsource for future need	1,2,3,5,9	100%	
Definition and scheduling of external funding rounds	Being considered outside of scope by DVC(S)	Follow up with DVC(S)	7,9	0%	

Identify and develop relevant standards	Not considered	Migrate to FM and Finance standards	6,9	0%	Note 1
Sustainable procurement integration	In progress; new procurement policy includes sustainability and carbon criteria	Follow up with Finance Dept, re: application and expansion	3,5,9	50%	
Embed eco element into wider reporting	In progress	Included in some Committee reports but can be expanded, particularly carbon metrics	2,3,6,9	53%	
Define targets at Unit levels for Eco Performance Reporting	Not started, due to carbon software delay and no internal funding links	Engage with this once the carbon software is 'proven'	2,3,9	0%	Note 1
Community				62%	
<i>Tasks, Milestones, Outcomes</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID</i>
Earth Hour 2010 event	Complete	Nil	2,6,8	100%	
Earth Hour 2011 event	Complete	Nil	1,2,8	100%	
Promulgate regular eco performance reports	Not started	Include in engagement strategy	2,3,9	0%	Note 1
Open browser access to information / social media	In progress	Includes touch screen display for HUB, and web browser access to carbon data	9	50%	
Expand linkages with ACTS	Complete	Continue with benchmarking tool development and collaboration	7,9,10	100%	
Expand linkages with ASSHE	Not started, due to USA focus and lower priority	May need review due to distance and relevance	7,9	6%	Note 1

Expand linkages with TRC	In progress	Continue to seek suitable opportunities for collaboration. Bus system in particular for 2012.	3,7,9	65%	
Linkages to other State, Federal and International entities	Not started	Consider as opportunities present rather than a strategy	3,9	0%	Note 1
Initiate ESC Web pages	Complete	Nil		100%	
Review and update ESC Web pages	Minor progress	Major update of the pages is scheduled for JAN 2012	9	10%	
Smart displays	In progress	Included as part of the HUB project, follow up with Springfield via new building	9	50%	
Metering and carbon reduction web additions	In progress	Include in regular review and web maintenance regime	9	30%	
Teaching and learning				40%	
<i>Tasks, Milestones, Outcomes</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID</i>
Identify related on-campus research activity	In progress	Opportunities with FoB&L and FoES identified. Explore others in 2012	9	50%	
Develop process for linking research with real time opportunity	In progress	Environmental officer to coordinate synergies and opportunities in 2012	9	30%	
Campus Life				57%	
<i>Tasks, Milestones, Outcomes</i>	<i>Status</i>	<i>Carry forward action</i>	<i>Project Plan Goal ID</i>	<i>% Complete</i>	<i>Artefact ID</i>
Appoint an Environmental Coordinator	Complete	Nil	1,2,3,7,9	100%	

Staff engagement - eco champion network	Not started	Environmental officer to action as part of the 2012 engagement strategy	9	0%	Note 1
Eco project scheme/award/USQ environmental brand	Completed	Competition held, brand developed	9	100%	
Public event presence	In progress	Establish presence at all USQ orientation, open days etc.	9	10%	Note 1
Regular media and awareness communication	In progress	Improve reliability and scope of contributions	9	50%	
Induction material	In progress	Chancellor's opening video to be included in 2012.	5,9	95%	

NOTES

1. These items are works in progress and no final artefacts are available at this time.
2. Annexes, artefacts and other supporting documentation are provided on a separate CD labelled 'POVEY DPST – Carbon Reduction Project'.

ANNEXES

- A. Carbon Reduction Strategy paper and presentation to Vice Chancellor's Committee
- B. Implementing a Carbon Reduction Strategy at USQ (DPST paper)
- C. Project Gant at closure (19 DEC 2011)

END OF ARTEFACT 27

4.7.7 Vice Chancellor's Committee Discussion Paper and Artefact 28

As stated above, the strategic culmination of the Carbon Reduction Project was captured in the development of the USQ Carbon Reduction Strategy (2011-2014), presented in a paper to the senior management committee within the University in November 2011.

The paper was entitled 'Environmental Sustainability – Carbon Reduction Strategy' and took the form of a discussion paper with specific recommendations.

The paper described the work that had been done through the Carbon Reduction Project and all of its elements and phases, and presented that in the form of specific built solutions within the framework of a staged approach to carbon reduction. The full paper and supporting presentation slides are provided at Artefact 28.

The purpose of the paper was to gain endorsement and approval of the strategy and to engage senior leadership in the work that would need to be done to achieve the neutrality goal.

That said, the paper was structured for a high level audience with focus on the good news aspects of the strategy and achieving support for subsequent funding. The elements that it did not discuss are also of importance at an operational level. As an example, the following list is part of a continuing dialogue internally at USQ.

- The opportunities for systems enhancement and integration
- The frequency and repeatability of the GHG Audit and data maintenance of the carbon inventory
- Action around the 'non-carbon' recommendations from the Environmental Audit
- Further improvements and actions around vehicles and air travel
- Broader and alternative carbon offset opportunities
- Wider partnering and collaboration opportunities (e.g. energy providers, regional partners)
- Staff engagement and communication strategies
- Creating organisational drivers for behavioral change around car use, energy consumption, waste and recycling (i.e. introducing parking fees to fund environmental projects and reduce vehicle use)
- Corporate funding model incentives and opportunities such as an internal carbon tax, or Faculties and Business Units carrying the cost of their own carbon emissions
- Recognition and reward schemes
- Identifying and creating wider research opportunities
- Regional leadership opportunities

The paper and supporting presentation were very well received and demonstrated again the willingness of the community to engage in this type of socially and morally sound project.

Once endorsed by the VCC the material went on to the University governance environment and was presented to the Finance and Facilities sub-committee of University Council and later to University Council itself as the highest body within the University. It was endorsed at each stage.

Endorsement of the work undertaken through this project and the resultant strategy has enabled detailed discussions to begin around specific proposals for the tri-generation and photo-voltaic solutions.

4.7.8 Artefact 28



VICE CHANCELLOR'S COMMITTEE PAPER

To VICE CHANCELLOR'S COMMITTEE
From EXECUTIVE DIRECTOR CAMPUS SERVICES
Date 27 OCTOBER 2011
Subject ENVIRONMENTAL SUSTAINABILITY - USQ CARBON REDUCTION STRATEGY

RECOMMENDATION

The Executive Director of Campus Services recommends that:

1. The Vice Chancellor's Committee note the general content of this report.
 2. The Vice Chancellor's Committee endorse the 2012-2014 carbon reduction strategy.
-

EXECUTIVE SUMMARY

Following the formation of the first Environment & Sustainability Committee in 2007, the University significantly strengthened its commitment to environmental sustainability with the inclusion of a specific carbon neutrality goal in the USQ Strategic Plan 2009-2013.

In 2010 the University undertook an Environmental Audit across all areas of operations. The audit had two main purposes: the first was to create an environmental and greenhouse gas emissions baseline and the second; to provide a series of recommendations from which the University could develop key environmental sustainability strategies to assist in achieving the carbon neutrality objective stated in the Strategic Plan 2009-2013, Goal 9 Enterprise. The Environment and Sustainability Committee received and endorsed the final GRI Environmental Performance Indicator Summary Results, the Greenhouse Gas Inventory Report and the Environmental Performance Report.

The Carbon Reduction Project was developed in 2010 to deliver a carbon neutral operation across all three campuses by 2020. WSP Lincolne Scott were engaged to consider the Toowoomba Campus³² and its suitability for renewable energy solutions and low carbon technologies. This resulted in a number of feasibility studies being undertaken. A summary representation of those potential solutions and the associated cost to carbon reduction relationship is provided at Attachment 1 in the form of a Marginal Abatement Cost Curve (MAC).

³² Principles from this investigation would then be applied to Fraser Coast and Springfield Campuses as appropriate.

The recommended plan of action for the 2012-2014 period is to focus on demand reduction initiatives (retrofitting and engagement) whilst exploring cost effective implementation models for renewable energy options (photo-voltaic installation) and low GHG emissions technology (tri-generation). Provision for some internal funding for carbon reduction initiatives had been previously earmarked within the CAMP and this has now transferred to the Strategic Initiative Fund. Other funding solutions are also being sought via the exploration of potential external partnership opportunities and government grants.

Subject to achieving acceptable funding sources and instruments the proposed Carbon Reduction Strategy for 2012 - 2014 is projected to deliver a 64%³³ reduction on the 2009 baseline by the end of 2014 and include the following key elements:

- Retrofitting - potential carbon reduction 17%
 - Lighting improvements - converting old fluorescent lighting to energy efficient T5's
 - Revising heating and cooling set points to reduce plant operation
 - Solar film fitted to glazing on selected buildings
 - Installation of thermal insulation at the Residential Colleges

- Renewable Energy - 15% reduction
 - Photo-voltaic energy generation
 - Solar Thermal

- Low Carbon Technologies - 13% reduction
 - Tri-generation
 - Thermal Energy Storage

- Engagement - 7% reduction
 - Induction module
 - Position Description insert
 - Communication/events
 - Local champions
 - Project incentives

- Green power - 25% reduction equivalent via renewable energy via Electricity provider
 - 2011 - 10% 'green power' purchase
 - 2012 - 20% 'green power' purchase
 - 2013 - 30% 'green power' purchase
 - 2014 - alternative offsets identified and engaged

RATIONALE

³³ Projected reductions assume all elements implemented and indicative of the reductions achieved against the 2009 baseline by the end of 2014, and exclude additional impacts through organisational growth. Solutions focus on Toowoomba Campus initially and may be deployed at Springfield and Fraser Coast post 2014, hence the reduced 64% overall contribution rating.

Relationship to USQ Strategic Plan

Key organisational theme:

Sustainability; by placing an emphasis on activities that support sustainable futures for communities and regions locally, nationally and globally, and by USQ it's operating as a socially responsible organisation.

The Carbon Reduction Project is designed to contribute to the achievement of USQ Strategic Goals as follows:

- Goal 2 - Student experience will be enhanced through sound eco-friendly engagement at USQ and this is reflected in the 2009 and 2010 International Student barometer results.
- Goal 4 - Through the consideration of research opportunities and engagement
- Goal 5 - Staff attraction and retention is enhanced by USQ's demonstrated commitment to environmental responsibility
- Goal 6 - Educational partners will respond positively to USQ's environmental performance
- Goal 7 - Social justice is achieved at a global level as USQ becomes part of the response to Global Warming
- Goal 8 - Engagement and development through the inclusion of joint venture community projects and consideration of those opportunities as part of carbon reduction solutions; and
- Goal 9 & Goal 3 - Deliver a carbon neutral operation across all three campuses by 2020

ISSUES

Background

Following the formation of the first Environment & Sustainability Committee in 2007, the University significantly strengthened its commitment to environmental sustainability with the inclusion of a specific carbon neutrality goal in the USQ Strategic Plan 2009-2013.

In 2010 the University undertook an Environmental Audit across all areas of operations. The audit had two main purposes: the first was to create an environmental performance and green house gas emissions baseline and the second; to provide a series of recommendations from which the University could develop key environmental sustainability strategies to assist in achieving the carbon neutrality objective stated in the Strategic Plan 2009-2013, Goal 9 Enterprise. The Environment and Sustainability Committee received and endorsed the final GRI Environmental Performance Indicator Summary Results, the Greenhouse Gas Inventory Report and the Environmental Performance Report.

The key findings of the Environmental Audit relevant to this paper are:

- USQ Baseline Carbon Footprint is 16 728 tonnes of CO₂-e
- Purchased electricity accounts for approximately 82% of USQ's total energy consumption and 89% of the university's total greenhouse gas emissions
- Diversion of waste to recycling facilities has the potential for improvement on all sites from 17% (current rate of diversion) to 34% based results from an independent waste audit
- Town water supplies account for over 75% of water consumed across the three campuses. Springfield and Fraser Coast are entirely dependent on town water supplies with the Toowoomba campus using multiple sources of water (harvested stormwater & roof water, ground water as well as town water)

Following the audit a number of Initiatives were introduced to reduce energy, water and greenhouse gas emissions primarily focussed on the Toowoomba campus (because of the size and age of the facilities). The audit concluded that the implementation of energy saving initiatives on the Toowoomba campus would achieve the maximum benefits. A summary listing of energy and water saving initiatives are listed in Attachment 2. Attachment 3 provides a table of the original GHG inventory findings that act as the 2009 baseline, plus data for 2010, 2011 year to date data, and forecast end of year values for 2011.

The Carbon Reduction Project was developed in 2010 to deliver a carbon neutral operation across all three campuses by 2020. One of the key deliverables of the overarching project is the Campus Ecological Transformation sub-project which involved developing a range of ecologically sustainable development initiatives to feasibility stage. Solutions which were investigated included solar energy capability, waste reduction, the conversion of waste to energy, ground source cooling and heating opportunities tri-generation and co-generation design, biomass, existing building energy and sustainability retrofits as well as the delivery of a campus ecological master plan. With the Toowoomba Campus contributing 80% of the University's scope 2 (purchased electricity) carbon emissions it was agreed that the primary focus of this sub-project would be the investigation and implementation of suitable renewable energy and low carbon technologies. That said, water capture, retention and management solutions were also considered.

Across the various stages of the project, feedback has been received from members of the Carbon Reduction Working Party and Project Control Group as well as the Environment & Sustainability Committee. The series of Greenhouse Gas (GHG) abatement technologies investigated the cost effectiveness of both the individual and combined technologies as well as the cost of purchasing GHG credits.

The final WSP report summarises the combined integration of these technologies noting the GHG reduction potential and cost of achieving GHG abatement. Following the exclusion of initiatives that were deemed to be not viable at this time, the external consultants have predicted an onsite GHG reduction of 50-60% can be achieved.

Moving to the National environment, the proposed Federal Government carbon pricing mechanism is scheduled to commence on the 1 July 2012 with a starting price of \$23/tonne rising annually by 2.5% until 2015. From the 1 July 2012 the carbon price will move to a more flexible price structure under an emissions trading scheme.

Industry advice obtained with regard to the impact of the recently introduced Clean Energy Legislation has confirmed that although USQ is not directly liable³⁴ the university will be exposed to higher costs as the impost of the carbon price is passed on through the supply chain via products and services purchased. The area of most significance for the University will be in the purchase of electricity and gas (USQ annual expenditure for electricity and natural gas for 2010 was \$1.8M and \$105K respectively). Electricity tariffs are expected to increase annually between 6-12%, while gas predictions suggest annual increases of around 6%.

There is strong indication that electricity generation in Australia will dramatically change with the Federal Government encouraging investment in renewable energy (solar & wind) and low carbon technologies (gas). The Government has a Renewable Energy Target (RET) which will see 20% of Australia's electricity to come from renewable energy sources by 2020. To facilitate that movement in the supply industry, the Government is proposing to invest \$10B in the Clean Energy Finance Corporation to invest in renewable energy, low carbon and energy efficient technologies. Funding opportunities will be available for USQ under the Clean Technology Program with \$1.2B allocated for early stage clean technology grants.

Benefits

The 2012-2014 carbon reduction strategy has the following benefits

- Reduction in the organisation's carbon footprint as required by the USQ Strategic Plan
- Reducing USQ's exposure to the potential impact of a carbon tax
- Reputation as a socially responsible organisation through a proactive approach to the reducing global carbon emissions
- Tri-Gen and PV technologies will reduce USQ reliance of power grid supply reducing continuity of supply risks (BCP resilience) and price fluctuation risk.
- Opportunities exist now for USQ to collaborate/partner with renewable energy providers, consistent with Government direction and initiatives

Risks

- Insufficient funding (via internal and external funding sources) impacting on the organisation's ability to proceed with major carbon reduction initiatives
- Engagement outcomes will need whole of organisation support to be successful and benefits sustained

RESOURCE IMPLICATIONS

Financial Resources

³⁴ USQ emissions are below the capture thresholds

- Internal funding dependent upon the scale of the particular activity might be available via the Strategic Alignment Fund, the CAMP or MNW program (if MNW is re-introduced for future years)
- External funding via grants, EIF, State and Federal initiatives
- Alternative funding solutions - partnership opportunities, sponsorship

Human Resources

- Campus Services and members of the Carbon Reduction Project working group and project control group are already engaged in various elements of this strategy

Information Technology

- Addressed within project specific requirements, but considered minimal
- Consideration of server room cooling loads for tri-generation plant efficiency

Asset Management

- Future space requirements to implement carbon reduction initiatives have been addressed in the individual feasibility studies with any future cost implications clearly outlined. To illustrate;
 - Locations for PV arrays will be dependent on the size of the area and infrastructure for grid connectivity. Locations may vary from roof top to the construction of covers for existing car park areas or a 'green field' array farm.
 - Tri-generation is likely to be located in close proximity to K7 to maximise the cooling load opportunity.

CONSULTATION

External

- Opus International - Environmental Audit
- Envirocom - Waste Audit
- ARUP - Scoping Documentation Ecological Transformation Project
- WSP Lincolne Scott (Built Ecology) - Ecological Transformation Project feasibility studies, and current Level 2 Energy Audit
- Infinity Solar - Large scale solar deployment and review of the business models
- AGL - Energy Profile
- Ergon Energy - Energy Profile, and current Power Factor Correction review

Internal

- Environment & Sustainability Committee - Reviewed and endorsed Environmental Audit Reports and Ecological Transformation Feasibility Studies and Pathways to Carbon Neutrality Report
 - Carbon Reduction Project Control Group - Reviewed Ecological Transformation Feasibility Studies and Pathways to Carbon Neutrality Report
 - Carbon Reduction Working Party - Workshopped and reviewed Ecological Transformation Feasibility Studies and Pathway to Carbon Neutrality Report
-

IMPLEMENTATION

The Environment and Sustainability Committee have oversight of the Carbon Reduction Strategy. Project delivery governance is provided by the Project Control Group, whilst operational delivery is affected by the Working Group, Environmental officer and Campus Services.

EVALUATION

- The 2009 audit and GHG baseline report has been reviewed by Campus Services and the Environment and Sustainability Committee and has previously been made available to VCC and F&F Committee
 - An internal Quality Assurance review of the viable feasibility studies is currently being conducted by USQ Financial Services. Feedback to date suggests a number of queries around detail and assumptions with the retrofit study, and general acceptance of the tri-gen and PV studies. All queries raised were valid and will be addressed as part of the development of detailed proposals.
-

ATTACHMENTS

- Attachment 1 - MAC profile
- Attachment 2 - Summary of environmental and sustainability initiatives
- Attachment 3 - USQ carbon emissions table

Additional information relevant to the submission can be accessed from VCC SharePoint Site

RESPONSIBLE OFFICER

Dave Povey

Executive Director, Campus Services

ENVIRONMENTAL SUSTAINABILITY & USQ CARBON REDUCTION STRATEGY

Presented by: Dave Povey
Executive Director, Campus Services
Chair Environment and Sustainability Committee

Background and mandate

- Formation of the Environment & Sustainability Committee in 2007
- Environmental Management Policy 2007
- USQ Strategic Plan 2009-2013 , Goal 9, commitment to carbon neutrality across all three campuses by 2020
- Environmental Audit 2009/2010
 - 2009 Baseline
 - GRI G3 Report
 - GHG Inventory
 - Environmental Performance Report

2009 – 2011 activity

- Energy efficiency initiatives
 - Retrofitting T5 and LED lighting
 - Installation of hot water timers
 - Reduction in incandescent lighting
 - BMS control adjustments
 - Plant re-commissioning
- Smart Metering Project
 - Electricity, gas and water meters connected to the BMS

2009 – 2011 activity

- 10% electricity supply 'Green Power' for 2011
 - Government accredited renewable energy program (no net greenhouse gas emissions)
- Sustainable transport solutions
 - Greening of fleet vehicles
 - Provision of two 'End of Trip' facilities

2009 – 2011 activity

- Water saving initiatives
 - Buildings 01, 02, 03 and K5 now use 100% harvested rainwater
 - Conversion of single flush toilets to dual flush systems
 - Water solenoids on timers
 - Flood mitigation system and storm water collection
 - Reusing water from air-con cooling towers for irrigation

2009 – 2011 activity

- Responsible waste management
 - Campus wide waste audit (2010)
 - Installation of a weigh bridge to monitor waste removal
 - Recycling programs – Paper, Cardboard, Co-mingled & E-waste
 - Grounds waste mulching
 - Furniture recycling

2009 – 2011 activity

- Carbon Reduction Project
 - Multi-faceted approach:
 - Campus Ecological Transformation
 - Engagement
 - Partners
 - Infrastructure
 - Monitoring and management


Campus Ecological Transformation

- Campus Ecological Transformation sub project
 - Infrastructure focus
 - Feasibility studies for various technology based solutions at Toowoomba

Technology	Estimated Cost (\$)
Hydrogen	~\$100
Retrofits	~\$100
PV	~\$100
Solar Thermal	~\$100
Ground Colleges	~\$100
Wind	~\$100
Ground O Block	~\$100
Biogas	~\$100
Biomass	~\$100

Renewable energy

- Photo-voltaic
- Infinity Solar
 - large scale solar deployment for 2012
 - 1.6MW ground mounted system
 - Two business models
 - EPC - Engineer, procure and construct
 - BOO - Build, Own, Operate
- Potential GHG abatement ~ 2200 tonnes GHG/year = reduce emissions by 15%

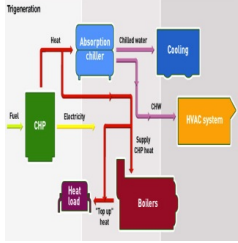


UNIVERSITY OF SOUTHERN QUEENSLAND
www.usq.edu.au

fulfilling lives

Low Carbon Energy

- Tri-generation
- AGL
 - 1 MW system operating 24/7
 - Two business models
 - EPC - Engineer, procure and construct
 - BOO - Build, Own, Operate
- Potential GHG abatement ~ 1760 tonnes GHG/year = reduce emissions by 13%




UNIVERSITY OF SOUTHERN QUEENSLAND
www.usq.edu.au

fulfilling lives

Retrofitting

- Retrofit opportunities to existing buildings
- Lighting improvements
 - represents 84% of the retrofitting GHG abatement
- Revised heating & cooling set points
- 'V-Kool' low-e coating glazing on windows
- Thermal insulation at Residential Colleges
- GHG abatement potential ~ 2360 tonnes GHG/year = Reduce overall emissions by 17%

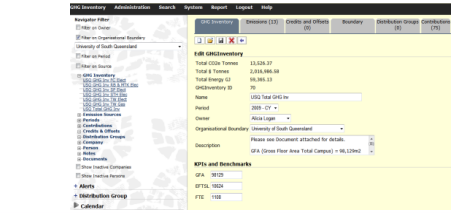


UNIVERSITY OF SOUTHERN QUEENSLAND
www.usq.edu.au

fulfilling lives

Monitoring and Management

- Carbon Management Software – emissions based inventory primary purpose to capture carbon usage and monitor overall environmental performance
- Information available to staff and students and academic use




UNIVERSITY OF SOUTHERN QUEENSLAND
www.usq.edu.au

fulfilling lives

Engagement and Partners

- Institutional Membership of Australasian Campuses Towards Sustainability (ACTS) and Association for the Advancement of Sustainability in Higher Education (ASSHE)
- Sustainability Awareness Module integrated into the induction process for all USQ staff
- Staff/Student Engagement Activities
 - Earth Hour Event,
 - Ride to Work Day
 - PD inclusion
 - Green Office Programs (2012)
 - Environmental Website
 - TRC, AGL, ERGON, Infinity Solar




UNIVERSITY OF SOUTHERN QUEENSLAND
www.usq.edu.au

fulfilling lives

2012-2014 Strategy

- Potential overall reduction 64%
 - Retrofit 17%
 - Renewable Energy 15%
 - Low Carbon Energy 13%
 - Engagement 7%
 - Green Power 25%



UNIVERSITY OF SOUTHERN QUEENSLAND
www.usq.edu.au

fulfilling lives

END OF ARTEFACT 28

4.7.9 Phase conclusion



The Project Closure Report provided a detailed and transparent assessment of the state of the project at the time it was closed off, and at that time overall progress was assessed at 83%.

The SAM Project had exemplified a facet of undertaking work based learning projects whereby the researcher practitioner not only has an academic interest but an ongoing operational responsibility for the project which survives the academic connection. The Carbon Reduction Project re-enforced that observation through similar experience.

It was therefore important for the project team not to lose sight of the residual tasks and to determine which of those was required to be continued post project, potentially through the various business-as-usual mechanisms available within the organisation.

The major carry forward items from the Carbon Reduction Project were:

- Technical elements: The smart metering project was split into phases to align with the available funding and to recognise the magnitude of the task. Consequently there are three more phases to come. The interactive display screen was only recently finished and operational, this will be developed further and more screens located around the campus
- Policy development and amendment: As previously discussed these were identified and passed to the responsible internal unit for action. The policy changes are required to reinforce the principles and practices that are seen as essential to the ongoing consideration of environmental and carbon reduction imperatives
- Facilities Standards: Whilst this task is based in the SAM Project there is a layer of environmental and carbon reduction consideration which needs to be included within the developed standards
- Engagement: This is an area where there are always new opportunities to improve or expand the communication, perhaps as a result of events, knowledge, initiatives or technical media and platform developments.

The Closure Report template was an effective mechanism for capturing and communicating the status of the project and reducing the risk of the remaining tasks being 'missed' as the team members refocused on their operational environments. Equally it provided an effective link between the project detail and the artefacts to facilitate the robust progressive assessment of this WBL project.

Examples of other templates developed through this project and now operational within USQ include, Energy Efficiency Proposal, GHG Inventory, Corporate Reporting GRI G3 template, Environmental Report, Online collaboration (SharePoint) site standard format, and Project Plan template.

In addition to the carry forward tasks (incomplete through implementation phase) there are also a number of new or subsequent projects. These take the form of the infrastructure projects referenced within the Carbon Reduction Strategy and also new activities (or tasks) emerging from the changing environment at USQ, and items from the original project environment, that were deferred or parked for post project consideration. These include:

- Photo-voltaic array infrastructure – Carbon Reduction Strategy project
- Tri-generation plant infrastructure - Carbon Reduction Strategy project
- Building retrofit solutions - Carbon Reduction Strategy project
- Vehicle fleet selection, rationalisation and management project – emerging initiative
- Carbon management software – open access and integration with Data Warehouse – emerging initiative
- Toowoomba Regional Council – emerging interest in research and collaboration
- Photo-voltaic array research and partnership opportunities – developing synergy
- Wider sustainability project – deferred original scope proposition, may now be appropriate
- Interactive campus displays – expanded scope to include campus maps, way finding and smart phone applications (much more utility and engagement than the original power and carbon data display)
- The possible transfer of ownership of the next round of the Environmental and GHG Audit to the USQ Internal Audit Office, thereby embedding the corporate ownership and significance of these exercises and separating the responsibilities between Campus Services for goal delivery and Audit Office for monitoring performance.

The Carbon Reduction Project perhaps requires fewer Strategic Linkages for it to be sustainable than the SAM Project. To clarify, the SAM requires early planning and information linkages to inform portfolio planning, development and management. It also requires appropriate enterprise business case development and approval processes and systems if USQ is to maximise the value from the SAM implementation. Whilst the sustainability of the Carbon Reduction Project does not depend on these planning linkages, it does require more capital investment initially to establish the required infrastructure, and thereafter will rely as much upon community engagement (through consideration and acceptance of the need for carbon emissions reduction at a unit and individual level) as it will on policy and systemic solutions.

One perspective on this is to question how USQ intends to develop its portfolio of products set in the environmental context. Albino et al (2009) provides useful discussion on the relationship between green 'product' development and environmental strategic approaches, which may assist future USQ focus.

The ongoing dissemination and development of tools and interfaces created through the Carbon Reduction Project (i.e. carbon management software integration, smart metering, energy efficiency proposal, environmental project funding, communication and information media, smart displays) will continue to be a priority.

As previously above, whilst there remain some strategic linkages that require strengthening, or have yet to be built and embedded (i.e. sustainable procurement at all levels, funding provision, carbon consideration in all business cases, formal staff and student communication and engagement instruments), the key objective is to achieve a philosophical understanding and acceptance of the importance and benefits of carbon reduction and environmental awareness more generally.

The early elements and implementation frameworks (included in Figure 14 and Artefacts 14 and 15) remained appropriate and were a useful way to crystallise the various elements of the project for multiple audiences (Environment and Sustainability Committee, Working Group, Governance Group, FM staff, wider USQ communication) in support of a successful project delivery.

4.8 Carbon Reduction Project conclusion



Figure 23 below describes the primary challenges of the Carbon Reduction Project as identified at the Carbon Getting Started paper (Artefact 14) and comments on the accuracy and outcome of those projections:

Challenge	Reflection
1. Designing a carbon reduction strategy that is compatible with the USQ corporate mindset and financial situation	The strategy for the period 2012 to 2014 was developed after significant research and options analyses. It has three main elements based on key infrastructure improvements and changes. Internal approvals are being sought for the PV array and will be followed by the tri-generation and retrofit solutions. The solutions are compatible with USQ corporate and financial environments and demonstrate acceptable pay back and return on investment performance for the infrastructure proposed
2. Designing a carbon reduction strategy that demonstrates and delivers value as perceived by the organisation	The strategy is projected to deliver value through a mix of hard and soft benefits, by: <ul style="list-style-type: none"> • Achieving sound financial performance (8% ROI) • Providing reduced risk in terms of grid supply price volatility and reliability of supply (interruption) • Providing an enhanced research platform • Providing visible commitment to carbon neutrality and social responsibility • Providing an opportunity for regional leadership • Providing a catalyst for regional engagement and

	<p>collaboration</p> <ul style="list-style-type: none"> Increased staff and student engagement
3. Implementing the strategy in a setting where there are many competing priorities.	<p>The strategy independently provides a sound return on investment, but when the soft benefits (described above) are also considered, the two combine to deliver a compelling business case.</p> <p>The USQ environment has intensified in terms of competing funding requests, particularly in growing research activity. The elements of the strategy have been developed to maximise the contribution to creating new research opportunities in support of this parallel goal.</p>
4. Achieving improved coordination of environmental efforts and increasing value returned.	<p>The project has significantly improved communication and information relating to carbon reduction and environmental knowledge and specific organisational activity in these areas; an Environmental Officer was appointed and a high profile 'shop front' office created in the main quadrangle. All of these measures have assisted in overall coordination. Examples include; an energy study of the University Colleges by an academic unit, sponsored via Campus Services; the introduction of carbon management software available to all staff and students and used by academic staff in their courses.</p>
5. Implementing the project as an additional task for all concerned rather than with dedicated resources.	<p>This transpired to be less of a risk than anticipated due to the two different approaches applied through the project. The initial audit work and CET sub project were undertaken by the Environmental Officer and me (using external resources as required) with governance oversight by the Environment and Sustainability Committee. As the CET sub project and the carbon management software developed momentum, the Working Group and Project Control Group were established. In summary the delivery and governance structures were aligned with the phases of the evolving project resulting in a reduced workload for all and an aligned relevance for those supporting the project. Continuity of knowledge and ownership vested with the Environmental Officer and me, and independently with the COO as the overarching sponsor.</p>
6. The organisation's approach to the wider dimensions of sustainability is developing and there is a risk that I may subsequently be unable to manage or deliver this project in the way I have planned.	<p>This risk did eventuate into a reality and the project focus was shifted from one of sustainability to carbon reduction. That said a number of environmental elements were delivered within the project that do not have a direct relationship to carbon reduction (i.e. water conservation, staff and student engagement, student garden).</p> <p>The aspiration that a wider sustainability project may become more viable as a result of the education, engagement and achievements of this Carbon Reduction Project is an increasing reality and will be the subject of further work by me.</p>
7. This project will consider feasibility studies	<p>The ESD sub-project feasibility studies were developed as part of the CET sub-project. They included PV, solar water heating,</p>

<p>for a number of technically based ESD sub-projects that will potentially be significant for the USQ carbon footprint. There is a risk that the USQ will not be in a position to fund the sub-projects (internally or externally).</p>	<p>tri-generation, ground source heating and cooling, waste to energy, bio-mass, retrofit, centralised services and alternate HVAC.</p> <p>Using the MACC model the University determined that the maximum benefit would be gained from the PV, tri-generation and retro fit components and these were developed in to full blown costed feasibility studies on the basis that they were essentially self funding over time. Options for initial capital sourcing were investigated and included, self-funding, a range of federal and state initiatives, build, own operate models, and state government lending. All of these options exist and are under current consideration in regard to the PV array element.</p>
<p>8. Integration of environmental impact and carbon footprint within all FM activities requires development, education and engagement of FM staff</p>	<p>This will be an ongoing focus but significant progress has been made. Examples include on campus vehicles have moved to all electric, tools are being considered (i.e. staff are trialling electric and rechargeable hand tools, including grounds staff). Design and project staff are more regularly considering and implementing ESD principles and features such as natural light, furniture recycling and selection, light fittings (LED) and the inclusion of green walls or equivalent bio features into spaces.</p>
<p>9. Creating the engagement, systems and process required in partner areas within the University to ensure that strategic and operational interfaces are established and provide the two way data flowed required to achieve the objectives of the project</p>	<p>As previously discussed, this is less of an issue than for the SAM Project. That said, desired linkages are:</p> <ul style="list-style-type: none"> • Improved data automation and capture, feeding into the carbon software • Procurement systems capture quantity at all levels for items of interest • Waste measurement and integration with supplier contracts • Funding model revisions to create appropriate behavioural drivers • Improved reporting transparency and representation at the highest level • Carbon impact section included in all business case development
<p>10. There is a risk that the USQ may simply modify the strategic goal to suit other priorities or imperatives of the University</p>	<p>At the outset of the project, when the carbon neutrality goal was merely an aspiration, this risk was particularly valid, and of course it may always be a risk. However, the probability of that risk eventuating is considerably less today than at the start of the project. The communication, engagement, and positive feedback received throughout this project have affirmed the University community's sense of value and support for USQ in becoming carbon neutral. There is a sense of pride apparent in this community contribution that transcends the simple financial benefits, and which is evidenced in my every day interactions with staff and students.</p> <p>The identification and demonstration of the 'soft' benefits has significantly helped to secure the investment required to</p>

	deliver on the infrastructure projects that form an essential part of the Carbon Reduction Strategy.
--	--

Figure 23 – Carbon challenges review

In summary, the project challenges and aspirations as originally identified were relevant and in some cases remain so, although the probability attached to the risks has significantly reduced.

Figure 24 below provides the risk mitigation measures proposed within the original Carbon Getting Started paper (Artefact 14), and reflects on the effectiveness of those measures.

Mitigation	Reflection
1. Establishment of a PCG for governance	The PCG was established later in the project and worked well, balancing the CETS and carbon management software components strategic alignment with operational performance. The Environment and Sustainability Committee oversaw early activity.
2. Membership of PCG to include 'key' Planning and Finance executives	The key executives included in the PCG were also represented on the Environment and Sustainability Committee. This assisted with implementation of the project but did not achieve the level of ownership within their respective areas of responsibility that was originally hoped for.
3. External peer review member	In fact an internal professor was appointed to this role and was very successful providing subject matter expertise on a number of occasions. Specific examples include; review of the Marginal Abatement Cost Curve; the conduct of related research projects, the detailed functionality of the carbon management and reporting software.
4. Establishment of a Working Group comprising members of Campus Services at all levels	As previously discussed; whilst this approach was successful there was a different form of engagement with participants adopting a more territorial mindset. There was not the same level of ownership of the Carbon Reduction Project as was evidenced in the SAM Project. Reasons for this changed dynamic may include; project fatigue, workload, sense of relevance, reduced breadth with a system specific focus, the role of the Environmental Officer was perceived as being aligned with most of the tasks and therefore the owner of them.
5. PCG and WG meetings scheduled on the corporate calendar system via Outlook	This approach allowed the project to be treated as business as usual (to an extent). It was helpful in socialising the project and reducing the administrative workload, particularly the online collaborative workspace.
6. Individual one-on-one meetings as required to progress individual tasks and support resources	This occurred routinely, almost on a daily basis with the Environmental Officer but regularly with others as warranted. The Environmental Audit, the Carbon Software and the smart metering feature as elements that required significant offline discussions.
7. Establish provisional	This was done and certainly raised the profile of the project

funding allocations within the capital asset management plan for the sub-projects from 2012 onwards	through the scale of the place holder entries in the Capital Plan. Mid way through 2011 the entries were removed on the basis that the projects would largely be self funding and therefore could be argued as stand alone investments bidding into a recently created 'spend to save' fund. The reality of that has been less than hoped, as the new fund was over committed the moment it was created. On reflection, I ought not to have agreed to the removal of the place holder funding until the detailed and costed proposals were known.
8. 10% green power from 2011.	The 2011 and 2012 green power offsets have been implemented and are a part of the overall strategy. The 2011 offset was agreed early in 2010 and was a positive indicator of the commitment of the organisation. There was significant discussion around whether the green power offset was the most appropriate or cost effective. The ESC accepted the credentials of the offset more readily than anything else available at the time, noting that there were lower cost options available.
9. Develop a prioritised strategy for carbon reduction that reflects the changing footprint	This has been achieved against a robust background of data and technical advice delivered via the Audit, GHG baseline and CET sub-project. The Strategy (provided at Artefact 28) was the key deliverable from the project.
10. Public and media celebration of all significant 'wins'	Every opportunity was taken to publicise completed tasks and events. Specific examples include, planting of particular flora to provide habitat for an endangered butterfly species, water systems were the subject of newsletter and media release, the environmental web site launch was subject to internal and external media articles, Earth Hour featured each year, the release of the keep cups and the environmental charter was the subject of an internal media release. All of these helped to provide evidence of the University commitment and activity and fostered interest and engagement from its staff and students.
11. Establish the systems, processes and framework required to maintain USQ's carbon monitoring, management and reporting, including the GRI G3 return.	The systems have been established but require more manual collation and manipulation that is desirable and achievable (in my view). The GRI G3 report has been completed for the past two years via the Environmental Officer and me, and this might migrate across to the Corporate Reporting unit in due course, providing an element of independence in the determining and reporting of the results.
12. Comprehensive documentation and explanation of each stage	This was generally achieved as evidenced by the Artefacts within this thesis. The role of communication was crucial in managing expectations, particularly around the shifting focus to carbon reduction, and the time line for the project. It would be reasonable to say that the majority of staff had not considered the significant volume of work in collecting and analysing the data required for the project and the subsequent

	development of appropriate ESD infrastructure solutions.
13. Regular reporting to the Chief Operating Officer and Vice Chancellors Committee	Achieved and appropriate to the project. This was generally delivered during meetings with the COO and via environmentally focused sections within reports to the VCC and Finance and Facilities Committee. Refer to the Learning Journal excerpt below.
14. Linkages to the Strategic Asset Management project	Primarily the linkages to the SAM Project related to integration within appropriate FM standards, consideration of carbon impacts within business case templates, new project design and delivery considerations, capital funding, generation infrastructure, and smart metering.

Figure 24 – Carbon mitigation review

In regard to item 10 (media) of Figure 24 above, my learning journal from the time records:



29 JAN 2010³⁵: *“Launch of the Going Green at USQ web site. Long awaited and very visible sign of environmental progress and appreciation...Great opportunity for highest level media coverage, senior management buy-in and to raise awareness of the project”*.

In regard to item 13 (reports) of Figure 24 above, my learning journal from the time records:



13 MAY 2010: *“Developed April report...still too many operational items and struggling for a final form...amend as SAM and Carbon Zero progress”*.

In summary then, the challenges and risk mitigation strategies suggested at the outset were appropriate and generally effective in support of project implementation.

As stated within the Project Plan, the project had the following deliverables:

- Undertake an Environmental Audit in line with the GRI G3 reporting framework for 2009
- Definition of ongoing processes for the maintenance of carbon reporting
- Complete a GHG emissions inventory, establishing the 2009 baseline
- Campus ecological master plan (CETs)
- Policy review, amendment and development as appropriate
- Standards and templates review and development as appropriate
- Identification, planning and staged implementation of environmental projects
- Implementation of metering network
- Improved understanding and participation by the USQ community regarding carbon emission reduction

³⁵ A copy of the media article is provided at Artefact 26

- Case study for Higher Education Sector

This project has achieved all of the deliverables as stated in the Project Plan. Further as a direct result of this project, USQ has developed a mature understanding of its environmental and carbon emissions performance and footprint, including and emergent understanding of the causal relationship of the University 'portfolio'³⁶ with that footprint.

In addition it has started on a journey of community awareness and engagement and carbon reduction initiatives that will position it as a regional leader for Southeastern Queensland.

As previously discussed there are further actions to be addressed in the post-project environment that will add value to the University's mission to be carbon neutral and further position the University to successfully engage in a broader 'sustainability' project, should it wish to do so. These are:

- Re-visit the internal carbon tax initiative
- Pursue outstanding policy changes
- Complete the USQ FM standards revision
- Continuous improvement of carbon and eco reporting (form, media, breadth and depth)
- Unit level targets and reporting for carbon emissions (links to internal carbon tax approach)
- Increase partnering and collaboration (Regional Councils, suppliers, research partners)
- Increased use of various media (web, social media, local press)
- Smart displays in public areas (one is now installed in the Student Learning Commons)
- Public access to the Carbon Management overview screens (transparency, performance, engagement)
- Establish the Eco champion network (the environmental charter has provided the foundation for this)
- Completion of smart meter infrastructure (spread across multiple phases due to volume and cost) in support of enhanced reporting and local performance ownership

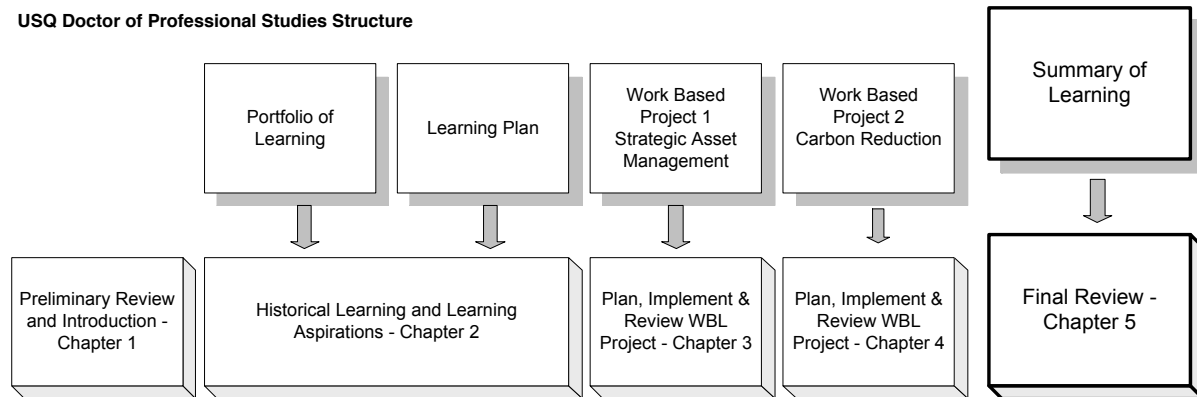
A more in depth discussion of the learnings from the Carbon Reduction Project are provided in Chapter Five of this thesis.

³⁶ The University portfolio in this context relating to the complete package of activities and assets comprising the USQ entity, all of which contribute to the organisation's footprint

5 Post-project – Summary of Learning and reflecting on my contribution



USQ Doctor of Professional Studies Structure



Thesis Structure

5.1 Chapter outline

This Chapter of the Thesis has the following form:

- Introduction
- Recapping
- Bringing it all together
- Knowledge
- Action
- Learning
- Contribution

5.2 Introduction

This Chapter will provide a reflection and summary of the learning and contributions achieved through my doctoral journey to date (as part of my DPST program study), and arising from the planning, development and implementation of the work based learning projects undertaken as the catalysts for that doctoral learning.

The learning has arisen from the synergy between the various roles I have performed throughout the journey as a practitioner researcher, student, FM professional, manager, mentor, leader and senior executive. Therefore, the resultant, cumulative learning reflects insights across a range of areas and dimensions which go to the concept of the larger

'whole' described by Cherry and Scott, (Cherry, 1999; Scott, 2004) and has led to particular insights in regard to 'portfolio mindedness' and the potential role of the FM professional in understanding and engaging with that paradigm for the benefit of their organisations.

It was these insights that prompted my particular choice of title for this thesis, capturing as it does, the significant institutional projects, their existence as portfolios within the organisation, the relationship between the portfolios and their role in defining the physical footprint of the organisation, and finally the role and importance of a 'portfolio minded' approach as a distinct evolution of traditional portfolio management paradigms.

To reinforce the approach I have taken throughout the project implementation, the form of this chapter is reflective of Cherry's (1999) Action Research 'rope' metaphor and I will reference the three strands of Action Research (knowledge, action and learning) throughout.

At the end of this chapter and by way of a thesis conclusion, I have provided a discussion of the contribution made as a result of my doctoral journey; specifically the areas where I believe (based on my understanding and experiences of current practice and knowledge) my work has been of most value to the professional and academic communities.

5.3 Recapping the thesis thus far

In Chapter One I discussed contemporary views in regard to Action Research, work based learning and various formats for professional doctorate theses. Further, I discussed the professional, institutional and personal contexts influencing my engagement with this doctoral learning journey and the particular choices I have made along the way. In that regard, I am reminded again of the words of Lester (2004) when he refers to *'the approach needing to be able to respond to the 'swamps,' 'messes' and 'wicked problems' encountered by senior professionals in their practice situations'* and part of my material in this chapter will reflect on the ability of the Action Research approach to accommodate those institutional 'swamps'.

Later on in Chapter One I discussed the nature of Action Research and the influence that the personal and institutional contexts would have on the outcome of the work based projects (the professional context having more influence on the selection of the projects). I justified the selection of the SAM and Carbon projects against those contexts, and described the common ground that exists at their intersection. I identified this common ground as being the point of origin for my approach to the study and proposed that the common ground 'driver' may be considered a proxy for the 'gap in the literature' approach, more common in traditional research doctorates.

In concluding Chapter One, I discussed my approach (and rationale) to the structure and content of this thesis and in so doing, I acknowledged the design and development of this

thesis as being itself part of the learning process and suggested it is further evidence of the maturing I have experienced through the undertaking of this doctoral journey.

In Chapter Two, I addressed the 'pre-project' phase of my journey and started by introducing myself, my experience and learning (prior to commencing this journey) in the form of a Learning Portfolio. I then developed those historical 'inputs' into a Learning Plan, creating a bridge between the past, present and future, and provided a series of logical 'planned' actions designed to achieve the future goals expressed within the Plan.

In concluding the 'pre-project' phase (Chapter Two), I introduced the initial 'DPST Getting Started' paper which represented some of my earliest learning in interpreting and developing the relationship (and its mechanical elements) between the operational requirements (arising from the undertaking of strategic institutional projects) and the requirements of academia (arising from the DPST program and necessary to eventually evidence doctoral learning). The elements contained in Chapters One and Two are some of the earliest examples from my journey that can be linked to the 'learning strand' of Cherry's rope.

In Chapters Three and Four, I moved to the project implementation phase and Chapter Three describes the development and implementation of the SAM Project, whilst Chapter Four describes the Carbon Project. Each Chapter contains sections addressing the establishment, implementation and closing phases of the respective project.

There is a significant amount of operational and academic material and artefacts contained in Chapters Three and Four that relate to the Action and Knowledge strands of Cherry's (1999) Action Research rope, including; project governance and management frameworks, operational implementation, challenges, observations and learning (across the institutional, professional and personal contexts), project management documents, project baselines and results, and excerpts from my Learning Journal to support the 'point in time' discussion and reflection.

A number of the elements contained within Chapter's Three and Four will be revisited and summarised in this final chapter as part of the summary of learning.

Before moving on to describe and discuss the detailed learning and contribution, I am mindful that this thesis, through its content and approach, comprises a significant number of elements and dimensions. Whilst I have endeavoured, through the explicit statements, figures, rich graphics and structure to guide the reader through this diverse portfolio, it is useful to consolidate the relationship into a single 'map' for the benefit of the reader, prior to describing the learning.

Therefore, in the next section I will bring together the various elements and dimensions, illustrating by rich graphic, how they have combined to achieve the doctoral 'whole'.

Subsequent sections of this chapter will then discuss the knowledge, action, learning strands and contribution, using the 'map' as the guiding framework.

5.4 Bringing it all together

As discussed above, to assist in bringing the elements of my journey together I have developed a rich graphic, provided below at Figure 25, to act as a map (or in FM parlance, an 'As Built' record) of the journey.

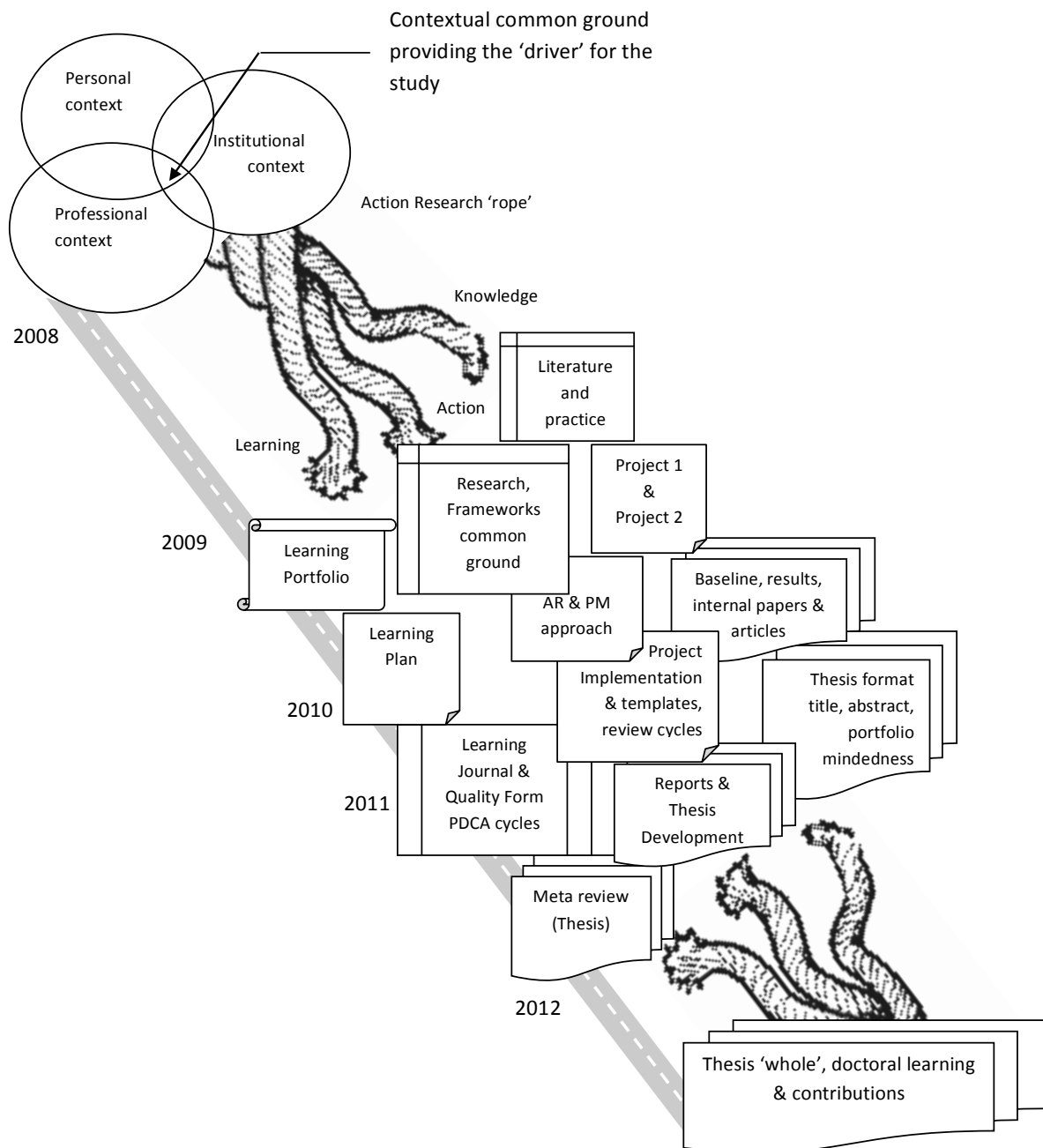


Figure 25 – 'Bringing it all together'

Figure 25 relates the three Action Research strands to the key elements of my doctoral journey and the thesis whilst also indicating the approximate time line and thereby creating a useful reflective 'map' for the reader. The allocation of key elements to each strand of the action research rope will be used throughout the rest of the Chapter as a way to categorise and present the outcomes. Under the 'Knowledge' strand I will discuss the professional and institutional knowledge; under the 'Action' strand I will discuss the academic methodology and professional practice outcomes; and under the 'Learning' strand I will reflect on my personal learning development.

5.5 The 'Knowledge' strand

This section will consider the knowledge outcomes of the learning journey, and in order to evidence that most effectively I will start with the knowledge arising from the two work based projects, captured by the academic papers generated at the conclusion of each project.

The first to be completed was the SAM Project and the full version of this paper is provided below as Artefact 29. The full version is included in order to provide an accurate view of the material produced as part of this study. The (final) version accepted for Emerald Insight publication is included at Annex H; this version is shorter as a result of the Emerald publication requirements and includes other minor changes arising from the triple blind peer review feedback.

Following the SAM Project paper, the Carbon Project paper is then provided as Artefact 30. This paper has not yet been submitted to Emerald Insight and is therefore the only version available.

Together these two papers capture the substantive knowledge (at the time of writing) arising from the implementation of the work based projects. I provide further discussion on the knowledge outcomes in regard to the thesis development and portfolio mindedness later in this section, after the two Artefacts.

5.5.1 SAM academic paper and Artefact 29

The academic paper produced for SAM was initially intended to provide a case study for internal and potentially external use. As the paper evolved it became an opportunity to create value beyond the drafting of an FM case study, and to engage with a full academic peer reviewed paper. This additional dimension increased the challenge and the learning opportunity for me as it constituted my first encounter with substantive academic writing for publication. Therefore, one of the reasons for including this Artefact is to evidence the improvement in reflection and writing achieved through the undertaking of the work.

As previously mentioned the paper was accepted by Emerald Insight for publication and I want to acknowledge again the support of my Doctoral Supervisor with what I had initially thought to be an 'academic excursion', but evolved into a significant learning experience and high point in my doctoral learning journey.

The paper itself follows a similar design to this thesis in that it is generally chronological, starting with a brief but very important discussion of what Strategic Asset Management is, moving through the institutional context, and then engaging with the project structure. The balance of the paper summarises the approach, baseline, outcomes and lessons learnt and further positions the work within the academic and professional bodies of knowledge.

The use of the TEFMA (2009b) guidelines played a big part in the early stages of the project and arguably represented the Australasian University sector understanding of best practice in regard to SAM. The utility of those TEFMA guidelines is discussed within the paper, with particular reference to the need to balance the TEFMA framework against the particular organisational environment (e.g. asset base, resources, funding environment, and information systems), leading to the need to produce a scaled and sustainable USQ SAM framework.

The paper generally seeks to address the 'what', and the 'how' of implementing a Strategic Asset Management project in a large and complex institution such as USQ, and reflects not only on the successes but also on the failures; i.e. elements that have not been able to be fully implemented. There is also some discussion of the institutional barriers encountered through the project.

Another element of the SAM learning introduced (but not fully explored) in the academic paper was the significant staff development and engagement outcomes resulting from the use of the Facilities Management staff as participants in the development and implementation of the project. This was one of the objectives and of my particular approach and decision to apply the action research approach and as such is also expanded upon later in this chapter.

5.5.2 Artefact 29



Understanding and implementing strategic asset management at the University of Southern Queensland

David Povey

Office of Facilities Management,

University of Southern Queensland, Australia

Abstract

Purpose – The University of Southern Queensland (USQ) has sought to recognise the strategic significance of its real estate portfolio through the adoption of Strategic Asset Management (SAM) principles. This paper provides a case study of the project undertaken to implement SAM at USQ. The case study sets out the various dimensions of SAM identified and implemented, the framework developed to support the project, the key outcomes and some of the key lessons learnt. The paper also outlines an implementation model and framework for other Facilities Management professionals who are seeking to enhance the strategic role of FM within their organisations, through the development of SAM.

Design/Methodology/Approach – The project incorporates the implementation of the key dimensions of SAM identified within the literature. The project adopted an action research framework to capture key outcomes and findings and employed formal project management techniques as a way of governing implementation across the multiple dimensions. The formal project was delivered over a 20 month period and wherever possible was informed by industry and USQ standard benchmarks to support the evaluation of actions.

Findings/Results – As a result of the project, the University of Southern Queensland has significantly matured in its understanding of its real estate portfolio. In particular it has now recognised the importance of appropriate and effective investment, optimal utilisation of space, the latent opportunities residing within an under utilised or 'lazy' portfolio and the significance of SAM in support of organisational objectives and priorities. Numerous operational improvements were also made and the professional knowledge and expertise of the various members of the project team was developed through this project.

Research limitations/implications – Whilst undertaken in a single organisation the case study provides information, observations and learning that can be applied in other organisations seeking to develop a SAM focus. These outcomes cover, the technical, political, structural, and change management aspects of implementing SAM. The paper also outlines a conceptual framework and implementation model (developed from the literature) that were tested during the project and may be beneficial in other settings.

Originality/value – The paper provides guidance on the considerations, implementation experiences and lessons of an organisation with extensive and diverse physical assets engaged with an enterprise level upgrade of its asset management philosophy and practice. This paper comments on a number of organisational dimensions that go beyond the traditional technical areas.

Keywords Strategic Asset Management, Assets, Facilities, Change Management

Paper type Case Study

1. Introduction

Strategic Asset Management (SAM) is an approach adopted by the Facilities Management (FM) professional that elevates the role and relationship of Facilities Management to that of a strategic partner and enabler rather than simple service provider. Its purpose is to enable the organisation to achieve its goals through the provision of appropriate asset solutions. In determining those solutions the FM professional (through the SAM process) will consider amongst other things- opportunities within the wider asset portfolio, life cycle costing, procurement choices (purchase, lease, disposal, BOOT or PPF schemes), policy, project constraints (timing, quality, cost), reuse opportunities, revenue creation, value-add opportunities. Barrett and Baldry (2003) propose FM as “an integrated approach to operating, maintaining, improving and adapting the buildings and infrastructure of an organisation in order to create an environment that strongly supports the primary objectives of that organisation”.

The key to successful SAM is in the embedding of the linkages necessary to achieve the earliest advice for the FM professional of a changing need or service level on the part of the organisation. This is essential given not only the lead times associated with the decommissioning, refurbishment or creation of new built assets but also the substantial opportunity costs associated with changing (or creating more) physical assets. The effective application of SAM permits the FM department time to consider how best to respond to that change in need; to thoroughly evaluate the changing demand to ensure all options (including non physical asset solutions) have been fully considered and the most appropriate solution is being adopted. Another significant benefit to the organisation is full transparency of the costs of the proposal through the SAM information. Too often an organisation will engage with an exciting new proposition without considering the full implications and life cycle costs of implementation. This is a particular risk where the new development is perhaps part of a funding bid process to a recurrent Federal Government funding program. Without a robust SAM approach these costs are often hidden.

Through SAM the FM professional will add value to the strategic decision making of the organisation, moving the FM Department from a position of 'supplier' to 'strategic partner'.

The University of Southern Queensland is not unique in facing the challenge of balancing numerous and various demands in a dynamic market environment. At the time of this project's inception (end of 2008) the University had completed a major change process called 'Realising our Potential' (ROP). The project was largely successful in capturing operational efficiencies through structural changes but had not engaged the hearts and minds of the University community. As a result, there were differing views around the University regarding governance and management structures and in particular the role of the corporate centre. Some considered it to be a support role to the Faculty business units (suggesting a distributed business model). Others considered it to be at the heart of the organisation having oversight of the enterprise, for the benefit of the whole (suggesting a centralised model with Faculty delivery units). Irrespective of these organisational tensions, there was limited recognition that it would make any difference to the role of FM. Other than a few individuals, there was no awareness of concepts such as Strategic Asset Management or Facilities Management as a strategic enabler. Space utilisation audits had never been done and backlog maintenance assessments were undertaken in an ad hoc fashion when circumstances or projects warranted. Neither was considered part of the normal work program or planning platform for the FM team. FM at USQ was therefore highly reactive and operationally focused. Within the FM department, the cross departmental communication and planning linkages required for FM to become proactive or for SAM to operate simply did not exist.

This meant that both inside and outside the FM department at USQ there was a significant capability 'gap'. In this regard Jensen (2007) describes four different types of relationships between FM and Corporate Strategic Planning as follows:

- Integrated strategic (fully integrated, formal and informal);
- Proactive strategic (interdependent planning occurs in parallel with mutual exchange of information);
- Reactive Strategic (FM reacts to but does not influence organisational strategic planning)
- Passive Non-strategic (FM has an administrative relationship and provides support but is not involved in the strategic planning process)

At USQ in 2008, FM was clearly located in the 'Passive Non-strategic' quadrant of Jensen's typology. Consequently, one of the primary challenges for this SAM project has been the development of the necessary understanding, capability and connections between USQ Senior Management, USQ Governance and the FM department, as well as within the department, to enable the FM department to move towards operating in the 'integrated/proactive' mode.

2. Governance and management

The project was established and implemented using industry standard project management tools and processes, in particular project management techniques and principles as

described within the Project Management Body of Knowledge³⁷. A Project Control Group (PCG) and a Working Group (WG) were established for oversight and implementation respectively. The PCG was aimed at building cross enterprise capability and the WG was aimed at building capability across and within the different sections comprising the FM department.

The WG comprised the Group Manager Facilities Management and FM staff members responsible across various areas of the FM operation. There were a number of constraints and benefits that contributed to the rationale for this particular composition:

- The project was internally funded, from within existing budget
- The staff know the current practices, processes and systems
- The staff would benefit from the knowledge acquired through the implementation of this project
- For the initiatives to be sustained the staff will need to have ownership of the project outcomes and deliverables.

This approach was regularly challenged by the day to day workload that was already placed on the FM staff. This made the completion of project tasks particularly challenging as competing priorities regularly appeared. Another and perhaps less anticipated aspect of using existing FM staff is that some were not comfortable working with such a structured project environment and with relatively junior staff working in the same group as the departmental head. The varying levels of comfort and confidence were clear to see in the early months of the project and were evidenced through body language, low levels of meeting contribution/interaction, lack of questions, numerous off-line engagements for clarification and low levels of team dynamic. There were also members of the WG with little or no experience of some of the software tools that were used to manage the project; consequently management tools and processes required introduction, training and familiarisation in order to be successfully adopted. Subject matter expertise was generally always available and readily contributed.

As a result of these learnings, future projects will see more focus applied to raising the generic skill levels of all WG members (to ensure no discomfort in any secondary or logistical aspects) thereby allowing full contributions in the primary project areas. In addition, time will be allocated to the creation of a team dynamic in the early meetings to develop a team dynamic and sense of united purpose.

The Project Governance Group (PCG) comprised the Group Manager Sustainable Business and Information (GM SBMI), the Chief Financial Officer (CFO), the Group Manager Facilities Management (GM FM) and an external expert being the Director of Facilities Management

³⁷ The Project Management Book of Knowledge or PMBOK, is the definitive text on project management techniques and methodology and is produced via the Institute of Project Management.

at the Queensland University of Technology. The members of the Governance Group were selected not just for their seniority and subject matter expertise, but for their future role in supporting the changes that were anticipated to successfully implement SAM. It was envisaged that the CFO would need to support linkages with finance and financial planning and the GM SBMI would need to support and accommodate changes in the strategic and operational planning and policy frameworks.

Support was also sought and gained from the Vice Chancellor (CEO and President of USQ) and the Chief Operating Officer, both of whom approved the project plan for SAM, prior to initiation. Careful consideration was given to the structure and reporting of governance and management for this project in an endeavour to increase the likelihood of achieving beneficial outcomes both inside and outside the FM department. Similar care was also taken in the selection of the membership of each group so as to increase the likelihood of developing a sustainable SAM capability at an enterprise level. This is considered critical to any SAM project, as SAM cannot be achieved by the FM department in isolation to the other key parts of the entire organisation.

3. Framework and implementation model

The earliest stages of the project involved the development and definition of a conceptual framework based on the extensive literature (encompassing models from diverse organisational settings) and the latest edition of the Tertiary Education Facilities Management Association (TEFMA) Strategic Asset Management Guidelines. This latter framework was given considerable attention as it represented the accumulated knowledge of FM professionals operating within the education industry over many years.

The first step in the process involved detailed consideration of the TEFMA SAM guidelines and subsequent mapping of the various TEFMA SAM elements (e.g. Acquisition Plan, Disposal Plan, Teaching and Learning Plan, Management plan) into a relationship model. This step is considered critical because achievement of SAM is dependent on the cross flow of information, not only across different parts of the whole enterprise but between the elements/functions within FM. Required action arising from one part of the organisation (e.g. Teaching Plan) may have impacts on multiple FM elements (Acquisition and Maintenance). The relationship model charts different sources or pathways of organisational needs and wants and must map these to elements of SAM within FM. (It should be noted that this does not resolve the information flows and or organisational structure/relationships within the FM Department). That model became the starting point for a potential USQ solution. The WG then overlaid the USQ 'existing' FM situation, using the same relationship structure, and cross checked content and function to ensure consistent element identification. This would not always be a one to one relationship as USQ elements (where they existed) tended to be less in number and have broader

application and content. The two model layers were then analysed and interpreted in detail to remove duplication and to identify efficiencies and integration opportunities within the structure and processes of the FM department. This formed the core of the GAP analysis undertaken in the development of the USQ SAM model.

The WG found the TEFMA model to be particularly comprehensive, and concluded that for it to be sustainable and provide the intended benefit (for USQ), it would need to be streamlined or scaled down to suit the USQ environment. The WG was equally clear that the process of streamlining and scaling down should not compromise the quality and utility of the SAM information delivered from the project. The extent to which the USQ model would seek to close the gaps or expand on the opportunities was further informed by a separate SWOT analysis that provided a broader view of the organisational and FM strengths, weaknesses, opportunities and threats.

The integration of the model layers, the SWOT assessment and the resource constraints were considered collectively by the WG and provided the rationale for the construction of the final model. The resultant adopted model for the USQ SAM project therefore (1) integrates a number of functions and reports that are separated in the TEFMA model, (2) builds upon existing USQ strengths and (3) applies focus to areas of USQ weakness where it is required as part of the model.

The adopted USQ SAM model is shown at Figure 1. Further minor changes occurred throughout the project and at the time of drafting this report, work continues on a number of the elements in regard to the population of data.

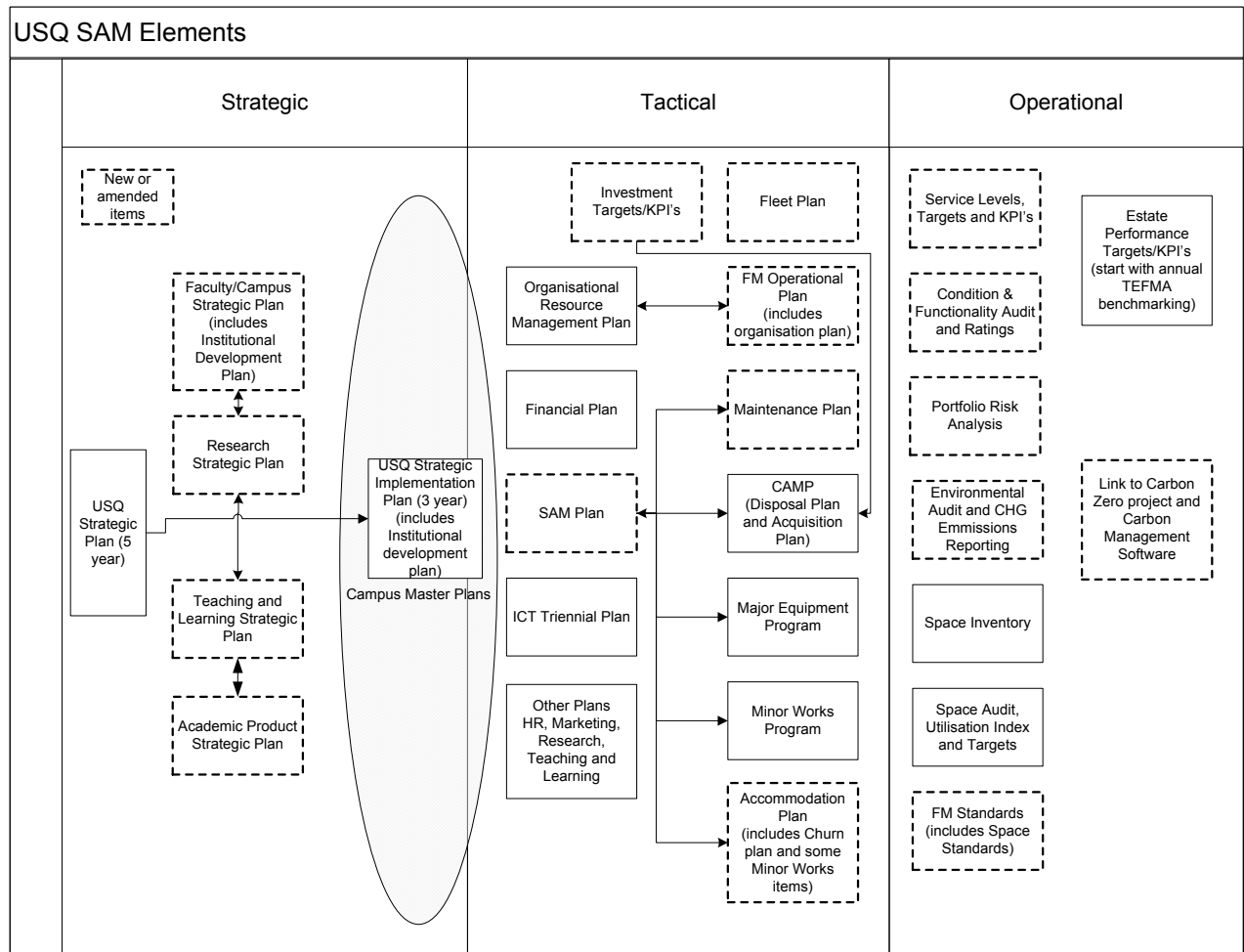


Figure 1.

Once the model was agreed by the PCG, the WG revisited the project scope to ensure that it was still an appropriate representation of the overall project and that the proposed model was not taking USQ outside the scope boundaries.

Building on the SAM body of knowledge and the experience of the University’s recently finalised ROP project, it became apparent that the project would need to have aspects of change management within the delivery methodology: especially if the benefits of SAM were to be sustained. To facilitate the alignment of the management of impacts on individual staff and their teams and the implementation of new or revised elements of FM required for SAM, the project was broken into five key areas or dimensions. Task clusters (aligned with the SAM model) were created under these dimension headings and aided in the development of specific tasks for population of the initial project Gant Chart (or Schedule). Figure 2 shows the project dimensions and the initial task clusters.

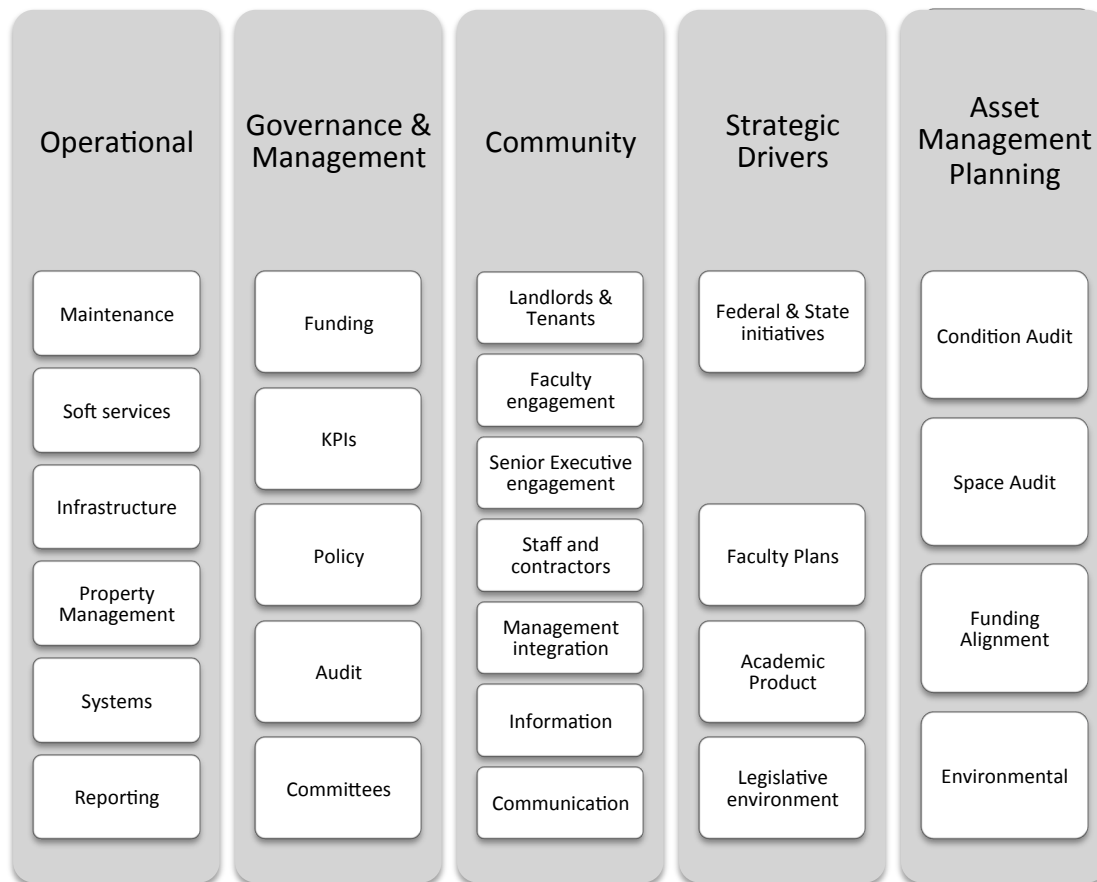


Figure 2.

The PCG and WG then reviewed the initial project schedule and task structure, adding to the detail as appropriate. This process provided perhaps the most significant value-add opportunity in the project. The willingness to consider SAM holistically created an environment where members of the WG, in particular, saw the project as an opportunity to improve practices at every level and in every area of FM. This broadening of the implementation scope did not compromise the project objectives or scope as stated within the project plan, but did add to the individual workload of the team members. This widening of focus and consequent growth of the task schedule to encompass general quality improvement was endorsed by senior management and the PCG and this has been a major factor in the breadth and depth of the positive changes delivered by this project. Even though everyone in the FM team was not directly involved, the project was communicated and consulted widely within FM and regularly presented as a significant FM project of direct benefit to the University at an enterprise level. Key deliverables (such as templates or survey findings) and data were also presented in various forums to reinforce the progress and utility of the project. It appears that the whole FM team adopted ownership of the SAM project, particularly as a result of the expanded focus, and that is reflected in the results of a University wide staff survey taken in 2010, where FM internal communication and strategic understanding scored very highly compared to previous surveys.

4. Assessment

The adoption of an Action Research methodology inherently required the capacity to identify changes over time across key project dimensions (O'Brien, 1998). The most appropriate approach, given the scope of the project, was to make an assessment of the FM (SAM) environment at the start and finish of the project. This was the subject of some discussion amongst the WG as it sought to develop a starting rating against each dimension and task within the project plan. These discussions provided an opportunity to engage FM staff with the benefits of a systemic approach to their activities at all levels. It became apparent that fully documented, communicated and maintained standard operating procedures did not exist in all areas, and those that did were focused on safety. The need to assess against a robust ratings framework highlighted these deficiencies. Eventually two methods were adopted. The first was the more familiar and simpler TEFMA table. This was initially selected as it is a reporting obligation of the University arising from its membership of TEFMA. However, once the WG became more confident and familiar with the USQ SAM model and its various elements, the relevance of the TEFMA SAM rating tool diminished. This was largely due to the low number of rating elements (11) and the lack of linkage (or relationship) between those elements and the TEFMA SAM model. TEFMA's SAM rating tool has perhaps not been updated to reflect the revised TEFMA SAM guidelines and this observation will be reported to TEFMA as part of the project close out.

The second assessment model and subsequently the primary measure for the WG, was the Institute of Asset Management (IAM, 2012a) methodology. The IAM model was considered by the Working Group to offer a far more detailed (23 separately assessed elements) and analytical approach to the assessment. The IAM assessment elements are also very closely aligned with the elements of a generic SAM model and therefore also aligned to the USQ SAM project dimensions. The WG considered that the IAM model as it is presented in standard form, did not require further interpretation or mapping against the specific USQ project dimensions and tasks. The IAM method, starting and target rating is shown at Figure 3.

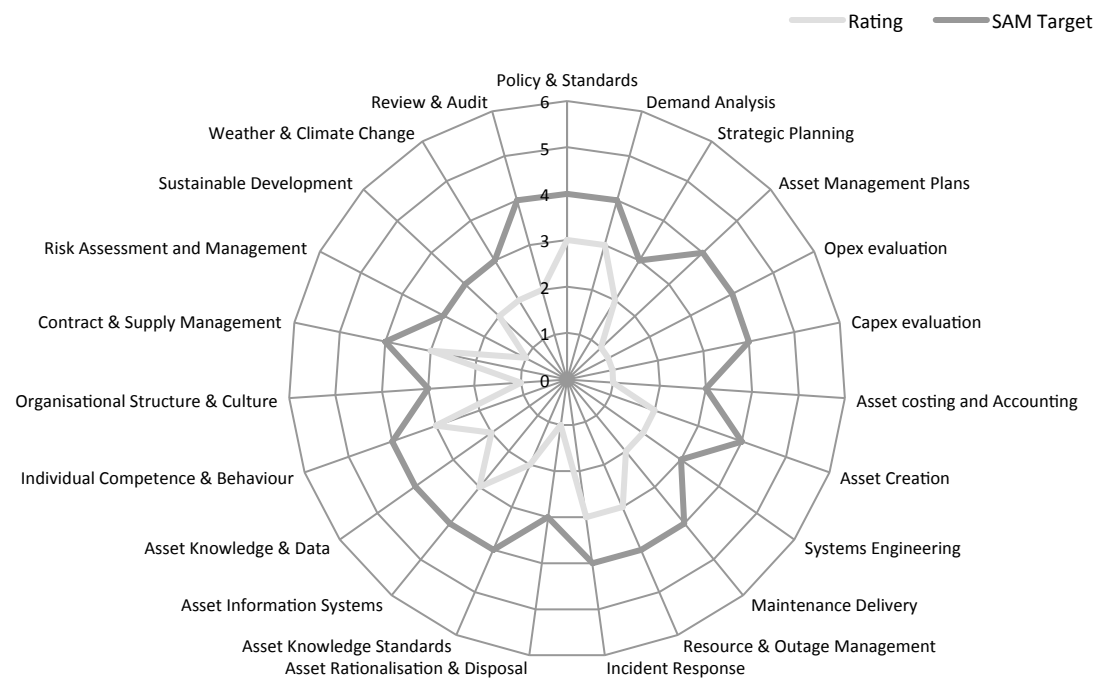


Figure 3.

Both assessment methods were applied at a high level and were therefore largely qualitative and to some extent subjective. That said, the assessments were consistently undertaken, and ratings rigorously debated and challenged in the WG environment. This was an interesting debate as the WG members, some of whom were operational FM staff, had a strong sense of ownership which required careful handling in an objective assessment environment. To minimise the risk of bias the ratings were reviewed and challenged in a separate forum involving University senior management.

As part of the assessment the WG identified the target movement in each rating to be achieved through the project implementation. In setting those targets, one of the problems that the WG faced was to determine the point at which the project would stop. For example, the project sought to develop asset management plans, informed by condition assessments. The question the WG considered was this-should the SAM project deliver the completed condition audit, or the processes, policy, templates and systems required to allow that audit to occur, or both?

The WG determined that the primary purpose of the project was to create the SAM environment through appropriate policy, systems, processes, practices and linkages. The population of the data or the detail, whilst important was secondary to creating the correct environment. That understanding was a significant step forward for the WG and the project.

As a result, even though the formal project phase has been completed, these activities are continuing to be implemented and progressively improved.

One other factor was considered in defining the project baseline and that related to the use of an external assessor. The WG and PCG considered that the project scope and budget did not allow for the engagement of a consultant for this purpose. It also considered that an objective assessment undertaken by the WG utilising an international methodology and validated by the PCG would be appropriate given the internal nature of this project. In the end, the USQ SAM project was subjected to review at both commencement in JAN 2009 and 18 months later in JUL 2010. The review went across 23 elements of the IAM SAM assessment framework and was undertaken by both the WG and the PCG. The ratings were moderated using the knowledge and skills available to the organisation. The results are set out in the next section and this whole approach to the project, set in the context of an action research methodology, enabled multiple organisational actors to play a role in developing both SAM and FM capability at USQ. Specifically, it has raised awareness of SAM and the role of the physical asset portfolio at senior management and governance levels, and it has expanded existing staff knowledge and engendered substantial ownership of the project within the wider Facilities team.

5. Results

The overall impact for USQ and FM of this project is considered to be significant across multiple dimensions and at several levels. In summary, as a result of this project, FM has evolved from the 'Passive - Non-strategic' quadrant of Jensen's model and is now operating in the 'Proactive - Strategic' quadrant, and moving rapidly toward 'Integrated Strategic'. This is apparent as the various reports, policy changes and planning linkages generated through this project become integrated with corporate instruments (creating the underpinning information flows and understanding necessary for sustained SAM).

Overall achievement against the project target levels is shown at Figure 4. These targets were developed as a substantial improvement on the existing level of capability assessed at the commencement of the project (as shown in Figure 3).



Figure 4.

It is interesting to consider both significant shifts as well as areas where there has been limited progress. Specifically -

- Asset Management Plans, Opex evaluation and Capex evaluation have shown limited improvement and remain lower than the desired level. This is in part due to the distributed ownership of the various parts of the process across a number of sections (including FM). Awareness of these gaps and understanding of the issues created by them has improved and this has provided FM and other key organisational players with the opportunity to initiate separate discussions to mitigate the negative impact on the achievement of SAM.
- Asset rationalisation awareness has improved in regard to targeting improved utilisation, but there is work still to be done around replacement or disposal strategies. This is seen as a key requirement and will need to be embedded in policy if it is to be a sustainable mechanism for limiting unnecessary portfolio growth.
- Risk assessment has significantly improved and now forms a part of all FM activity. In relation to SAM it serves an important role in developing service levels and prioritising the importance of an asset within the portfolio, thereby influencing the resource allocated to support that asset.
- Individual competence has increased and this is attributed to the level of engagement achieved through the action research approach and “learning by doing”, primarily for the members of the WG but also the wider members of FM.

In addition to these demonstrated results, it is important to note that high-level awareness of SAM is also growing and has manifested through the inclusion of the GM FM in the 2011 Vice Chancellors Committee (VCC) and University Council Strategic Planning Forum. Subsequent to that forum, and using the data and analysis from the SAM project, the GM FM developed and presented a paper to the VCC regarding the diverging alignment of the real estate portfolio with the strategic direction of the University. The paper represents the culmination of the SAM project, in linking FM with the organisation's strategy, by summarising the key strategic issues for the real estate portfolio as a contributing element of USQ strategy and bottom line surplus. Some of the key findings and issues from that paper include:

- The misaligned perception and use of the real estate portfolio with the changing business environment of the University. In particular the students' move away from on-campus study and the lack of a corresponding reduction in teaching space
- The significant investment tied up in the portfolio and the divergence of this against other costs and revenue, impacting adversely on the organisation's bottom line
- The significant opportunity for improved space utilisation, creating an improved bottom line through the release of real estate for revenue creation and/or deferral of new building projects
- The importance of planning integration and forecasting to both optimise the portfolio operation and value-add in support of strategic initiatives
- Consideration of the role of space into the future as USQ engages in various technology based initiatives both associated with student study modes and expectations
- Consideration of the role of real estate in attracting and retaining particular staff and student cohorts
- Portfolio planning across 3 distinct campuses may take an integrated, synergy based approach or it may consider autonomous development with a degree of duplicated services and function. This is an emerging discussion within USQ senior management and governance and part of the role of FM is to contribute to a more informed discussion by way of providing additional supporting information, such as comparative development cost, development constraints, regulatory planning environment etc, and link those to new initiatives, organisational aspirations, student and staff load forecasts and model the most effective real estate solution against all those dimensions. Prior to the initiation of this project it would not have been possible nor would it have seemed appropriate for this level of engagement. It would not have been possible because the information sources required to hold such a discussion (such as staff and student load connections to space planning, enhanced space planning and utilisation targets, space audits, condition audit, service level definitions), have only been introduced through this project. It would have seemed inappropriate because FM was not perceived as having a role in broader issues or

strategy. The commencement of a strategic FM conversation at the highest levels of management and governance is a strong indication that the SAM project is bearing organisational fruit.

There is another aspect of 'results' worthy of review and that is to consider the robustness and useability of the conceptual framework employed. The general reason for employing such a framework was to guide and inform the project and ensure completeness and fit; completeness from the perspective of SAM and fit from the perspective of the particular organisation, in this case USQ.

The conceptual framework had three key dimensions. The first dimension was the development of the systemic model and acceptance of the SAM elements for USQ. The creation of the model in the manner previously described allowed for broader project enhancements around delivery methods, change management and content. The second dimension considered technical delivery and this was founded on established project management principles and was familiar to a varying degree to all members of the PCG and WG. The final dimension related to the action research approach which allowed for the softening of an otherwise potentially rigid project management delivery. The action research methodology allowed members of the PCG and WG the flexibility to reflect and adjust the specifics of the project resulting in personal and organisational growth and engagement.

6. Learnings

The key learnings from this project arise in relation to the (1) the conceptual SAM model employed, (2) the governance and management structure and (3) the integration of the methods employed for both the implementation and research dimensions of this project.

SAM model

This project has demonstrated the importance of embedded planning linkages if FM is to move from service provider to strategic enabler. Embedding the timely capture of the data required for even the simplest space and portfolio planning is essential to move FM to a proactive and informed mode, and thereby allow it to make appropriate and timely contributions to directions of the organisation. To assist in that, the USQ SAM project developed user templates that can be issued annually either from the FM office or ideally embedded into the USQ corporate planning cycle and associated documentation. The latter is currently in progress via the Corporate Planning office and represents a value add to the general planning data as well as meeting FM specific information needs. One of the unexpected learnings is the number of business and academic units across the University that rely (to a large extent) on the same core data but do not have ready or consistent access to it. Similarly the lack of central oversight of business case development and funding bid submissions, utilising robust data and standard content and form has also been

surprising. This latter point has been raised and through this SAM project separate initiatives are underway to address that gap.

Real estate is taken for granted in many Universities. One of the major areas that can make a tangible contribution to the organisation is improved space utilisation. This is not a revelation for most Facilities Managers particularly those in a commercial sector, but it is perhaps a constant frustration for those in the University sector. The challenge is to find an effective way to raise the importance and understanding of the issue to senior management and governance. In this project, space utilisation did not feature greatly other than as an improved outcome of SAM. That said, the underpinning data and planning linkages required were a specific deliverable. The data so collected has now been able to be used in a separate paper to University Governance and Senior Management to present a compelling argument in a way that senior managers would readily assimilate. As a result of the SAM project was able to bring the following information to bear -

USQ currently achieve a certain service capacity from its current portfolio based on the current audited space utilisation rate (CUR). If USQ reached its target utilisation rate (TUR) that would equate to a service capacity increase equivalent to constructing another 73,000 m² of space (at an approximate cost of \$200M) at the CUR level. The opportunity to have a significant positive impact on the general business outcomes of the organisation through improved planning and utilisation of existing space is considerable.

The high level awareness of the portfolio and the organisational performance needed to express such statements with a robustness of logic and confidence in the data has been a direct result of undertaking this SAM project.

The introduction of extended condition audits and space assessments has created a comprehensive data base that will benefit FM planning, room bookings and central timetabling, and also assist in achieving appropriate allocations (timing and value) to support the portfolio at the required service level.

Governance and management

The project established a traditional governance and management structure with the PCG and the WG performing those functions respectively. The key to the success of this project was in the selection of the members of the two groups and the engagement of the VC and the COO in the initial endorsement and approval of the project. There can be no doubt that having top level approval removed a number of organisational road blocks that might otherwise have stalled the project. The PCG captured in its membership key management positions that would be necessary to create the planning and financial linkages for the delivered Sam model to be sustainable. It also included an external expert member to provide independent comment and focus. This was particularly valuable when change

proposals were received that were perhaps reflective of the challenges of the USQ environment; in these instances the independent member was able to provide a wider context and contribution that might otherwise have been missed and prevent the final solution from being adversely compromised.

The composition of the WG was a significant factor in the success of this project and a success story in its own right. The decision to pull so many operational staff into the WG was not an easy one. It would impact on their daily time and workload and also may introduce issues or challenges that could delay or derail the project. The opportunity for professional development and the need for ownership and engagement outweighed these considerations and the WG was formed accordingly. The end result, in part through the delivery approach adopted, and in part due to the quality of the individuals involved has been a significant success. As discussed in the results section the degree of corporate and individual knowledge development has been significant and is reflected in the final results assessments. Perhaps most importantly there is high levels of confidence around the sustainability of the solutions arising from the degree of ownership from the FM staff.

Methodology

As previously mentioned the approach adopted in this project has been shaped by two methodologies. They are (1) project management as the primary implementation methodology and action research as the primary research methodology. These methods have been interlinked to ensure (a) the robustness of the operational implementation of a real project [with real risk and threats] and (b) the validity of a research project using a bespoke conceptual framework for SAM intended to expand the capability of an existing FM section that was clearly in a 'reactive' mode of operation at the commencement of the project (as set under Governance and management above).

The adoption of a project management approach was seen as being the most robust and easily accepted delivery model. It is a proven and recognised methodology and generally understood and adopted throughout the University. That said, it was not so familiar to members of the WG and this has been an area of particular professional development.

The adoption of an action research approach was not something that was immediately understood or embraced by the WG. The introduction of a 'Quality' review as an agenda item at each WG meeting allowed for the opportunity (via a simple template) to encourage the 'Plan, Do, Observe, Reflect' cycle. The members became comfortable with the process after a couple of sessions and the learnings and observations captured on the templates were useful to the PCG and the WG alike in making changes to the project scope and methodology. The ownership and engagement of the members of the WG and FM staff generally was clearly enhanced as a result of their observation of the Action Research methodology at work and seeing first hand that their individual thoughts and suggestions could result in a change to the project.

One other observation of the action research approach has been the suitability of that approach to a project where the deliverables are not fully defined or absolute. Its adoption allowed for the adaptation of the project's targeted deliverables to suit the project context and organisational environment. As discussed earlier, the USQ SAM model is an interpretation of the TEFMA model, adopted in the context of the SAM literature and the particulars of the USQ environment; such a package of influences would not support an immovable model and hence the benefit of an action research methodology which allows for such adaptation in an informed, engaging and beneficial way. The particular technique employed to develop the USQ SAM model has been explained above (under Framework and Implementation Model) and it is considered that this is an important contribution to the FM discipline in providing a structured template or framework for practitioners to apply in diverse organisational settings. The technique is founded on the need to 'map' key elements of SAM and the current way FM is delivered in an organisation. So often experience has shows that FM practitioners are prone to focus primarily on their own 'sections' or 'departments' to implement SAM. This may cause some operational improvements but it limits the likelihood of the fullest adoption of SAM as a significant arm of corporate strategy. The author intends to develop a more detailed explanation of this 'mapping' process so as to better enable FM practitioners to undertake comprehensive SAM implementations.

7. Conclusion

Through the implementation of this project USQ has developed a robust SAM capability and in so doing has reached an understanding and awareness of the role of SAM and the benefits of engaging with FM (equipped with a SAM competency and capability) as a strategic partner, rather than a reactive service provider. The decision making of the organisation has been enhanced and this has been demonstrated through the approach taken in acquiring a satellite campus and also the development of a Federal funding bid project, where the principles and considerations of SAM were integrated into the design and development of the build component of the bid. That said; building capability is seldom a short term issue. Building capability for a set of complex inter-related cross disciplinary activities must by definition be a long term undertaking. This project has provided an opportunity to create the framework and mechanisms by which a core SAM competency (assessed across specific elements and within a defined time frame) has been created within USQ, but it is not complete, it is but the beginning of a longer process to further evolve and embed the tools and principles that have been established.

FM staff knowledge, skill and engagement have increased through the delivery of this project and the particular implementation approach adopted. In particular, the expansion across all areas and levels of FM as a quality improvement focus and the involvement of operational staff at all levels in the development and execution of the project.

The FM efficiency and customer service levels have improved as a result of increased understanding, improved communication flows, improved planning and solutions development.

This project has provided a valuable resource for practitioners seeking to raise the value of the contribution of an organisation's real estate portfolio, in the success of that organisation. This case study recognises and records the value of different methodologies (being project management and action research) combining to provide an enhanced outcome in a real world operational environment.

Much has been written about the nature and dimensions of SAM but the implementation and application of a comprehensive SAM model within a relatively large and complex organisational setting remains problematic.

In summary this project has:

- developed a conceptual framework for the construction and delivery of a SAM competency that connects the theory of SAM and FM, and aligned that with a particular organisational setting. A specific mapping technique was employed to enable this and this technique has much wider ramifications for FM practitioners
- amalgamated a research method and an implementation method to achieve an enhanced outcome in a fully operational real world environment. applied industry standard frameworks to facilitate the assessment of the impacts of this project on the organisation and as a result of this project, recommendations will be made to an industry body on ways to improve an important benchmarking tool;
- contributed substantial improvements for the organisation, specifically;
 - Integrated planning processes
 - Data standards and sharing
 - Organisational and individual knowledge and awareness of SAM
 - Portfolio planning and utilisation
 - Enhanced risk management
 - Improved service levels and understanding
 - Development/enhancement of FM standards
 - Recommendations for policy change
 - Improved value from the FM dollar

Further material from this project is available from the author at dave.povey@usq.edu.au .

About the author

David Povey is a student at the University of Southern Queensland (USQ) engaged in a Doctorate of Professional Studies. He is also the Group Manager Facilities Management at the USQ. He was born in the UK in 1961 and has 30 years experience in Facilities Management. David has various trade and technical certificates and was awarded a Masters

of Property Studies in 2003. His primary FM interest is in Strategic Asset Management and in particular FM as a strategic enabler. David is also the Chairperson of the USQ's Environmental and Sustainability Committee and is particularly interested in the role of FM in the management and reduction of the University's carbon footprint.

END OF ARTEFACT 29

5.5.4 Carbon academic paper and Artefact 30

As with the SAM paper, the Carbon paper was produced with a view to submission as a peer reviewed academic paper. However, I have not yet edited (or 'sharpened') it to meet the criteria for Emerald submission and therefore Artefact 30 is the only version of the paper.

The paper starts with a discussion of the institutional context and particularly the clear mandate created by the USQ Strategic Plan. Governance and management frameworks are discussed next and are similar to SAM, noting my earlier comments on the role of the Environment and Sustainability Committee in governance oversight of the early Carbon Reduction Project activity (e.g. Environmental Audit).

The paper puts significant importance on the implementation framework and communication, and describes more fully the Concept Communication Model introduced in Chapter Four. This was a direct response to the institutional context in which this work was planned and developed and sought to: mitigate the relatively low levels of understanding and awareness of real world sustainability solutions (as they might be applied in this project) and; respond to the fundamental need to engage all staff and students with the carbon reduction imperative in order to sustain results (as experienced by Rauch 2007). This was quite different to the SAM Project which (initially at least) appeared to rely far more on systemic and process based solutions for its sustainability.

The relationship between the community interest and the staging of the project were formalised through the model and readily included within the Action Research contribution to the project, as a legitimate implementation of the plan, do, check, act cycle with consequent adjustment to the delivery and scope. This is fully described within the paper and is a very clear illustration of the real world benefits of the (Action Research) approach in a work based project (Project Management) environment and consistent with the observations of Armsby (2000, p. 42) "The focus is on 'real' research and development projects and reflection on 'real' pragmatic and applied activities".

One of the enduring outputs of the project has been the 2009 Carbon Baseline and this continues to be a key tool in monitoring and managing the USQ carbon emissions performance. The paper also discusses some of the interpretive analyses undertaken around the baseline creating additional institutional learning and reinforcing the relationship between the estates and the carbon portfolios.

The paper introduces the MAC chart to illustrate the value proposition of each carbon abatement option representing the first time the MAC has been used operationally within the USQ management environment. The paper concludes by providing significant detail on the operational, strategic and learning outcomes set against the project dimensions described in the Concept Communication Model.

5.5.5 Artefact 30



Developing and implementing a carbon emissions reduction strategy at the University of Southern Queensland

David Povey

Office of Campus Services, University of Southern Queensland, Australia

Abstract

Purpose – in 2008, the University of Southern Queensland (USQ) committed through its Strategic Plan (2009-2013) to being carbon neutral by the year 2020. This paper provides a case study of the project undertaken to achieve that goal. The case study sets out the various dimensions of the carbon reduction project identified and implemented, the key outcomes and some of the key lessons learnt. The paper also describes the implementation framework as a possible model for other professionals seeking to engage their organisations in an effective carbon reduction strategy.

Design/Methodology/Approach – The project adopted an action research approach to capture key outcomes and findings and employed formal project management techniques as a way of governing implementation across the multiple dimensions. The project was delivered over a 30 month period and wherever possible was informed by industry benchmarks and current knowledge to support the evaluation of actions.

Findings/Results – As a result of the project, the University of Southern Queensland has, for the first time, gained an understanding of its carbon footprint and subsequently started to develop and embed the systematic management necessary to achieve the ongoing reduction of contributing emission sources. In particular it has now recognised the importance of appropriate and effective investment in alternative energy provision and low carbon systems infrastructure. In addition to the numerous operational and infrastructure improvements that were made, there was significant development of the professional knowledge and expertise of the various members of the project team and the wider USQ community in dealing with carbon reduction management.

Research limitations/implications – Whilst undertaken in a single organisation the case study provides information, observations and learning that can be applied in other organisations seeking to implement a carbon reduction strategy. These outcomes span the technical, political, structural, and change management aspects of carbon reduction.

Originality/value – The paper provides guidance on the considerations, implementation experiences and lessons of an organisation with extensive and diverse physical assets engaged with an enterprise wide project to reduce its effective, ongoing carbon footprint to zero through a mix of technological, behavioural and offset solutions. This paper comments on a number of organisational dimensions, implementation strategies and actions that influenced the success of this project.

Keywords - Carbon, reduction, emissions, footprint, energy efficiency, facilities, change management, action research

Paper type - Case Study

1. Introduction

In late 2008, USQ Senior Management developed the 2009-2013 USQ Strategic Plan. At the time there was a 'soft' aspiration and general desire for USQ to be seen as a green, sustainable organisation. The inclusion of environmental goals within the Strategic Plan was the start of the corporate journey into environmental awareness and engagement, and as USQ started that journey it became quickly apparent that there were few practical examples within the organisation of where that original aspiration had been converted into action.

Through the 2009-2013 Strategic Plan, USQ made a significant commitment to achieve carbon neutrality by 2020. This goal was supported by annual KPI targets of 10% reduction in carbon footprint per annum. This allowed for a mix of actual reduction and offset to achieve the annual target requirements. It is interesting that this commitment occurred without an understanding of how it would be achieved. This is contrary to the recommendation made by Rauch (2007) where it is suggested that a strategy for achieving a proposed goal must be developed before asking for institutional endorsement and commencing implementation. Through its simplicity and clarity, the initial USQ commitment gave a compelling mandate for the subsequent development of a carbon emissions reduction strategy and a powerful tool in the engagement of all areas of the University (at strategic and operational levels) in support of that strategy.

2. Governance and management

Once the organisation commitment had been made a specific project was initiated in 2009 and a Project Control Group and a separate Working Group were established for oversight and implementation respectively. The Project Control Group was aimed at building cross enterprise capability and the Working Group was aimed at building capability across and within the different sections comprising the Facilities Management department (recently expanded and renamed as Campus Services).

The whole project was overseen by the Environment and Sustainability Committee as the most appropriate Management Committee of the University. Recommendations flowed

from the Working Group to the Project Control Group and then to the Environment and Sustainability Committee. From there the project was reported to the University's senior management forum, the Vice Chancellors Committee. Reports on the project were also included provided to USQ Council via Finance and Facilities Committee (this is a Council sub committee) and directly to Council via contributions within the Vice Chancellor's Report.

The Working Group comprised the Executive Director Campus Services and Campus Services staff members responsible across various areas of the Campus Services operation. The project manager responsible for the primary carriage of the project was located within Campus Services.

There were a number of constraints and benefits that contributed to the rationale for this particular management approach and structure:

- The university generally adopts a formal 'committee' framework for all elements of business that are important
- The project was internally funded, from within existing budget and Capital programs, noting that the Environmental Audit had been allocated specific funding as a result of the Strategic plan mandate
- The staff would need to acquire knowledge of the practices, processes and systems necessary to achieve the carbon reduction goal
- There were no internal systems in place that specifically supported the project and therefore some new tools would be required
- For the initiatives to be sustained the University community will need to have ownership of the project outcomes and deliverables

The Project Control Group comprised the Group Manager Sustainable Business and Information, the Chief Financial Officer, the Executive Director Campus Services and a subject matter expert being the Deputy Director of the Australian Centre for Sustainable Business and Development at the University of Southern Queensland. The members of the Project Control Group were selected not just for their seniority and subject matter expertise, but for their future role in supporting the changes that were anticipated to successfully implement carbon reduction strategy. In particular, it was envisaged that the Chief Financial Officer would need to support linkages with finance and financial planning and the Group Manager Sustainable Business Management & Information would need to support and accommodate changes in the strategic and operational planning and policy frameworks.

Support was also sought and gained from the Vice Chancellor³⁸ and the Chief Operating Officer, both of whom approved the project plan for the Carbon Reduction project, prior to initiation. The Chief Operating officer was appointed as the project sponsor.

Unlike other strategic initiatives, for which there was a pre existing 'management' infrastructure, a new management structure was brought into operation to support this initiative. This was not achieved without substantial investment in determining the 'best fit' structure and also in gaining and engaging, the support of participants. This aspect of the delivery model is regarded as a major component of the success of the project thus far and has acted as a catalyst for the wider consideration of carbon reduction and environmental sustainability within other (pre-existing) management structures and committees.

3. Framework and implementation

Whilst the scope of the project was eventually defined and limited to carbon reduction, it was not always so. Initially there was pressure to make the project deliver a 'sustainability' agenda within USQ. The level of organisational understanding and maturity, particularly within corporate enterprise areas was not aligned with that objective, noting that some academic areas were significantly more mature and indeed, were teaching sustainability content in their programs.

Griffiths (2009) explores the diversity of understanding within organisations as to the meaning of corporate sustainability. To provide a USQ example, one senior manager was asked what he understood by sustainability and responded by describing the triple bottom line accounting elements of; environmental, economic and social. This answer may be partially correct but it does not acknowledge the wider and inter-related nature of those elements and the cultural change required across the whole enterprise in order for an organisation to proclaim its self sustainable i.e. meeting the needs of the present without compromising the ability of future generations to meet their needs (Brundtland Commission, 1987).

For USQ, the option to engage in a broader sustainability project had to be considered and resolved promptly so that the project scope could be finalised.

Presentations and discussions were held to determine whether USQ was 'ready' to engage in a comprehensive sustainability project requiring by definition a total systematic modification (Rauch, 2007). For the following reasons USQ determined not to adopt a wider sustainability focus for this project:

- Even within senior management, sustainability meant different things to different people; no USQ version of sustainability existed, complicating communications and the discussion of strategy and possible project elements

³⁸ The VC is also the Chief Executive Officer and President of the University.

- There were no operational or management frameworks that could effectively coordinate and deliver a wider sustainability project, including the absence of a Senior Executive with carriage of sustainability
- There were no additional funds available for the project
- Organisational knowledge and experience of sustainability and previous enterprise wide change initiatives was not conducive with a whole of organisation paradigm shift
- There were defined resource priorities competing with the undefined sustainability project
- Lack of senior executive buy-in for the sustainability focus (seen as difficult to define and therefore hard to deliver and measure the performance and benefits)

The 'silver lining' in this consideration process was the reasonable belief that the organisation would be more likely to embrace the broader sustainability concept on the back of early success foundations associated with the more specific and readily understood carbon reduction solutions. These solutions were also considered to be less risk as they relied more on infrastructure and systems upgrades than human behavioural change, noting that this latter aspect must be engaged at a future point (Maras, 2010) for reduction benefits to be achieved and sustained.

It is clear from this experience that organisations, especially if they are leading with their vision and aspiration (as was the USQ) rather than a particular business driver, must understand the scope of their intended actions and be prepared to limit or sequence them in order to define project deliverables and outcomes that are achievable for the organisation. A full sustainability initiative would have much broader and deeper ramifications for an organisation as compared to the more focused and manageable carbon reduction project.

Because the USQ also had (and still has) strategic aspirations in relation to the notion of sustainable development and sustainability, and these aspirations were general knowledge within the USQ community (including the earlier talk regarding a wider sustainability project), the first communication required was that the project boundaries had been set to give focus on achieving carbon neutrality and that the project was not considering the wider goals of sustainability. A simple conceptual model was developed to assist in that communication.

Concept Communication

To aid in defining and communicating the project boundaries, a framework was established to both guide the project scope and manage the community expectations of this project.

The initial 2009 planning and development exercises had approached the project in terms of 5 key dimensions (Campus Life, Teaching and Learning, Operations, Community, and

Governance and Management) derived from a comprehensive mind map developed by the Working Group. In essence, these early planning processes focused on the 'what' (content) rather than the 'when' and 'how' of delivery. The Concept Communication Model took those 'what' elements and re-packaged them in a form that would represent not just the 'what', but the 'when' and the 'how'. The result was a high level, Concept Communication Model that could not only identify key stages and elements, but also represent a logical delivery sequence³⁹.

The Concept Communication Model is shown below at Figure 1 and operates within an overarching Action Research framework, described later in this section. Each pillar of the model represents a main stage of the project, with key elements of each stage contained within the respective pillars. Each key element was delivered using industry standard Project Management techniques and principles as described within the Project Management Book of Knowledge³⁹.

A full description of the model pillars and their relationships is set out below Figure 1.

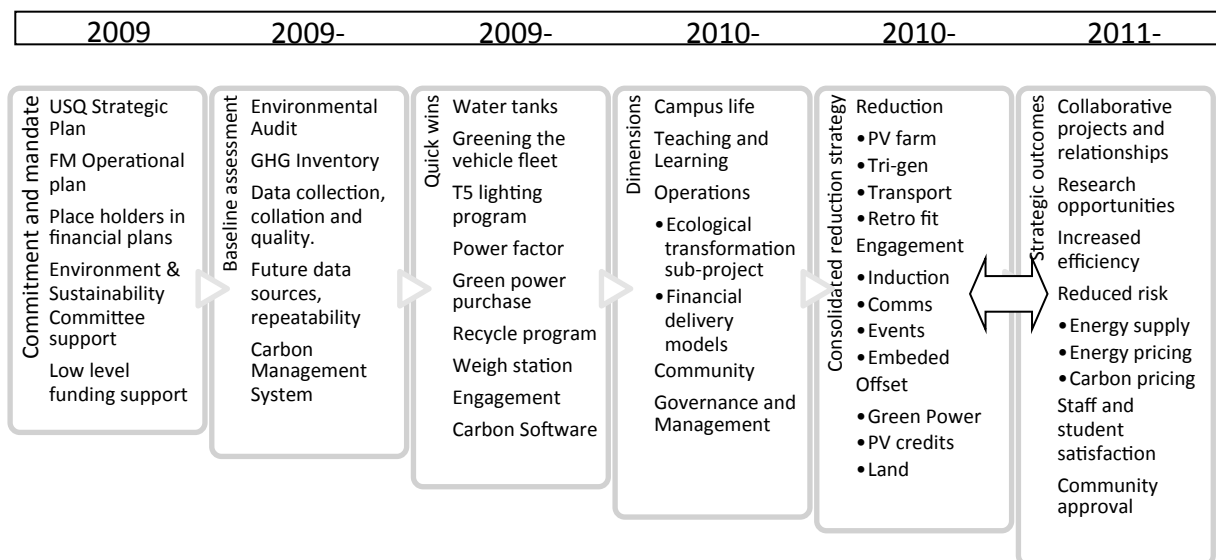


Figure 1

Commitment and Mandate Pillar

The USQ Strategic Plan provided a very clear mandate for the work of the project and in particular the undertaking of the Environmental Audit in 2009/10 and the associated waste audit and Green House Gas (GHG) inventory. Internal planning cycles reflected known and projected activity in support of the project.

³⁹ The Project Management Book of Knowledge or PMBOK, is the definitive text on project management techniques and methodology and is produced via the Institute of Project Management.

Baseline Pillar

As previously discussed, the emissions baseline was determined from the GHG Inventory. Separate review and analyses of the data collection exercise led to some minor changes in the inventory metrics i.e. the refining of carbon boundaries; suggestions for the improvement of the data quality; improvements for data capture and collection processes and suggestions for future inventory development. The definition of GHG data boundaries represented a pragmatic approach reflecting the data available, the data that could reasonably be obtained and the significance of the data (% of overall emissions that the data was likely to represent).

All assumptions and boundaries were properly described in the Environmental Audit and GHG inventory for future reference and consideration, and in particular to ensure auditable transparency and exercise repeatability.

Quick Wins Pillar

This step in the process was intended to enable the fast tracking of initiatives and activities that would contribute to the project across any dimension. To illustrate, the 'quick win' need not contribute significantly to carbon reduction if it could be shown to have a wider environmental or community engagement benefit.

Quick wins were not just for energy and carbon reduction but also to encourage a positive funding environment in support of investment in larger projects (bids are likely to have a higher priority in a competitive internal funding arena if the staff and/or students want it). A specific example was the initiative to install rainwater catchment tanks and potable water technology to suitable buildings (generally smaller, stand alone; teaching or office). This action created a visible environmental sustainability outcome, particularly relevant for the Toowoomba campus (where drought has been an issue for several years) that sent positive signals to staff and students and contributed to their awareness and consideration of the environmental objectives of the University.

Other initiatives under this section included the retro fitting of high efficiency T5 lighting, achieved via a scheduled replacement program funded across five successive years; staged implementation of smart water, gas and power meters; review of instantaneous hot water units, passive shade options; changes to the Building Management System set points, and creation of an Eco-Trail around the campus.

Quick wins were generally determined by the following criteria: Campus Services ability to influence or affect; Campus Services capability and capacity to implement; the cost of implementation versus existing budget and delegation levels; anticipated benefit or return on investment; and risk assessment (formal or informal).

Notwithstanding the early clarification that the project scope did not include sustainability, the Project Control Group and Working Group were satisfied that such non carbon reduction specific activities could be undertaken where those activities could be accommodated as quick wins, were likely to engage staff and students and would not significantly compromise the carbon reduction focus and resources of the project.

Dimensions Pillar

The Dimensions pillar represents the summarised scope and contains the 5 key dimensions, or delivery areas identified earlier; being Campus Life, Teaching and Learning, Operations, Community, and Governance and Management. The 5 dimensions were then carried forward to the detailed project Gantt chart as useful identifiers for task categorisation and scheduling.

With regard to the elements of the Operations dimension, there are various financial delivery models available and so a specific element was included in this pillar to represent the range of funding choices associated with any given technical solution.

The most significant aspect of the Dimensions pillar is the identification of the Campus Ecological Transformation sub-project. This sub-project involved the commissioning of a sustainability/energy consultant to undertake a holistic review of the University's Toowoomba campus, considering land holdings and characteristics, the built environment (buildings, plant and equipment and infrastructure), the local climate and the campus energy load profile. This was then considered against the various technologies and solutions available to develop a series of feasibility studies (i.e. photo-voltaic, solar-thermal, tri-generation, bio-mass, ground source heating/cooling, wind, and retrofit opportunities) and subsequent recommendations presented in the form of a consolidated 'Pathways to Neutrality' report.

The 'Pathways to Neutrality' report brought together the feasibility studies. These have subsequently been developed in the form of a Marginal Abatement Cost (MAC)⁴⁰ Curve that clearly informs the University's overarching carbon neutrality strategy and is provided under the 'Results' section of this paper. The various solutions resultant from the Campus Ecological Transformation Sub-project are subsequently shown in the Consolidated Reduction Strategy pillar.

Consolidated Reduction Strategy Pillar

Building on the dimensions, areas of interest and activity provided in the Dimensions pillar, the Consolidated Reduction Strategy pillar brings together possible specific and detailed activities under each of the 5 dimensions, develops them further and also introduces the

⁴⁰ 'Marginal Abatement Cost Curve': This is a diagrammatic method of demonstrating the best value for money options (cost versus carbon abatement potential) when investing in energy efficiency, carbon reduction or sequestration options. In short, it potentially provides a priority list for investment.

feasible solutions identified by the Campus Ecological Transformation Sub-project. It should be noted that the Campus Ecological Transformation Sub-project excluded from its terms of reference the 'softer' staff engagement tools and activities designed to reduce energy use (such as energy breach notices, effects of increased communication, user specific energy reports, and the benefits of wider engagement with regional and industry partners).

The Consolidated Reduction Strategy pillar acknowledges that there are varying levels of feasibility, investment, risk and return associated with all of the carbon reduction options and develops an overarching strategy that delivers a coordinated approach across all project dimensions. It is from this pillar (stage of the model) that we begin to identify the specific elements of the 2011-2014 Carbon Reduction Strategy.

Strategic Outcomes Pillar

Through the delivery of this project it was anticipated that USQ would enhance relationships with Toowoomba Regional Council and indeed, it is exploring joint venture opportunities including shared participation at regional and local events including Earth Hour 2012 (as was 2011 event), shared attendance at respective Environmental Committee meetings, and preliminary planning around joint infrastructure projects. Discussions have also started regarding the development of regional level low carbon growth plans.

Other strategic outcomes included reduced risk around energy pricing volatility and continuity of supply (the latter reducing business interruption risk), improved community (staff, student and local) satisfaction as demonstrated by the 2010 and 2011 International Student Barometer Survey⁴¹.

As noted above, the six pillars of the Concept Communication Model represent the essence of the project in terms of logical sequence and comprehensive action. The benefits of USQ establishing this planning flow have been:

- Simple visualisation of the project construction leading to detailed project schedule (Gantt) chart development
- Simple representation of sequence and content allowing leveraging off into detailed constructs
- Transparency of process for the Project Control Group, Working Group and USQ generally
- Minimised non-productive activity
- Robust data, independently obtained, developed and verified informing the reduction strategy
- Current technology and practice is reflected in all feasibility studies
- Current carbon abatement reporting methodology used in the presentation of the strategy

⁴¹ International Students expressed >90% satisfaction rating for USQ's environmental activity.

- The development of a robust 2011-2014 carbon reduction strategy, informed by specific projects and activities

The development of the 2011-2014 Strategy was a key deliverable of this project. The strategy is succinct, robust and focused on established carbon cost abatement methodology and is described in detail within the results section of this paper (Section 5).

In terms of the Concept Communication Model, the organisation has progressed through to the Consolidated Reduction Strategy pillar, with some elements of the Strategic Outcomes pillar already achieved, including the adoption of the 2011-2014 Reduction Strategy (as the primary deliverable of the project). That said, some elements within the Dimensions pillar are still works in progress (i.e. Teaching and Learning, ongoing Community engagement). This distribution of progress is perhaps to be expected as the various elements within the pillars have differing degrees of difficulty, controllability, and priority within the project's limited resource environment. The early decision to adopt an Action Research approach to this project has allowed the various diverse stages of progress and outcomes to be readily accommodated.

Movement through the Concept Communication Model and Action Research cycles will continue as individual elements are completed. It could be said that those elements which are specific, and within the ability of the project Working Group to implement have made the most progress. This is consistent with Rauch (2007) who in relation to his own endeavours, introducing an energy efficiency program at Yale University, commented on the importance of setting targets that are specific and achievable.

As discussed previously, the project was implemented using not only industry standard Project Management tools and processes but also the Action Research principles of "plan, act, observe and reflect". Through the combination of these two methodologies (Project Management and Action Research) the project has provided a sound implementation and quality framework for delivering USQ's Carbon Reduction Strategy through to 2014 and beyond.

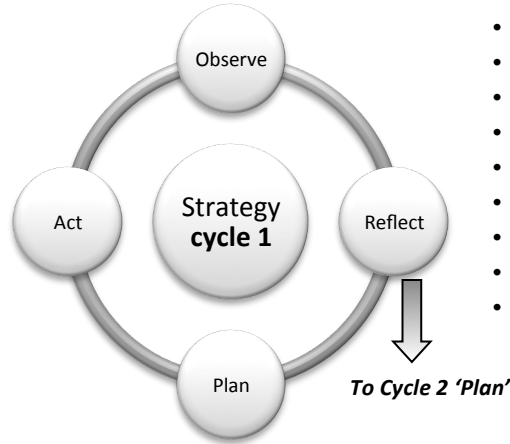
Action Research Applied

Action Research was adopted for this project for two primary reasons; 1. It allowed for the regular review and refinement of the project and; 2. It is particularly suited to extended duration projects where the environment is dynamic, and results and solutions are not known at the outset. Figure 2 describes the key activities undertaken throughout this project, against a series of action research review (or strategy) cycles and lists key items against each stage of those cycles.

2009

- Project initiation and scope review
- Project Plan development and approval
- Environmental Audit
- Waste Audit
- GHG Inventory
- Literature review and research
- Data collection
- Key stakeholders and Environment Committee engaged

- Strategic Plan KPI
- Environmental Audit
- Waste Audit
- Project progress
- Data collection



- Strategic Plan KPI misalignment
- Environmental Audit boundaries
- Waste Audit results
- Project progress and reprioritisation
- Data collection difficulties
- Capability gaps identified
- Quick wins possible
- Engagement opportunities
- Project boundaries (not sustainability, but carbon reduction focus)

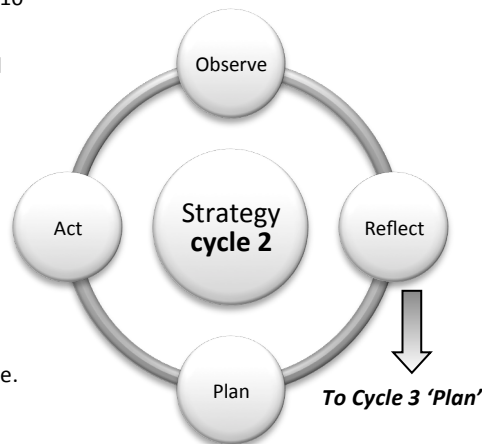
2010

- Strategic Plan mandate
- Strategic plan requirement for an Environmental Audit
- Mind mapping and project dimensions

2010

- Reported against Strategic Plan KPI
- Submitted GRI G3 indicator report for 2010
- Recycle facilities and weigh station installed
- Campus Ecological Transformation sub-project (CETS) commissioned
- Carbon Management Software procured
- Data collection and cleansing
- Quick wins engaged (i.e. water, T5 lights, fleet)
- Engagement initiated
- Project tasks against the 5 project dimensions

- Project progress using project management methodology
- Data quality and collation rates
- Data and progress of CETS



- Strategic Plan KPI adjustment post reduction strategy determination
- GRI G3 indicator report quality and sustainability
- Ongoing activity and funding alignment
- CETS project recommendations and funding options
- Carbon Management system application and integration with corporate data warehouse
- Remaining capability gaps

2011

- GRI G3 report discussion
- Expanded recycling strategy and data capture
- Campus Ecological Transformation Sub-project concept and scope
- Carbon Management system solution
- Capability gap remediation strategy
- Quick wins selection
- Concept communication model

2011

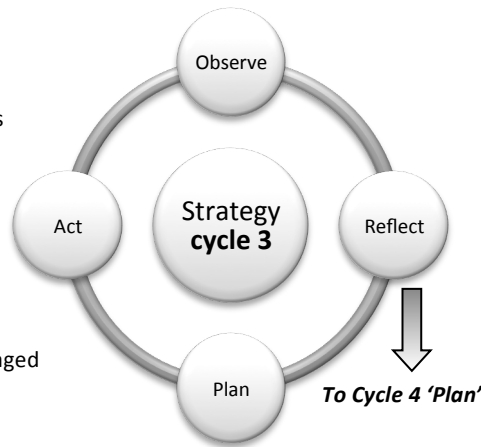
2011

2012

2012 onwards

- Expanded reporting content
- Smart meter install
- Lighting upgrade programme
- CETS feasibility studies and final report
- Carbon Management Software go live
- Research linkages
- Engagement events activities
- External partners engaged with Tri-gen and PV projects
- Project tasks (via Gantt schedule)
- 2011-2014 reduction strategy endorsed by senior executive
- Green power component

- Project progress via PM methodology
- Business case development for Tri-gen and PV projects
- Engagement levels increasing

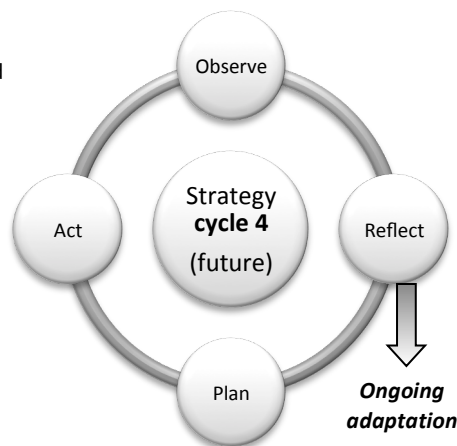


- Strategic Plan KPI adjustment post strategy determination
- GRI G3 indicator report
- Recycle and weigh station development
- Campus Ecological Transformation project
- Carbon Management system
- Capability gaps
- Quick wins possible

- Carbon reduction strategy to 2014
- CETS feasibility studies evaluation
- Water management
- Smart metering program
- Carbon Management system wider data integration
- Governance and management presentation and engagement

- Tri gen and PV project implementation
- Retrofit solutions implementation
- Vehicle rationalisation and coordination
- Air travel and hire car offsets at source
- Increased engagement
- Smart screen display in HUB
- Funding provision in budget cycle for Fraser Coast and Springfield Campus opportunities
- Legislative compliance reporting preparation
- Green power % increase
- Alternate offset analyses
- Adjust reduction strategy

- Actual reductions achieved by each initiative
- Legislative environments
- Funding sources
- Broader benefits
- Risk review



- Organisational readiness for a wider sustainability project
- Anticipate changes to the legislative environment
- Ongoing strategic alignment (land availability for PV, growth, change of use)
- Sustaining the engagement of staff and students
- Broader carbon boundaries to consider supply chain
- System integration opportunities

- Carbon reduction strategy review mid 2014
- Tri gen and PV detailed project planning
- Retrofit solutions detailed planning
- Vehicle and air travel reduction strategy and specific project development
- Engagement and communication strategy review
- Satellite campuses project planning
- Legislative compliance reporting preparation

Figure 2

Each strategy cycle contains a series of actions and outcomes, previously described collectively under the five project dimensions of Campus Life, Teaching and Learning, Operations, Community and Governance and Management. These actions and outcomes are then described against each of the cycle phases demonstrating the actual relevance and application of Action Research for this project.

Each 'reflection' phase of the strategy cycle links forward to the 'planning' phase of the following cycle. In that way the project can consider the changing environment, the success or failure of any particular action and adapt to maintain the desired project outcomes.

Within the strategy cycles, the actions themselves have been delivered using project management methodology, and that will continue to be so until all outstanding actions have been completed or removed from the ongoing strategy.

As mentioned previously, this approach is particularly relevant for a project such as this, with longevity of 11 years or more (2009-2020), being delivered in changing organisational and legislative environments.

4. Baseline Assessment

As indicated in Section 3, this project was something different for USQ and perhaps even something of a 'novelty'. There was then, a clear need to ensure that the project could demonstrate both the impacts and the benefits of any actions taken. The most critical tool in establishing an assessment framework was undoubtedly the emissions 'audit'.

Completing the emissions audit was a significant challenge and highlighted a number of capability gaps/opportunities within the University and particularly around data and procurement systems. These systems would need to be improved to sustain and hopefully increase the accuracy and breadth of future carbon (and indeed environmental) data collection.

For reasons of quality, independence and expediency the audit was conducted by an external consultant using the National 'Green House and Energy Reporting Act 2007' (NGER) reporting framework. This approach provided a number of benefits, including: enabled future external comparisons to be made with other organisations; positioned USQ reporting capability for potential future reporting obligations under NGER; utilised the highest order reporting structure available for the USQ inventory audit; provided external integrity and resource availability.

The adoption of the NGER framework has created an audit report separated at the highest level across three categories of emission, being Scope 1, Scope 2 and Scope 3. The primary emissions findings of the audit and consequently the 2009 baseline are set out in Figure 3 below.

Emission source		Total Tonnes CO ₂ -e	Percentage of total
Scope 1 (direct activity emissions)⁴²			
Vehicle use (diesel and petrol)	Toowoomba	351	2%
	Fraser Coast	12	<1%
	Springfield	33	<1%
Fuel for Generators		12	<1%
Fuel for plant and machinery		10	<1%
Natural gas for stationary combustion		353	2%
Total Scope 1		771	5%
Scope 2 (indirect activity emissions)			
Purchased electricity	Toowoomba	13,336	80%
	Fraser Coast	725	4%
	Springfield	820	5%
	Mt Kent Observatory	25	<1%
Total Scope 2		14,906	89%
Scope 3 (all other indirect emissions external to the facility)			
Air Travel		543	3%
Waste to Landfill		464	3%
Rental vehicles		44	<1%
Total Scope 3		1,051	6%
Total GHG Emissions		16,728	100%

Figure 3

It is noteworthy that the results of the GHG audit were something of a surprise to the Working Group and the Project Control Group members. The quantum and the significance of the Scope 2 emissions (purchased electricity) as a percentage of the overall total had not been anticipated. Expectations for scope 2 were much closer to 70%, with a higher portion of the overall carbon footprint coming from travel related emissions.

The results of the audit provided a very clear focus for the Working Group, in terms of possible Strategy development and also the need for quick wins in the area of energy

⁴² Scope 1, 2 and 3 definitions are summarised in Figure 2. The GHG Inventory adopted the full definition as prescribed by the National Greenhouse and Energy Reporting Regulation 2.23.

reduction and efficiency. The importance of reducing the main Toowoomba Campus Scope 2 emissions was particularly evident (at 80% of the total footprint). Toowoomba assumed the focus for solution development with the view that those solutions (in their simplest form) could be carried across to the other Campuses.

As mentioned previously, the undertaking of the emissions audit also provided some insights to the organisation's capability gaps or constraints. Examples include:

- Distributed procurement structures that only capture the cost of items such as bottle gas and not the volume of the gas, thereby making it difficult to determine emissions metrics other than by the use of proxies
- Distributed procurement structures (i.e. local credit cards) that do not have any ability to consolidate and collate data centrally, and thereby require considerable manual effort to collate and/or derive data for the purposes of determining emissions at an enterprise level
- Online procurement system practice that captures volume details sporadically and often embedded within a text field (rather than a quantity field) making data reporting or extraction either impossible or manually intensive
- Core (enterprise wide) finance and procurement systems that have the capacity to provide a common platform for capturing volume and carbon data at source, but could not (or in some cases were not allowed to) respond with changed functionality or format, such as additional fields, to enable that data capture to occur.
- Bulk purchasing of diesel fuel (for economies of scale) making use difficult to attribute due to consumption being recorded via manual systems (log books for operational distribution of the fuel to generators and plant and equipment). This made enterprise level consumption data difficult as a purchase may take up to 6 months to consume and no transparency of lower level users
- No capability to record volumes of waste or recycling leaving site (prior to weigh station) and inconsistent use of the weigh station (subsequent to installation)
- Numerous energy accounts with separate account owners, meters and client IDs
- Utility accounts that went directly to the Finance department with no linkage to the operational managers of the utility, in this case Campus Services
- No consideration of carbon in any procurement process
- Consideration of audit 'boundaries'. In summary, operational influence was used as the deciding factor

From one perspective, these 'incidental' capability observations formed the essence of a capability baseline (albeit focused on the deficiencies rather than a balanced review) and as such, progress made in improving these capability levels was considered an important additional indicator in measuring the success of this project.

5. Results

Summary

The direct consequence of this project and its impacts on the performance of USQ (during the period of this project implementation) has resulted in a 13.7% reduction in carbon emissions against the 2009 baseline as at the end of 2011. This result has been achieved against a competing background of organisational growth during the same period (10.6% increase in staff, 3.3% increase⁴³ in student load, and a 1.9% increase in building gross floor area).

The activities to date and the consequent results are consistent with the organisation's Strategic Plan and target deliverables. In particular, the Strategic Plan requires (as the 2014 target), a 40% reduction on the 2009 Baseline of the overall carbon footprint. The Carbon Reduction Strategy for 2011-2014 projects an overall reduction of 65% against the 2009 baseline by the end of the 2014 year.

The results of the work undertaken during the project are much easier to identify as a result of the preliminary investment made to undertake a baseline audit as previously discussed. During the past two years further work has been undertaken to update data for each of the three scopes, including the refinement of systems and process to maximise (within the constraints of USQ's technology and operational environments) the automation of data capture. Using the same primary headings within each scope, the emissions performance for 2010 and 2011 are shown in Figure 4 below.

Emission source		2009 Baseline		2010		2011		% Change
		Total Tonnes CO ₂ -e	% of total emissions	Total Tonnes CO ₂ -e	% of total	Total Tonnes CO ₂ -e	% of total	Change against 2009
Scope 1 (direct activity emissions)								
Vehicle use (diesel and petrol)	Toowoomba	351	2%	316	2%	208	1%	-40.7%
	Fraser Coast	12	<1%	11	<1%	7	<1%	-41.7%
	Springfield	33	<1%	33	<1%	25	<1%	-24.2%
Fuel for Generators		12	<1%	12	<1%	15	<1%	<1%
Fuel for plant and machinery		10	<1%	27	<1%	12	<1%	<1%
Natural gas for stationary combustion		353	2%	436	3%	452	3%	+28.0%
Total Scope 1		771	5%	835	5%	719	5%	-6.7%

⁴³ The student load data is based on 2011 end of Semester 3 projections at as NOV 11 and represents Equivalent Full Time Student Load, not simple headcount enrolment data.

Scope 2 (indirect activity emissions)								
Purchased electricity	Toowoomba	13,336	80%	12494	79%	11177	77%	-16.2%
	Fraser Coast	725	4%	749	5%	578	4%	-20.3%
	Springfield	820	5%	782	5%	1120	8%	+36.3%
	Mt Kent Observatory	25	<1%	23	<1%	15	<1%	-40.0%
Total Scope 2		14,906	89%	14,048	88%	12,890	89%	-13.5%
Scope 3 (all other indirect emissions external to the facility)								
Air Travel		543	3%	514	3%	373	2%	-31.3%
Waste to Landfill		464	3%	464	3%	420	3%	-9.5%
Rental vehicles		44	<1%	44	<1%	33	<1%	-25.0%
Total Scope 3		1,051	6%	1022	6%	826	6%	-21.4%
Total GHG Emissions		16,728	100%	15,905	100%	14,435	100%	-13.7%
Reduction against 2009 baseline		0%		4.9%		13.7%		

Figure 4

Whilst Figure 4 provides a summary of the emissions results, much more has been done in addition to measuring and monitoring performance. Whilst there are optimistic views regarding the beneficial impacts of measuring and reporting, it is considered that the measurement of such performance, of itself, contributes less to sustained performance improvement, than the implementation of parallel and supporting management initiatives. For this project, such initiatives (are in part) reflected in capability improvements, particularly in the areas identified from the 2009 GHG Inventory exercise as capability gaps.

There has been a major thrust through this project to change attitudes and behaviours across all areas and levels of the University. Specifically, the key activities undertaken in each of the baseline areas (i.e. emissions scope 1, 2 and 3 and organisational capability) are as follows.

Scope 1 activities

Vehicle use: A review of vehicle policy has been initiated, including but not limited to; increased operational use of salary package vehicles, vehicle selection standards, a new requirement for hired vehicles to be consistent with University pool vehicle standards (safety and emissions), reduced vehicle fleet overall, review of central management of vehicle procurement, greening of the Pool vehicle fleet (e.g. diesel, mid size, 8 L/100km), and increased use of electric vehicles for on-campus utility work.

Care is required with the proposed increased use of Executive Vehicles for daily operational activity as current executive vehicles tend to be larger, more luxurious cars with much

poorer environmental performance than the specifically selected pool vehicle fleet, and as such emission levels may increase.

Fuel for generators: Whilst this is a very low contributor it is one that has increased as the organisation continues to install more standby power generators in response to business continuity planning needs (noting this requirement may be modified following the installation of photo-voltaic and tri-gen technology which inherently reduce supply interruption risks through self generation and the broadening of the technology and supply options).

Fuel for plant and machinery: Efforts in this area have focused on improving data capture. The challenge has been that these low cost transactions occur, often via credit card, and as such do not require the same data capture or linkage to corporate reporting systems. There has not been any physical increase in plant and machinery against 2009 levels, therefore increases in this area are attributed to bulk order timing and possible errors in the 2009 data due to the difficulty of capturing high volume/low cost transactions across multiple procurement points.

Natural gas: As part of the follow up to the energy audits, work was done to review the efficiency of gas boilers. However, savings were minor as the primary boiler plant had been subject to a robust preventative maintenance regime. As a result of this data the periodic re-commissioning of combustion settings and flue gas monitoring, was incorporated into scheduled maintenance activity.

Scope 2 activities

Purchased electricity: In 2011 USQ took 10% of its electricity as Green Power. During 2010 and 2011 the Campus Ecological Transformation Sub-project was undertaken and identified the photo-voltaic, tri-generation and retrofit studies as the most efficient carbon abatement solutions. The preliminary planning and identification of possible funding sources for these elements was initiated in 2011 as previously described.

Other energy reduction activities undertaken in 2010 and 2011 included; smart metering project (this delivered increased data granularity and coverage in order to identify heavy users and efficiency opportunities), T5⁴⁴ lighting upgrades starting with the Library and the Information & Communication Technology (ICT) building, a power factor survey and correction exercise with ERGON Energy, a level 2 energy audit for the Toowoomba Campus, LED lighting was installed in the Campus Hub and LED tubes were trialed at various locations, trials of hand dryers versus paper towels, investigation into instantaneous hot water heaters versus electric jugs (ceased quickly due to health and safety concerns), USQ participated in Earth Hour, communication around energy reduction, the Building Management System was adjusted to widen the temperature band and reduce the operation of the heating and cooling plant, a staff induction module was developed to

⁴⁴ T5 refers to high efficiency fluorescent lighting, producing more light at less power and with lower heat generation, further reducing air conditioning load.

engage staff with the carbon reduction goal and specific opportunities for them, and the Environmental Officer was relocated to a 'shop front' office on the main Quad (prime real estate), maximising exposure for staff and students.

An area of surprising increase in purchased electricity consumption is the Springfield Campus. This has been identified as a plant management (or housekeeping issue) as the increase in consumption only started when USQ moved from being a tenant, and took vacant possession as an owner. There was a 6 month period in 2011 where staff, systems and contractors were transitioning to new arrangements (with USQ as the owner occupier) and it is suspected that earlier energy efficiency activities undertaken by the commercial facilities management team (via the previous owner) had ceased.

Scope 3 activities

Activities under the scope 3 area include: A vehicle weigh station was constructed to monitor the levels of waste and recycling that leave the campus. The results of the waste audit were communicated and created some engagement and interest, but this engagement was difficult to sustain and as experienced by Button (2008), USQ has experienced mixed success in the recycling area.

Discussions were held with corporate travel regarding the offsetting of air travel at source, rental vehicle selection was requested to be aligned with University vehicles in terms of environmental performance and/or carbon offsets purchased at source, a furniture store was established to accommodate surplus items and encourage reuse.

Capability improvements

One of the most significant capability improvements occurred in the uptake of the 2009 GHG Inventory data and the population of that data into a Carbon Management System. The importance of consistent and sustainable data as the starting point for monitoring, managing and reporting carbon performance was understood by the Working Group, Project Control Group and Environment and Sustainability Committee. The difficulties encountered during the original exercise associated with the collection and quality of data made a compelling case for acquiring a suitable system.

Through the implementation of the Carbon Management System many of the previously experienced data collation issues (capability gaps) were addressed, including: changes to procurement policy, quantity fields included in purchasing instruments, data sourced direct from providers⁴⁵, and planned future customisation of the primary finance systems associated with carbon related data. Other changes include shifting focus around vehicle

⁴⁵ Quality issues emerged with direct source data as providers would represent both unit quantities and emissions value. However, we discovered that different carbon conversion factors had been used from those adopted by USQ. This led to a conscious decision that all direct data related to item quantity only with all conversion taking place within the carbon management software.

selection, and the consideration of carbon impacts starting to appear in wider procurement activity⁴⁶, business cases and discussions.

The capability improvements correspond with the findings of Albrecht et al (2007), in that USQ was able, through the GHG Inventory and subsequent Carbon management System implementation to take knowledge that was implicit, change it to knowledge that is explicit and then institutionalise that reporting as part of an ongoing process.

Carbon Reduction Strategy 2011-2014

In recognition of the changing technological and legislative environments around carbon emissions and renewable energy technology, it is intended that the strategy will be reviewed mid 2014. This review will also consider (including but not limited to) progress, actual cost/benefits to date, technology improvements, federal and state legislative and funding environments, levels and sources of engagement and University strategic imperatives.

Subject to achieving acceptable funding sources and instruments the proposed Carbon Reduction Strategy for 2011 – 2014 is projected to deliver a 64% reduction⁴⁷ on the 2009 baseline (by the end of 2014) and includes the following key elements:

- Retrofitting – potential carbon reduction 17%
 - Lighting improvements – converting old fluorescent lighting to energy efficient T5's
 - Revising heating and cooling set points to reduce plant operation
 - Solar film fitted to glazing on selected buildings
 - Installation of thermal insulation at the Residential Colleges
- Renewable Energy Technologies – 15% reduction
 - Photo-voltaic energy generation
 - Solar Thermal
- Low Carbon Technologies – 13% reduction
 - Tri-generation
 - Thermal Energy Storage
- Engagement – 7% reduction
 - Induction module
 - Position Description (insert environmental considerations)
 - Communication/events

⁴⁶One example of the acceptance of the consideration of carbon can be found in the NOV 2011 procurement of copying paper. The team assembled to develop the tender documents included an academic member of staff to advise on sustainable forestry considerations.

⁴⁷ Projected reductions assume all elements implemented and indicative of the reductions achieved against the 2009 baseline by the end of 2014 and exclude additional emissions through organisational growth. Solutions focus on Toowoomba Campus initially and may be deployed at Springfield, QCWT and Fraser Coast post 2014, hence the reduced 64% overall contribution rating.

- Local champions
- Project incentives

- Green power – 25% reduction equivalent via renewable energy via Electricity provider
 - 2011 – 10% ‘green power’ purchase
 - 2012 – 20% ‘green power’ purchase
 - 2013 – 30% ‘green power’ purchase
 - 2014 – alternative offsets identified and engaged

The strategy provides a relatively simple and transparent framework of specific and developed projects, and as such offers a high degree of confidence around the resultant benefits.

The summary representation of the strategy as shown above is perhaps not representative of the considerable volume of work undertaken through this project and individuals seeking to implement carbon reduction projects within their own organisations should not underestimate the resources required for such an undertaking.

Applying the results

At the time of writing this paper USQ has operated primarily in the final two pillars of the Concept Communication Model (as described in Section 3), being; ‘consolidated reduction strategy’ and ‘strategic outcomes’. The outputs of the first four pillars might be summarised as foundation activity and have culminated in the production of the 2011-2014 Carbon Reduction Strategy and the organisation’s consequent ‘implementation ready and engaged’ status.

However, the organisation did not arrive at the final Strategy without significant data and consideration (through the Action Research cycles) of the various feasibility study outcomes. To facilitate that consideration the feasibility studies delivered from the Campus Ecological Transformation Sub-project were structured in the form of a MAC curve as illustrated in Figure 5.

The technology solutions considered through the feasibility studies included photo-voltaic, tri-generation, ground source heating and cooling, bio-gas, bio-mass, building retrofit solutions, wind turbine, and solar thermal.

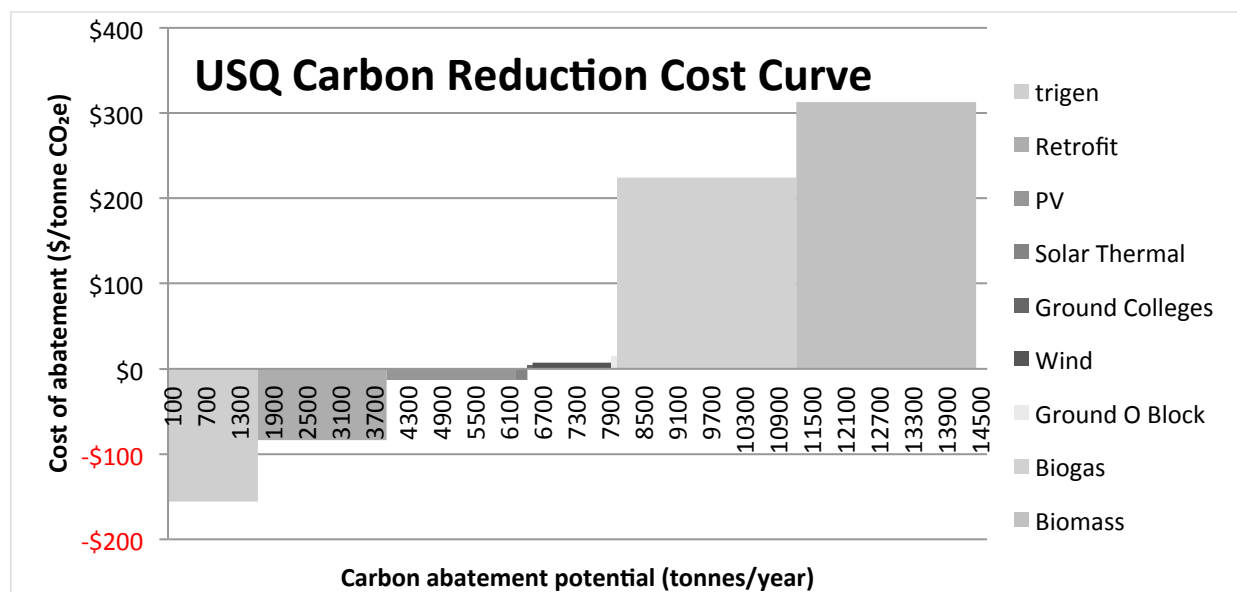


Figure 5

The MAC illustrates⁴⁸ that the retrofit, tri-generation, bio-mass, photo-voltaic and wind options would have a cost per tonne of abatement less than the carbon tax rate of \$23, and therefore would generally be considered viable.

The biogas and biomass technologies are currently not viable given the lack of facilities in the Toowoomba region and the relatively small size of the University (thereby not supporting specific plant). Should this change in the future then these options would be revisited.

The public debate around wind turbines suggested that the campus location in close proximity to domestic housing would not be suited politically to the installation of wind driven turbines, although an offsite location or project may be an option.

The ability to consider each solution on its own merits, gauging each against the cost/benefit and risk characteristics has allowed the development of the proposed MAC (shown at Figure 6), representing the actual solutions adopted within the Carbon Reduction Strategy 2011-2014.

Whilst the contribution of an effective staff and student engagement strategy was not modelled as part of a feasibility study, an assumed reduction contribution of 7% has been adopted (and shown in the MAC) in the overall 2011-2014 reduction strategy as described earlier. It is accepted that engagement is vital for sustained results and it is in this context that the project has projected the engagement benefit.

⁴⁸ The height (or depth) of the MAC columns indicate the cost per tonne of the particular carbon reduction solution; the width of the columns indicate the reduction potential of the particular solution; the X axis represents the volume of carbon emissions. Potentially, any solution that costs less than \$23 per tonne (being the Government carbon tax rate) should be considered further.

The planned 2014 review of the strategy will refresh the data used to develop the MAC based on technological development, progress on tri-generation and photo-voltaic initiatives and actual performance achieved. The MAC will be refreshed to ensure that USQ is on track for achieving its stated carbon neutrality goal in the most effective way possible.

One of the operational benefits achieved through the delivery of the MAC phase of the project has been the development of a business case template that considers the whole of life costs around a project proposal including the associated carbon cost. This in turn has contributed to changes in Financial Management and the University procurement policy now requires environmental considerations to be included in any procurement decision, and whilst this is still in its infancy, the inclusion of environmental criteria via policy mandate is a significant step forward.

As mentioned previously, whilst Figure 5 represents the abatement costs based purely on the feasibility studies, Figure 6 (below) filters those results and adopts the MAC as a way of representing the proposed 2011-2014 strategy. The tri-gen, retrofit, photo-voltaic, solar thermal, ground source options remain the same and will be adopted. The wind option has been deleted due to perceptions (reputational risk) and the initial reaction of the local Council to wind turbines in a partially residential zone.

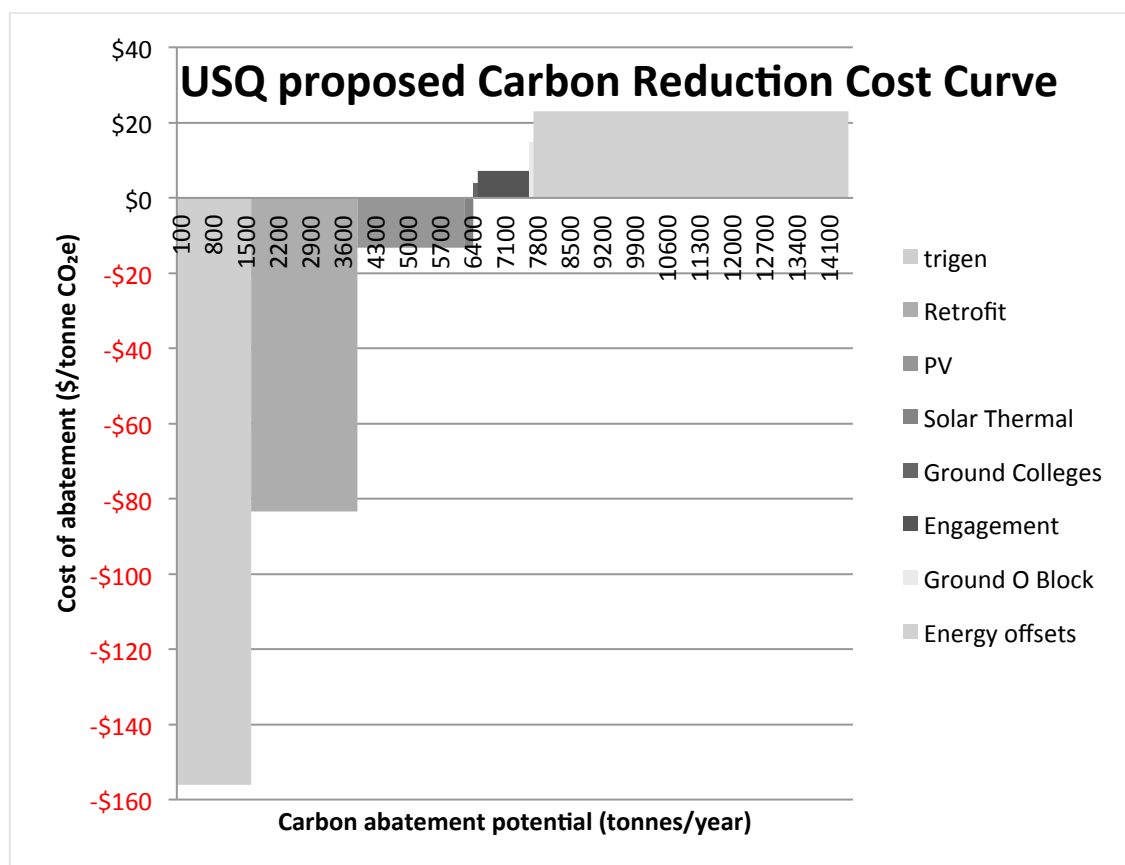


Figure 6

Assumptions around the reduction contributions of staff and student engagement have been modelled at \$7.20 tonne and a potential impact of 7% of the total emissions reduction.

Energy offsets are shown for the balance of the emissions at \$23 per tonne. This is a worst case scenario and does not reflect any particular offset scheme or solution, but is rather an assumption that any offset must cost less than the carbon tax tariff to be viable.

To summarise, the immediate focus for USQ will be reducing emissions arising from standard energy grid consumption and as described earlier, this will be achieved through the adoption of sustainable energy generation and reduction solutions. Accordingly, the organisation has started to implement retrofit solutions already, and is seeking suitable partners for the design, construction and operation of both photo-voltaic and tri-generation plant. This will take the organisation forward in an environment of staff and student engagement (achieved through the broader activities to date and leveraged off the quick win projects) and with a particular reduction strategy that maximises emissions reduction and minimises offsets in order to meet the organisation's stated neutrality goal

6. Lessons learnt

The development and implementation of a carbon reduction strategy within an institution such as the University of Southern Queensland is a complex and multifaceted undertaking and one that will intrinsically take some time to fully deliver. As such the final goal of full carbon neutrality is still some years away but the milestones along the journey are now clearly visible and in some cases have been passed.

This project started with an aspiration; the desire to be carbon neutral by 2020. Supporting that aspiration, linear (but perhaps somewhat arbitrary) targets were set of 10% per annum reductions. Through the various dimensions of this project and the cross organisational engagement required to deliver on the required outcomes, there has been not just a reduction of the University's carbon footprint, but also a wealth of additional benefit in the form of individual and institutional learning.

Some of the key learnings from this project are described below in Figure 7, set in the context of the original Concept Communication Model (as provided in Section 3):

Project dimension/stage	Learning
Commitment and mandate	<ul style="list-style-type: none"> • The use of linear targets should be avoided as significant 'ground work' is required in early stages, suggesting a more structured approach to KPI's is required. • Perceptions of failure in the first year due to misaligned targets were a challenge. • The broad terms of the strategic plan statement were able to be applied as a powerful mandate. • The inclusion of the strategic plan statement came at the last minute and perhaps too easily, leading to limited ownership and engagement at the senior executive level in

	<p>the early stages of the project. The response to this was to deliberately lobby key personnel (executive, committee members, University Council members) when necessary to ensure that a paper or initiative made it through the process successfully.</p> <ul style="list-style-type: none"> • Obstacles and apathy were regularly encountered in the early stages of the project and it is beholden on the individual that undertakes this type of initiative that they be self motivating and tenacious and believe in the value of what they are doing. As the project becomes more credible and ‘gets some runs on the board’ the resistance will fall away, to be replaced with apparent enthusiasm and support from those same earlier obstructers. At this time the self-motivating and tenacious individual must adopt the greater virtue of generosity and be willing to share the project and embrace the new found interest in order to reach the widest audience and obtain the greatest benefits for the organisation. • The use of ‘place holders’⁴⁹ in institutional funding programs helped to notionally reserve funds and raise the profile of the activity. It also required defending at various times and the Strategic Plan mandate and the directives of the Environment and Sustainability Committee were regularly used to repel competing claims on the funding. • FM (Campus Services) operational plans were adjusted to reflect the carbon reduction objective but in reality were limited in their ability to deliver maximum benefits due to operational funding reductions, shortage of staff resources and internal procurement processes creating additional workload. • Early understanding of what a sustainability project meant in the USQ context may be challenged as a result of the carbon reduction project. None the less, the decision to maintain the focus on carbon reduction was the correct one given the other project constraints that were in place.
Baseline assessment	<ul style="list-style-type: none"> • The environmental audit and the associated GHG inventory was a major undertaking and we had underestimated its breadth and depth, leading to the deferral of other tasks and general delay in the anticipated schedule. • Inconsistency of USQ procurement systems and data were highlighted throughout this stage. • The fragmented ownership of various elements of the whole procurement activity ‘suite’ made data capture and collation

⁴⁹ The term ‘place holders’ is used to describe simple one line entries in central funding programmes to notionally reserve and indicate expenditure for anticipated projects. I.e. tri-generation @ \$2M for 2012.

	<p>very time consuming and manually intensive. This would raise its head again during the carbon management software implementation.</p> <ul style="list-style-type: none"> • Carbon Management System: This was seen as part of the baseline stage, in that we needed a tool for hosting our data and monitoring performance. One of the functions that we missed in specifying this was to include solution ‘scenario’ modelling in the form of MAC’s. One other consideration here is that the software is externally hosted for USQ; this was intentional as USQ is developing its own Data Warehouse and Business Information system and it is intended that the Carbon Software function would migrate to the USQ system at an appropriate time. • We encountered some areas that were uncomfortable providing data and various obstacles were raised, including privacy. In fact there were a number of activities and practices exposed that may not have been in strict accordance with USQ policy. These were referred to internal audit for follow up.
Quick wins	<ul style="list-style-type: none"> • The decision to act on quick wins was ‘key’ to success and as hoped, allowed for parallel engagement with staff and students alike through the visibility of lighting projects, and new water tanks. • The strategy engaged FM staff in the project and gave them a sense of purpose around environmental responsibility that had been passive previously. This led to secondary benefits such as mulching, irrigation, resealing the Japanese Garden Lake, student garden creation, installing locks on all external town water supply points. • A weigh station was installed; however this was not something we initially wanted to provide and highlights the lack of regional infrastructure for some of the elements of sustainability. In this case, very limited recycling facilities and even less contractors, and none of them able to provide data on the mass of waste and recyclables taken from campus. We even tried to adopt proxies based on truck volume percentage but this was not successful. • Greening the fleet met with considerable internal resistance as we moved from large V6 sedans to small and mid size diesel sedans. Even today after two years, we regularly receive perception based complaints about the vehicles for highway driving, or load carrying capacity, none of which are borne out by the independent data. • The decision to invest in 10% Green Power was driven by pressure to ‘catch up’ to the linear targets set within the Strategic Plan. It was noted that this is not a particularly cost effective way of purchasing carbon offsets but it was

	<p>considered to be a credible⁵⁰ solution to the immediate need, and coupled with a favourable electricity supply price was not prohibitively expensive. The other benefit of this was to introduce a funding source that might later be redirected to energy efficiency funding rather than Green Power premiums.</p>
Carbon reduction project	<ul style="list-style-type: none"> • The results of the 2009 and 2010 International Student Barometer surveys were surprising to the project team. We had underestimated the visibility and volume of work that had been done and the appreciation of those initiatives by the student community. • The student garden was requested but never properly patronised or ‘owned’ by the students, even though University staff set it up, including water tank and irrigation. It has since become a garden for use by the residential colleges catering staff for fresh produce and herbs in particular and can revert to student use when there is sufficient interest. • The replacement of lighting has caused an interesting mix of responses including accusations of waste (replacing working lights for the sake of it). The decision to replace lights en masse was not taken easily, and the first strategy was to replace lights as they failed. However, this was taking a considerable time as it relied on internal trade staff having the time to do the non essential work. Bulk replacement was more cost effective both in terms of the labour to do the work and also the savings through lower energy use. • Power factor correction tends to be something that is overlooked and over time can drift further away from an efficient level. It is a relatively inexpensive audit and fix, with significant benefit. A poor power factor is like operating a vehicle that is out of tune; the car keeps running but you use more fuel than you should to travel the same distance. • Included here is the stereotypical observation regarding ICT projects, and made in regard to the carbon management software. This took many months longer than originally anticipated and agreed; the software was not quite as commercially developed as originally presented; along the way USQ made some changes to the specifications and perhaps lost focus at times in the project management. Additionally the vendor had a change of key personnel resulting in knowledge and project continuity problems.
Consolidated strategy	<ul style="list-style-type: none"> • The photo-voltaic solution had a number of non-technical dimensions that were to prove challenging.

⁵⁰ The Green Power scheme is operated by the Australian Federal Government and provides independently audited and accredited renewable energy sources that are then linked into the national power grid. Companies can then purchase Green Power with confidence around the genuine offset benefits achieved.

	<ul style="list-style-type: none"> ○ The arrays themselves require a large area to achieve the outputs required. Original locations included recently purchased USQ land, but following early signals from the Toowoomba Regional Council it was decided not to use that land. The Toowoomba Regional Council (TRC) planners considered the use of the land for PV arrays to be less than optimal and would prefer it developed for urban growth. ○ Popular opinion suggested that arrays should be roof mounted. Initially we were focused on ground mounting for structural and economic reasons. As the solutions became more specific we adopted a mix of mount types. ○ Open land (park like) areas exist to the front of the campus but these were excluded due to political and aesthetic considerations. ○ Sites already identified for future building or development, were also excluded. ○ Car parks were identified as the most likely locations with array mounts that were robust and high enough to be suitable, and as additional benefit, might provide shade to parked vehicles. ○ Risk of vandalism was also a factor in site selection. • In 2010, the USQ Human Resources Division was asked to include sustainability content into all position descriptions. They were also asked to include a sustainability module in all staff and student induction. At the time, both requests were refused. Through the course of the project they are now engaged and have undertaken both activities. • University procurement policy was challenged by the strategic and sensitive ‘partnering’ discussion held with Infinity Solar and AGL for photo-voltaic and tri gen (respectively) design solutions. The early discussions were tempered by the prospect of having to take the material developed to date and begin an open and competitive procurement process. This introduced significant risk to the extent that the Chief Operating Officer and Chief Financial Officers were invited to intervene and review the situation, and provide a procurement exemption.
Strategic outcomes	<ul style="list-style-type: none"> • The opportunity to select and structure the PV arrays to maximise research and study opportunities quickly emerged and we selected a mix of roof, ground and tracking option, plus requested panels be sourced from a number of different types and manufacturers to enable data capture and analyses to occur and contribute to academic research. • Research opportunities and academic engagement and integration are areas of further opportunity and were not

	<p>maximised through this project due to project resource constraints. The benefits (i.e. engagement, academic contributions, profile, and intellectual property) of doing more in this area are acknowledged.</p> <ul style="list-style-type: none"> • The relationship with TRC has been interesting and varied. Good support from some areas and clear resistance from others. This is in part perhaps due to the silo structures of TRC and the ‘hard line’ that is held in regard to achieving the targets and goals of that particular silo, rather than seeing the whole picture. The relationship will hopefully continue to strengthen and may perhaps be a catalyst for the improvement of TRC internal communications. • The setting of linear annual targets was arbitrary and a more realistic distribution would have been perhaps 5% per annum in the first two years to allow for audits, data collection, research and technological enquiry. Targets for years 3, 4 and 5 perhaps set at 20%, year 6 10%, and then year 7, 8 and 9 at approximately 7% each. Alternatively, an organisation might adopt a fixed ‘achievable’ amount for the first two years based on quick wins, engagement and offsets, and then define subsequent targets using specific solution based reduction projections (via MAC data) and implementation timelines. • The delivery of this project and its particular outcomes has been a good news story for the University, particularly internally. Staff members at every level (including Senior Management and Governance) have been visibly pleased to be part of an organisation engaged in this socially and environmentally responsible project. As a consequence the project has contributed to a second USQ strategic objective around improved staff retention and satisfaction.
<p>Planning Model – General</p>	<ul style="list-style-type: none"> • Initial planning tools included the mind mapping and subsequent identification of project dimensions. The mind mapping produced a lot of themes and possible tasks/actions. This approach was perhaps more suited to the wider sustainability project and needed some tough editing to bring it back to the narrower carbon reduction focus that the project would eventually adopt. Notwithstanding the volume of ideas generated through the approach it was most successful in developing the Working Group member’s engagement with the project. • The benefit of a thorough audit and baseline exercise can not be understated. Not only does it provide a baseline for monitoring performance but it provides a large portion of the absolute data required to inform the subsequent technology based feasibility studies and sub projects. It is a form of economy, in that the data can later be provided to

	<p>any number of consultants and engineers.</p> <ul style="list-style-type: none"> • On reflection, a specific organisational capability study should also have been conducted at the time of the environmental audit. However, the lessons learnt in the form of the capability gaps identified as an indirect result of the audit and GHG inventory provided a very practical and useful starting point in addressing capability shortcomings. • The model itself has been a useful guide and demonstration for others in understanding what the project is seeking to achieve and how it will do so. The illustration of the model could be refined further to indicate the non-linear aspects of the implementation (i.e. at times, various tasks or elements of the project could be spread across a number of model pillars. This is consistent with the progressive and cyclic characteristics of the two methodologies adopted in this project (Action Research and Project Management).
--	--

Figure 7

One of the primary decisions required at the outset of the project was to consider the most effective delivery method, i.e. whether to follow an incremental step by step process or to identify the whole project and initiate as one.

Rather than adopt one or other model, the USQ approach has been to adopt elements of both; engaging quickly with operational quick wins and progressing engagement opportunities as they arise. Whilst in parallel, developing the larger infrastructure solutions that will have the most significant impact on emissions reduction and also deliver secondary operational enhancements (reduced costs, reduced BCP risk, and reduced reliance on external market volatility).

The significance and scale of the infrastructure solutions also created a profile and presence that stimulated the USQ community and thereby provided a platform for future wider sustainability discussion and engagement.

Engaging the USQ community has occurred progressively as opportunities presented themselves. Engagement with key individuals and bodies within that community has occurred as a specific strategy to aid in the delivery of the project.

Engagement efforts have been focused on groups and functional areas that appear to be interested in the project and are potentially willing to support it, such as the student environmental group, and members of Finance, Human Resources and ICT teams. This approach has been successful for the delivery of specific activities and elements identified within the project.

Engagement generally, has been restricted by resource availability (as per the project constraints) and on reflection, resources may have been over stretched in the early stages and early expectations around engagement activity perhaps too ambitious.

Looking to the future and as an essential tool in sustaining the outcomes of this project, a separate and specific community engagement strategy is needed, and this will be a key task of the environmental officer subsequent to the closure of this project. Marans (2010) suggests some key principles for engagement and more specifically motivating appropriate behaviours including; development of mechanisms for providing feedback and; creating incentives.

The USQ engagement strategy to date has included the representation of local carbon performance data and reporting, but has not yet considered the creation of ongoing incentives for behavioural change. In addition, the strategy will further recognise the benefits of successful lobbying and the engagement of key decision makers (particularly for items that are not mandatory or perceived as almost esoteric). That said, the introduction of carbon related legislation by the Australian Federal Government has done much to raise the importance of carbon reduction within corporate boardrooms across Australia and as a consequence, the need for such lobbying in the future may be reduced.

Navigating the corporate minefield of competing agendas, essential criteria and other ‘immovable objects’ (e.g. strategic alignment, financial systems, procurement policy, lack of time, lack of money, lack of priority) was previously only achieved by making carbon reduction important for people. This was a significant lesson that emerged from this project. Perhaps not surprising of itself, due to the ‘soft’ and ‘different’ nature of the project, but the importance of key individuals (within the corporate environment) engaging (passively or proactively) with the project in order to achieve the goal, cannot be understated.

For USQ, the areas of greatest engagement success have been where an individual was personally motivated by the need to reduce carbon emissions. The longer term engagement strategy will consider this factor and seek to develop not only business driven motivation but individual ownership and passion.

One area of quiet, almost covert, success was the gradual and proactive introduction of environmental reporting into key governance and management committee reports, steadily raising the profile and awareness of activity and performance. A more overt example of success is the creation of an Environmental office ‘shop front’ on the main quadrangle resulting in an immediate and significant increase of awareness and interested reaction from staff and students.

The role of external sector partners within this project has been a significant factor in the development of viable solutions and the delivery and operation of adopted technologies. The engagement of an independent building services and environmental engineering

consultant to undertake the detailed technical feasibility studies provided a coherent unbiased assessment of the infrastructure elements within the overall project.

The networks and expertise of the building services and environmental engineering consultant also contributed to the identification of potential external funding sources and industry partners. These relationships were 'key' in the timely development and progression of site specific proposals that were capable of full implementation and in a form that aligned with the University's financial constraints and preferences.

Further benefits of engaging with industry partners is that they bring a practical knowledge and experience that may introduce and/or enhance options; in the case of USQ that is exemplified by the proposal to construct car park covers with PV panels mounted above (an idea originally not thought to be viable).

One area that requires further exploration is the potential further benefit/opportunity to link the infrastructure projects to academic research and thereby not only value-add to the core academic business of the organisation, but also potentially connecting the partner funding to possible grant revenue (connections with federal Funding benefits). This particular concept was raised as a possible opportunity but sits outside the scope of the project. It is included to demonstrate the wider and serendipitous strategic opportunities that may arise and be considered as valid business opportunities beyond the immediate carbon cost abatement rationale.

7. Conclusion

Even though the University started with an aspirational Goal, and no knowledge of the costs and changes required in attaining that goal, it has set and largely achieved a linear series of annual reduction targets of 10%. In the first two years this has been achieved primarily through the adoption of Green Power (10% in 2011 and 20% in 2012) and through 'quick win' energy efficiency projects.

In the 2011 to 2014 period the projected outcomes from the carbon reduction strategy will see reductions against baseline in the order of 65%; that is 25% more than the USQ Strategic Plan target of 40%. This 2011-2014 projection is based on current technology, legislative environments and funding availability. As those environments change, the University's strategy will be updated to reflect the optimum outcome and in particular 2014 is set as the strategy review date. Offsets are accepted as a likely mechanism to achieve full neutrality as USQ moves closer to 2020. However, the intention is to achieve as much true reduction as possible and limit offsets to a minimum.

Of equal significance, the 2014 carbon reduction projections have high confidence levels as a result of the significant research, data collation and technical development work undertaken during the 2009 to 2011 period including; a major environmental audit, GHG

inventory, and consequent organisational capability development that will improve the quality and sustainability of the environmental data through new information, systems, policy and processes.

Further, the project has identified and facilitated several significant infrastructure solutions (tri-gen, photo-voltaic and retrofit) that are not only key elements in the carbon reduction strategy but will also deliver additional operational benefits (reduced cost of energy, protection from external price volatility) and organisational risk reductions (energy source diversity, reduced supply disruption exposure).

At the start of this project early in 2009, there was a low level of support and engagement around carbon reduction, notwithstanding the goal contained within the USQ Strategic Plan. At the close of the project in December 2011, there is considerable interest and understanding of the activities underway and the need to reduce the carbon emissions of the University (driven globally, nationally and locally). Clearly through the course of this project the USQ community has increased its awareness of the importance of carbon emissions reduction and the various solutions and opportunities for achieving that.

This project has delivered visible examples of USQ's commitment to carbon reduction through the implementation of both operational quick wins and longer term strategic level activities and deliverables; all within a project environment of transparency and engagement with staff and students.

Not only has this project provided the catalyst for increased engagement and subsequent knowledge development for both staff and students, it has created positive effects that have extended to other entities closely allied to the University (Regional Council, vendors, contractors and other professional bodies). These relationships have expanded within the area of environmental sustainability and carbon reduction in particular and have spawned new collaboration opportunities⁵¹.

As anticipated at the outset, the University has responded well to the carbon reduction project and this project has now delivered a platform of infrastructure and systems, and created an environment of awareness and engagement, whereby a wider sustainability initiative might be successfully undertaken.

If we consider USQ's evolution in terms of the Institutional Change Cycle model offered by Rauch (2007), the University has progressed through each stage of the cycle; Vision, Development, Endorsement, Implementation, and Institutional Change across the multiple dimensions of the project.

The experiences gained through this project might suggest another possible configuration for the Institutional Change Cycle and that is to acknowledge that the 'Endorsement' stage should not always be seen as a sequential stage of the cycle. Endorsement can happen at

⁵¹ At the time of writing USQ collaboration examples include: TRC, AGL, Infinity Solar, Ergon, Australasian Campuses Towards Sustainability, and support to a Chromasun research installation bid.

various stages and levels. For the USQ project, significant development and implementation was undertaken prior to institutional endorsement of the overarching carbon reduction strategy.

In summary, this project has:

- Developed a conceptual framework (mind map and key dimensions moving then to a concept delivery model) and project delivery methodology (Project Management and Action Research) aligned with leading industry solutions in a complex organisational setting
- The conceptual framework provides a logical development sequence and considers the relationships between a number of enterprise level elements typically present in a large corporate entity and as such provides a useful model for similar organisations wishing to embark on a carbon reduction path
- The outcomes of this project have played a singular role in achieving the strategic aims of the University in regard to its carbon reduction goals.
- The outcomes of this project have beneficial impacts beyond carbon reduction and include: reduced operating costs, reduced risk around supplier dependence and energy market volatility; reduced risk around the impacts of carbon legislation; expanded strategic relationships and collaboration opportunities; increased research opportunities and academic engagement; provided a platform of success for subsequent community engagement around wider sustainability objectives.
- This project has raised the knowledge, awareness and engagement of the University community to a level that a wider sustainability initiative may now be successfully undertaken.
- Demonstrated the effectiveness of an implementation strategy that combines the principles of Action Research and Project Management methodology

This project has culminated in the delivery and organisational adoption of a logical and robust carbon reduction and management strategy projected to reduce the University of Southern Queensland's carbon footprint by 65% (against the 2009 baseline) by the end of 2014.

The strategy is founded on the conceptual framework (Concept Communication Model and Action Research cycles) described earlier in section 3. In particular; the Strategic Plan mandate (aspirational goal) which empowered all subsequent activity; the environmental audit and GHG inventory which provided key data and an emissions baseline for future performance monitoring; the identification and execution of quick wins (allowing immediate reductions to occur and perhaps more importantly, provided visible indicators to staff and students that USQ was committed in its goal and thereby initiating the engagement phase); the adoption of a logical, transparent, project management methodology for the delivery of the carbon reduction initiative; the campus ecological transformation sub project developing sustainable technology solutions resulting in site specific feasibility studies that

provided the data for the development of the USQ MAC projections; and finally the development of a consolidated reduction strategy for 2011 to 2014, building on the hard metrics of the MAC projections and also encompassing some of the wider engagement opportunities.

Further material from this project is available from the author at dave.povey@usq.edu.au .

About the author

David Povey is a student at the University of Southern Queensland (USQ) engaged in a Doctorate of Professional Studies. He is also the Executive Director Campus Services at the USQ. He was born in the UK in 1961 and has 30 years experience in the field of Facilities Management. David has various trade and technical certificates and was awarded a Masters of Property Studies in 2003 from Lincoln University (NZ). David is the Chairperson of the USQ's Environmental and Sustainability Committee and is particularly interested in the role of Facilities Managers in the reduction and management of the University's carbon footprint.

Acknowledgements

The engagement and assistance of all those who played a part in the development and delivery of this project is acknowledged and appreciated. Particular thanks go to: Dr. Neil Peach in his role as Doctoral Supervisor, Mr. Bernard Lillis in his role as the Chief Operating Officer, and Ms. Alicia Logan in her role as the Environmental Officer. Thank you.

END OF ARTEFACT 30

5.5.6 Other 'knowledge' arising from the projects

The knowledge arising from this doctoral journey and in particular the projects is significantly represented in this thesis through the content and artefacts provided in earlier chapters, and particularly by Artefacts 29 and 30 in the previous sections. Therefore my intent with this section is to simply 'pull out' and highlight some of the other key knowledge achieved through project implementation and conclude with a brief discussion of some of the opportunities that still remain.

For completeness, I have provided at Annexes G and I, succinct 'bullet point' schedules of the outcomes and initiatives delivered by the SAM Project and the Carbon Project respectively. These annexes provide a level of granularity intended to compliment and extend the knowledge and learning provided in Artefacts 29 and 30 and is provided mainly for the interest of FM practitioners.

As a general reflection to start this section, the material represented in this thesis reflects evidence of academic and professional knowledge through the development of detailed structural and implementation frameworks. These frameworks describe the development and implementation of the two projects set against the challenges of the institutional, professional and personal contexts. That is, how the implementations were developed and adapted to accommodate the '*swamps, messes and wicked problems*' described by Lester (2004, pp. 7-8). This knowledge is of potential assistance to other FM practitioners researching options for how they might approach their own projects and minimise the impact of their own institution's 'swamps and messes'.

A key outcome of the Carbon Project was the Carbon Reduction Strategy. The knowledge underpinning the USQ strategy is founded on current 'sustainable energy' technology solutions and employs leading edge ESD principles and approaches. Of equal importance, the strategy reflects the specifics of the USQ environment in regard to annual load profile, existing services and infrastructure systems and as such is robust and carries with it a high level of confidence around the carbon reduction projections and costs associated with implementation.

Other participant and institutional knowledge arose from: the system and procedural changes required to ensure the repeatability of the data collection (i.e. as automated as possible with consistent accuracy and methodology); the consideration of carbon boundaries and their potential and actual relationship with the SAM project (i.e. do we count emissions from tenancies on the campus, or contractor vehicles), and; the identification and implementation of a carbon management software system and its wider interaction with the USQ community including academic use (as part of the toolkit available to the academic courses and programs).

As the two projects progressed USQ's understanding (led by the knowledge and experiences created through implementation) of the interdependency of its numerous internal areas of activity also developed. Examples of where this understanding translated to action include; identification and engagement of research synergies, collaboration with academic consultancy, common data storage and information systems, improved procurement practice, changes to and funding for infrastructure and asset portfolios, and adaptation of the financial system form, use and interfaces.

Before concluding this section, I will briefly discuss some of the areas of opportunity for further improvement and knowledge development.

The first is in regard to the SAM Project and is quite operational but important (for the FM practitioner), and relates to the quality of the Condition Audit data. The current USQ data is subjective in places complicating the interpretation and reporting, and resulting in reduced management confidence in regards to estimates of cost, priority and/or timing. This has likely occurred as a result of the diverse range of trade staff completing the exercise, plus the use of the internally developed Condition Audit Guide (which provided illustrative photos to assist in condition grading) was helpful but imperfect.

Staying with the SAM Project, a more strategic area for institutional improvement (and addressing some of the interdependencies discussed earlier) relates to the use of the Faculty Planning Template. Currently only two Faculties are using it in the way it was intended. The embedding of the template within the corporate planning cycle and documentation is still an essential step in the multidimensional integration of the SAM approach, linking the various portfolios that influence the estate (staff, students, academic product, and pedagogy).

The importance of the Faculty Planning Template extends beyond the role of simple space data and seeks to address some of the institutional gaps in regard to the management of the Academic Portfolio. To be explicit, the Academic Portfolio informs and is informed by, the pedagogical approach and will consequently influence the location, quantum, type and specialisation (fitout, services, equipment) of the physical space. This relationship highlights again the importance of portfolio mindedness. There is further opportunity here as the management of the academic portfolio is also an area where the University could adopt an equivalent SAM approach rather than Faculty driven development.

Another area for institutional and operational improvement, and one of the key deliverables from operating within a SAM framework, is the Capital Asset Management Plan (CAMP). In its simplest form, the CAMP portrays the organisational capital expenditure across a number of years in regard to the estates portfolio, noting that different asset groups may have their own version of CAMP, or be collated to a single overarching CAMP. For USQ, the projects included on the CAMP do not yet reflect consideration of the full range of enterprise drivers that influence the built environment (the SAM linkages). Again, this is in part due to the

planning gaps discussed above, but also in part due to residual 'management practice' in its willingness to simply adjust the CAMP expenditure in response to crises or opportunities (actual or perceived). This practice seems to represent the 'low hanging fruit' option and whilst it is perhaps inevitable as a legitimate (and expedient) financial control available to senior management, it indicates a particularly short-term view that potentially undermines the benefits of the SAM approach. Further effort in developing and presenting the SAM justification (perhaps as individual business cases) for each Capital funded item is likely to assist in raising the enterprise understanding of the benefits of the SAM methodology.

Moving to the Carbon Project opportunities, the principles of ESD were required as future project standards and whilst this is mirrored in the SAM Project, those standards have yet to be fully adopted as an absolute requirement in new project and refurbishment design. This in part reflects the tight operating environment but also signals that there is more engagement work to do in ensuring the ESD elements are sufficiently prioritised, considered and represented at project initiation stage.

To conclude this project knowledge section, I recall one of the earliest and most visible outcomes of the Carbon Project, being the greening of the vehicle fleet late in 2008/early 2009. This caused considerable internal debate at the time, in spite of significant communication and positive media. Whilst the move to smaller greener vehicles was a very useful 'opening shot' for the Carbon Project, it was the one thing throughout the whole project that generated a negative response. The objections were primarily around perceptions of safety associated with highway driving and small or medium size vehicles. On reflection, I might have either: left the vehicle changes until later in the project when the engagement 'trend' was further developed, or engaged more broadly with the USQ community in developing the case (and boundaries) for greener vehicles and communicating that rationale as part of the change.

In the next section, I will explore one of the key insights arising from the whole journey and link that to the thesis form, title and abstract.

5.5.7 Format, title and portfolio mindedness

For me, one of the key knowledge areas arising from and influencing this learning journey has been that of 'portfolio mindedness'.

This knowledge has developed not only as I have moved through the implementation of my work based projects, and observed the interdependency and connectivity of the various elements and dimensions of those undertakings, but also as I have developed my academic knowledge and understanding.

At the start of my journey, in initiating the two work based projects I sought to change particular elements of my organisation to achieve specific outcomes. It is evident through

the experiences and outcomes arising from those implementations, that enterprise level projects cannot be wholly scoped, planned and affected in isolation of the remaining institutional dynamics and elements. This connectivity is an extension of Armsby's observations in regard to the influence of the organisational context on the work based learner and the development and implementation of my two work based projects has clearly illustrated this interdependency and the consequential importance of adopting a 'portfolio minded' approach.

Similarly, as I have undertaken my research of the academic literature and sought to position my own work within, and as a contribution to, that body of knowledge, I have recognised the interdependency inherent in the academic material and approaches, providing further rationale for a representation of portfolio mindedness in regard to my thesis content, form and structure (discussed fully in Chapter One).

These insights and my commitment to them as major learnings have been progressive, and for me (occasionally with some frustration) have been evidenced and facilitated by the number of times I have redrafted the thesis abstract and title. As mentioned previously, my starting view of this journey was focused in the professional, technical FM outcomes, with a splash of institutional and personal learning. This led to some fairly black and white early narratives in the abstract and the title. As my vision expanded, these documents evolved to the point where I could link the SAM and the Carbon portfolios as expressions of the institution's physical footprint. In the latter stages of my study, that conceptual platform has evolved further to identify and embrace the 'portfolio mindedness' learning. To some extent this evolution, crystallised in the various versions of the thesis Abstract provides a macro-representation of my learning journey.

But what do I mean by the term 'portfolio mindedness'?

There are many applications of the term portfolio, generally applying to a range of investments, responsibilities, papers or artwork. In its simplest form, a portfolio is a collection⁵² of 'things'. Paradoxically though the terms are not always interchangeable i.e. a portfolio of art suggests original work by the portfolio owner, whereas a collection of art simply suggests the bringing together of various pieces. For the purpose of this discussion we assume that portfolio is a collection of things (e.g. assets, resources, products or responsibilities) with an assigned responsible manager. Therefore, a portfolio can exist within, alongside, below or above other portfolios and whilst it is possible to have distinct portfolios with no interdependency, it is more likely that dependencies or 'effect pathways' will exist between the portfolios within an institutional setting.

⁵² Wiktionary describes the etymology of 'portfolio' as found in the Latin verb *portare* ("to carry") and *folium* ("sheet") and suggests the meaning "collection of responsibilities" came by extension in the 1930s.

There are various other terms associated with portfolios and portfolio management which arise from the more traditional financial investment portfolio approach such as seeking balanced risks, diversification of investments and target rates of return. These perspectives were epitomised by Markowitz in his 1952 model of portfolio selection and more recently in his broader review (Markowitz, 1991) of the foundations of portfolio theory.

Other disciplines and references encompass Project Portfolio Management (PPM) and certainly both the IT and Campus Services Divisions at USQ talk in terms of the project portfolio within their respective areas. An evolution of PPM is Enterprise PPM (EPPM) where a more integrated top down approach is taken to the delivery of project focused work within an organisation. This approach particularly assists in meeting the need to deliver projects against organisational constraints and criteria, optimising resources, and allows for the testing of projects for strategic fit through central oversight.

Within the IT area there is an established approach for IT portfolio management, which can include a number of subordinate portfolios, such as the 'application portfolio', 'infrastructure portfolio', and 'project portfolio'. In their discussion of IT Portfolio Management implementation, Jeffery and Leliveld (2004), expand on the options and hurdles associated with implementing an IT portfolio management approach.

Other portfolio management approaches include, Real Estate Portfolio Management, Corporate Real Estate Asset Management, Facilities Portfolio Management and Product Portfolio Management.

All of these portfolio management approaches contain similar goals and objectives built around systemic approaches to the evaluation of data and the generation of information to assist management decision-making.

Within this environment of portfolio management systems and approaches, the role of the 'portfolio minded executive' is to perceive and respond to the interdependency of the various portfolios in a way that brings about the best possible outcome in regard to the organisation's strategic goals.

This may seem an obvious interpretation, or even an implicit expectation placed on every senior manager and executive, but in reality the organisational environment (e.g. workload, communication, planning, performance targets) does not facilitate that level of holistic thinking from the senior executive. There is a belief (evidenced within USQ) that managing an individual portfolio well (i.e. within financial and performance targets) is sufficient to maximise the institutional outcome at the enterprise level.

If individual portfolio owners are environmentally prevented from broadening their perspectives to further consider and accommodate the needs of other sibling portfolios, who within the organisation is looking at the enterprise picture with a level of subject

matter familiarity to achieve the optimal outcome (from a holistic portfolio minded perspective)?

Traditionally this holistic portfolio minded approach has not been the specific responsibility of any one position within an organisation, or if it has, then it is likely to have been at the Chief Operating Officer or the Chief Executive level (in the case of USQ). But are those top executives, dealing with a significant volume of relationship, transformation, operational and strategic workloads, likely to have sufficient time to achieve the depth of understanding necessary to ensure the synergistic integration of the various portfolios with the strategic plan?

In his paper entitled “The need for a Chief Portfolio Officer (CPO) in Organisations”, Steyn (2010) explores the workload already placed on executives and discusses the case for the appointment of a Chief Portfolio Officer within an organisation, in order to have oversight of the various portfolios and to bring those together for maximum benefit.

To illustrate this succinctly, I have provided below at Figure 26, a representation of portfolio mindedness using a sample of the USQ portfolio relationships.

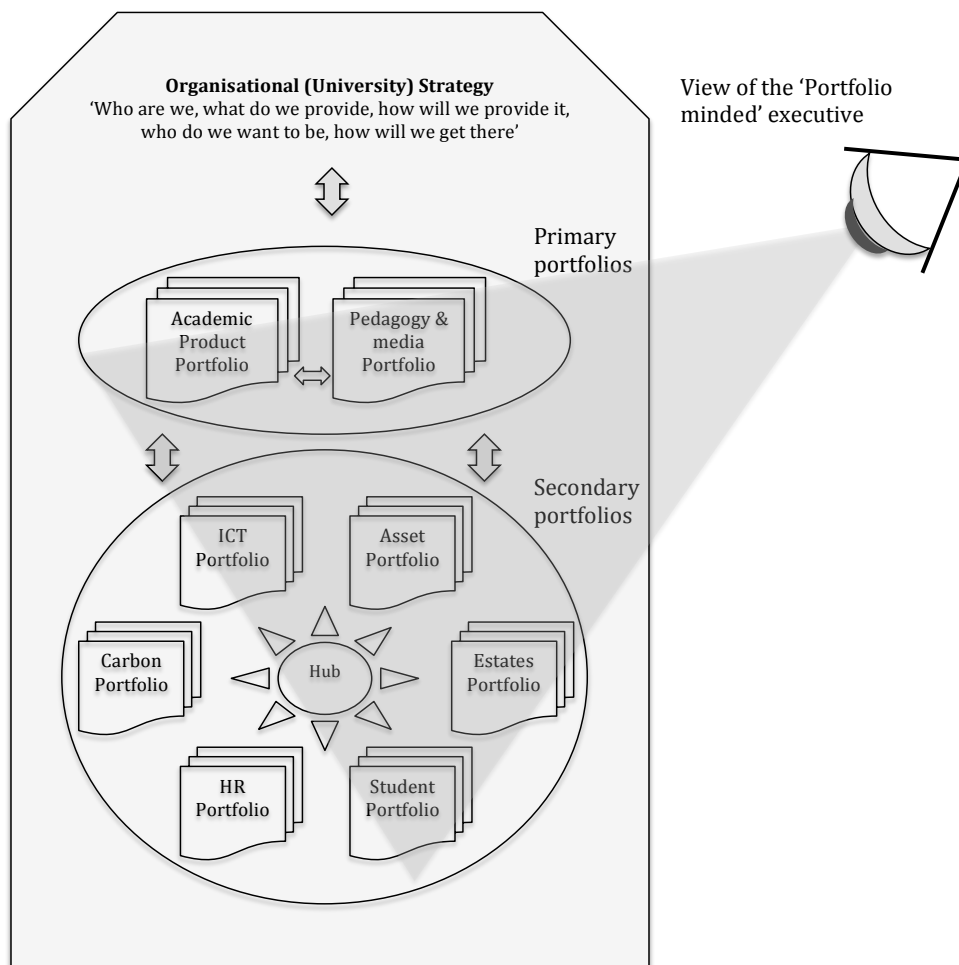


Figure 26 - University example of portfolio relationships

Whilst there are a number of portfolios within an organisation, it is clear that some will have more influence on the core business and strategy than others. To that end I have identified primary and secondary portfolios. Primary portfolios are essentially the direct core business portfolios with the greatest connection to the strategic goals, and the secondary are those portfolios that support and enable the strategic mission.

Figure 26 shows the role of the organisation's strategic plan both informing and being informed by, the key business of the organisation (expressed by the primary portfolios). For USQ those strengths have traditionally been distance and online education across a range of programs.

Sitting under portfolios of course there will be assets or programs; and under the programs, individual projects or initiatives. As mentioned earlier, the portfolios are connected via a myriad of dependencies or effect pathways, represented by the 'hub' at the centre of the secondary portfolios.

The model is indicative in its mapping of USQ portfolios, and there are certainly other portfolios which could have been included.

To illustrate portfolio dependencies against my own projects, an estates portfolio managed and moderated under a SAM approach, will have a different impact on the Carbon emissions portfolio than that of a 'Lazy' estates portfolio (arising from its different scale, location, form and use).

Similarly, the institutional procurement strategy (part of a Finance portfolio) may have a direct influence on the SAM and/or Vehicle strategies, and the Carbon emissions footprint (through the importance placed on 'green' procurement or perhaps by mandating reuse and recycling).

As indicated in the primary portfolio tier, the University's pedagogical approach will have a significant impact on the Estates and Carbon portfolios, and a 'lazy' estates portfolio will quickly become misaligned with the Institutional mission and profile. Similarly, a student body studying and learning by distance will have a substantially lower affect on the carbon footprint of the University (noting a potential discussion here in regard to defining institutional carbon boundaries) than the same number of students attending a campus.

For USQ and many other universities, as more and more academic offerings migrate to a digital only, online format, obvious questions are raised, not only for the estates portfolio but for the other portfolios which make up the organisational whole.

What are the implications of online teaching for the HR portfolio; does it require lecturers at all or just academic product developers, and can they be based anywhere that has web access? Clearly, this could result in significant changes to employment contracts, the form of physical estates; potential increases in the IT portfolios (or possible paradigm shifts to

outsourcing, and/or the 'cloud'). How will these changes affect or be affected by the target student demographic?

Whilst the concepts and methods of portfolio management are well understood, the concept of and need for a 'portfolio minded' approach is not. Portfolio mindedness (as a practitioner competency) is perhaps an extension of portfolio management praxis and has become increasingly relevant in the rapidly evolving global environment.

'Things' within an institutional setting are interrelated (overtly or covertly) and the value to a practitioner in adopting a 'portfolio mindedness' approach to their reflection and decisions must inevitably be the development of their own professional learning and competency, improved project implementation, and an improved value contribution to their host organisation. The development of such a competency is consistent with the work of Boyatzis (2008) who sought to describe the 21st century competencies of effective leaders and managers. The development of a portfolio mindedness competency would straddle both the cognitive and social intelligence classifications described by Boyatzis.

For USQ, entering a review of its Strategic Plan, the opportunity to adopt such an approach is now, and might potentially include the development of a Chief Portfolio Officer role.

That concludes my discussion of the 'Knowledge' strand outcomes and I will now move on to look at the outcomes under the 'Action' strand, once again referring back to the 'map' at Figure 25 to guide that discussion.

5.6 The 'Action' strand

Much of the 'Action' detail (consistent with my interpretation of those elements and interventions as represented by Figure 25) has been described in Chapters Three and Four and Artefacts 29 & 30, and I would summarise that material as relating to frameworks, models, reporting and approaches.

In this section then, my aim is not to repeat that earlier discussion, but to strengthen the connection of my work with Cherry's (1996) Action Research 'rope'. In particular I will focus on my choice of approach and expand further on the role and significance of Action Research in my undertakings.

Perry (1992) cites Altrichter's description of Action Research through the use of a scenario table, against which the research environment can be tested. Altrichter's criteria are summarised as follows:

- The researcher is in an environment where people reflect and improve their own work and situations as a consequence of that reflection, whilst making that reflection and action publicly available to other interested parties

- The researcher is in an environment where there is increasing gathering and application of data; where there is increased participation in decision making and a reduction in hierarchical behaviour
- Collaboration among the members of the group, identifying as a community
- Learning is occurring progressively by doing and making mistakes, reflecting on the actions and applying alternate action

At the time I started this journey, the environment described by Altricher was not the environment that existed within the Facilities Management team at USQ. But, in 2008 as the new leader of that group, seeking to rebuild the team following a significant organisational restructure, it was exactly the environment that I needed to create.

Perry further summarises the scenario table to provide three elements indicative of an Action Research approach as:

- A group of people working together;
- Involved in the cycle of planning, doing, observing and reflecting on their work more deliberately and systematically than usual; and
- Producing a public report of that experience (such as a thesis)

Perry's summary of the elements provided a succinct expression of the workplace environmental outcomes that I aimed to achieve from my intended interventions. At the time, the benefits of moving the Facilities team to a more collegial, structured and considered approach to their organisational contributions was of itself worthwhile and further supported the 'management focused' rebuilding activities I had already initiated. The requirement for a public report would be met by my academic work (articles and summary of learning, aka thesis) and also through increased internal reporting and communication arising from the projects. These were some of the considerations that sat within the contextual circles driving my reflection and subsequent actions.

The adoption of Action Research for my study, and for rebuilding the team (through staff engagement and development) did mean that I would have to adapt some of my own leadership styles to accommodate the intrinsic role and influence of the organisation, the team (as participants) and me as the research practitioner.

My willingness to adapt my leadership and management practice to accommodate this aspect of the Action Research approach, highlights the importance of the personal and institutional contexts in which this study was undertaken, and also the alignment of the Action Research paradigm in acknowledging and accommodating contextual influences as inherent elements of the research process and outcomes.

This is a key difference between Action Research and traditional research, where the researcher may be operating external to the primary environment in which the research is occurring.

One metaphor that I have used with members of my team to describe the difference is this; in traditional research the researcher acts as the Director of the stage play and owner of the auditorium, planning and overseeing the activities on the stage, observing them from the front row of a controlled environment, and ensuring their performance against the script.

In Action Research, the researcher is still the Director but yields to a more collaborative approach, adapting to the environment in which the play is staged, the abilities of the actors, and the needs of the audience. He does not own the auditorium and he must perform as an actor on the stage. This participant in the play creates a different dynamic with the other actors and the audience, and in so doing, creates different perspectives on the play and a willingness to accept performance outcomes that may vary from the original playwright's script.

It is this fundamental difference which aligns Action Research as a suitable methodology for the implementation of work based projects aimed at creating significant change in complex organisational environments, and requiring the involvement of multiple and diverse staff in their implementation.

If the adoption of the Action Research approach represents one of the key actions leading to success, another must be the integration of Action Research with the standard Project Management approach (that I would have applied to any operational project).

The connection of these two approaches was not without challenge and at the start of my journey it was not obvious to me how I would combine the two approaches in a way that would meet the operational 'real world' need and also the academic need. This is reflected in my DPST Getting Started paper (provided at Artefact 3), which described a more direct and mechanical relationship than that which I eventually adopted. My development of the Learning Journal and the Quality Review Template, combined with a standing item on the Working Group agenda allowing for completion of the template, provided the final mechanisms for this integration. Raelin's (2006) comments on learning to learn, and pausing for reflection, pointed me to the need to formalise reflection within the project delivery framework, elevating it to a substantive element of implementation, rather than a discretionary add on.

This provided a very effective implementation environment. The resultant hybrid methodology provided the logical, task focused benefits of operational project delivery, whilst creating the time and framework for the participants to pause, reflect and adjust the project scope and/or task detail.

The Action Research component and its required reflection produced additional value as implied by Raelin (2011) and through the application of the work based projects as a learning opportunity for the participants.

Examples of that additional value include: the staff within the Campus Services team have significantly grown their knowledge of SAM and particularly how FM can affect many areas of the organisation (portfolio mindedness again); their engagement with the project has developed a strong sense of ownership with the SAM framework particularly (as a philosophy and practice) and the contribution to the collective Campus Services outputs via their own operational areas of responsibility.

There are of course still challenges in front of the organisation and perhaps unsurprisingly, the creation and maintenance of the SAM framework has of itself created an additional demand on resources, beyond that addressed or anticipated by the terms of the project. To some extent this is representative of one aspect of the organisational context referred to by Armsby (2000, p. 35), when she says “the work based learner is both helped and hindered by his or her organisational context...work based learners must grapple with being a part of the problem, situation or development they are investigating”.

With the sustainability of the SAM framework in mind, resources may need be added incrementally (as other synergies are identified or as demands warrant), or alternatively the SAM framework may be adjusted until the two are in balance and therefore sustainable for the USQ situation. As the researcher practitioner with responsibility for both the project and the institutional performance of SAM, I am reluctant to consider (‘grappling with the problem’) solutions that reduce the USQ SAM framework so soon. In my opinion it has not yet had sufficient time as a fully operational system to generate sufficient experience and data to support a cycle of review.

One of my ‘action’ regrets is in regard to my early decision to use the Environment and Sustainability Committee (ESC) for early governance oversight of the Carbon Project. My intent was that members of ESC would also assume a level of ‘participant’ status, contributing to and representing the Carbon project in their own areas of responsibility and act as champions for the project more generally. However, this was not always the case and on reflection a more formal ‘project’ communication to the University community may have been beneficial. It is my general observation that in any committee environment, there are members who attend the committee almost as a completely independent activity from their normal responsibilities, and do not allow (consciously or otherwise) the two environments to cross pollinate; in my view, missing the primary purpose and value of their membership. Perhaps this provides an example of the effects of not adopting a portfolio minded approach.

In summary then, the actions undertaken in developing the frameworks for, and successful implementation of the work based projects, go beyond the simple ‘what’ of the projects and provide a detailed guide to the development and organisational implementation of the SAM capability and the Carbon Reduction Strategy. The resultant knowledge, material and experiences created as result of the frameworks and methodology, and described within this thesis, provided full details on the ‘why’ and the ‘how’ of the projects.

In bringing this 'action' section to a close, I want to reflect briefly on the importance of the approach in terms of its personal fit with me as the researcher practitioner. It is my view that the engagement of the Action Research approach was successful not just because of its alignment with the work based learning paradigm, but because it was consistent with my personal leadership values and facilitated my objective to engage the FM staff with the project, rather than simply outsourcing or contracting the work.

This intervention with my staff was driven by my desire to bring the team with me on this learning journey and by so doing, rebuild the FM division, develop their professional knowledge and confidence, and create ongoing ownership of the project deliverables (including the sustaining of the data and systems).

This outcome is consistent with the observations of McNiff (2000) described earlier in Chapter One, in that my values and my passion as a manager (and therefore as a worker researcher) have directly influenced the implementation methodology for these projects and resulted in an enhanced outcome across the institutional, professional and personal dimensions.

To complete the connection to the Action research rope I will now move to the 'Learning; strand.

5.7 The 'Learning' strand

In this section I will reflect on the personal learning that has occurred as result of undertaking this journey. I will continue to utilise the elements of the learning strand, as illustrated at Figure 27, to generally categorise and present that learning. Of most importance, I will reflect on my own learning capability development and position that development within contemporary views of experiential learning and reflective development.

I will begin with some discussion of the elements inhabiting the learning strand, as I have represented them previously.

5.7.1 Learning Portfolio

The Learning Portfolio was presented and discussed in Chapter Two (with a full copy of the document provided at Artefact 1). As discussed within the earlier supporting narrative, the act of considering, collating and positioning the various personal, academic and professional elements of my life up to that point was the first deliberate and structured reflection of that scale that I have ever done and as such the experience was profound. It was particularly interesting for me to recognise the key emergent themes around; the action focus, the

increasing significance of the leadership component and the strength of the facilities and estates practice.

The work of Alveson and Skoldberg (2000) in describing Reflexive Methodology influenced my own process in developing the Learning Portfolio and the Learning Plan. The influences of Reflexive Methodology on my own process relate to: the interaction with empirical data parallels with my collation of personal academic and experiential facts; the interpretation stage was used to identify themes, and; the critical interpretation stage parallels to my positioning of the data within the professional, personal and institutional contexts.

As a result of this approach and the self-understanding gained from developing the Learning Portfolio I was able to construct and consider the contextual circles (refer Figure 25) and consequently provide the base data required to plan my doctoral journey.

5.7.2 Learning Plan

If the Learning Portfolio provided the base data, then logically the process of constructing the Learning Plan was equivalent to the analysis of that base data. Through that analysis (linking again to the reflexive approach), and the bringing together of the contextual circles, I was able (for the first time) to view the contextual common ground that would subsequently become the driver for my particular doctoral journey. The Learning Plan itself was the expression of that analysis, providing a series of results, in the form of learning journey objectives and potential work based projects.

One of the major differences in the Learning Plan deliverables has been that of the thesis. I had originally anticipated providing a Summary of Learning Report rather than a full thesis. At that early point, I had not considered the requirement for a thesis at all and had taken at literal 'face value' the structure provided in the DPST guidebook.

My initial understanding of the Summary of Learning was more akin to a standalone report, potentially following a similar format to the Portfolio or Learning Plan document. Consequently, one part of my academic learning through this doctoral journey (and as discussed in Chapter One) has been to understand, adjust to and embrace, not only the academic rigour required, but also the intrinsic value (not least to my own learning development) of developing a full thesis to reflect the doctoral journey I have undertaken.

One of the major challenges I faced in developing the Learning Plan was not just the identification of the work based projects but also their initial scope and scale, and relating that to the requirements of the DPST award. In essence, how much is needed, in what areas and at what level in order to achieve and demonstrate the 'doctorateness' of the study?

Notwithstanding the levels of success achieved across both of the work based projects, I do reflect that the scope and scale of the projects was such that it has adversely impacted on

the academic outcomes at times. The literature tells us that balancing the operational with the academic is an inherent challenge of undertaking work based learning projects and with hindsight, I might have perhaps focused more on one project (rather than two in parallel) for the doctoral learning and thereby been able to commit more personal resource to the academic component of the journey. That said, I am satisfied that the Learning plan has been a most useful tool in developing and guiding the journey, and that its objectives have been met across all contexts.

In closing this section on the Learning Plan, I have provided a table at Annex J that shows the original SAM and Carbon Project objectives (as described in the Learning Plan) with summary reflection against each item. I have not embedded the table in this section, as it is perhaps too 'mechanical' for these closing reflections of the thesis. However, I do consider it worthwhile to provide this material as an annex as it gives a clear overview of the study outcomes set against the original plan; and a 'review against plan' is a normal part of professional practice when bringing a project to a close.

I will move now to the next elements in the learning strand series, being the Learning Journal and Quality Review template.

5.7.3 Learning Journal and Quality Review

As part of my initial engagement (and developing understanding) of the doctoral journey I had started, I recognised that I would need to develop my reflective management practice if I were to achieve my goals. This development would have the effect of: elevating my own operationally dominated, and sometimes instinctive management style, to a more considered, holistic approach (yielding it's own personal and professional benefits); aligning my personal and managerial practice (through increased reflection) with the doctoral study I was undertaking; and capturing the value of a structured approach to reflection as an aid for developing the final learning summary report (or thesis).

In their work on the role of reflection in managerial learning, Seibert and Daudelin (1999) discuss the importance of the relationship between the internal (how) cognitive processes managers use to reflect, and the external (factors) affecting the managers ability to reflect. I took from this material the importance of adopting a structured approach for developing my reflection, which included not only the frameworks for that reflection but also created the opportunities for that reflection to occur, preferably as an embedded part of operational practice. As a consequence, I developed my Learning Journal and the Quality Review template (used through both projects) and used as the primary reflective instruments of the action research PDCA cycle.

Austin et al (2005) undertook a qualitative study to determine the role of the Learning Journal (described by them as the Learning portfolio) in professional development for a group of pharmacists in Ontario, Canada. Their results suggested that more experienced

practitioners saw less value in the Journal than the newer practitioners, but 94% reported that the journal had identified learning objectives for them. Austin also suggested a structured peer reviewed approach to the Journal form and management as ways to provide further value.

For my part, my Learning Journal has been maintained throughout the period of the study and has been invaluable to support both my regular academic reporting against project progress, and also by providing me with a disciplined opportunity for critical reflection across a range of dimensions extending beyond the study itself.

These wider reflections have been of value to me in my wider role and praxis. These outcomes are consistent with the observations of Raelin and Coghlan (2006) who emphasised the benefits to institutions and the individual, when managers are able to take the time to reflect. Further reinforced by Marsick and Watkins (2001) in their discussion and model of informal learning, again underpinning the importance of accommodating reflection as part of personal and professional daily practice.

The development of my capabilities as an effective practitioner researcher arising from the use of action research (as described by Cherry, 1999), and my general management practice has been directly enhanced through the use of the journal. Further, the combined effect of the use of the Journal and the application of the action research approach, has facilitated a 'step change' in my workplace learning capability, moving the learning from the 'informal and incidental' as described by Marsick and Watkins (2001), to a higher structured approach involving both intervention and critical reflection. Consequently, this thesis not only provides evidence of the outcome of my projects but also evidence of my progression and development as a reflective manager.

It is useful to summarise the characteristics of the contributions to my study arising from the Learning Journal.

The journal format provided separate fields for situation, observations, analyses, reflection, impact and forward action; as such it compelled a structured approach to my reflection that was readily assimilated with the action research approach.

The majority of my journal entries are reflections that impact on project implementation and/or outcome sustainability, arising from perspectives and dynamics inherent within the organisation and/or key individuals. These reflections led to forward actions that are best described as strategies for overcoming the problem (or mitigating the reflected risk). To summarise, these critical reflections allowed me to identify, often quite subtle and sophisticated, levels of risk and design an appropriate intervention (forward action) to manage that risk, thereby further evidencing the learning evolution described by Marsick and Watkins (2001).

On a more personal level, the Journal also provided me with a forum in which to express frustrations or concerns. In this regard the act of completing the journal was itself therapeutic and a positive action in managing that frustration. Functionally it provided the reflective space in which I could objectively describe and adapt to the subject of my frustration. The reflective habits developed through the use of the Journal have extended into the modus operandi for my personal and professional life and I now find myself engaging life's challenges with a more structured and objective approach, born of the Journal keeping discipline.

In closing this section, I would like to comment briefly on some of the further opportunities around the Learning Journal and Quality Review templates. Both documents were crucial tools in the Action Research (PDCA) approach to the projects and the development of my reflective practice. As part of the meta-review I would extend those approaches to include post study reflection on the format of the Journal and Quality Review templates. Notwithstanding the views of Wellington et al (2005) that 'there is no right way' to operate a Learning Journal, I would adapt my own templates to provide: improved identification, classification and extraction of the point-in-time learning; improved linkage to the PDCA cycle to further reference the resultant action, and; improved connectivity to the final thesis form.

I will now move on to expand a little on the content and structure of the thesis from the perspective of my learning development, noting that I have discussed this previously.

5.7.4 Thesis Structure and Content

The process of designing and developing this portfolio has been a multifaceted one. Not only have I have needed to consider how best to represent my journey over the past several years but I have needed to research and address the various forms of thesis appropriate to work based learning and professional doctorates.

As discussed in Chapter One, I undertook a review and interpretation of contemporary literature in regard to Action Research, Professional Doctorates and Explication Theses. As a result of that review, I have developed a thesis format which not only accurately reflects and communicates my own doctoral learning journey, but by its very form is an 'academic' example of 'portfolio mindedness' and thereby further illustrates and reinforces a major learning emerging from the study.

To sum up, this thesis can be described as a hybrid of explication and artefact centric forms, interwoven with the themes of action research, with content comprising a range of artefacts and narrative (created at different times for different audiences) and which collectively come together to produce an outcome which exceeds the sum of the parts.

Consequently the form of the thesis is itself an outcome of my learning development, arising as it does from the various learning approaches reviewed and described earlier in this Chapter and in Chapter One.

5.7.5 Personal Learning

One of the key outcomes and benefits for me in undertaking this journey has been the development of my personal learning capabilities and competencies. Wellington et al also point to this wider learning, and observe:

Untangling and becoming aware of the many aspects of learning on a doctoral programme illustrates the scale and multilayered nature of the whole endeavour...it can be salutary to stop for a moment to take stock of all the different ways in which your work on the programme is contributing to your development - and thereby creating a firm foundation for learning that will extend far beyond the completion of your thesis (Wellington et al, 2005, p. 41)

At the outset of my journey, I had not properly appreciated this aspect of my undertaking. Whilst I had clearly hoped and expected to develop myself through the doctoral study, my thoughts had generally focused on facilities and carbon management, organisational change, project implementation, and to some extent leadership, as the primary areas of growth. The learning capability development arising from this doctoral journey has been a significant added benefit for me, and also one that has presented me with perhaps some of the biggest challenges, due in large part to my failure to sufficiently recognise and accommodate this aspect of my work at the initial stages. Consequently, my readings in regard to this aspect of the journey have been conducted later in the piece and are reflective of Dick's (2002) comments that we may not always know where the action research approach will lead and consequently we may be reviewing various literature, at various stages of the implementation (not just at the start as with traditional research).

My work has given me knowledge of learning and research, theory and approaches that I did not possess previously and the ability to synthesise and conceptualise knowledge against the context in which it is set. This is in stark contrast to my earlier maturity perhaps as a typical 'practitioner' where my 'pre-journey' focus was more on the professional and institutional environments, driving the effective and timely delivery of projects, and perhaps I undervalued the merit of undertaking academically robust approaches to projects (other than to the extent which the operational process required it). The use of action research methodology has been particularly valuable in convincing me that there are intrinsic

benefits to a professional approach that engages with academic rigour (to the maximum extent permitted by organisational and/or project constraints) and inherently recognises and accommodates the real world contexts in which the project (aka the desired change) is being implemented and positioned.

At the start of my journey I would have refuted this degree of outcome flexibility, and I would have seen the objectives of both of my work based projects as being relatively fixed and in some areas non-negotiable. It is a further sign of my maturing and development through this study, that I am able to recognise that the solutions, whilst based in common technology and data, will be different (to varying degrees) across different institutional settings. These differences arise not just from hard differences between portfolios, but also from soft differences arising from Institutional maturity, priorities, role, politics, leadership etc. It is this latter group of soft influences which have historically caused me the most difficulty as a professional practitioner.

Through this undertaking I have been able to see the relationship between 'all things' comprising the institution, and developed an awareness of portfolio mindedness, an awareness which extends beyond the boundaries of portfolio management theory and goes to the core of executive competency and contemporary literature (Steyn 2010) around the need for portfolio focused approaches within organisations.

My work has been developed on the foundations of both positivism and constructivism. That is, for both of the work based projects, I have taken a collection of observable facts and relationships, and interpreted, synthesised and conceptualised that data within the personal, institutional and professional contexts of my world and that of others. The outcomes of that analysis have connected to the action research cycles and the project management implementation, affecting scope, tasks, timing, communication, engagement and strategy.

The broader participant learning arising from the adoption of the action research approach cannot be understated. For me, the embedding of the 'academic rigour' required, provided a framework in which I could positively engage members of the FM team as participants in the work, in a way which reached far beyond the legitimate authority of the 'supervisor to worker' relationship.

This framework provided real world opportunities to expand the knowledge and capabilities of myself and members of the FM team through conceptualisation, reflection, experimentation and experience; consistent with Raelin's (1999) model of work based learning. Further, it established examples of higher practice that served to raise the internal expectation (benchmark) for standards of project delivery.

To conclude this section, I summarise my learning across the original three contextual areas that gave focus to my study:

- Professional; knowledge and learning arising from the theory, practice, technology and literature associated with the SAM and carbon reduction projects, including the developed implementation frameworks
- Institutional; knowledge and learning in regard to institutional dynamics, leadership, policy, portfolio concepts and relationships, institutional footprints and the role of portfolio mindedness
- Personal; the completion of a significant academic and professional undertaking has given me confidence and inspiration. Further, through this process I have matured as a manager and as a human being, applying a more considered and reflective approach in all areas of my existence.

My personal development and learning through this undertaking has been profound with benefits across all areas of my life. As a consequence of the broadening of my understanding and the attendant learning, when considering my relationships, perspectives, judgments and interventions, I now perceive the world to be a place of colour rather than the predominantly black and white environment I would have described at the start of my journey.

5.8 Contribution

The contextual 'common ground' described in Figure 26 has been the site in which this thesis, and the doctoral work underpinning it, has occurred. The contributions arising from the work have been presented throughout this Chapter and supported by appropriate reflection. These have been categorized under the headings of Knowledge, Action and Learning, positioning the reflection against the strands of the action research rope. Consequently, my approach to this study crystallised by the metaphor regarding the use of the contextual common ground as the proxy for the traditional gap in the literature approach, is an expansion of the knowledge base underpinning action research.

Notwithstanding my assertion in regard to the role of the contextual common ground, this thesis does also address an identified gap in the literature. As mentioned above, the two work based projects were implemented using an action research framework to capture key outcomes and findings; at the same time, formal project management techniques were used to govern activities and actions across multiple project dimensions. The frameworks and strategies created for implementation were developed to reflect the action research/project management hybrid approach aligned with the institutional context in which the projects were delivered. Consequently, these contributions specifically address a gap in the action research literature identified by Dick (2002) in regard to decisions the researcher practitioner faces in designing an appropriate approach in order to engage the institution and participants in the action research project.

The frameworks and templates developed throughout the study represent not only a relatable contribution to praxis in academic areas, but also professional practice. The material in this thesis provides a particular set of implementation solutions appropriate for large, complex organisations (as evidenced by USQ, i.e. case study perspective) and as such is of interest and relevance (and therefore both relatable and generalisable) for other researcher practitioners in institutional settings.

Further, the technical solutions and outcomes of the projects represent contemporary thinking in the field of Facilities Management and Carbon Management, with both projects adopting a holistic multi-level approach to their scope and implementation.

In the case of the SAM Project, the final model reflected the maturity of the organisation, the resources available for project implementation and maintenance, the body of knowledge and current thinking in regard to SAM methodology, and the relationship of the SAM deliverables to other portfolios within the organisation. The culmination of the project was a strategic paper to the University Council highlighting the characteristics of the built portfolio and using familiar KPIs to illustrate the divergence of the portfolio with the University's core business. As a result of this intervention the University has a renewed focus on the role of the estates portfolio and a significantly improved understanding of the impacts of estates decisions. Further it has engaged in a significant space rationalisation project (for 2012-2014) in order to align estates with emerging pedagogical trends and also recapture some of the value already lost through the existing divergence of the 'lazy' portfolio. To recap the assertions made in the SAM academic paper provided at Artefact 29, the SAM Project has:

- developed a conceptual framework for the construction and delivery of a SAM competency that connects the theory of SAM and FM, and aligned that with a particular organisational setting. A specific mapping technique was employed to enable this and this technique has much wider ramifications for FM practitioners
- amalgamated a research method and an implementation method to achieve an enhanced outcome in a fully operational real world environment. applied industry standard frameworks to facilitate the assessment of the impacts of this project on the organisation and as a result of this project, recommendations will be made to an industry body on ways to improve an important benchmarking tool;
- contributed substantial improvements for the organisation, specifically;
 - Integrated planning processes
 - Data standards and sharing
 - Organisational and individual knowledge and awareness of SAM
 - Portfolio planning and utilisation
 - Enhanced risk management
 - Improved service levels and understanding
 - Development/enhancement of FM standards

- Recommendations for policy change
- Improved value from the FM dollar

As mentioned above, the work undertaken and the materials provided in this thesis clearly demonstrate the impact of a 'lazy' property portfolio on the bottom line of the organisation. This form of analysis is surely at the absolute core of a Strategic Asset Management approach, and yet it had never been done at USQ (or any of my previous organisations) with such clarity. This insight was only achieved by taking the time to pause, gather, analyse, synthesise and present enterprise data (readily available from USQ Annual Reports) in a form that focused on the influence of the Estates Portfolio across multiple contexts.

Raelin and Coghlan (2006) described 'three voices of experience' and 'single to triple loop reflection' as stages of action learning approaches. The production of the SAM paper met the criteria offered by Raelin and Coghlan, in that it had the effect of 'changing the wider community view of the estates reality' (associated with the third voice) and set its content across 'multiple contexts' (described as triple loop reflection).

Further, the production of such a report highlighted the broader information and reporting possibilities that exist within a large institution and their utility as drivers for change. It will certainly be the case that there are numerous other 'lenses' through which a motivated practitioner might represent the performance and alignment of the estates portfolio, but I suggest always focused on the contexts most relevant for the particular institution.

One final example of an institutional contribution arising from the SAM work is also a direct consequence of the portfolio minded approach, and is in regard to the relationship between the project and various institutional portfolios. This has emerged particularly in the area of data and business process improvements. These include increased planning and data sharing, with several elements of the SAM project now providing data to and drawing data from, the recently established USQ Data Warehouse and Business Intelligence (DWBI) project. This data sharing and accessibility will continue to expand as maturity across both areas (SAM and DWBI) increases and will also include data from the Carbon Project and carbon management software.

Moving on to the Carbon Project, the original scope was built around the foundations created by the USQ Strategic Plan goal to be carbon neutral by 2020. The project engaged the organisation and participants in developing a project scope that reached beyond carbon management to include areas of community engagement, water conservation, energy efficiency, renewable energy infrastructure, media development and systems development. As with the SAM Project, the implementation framework and the outcomes of the Carbon Project are generalisable to other organisations with similar asset and energy profiles, noting the variables that influence the final elements of the approved USQ Carbon Reduction Strategy. To recap the Carbon Project academic paper provided at Artefact 30, the Carbon Project has:

- Developed a conceptual framework (mind map and key dimensions moving then to a concept delivery model) and project delivery methodology (Project Management and Action Research) aligned with leading industry solutions in a complex organisational setting
- The conceptual framework provides a logical development sequence and considers the relationships between a number of enterprise level elements typically present in a large corporate entity and as such provides a useful model for similar organisations wishing to embark on a carbon reduction path
- The outcomes of this project have played a singular role in achieving the strategic aims of the University in regard to its carbon reduction goals.
- The outcomes of this project have beneficial impacts beyond carbon reduction and include: reduced operating costs, reduced risk around supplier dependence and energy market volatility; reduced risk around the impacts of carbon legislation; expanded strategic relationships and collaboration opportunities; increased research opportunities and academic engagement; provided a platform of success for subsequent community engagement around wider sustainability objectives.
- This project has raised the knowledge, awareness and engagement of the University community to a level that a wider sustainability initiative may now be successfully undertaken.
- Demonstrated the effectiveness of an implementation strategy that combines the principles of Action Research and Project Management methodology

The culmination of the Carbon Project was the development of USQ's Carbon Reduction Strategy, presented to Senior Executive and USQ Council in early 2012. The adoption of the strategy has led to photo-voltaic system design and tendering on a scale that will provide for the base energy load for the whole Toowoomba Campus. The strategy also proposes the development of tri-generation power plant to further exploit local resources availability and reduce emissions. This technical element of the strategy provides wider business benefits such as improved business continuity, reduced exposure to vendor pricing, improved reliability of supply, broadening of USQ's research base and the creation of strategic partnerships. This has been discussed earlier in the thesis and is a further example of the connectivity of 'things' within institutional portfolios.

Another important aspect of the Carbon Project is that the particular methodology and approach applied in the development and implementation goes significantly beyond the limited 'panels on the building' approach employed by other organisations. This is not to denigrate the activities of other organisations in their efforts to incrementally manage their carbon portfolios, but the point of difference for the USQ project is that it has sought from the outset to adopt a data-driven, holistic approach structured around the specific infrastructure and contexts of the whole Toowoomba Campus. In so doing it has generated a finite strategy that 'leverages off' the synergies between the various ecological and technical contemporary solutions. Once again illustrating the wider benefits of a portfolio

approach. As such the Carbon Project material included in this thesis provides a comprehensive case study offering unique approaches and experiences that contribute to the body of praxis.

Of more significance in terms of the sustainability of the project outcomes, and as evidence of transformational change within USQ, there is a growing awareness and sense of ownership in the USQ community of the Carbon Reduction Strategy and goals. This is in turn translating to an increased level of expectation from that community in regard to institutional performance and action.

In essence, USQ has raised its standards around its own performance in the environmental and carbon areas, not just as a result of a top down aspiration (expressed in 2009), but as a growing 'bottom up' expectation from an educated and engaged community (with the issues and the solutions) and as a direct result of this project. There is almost an 'excited buzz' around the reduction strategy and the socially responsible and positive nature of its component activities that goes beyond the simple achievement of an organisational goal. To summarise, the project has a 'feel good' aspect that has clearly energized the community and contributed to the transformational change achieved by the project.

As a result of both projects, relationships have developed within USQ (expressed by increased collaboration between departments) around achieving synergistic outcomes for the common benefit. These collaborations exceed basic functional achievement levels and create 'added value' as a result of the scope widening inherent in a collaborative approach. This has not been an easy evolution as traditionally portfolio owners are focused on the needs of their own areas, legitimately believing this to be the way to achieve the best organisational outcome, or perhaps concerned that their own portfolios will receive less benefit in the face of a more aggressive approach by another area. It is hoped that as the confidence of portfolio owners grows through successful collaboration, their competency in regard to portfolio mindedness will also develop. In essence the implementation of the work based projects has impacted on the 'leadership' within the University and encouraged a more collaborative practice as described by Raelin (2011).

One example of a serendipitous strategic outcome arising from the projects has been the opportunity (and desire) for USQ to assume a regional leadership role around carbon management. This has emerged as the carbon portfolio, the academic portfolio, the community engagement portfolio and the research portfolio have achieved greater visibility of and interaction with each other. To date this has been expressed by an evolving relationship with the Toowoomba Regional Council in regard to carbon management and the potential collaborative development of a Regional Carbon Management Plan.

One of the greatest contributions for me personally as a practitioner and leader has been the development of the Campus Services team. Through their participation in the projects, the staff within the Campus Services team has significantly grown their knowledge and

competencies across multiple dimensions. Further, their engagement with the projects has developed a strong awareness and sense of ownership, born of their own learning and development, in regard to both their respective operational areas of responsibility and their collective contribution to the Campus Services and institutional outcomes. I question whether such a level of ownership would have been possible through any other planning, development and implementation approach.

I have already discussed the integration of the Action Research approach with industry standard project management methodology from the perspective of an academic contribution, but the methodology also impacted on the development of participants. The use of the hybrid approach (rather than just project management) not only provided the entire logical, task focused framework and benefits of operational project delivery, but it also mandated the time for the participants to engage in reflection as part of the quality review (aka action research) cycle.

Taking the risk of engaging the staff in this way (i.e. soliciting their engagement with this additional layer of academic rigour) is not one that I would normally have considered outside of this doctoral journey. However, the Action Research component and its required reflection certainly produced additional value as discussed by Raelin (1999), reinforcing the value of (appropriately) adopting the work based project approach to routine operational project implementations, as a valuable learning opportunity for all participants. My comments in this context extend beyond the scope of more routine business improvement activity.

In future project implementations I will certainly be mindful of this opportunity and seek to create a project environment that not only achieves operational imperatives, but also provides a framework for learning and development for my team and for myself. In this regard, Raelin (1998) discusses the role of action learning teams as one way to bridge the operational need with the learning opportunity, and the creation of such groups may also be an option for my team, thereby reducing the dependency on project specific opportunities.

To recap, this study has delivered significant personal, professional and institutional knowledge and competency in regard to two separate institutional portfolios; portfolios that combine to significantly define the organisation's physical footprint. In so doing, the study has evidenced the relationships that exist between multiple portfolios within the organisation and thereby demonstrated the importance to the practitioner of understanding those relationships and the benefits in actively developing a portfolio minded approach; an awareness and understanding which ideally would be developed as a new professional competency. Consequently, this study has not just contributed to the praxis around SAM and Carbon Management but it has also contributed to the developing body of literature in regard to portfolio mindedness.

In addition to an ongoing review by my academic supervisor, each project covered by this thesis has been the subject of regular reporting to, and review by, the Chief Operating Officer of the University. Further, several reports on the major findings and outcomes have been presented to, and endorsed by, the senior management and governance committees of the University.

In addition, I have prepared articles that provide an overview of the literature, methodology and results for each project and at the time of writing this thesis, the SAM article had been accepted for publication. The Carbon article has been drafted in its initial form (refer Artefact 30) but not yet 'edited down' and submitted. Publication is dependent on a triple blind peer review process managed by the editors of the journal.

In drawing this thesis to a close, I reflect on the extent to which I have been a 'good fit' candidate for this journey, and it for me. Certainly it has provided me with significant learning, based in areas of real world relevance (for me).

For mature, established practitioners the utility and attraction of a professional studies program must be a compelling opportunity for 'self' and 'institutional' learning, and one to be recommended as part of a structured approach to professional development. Interestingly, my own background, situation, experiences and doctoral outcomes are surprisingly consistent with the model developed by Armsby (2012) in her comparative discussion of the features of PhDs and DProf degrees. In that discussion, she identified key features of Professional Doctorates (and their candidates); paraphrased in the dot points below:

- Work based, generic. Develops (integrated) practice and theory
- Impacts on the individual, the organisation and/or the professional group
- Learner centered and practice focus
- Assessment by varied portfolio, smaller dissertation, publications
- Assessment detail is normally a project on a contextual issue
- Typical candidates are in service, experienced, immersed, have Masters Degree

Not only have I unwittingly 'ticked all the boxes' of Armsby's characteristics model, but I have also faced another challenge which she identified, that of the need to balance academic epistemologies (deriving knowledge from robust research approaches) with professional practice, and it is in this regard that I would characterise another key contribution of my work (as discussed earlier).

If I then position my experiences and the study outcomes against my original motivation and considerations for starting this journey, I can observe that I have fulfilled all of the motivational objectives including personal development, staff development, and contribution. But more than that, I have become aware of and excited by the new opportunities that lie before me in regard to future contributions. One example would be in

the area of Facilities Management leadership development, and further exploration of the portfolio mindedness approach as a strategy for increased contribution within the institutional setting.

As mentioned in Chapter One, Zuber-Skerrit (2007) suggested that some senior managers would not have the time or interest to undertake a PhD (representing the traditional research approach) and would therefore be attracted to an explication thesis (being based on a 'more relevant' action research/experiential platform). Perhaps an interesting extension of Zuber-Skerrit's assertion arising from my own journey, is that managers who complete a DProf or other 'doctoral' action based study, may as a result of that undertaking, be sufficiently equipped and excited by their learning, development and experiences to more favourably view further contributions via the PhD pathway.

For my part, I am certainly considering further doctoral learning as result of this experience.

References

- Albrecht, P., Burandt, S., & Schaltegger, S. (2007). Do sustainability projects stimulate organizational learning in universities? [Research paper]. *International Journal of Sustainability in Higher Education*, 8(4), 403-415.
- Allison, P., & Pomeroy, E. (Fall 2000). How Shall We "Know" Epistemological Concerns in Research in Experiential Education. *The Journal of Experiential Education*, 23(2), 9.
- Alvesson, M., & Saldberg, K. (2000). *Reflexive Methodology: New vistas for qualitative research*. Gateshead, Great Britain: SAGE Publications Inc.
- Armsby, P. (2000). Methodologies of Work Based Learning. In D. G. a. K. M. O'Connor (Ed.), *Beyond the Peer Observation of Teaching: Staff and Educational Development Association [SEDA]*.
- Armsby, P. (2012). Accreditation of experiential learning at doctoral level. [Research paper]. *Journal of Workplace Learning*, 24(2), 133-150. doi: <http://dx.doi.org/10.1108/13665621211201715>
- Armsby, P., & Costley, C. Research Driven Projects. In D. G. a. K. M. O'Connor (Ed.), *Beyond the Peer Observation of Teaching: Staff and Educational Development Association [SEDA]*.
- Austin, Z., Marini, A., & Desroches, B. (2005). Use of a learning portfolio for continuous professional development: A study of pharmacists in Ontario (Canada). *Pharmacy Education*, 5(September/December 2005), 175-181.
- Bainbridge, M., & Finch, E. F. (2009). Getting the Attention the Facilities Manager Deserves. *Facilities*, 27, 277-290.
- Barbuto, J. J. E., & Burbach, M. E. (2006). The Emotional Intelligence of Transformational Leaders: A Field Study of Elected Officials. *Journal of Social Psychology*, 146(146), 51-64.
- Barrett, N., & Barrett, H. (2006). Going carbon neutral the Ashton Hayes example [[videorecording (DVD)] 1 videodisc (15 min.)]. Bendigo: Classroom Video.
- Barrett, P., & Baldry, D. (2003). *Facilities Management – Towards Best Practice*. London: Blackwell Publishing.
- Bassey, M. (1981). Pedagogic research: on the relative merits of search for generalization and study of single events. *Oxford Review of Education*, 7(1), 73-93.
- Boyatzis, R. (2008). Competencies in the 21st century. *Journal of Management Development*, 27(1), 5-12.
- Bradberry, T. (2009). The cost of seagull management. *Industrial and Commercial Training* (41), 139-141.
- Button, C. E. (2008). Towards carbon neutrality and environmental sustainability at CCSU.

International Journal of Sustainability in Higher Education, 10(3), 279 - 286.

- Cherry, N. (1999). *Action Research: A Pathway to Action, Knowledge and Learning*. Melbourne: RMIT University Press.
- Chivaka, R., & Tyler, E. (2009). The Use of Real Options Valuation Methodology in Enhancing the Understanding of the Impact of Climate Change on Companies. *Business Strategy and the Environment*.
- Christopolos, I., Anderson, S., Arnold, M., Victor, G., Hedger, M., Klein, R., & Goulven, K. (2009). The Human Dimension of Climate Adaptation: The importance of local and institutional issues: Commission on Climate Change and Development.
- Costley, C. (2010). Doctoral learning that leads to organisational and individual change. *Work Based Learning e-Journal*, 1(1), 25.
- Dangelico, V. (2009). Environmental Strategies and Green Product Development: an Overview on Sustainability-Driven Companies. *Business Strategy and the Environment*(18), 83-96.
- Dick, B. (2002). Postgraduate programs using action research. *The Learning Organisation*, 9(4), 12.
- Eagan, D., Keniry, J., & Schott, J. (2008). Higher Education in a Warming World. The Business Case for Climate Leadership on Campus - *Campus Ecology Program*: National Wildlife Federation.
- Farren, M. (2005). *How can I create a pedagogy of the unique through a web of betweenness?* . (PhD), Bath, Bath. Retrieved from <http://www.actionresearch.net/living/farren.shtml>
- Ferrer-Balas, D. (2004). Global environmental planning at the Technical University of Catalonia. [Research paper]. *International Journal of Sustainability in Higher Education*, 5(1), 48-62.
- Franz-Balsen, A., & Heinrichs, H. (2007). Managing sustainability communication on campus: experiences from Luneburg. [Research Paper]. *International Journal of Sustainability in Higher Education*, 8(4), 431-445.
- Freed, J. R., & Sussman, F. G. (2009). *Adapting to Climate Change: A Business Approach*. Arlington: Pew Center on Global Climate Change.
- Galbreath, J. (2009). Corporate Governance Practices That Address Climate Change: an Exploratory Study *Business Strategy and the Environment*.
- Garnett, J. (2010). Recognising, Assessing and Rewarding Work Experience *Understanding Work Based Learning* (pp. 55-60). Farnham, Surrey, GBR: Gower Publishing Ltd.
- Garnett, J. (2009). *Contributing to the Intellectual Capital of Organisations*, in *Work Based Learning: Journeys to the Core of Higher Education*, Garnett, Costley and Workman (Eds), London: Middlesex University Press.

- Government of South Australia (1996). Strategic Asset Management Framework. *Policy Series* 2nd.
- Government of Western Australia (2005). Strategic Asset Management Framework for Western Australian Public Sector Agencies. *Policy Series*
- Group, N. A. M. S. (1998). New Zealand infrastructure asset management Manual. Wellington, NZ: National Asset Management Steering Group.
- Hanley, N., & Roberts, C. (2002). *Issues in environmental economics*. Oxford: Blackwell.
- Harrison, B. (1993). *Going green: how to communicate your company's environmental commitment*. Homewood, IL: Business One Irwin.
- Healey, J. (2008). *Sustainable living*. Thirroul, NSW: The Spinney Press.
- Hoffmann, G. W., & Weinhofer, G. (2008). Mitigating Climate Change – How Do Corporate Strategies Differ? . *Business Strategy and the Environment*. Retrieved from
- Holmes, J., & ABC-TV (Australia). (2007). Earth, wind and fire. *Four Corners* [[videorecording (DVD)]. 1 videodisc (DVD) (45 min.)]: Australian Broadcasting Corporation.
- IAM. (2012a). PAS Assessment Methodology (PAM). Retrieved February 2012 from <http://theiam.org/products-and-services/pas55-methodology>: Institute of Asset Management.
- IAM. (2012b). Competencies Framework)". Retrieved February 2012 from <http://theiam.org/products-and-services/competences-framework>: Institute of Asset Management.
- Illeris, K. (2008). A comprehensive understanding of human learning. In K. Illeris (Ed.), *Contemporary Theories of Learning: Learning Theories...In Their Own Words*. Hoboken: Routledge.
- Jarvis, P. (2007). "Globalisation, lifelong Learning and the learning society: sociological perspectives", *Lifelong Learning and the Learning Society* (Vol. 2). Abingdon: Routledge.
- Jeffery, M., & Leliveld, I. (2004). Best Practices in IT Portfolio Management. *MIT Sloan Management Review*, 45(3), 41-49.
- Jensen, P. A. (2008). The origin and constitution of facilities management as an integrated corporate function. *Facilities*, 26, 490-500.
- Kitchener, K., King, P., & De Luca, S. (2006). Development of Reflective Judgement in Adulthood *Handbook of Adult Development and Learning*. Cary, NC: Oxford University Press.
- Lester, S. (2004). Conceptualising the practitioner doctorate. *Studies in Higher Education*, 29(5), NK.

- Linnenluecke, M., Russell, S., & Griffiths, A. (2009). Subcultures and Sustainability Practices: the Impact on Understanding Corporate Sustainability. *Business Strategy and the Environment*, 18, 432-452.
- Liverpool, J. (2010). Carbon Management Plan *Carbon Management Programme*, 1-90. Liverpool: Liverpool John Moore University.
- Luft, J., & Ingham, H. (1955). *The Johari window, a graphic model of interpersonal awareness* Paper presented at the Western Training Laboratory in Group Development., Los Angeles.
- Marans, R. (2010). The human dimension of energy conservation and sustainability. *International Journal of Sustainability in Higher Education*(11), 6-18.
- Markowitz, H. (1991). Foundations of Portfolio Theory. *The Journal of Finance*, 46(2), 469-477.
- Marsick, V., & Watkins, K. (2001). Informal and Incidental Learning. *New Directions for Adult and Continuing Education*, 89(Spring), 25-34.
- McNiff, J. (2000). *Action Research in Organisations*. Florence, KY: Routledge.
- McNiff, J., Lomax, P., & Whitehead, J. (1996). *You and Your Action Research Project*. London: Routledge in association with Hyde Publications.
- Moriarty, P. (2007). A brief introduction to action research - key concepts and practice: SWITCH LA training.
- Müller, M., & Siebenhüner, B. (2007). Policy Instruments for Sustainability-Oriented Organizational Learning. *Business Strategy and the Environment*, 16, 232-245.
- Noor, M. N., & Pitt, M. (2009). A critical review on innovation in facilities management service delivery. *Facilities*(27), 221-228.
- Nordhaus, W. (1998). *Economics and policy issues in climate change*. Washington, DC: Resources for the Future.
- O'Brien, R. (1998). An Overview of the Methodical Approach to Action Research. In R. Richardson (Ed.), *Theory and Practice of Action Research*. Brazil: Universidade federal da Paraiba.
- Perry, C. (2002). *A Structured Approach to Presenting Theses: Notes for Students and their Supervisors*. University of Southern Queensland. Toowoomba.
- Peters, M. (2009). Kinds of Thinking, Styles of Reasoning. In M. Mason (Ed.), *Critical Thinking and Learning*. Hoboken, NJ: Wiley-Blackwell.
- Raelin, J. (1998). Work based learning in practice. *Journal of Workplace Learning*, 10(6/7), 280-283.
- Raelin, J. (1999). The Design of the Action Project in Work-Based Learning. *Human Resources Planning*, 22(3).

- Raelin, J. (2008). *Work-based Learning: Bridging knowledge and Action in the Workplace*. San Francisco, CA: Wiley.
- Raelin, J. (2011). Work-based learning: how it changes leadership. *Development and Learning in Organisations*, 25(5), 17-20.
- Raelin, J., & Coghlan, D. (2006). Developing Managers as Workers and Researchers: Using Action Learning and Action Research. *Journal of Management Education*, 30(5), 670-689.
- Rauch, N. (2009). Institutionalizing a greenhouse gas emission reduction target at Yale. *International Journal of Sustainability in Higher Education*(10), 390-400.
- Renner, M., Sweeney, S., Kubit, J., & Worldwatch Institute. (2008). *Green jobs : working for people and the environment*. Washington, DC: Worldwatch Institute.
- Revans, R. (1983). *The ABC of action learning*. Bromley: Chartwell-Bratt.
- Scott, D. (2004). *Professional Doctorates*. Berkshire, GBR: McGraw-Hill Education.
- Seibert, K., & Daudelin, M. (1999). *The Role of Reflection in Managerial Learning: Theory, Research and Practice*. Westport: Quorum Books.
- Sharp, L. (2002). Green campuses: the road from little victories to systemic transformation. *International Journal of Sustainability in Higher Education*, 3(2), 128-145.
- Smith, M. (2006). Keeping a learning journal. *the encyclopedia of informal education*. Retrieved January 2010 from www.infed.org/research/keeping_a_journal.htm
- Stegman, A. (2005). *Convergence in carbon emissions per capita* (Vol. 5/ 2005). Sydney: Dept. of Economics Macquarie University.
- Steyn, P. (2010). The Need for a Chief Portfolio officer (CPO) in Organisations. *PM World Today*, XII(VII), 1-14.
- Susman, G. (1983). *Action Research: A Sociotechnical Systems Perspective*. London: Sage Publications.
- Tavner, P. (2007). *Renewables in the Built Environment*. Paper presented at the Reducing the Carbon Footprint in the Built Environment, 2007 Institution of Engineering and Technology Seminar on, UK. Retrieved March 2010 from <http://ezproxy.usq.edu.au/login?url=http://atoz.ebsco.com/link.asp?id=2609&rid=1362224>
- TEFMA. (2009a). A Review of Approaches to Strategic Management. Retrieved February 2012 from <http://www.tefma.com/publications/publications-overview>. Tertiary Education Facilities Management Association Inc.

- TEFMA. (2009b). How To Undertake a Facilities Audit. Retrieved February 2012 from <http://www.tefma.com/publications/publications-overview>: Tertiary Education Facilities Management Association.
- TEFMA. (2009c). The Strategic Asset Management Guideline". Retrieved February 2012 from <http://www.tefma.com/publications/publications-overview>: Tertiary Education Facilities Management Association.
- Trafford, V., & Leshem, S. (2002). Starting at the end to undertake doctoral research: predictable questions as stepping stones. *Higher Education Review*, 34(1), 19.
- Turnbull, J. (2009). *Coaching for Learning: A Practical Guide for Encouraging Learning*. London, GBR: Continuum International Publishing.
- UNESCO. (2006). *UNESCO (2006) Drivers and Barriers for Implementing Sustainable Development in Higher Education*. Paper presented at the Goteborg Workshop December 2005, Technical Paper No.3. Retrieved November 2009 from <http://unesdoc.unesco.org/images/0014/001484/148466e.pdf>
- Verdonschot, S. (2006). Methods to enhance reflective behaviour in innovation processes. *Journal of European Industrial Training*, 30(9), 670-686.
- Wellington, J. J., Bathmaker, A., Hunt, C., McCulloch, G., & Sikes, P. (2005). *Learning on the Doctoral Journey. Succeeding with Your Doctorate*. London, UK: SAGE Publications.
- Westberg, J. (2001). *Fostering Reflection and Providing Feedback: Helping Others Learn from Experience*. New York, NY: Springer Publishing Company.
- Whitehead, J. (2012). ActionResearch.net. *Action Research: What is a Living Educational Theory Approach to Action Research and a Human Existence?* Retrieved June 2012 from <http://www.actionresearch.net/>
- Williams, M. (2004). *Write a Doctoral Thesis About Work: Professional Action Research: A Creative Reader Introducing Rich Modelling*. Perth: Resource Press.
- Williams, T. (1999). The need for new paradigms in complex projects. *International Journal of Project Management*, 17(5), 269-273.
- Wilson, J., & Oyola-Yemaiel, A. (2001). The evolution of emergency management and the advancement towards a profession in the United States and Florida. *Safety Science*(39), 117-131.
- Yui, C. Y. (2008). A conceptual link among facilities management, strategic management and project management. *Facilities*, 26, 501-511.
- Zuber-Skerritt, O. (2002). A model for designing action learning and action research programs. *The*

Learning Organisation, 9(4), 7.

Zuber-Skerritt, O. (2007). Professional doctoral theses by explication as professional management development. *Quality Assurance in Education*, 15(1), 20.

Bibliography

Altman, W. (2006). When it all comes raining down [business continuity planning]. *Engineering Management*, 16(1), 46-48.

Angel, C., Boyd, K., Rawlings, M., & Cambridge Educational (Firm). (2006). Environmental issues and human impact [[videorecording] /1 DVD (22 min.)]. Lawrenceville: Cambridge Educational.

Ashkanasy, N. M., & Nicholson, G. J. (2003). Climate of Fear in Organisational Settings: Construct Definition, Measurement and a Test of Theory. *Australian Journal of Psychology*, 55(1), 24.

Association of Local Government Engineers of New Zealand. National Asset Management Steering Group., & Institute of Public Works Engineering of Australia. (2002). *International infrastructure management manual : 2002 update* (2nd. ed.). Thames, N.Z.: Association of Local Government Engineering N.Z. Inc (INGENIUM) National Asset Management Steering (NAMS) Group.

Australia. Bureau of Industry Economics. (1996). *Energy efficiency and greenhouse gas abatement : the role of cooperative agreements in Australia*. Canberra: Australian Government Publishing Service.

Australia. Bureau of Industry Economics., Dempster, P., McCann, B., Travis, J., & Australia. Productivity Commission. (1996). *Energy efficiency for SMEs*. Canberra: Australian Govt. Pub. Service.

Australia. Committee of Review - Commonwealth Owned Heritage Properties. (1996). *Draft heritage asset management manual*. Canberra ACT: Dept. of Communications and the Arts.

Australia. Dept. of Resources Energy and Tourism. WorleyParsons (Firm), & Demand Response (Firm). (2008). Energy savings measurement guide: how to estimate, measure, evaluate and track energy efficiency opportunities. Retrieved May 2010 from http://www.energyefficiencyopportunities.gov.au/assets/documents/energyefficiencyopps/ESMG%20-%20VersionOne_Web20080520104658.pdf

Australia. Dept. of the Prime Minister and Cabinet. (2007). Australia's climate change policy: our economy, our environment, our future. Retrieved October 2009 from <http://nla.gov.au/nla.arc-76725>

- Australia. Dept. of Resources Energy and Tourism. Energy and Environment Division. (2008). Energy efficiency opportunities. Retrieved February 2010 from <http://www.energyefficiencyopportunities.gov.au/assets/documents/energyefficiencyoppops/guideline2008%5Fweb20080520093453%2Epdf>
- Australia. Parliament. Joint Committee of Public Accounts and Audit. (1998). *Asset management by Commonwealth agencies*. Canberra: Joint Committee of Public Accounts and Audit.
- Australia. Productivity Commission. (2005). *Energy efficiency : Productivity Commission draft report*. Melbourne: Productivity Commission.
- Baca, C. (2005). *Project manager's spotlight on change management*. San Francisco: Harbor Light Press.
- Berinstein, P. (2001). *Alternative energy : facts, statistics, and issues*. Westport, CT: Oryx Press.(pp. 8). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10088397>
- Books24x7. (2002). IT asset management *IT manager development series* Retrieved from <http://ezproxy.usq.edu.au/login?url=http://library.books24x7.com/library.asp?^B&bookid=10959>
- Books24x7. (2004). PMP project management professional study guide Retrieved from <http://ezproxy.usq.edu.au/login?url=http://library.books24x7.com/library.asp?^B&bookid=9193>
- Books24x7, & Project Management Institute. (2004). The project management tool kit 100 tips and techniques for getting the job done right Retrieved from <http://ezproxy.usq.edu.au/login?url=http://library.books24x7.com/library.asp?^B&bookid=4546>
- Bryson, J. (2006). *Managing information services : a transformational approach* (2nd ed.). Burlington, VT: Ashgate.
- Brice, S. V. (2004). What We Learn From Deadly Quakes. *National Geographic*, 206(3), 13-13.
- Brigham, E. F., Gapenski, L. C., & Ehrhardt, M. C. (1999). *Financial management: theory and practice* (9th ed.). Fort Worth, TX: Dryden Press.
- Busby, L. J. (2002). *Development of an asset management strategy for water main replacement in Murgon Shire, Queensland*. (BEng), USQ.
- Cable, J. H., Davis, J. S., & ebrary Inc. (2004). Key performance indicators for federal facilities portfolios *Federal Facilities Council Technical Report ; #147* (pp. viii, 44). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc>

?id=10075870

- Dawkins, J. (2004). Corporate responsibility: The communication challenge. *Journal of Communication Management*, 9(2), 108-119.
- Diesendorf, M. (2007). *Greenhouse solutions with sustainable energy*. Sydney, N.S.W.: University of New South Wales Press.
- Doppler, K., & Lauterburg, C. (2001). *Managing corporate change*. Berlin; New York: Springer.
- Dosi, G., Teece, D. J., Chytry, J., & Books24x7. (2005). Understanding industrial and corporate change Retrieved from <http://ezproxy.usq.edu.au/login?url=http://library.books24x7.com/library.asp?^B&b ookid=12560>
- Dunphy, D. C., Griffiths, A., & Benn, S. (2007). *Organizational change for corporate sustainability : a guide for leaders and change agents of the future* (2nd ed.). Milton Park, Abingdon, Oxon ; New York: Routledge.
- ebrary Inc. (2001). Capital asset management tools and strategies for decision making : conference proceedings *Federal Facilities Council Technical Report ; no. 143* (pp. vii, 38). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10068441>
- ebrary Inc. (2004). Investments in federal facilities asset management strategies for the 21st century (pp. xx, 139). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10056952>
- Environment Australia. (2002). *Energy efficiency*. Canberra: Environment Australia.
- Erlanger, L. (2006). In case of Emergency Activate Business Continuity Plan. *InfoWorld*, 28(32), 27-31.
- Gabbi, G., & ebrary Inc. (2006). Quantitative methods applied to asset management *Managerial finance ; v. 32, no. 4* (pp. 122). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10120693>
- Goldin, I., & Winters, L. A. (1995). *The economics of sustainable development*. Cambridge ; New York: Cambridge University Press.
- Hanley, N., & Roberts, C. J. (2002). *Issues in environmental economics*. Oxford: Blackwell.
- Hesselbein, F. (2004). Circles of inclusion. *Leader to Leader*, 2004(32), 4-6.
- Hoffman, E. J. (1996). *Power cycles and energy efficiency*. San Diego, CA: Academic Press.

- Kendrick, T. (2009). *Identifying and managing project risk : essential tools for failure-proofing your project* (2nd ed.). New York: AMACOM.
- Kendrick, T., & Project Management Institute. (2004). *The project management tool kit : 100 tips and techniques for getting the job done right*. New York: AMACOM/American Management Association.
- Koch, R. (2004). Best practices in business continuity. *Communications News*, 41(11), 24-25.
- Levinson, H., & Rosenthal, S. (1984). *CEO : corporate leadership in action*. New York: Basic Books.
- Lewis, L. K., Schmisser, A. M., Stephens, K. K., & Weir, K. E. (2006). ADVICE ON COMMUNICATING DURING ORGANIZATIONAL CHANGE. *Journal of Business Communication*, 43(2), 113-137.
- Lida, H., & Lynnette, F. (2008). Communicating to a diverse workforce: Employees' perceptions of symbolic corporate identity elements. *Corporate Communications: An International Journal*, 13(1), 80-94.
- Litterman, R. B., & Goldman Sachs Asset Management. Quantitative Resources Group. (2003). *Modern investment management: an equilibrium approach*. Hoboken, N.J.: John Wiley.
- Loistl, O., Petrag, R., & ebrary Inc. (2003). Asset management standards corporate governance for asset management *Finance and capital markets* (pp. xx, 292). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10076917>
- McClain, M. A. (2007). Employee crisis communication and disaster assistance planning: Providing disaster assistance to employees and their families. *Journal of Business Continuity & Emergency Planning*, 1(2), 213-220.
- Mendonca, M., & ebrary Inc. (2007). Feed-in tariffs accelerating the deployment of renewable energy (pp. xxii, 150). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10178471>
- Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: a comprehensive guide* (2nd ed.). San Francisco: Jossey-Bass Publishers.
- Miller, G. T. (2005). *Living in the environment : principles, connections, and solutions* (14th ed.). Pacific Grove, CA: Thomson Brooks/Cole.
- Moser, S. C., & Dilling, L. (2007). Creating a climate for change communicating climate change and facilitating social change. Retrieved from http://ezproxy.usq.edu.au/login?url=http://www.USQ.eblib.com.au/EBLWeb/patron?target=patron&extendedid=P_293375_0

- Muller, N. J. (1996). *Network planning, procurement, and management*. New York: McGraw-Hill.
- National Research Council (U.S.). Committee on Benefits of DOE R&D on Energy Efficiency and Fossil Energy., & ebrary Inc. (2001). Energy research at DOE was it worth it? : energy efficiency and fossil research 1978 to 2000 *The compass series* (pp. xv, 224). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10032380>
- National Research Council (U.S.). Committee on Core Competencies for Federal Facilities Asset Management 2005-2020., National Research Council (U.S.). Board on Infrastructure and the Constructed Environment., National Research Council (U.S.). Division on Engineering and Physical Sciences., & ebrary Inc. (2008). Core competencies for federal facilities asset management through 2020 transformational strategies (pp. xii, 121). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10209912>
- O'Neil, J., Marsick, V. J., & ebrary Inc. (2007). Understanding action learning *The adult learning theory and practice book series* (pp. xxvi, 230). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10195623>
- Organisation for Economic Co-operation and Development., & International Energy Agency. (1991). *Energy efficiency and the environment*. Paris, France: International Energy Agency : Organisation for Economic Co-operation and Development.
- Owen, J., Burstein, F., & ebrary Inc. (2005). Where knowledge management resides within project management (pp. 16). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10088398>
- Pettenger, M. E. (2007). *The social construction of climate change : power, knowledge, norms, discourses*. Aldershot, Hampshire, England ; Burlington, VT: Ashgate.
- Queensland. Dept. of Minerals and Energy. (1995). *Energy efficiency & alternative energy : Queensland energy policy statement*. Brisbane: Dept of Minerals and Energy.
- Randolph, J., & Masters, G. M. (2008). *Energy for sustainability : technology, planning, policy*. Washington, DC: Island Press.
- Reilly, F. K., & Brown, K. C. (2002). *Investment analysis and portfolio management* (7th ed.). Mason, Oh.: South-Western.
- Renner, M., Sweeney, S., Kubit, J., & Worldwatch Institute. (2008). *Green jobs : working for people and the environment*. Washington, DC: Worldwatch Institute.
- Repetto, R., Austin, D., & World Resources Institute. (1997). *The costs of climate protection :*

- a guide for the perplexed*. Washington, D.C.: World Resources Institute Climate Protection Initiative.
- Roseland, M., Connelly, S., Hendrickson, D., Lindberg, C., & Lithgow, M. (2005). *Toward sustainable communities: resources for citizens and their governments* (2nd ed.): New Society Publications.
- Seville, E., Brunsdon, D., Dantas, A., Le Masurier, J., Wilkinson, S., & Vargo, J. (2008). Organisational resilience: Researching the reality of New Zealand organisations. *Journal of Business Continuity & Emergency Planning*, 2(3), 258-266.
- Spittal, M. J., McClure, J., Siegert, R. J., & Walkey, F. H. (2008). Predictors of Two Types of Earthquake Preparation: Survival Activities and Mitigation Activities. *Environment & Behavior*, 40(6), 798-817.
- Smith, D. (2005). Business (not) as usual: crisis management, service recovery and the vulnerability of organisations. *Journal of Services Marketing*, 19(5), 309-320.
- Smythe, J. (2008). Engaging employees to drive performance. *Communication World*, 25(3), 20-22.
- Spearman, K. (2007). *Financial management for local government*: Earthscan.
- Spittal, M. J., McClure, J., Siegert, R. J., & Walkey, F. H. (2008). Predictors of Two Types of Earthquake Preparation: Survival Activities and Mitigation Activities. *Environment & Behavior*, 40(6), 798-817.
- Swift, T. (2001). Trust, reputation and corporate accountability to stakeholders. *Business Ethics: A European Review*, 10(1), 16-26.
- Taylor, R. P., World Bank., & ebrary Inc. (2007). Financing energy efficiency lessons from Brazil, China, India, and beyond (pp. xvii, 284). Retrieved from <http://ezproxy.usq.edu.au/login?url=http://site.ebrary.com/lib/unisouthernqld/Doc?id=10212660>
- Ward, K., Bowman, C., & Kakabadse, A. (2007). Extraordinary performance from ordinary people value creating corporate leadership, from http://ezproxy.usq.edu.au/login?url=http://www.USQ.eblib.com.au/EBLWeb/patron?target=patron&extendedid=P_284029_0&
- Watkins, K. E., & Marsick, V. J. (1993). *Sculpting the learning organization : lessons in the art and science of systemic change* (1st ed.). San Francisco, Calif.: Jossey-Bass.
- West, R. E., & Kreith, F. (1996). *CRC handbook on energy efficiency*. Boca Raton, FL: CRC Press.
- Wilson, J., & Oyola-Yemaiel, A. (2001). The evolution of emergency management and the advancement towards a profession in the United States and Florida. *Safety Science*, 39(1-2), 117-131.

Wulfinghoff, D. (1999). *Energy efficiency manual : for everyone who uses energy, pays for utilities, controls energy usage, designs and builds, is interested in energy and environmental preservation*. Wheaton, Md.: Energy Institute Press.

Annexures

Annex A – Learning Journal

Situation/Reading	A beginners guide to Action research	Date 10 JAN 10	Project Action Research
Content/events/observations	Reading indicated need for cycles of plan, act, observe, reflect		
Analysis	Logical cycle, analogous to QM principals and models. But how best to represent and accommodate that within the project schedules?		
Reflection	Need for all stakeholders to engage with the cycles Show this on the project schedule or program Cycle at task or whole project level?		
Project Impact/significance	Important to allocate time and tasks around the cycle for the project benefit and also to evidence occurrence.		
Forward action	Consider program model, planning provision, inclusion within PCG member roles. Formalise it!		

Situation/Reading	New internal email protocol at USQ	Date 12 JAN10	Project Sustainability
Content/events/observations	'ALL USQ' emails now have to be approved by COO		
Analysis	Driven by some abuses of the executive communiqué email group. Initially I thought this was 'a sledgehammer' to crack a walnut' but it can be used to advantage.		
Reflection	Functional or service related emails will be impacted. Time impacts. Future emails will be seen by recipients as having highest level support.		
Project Impact/significance	Potential impediment to sustainability communication. Opportunity to demonstrate highest level support for the project		
Forward action	Seek pre-approval for sustainability communication Allow additional time in communication plan Opportunity to seek further high level engagement		

Situation/Reading	Meeting with Sciences	Date 13 JAN 10	Project SAM
Content/events/observations	Meeting to discuss FoSc space needs and current new initiatives.		

	Two projects have existing federal funding, one for refurb, one for new build. Sciences suggesting another bid for further new build. Need to rationalise existing space before building new. Dilemma created as we are funded for a new building and theoretically the funds (projects) can not be merged or cross subsidised.
Analysis	Multiple initiatives and space solutions being proposed; lack of process and weak communication, loss of overall strategy and picture as a result
Reflection	At the highest level there is not always a robust process being followed. Uncertainty regarding aspects of governance, particularly preliminary approval before commitment stage is reached.
Project Impact/significance	It is important to get this right as we may jeopardise one of the existing funding grants or lose some credibility
Forward action	<ul style="list-style-type: none"> I have strongly suggested that the new bid be focused on the capability and that any funding be spread across the two existing projects. This allows the earlier dilemma of how to move the new build funding into the refurb project to be waived as we can proceed with the new build as already approved and still have enough funds (via the new bid) to complete the refurb project. I will attempt to have some input to the drafting of the submission.

Situation/Reading	Springfield purchase	Date 15 JAN 10	Project SAM
Content/events/observations	Final stages of document drafting (agreeing text and last few issues), we have started to receive final docs for internal governance.		
Analysis	USQ Council will require internal legal office approval of the documents. Legal office outsourced the work but have not planned around the responsibility and final sign off element		
Reflection	At the start of this negotiation USQ Legal Office approved legal work to be outsourced. It is likely that USQ Council will ask whether legal office is happy with the documents and to date they have not seen them nor expressed a requirement to do so; indeed they have stated they do not have time to review them all		
Project Impact/significance	Could introduce significant last minute delay Could introduce new issues		
Forward action	I asked the legal office how they were going to respond when asked by Council if they are happy with the documents. This immediately highlighted the obvious gap and they are currently reviewing the documents.		

Situation/Reading	Tools for reflective practice	Date 15 JAN 10	Project Action Research
Content/events/observations	See notes in the literature review template		
Analysis	Many ways to provide a vehicle for reflective practice. Distinctions between journal types are often quite subtle.		
Reflection	A version of the Reading Response and Double Entry Journal seems appropriate. Yarning and mentoring to some extent occurs within the supervisor sessions.		
Project Impact/significance	Essential to act as a working tool for reference and also as an artefact of the action learning project		
Forward action	Rename to reading journal. Standardised format with quotes/context in italics, followed by my interpretation and comments as appropriate. Particular actions at the bottom of each readings table. Include opportunity for yarning in the PCG forums, perhaps very informally		

Situation/Reading	Action Research Wikipedia	Date 15 JAN 10	Project All
Content/events/observations	See Literature Review Template (Reading Journal)		
Analysis	Cyclic process similar to others in the planning or QA world, but usefully shows all dimensions together I don't favour the terms freezing and unfreezing as it suggests too much rigidity of process and contrary to the writings of others about the dynamic and adaptive nature of action research		
Reflection	Useful systems model linking the cycle to the stages of the real project. May be helpful to illustrate same for my projects		
Project Impact/significance	Improved clarity for me and the stakeholders Help to define and identify linkages		
Forward action	Create a model for the Sustainability and SAM projects		

Situation/Reading	Brief notes on theory and practice of action research	Date 17 Jan 10	Project Action Research Sustainability
Content/events/observations	No one method, appreciative inquiry and whole systems inquiry as different forms of approach		
Analysis	Appreciative useful to identify activity to date and build this into the communication strategy Whole systems inquiry appropriate for planning and		

	engagement although may have to be strata approach
Reflection	The extent to which participants have the ability to plan may need to be layered and perhaps relate to activity within their own areas? I would be concerned not to create a committee approach to managing the project as this is still an operational deliverable, but that said staff engagement, buy-in and ongoing support (behaviour change) are essential
Project Impact/significance	Highly important to consider these approaches
Forward action	Integrate into project planning and discuss with Marketing and Quality and Planning Dept.

Situation/Reading	Various	Date 17 JAN 10	Project Action Research Sustainability
Content/events/observations	Traditional 4 stage model		
Analysis	This model if taken in isolation does not support the concept of orientation to methodology. Clearly there is more in the application of action research in a real world project, particularly a non-social science application		
Reflection	Plan, action, observe, reflect is a very theoretical model and simplistic if action research is related to an operational project. A model which separates obvious action from the considered action, and also overlays the parallel timing of those two lines of activity would be a more accurate and informative representation.		
Project Impact/significance	Very significant, represent more accurately the link between theory to practice		
Forward action	Develop the model accordingly		

Situation/Reading	Overview of Action Research methodology	Date 15 JAN 10	Project Action Research Sustainability
Content/events/observations	1. Action Research is a collaborative process of co-learning 2. Flexibility, the involvement of people in the research and change must happen quickly or holistically		
Analysis	1. Translation of the co-learning into a corporate environment. 2. Focused on operations need but with academic methodology		
Reflection	1. How to represent co-learning of the organisation rather		

	<p>than individuals participating in the project? Is this through improved corporate performance (KPI's metric s) and demonstrated in documentation such as policy and procedures?</p> <p>2. Aligned with characteristic of the project</p>
Project Impact/significance	1. Will help to define the project success indicators and refine deliverables
Forward action	<p>1. For consideration in the project plans documents and discussion with project control group members when discussing the first draft documents, or could this be an email request now?</p> <p>2. Frame introductory paper using this approach</p> <p>3. Cross check process and structure against ethics list</p> <p>4. Cautionary note to myself, not to be precious about this project and to establish the widest group of participants as possible. Local environmental officers as a supernumerary role? (Similar to floor wardens?)</p>

Situation/Reading	Meeting with Science	Date 20 JAN 10	Project SAM
Content/events/observations	Further discussion around structuring of ICTTG bid.		
Analysis	Very complex space planning environment as no space plan defined for existing portfolio. Mix or refurb and new building (4.5M). Additional speculative space need through collaboration with GU, QRME and Cunningham's.		
Reflection	Assisted to crystallise the space plan, leading to a more structured bid that aligns with existing federal funded project for the new science building. Averted political embarrassment and increased probability of funding. Opportunity to remove old building stock as part of this project		
Project Impact/significance	Direct impact to funding probability of success.		
Forward action	Monitor closely and develop existing projects based on most recent information. This will be a very dynamic suite of spaces.		

Situation/Reading	Meeting with Group manager Sustainable Business	Date 22 JAN 10	Project Sustainability SAM
Content/events/observations	General discussion with GM regarding project approach. I outlined both projects; we discussed dimensions, stakeholders and internal processes.		

Analysis	Useful discussion, he is willing to be involved and assist with templates, document review and limited resource. Willing to sit on PCG for both.
Reflection	He will help me to maintain the corporate focus and brings significant planning and corporate project expertise, capability and influence. He gave some good advice regarding internal documents and representing the project scope in the form of block structures.
Project Impact/significance	Project probability for success and ongoing corporate engagement should increase significantly with Steve involved.
Forward action	As part of the project introduction develop block diagrams to show project dimensions Include him on both PCGs Check templates Allow time for him to review documents before internal issue

Situation/Reading	Meeting with FCRC and USQ JULAC group	Date 28 JAN 10	Project SAM
Content/events/observations	There is an existing agreement between USQ and FCRC regarding a joint use library. Both parties contribution to the project. It has not worked satisfactorily in practice and there are a number of areas that have not been delivered on i.e. USQ only occupy 105 sqm where the original agreement was for 600.		
Analysis	Both parties have become entrenched in their positions and the agreement is on the verge of complete breakdown. The JULAC meetings are openly hostile and personality clashes are blatant.		
Reflection	In parallel with this operational challenge I also had a strategic issue unresolved, being the lease of the 4ha area for the campus. I engaged with FCRC Director of Recreation, to develop a strategic group. This group is focused on the wider civic precinct and the integration of the USQ campus development plan to the FCRC planning. Synergies to be exploited, parking, accommodation, community centre with facilities for future Arts or Graduation events, public transport node. I volunteered to sort out the JULAC issues through the strategic group and have consequently been able to present the wider vision to the JULAC members, thereby lifting their view from the immediate local problems to the more aspirational and positive end state. At the last		

	meeting, the JULAC group was disbanded and a new smaller operational group known as the Library Liaison Group was formed. Outcomes are: Strategic Precinct Committee formed; Library Liaison Group formed; commitment from FCRC to move the gallery and allow USQ access to 600sqm, closer relationship with FCRC including key councillors, expansion opportunity to add value to USQ FC space (learning commons, LTSU space)
Project Impact/significance	This is at the heart of SAM in the real world. Coordination of a number of elements and stakeholders to achieve a mutually beneficial outcome at the highest level.
Forward action	Attend meetings, maintain relationship, and monitor construction of gallery, review space design for new library area. I need to be on the strategic relationship group at Springfield for similar reasons

Situation/Reading	Various correspondence and telecons re the OC at SP	Date 28 JAN 10	Project SAM
Content/events/observations	My protests regarding the proposed purchase of \$200k of fitout equipment and the subsequent negotiation of a 5 year lease with SLC have fallen on deaf ears.		
Analysis	<p>USQ is assuming the risk around the operation of the OC USQ is proposing to sub-let the operation to a subsidiary company of SLC??? Logic? USQ has done no due diligence around the assets Negotiating position re lease is compromised (read gone!) once we have bought the fitout USQ is acting in a desperate manner based on Dir Springfield assertion that this is the only option and we must act now. SLC is extremely commercial and the full details of the lease must be understood before committing to anything Wasting an opportunity to represent this as USQ's first expansion in the reserved land area and thereby improve certainty of retention of that area. Wasting an opportunity to push for purchase of the OC and moderate adaptation to include library and refectory (learning commons?) Moves us back to a tenant position just as we are about to become 'freehold' with B1 and Auditorium Operation of OC should be significantly changed to suit USQ but this is unlikely under the proposed scheme. Likely to be a challenge going forward due to wider EC focus, largely</p>		

	undefined.
Reflection	<p>Disappointing to see the speed and ease with which management and governance processes are abandoned. This is typical of events 18 months ago; behaviour we have been working hard to change.</p> <p>I have now involved the Legal Office in the hope that their opinion and USQ Council role and connections will compel a more considered set of actions.</p> <p>Update 29 JAN: legal office has written a very clear email outlining concerns and a lack of support for this approach. Legal officer has also raised with Governance Committee and it is anticipated that questions will be asked next week at F&F</p>
Project Impact/significance	This is significant. How can we ever hope to achieve a best practice SAM environment when senior executive abandon process so readily.
Forward action	<p>Advance consideration of my response to F&F questions, understanding the need to avoid criticism of other senior executives</p> <p>Keep reinforcing the need for due process to be followed</p>

Situation/Reading	Project milestone	Date 29 JAN 10	Project Sustainability
Content/events/observations	Launch of the Going green at USQ web site		
Analysis	Long awaited and very visible sign of environmental progress and appreciation		
Reflection	Great opportunity for highest level media coverage, senior management buy-in and to raise awareness of the project		
Project Impact/significance			
Forward action	<p>Consider appropriate upbeat words for the news article and something for the VC to quote.</p> <p>Arrange photo shoot with VC to demonstrate engagement</p> <p>18 FEB update: photo shoot done and in USQ news.</p>		

Situation/Reading	Thought	Date 18 JAN 10	Project Sustainability
Content/events/observations			
Analysis	Some of the academic members of ESC do not contribute at an appropriate level. Significant effort has been made to encourage and engage with them (recognition, responsibility, consultation etc).		

Reflection	Perhaps the membership needs refreshing more frequently? Currently there is no provision for re-election or reappointment.
Project Impact/significance	ESC is one of the foundation blocks of the sustainability project and must operate with maximum effectiveness.
Forward action	Suggest redrafted ToR for ESC to the VC's approval. Perhaps a 12 month term for the academic members. This will attribute value to the appointment, provide a limited time for them to make a difference, increase staff exposure and also allow the introduction of fresh ideas and perspectives.

Situation/Reading	Finance and Facilities Committee	Date 4 FEB 2010	Project SAM
Content/events/observations	Springfield purchase update generated recurrent questions from Committee members regarding CMS, easements for parking and height planes on volumetric lots.		
Analysis	Members suggested that we should negotiate harder and insist on resolving the easements issue before settlement. They also wanted the height plane increased.		
Reflection	<p>Members do not understand or appreciate the dynamic and intensity of the negotiations that have occurred. The new position represents a significant improvement on the old one. I have pushed SLC to the edge of abandoning negotiations twice now and I believe this instruction from Committee will not be received well by SLC. It is likely that we will get agreement around comms equipment on the roof of building 1 but not around the easements.</p> <p>I spoke with the VC following the meeting and he agrees that the committee is naive in this regard.</p> <p>One committee member in particular raised these questions. I could perhaps have anticipated that in advance given his previous mode of operation.</p> <p>No intervention by COO or VC regarding negotiating authority and role.</p>		
Project Impact/significance	This will potentially delay or stop the negotiations at this final stage.		
Forward action	<p>Draft content for legal team to communicate to SLC around easements and comms equipment</p> <p>Meet with members in advance of next meeting to deal with queries off line and hopefully manage the situation more closely.</p>		

Situation/Reading	Finance and Facilities Meeting	Date 4 FEB 2010	Project SAM
--------------------------	--------------------------------	---------------------------	-----------------------

Content/events/observations	Discussion of Springfield OC
Analysis	<p>Clear difference of opinion regarding the proposal to purchase the fitout of the OC and assume a lease for the operation of the facility. Management significantly downplayed the situation. Committee members believed that appropriate processes had not been followed.</p> <p>The legal officer challenged the COO and the COO stated categorically that the legal officer was wrong, contrary to email evidence available at the time.</p> <p>I was asked by the Chancellor for my opinion. I stated that the situation represented a positive opportunity for USQ, that we should seek to gain control of the OC, but to do so in a considered way that ensured maximum longer term benefit for USQ. I suggested that we break out of the immediacy argument by implementing a local interim solution and then begin negotiations from a more considered, stronger position.</p>
Reflection	This was a difficult situation for the COO and the VC in terms of governance compliance and exposure in the committee forum.
Project Impact/significance	The opportunity to bring the OC negotiation into the wider purchase negotiations now looks more likely. Certainly taking a strategic view (ownership, change of use, expansion area)
Forward action	<p>Write to COO with immediate recommendations.</p> <p>Countermand authority to legal team from the Dir Springfield re OC negotiation.</p> <p>Discuss interim and longer term options for Student Guild support</p>

Situation/Reading	ICTSC	Date FEB 10	Project SAM
Content/events/observations	Documentation and discussion around ICT projects		
Analysis	The documentation is very robust, mandate, plan etc, but the prioritisation seems ad hoc and subjective. No meaningful use of the ICT-Val evaluation matrix.		
Reflection	<p>I did think the project portfolio matrix was good, identifying key stages and colour code status for each. One enhancement might be % complete imposed over the coloured background to indicate both risk and progress.</p> <p>Also observed that ICT general response is no citing resource shortages and follow up with additional funding for external project manager. Should I be taking this approach more often?</p>		

Project Impact/significance	An improved way, aligned with the other major project provider ICT, of providing high level progress and risk reports.
Forward action	Review reporting template for the Sam and Sustainability projects.

Situation/Reading	Meeting with VC re Springfield	Date FEB 10	Project Sustainability
Content/events/observations	Brief meeting with VC following F&F re Springfield. Toward the end of the discussion VC raised the sustainability project and I offered to present summary to VCC. Offer accepted so now need to work on a solid presentation, noting that project documents are not completed (don't need to be for this)		
Analysis	Having witnessed the governance and management gap several times it is clearly a challenge for me to remain professionally neutral, but this is paramount in terms of credibility and career.		
Reflection	Great opportunity for senior management team engagement with the sustainability project. I will use the opportunity to put together a comprehensive presentation that can also have wider application outside of VCC forum.		
Project Impact/significance	Launch pad for the formal recognition of the project.		
Forward action	Develop presentation as above. Early March present.		

Situation/Reading	VC welcome drinks	Date 18 FEB 10	Project SAM
Content/events/observations	Discussed outstanding concerns with Chair of F&F and another member, also the recently imposed negotiation deadline linked with fixing the purchase price from SLC.		
Analysis	There is a risk that the recent communiqué would be seen by F&F members as bullying by on the part of SLC with a take it or leave it time deadline.		
Reflection	As stated previously the negotiations are the point of diminishing returns, and the two sides are weary. The outcome represents the best the possible given the starting point and this is reflected in the email from the COO and VC this week. I need the F&f members to understand that and not lose sight of the overall benefits of purchase through criticism of the detail.		
Project Impact/significance	Months of negotiation will come to a conclusion on 26 FEB. My challenge is to convince the decision makers of the overall benefit and positive change. I will ensure the legal		

	rep (Craig) attends to answer any direct legal issues and also lend a credible voice to the end result as being a huge improvement over existing and the best possible.
Forward action	Prep members, lawyer attend, summary of documents and rationale (if needed, may invite additional questions and possibly better to respond to questions on the day).

Situation/Reading	Meeting with Council member	Date FEB 2010	Project SAM
Content/events/observations	He raised some very specific queries regarding a number of the documents. I talked through the documents in detail and showed him a number of the previous correspondence and due diligence work that had been undertaken. I also fielded his queries directly with the Lawyer and provided the response to him. I followed up later at a social function to see if he was comfortable and he indicated he was. We spoke generally about the need to bring the negotiation to a conclusion as all parties are clearly tiring and becoming less responsive to what should be a very positive outcome for USQ.		
Analysis	He is an elected staff member and also a Surveyor. He has a natural interest in the detail of this property transaction and is listened to for both his representative role but also his experience and knowledge by the FF members. I believe he is now on board with the recommendation to proceed.		
Reflection	I should perhaps have engaged with individual members of F&F earlier but I was acting on the advice of my manager, who at the time was confident about the lines between governance and management. Clearly that confidence was misplaced or ill considered and I would have benefited from independent thought and action (balanced action) in this case. But we seem to be on track now. Also I wonder whether it would have been useful to have had a member of F&F attend the negotiations. Possibly not acceptable to management but a prudent investment in terms of confirming the effort and strength of our negotiating representations.		
Project Impact/significance	On track now with Council approval meeting scheduled for 26 FEB 10.		
Forward action	Act more independently, noting the need to maintain the balance of support. Involve a member of Council in negotiating team. Structure separate detail briefings for those interested, to address the hard questions outside of forum and gain support in forum.		

Situation/Reading	Final negotiations	Date 16 FEB 10	Project SAM
Content/events/observations	Response to F&F feedback and directives on negotiation documents and queries		
Analysis	The negotiations have been conducted in good faith with the reservation of rights for both sides, pending respective governance body reviews. F&F have been more involved in the detail than expected and this is to some extent undermining the relationship between negotiators		
Reflection	Need to have a balanced approach to the introduction of these late items via F&F. I have kept the SLC negotiator aware of the internal political situation in the hope that the requests would be taken with some serious consideration and that an open approach is least likely to compromise the negotiating and subsequent strategic relationship into the future.		
Project Impact/significance	If any of this is seen as USQ not acting in good faith it will compromise the relationship and the early purchase opportunity.		
Forward action	Underway already, keep informal communication lines open with SLC negotiator.		

Situation/Reading	Staff Development	Date 14 FEB 10	Project SAM
Content/events/observations	BEIMS Training Opportunity		
Analysis	As part of the HR development need in order to support the SAM project I have authorised two FM staff members to attend BEIMS training; particular focus is the creation of the scheduled maintenance task library and calendar. I have also approved external study for the HVAC Technician and the Maintenance Supervisor to gain broader FM knowledge including asset management.		
Reflection	Positive on many levels including staff engagement, motivation and development.		
Project Impact/significance	Necessary for the longer term sustainability of SAM and best practice.		
Forward action	There may be other opportunities for staff, or needs of the project, consider this when drafting the project plan.		

Situation/Reading	General	Date 15 FEB 10	Project Carbon Zero
Content/events/observations	Meeting with HVAC tech		

Analysis	Made him aware that I want the new ESC web site to be connected to the BMS and various meters so that we can demonstrate real time and derived environmental performance data. Also interactive screens in the new HUB and Learning Commons projects.
Reflection	This will be a huge plus for transparency of environmental sustainability, it will focus the delivery of monitoring systems, ease reporting and engender a sense of ownership and community around the carbon zero initiative.
Project Impact/significance	It is one tool and a significant one in achieving a number of the project deliverables.
Forward action	Regular review of progress with web manager and HVAC tech.

Situation/Reading	Tasked EA with report framework	Date 13 FEB 10	Project Carbon Zero
Content/events/observations	EA researching other University and corporate reporting formats. Meetings held to discuss and guide development of framework, appropriate to the USQ community initially, but capable of being hosted externally and promote USQ activity in the most positive light.		
Analysis	Progress is a little slow so I asked for this by 1 st week of MARCH to encourage focus and prioritisation.		
Reflection	The intention is that this will take the form of a typical annual report with metrics and narrative, period performance and future directions/projects. This is not intended to satisfy legislative reporting such as NGER.		
Project Impact/significance	Again, one tool in communication, but will also formalise role, responsibility and acknowledge progress and signal future direction and project mandates.		
Forward action	Set time to finalise and populate following environmental data review by OPUS.		

Situation/Reading	Meeting with LTSU rep	Date	Project Carbon Zero
Content/events/observations	Meeting held to discuss inclusion of an LTSU member on the ESC		
Analysis	Rationale presented that this is necessary for academic integration of sustainability into all courses and programmes		
Reflection	Comment from ESC members to this request was not positive, so I have asked LTSU to send me a short paper outlining the significance. I am not inclined to expand the membership, particularly in the academic area, unless I am		

	convinced they will contribute and there are significant benefits. Still no response from VC re annual turnover of academic members.
Project Impact/significance	Unknown, could be very useful in terms of the larger university vision but may offer little to the carbon zero project.
Forward action	Review paper from LTSU, circulate to ESC for comments. Chase up VC on revised ToR for ESC.

Situation/Reading	Sustainable campus conference	Date 22/23 FEB 10	Project Carbon Zero
Content/events/observations	Attended conference in Melbourne		
Analysis	Excellent speakers, used lots of case studies		
Reflection	May be a good venue for one of my case study presentations. We are on the right track with lots more to do		
Project Impact/significance	Confirmed approach, inclusive and consultative, pick the projects people are excited by, senior buy in and leadership		
Forward action	Download presentation materials and review in Reading Journal more thoroughly, compliment with notes taken at the time.		

Situation/Reading	Chancellor's Committee	Date 26 FEB 10	Project SAM
Content/events/observations	Special meeting to approve the Springfield purchase proposal. Attended also by the solicitor advising USQ		
Analysis	The members appeared to be unfamiliar with the existing restrictions and contractual framework.		
Reflection	Members did not initially appreciate the progress made in the proposed agreement as they were not familiar with the current agreements. Individuals represented issues from their own areas of expertise and did not appear to consider the proposal holistically. There was clear reluctance to approve anything and it was deferred to a full council meeting scheduled for 8 March. Clarity of Governance expectations, role and boundaries is needed for the future. Unclear whether we adequately prepared members. I genuinely believe that appropriate briefings had been provided. Perhaps they were not read or understood? Or perhaps I needed to reintroduce? Committee requested another valuation.		

Project Impact/significance	High risk of losing the opportunity (improved conditions and \$10M saving over next 22 years). Risk to the relationship at Springfield
Forward action	Speak to members off line and determine a credible Valuer (from their perspective) Have legal draft some terms of reference for the Valuer Simple summary highlighting the key issues/opportunities for Council meeting on 8 March. Discuss with Chancellor one on one Review VC and COO papers to enhance as appropriate. Talk with SLC negotiator and keep a positive message alive

Situation/Reading	USQ Council	Date 08 March 10	Project SAM
Content/events/observations	Session to approve the Springfield purchase proposal. Interesting dynamic with old, previously addressed) issues		
Analysis	The members appeared to be unfamiliar with the existing restrictions and contractual framework. There have been previous briefings and papers but they do not seem to have read these fully. The Chancellor provided a summary that focused exclusively on the risk. The change of risk and the benefits were under represented.		
Reflection	A number of members were struggling with the complexity. Could I have pre-briefed them? They may have been allies in the discussion given they are staff members of Council. The lawyer members took a very legal, absolutely risk adverse position and at times did not reflect the existing restrictions. Interesting that the risk of losing a \$10M saving was under represented. There was almost an obsession with the valuation figure reflecting restrictions on use, but as I pointed out the main restriction relates to use as a University. The commercial activity restriction is very minor in the operation of a University and unlikely to affect the valuation figure.		
Project Impact/significance	Similar to last report. High risk of losing the opportunity (improved conditions and \$10M saving over next 22 years). Risk to the relationship at Springfield Possibility that the deal will simply be withdrawn. This has implications for the approach to SAM at each campus, particularly through the role of Governance Committee		
Forward action	Council to send letter to SLC asking for two items to be revisited and additional time for a new valuation. If SLC agree that is a lesson for me in that clearly their earlier representations about those items were false. It might also illustrate the benefit of highest level involvement with the		

	<p>negotiation.</p> <p>Instruct the valuation to proceed. Useful anyway even if we end up with the 2011 purchase option.</p> <p>Talk with SLC negotiator to keep a positive message alive. Seek an opportunity to review the draft minutes of the meeting to ensure that my advice re risk is accurately reflected.</p> <p>I suggested to the Chancellor that a facilitated workshop would be useful as a quality improvement exercise. We could use the Springfield proposal to clarify roles and processes going forward and have a more efficient operation next time.</p>
--	---

Situation/Reading	Discussion with COO	Date 8 Mar 10	Project Carbon Zero
Content/events/observations	I have developed a presentation for the VCC regarding a organisation wide Sustainability project. I showed it to COO for comment. He made me aware that the VC has asked DVC (S) to have stewardship of the delivery of sustainability		
Analysis	Natural extension and holistic approach. Aligns with ESC role and responsibilities. Some risk through reduced management influence. Improved risk through senior engagement and potential broader team support.		
Reflection	This broadening of my carbon zero focus is a natural extension of the project and necessary for the longer term benefit of USQ.		
Project Impact/significance	Moderate, unless a redefinition of the project is required on the advice of my Supervisor		
Forward action	<p>I will engage with DVC (S) and try to develop a collaborative project using his seniority to advantage.</p> <p>If my contribution to the final project does not meet the needs of the DPST or it is delayed, I will refocus on the environmental component and in particular the carbon zero element.</p> <p>Meeting scheduled mid March with DVC (S) to discuss. I have also written to the VC and made him aware of that meeting. I will also reference the project in the next FM newsletter and ESC Meeting.</p>		

Situation/Reading	Discussion with SBMI	Date 8 Mar 10	Project Carbon Zero
Content/events/observations	<p>Following on from the knowledge that DVC (S) is to have stewardship of the delivery of sustainability, I met with GMSBMI to engage him in the project to date.</p> <p>I showed him the PPT slides and sought his</p>		

	feedback/comments. Steve identified an opportunity to strengthen the linkages with existing committee and PD responsibilities.
Analysis	He was keen to involve his group and confirms that he sees it as a significant and very valid project for USQ. Good input re the linkages and I have amended the PPT to reflect this.
Reflection	Involving him will help in maintaining the momentum of the project and provide a stronger platform for working in a team environment with DVC (S).
Project Impact/significance	To be determined whether this strategy assists, but I am convinced it is the correct one.
Forward action	Ensure he is presented as co-author and owner of the Sustainability project to date. Invite him to the meeting with DVC(S).

Situation/Reading	Earth Hour	Date 11 Mar 10	Project Carbon Zero
Content/events/observations	USQ participation in Earth Hour needed to be determined.		
Analysis	ICT concerns regarding old infrastructure and hardware signal reduced levels of participation Last year myself and the photographer were the only people here for Earth Hour; there was no general interest or support		
Reflection	Last year was interesting in that we achieved a maximum technical participation by shutting down all power but achieved essentially zero interest from the USQ community. The real benefits towards sustainability come from engaging the staff and students in developing ownership of the issue. The 2010 event will focus more on communication and engagement and less on power outages, although these will occur at a level that confirms Earth Hour support but does not introduce risk for USQ. It is also an opportunity to involve the Student Guild and expand participation/collaboration.		
Project Impact/significance	This is a foundation block for raising awareness and will pre-position the wider sustainability projects and carbon zero endeavours		
Forward action	Finalise planning and distribute communication. Seek VC or Chancellor as guest speaker. Possibly also Tegan Student Guild President. Prepare PPT presentation to show on the night with stats re USQ performance and objectives etc		

Situation/Reading	Approach re land for sale	Date 19 Mar 10	Project SAM
Content/events/observations	Operations Manager received an approach regarding a possible land purchase by USQ. Martine is selling 15 acres of land adjoining existing USQ land.		
Analysis	Logical extension of USQ land holdings with excellent street frontage. May be suited for USQ commercial activity or sustainability industry park.		
Reflection	I have made VC and COO aware of it and initiated a valuation. Instructed Ops Manager to issue a holding email confirming our interest and that USQ is undertaking a valuation to determine price.		
Project Impact/significance	Great opportunity for USQ. Prevents challenges if the Industry park ever gets going, also avoids Toara park use. Will depend on price to some extent although there are no specific development needs currently.		
Forward action	Finalise detail and bring to F&F and I&C Committees in a timely fashion. Once accepted establish small group to consider optimal planning use for the area.		

Situation/Reading	Fraser Coast asset transfer	Date 19 Mar 10	Project SAM
Content/events/observations	I was made aware by the VC that he is holding discussion with Sunshine Coast University and DEWWR regarding the transfer of the FC campus to the Sunshine Coast Uni, in exchange for significant infrastructure funding from DEWWR – possibly \$40M		
Analysis	I note that the VC has only recently made the Chancellor aware of this, perhaps on the back of his SP experiences. The growth rates and market analyses apparently do not indicate significant growth opportunities. The VC confirmed that we could continue for years operating at a small profit. He also commented that he didn't see too many joint venture opportunities.		
Reflection	This impacts on my negotiations with FCRC potentially. The joint use library in particular. Logic of moving to exit a campus that shows a small profit versus arguing to retain a campus at SP that loses money? Is it simply the growth potential and how thoroughly has that been studied for both cases?		
Project Impact/significance	Minor		
Forward action	Ensure any contracts allow USQ to exit and transfer obligations onto successor.		

Situation/Reading	Fraser Coast asset transfer	Date 23 Mar 10	Project SAM
Content/events/observations	Two requests for data. No explanation of purpose, but clearly to support discussions.		
Analysis	From the response to the data provided there is little understanding of the legal framework at FC (lease, library etc). I have asked the COO at what stage I will be fully involved with this project		
Reflection	I suspect that representations or assumptions have been made that will be significantly different to the reality of the lease and library arrangements.		
Project Impact/significance	Minor		
Forward action	Once included in the discussions proper, I will seek to affirm understandings and realign as necessary.		

Situation/Reading	Met with DVC(S) and GMSBMI	Date 23 March 2010	Project Carbon Zero
Content/events/observations	Meeting to present outline of sustainability Project (PPT slides) and discuss		
Analysis	DVC(S) did not provide a particular path forward, but suggested that the 9 goal stewards should be represented on the project diagram.		
Reflection	Understand political perspective but this assumes the goal steward concept is an effective model for actual delivery, and based on observation that is debatable.		
Project Impact/significance	Minor		
Forward action	I will integrate the suggestion but still emphasise use of existing committee and units. Next meeting will need to address specific plan to progress.		

Situation/Reading	Springfield Purchase	Date 26 Mar 10	Project SAM
Content/events/observations	Update meeting re Springfield. I provided some sales evidence re land sales at SP. Indicative land costs range from 300 – 1100 per sqm. Discussion around Maha and ST Peters College link. Can this be used to advantage, possible meeting with VC?		
Analysis	Softening of position from Council. Previously very clear that guarantee of land and sovereignty was essential, now suggesting staged implementation, and in the case of commercial activity that USQ has the right to step in if activity fails, rather than starting right to provide our own		

	service.
Reflection	This softening is moving us closer to the deal already on the table and therefore more likely to be achievable. I still believe there is a desire to explore a green field location from some. Chancellor quite neutral, VC opposed.
Project Impact/significance	Moderate: Things may move back to a more considered position as people have had time to think it through. After the negotiating team meeting the VC made a half suggestion that management didn't have a chance to see my updates and reports in advance of Council. I responded that I had made him aware in an earlier email of the gap created when he restructured Senior Leadership Committee and created VCC, noting that I am not part of VCC. He suggested that F&F reports come to VCC first.
Forward action	I will draft a negotiating matrix and commercial activities schedule to guide meeting. Consider F&F report to VCC and role at VCC.

Situation/Reading	Earth Hour	Date 27 march 2010	Project Carbon Zero
Content/events/observations	Planning for Earth Hour. The event is today and we have modified the activity to provide more community engagement on the issue of climate change. Showing AL Gore movie Inconvenient Truth and slide show of USQ activities in environmental area		
Analysis	Late communication but perhaps adequate. Unknown attendance levels, or demographic. Hoping for a staff and student community focus.		
Reflection	This is a pragmatic solution to our inability for a full power shutdown and may provide additional opportunities to share understanding and grow commitment		
Project Impact/significance	High: important to demonstrate USQ position and commitment and to enlist support from staff and students		
Forward action	Consider EH 2011 based on tonight's event. PR release from tonight		

Situation/Reading	Meeting of the sustainable budget model working group	Date 29 April 2010	Project SAM
Content/events/observations	Meeting to progress the review of the current budgeting model. Earlier meetings had developed a set of principles that reinforced the current model was ok. This was not well		

	received by Faculties. The discussion was largely around the inequity of Faculties getting less than 50% of revenue. Anecdotal comment from some re traditional overhead versus production centre allocations inflamed the debate.
Analysis	A lack of understanding seems to exist re the allocation of revenue and the way that centralised costs are managed at USQ. There is some duplication of function apparent across some areas.
Reflection	Many of the statements seemed based on the false assumption that Faculties meet all their own costs. Highlights the gap when full cost of operation is not transparent or embedded.
Project Impact/significance	<ul style="list-style-type: none"> • Funding envelopes could vary and SAM projections need to work within the constraints of the organisation. • May lead to internal rent charge
Forward action	<ul style="list-style-type: none"> • Meeting with COO, GM SBMI, Dir Budgets and Reporting and me to discuss areas of duplication and opportunity. • Consider sustainable funding within SAM project • Publish space costs for Faculty info.

Situation/Reading	Meeting with FM technicians	Date 29 April 2010	Project SAM
Content/events/observations	Discussion regarding the location of the new portable generator.		
Analysis	This is a deployable capability that can plug into a 'cluster' of buildings at the HV connection and service the essential power needs. We are adapting building connections to facilitate this new capability. It will be sited at S Block in order to service B, S and J block being the corporate critical functions. ICT already has its own standby capability. That said the generator can be moved if required.		
Reflection	This is a major step to minimising a major BCP risk. Further work will be done on this through the tri-generation sub-project within the SAM project		
Project Impact/significance	Minor to the SAM project but significant to BCP		
Forward action	Installation, trial and communication. Integration to maintenance scheduling.		

Situation/Reading	Meeting with COO	Date 30 April 2010	Project SAM
Content/events/observations	Meeting to discuss commercial model for Printery		

Analysis	COO is clearly thinking more about outsourcing options. I discussed various models that include USQ as a shareholder receiving a dividend each year, fully self funding etc
Reflection	I believe a semi commercial approach to be appropriate with a return back to the Uni. To outsource the model fully would seem to guarantee that we pay for something that we currently make a revenue from
Project Impact/significance	Minor for SAM generally but is a very high profile area in terms of client service levels
Forward action	Continue with proposal and get COO approval

Situation/Reading	F&F Committee	Date	Project
		1 April 2010	SAM
Content/events/observations	<p>Scheduled meeting with F&F Committee. Discussion re Springfield dominated. I provided update with Chancellor input at the end. Progressing with new negotiating team made up of two management reps, three council reps and legal officer.</p> <p>No discussion re Fraser Coast disposal (odd given significance?)</p> <p>The Pool Car utilisation report was tabled after successive meeting requesting it. Unfortunately no time to read it so it was simply accepted.</p> <p>I introduced an approach to USQ to purchase a block of adjoining land. Chancellor not enthusiastic but will take advice from Deputy Chancellor</p>		
Analysis	Council determined that the existing SP proposal is not acceptable given restrictions and that the valuation does not reflect those limitations. Meeting to discuss strategy scheduled.		
Reflection	<p>A range of logical disconnects at this meeting:</p> <ul style="list-style-type: none"> • Pool cars were proposed to reduce fleet further and increase hire rate as result of staff not following policy and booking the cars over external hire. • FC represents significant staff and community risk in terms of USQ reputation as there has been no communication to date, yet this doesn't feature at all. • Springfield negotiating team is dominated by council members rather than management receive a meaningful brief from Council outlining negotiating parameters. 		
Project Impact/significance	<p>Major in regard to governance and management relationship and interaction.</p> <p>Fraser Coast impacts on current negotiations with FCRC</p>		

	Land opportunity makes sense for USQ with West St frontage, would suit commercial activity (industry Park, Convention Centre?)
Forward action	<ul style="list-style-type: none"> • The dynamic nature of the governance /management relationship needs consideration. It is not enough to rely on the structure and apparent process. • Pool car policy to be reinforced. • FCRC negotiations 'on hold' as far as possible • Follow up with Deputy Chancellor re land opportunity

Situation/Reading	Guild projects as part of Toara Park	Date 7 April 2010	Project SAM
Content/events/observations	I arranged this meeting as part of a wider strategy to engage the Guild with the service level agreement (SLA). USQ's lack of progress with the \$400K project commitment contained within the Toara Park purchase is a source of friction with the Guild. We discussed what the Guild saw as priorities and I allocated from existing funds for most. The balance will carry forward to 2011 funding bids.		
Analysis			
Reflection	Guild were very happy to have this progressed and with little debate over the projects. Their prioritisation was similar to ours so no real conflicts		
Project Impact/significance	Significant to the relationship with Guild and in particular progressing the signing of the SLA		
Forward action	Meeting with Guild tomorrow to assist in costing the SLA		

Situation/Reading	Meeting with Guild re SLA costs	Date 8 April 2010	Project SAM
Content/events/observations	The Guild (and I) have concerns about the equity and quality of the current proposed SLA. It potentially seeks to contract for a level of service that both sides acknowledge is not achievable for the consideration paid.		
Analysis	I have suggested that the Guild should go through each objective and sub objective and cost them fully and represent that information to the COO in the form of a priced matrix		
Reflection	The Guild financial accounts structure do not align with the SLA structure (naturally) and the GUILD is having great difficulty making the adjustment. A slow process as they seem entrenched in the past SLA and funding levels. When I left the meeting they had completed two of the objectives		

	at an appropriate level and seemed to be on the right track.
Project Impact/significance	This may not affect the signing of the SLA but it will provide an audit trail of what could be a significant risk to the relationship in 12 months time
Forward action	Prompt Guild next week re progress. Mention the meeting to COO.

Situation/Reading	Meeting with Sciences	Date 12 April 2010	Project SAM
Content/events/observations	Meeting to pre-position the refurbishment project space review		
Analysis	This meeting was necessary to get key stakeholders to a common point prior to briefing the consultants undertaking the space study. Objectives; to understand the FoSc expansion and development agenda in terms of actual, probable and possible and then align that with the existing space portfolio and if appropriate consideration of the need for a new building (already funded).		
Reflection	This is a very dynamic project that brings a number of real world and aspirational elements together, requiring the correct space solution. From a SAM perspective we need to optimise space utilisation within the existing portfolio as there is no consideration of retiring any existing assets.		
Project Impact/significance	Significant. Sets a precedent, demonstrates success collaborating with a faculty, potentially releases 1.7M of USQ funds		
Forward action	Keep in touch with this project		

Situation/Reading	Executive WH&S Committee	Date 13 April 2010	Project SAM
Content/events/observations	Paper submitted from Arts re independent funding for USQ Safe		
Analysis	Paper is full of factual errors and seeks to release Faculties from responsibility for WH&S through a lack of funding; suggests \$315K for USQ safe and let them do it all.		
Reflection	Not a good paper and clearly influenced by safety office agendas.		
Project Impact/significance	WH&S is everybody's responsibility. Building compliance is with FM. Plant and equipment specific to faculties is their responsibility. USQ Safe only need some recurrent funding for replacement of consumables such as med kits, pandemic supplies etc.		

	May impact on FM funding and assign artificial priority to USQ safe generated activity.
Forward action	Discuss with COO offline.

Situation/Reading	ICTSTC	Date 14 April 2010	Project SAM
Content/events/observations	ICT Strategy Committee. GM ICT expressed that any space containing ICT fitout should be considered an ICT asset. These meetings continue to be an ICT version of Budget Management with very little strategic discussion and no 'blue sky' opportunity		
Analysis	This definition is not viable and not in the interests of the USQ. Fitout is separate from space. Space is planned strategically and tactically and allocated to suit the need of USQ. There are differences apparent in the way the ICT capital funding is being planned and managed compared to the FM.		
Reflection	ICT and FM processes could be far more closely aligned (in principle). The initial work on the SAM project suggest opportunity for a strategic asset committee and an asset management committee, but I will not pre-empt the project		
Project Impact/significance	Clarification of the boundaries and commonality between FM and ICT would be advantageous		
Forward action	Discuss further with COO, DVC (GL) and GM ICT once Sam project has progressed appropriately		

Situation/Reading	Meeting with visiting Professor	Date 19 April 2010	Project Carbon Zero
Content/events/observations	Meeting with a new Associate Professor at the centre for sustainable management		
Analysis	He described a number of imperatives and actions that he had set in place in an organisation the UK.		
Reflection	This was a very fast pace and high level 'chat' but the majority of the content has been considered and referenced already. He did indicate that performance bonuses at individual and unit levels were linked to environmental performance.		
Project Impact/significance	As previously discussed, the project is carbon reduction but might connect into a wider sustainability project if the organisation is ready to engage with that.		
Forward action	Requested Supervisor also have a meeting with the visitor Made contact with host centre and agreed to attend		

	carbon software demo
--	----------------------

Situation/Reading	PG Student Accommodation	Date 27 April 2010	Project SAM
Content/events/observations	Discussion re request from FoEs for a new building for 50 PG students in 2010		
Analysis	Strategic fit for USQ Very short notice, unplanned. Temporary accommodation versus time frame Likely to be permanent once installed Location on engineering green is high profile		
Reflection	Request was for portable building, I have instructed a greener innovative solution, perhaps geo-dome, something that reflects the engineering focus and will add (not detract) from the campus appearance. All subject to deliverability in required time.		
Project Impact/significance	Impacts on CAMP, SLA by FM, opportunity to demonstrate FM as enabler and raise portfolio standard		
Forward action	Meeting with Manager Planning and Space, follow up regularly Modify CAMP and advise BMC once known		

Situation/Reading	Meeting with VC re TRC space	Date 28 April 2010	Project SAM
Content/events/observations	USQ have been discussing taking on an area in a building in Little Street Toowoomba. No understanding of what USQ will do with the space Perception that the space is free because it's a peppercorn FM now involved to work through the detail and facts		
Analysis	Very late for FM to be involved but again an opportunity for us to bring process and rationale. We will also illustrate the full cost of leasing so that the value proposition can be understood. Risks include no real value, exit strategy if it fails, local industry competition (depending on use)		
Reflection	Demonstrates lack of understanding or unwillingness to follow space policy process. How to change this? Perhaps SAM project will reinforce this at senior levels. Overlap with Office of External Engagement Senior Management do not start with a needs based focus, but an opportunity based focus		
Project Impact/significance	Illustrates why the SAM project is so important		
Forward action	Meet with TRC next week and get the details Schedule meeting with VC and try to get definition of USQ		

	objectives for the space
--	--------------------------

Situation/Reading	Meeting at Springfield	Date 29 April 2010	Project SAM
Content/events/observations	<p>Usq team presented position to SLC. Initial shock and dismay from SLC. I presented this as a new opportunity beyond the scope of the original brief and one which potentially might aid them in providing a more viable operation at EC both tenant wise and financially. Need to put the past documents to one side and look with fresh eyes.</p> <p>Chancellor maintained the importance of working together and recognised the collaborative success we have achieved in the past.</p> <p>They asked what USQ wanted; we expressed sovereignty and the ability to expand.</p>		
Analysis	The strategy was effective (at this point).		
Reflection	<p>I imagine that an expanded purchase and the right to purchase more would be the ideal outcome for USQ. How we avoid being drawn down the same contractual road as previously will be the major challenge.</p> <p>The SLC CEO is certainly a key element in this and should be kept informed by USQ directly, building on the relationship and friendship.</p>		
Project Impact/significance	Various		
Forward action	Develop some models for a freehold campus, with rough orders of cost, check with CFO re affordability. Get load and academic product projections to inform expansion need.		

Situation/Reading	VCC Report	Date 30 April 2010	Project SAM
Content/events/observations	I have been asked to provide a report to VCC on a regular basis		
Analysis	This is the first time and is possibly driven by Management wanting to see the material that goes to F&F Committee in advance of that committee.		
Reflection	It is an opportunity to inform and potentially influence VCC members. I am slightly cautious that it will degrade into a subordinate report which in turn will make it harder for me to have equal relationships with the Deans. I appreciate the opportunity to attend and hear the information first hand		

	(essential for principles of SAM) but it is only once per month, again suggesting that it is a subordinate reporting relationship
Project Impact/significance	Possibly a step in the right direction but may create completely the wrong relationship.
Forward action	See how it goes for the first one.

Situation/Reading	Meeting with Draftsman re: Springfield layouts	Date 4 May 2010	Project SAM
Content/events/observations	Short meeting to try and identify some meaningful lines on the Springfield plan in order to develop a pick and mix range of options for the negotiating team to consider next week.		
Analysis	Very difficult to assess where the likely boundaries will be. I find myself hindered by a level of knowledge regarding Springfield that works against the creative component of this exercise. I also received two data sets re student load projections from SBMI and the Campus. Two very different views. I have accelerated the data from the FEB space audit to try and get an independent and actual measure to mediate between the two views.		
Reflection	Minimum investment in developing pick and mix options until we know what Council and SLC are likely to be aiming for. Student load does not support any expansion of the portfolio based on SBMI and space audit numbers.		
Project Impact/significance	Highlights that the council objections need to return to original focus being, value for money (price), sovereignty and ability to expand.		
Forward action	Raise at next negotiating (internal) meeting 13 MAY.		

Situation/Reading	CMPBPIE Steering Group	Date 4 May 2010	Project SAM
Content/events/observations	Steering Group meeting to consider project progress and status. Faculty reps commended the work to date. Stage 2 nearing an end but not clear on the outputs and how the communication will be handled. Introduced a new element in the mix, a standalone report from DVC(GL) to VC re policy on course material and		

	production.
Analysis	Reference is being made to recommendations of the GLD review, but no report is available for people to read. The scope of the CMPBPIE has been changed to focus only on the 'as is' processes and provide critique. The critique part is causing confusion because it portents the possible changes by making recommendations and comments on how the as is processes can be improved. HR is concerned re staff reaction to potential change. This is not currently being pulled together cohesively. Stage 3 will develop process changes informed by the GLD review and presumably the independent report from DVC (GL)?
Reflection	Demonstrates the importance of keeping a finger in all the pies. The role of the stand alone report is not understood, and again, nobody has seen a copy of it? We are inconsistent in our communication and consultation and appear to be tackling the same issue from 3 directions using different resources in each case. It is also clear that no one of these perspectives is directly considering the resource efficiencies (space duplication and location misalignment, staff excess)
Project Impact/significance	Impacts on the future role of Printery short term and space planning in the short and medium term.
Forward action	Monitor and stay proactive.

Situation/Reading	Asset Manager	Date	Project
	interviews	5 May 2010	SAM
Content/events/observations	Arranged meetings with the two prospective applicants at Springfield. Meeting to allow supervisors to meet the two and get an additional perspective on each.		
Analysis	Meetings went well. Clear preference from the supervisors re one particular candidate. That person was seen as a good team fit, good skills and unlikely to micro manage. They also enjoyed the quirky sense of humour, very natural. They acknowledged the other candidate's experience and quals but didn't react well to him. Interestingly the body language from the supervisors changed very quickly to be disengaged and defensive.		
Reflection	Very important that the supervisors have some engagement with the new Asset Manager, given the length of time they have been relatively autonomous and the importance of good relationships and team work in the SAM model (cross departmental communication and		

	common effort).
Project Impact/significance	Very important for the SAM project as I hope to hand over a significant amount of the 'doing' and lower task planning and supervising to this new position.
Forward action	Offer will be issued to the first candidate.

Situation/Reading	Emergency Learning Commons meeting	Date 6 May 2010	Project SAM
Content/events/observations	<p>COO called an emergency meeting re the Campus Hub and Learning Commons project stage 2. The purchase order has been put through for his approval. He is unsure about signing as he heard that the GLD review panel members were critical of the Learning Commons design. Meeting called to discuss with DVC GL and Dir DAIS.</p> <p>COO, DVC GL and Dir Dais had met the evening before apparently and consequently Dir DAIS arrived with new floor plans showing an LTSU facility in the location of the book shop; with no idea where the bookshop would go. It seems one member of the GLD panel commented that the LTSU area should be part of the Learning Commons and Dir DAIS saw that as an opportunity to get LTSU out of the library area!</p> <p>I reminded all that the R Block remodelling is much more than a learning commons; that it is about creating a campus HUB and improving student and staff experience on the campus. That we understand the importance of the LTSU area and that is why we are expanding it on level 3 and raising the physical standard in line with the ground floor. The learning commons is not just 40 sqm on the ground floor it is three dimensional and extends up to the third floor, reinforced by vertical linkages such as the expanded fully glazed stairwell and increased window/glazed connections.</p> <p>Eventually COO agreed to sign the requisition.</p>		
Analysis	Re-emergence of previously raised and addressed issues, reflecting the difficulty of designing such a multi purpose space with so many stakeholders		
Reflection	The construction offer prompting this requisition had two more days in which to be accepted. If COO had missed this we would be looking at an additional \$600,000 of costs. The potential for this to be derailed because of a verbal comment from the GLD Review panel is remarkable.		

	<p>Certainly engage with any feedback but to put the project on hold for a comment made by one individual? I wonder if the comment would have been so swiftly communicated had it not suited the Dir DAIS? I also reflect on the lack of understanding and engagement with the core goals of this project. I am unsure of what else we can do to communicate those; we have web sites, video fly throughs, plans on walls and notice boards, regular updates etc. I used this opportunity to create a project milestone and concluded the meeting that we are now committed to moving forward on the current design.</p>
Project Impact/significance	<p>Could have been significant but back on track. The experience will link to planning processes and communication and stakeholder sign off at earlier stages of projects.</p>
Forward action	<p>Create Minutes from the meeting to reflect the milestone.</p>

Situation/Reading	Online demo of carbon management software	Date 6 May 2010	Project Carbon Zero
Content/events/observations	Sustainability Centre has arranged a demo of some carbon management software. They want USQ to have it so they can refer to and utilise it in their course offerings.		
Analysis	The software was very user friendly (in demo at least) and provided a single point through which to access the information and visually represent performance. I note there are a number of existing opportunities with USQ that provide partial solutions. Certainly the Carbon Zero project would need to have a method of reporting and presenting data similar to this, but we have not yet reached a point of having to consider that aspect.		
Reflection	<p>The software seems to provide a very useful collecting basket for carbon emissions data. The challenge of course is creating the data inputs across the organisation so that the data is reliably accurate and not resource intensive to produce.</p> <p>The software may also provide a catalyst to progress the production of the data and earlier engagement with the rest of the organisation.</p>		
Project Impact/significance	<p>Very significant and fundamental to the project. But is it this software or some other? Timing is also a factor.</p> <p>At this moment I think the software should reside within</p>		

	FM with open access to all USQ. Rational; very focused on FM data; FM has the operational responsibility for reduction in most of the reported areas; and there is a position proposal for an Environmental Manager sitting with COO from 2009.
Forward action	Work with SBMI to manage the centres enthusiasm and agenda and achieve the appropriate introduction of carbon management reporting. Chase up COO re Environmental Manager.

Situation/Reading	Meeting with FM Accountant	Date 10 May 2010	Project SAM
Content/events/observations	Meeting to review end of 1 st quarter financial performance and revise end of year forecast. Noteworthy due to the \$90K deficit that had been applied to FM as a carry forward from 2009.		
Analysis	\$90K applied to 2010 from 2009. Accountant discussing with Dir Budgets. Apparently no other deficits applied? Confusing as I sought approval for overspend last year of \$270K due to contract rate increases, this was agreed as an approved overspend. We finished the year with about \$100K overspent, so an improvement on that which had been approved. Why would an explained and approved overspend be carried forward?		
Reflection	No discussion last year with me regarding carry forward deficit. Possibly undertaken at BMC with no communication follow up.		
Project Impact/significance	Significant impact for service levels in 2010. Role and transparency of BMC links with governance and management structures. Lack of SAM framework facilitates these ad hoc decisions in isolation of the consequences.		
Forward action	Check with CFO re deficits and talk to Dir Budgets. Talk to COO if not satisfactory Communication service level impact if financial envelope remains unchanged.		

Situation/Reading	U Count survey	Date 10 May 2010	Project SAM
Content/events/observations	U Count survey results across numerous organisations, task to review FM staff results and communicate with staff.		
Analysis	Staff results can not be usefully benchmarked as the 2006 survey included finance staff. Also questions are very general and not well drafted. However, I will pick up the		

	trends and communicate the positive.
Reflection	About half the FM staff submitted. The recent client satisfaction survey is perhaps more interesting and useful for staff, but together the two may provide a useful snapshot.
Project Impact/significance	Minimal for this survey but the forward opportunity exists to add relevant questions for FM/SAM
Forward action	Try to seek an intervention whereby FM can request supplementary questions and/or influence wording of the standard stock.

Situation/Reading	Launch of Sharepoint site for Project S	Date 10 May 2010	Project SAM
Content/events/observations	Requested to attend by COO and show support. Web based pages portraying info and performance stats for ICT systems.		
Analysis	They are using the wrong indicators. Represented as down time but excludes planned down time, so in fact it is a unplanned downtime indicator not an availability indicator. Misleading at best.		
Reflection	Classic example of putting a positive spin on what has been perceived by staff to be a terrible project. The use of Sharepoint in this way is inspiring and may be of use for the SAM project. I also note there is no FM systems user group and this needs addressing (BEIMS, Archibus, CCTV, Access control etc).		
Project Impact/significance	Minimal but lack of FM Systems user group will become increasingly significant as we rely on ICT support more and more.		
Forward action	I have pointed out the indicator inconsistency and COO has confirmed the same concern. I will write to CTO and COO re user group.		

Situation/Reading	Progress report for ORMP update	Date 10 May 2010	Project SAM
Content/events/observations	I have received a table to update re ORMP objectives.		
Analysis	It is clear that there are connectivity and duplication issues with the ORMP format and the newly introduced Strategic Implementation Plan (SIP). I also observe that a number of the objectives do not have meaningful KPI's or are ongoing activities.		

Reflection	The role of the SIP is unclear and muddies the Strategic Plan and the ORMP relationship.
Project Impact/significance	Significant as the SAM will need to extract strategic pointers from the Strategic Plan and now the SIP.
Forward action	Discuss SIP with GM SBMI at next PCG

Situation/Reading	Telecon with external panel member	Date 11 May 2010	Project SAM
Content/events/observations	He rang to talk through project documents. He commented that we had everything in the project plan that was needed. He also acknowledged the difference in the TEFMA approach to some of the other SAM models, particularly around predictive modelling.		
Analysis			
Reflection	A useful exchange. Sharepoint access arranged. Andrew will comment as appropriate		
Project Impact/significance	Initial confirmation of project alignment from our external peer review member so that is significant.		
Forward action	Progress as planned		

Situation/Reading	Meeting re Environmental Survey	Date 12 May 2010	Project Carbon Zero
Content/events/observations	Consultant sent through their gap analysis of the USQ provided data versus the GRI G3 indicator framework. This meeting was set up to discuss the report.		
Analysis	Areas of the report are fine but having read it twice I do feel that we could have received more value from the exercise if they had simply contacted us to clarify items rather than list all the items in a report (some are really very minor).		
Reflection	Perhaps we were not clear on our expectations. This is late in coming and falls short of expectations. Not enough relationship perhaps? They seem to be almost mechanically stepping through their proposal rather than a holistic exercise.		
Project Impact/significance	Delays to the project and reporting our footprint. On the positive we can report against an increased number of G3 indicators		
Forward action	Consultant to attend site to resolve data queries. I need to give more time to the project in support of EA's		

	stewarding. Waste audit to involve Operations Manager and all campuses.
--	--

Situation/Reading	Prepared F&F report	Date 13 May 2010	Project SAM and Carbon Zero
Content/events/observations	Developed April report.		
Analysis	Still too many operational items and struggling for a final form.		
Reflection	SAM structure will assist in developing this and reporting KPI's.		
Project Impact/significance	Minor, but illustrates further need and use for SAM		
Forward action	As SAM and Carbon Zero progress amend report		

Situation/Reading	Springfield pre-meeting	Date 13 May 2010	Project SAM
Content/events/observations	The meeting was held to discuss negotiating strategy and also identify some starting point specifics from USQ.		
Analysis	I submitted the cost benefit diagram to help crystallise the value proposition of each option under consideration. Discussion focused on buying the WKC building and a big piece of land, presumably to secure sovereignty. The VC described aspirations around growing the campus with ADFI and possibly ICT being based at SP. I pointed out that SP represented the most expensive real estate in the portfolio and questioned whether that is ideal for support functions?		
Reflection	The diagram does very clearly represent the best value proposal. The team is having trouble converting the various objectives of council into a physical model to develop the negotiating outcomes.		
Project Impact/significance	Significant as we will be pushed to be specific and clear by SLC tomorrow.		
Forward action	Meeting at Springfield tomorrow.		

Situation/Reading	WPPIUD beta testing	Date 12 May 2010	Project SAM & Carbon Zero
--------------------------	---------------------	----------------------------	-------------------------------------

Content/events/observations	Logged in to Beta test the FM pages of the university dashboard site
Analysis	No data in the system, no KPI's enabled. Complete waste of time. Not even test data populated
Reflection	This has the potential to be a very useful vehicle for SAM and Environmental reporting of KPI's but seems to be plagued with poor performance and lack of engagement. I suspect there are other factors at play here with USQ wanting the data and IP for it's own Data warehouse and BI project.
Project Impact/significance	I will not rely on this particular system for reporting on either the SAM or Carbon projects.
Forward action	Explore other avenues for dashboard style reporting in the short term. Acknowledge that this system may improve if given the chance.

Situation/Reading	Springfield meeting with SLC	Date 14 May 2010	Project SAM
Content/events/observations	<p>The first 30 minutes was very affable and strategic partner focused.</p> <p>Discussion then decayed somewhat. SLC asked did we no longer want the sports oval and basketball courts etc. Confusion about what USQ means by Sovereignty. Clarified more later, with guarantee of expansion through land ownership but also continued support for common services by SLC, such as sports oval etc.</p> <p>Discussion on valuations generated very strong response from SLC. MIRVAC explained valuation methodology and confirmed they are completely confident re their approach.</p>		
Analysis	<p>The meeting highlighted that we do not have a clear understanding of what we are asking for. At one point I called a break to talk to George and observe that we are becoming fixated on one solution. We could achieve sovereignty through changes to the existing deal and not engage in talk about another building just yet (the case for which has yet to be proven).</p> <p>The relationship would be under threat if we engage in a legal battle re price.</p> <p>A more comprehensive model is required, perhaps from SLC initially.</p>		
Reflection	<p>We are requiring fundamental changes without sufficient consideration of the impacts, or what the physical delivery of those changes might be. I felt that we looked ill prepared in that meeting and lost some credibility perhaps.</p> <p>Too much focus on a new building or expansion. No case for this but may arise from VC plans, or as a trading card for</p>		

	land tenure?
Project Impact/significance	Impacts on relationship, processes and financials. The VC (SP)planning group may contribute to an increased understanding of what might work at Senior Management and Governance levels and thereby inform the SAM project proposed structures.
Forward action	Develop more information about the various elements that make up USQ Springfield and describe each relationship vehicle against those elements. Try to prioritise importance to USQ at SP. VC to set up a working group to develop a plan for growth at Springfield by end of AUG to enable infrastructure fund opportunity. How can I assist in that?

Situation/Reading	SAM Project Working Group Meeting	Date 14 May 2010	Project SAM
Content/events/observations	I arrived 40 minutes late due to earlier SP meeting. Group debating semantics from TEFMA guidelines. No progress re tasks (updating or actual). Discussing project risks when I entered.		
Analysis	Lack of progress due in part to significant absences last week. But clearly Simon and Nathan in some part have no ownership yet. I expressed concern that they had been assemble 40 minutes with no evidence of any progress. I also reemphasised the need for proactive ownership of the tasks. Work is expected to proceed outside the meetings. I will set up one-on-one meetings to assist each member and kick start the activity. I invited them to update task with sub tasks if that added value for them; I did not at this stage require that level of granularity, but would if progress was not made. I refocused the meeting to the agenda and moved quickly through any questions.		
Reflection	I was possibly a bit heavy in that meeting but I was surprised and disappointed that there was no ownership of the project. EA later told me there was much laughing and joking, no sense of purpose and deferral of several questions to me (in absence). The questions related to a number of items from the TEFMA guidelines and I conclude that they have not understood that the guidelines will be adapted for USQ use as part of my activity.		
Project Impact/significance	The absences last week are acceptable; the lack of engagement is not. Significant if we are to get the work done in a positive way and with the benefits clear to all.		

Forward action	Ensure availability to chair the WG meetings. Follow up one on one in between meetings Be specific in deliverables if progress is delayed again.
-----------------------	--

Situation/Reading	Budget review meetings	Date 17 May 2010	Project SAM
Content/events/observations	Further discussion re the carry forward of 2009 deficit. Background; In 2009 numerous contracts were reviewed, reduced and retendered. Overall costs still came in higher with a projected overspend of \$270K. Approval was sought from BMC in JUL 09 to overspend by this amount and approval was granted. Managing across the bottom line (a regularly espoused and supported view of the cost centre management) FM finished at 80K overspent. At the start of 2010 an 80K deficit was applied to the cost centre. No consultation or discussion.		
Analysis	Appear to be inconsistent, inequitable and illogical. If this is the level of thought that occurs in the BMC arena is there any hope that the outputs of SAM will be considered or prioritised appropriately?		
Reflection	Disappointing and inconsistent. Creates the wrong drivers for financial management. From one perspective illogical given the approved overspend from last year and the rationale provided. I have queried the equity of treatment and the logic with Dir Budgets who seems to have almost absolute discretion about this, although he packages it as a BMC decision.		
Project Impact/significance	Central changes to FM funding without consultation? Undermines the efficacy of SAM in terms of planning and service delivery levels.		
Forward action	Meeting with Director Budgets to resolve Paper to BMC if necessary Consider service level impacts and adjustment if necessary		

Situation/Reading	Meeting re SAM tasks Utilities	Date 17 May 2010	Project SAM
Content/events/observations	Brainstorming of Utilities and Infrastructure to be captured in the condition audit		
Analysis	We identified a number of systems that had not been considered previously and also some related issues re scheduled maintenance omissions.		
Reflection	Useful exercise. There is an information and knowledge gap between the Service Technician and the Supervisor Maintenance created by the lack of an Asset Manager. Hopefully this will be closed soon with the recent		

	appointment of Kristi-Anne
Project Impact/significance	Significant as it sets boundaries (current and future) around the condition audit scope.
Forward action	Complete a task resolution form to capture the rationale for the meeting outputs.

Situation/Reading	Printery meeting re Health	Date 17 May 2010	Project SAM
Content/events/observations	The Printery staff are suffering from sickness and stress (based on personal observation and staff absence). I have asked HR to investigate and advise status and remedial actions.		
Analysis	HR advise me of three staff that are particularly unwell. They advise that there is a sense of uncertainty hanging over the Printery, and that staff can see no future or career path.		
Reflection	Residual effects of RoP perhaps and the lack of a Printing Service review. Also they are aware of the outstanding business case to increase commercial focus of Printery and the reviews of GLD and CMP. I wonder if the supervisors and managers are able to stay positive and project that to the staff		
Project Impact/significance	This came as a surprise and is a significant Business Continuity risk, and may warrant a delay in the progression of the commercialisation proposal. Could impact on PrinterFace software introduction affecting students and material production		
Forward action	Work with HR to identify specific actions. Keep positive focus (surplus reporting to staff) Chase up COO re printery proposal Stress management and other related workshops Task HR to develop a career pathway map for Maintenance and Printing staff		

Situation/Reading	Meeting to discuss tender docs	Date 17 May 2010	Project Carbon Zero
Content/events/observations	I am issuing a request for proposals to suitable consultancy firms for a sustainable campus master plan that will focus on an integrated design for the management of our carbon footprint. The proposal will identify opportunities and aligned technology and/or engineering design solutions to maximise the impact of the measures proposed. Meeting to discuss text of the offer documents.		

Analysis	The challenge is to be prescriptive enough to get meaningful submissions without exploring the technical detail of each elemental project suggested within the overall plan proposal. Each project would be tendered in its own right.
Reflection	Similar to the environmental audit this will form a foundation document, coming from an integrated master planning perspective and assist in identifying, aligning and prioritising a suite of related projects
Project Impact/significance	Links to the SAM and Carbon Zero projects in terms of planning carbon reduction activities and also introducing a new dimension to the campus master plan
Forward action	Continue with document development and issue. Communicate with VCC and COO

Situation/Reading	Meeting re SAM tasks	Date 18 May 2010	Project SAM
Content/events/observations	Meeting Manager Space to progress Standards and Faculty Plan template		
Analysis	Discussion of standards required. I suggested research initially, propose a list of standards and let WG comment or add to the list		
Reflection	Simon needed some guidance to get on track but seems to be aligned now.		
Project Impact/significance	Indicative of WG members that have not been involved in a project of this breadth before. The importance of assisting them in the early stages can not be over stated.		
Forward action	Progress similar meetings with other WG members and also program follow ups.		

Situation/Reading	VCC Meeting	Date 19 May 2010	Project SAM
Content/events/observations	I presented the first report to VCC. Loose format and open to feedback. I also raised issues that I wanted clarity or support on.		
Analysis	It did become a little one sided and an opportunity to interrogate FM. Hopefully it will be more balanced going forward. I raised the issue of the new PG Student accommodation for FoEs and also pool car use.		
Reflection	Highlights the need for a proper committee to have oversight of FM activity rather than this ad hoc arrangement. Alternatively if we can introduce more structure to the session a direct link to VCC is perhaps advantageous?		

Project Impact/significance	Impacts on structures current and proposed and strategically what is best for FM efficacy.
Forward action	Consider further as the SAM project develops and as the VCC relationship evolves.

Situation/Reading	Dir SP meeting	Date 19 May 2010	Project SAM
Content/events/observations	Met with Dir SP to bring him up to date with SP negotiations and options under consideration. Doug reiterated his view of student demand and the need for additional space and a stand alone library in the future		
Analysis	He is very familiar with the detail of the existing arrangements and also the operational environment.		
Reflection	He is still representing student numbers that are inconsistent with Finance, SBMI and KPMG projections and stats. I am concerned that this will manifest into a need for further space and assume too much significance in the negotiations. I note also that the VC is also taking about what other activities can be based at SP (NGLI, ICT, ADFI etc). I reminded him that SP represents the most expensive space in the portfolio and any activity there should be revenue generating.		
Project Impact/significance	This 'from the hip' development approach must be curbed and hopefully the SAM project will provide a framework for that. Similarly, for ensuring the delivery of space when it is required.		
Forward action	Continue with negotiating team work.		

Situation/Reading	Video for Sustainability	Date 19 May 2010	Project Carbon Zero
Content/events/observations	Met with Media Services to discuss the production of a USQ staff and student focused sustainability video. Idea is to show via web site or DVD etc at induction time. Focus on key elements, facts and figures, what is USQ doing, what can you (the individual) do.		
Analysis	Aim for 7 minutes, develop story board and script, engage a professional presenter		
Reflection	This will be a low cost but effective way of getting the starting message across		
Project Impact/significance	Significant to demonstrate commitment, transfer information, educate and engage.		
Forward action	Develop script and storyboard by end of JUN.		

Situation/Reading	Phone link re SP negotiation	Date 20 May 2010	Project SAM
Content/events/observations	Phone conference to discuss land options and operational issues for prep with SP purchase. Dir SP represented growth need again. I balanced with conflicting stats and views here. I returned the focus to sovereignty and guarantee of expansion, not new buildings.		
Analysis	Negotiating strategy is not clear. One minute we ask for land the next we can solve it with changes to the wording of the proposed agreement.		
Reflection	We appear to be unsure of how to proceed now, made worse by the suggestion that we need space soon. I am convinced we will lose the current opportunity to save 10M (+6M from DEEWR) at SP. I believe that the negotiating strategy is so aggressive that SLC will withdraw the current offer and simply wait for a new approach from USQ (all bets are off).		
Project Impact/significance	Significant impact on the affordability of Springfield and potentially the relationship with SLC. May be positive in that it will release committed funds for CAMP. It may require the return of 6M to DEEWR.		
Forward action	Continue to maintain objective professional position. Maintain links with SLC in order to keep the relationship alive.		

Situation/Reading	ESC Meeting	Date 20 May 2010	Project Carbon Zero
Content/events/observations	May meeting of ESC. Tabled and discussed draft audit data gap analysis. Discussed video opportunity. Various actions as per meeting Minutes. Discussed dashboard and carbon reporting software. Endorsement of the data analysis by members as a good piece of work. Discussed wider staff engagement.		
Analysis	Normal lack of willingness from Academic members to take on any task. An existing member is now resigning from USQ and this allows the conversion of one position to general staff (subject to VC approval). I will nominate GM SBMI as logical link with sustainability responsibilities.		
Reflection	Possible link with data warehouse and BI project to host Carbon management dashboard, although I suspect it will be quicker and simpler to achieve through 3 rd party software. Change of structure will improve effectiveness		
Project Impact/significance	Overall a positive meeting and progressing the carbon reduction theme nicely, in that a number of elements are		

	coming into position for a more significant launch of the project
Forward action	Work on project plan for Carbon Zero Write to VC re structure change Progress video storyboard Discuss with Steve carbon management dashboard

Situation/Reading	Meeting with Dir Budgets re financials	Date 20 May 2010	Project SAM
Content/events/observations	Meeting to discuss 2009 carry deficit carry forward. He agreed to review and represent removal of the deficit at BMC. At the end of the meeting he asked how we would cope with no CPI increase for next year, indicating that it is likely. He showed me a paper which had costs re legal advice for SP tagged to FM. He had written in pencil, "no written approval".		
Analysis	Legal costs for SP were linked to FM acting on F&F Committee instruction to begin negotiation. The deficit carry forward was obviously ill conceived and unable to be defended, again casual and inequitable financial management. The suggestion of a fourth successive year of reduced FM funding is incredible given the overspend approval granted last year and the % of contracted services that have CPI annual increases. It can only result in service level reduction again.		
Reflection	Legal costs: Are we really operating at a level where the lack of a minute note penalises this cost centre? Dir Budgets stated that he does not see FM as core activity. I argued that the staff and student experience is directly related to the physical environment and that to suggest that having a functional and attractive physical environment isn't a direct interface with students is a nonsense (unless we go 100% online or distance)		
Project Impact/significance	Perceptions of the role and significance of FM Impact on service levels		
Forward action	Follow up with FA and COO re deficit and potential 2011 budget issues.		

Situation/Reading	SAM SM vs RM	Date 20 May 2010	Project SAM
Content/events/observations	Meeting to discuss the SM and RM split and creation of WO's in BEIMS. Focused on level of detail required and		

	alignment with out source contract content. Refer to SAM Task Resolution Template on Sharepoint site.
Analysis	Agreed to define at contract/building/interval/BCA element level
Reflection	This is a useful level of granularity and will not generate an onerous amount of data maintenance or paper WO's. More review to do with in-house staff focus next week. Aligns with BCA elements and potential BEIMS module
Project Impact/significance	Significant and links with condition assessment approach and data storage options.
Forward action	Schedule meeting for in-house staff WO's Get BEIMS module for evaluation (SF to arrange)

Situation/Reading	Meeting with COO re PG space	Date 20 May 2010	Project SAM
Content/events/observations	Meeting to discuss a request from FoEs for a new building to house between 50 and 100 PG Saudi students, who could allegedly arrive at any time? I asked why we need a new building instead of improving space utilisation – no answer I asked if COO as chair of BMC was satisfied with the level of investment required on the back of a verbal assurance from Dean of FoEs – COO to talk to Dean further and get confidence level up.		
Analysis	Meeting called by COO, no doubt due to the discussion at VCC last week. FoEs is suggesting that he will not sign the student agreement until the building is in place. I have not seen the agreement or any evidence that the opportunity will be realised.		
Reflection	This project is an opportunity to put an iconic and character building on campus (albeit small and modular), perhaps a geodesic dome or something aligned with engineering excellence. I will resist transportable structures. We were almost committed without any substantive business case or evidence that the students are truly waiting on facilities before they come.		
Project Impact/significance	Indicative of systemic failures re business case and approvals. Highlights need for Faculty Plans (as identified in the project dimensions) to inform the SAM and CAMP. Highlights need to streamline procurement processes (3-6 month lead time). Opportunity to put a green building in perhaps but certainly something that will raise the look of the campus.		
Forward action	Chase up COO for confirmation to proceed or not. Issue request for proposals		

Situation/Reading	SAM Tasks with PM	Date	Project
		21 May 2010	SAM
Content/events/observations	Meeting to discuss communication plan, risk register, change register etc. I ran through the communication plan elements with Sant and we populated the plan and posted to Sharepoint. We updated the risk register.		
Analysis	Highlighted some opportunities that I had not considered previously (web page for project, Drawing Board publication and internal briefing to all FM staff using existing team meeting structure). No significant risks other than perhaps running over time.		
Reflection	Communication plan exercise was useful and had benefits beyond its immediate use. Sant has commented that he is learning a lot from assisting me in this project.		
Project Impact/significance	Other WG members will have actions from the communication plan.		
Forward action	Review regularly with PM, post WG meetings. Initiate action re web page		

Situation/Reading	SAM WG meeting	Date	Project
		24 May 2010	SAM
Content/events/observations	Refer to Minutes. Reviewed and accepted Comms plan, Risk Register, amended Schedule.		
Analysis	Lack of progress on a number of issues. No follow up by PM, no progress by some others.		
Reflection	The process is working reasonably well (Sharepoint, regular meetings and 1 on 1 meetings) but will need to focus on the slow ones. The extra meetings for me to support the others is impacting on my assigned tasks (ironically). The task resolution template is good and provides transparency of thought and decision.		
Project Impact/significance	Moving along.		
Forward action	More 1on1 meetings required to push this along Consider weekly meetings if progress is slow next time.		

Situation/Reading	COO/CFO Meeting	Date	Project
		24 May 2010	SAM
Content/events/observations	Meeting to discuss progress on DEEWR funding for new science lab and also potential transfer of bookshop to FM control		

Analysis	Unable to comment on likelihood of new building until we have finished space review of FoSc. Letter to DEEWR accordingly plus update of milestones for reporting template. CFO seemed open to transfer of Bookshop to FM.
Reflection	If we could link the transfer of bookshop with an efficiency identified through the Synoptic review it would probably ease the change process.
Project Impact/significance	Impacts on process efficiency, client service, space management
Forward action	Set up sub project to identify resource efficiencies and improvement opportunities with Leanne and Creon. CFO to send report from DEEWR for updating

Situation/Reading	Procurement process review	Date 25 May 2010	Project SAM
Content/events/observations	Meeting to discuss procurements processes		
Analysis	Processes vary depending on what section of FM is undertaking the activity. Obvious time lags and inefficiencies. Also current documentation is so huge and horrendous for small contractors that we are not getting competitive responses i.e. 12 register interest but only 2 submit a price.		
Reflection	Too much perceived risk for them when profit margins are small. Lack of time, expertise or willingness to read through documents and evaluate risk properly		
Project Impact/significance	Understanding and optimising procurement process is key to effective and efficient SAM delivery. Once analysed we will engage USQ Procurement section to optimise and then build remaining time lines into service levels.		
Forward action	Analyse and communicate with Procurement Consider lead times in service levels		

Situation/Reading	GLD Review	Date 26 May 2010	Project SAM
Content/events/observations	Meeting to discuss draft GLD Panel report		
Analysis	Report is full of errors, contextual and fact. Misleading and of limited value. Recommends creating a position for University Librarian with no real explanation of why or how that interacts with existing positions. Provides no strategic direction and fails to answer questions such as 'print or not to print'		

Reflection	Disappointing but serves as a political validation and does point to further analysis around DeC
Project Impact/significance	The role of DeC is my area of interest. This is a duplication of function with Printery, Warehouse and Bookshop and should be largely absorbed into a more streamlined model. Links to earlier comment re Synoptic sub group.
Forward action	Set up sub project to identify resource efficiencies and improvement opportunities.

Situation/Reading	Carbon Management software demo 2	Date 26 May 2010	Project Carbon Zero
Content/events/observations	Online demo of alternate software. Seems to have more functionality but a simpler more traditional visual style akin to spreadsheet. Not sure it handled renewable energy factors		
Analysis	Looks like a robust system, own or hosted, less expensive than previous and also they talked about developing an industry benchmark tool allowing proxies to be applied. Conforms to NGER reporting standards.		
Reflection	This seems to be more closely aligned with USQ needs and we will send a set of TEFMA and Environmental audit data through to them so they can mock up a custom demo for us.		
Project Impact/significance	As before this would be a very speedy way to achieve reporting requirements. The challenge is still in collecting the data of course.		
Forward action	Forward data sets – EA Set up next demo once they confirm ready		

Situation/Reading	TaC Meters	Date 26 May 2010	Project SAM & Carbon Zero
Content/events/observations	Meeting to discuss lack of progress with Metering project I asked why we are getting a software add on when the meter could be plugged into the BMS – reason; ease of connection and enhanced viewing and reporting. I checked whether this could output to the carbon management software and it can. I asked why we have seen no program of works and requested same immediately. Priority on existing meters for power gas and water.		
Analysis	Very casual approach to running a project. Some of the staff don't know any better and reacted well to the assistance in bringing focus. Apparently they have not been		

	able to get a reaction previously.
Reflection	I must remember that most of my team haven't had direct structured project management experience and it has been mostly by first hand interaction.
Project Impact/significance	This is a key task for both SAM and Carbon Zero and needs to plug into the project schedule.
Forward action	Chase up next week if program not received.

Situation/Reading	Testing of WPPIUD	Date 26 May 2010	Project SAM
Content/events/observations	Online testing of beta dashboard. Consultant guided.		
Analysis	Will be a useful tool. Only space data present Could not cross reference with inputs from other areas (standard reporting cube function). Errors in the information presentation (data or system?)		
Reflection	Expected more than this considering the time taken to date. Basic errors apparent suggesting they haven't looked at it at all.		
Project Impact/significance	Minor as this is not core to the SAM project, but might be a potential dashboard for SAM indicators and metrics if successful. If it receives wider adoption across USQ it may be a good source of data input for SAM to access.		
Forward action	Feedback to project manager Consider future utility as progress is made		

Situation/Reading	Finance and Facilities Meeting	Date 27 May 2010	Project SAM
Content/events/observations	Of significance: Paper from COO re forecast deficit and remedial action Updated on Springfield (see earlier entry re status)		
Analysis	At end of 1 st quarter, CFO is predicting a \$2M over spend in salary costs by year end. Proposed measures are generic and will impact all units, not just those that are responsible for the deficit. COO talked about people acting within budgets and plans and only doing what they are entitled to do.		
Reflection	If these statements are true, why is the deficit a new item? If people are acting in line with approved plans and budget prep from last year, why is it only now being shown in projections? Why aren't the offenders being taken to task.		

	Why are we tolerating areas of non-performance some of whom are \$2M behind revenue targets?
Project Impact/significance	Will impact on FM funding, asset renewal/refurbishment. Impacts on process going forward and delegations potentially. Credibility of USQ management compromised again.
Forward action	Email to COO with suggestion for immediate freeze on new appointments. Convene special panel to assess against matrix of criteria etc. Copy to Chancellor also.

Situation/Reading	Student ID cards	Date 27 May 2010	Project SAM
Content/events/observations	Meeting to discuss the student id cards, process and ownership etc. This is outside of the established project group created for Staff and Student ID Card and excludes key members of that forum. I sought explanation as to why that might be. Very critical of the Student Guild. SM wants to do it all and need more people and space to do so. I responded that they would need to prove the business case not just desire it. FC and SP do not support transfer to SM control. CTO clearly trying to pass the project off to PVC SM.		
Analysis	A very unusual meeting, misguided and inappropriate. Clear collusion to orchestrate an outcome and bypass the project group.		
Reflection	Attendees expected to roll out an answer right there. No regard for staff element, no consideration of wider uses of the card.		
Project Impact/significance	Impacts security (access control), space allocations and cost management, existing contract for service with Guild also.		
Forward action	Email to COO follow up.		

Situation/Reading	Meeting re Faculty templates	Date 31 May 2010	Project SAM
Content/events/observations	Meeting with Manager Planning and Space to develop first draft of Faculty Planning Template.		
Analysis	Not prepared but open to suggestions. Still seeking to find a document somewhere else as a guide. Needs to link across all USQ needs and integrate with SBMI planning round if possible.		

Reflection	More guidance and direction provided by me at this meeting around the use and importance of this document.
Project Impact/significance	Significant as this will be a primary data tool
Forward action	Schedule follow up tomorrow to ensure progress and outcome.

Situation/Reading	Brainstorming Printing Services	Date 31 May 2010	Project SAM
Content/events/observations	In support of Synoptic review		
Analysis	Looking for efficiencies. Again, apparent duplications and synergies with bookshop, DeC, Post Office and the Uni stores and distribution areas are apparent.		
Reflection	This should be resolved and could potentially release resources and reduce costs, whilst improving service levels to students.		
Project Impact/significance	Minor to SAM, but significant in terms of wider FM service levels and organisational efficiency		
Forward action	Raise again with COO and try to create a review project as described above		

Situation/Reading	Meeting re TRC strategic plan	Date 1 June 2010	Project SAM
Content/events/observations	Meeting with TRC planners and Councillors, re master planning adjacent to USQ. Opportunity? I requested they consider transfer of Baker Street to USQ to create an enclosed Campus. I suggested that USQ would contribute towards the creation of an alternate 4 lane road (which they are seeking into the future).		
Analysis	Thorough presentation and discussion, generally aligned with USQ plans and use profile; no conflicts apparent. Some uncertainty around how TRC will achieve the urban density they aspire to around the Kearney Springs and Uni area.		
Reflection	Good relationship building meeting. Possibility for the future re Baker Street. Baker St represents the biggest risk to student and staff safety as increasing numbers cross it daily assuming it to be part of the campus.		
Project Impact/significance	Significant for USQ, not particularly the SAM project		
Forward action	Discuss this again with Councillors around AUG/SEP time. Consider in CAMP process		

Situation/Reading	Meeting re printery synergies	Date 01 June 2010	Project SAM
Content/events/observations	Synoptic meeting to 'sound out' Synoptic ability /willingness to do an integration study re bookshop/printery etc		
Analysis	Synoptic well placed to deliver; they are expensive, need for HR involvement, finance also.		
Reflection	Synoptic notionally willing, raise with COO		
Project Impact/significance	SAM minor, USQ major		
Forward action	Raise with COO		

Situation/Reading	Follow up meeting re Faculty templates	Date 01 June 2010	Project SAM
Content/events/observations	Discussed changes to the template		
Analysis	Perhaps too much speculation required, but a balance of hard fact and crystal ball gazing is perhaps what we are seeking. Bring all projections back to metrics around EFTSL, FTE and Area sqm		
Reflection	Getting close to a final draft, needs validating by others. Perhaps trial with SBMI and Faculty staff once ready		
Project Impact/significance	Significant for SAM		
Forward action	Forward to FoEd, FoSc and Steve Ivey once complete. Review at PCG meeting (Andrew Frowd in particular may some input).		

Situation/Reading	Meeting re HDRS Building	Date 02 June 2010	Project SAM
Content/events/observations	Meeting with Dean engineering to discuss the new PG student building he has requested		
Analysis	Dean moving back to a more considered approach. FM will obtain some initial concept proposals and costs for inclusion in a business case to VCC and F&F Committee.		
Reflection	Good to see the shift to a more considered approach after the initial emails.		
Project Impact/significance	In theory we do not need another building and could squeeze the space from the existing portfolio. In practice I suspect that would be an expensive, painful and time consuming process. To capture the opportunity (if time really is of the essence) a new build seems our best chance of success.		

Forward action	Seek proposals and discuss with the Dean on receipt. Keep VCC and F&F abreast of activity to ensure it stays on the right track.
-----------------------	--

Situation/Reading	Meeting of Corporate Risk Team	Date 02 June 2010	Project SAM
Content/events/observations	Regular meeting. Main items here are: <ul style="list-style-type: none"> the continuing lack of connectivity with this group and insurance management Resolution of ownership and roles around BCP, incident/emergency management 		
Analysis	COO expressed the desire to have hands on control of every incident and emergency. SBMI have not been able to resolve a model which addresses the points above. The original intent to transfer EM to FM appears to be gone		
Reflection	Set this to one side and support when requested.		
Project Impact/significance	Minimal. Connects to risk management, BCP and EM preparedness.		
Forward action	I will work with SBMI directly around risk and BCP issues.		

Situation/Reading	Meeting with COO	Date 31 June 2010	Project SAM
Content/events/observations	Briefed COO on progress to date, particular discussion around the proposed SAM Framework and creation of new linkages with SBMI processes		
Analysis	COO seemed to relate to the various charts quite readily. He suggested he might use the proposed model to illustrate the objectives to the newly formed SP Development Group		
Reflection	Positive meeting in many regards		
Project Impact/significance	Required under communication plan, task schedule and for longevity/support of the project		
Forward action	Update again next month.		

Situation/Reading	Meeting with DPST Supervisor	Date 04 June 2010	Project SAM
Content/events/observations	Primary discussion re SAM. Main points: <ul style="list-style-type: none"> Reduced content in monthly reports Need for a baseline How to determine quantity and quality of work 		

	<p>required for one credit</p> <ul style="list-style-type: none"> • Need to demonstrate organisational change
Analysis	The baseline requirement is standard and I had overlooked it. There are various options out there for this purpose and I will investigate
Reflection	This last point took me by surprise to some extent. I had understood that the award of the DPST was not conditional on the absolute success of the project. That said, the linking of the baseline with the project outcomes will provide a measure of the elemental progress achieved through the project
Project Impact/significance	Significant as it will evidence progress made
Forward action	Research options for base line, develop or adopt a version and undertake self assessment.

Situation/Reading	Meeting with VC re ESC	Date 04 June 2010	Project Carbon Zero
Content/events/observations	I met with the VC to discuss changes to the ESC ToR as follows: <ul style="list-style-type: none"> • Reduce academic members to two • Change term of service for academic to 2 years • Add Group Manager SBMI as Ex Officio member 		
Analysis	This is a follow up from changes of 2 years ago. I am still not getting any effort from the current academic members. The positions should be rotated to allow fresh ideas and instil a sense of privilege and service. General staff positions link to permanent roles so they should not be rotated.		
Reflection	VC seemed happy with this		
Project Impact/significance	Would be helpful to achieve a more effective group able to engage more proactively with the impending results of the Environmental Audit.		
Forward action	Follow up with the VC in a couple of weeks.		

Situation/Reading	Springfield negotiation meeting	Date 07 June 2010	Project SAM
Content/events/observations	Meeting with SLC at SP. SLC held a slightly softer position than last time, less adversarial. Brief discussion on price again suggesting they would not move on that and felt the option wording was clear.		

	<ul style="list-style-type: none"> We suggested a new relationship statement to inform the basis upon which we were going to do business (interact) Discussion around how we might resolve the price issue. USQ to propose a process to SLC USQ to develop a master plan for the campus illustrating intent around expansion/synergies/EC service levels and bring to the table to inform negotiation discussions.
Analysis	<p>Some confusion in my mind re the role of the relationship statement. I will need to understand exactly what is envisaged.</p> <p>Post meeting we agreed among ourselves to get a QC opinion re the valuation clause</p>
Reflection	<p>I have concerns re:</p> <ul style="list-style-type: none"> The relationship statement will not introduce anything new; that said it could act to heal the wound from the failed earlier negotiation. It also must not be seen as positioning SLC at all. The QC opinion may support USQ's interpretation and it may not. In any event the price presumably goes up with every rent increase. I also wonder about USQ's willingness to engage in a court battle over this. I have every confidence that SLC will go all the way (they are currently fighting the Queensland Government, why not USQ). Also they could demonstrate the market value very simply by putting the buildings on the market and moving the discussion from one of legalistic theory to fact based reality, and with our current lease I have no doubt they could sale to an investor at \$40M plus. The Master planning is long overdue, but to be useful should be fast tracked (without compromising quality) if it is to inform negotiations. <p>I am not clear whether we have started a new negotiation or whether we are still trying to fix the previous one.</p>
Project Impact/significance	<p>Increasingly seems to be a 2011 option with a number of fundamentals not resolved. To some extent we have simply killed the old negotiation and not made any progress in the process of doing so.</p>
Forward action	<p>Prepare for the development group meeting.</p>

Situation/Reading	Meetings with managers re SAM	Date 15 June 2010	Project SAM
--------------------------	-------------------------------	-----------------------------	-----------------------

	KPI development		
Content/events/observations	Met with key staff re KPI's.		
Analysis	Wide range of types offered by the three staff		
Reflection	Keep a focus with this as it could be very broad; pick off two or three key operating and another 4-5 high level. The amount of choice is leading to too many KPIs being suggested.		
Project Impact/significance	This is low risk as the KPI's can be amended later, but clearly more efficient to establish the data capture as accurately as possible		
Forward action	As per task schedule		

Situation/Reading	Meeting with CTO re capital	Date 04 June 2010	Project SAM
Content/events/observations	Discussion around FM software and various systems; should they be core ICT systems and appear on the ICT CAMP. Agreed FM would remain distinct at this stage		
Analysis	ICT CAMP is currently over subscribed by some 200%.		
Reflection	I do not want to move FM systems into the current ICT CAMP environment and be competing across the whole University. High risk that FM systems would not be funded (as indicated by other areas of FM funding when placed in competition)		
Project Impact/significance	SAM may require some ICT changes to capture data (BEIMS?). Avoid the risk of being declined and self fund.		
Forward action	Progress as is. Consider the future of CCTV, Access Control in terms of the ICT backbone. Retain support from ICT but not ownership.		

Situation/Reading	Telecon with consultant	Date 16 June 2010	Project Carbon Zero
Content/events/observations	Problems with the data gap analysis document have resulted in this call. They are proposing to create an addendum to the report rather than integrate latest info and value-adds into the body and re-issue.		
Analysis	They appear to be doing this too much from a desk with not enough engagement or ownership. An addendum will reflect the data but not present it in the best way possible.		
Reflection	Distance challenges mingled with a cost saving approach by the consultant.		

	This document will be public and high profile; it must be the best it can be.
Project Impact/significance	Significant. This provides the environmental and carbon baseline going forward.
Forward action	Follow up if no feedback. Speak to NZ head office again if necessary.

Situation/Reading	Meeting with SBMI	Date 16 June 2010	Project SAM
Content/events/observations	Interview with two members of SBMI re Springfield negotiations risk assessment.		
Analysis	The auditors admitted that this audit (or assessment) is hampered by the politics associated with it and that they can not be critical of any party		
Reflection	If there is limited opportunity to present an objective evaluation of the process (good or bad) it would seem to have limited value. Perhaps it is being undertaken to clear all parties and heal the wounds between governance and management that arose through this exercise. That of itself would be a useful outcome.		
Project Impact/significance	Minor, but an interesting insight.		
Forward action	Seek a copy of the report.		

Situation/Reading	Second demo of carbon software	Date 17 June 2010	Project Carbon Zero
Content/events/observations	Met with SBMI and FoB re a further demo of the carbon management software using USQ data.		
Analysis	Very robust system. I think we all agree it would be an asset for USQ and bring together a number of strands in a single reporting package. Purchase options seem reasonable, including lease.		
Reflection	SBMI has no funds. Low cost solution that may fit within the ESC funding envelope.		
Project Impact/significance	Very useful for both Carbon Zero and SAM.		
Forward action	Approach ESC for funds, fund from FM if not successful. Fore warn Director Purchasing		

Situation/Reading	Meeting at UTAS	Date 22 June 2010	Project SAM and Carbon Zero
Content/events/observations	Meeting to discuss student accommodation. Operates at		

	full capacity
Analysis	<p>Diverse on campus profile. Funding made available from the sale of some CBD assets; limited thought to carbon footprint. Issues re security and soft services. Well structured catering contract with no risk to UTAS</p> <p>Move to a basic room rate, with everything else as a tenant choice, pay as you go.</p> <p>Fortnightly room inspection, 5 days to rectify then commercial action and cost recovery.</p> <p>Suites work better and are more popular 6 rooms off central common areas. Needs more engagement to achieve pastoral care and ensure welfare but very popular and generally self policing by tenants.</p> <p>No RA's but 2xFTE for residential support officers.</p> <p>Fully profitable</p> <p>Cultural changes creeping in with cultures wanting female only areas</p>
Reflection	Good background for later discussion with COO
Project Impact/significance	If FM assumes control of accommodation this will be useful. The contract discussion was interesting but difficult to know how much could be applied in the Toowoomba environment.
Forward action	Park for later discussion with COO. Send templates to UTAS

Situation/Reading	Meeting with Dir FM - UTAS	Date 22 June 2010	Project SAM and Carbon Zero
Content/events/observations	<p>Meeting to discuss SAM, TEFMA and environmental issues</p> <ul style="list-style-type: none"> • Walk through of recent projects including learning commons • Environmental focus on sustainability rather than operational (opposite to USQ) • Employed two staff one for environmental, one for energy • Discussed TEFMA guidelines for SAM. Matt (current President) invited me to present at TEFMA conference with case study re SAM. • Space policy and utilisation 		
Analysis	Capital funding significantly higher. Additional funds through disposal programme. Space utilisation is at 30% on average, through student numbers and extended room usage.		

Reflection	Good discussion, slightly different structure to USQ. No particular ideas discussed that we haven't identified, similar to USQ in some ways.
Project Impact/significance	Useful sounding board and validation of the activities of our projects. Good networking and TEFMA links
Forward action	Case study Send copies of contracts and Master plan Make contact with Environmental Manager

Situation/Reading	Meeting with UTAS ESC	Date 23 June 2010	Project Carbon Zero
Content/events/observations	Met with Chair of UTAS ESC. Discussed starting points, staff engagement, student interns for projects, Financial awards at school/dept level; VC executive communiqué to convey highest level support; established network of school and dept level representatives: Emphasised you do need a champion.		
Analysis	UTAS developed an EMP, appointed an Environmental Manager		
Reflection	Currently ESC does not get much Senior Exec exposure. Could ESC report to F&F? Or could F&F require an Environmental item on their agenda to track corporate progress and encourage support and investment?		
Project Impact/significance	High. Good ideas to apply at USQ		
Forward action	Discuss offline with Chancellor F&F interest in environmental visibility.		

Situation/Reading	Meeting with Legal re SP	Date 25 June 2010	Project SAM
Content/events/observations	Met to discuss the Relationship Statement. Discussion was free ranging. At one point we looked at a brief 'charter' style approach that might be signed by the two CEO's, almost as a renewing of vows to reaffirm the relationship.		
Analysis	Acknowledgement that this document can not be prescriptive or be seen to restrict SLC. My opinion, we seem to still be unclear of what this document should be. I note that our lawyer is also very cautious based on his extended interactions with SLC This document may have a number of useful purposes		

Reflection	From an unclear start we have identified a potentially very useful approach. The challenge will be in the drafting
Project Impact/significance	Significant, if presented in the correct way this could help heal the wounds between USQ and SLC, and also guide the relationship forward
Forward action	Review and amend as appropriate once we have the initial draft

Situation/Reading	Network lunch with QLD Directors FM	Date 28 June 2010	Project SAM
Content/events/observations	Site visit to UQ Gatton; networking and view ne Veterinary Science Facilities		
Analysis	Collegial opportunity. Number of significant projects, significant funding. Apparent issues of finishing with the contractor. Good design generally with flexible spaces. Particular use of multiple LED monitors in theatres rather than single big screen. Better for the student but wonder about costs and carbon footprint.		
Reflection	Different league from USQ in terms of scale. Willingness to share knowledge and experiences is invaluable		
Project Impact/significance	May provide peer review or project input beyond that already achieved with QUT.		
Forward action	Prioritise attendance at these forums.		

Situation/Reading	Meeting with DEEWR	Date 29 June 2010	Project SAM
Content/events/observations	CFO, self and Manager Space met with reps from DEEWR Discussed project progress for SP and Science Bldg Discussed change of use for funds on Science Bldg Discussed bid preparation and any feedback Discussed funding for 2011		
Analysis	I believe DEEWR would welcome a more direct communication line. They appeared very practical and genuinely desired to help. Common sense applies seemed to be the message. Why has none of this come via the CFO who is the POC for DEEWR?		
Reflection	Increased confidence that we are taking the right approach in not just building to capture a funding opportunity		
Project Impact/significance	Increased relationship with DEEWR individuals would be useful		

Forward action	Make independent contact. Advise CFO that I am doing so and will be the POC for FM CAMP works
-----------------------	---

Situation/Reading	Meeting with BMC	Date 29 June 2010	Project SAM
Content/events/observations	<p>Short notice meeting to update BMC of CAMP progress. Signals from COO that funding will be significantly reduced in 2011.</p> <p>Signals from Dir Budgets that he would like to reduce 2010 if we are not going to spend it.</p> <p>I briefed each line item rationale and progress.</p> <p>I was asked to review cash flow and projections for 2011. I asked that they tell me what the envelope is rather than do redundant work. They couldn't tell me.</p> <p>I commented that any diversion of asset investment should be accompanied by a clear understanding of the effects and a robust process by which to assure the return on the alternate investment is achieved.</p>		
Analysis	COO clearly seeking to move money from CAMP into a 'strategic fund'. This may have FM items in it but would be applied more broadly.		
Reflection	<p>BMC not prepared, they didn't even have a copy of the CAMP in front of them. A better outcome would have been achieved by communicating the real agenda.</p> <p>Is this another way of shifting more control to BMC and disguising some of the other less favourable activity by moving it from Operating into the less visible Capital programme?</p>		
Project Impact/significance	Reduced CAMP funding will impact directly on the ability of FM to fund SAM activity. That said the outputs of the SAM project may go some way to limiting a funding reduction as it will provide robust validation of the funding sought.		
Forward action	Review CAMP 2010 and 11 and discuss with CFO for BMC report.		

Situation/Reading	SP development group meeting	Date 30 June 2010	Project SAM
Content/events/observations	<p>First meeting of this group. Discussed ToR and format for reporting. Goals etc. Some debate on the purpose. I provided clarity in terms of the needs of the negotiating group and the wider context of providing a USQ master plan to the SP relationship</p>		
Analysis	<p>Initially the group did not have the contextual briefing to understand the outputs required.</p> <p>Locally provided 'data' is at risk of confusing the planning</p>		

	and I introduced the need for SBMI to review the assumptions and material being used. This forum could also add to the SLC relationship; by inviting SLC to one session we would have made a real demonstration of our willingness to work with SLC around synergistic opportunities. Could become skewed by the artificial desire to align with a structural adjustment fund bid.
Reflection	A good start, hampered by debate and lack of preparation. See how the next one goes and whether independent action is required to achieve the outputs.
Project Impact/significance	Significant. This links with faculty Plans and might provide a precedent or model for FC and ST Campuses.
Forward action	Prepare infrastructure and other data for next meeting. Modify template to identify probability etc.

Situation/Reading	Prepare F&F Report for JUL meeting	Date 01 July 2010	Project SAM and Carbon Zero
Content/events/observations	Reviewing the balance of Operational and Strategic content. Insert comments re possible Wagner Land purchase.		
Analysis	Good mix of content		
Reflection	The members of F&F are inclined to want to know the detail and are interested in the day to day activity. This is a positive and I will use this interest to expose operational issues that are not being addressed through normal channels. Raising forward actions in this forum goes a long way to achieving subsequent approvals (governance and management)		
Project Impact/significance	Major in terms of high level engagement		
Forward action	Bring SAM into the next report (SEP) along with Environmental elements		

Situation/Reading	WPPIUD	Date 01 July 2010	Project SAM and Carbon Zero
Content/events/observations	Meeting re dashboard project to refine label names.		
Analysis	Label names are minor concern. The data is still wrong and there are no business rules around the data. Discussion around possible rules and systems response if outside of		

	those rules.
Reflection	I recall doing a Master's level paper re ICT and one of the fundamental requirements of a database was business rules around data entry. I am staggered that we don't have that within the project already (whether by the contractor or our own ICT staff requiring it)
Project Impact/significance	Without the rules the dashboard will not have the confidence of users and will not be used. It would not be a suitable tool for either SAM or Carbon metrics reporting.
Forward action	Raise email to CTO and PM re business rules

Situation/Reading	Meeting with CFO and COO	Date 01 July 2010	Project SAM and Carbon Zero
Content/events/observations	COO presented GM SBMI draft document re SAR and requested review and additional items for inclusion be returned to GM SBMI with copy to COO		
Analysis	Odd meeting, why not have this direct from GM SBMI. Made odder by a comment from COO that he wanted to see what material is provided.		
Reflection	From the comment made I conclude that COO and GM SBMI are not in agreement around the SAR		
Project Impact/significance	Minor in terms of this relationship. The use of SAR To more comprehensively represent and embed Sam and Carbon Zero performance is real and I will focus my contributions in that way.		
Forward action	Review SAR and submit Sam and Carbon Zero inputs		

Situation/Reading	Meeting of SAM WG	Date 01 July 2010	Project SAM
Content/events/observations	Progress being made. Not all are using the task resolution templates properly A number of new documents have not been reviewed by all		
Analysis	Better progress Some new items seem to be straight copies of other organisations, this need reviewing in detail and tailoring for USQ. Those items also contain significantly more detail and a slightly different focus to our immediate SAM needs.		
Reflection	Perhaps people are seeking to catch up conscious of the timelines and perceptions, pressures within the group. The use of the task resolution template needs to be reinforced		

Project Impact/significance	Significant
Forward action	Issue memo re task templates Review new materials

Situation/Reading	Campus Eco tender review	Date 05 July 2010	Project Carbon Zero
Content/events/observations	Tenders vary widely in quality, content and price		
Analysis	Indicative prices from the preferred submissions are significantly higher than anticipated. Specific sub project investment ranges from \$5 – 32M		
Reflection	There are three main contenders. This will be a significant undertaking and may need to be funded		
Project Impact/significance	This will provide the blue print for an infrastructure shift towards carbon reduction and sustainability. It is fundamental if USQ is committed to being environmentally sustainable.		
Forward action	Complete evaluation. Integrate with CAMP review in order to secure first phase funding		

Situation/Reading	Grounds at Res Colleges	Date 06 July 2010	Project SAM
Content/events/observations	Met with Dir Res Colleges and the Manager Facilities. Colleges are spending \$130K pa on grounds contractor. Performance is unsatisfactory. Colleges can't manage the contractor and want to employ direct grounds staff.		
Analysis	Not supported. Suggested FM add 2 staff to service the whole Campus and charge Colleges \$100K to maintain grounds. This allows FM to service increased demand for low level moves that are too expensive via Wellcamp contract and also service the additional land area created by Toara Park in 2009 and the projected Wagner's in 2010. Capital development to be funded via Colleges where necessary		
Reflection	Colleges happy to proceed on that basis.		
Project Impact/significance	Impacts FM service level and resource efficiency. Addresses existing resource challenge re Toara Park and positions for future growth.		
Forward action	Me to approach COO re the idea.		

Situation/Reading	SAM web page	Date 06 July 2010	Project SAM
Content/events/observations	Met with staff to develop SAM Project web page as required by Communication Plan		
Analysis	Straight forward objective. Include key items to indicate rigour and consideration. Reference TEFMA etc		
Reflection	Triggered discussion re the wider layout of FM pages and the creation of a 'current projects' section. This provides an opportunity to address client feedback about poor communication in the projects area.		
Project Impact/significance	Minor		
Forward action	Review draft pages when presented		

Situation/Reading	CAMP review	Date 07 July 2010	Project SAM
Content/events/observations	Met with Manager Projects to review CAMP spend for 2010 and 2011		
Analysis	Some difficulty getting to the expenditure projection. Achieved by the end of the meeting.		
Reflection	Actual expenditure in 2010 will be much less than the CAMP provides for. I will model the carry forward of the allocations because it is simply a timing issue and lack of progress (against the original estimated timelines) for numerous legitimate reasons. I have also included Wagner's land and made several other reality based changes.		
Project Impact/significance	Major. The new CAMP represents the best view of actual expenditure projections and highlights the lack of funds available for speculative projects.		
Forward action	Meet with CFO and COO later in the week to talk through and consider funding alignment		

Situation/Reading	Springfield development group meeting	Date 07 July 2010	Project SAM
Content/events/observations	Met to review progress. DIR SP had amended his data. COO and Dean Education provided schedule of possible growth items. Discussion around SP loads projections and SBMI numbers. Using SPO raw numbers there is not a significant difference in the projections. We are trialling the Faculty Plan template in this environment		

Analysis	Growth opportunities need to be mapped to the same format with EFSTL/FTE /timing and probability data entered.
Reflection	Good progress but more to do before we can link this to facilities requirements. This is likely to yield a reasonable projection of what might happen at SP, but will need the investor's (USQ's) risk appetite applied to it in order to align aspiration with commitment.
Project Impact/significance	Test of Faculty Plan template in a real application. Whatever the outcome there will be learning achieved and perhaps some templates developed for undertaking this type of exercise into the future
Forward action	Feedback to SAM WG template comments Consider FM benchmarks and SP needs once projections are completed

Situation/Reading	Meeting with FCRC	Date 08 July 2010	Project SAM
Content/events/observations	Meeting to: <ul style="list-style-type: none"> • resolve new area to be assigned to USQ in the existing shared library building • Discuss expanded land area • Discuss outstanding accounts • Possible new JV project Additional discussion around making the new area a state of the art learning facility, ICT input, etc (referenced Singapore)		
Analysis	Current opportunity to consider those ideas. Ned to move swiftly re learning centre specifics		
Reflection	Very good meeting. Positions the campus very well in terms of relationship, technology and infrastructure		
Project Impact/significance	A good example of working in a strategic environment with external partners		
Forward action	Record Minutes and action appropriately. Review CAMP		

Situation/Reading	Meeting with Land owner	Date 09 July 2010	Project SAM
Content/events/observations	Met the owners to discuss direct purchase. Meeting went well with much acknowledgment, positioning and relationship building before arriving at the significant issues		
Analysis	Important to establish the rapport with these folks because at the end of the day, they can sale for a higher price. Their emotions are playing a role in this proposal. I suspect they		

	absolutely don't want to see the land go for high density development
Reflection	Very productive. My view; they are genuine and want a simple transaction, quickly even if that means some reduction of price. They also would like to keep a linkage with the Uni and spoke of watching it grow and the history behind the site.
Project Impact/significance	Given the area and West St frontage this is a significant and very strategic purchase of land, potentially ensuring USQ is able to implement some of its wider initiatives. It may also help in the transfer of Baker St to USQ (a discussion I started with TRC last week).
Forward action	Include in the Investments and Contract Committee meeting this afternoon.

Situation/Reading	Meeting with CFO and COO re CAMP	Date 09 July 2010	Project SAM
Content/events/observations	Presented the revised CAMP. CFO tabled budgets/allocations for CAMP		
Analysis	We appear to have the correct funding for 2010 and 2011.		
Reflection	COO appeared accepting of the revisions made and presented.		
Project Impact/significance	Major. Some provision is still included for SAM elements and the strategic purchases		
Forward action	CFO to check the detail against the funding allocations and reconcile. I will reference this in the I&C meeting later if necessary to reinforce the land purchase.		

Situation/Reading	Meeting with DPST Supervisor	Date 09 July 2010	Project SAM
Content/events/observations	Progress meeting. Discussed: <ul style="list-style-type: none"> • Project milestone plan setting and assessment framework development and relationship to enrolled unit value • Three phases of the project from DPST perspective • The feedback from UK academics regarding the fundamental need for a rigorous and robust framework generating sufficient evidence and artefacts to award the Doctorate • Progress with SAM • Progress with Carbon Zero 		

Analysis	Great progress and very positive to have an increased level of confidence and certainty around this framework
Reflection	It is important that this program update the material provided to students to incorporate the learning achieved. The stress on the student and possibly the staff, will be reduced through a clearer understanding of the how mechanics of the DPST will be achieved.
Project Impact/significance	Allows me to focus on doing the work
Forward action	Maintain the reporting discipline. Support Supervisor as appropriate to achieve the program improvement for the benefit of future DPST students and USQ

Situation/Reading	Investments and Contracts Committee	Date 09 July 2010	Project SAM
Content/events/observations	<p>Meeting to discuss:</p> <ul style="list-style-type: none"> • Land proposal • Springfield <p>Land; initial response was to go back and try harder. I communicated it was a take it or leave it deal. Approval given to proceed with purchase.</p> <p>Springfield, QC advice confirms original view; negotiate now not in 2011, value will consider USQ rent levels. Back to where we were with loss of OPEX and increased purchase price! I suggested we push on and seek to modify the existing documents to address the other issues around sovereignty and growth, using the new relationship charter and campus plan (under development). This was accepted also.</p>		
Analysis	This long process has resulted in the original representations being validated. Some may consider it to have been useful due diligence.		
Reflection	This could have been identified and resolved at the outset with closer scrutiny and increased engagement by all, as negotiations developed.		
Project Impact/significance	Several impacts for SAM in terms of planning approach, relationships, role of various committees etc. The whole SP negotiating experience has influenced the SAM models and structures around management and governance approvals.		
Forward action	Obtain full valuation document, using QC advice Resolve master plan Finalise relationship charter and role Media opportunity		

	Amend documents and try to get the purchase back on the table for settlement early 2011 (in advance of next rent increase)
--	--

Situation/Reading	Evaluation of Eco Transformation Project proposals	Date 12 July 2010	Project Carbon Zero
Content/events/observations	Undertake analytical review of the Ecological Transformation Project proposals. 6 submissions received. Varying quality, content and prices. All represent significantly more costs than initially anticipated. Weighted attribute matrix may need some enhancing as it appears to be based on the standard procurement template (generic template)		
Analysis	Unable to reach final conclusion at this time as much of the data is speculative. Empirical analysis (as far as is possible) enclosed on the tender evaluation matrix		
Reflection	Given that the scale of projected costs are so significant, I will defer making a final decision and try to engage COO directly with the evaluation process. This allows his engagement with the project, sets the scale of the project in his mind and opens the door to discussion about how best to project these potential items in the CAMP		
Project Impact/significance	Major significance as this project will set the scene for the next 10 years of carbon reduction investment		
Forward action	Approach COO later this week and seek his guidance on the evaluation of the offers. Refine the evaluation template without compromising the original weightings allocation (and breaching procurement policy)		

Situation/Reading	Bookshop review	Date 12 July 2010	Project SAM
Content/events/observations	Not strictly aligned with SAM, but linked through the provision of essential services to staff and students, and also in support of Enterprise goal 9, regarding business efficiency. Meeting to discuss review of Bookshop business practice with a focus on rationalising stores, distribution and retail. Drivers are: <ul style="list-style-type: none"> • Multiple stores areas on Campus • Multiple distribution systems • Retail profile has lost its way • Opportunities to add value through tenant partners 		

	<p>(APO)</p> <ul style="list-style-type: none"> • Limitations on space within HUB • Opportunity to rationalise staff resource • Opportunity to improve service level to students
Analysis	Meeting to formulate steps forward re a review and potential change process
Reflection	Good meeting with HR and COO outlining rationale and potential objectives. HR seems on board.
Project Impact/significance	As above
Forward action	<p>Wait for paperwork from HR and review.</p> <p>Consider scoping document</p> <p>Discuss in confidence with FM internal staff to map out possible changes</p>

Situation/Reading	Met with Manager Printery and Manager Operations	Date 13 July 2010	Project SAM
Content/events/observations	<p>Discussion around possible impact of Bookshop rationalisation. Key possible impacts are:</p> <ul style="list-style-type: none"> • Increased responsibility for managers • Possible disestablishment of roles • Merger of Printery with Bookshop, or part thereof • Merger with Bookshop and stores/mailroom or part thereof • Change of PD for some staff; e.g. blended role supporting retail in Bookshop and Print Express 		
Analysis	Useful meeting, both see the logic and opportunities. No preconceived outcomes just scenario modelling.		
Reflection	<p>This could potentially save the University on staff and physical resource (space use, salary costs, rent subsidy for APO, reduced building OPEX), and enhance service for students through shared resources able to respond to peaks in either area.</p> <p>It is likely to be a very difficult change process and quite publicly resisted I imagine.</p>		
Project Impact/significance	Major in terms of service levels and business continuity planning		
Forward action	Develop possible models based on different scenarios ready for engaging with the project		

Situation/Reading	On site inspection of proposed (purchase)	Date 21 July 2010	Project SAM
--------------------------	---	-----------------------------	-----------------------

	property		
Content/events/observations	Met with the family on site to review property and discuss chattels/fittings etc.		
Analysis	<p>At this point the final approval has not been given by Council; that said I have an approved action from I&C Committee to proceed with the purchase. The University Lawyer is working this week to align the remaining approvals and paperwork.</p> <p>The property will be difficult to simply tenant. We may need to be creative in our thinking as it is attractive and there will be a body of ideas that spring forward once the purchase is known.</p> <p>Possible separation of the respective areas, e.g. tenant house, lease sheds, licence for grazing on pasture might be one model.</p> <p>Minor refresh required to the house (20k?) before tenant.</p>		
Reflection	I suspect our biggest challenge will be to prevent the opportunistic growth of various units into the buildings. The opportunity to minimise holding costs is reasonably straight forward, but given the longer term possibilities, I would not, for example, relocate FM into the current buildings		
Project Impact/significance	Strategic land holding Enhances position with regard to USQ taking Baker St		
Forward action	Prepare one page summary paper for F&F Committee tomorrow. Apparently some members are resisting the purchase.		

Situation/Reading	NZ Property Institute Asset Management Webinar	Date 21 July 2010	Project SAM
Content/events/observations	Participated in an online web seminar from NZ. The head of NZDF Estates presented a summary of their SAM model		
Analysis	<p>A lot of this is based on the work done during my tenure there, but has been well developed with GOIS based information systems and bespoke modules of SAP integrating to provide a very powerful software tool for effective rating and operations.</p> <p>A number of the Key Indicators are similar to the TEFMA model, to be expected perhaps. The linkage with GIS is very powerful and provides an integrated and visual user interface for the underlying data.</p> <p>Less focus on service levels in this model, but this is replaced with increased functionality and criticality metrics</p> <p>Unclear of the forward planning capability in regard to</p>		

	lifecycle based refurbishment or replacement planning
Reflection	Very robust. Developed over the last 10 years or so with considerable support across the whole of NZDF. To use the car analogy, this may represent the Rolls Royce solution
Project Impact/significance	Inspirational perhaps as it does demonstrate the kind of tool that can be developed with the right will and investment.
Forward action	Try to get the PPT download and show to the SAM working group for information and inspiration.

Situation/Reading	Meeting PVC SMD	Date 22 July 2010	Project Carbon Zero
Content/events/observations	Catch up meeting to discuss SMD rep on ESC. SMD have nominated a junior but enthusiastic staff member to be their rep. I want to communicate to PVC the level of committee membership and challenge the nomination of a junior staff member.		
Analysis	The role is now understood and PVC will nominate Director of Student Accommodation		
Reflection	This is important. We don't need token members with no authority to effect the changes required. The Director Student Accommodation is also a good fit due to the significant carbon footprint generated by Colleges		
Project Impact/significance	Significant in bring student accommodation on board with carbon reduction efforts		
Forward action	Invite Director SA to the next ESC, and also the Audit workshops next week.		

Situation/Reading	F&F Committee Meeting	Date 22 July 2010	Project SAM
Content/events/observations	I submitted a briefing paper (refer attached) Opposition from some re valuation, process, organisational priority etc. The Chair spoke to the purchase in support. I also spoke in support. The Chancellor spoke in support. It was requested that additional words be included in the resolution noting that due to it being a contiguous land holding the Committee accepted a [price premium for the land etc.		
Analysis	An appropriate and healthy level of due diligence and internal debate with common sense and the business analysis prevailing.		
Reflection	The meeting went well. It illustrates the value of lobbying and prepositioning and was absolutely the correct outcome. It is encouraging that the University can respond		

	quickly enough to opportunities if it believes those opportunities to be valid.
Project Impact/significance	Major. Illustrated a number of procedural gaps and real time solutions to those, in the absence of enhanced frameworks. Enhanced the reputation of FM at the most senior level and made a significant strategic contribution to the organisation
Forward action	Arrange for sale and purchase documents to be with the VC for signing tomorrow. (EA to collect, deliver, receipt and return) Liaise with FM internal re changes needed to integrate with portfolio (add to the managers meeting) Develop site use plan

Situation/Reading	COO catch up Meeting	Date 22 July 2010	Project Carbon Zero
Content/events/observations	Discussed the Eco transformation project proposals. COO agreed with the approach and the results. Supported appointment of Consultant and the inclusion of appropriate numbers into the CAMP, acknowledging that they may not be funded.		
Analysis	COO appreciated the significance of this project and had reviewed the offers. Inclusion of provisional sums into the CAMP allows initial allocations and thinking to occur		
Reflection	This project and the introduction of sub projects into the CAMP will test the commitment of the organisation in regard to Carbon reduction. Fortunately many of the projects will have reasonable rates or return in their own right and this needs to be represented clearly in the CAMP paperwork		
Project Impact/significance	Maximum significance		
Forward action	Develop a version of CAMP reflecting the inclusion of the sub projects based on data to date. Appoint highest scoring supplier Integrate Environmental audit data with Eco transformation project		

Situation/Reading	Bookshop follow up meeting COO, CFO	Date 23 July 2010	Project SAM
Content/events/observations	CFO is back-peddalling and very defensive of Bookshop. COO requested meeting to soften the situation and present as a balanced approach.		

	Chancellor has expressed support for the review stating that it doesn't look like a bookshop and appears very amateurish
Analysis	CFO very defensive of the Bookshop and refers to success and revenue etc. No comment on appropriateness of the model or whether it could be more efficient. CFO resisting space constraints
Reflection	By the end of the meeting with both COO and myself referring to a balanced outcome with student service as the priority, CFO was more comfortable and agreed to moving forward
Project Impact/significance	Significant for Printery and Stores; student and staff service levels
Forward action	Draft ToR and Project inception document, all to review and comment. Overlay HR advice re change process and engage with key staff likely to be affected

Situation/Reading	Energy contract	Date 23 July 2010	Project SAM
Content/events/observations	<p>Received a call from USQ procurement that they are about to renew the contract for up to 3 more years and did I have a view.</p> <p>I had requested in 2009 that from 01 JAN 2010 the management of utility contracts come to FM to create the necessary linkages for effective reduction of costs and carbon. I chased this up in 2010 and clearly no action has occurred. I have a week before the contract expires apparently.</p> <p>Concerns re the renewal of the contract without full consideration are:</p> <ul style="list-style-type: none"> • Tariff structure costs • Carbon offsets (included? Comparative costs?) • Impact of on site generation and links with Eco transformation contract • Supplier commitment to working with USQ re reduction 		
Analysis	<p>The speedy development of some data and information is required to make the appropriate choices.</p> <p>There is a failure of internal communication and process here within Finance</p>		
Reflection	<p>I am disappointed by this as the Director of Procurement is on the ESC and should have made the mental connections, also I have written confirmation of the management allocation from COO and CFO. That said, it isn't irretrievable and lends support to the case for the transfer and potentially the appointment of an Environmental Officer.</p>		

	Worst case I could limit the renewal to 1 year to allow the Eco Transformation feasibility studies to be undertaken. However, we need also to capture market opportunities around the pricing of electricity.
Project Impact/significance	Could be a real hurdle to the introduction and cost effectiveness of some of the initiatives planned. This is the major contributor to USQ's carbon footprint and we must explore what can be done through the contract.
Forward action	FM staff accumulate info immediately Write to COO re the issue and press for proper and complete transfer of the utility management Meeting next week with procurement

Situation/Reading	WPP IUD	Date 26 July 2010	Project SAM
Content/events/observations	I was asked to review the FM metrics again. This must be the fourth or fifth time. I note recurring errors.		
Analysis	Breakdown in the quality of this project. I have raised it with the PM.		
Reflection	My earlier comment on this appears correct that within USQ it is an 'acceptable casualty'. The value for USQ will be in transferring some of the IP and data collated into USQ's own data warehouse and BI project		
Project Impact/significance	Minor given parallel system developments		
Forward action	Minimum effort but achieve project closure		

Situation/Reading	Meeting with CFO and Dir Budgets re space management in J Block	Date 26 July 2010	Project SAM
Content/events/observations	This is a classic example of balancing policy, authority, logic against individual emotions and desire within a senior staff environment		
Analysis	I presented enhanced space plans, pitched at meeting longer term space needs within a logical framework of avoiding redundant investment, and creating an immediately enhanced environment for all Finance staff		
Reflection	Still emotional opposition from CFO, but he cant refute the logic and enhanced environment on offer for his team.		
Project Impact/significance	A minor win for common sense, policy and space utilisation		

Forward action	Give a couple of days for consideration and seek confirmation
-----------------------	---

Situation/Reading	Phone call to COO re Power accounts	Date 26 July 2010	Project Carbon Zero
Content/events/observations	Follow up re renewal of electricity accounts and management thereof, COO confirmed his understanding as the same as mine and generated email to CFO		
Analysis	Fell between the cracks or just not communicated internally within Finance		
Reflection	Many examples of these communication gaps exist, but this is significant for sustainability alignment		
Project Impact/significance	Electricity is >76% of USQ's carbon footprint and must be considered in that light, not simply a procurement process		
Forward action	Follow up meeting on Thursday with Procurement and Asset staff to decide how to move forward. This will also be informed by the environmental audit workshops on WED.		

Situation/Reading	Meeting with Procurement re review of processes and templates	Date 26 July 2010	Project SAM
Content/events/observations	General update on activity. Discussion re my ideas and observations		
Analysis	Useful, but not quite the right time to get involved.		
Reflection	I have signalled my interest and willingness to contribute and have been promised an opportunity		
Project Impact/significance	Procurement processes are currently slow, document heavy, onerous, and questionable in terms of their ability to align with the different types of contracts we engage in. They often put project timelines at risk and require some manipulation of the evaluation process because the mechanics are designed for straight forward procurement rather than technical consultancy or construction.		
Forward action	Flag in the diary and follow up engagement. When engagement occurs consult SAM WG for input		

Situation/Reading	ESC meeting	Date 26 July 2010	Project Carbon Zero
Content/events/observations	Routine meeting of the ESC (copy attached) Introduced Carbon workshops		

	Gained approval for Carbon software Members confirmed the draft staff induction PPT Introduced Campus ECO Transformation Project
Analysis	Members were excited re the audit and workshops for tomorrow
Reflection	Very productive meeting with some valid points being raised by members
Project Impact/significance	Major influence. The committee needs to sign off on the audit and endorse for VCC action. Approval of funds for carbon software is excellent and with the audit we now have the data to populate the software effectively. On that note we have the data to report at a corporate level against all the GRI G3 indicators. I must pursue and reinforce that commitment
Forward action	Procure software Communicate final versions of the audit (post workshop) Appoint ESD consultant for ECO Transformation project Develop Carbon Reduction project paperwork soon and create the project on the back of a VCC mandate ideally. Push SBMI with regard to GRI G3 reporting (check as somebody said marketing is now responsible for Annual Reports?) Consider annual engagement of OPUS to refresh GRI data and establishing the Carbon software

Situation/Reading	GLD Board review	Date 27 July 2010	Project SAM
Content/events/observations	<p>Global Learning Division review board final meeting. There was a lot of discussion around where the boards ToR finish and the DVC (GL) suggested that it was not for the board to make recommendations on the recommendation of the report other than to say to the VC "here are some recommendations for you to consider". The implementation of none, part or all of those recommendations would be devolved down to operational units for assessment and implementation.</p> <p>I spoke strongly against this on the basis that:</p> <ul style="list-style-type: none"> • The board is constructed of the right people to refine the recommendations into a set of implementation tasks • Devolving back to operational units will see the introduction of local bias and short range views • The VC is not in a position to know how much of the report to action • The recommendations are not made in the knowledge of the wider context of USQ and contain 		

	<p>considerable content from Library and DEC (with inherent bias)</p> <ul style="list-style-type: none"> • Why assemble such a large board if it was only to monitor a review process?
Analysis	The proposal is in error
Reflection	This review has not yielded anything of use and has incurred significant costs in time and money with no specific deliverables. It does not provide the strategic, policy connections that are so desperately needed around course material production and provision.
Project Impact/significance	Minor, but illustrates the risks around politically driven reviews and also the care needed to ensure the ToR are correctly drafted
Forward action	Discuss with COO to try and salvage more value from the exercise.

Situation/Reading	Session to try and map out the floor use for Bldg 2 at SP	Date 27 July 2010	Project SAM
Content/events/observations	Data received from Dir SP. I attempted to line up the data with the working group material. Adjoined to this is the statement from COO that we may just go with a second Building 1 and then see how best to use it. Partly driven by the Structural Adjustment Fund opportunity and partly by the VC public and recurring statement that we need a second building		
Analysis	This will be useful to have some figures for SAF. I do not believe anybody has considered what happens if there is no SAF and how that would affect the credibility of the contents in terms of significant business directions being espoused solely on the basis that SAF money is available.		
Reflection	Highlights the challenge between business driven change and investment and the opportunistic behaviour generated by the federal funding mechanism		
Project Impact/significance	Significant: <ul style="list-style-type: none"> • Consume all USQ capital allocations • Potential for interest on borrowings • Economic viability of SP and TW depending on model employed and tenants deployed • Resource required to service the SAF bid and outcomes 		
Forward action	Continue to support COO and raise internal challenge and tests against proposals		

Situation/Reading	Environmental Audit and Action Plan	Date 28 July 2010	Project Carbon Zero
Content/events/observations	<p>Meeting attended by ESC members, SBMI, COO, Finance, ICT</p> <ul style="list-style-type: none"> • draft GRI Indicator report and GHG inventory presented • Much discussion re boundaries and results • Requested FTE be used as a denominator • Requested EFTSL be used rather than student numbers and resulted validated accordingly • Requested validation of results used for comparative benchmarking (provided the TEFMA data extract) • Very clear that purchased electricity is our main carbon producer – encourages green power perhaps and certainly a focus on energy reduction • Also a surprising number of vehicles (approx 100) and the profile of hire cars (almost always 3.5L sedans) • Some of the recommendations were very generic and I requested more specific detail is provided where they have it. <p>Later discussion around the possible use of a % of Green Power for the short term.</p> <p>There is another over arching report to come that will link the two existing reports and build on the existing USQ activities.</p> <p>I spoke at length about the Carbon Reduction project and also the Campus Eco Transformation project. The many strands will be woven together through the carbon reduction project</p>		
Analysis	We are in a very strong position now and I need to action the Carbon Reduction project work		
Reflection	Very positive engagement from COO and all attendees.		
Project Impact/significance	Very significant. This provides the foundation stone for what is to come and baselines our footprint.		
Forward action	<ul style="list-style-type: none"> • Develop the Carbon Reduction Project documents as a priority • Explore the cost of Green Power and attempt to build into the budget round coming up. Perhaps 10, 20 and 30% across three years. This assumes the 		

	<p>GHG emissions from Green power are minimal.</p> <ul style="list-style-type: none"> • Raise a paper to COO re vehicle centralised control from FM and the use of hire cars to be under 2L
--	--

Situation/Reading	Meeting with APO	Date 29 July 2010	Project SAM
Content/events/observations	Met with operator of the APO to discuss possible expanded interaction between APO, USQ stores and Mailroom etc		
Analysis	<p>Opportunities around:</p> <ul style="list-style-type: none"> • Merchandising USQ memorabilia • Stationary supplies • Mail sorting and distribution • Bookshop despatch 		
Reflection	Very positive response. Increased interaction would also improve the viability of the PO.		
Project Impact/significance	This is a key component in a review of University stores, distribution systems associated with learning materials		
Forward action	Engage with subsequent project		

Situation/Reading	Meeting with Procurement re electricity renewal	Date 29 July 2010	Project Carbon Zero
Content/events/observations	<p>Met to discuss 1, 2 or 3 year renewal, or to retender completely.</p> <ul style="list-style-type: none"> • I requested rates to include 10, 20 and 30% green power • Discussed green power credibility and requested comment from OPUS on the credentials of the particular scheme to be considered • Confirmed that in any event we would not go for retender. 		
Analysis	Very good rates on offer and these may allow green power within existing spend envelope.		
Reflection	A real chance to make a corporate commitment that is tangible and allows us time to create reduction projects in parallel.		
Project Impact/significance	Major impact and will test the organisations resolve		
Forward action	<ul style="list-style-type: none"> • Consider new rates when available • Draft paper to BMC and VCC (if necessary) or simply direct to the VC perhaps. I will do some lobbying and see what path is most likely to achieve a positive outcome. 		

Situation/Reading	Divisional planning retreat	Date July 2010	Project Sam and Carbon Zero
Content/events/observations	<p>Meeting to review strategic and operational priorities and to test whether the Corporate services division is on track in its efforts.</p> <ul style="list-style-type: none"> • Highlighted generally yes on track • Highlighted planning process and templates is too bulky, repetitive and onerous with some loss of credibility internally • I offered FM Operational planning template as it establishes links between strategic, operational and funding, allowing all to be considered through a single plan. This was taken away for consideration (sample copy attached) • I raised carbon reduction as a priority that has only received lip service so far. This was acknowledged. I advised that this rise to the fore soon through a Carbon Reduction project 		
Analysis	Well intentioned, limited use. At some stages it became a 'what's wrong with the world' session. The CTO was also particularly active seeking to link all of his projects to strategic goals, clearly under pressure from the ICT funding reduction required in the CAMP		
Reflection	Overall useful, assuming something changes as a result. It really did highlight the number of and duplications within the strategic planning framework and strategic alignment report		
Project Impact/significance	Potentially major, in regard to planning, earliest information and aligning the portfolio with future direction.		
Forward action	Support as needed Send copy of FM template to SBMI (again)		

Situation/Reading	Meeting with Dir Colleges	Date 29 July 2010	Project SAM
Content/events/observations	<p>Further to my meeting two weeks ago with PVC SM: Discussion re possible outsourcing of cleaning staff. We discussed and explored the possibility of adding to the campus contract.</p> <p>My view is that this is absolutely aligned with campus contract, noting the different level and type of service required.</p>		
Analysis	<p>Opportunities to:</p> <p>Reduce cost; enhance service level; reduced casual staff, larger cross trained team; integrate a number of ancillary services</p>		

Reflection	This links to the longer term possibility of FM assuming responsibility for Colleges. At the moment the rationale around basic logistics is enough, although catering will be an item for consideration in the very near future.
Project Impact/significance	Another piece of the jigsaw. Goes to the heart of the in-house or outsource debate and we have now seen both examples from colleges where they have asked FM to take over. This suggests there is a challenge in the management of the supplier, whether in-house or out-sourced.
Forward action	Pass to Operations Manager to discuss with Contractor and put some indicative proposals together for Dir Colleges to consider

Situation/Reading	Research for SAM task –Federal and State links	Date 2 AUG 2010	Project SAM
Content/events/observations	Research of Federal and State legislative and funding links relevant to FM		
Analysis	There is more here than I had anticipated. Linkage areas include: funding; lease and land management, environmental performance, organisational reporting and the new IPP format with enhanced CAMS (replacing CAMP)		
Reflection	Having identified the key areas we will need to put more effort into understanding the detail.		
Project Impact/significance	Moderate		
Forward action	Focus, through WG tasking		

Situation/Reading	Budget Meeting	Date 3 AUG 2010	Project SAM and Carbon Zero
Content/events/observations	Initial planning meeting for 2011. Introduced by Financial Accountant as “same as last year minus 2%”. Let’s work out salaries and see what’s left.		
Analysis	FM budget responsibilities do not vary as a result of student load fluctuations (on the scale we are experiencing). The organisation has a relatively fixed portfolio and has repeatedly demonstrated a lack of willingness to reduce the portfolio or to push hard for increased utilisation. Contractor costs are increasing, utility costs are increasing leaving the discretionary spend % as minimal. This will have significant impact on service levels. I understand the CAMP is also going to receive significant cuts		

Reflection	This is a logically and ethically flawed approach to budgeting. It is a simplistic distribution that merely seeks to satisfy the politics and the one possible positive that can possibly be said is "all are treated the same". I struggle with the equity component of this when the organisation has approx \$15M of carry forward surpluses sitting in various units, the recall of just 50% of which would solve the projected budget deficit. This points to a seriously flawed budget distribution model and highlights the failure of the sustainable budget model working group.
Project Impact/significance	Major: This could significantly reduce my ability to implement both projects
Forward action	Discuss with COO and CFO. Draft paper for VCC and F&F Committee if necessary.

Situation/Reading	Meeting with Marketing	Date 3 AUG 2010	Project SAM
Content/events/observations	Meeting to discuss projected costs to implement new crest and logo		
Analysis	Marketing requesting significant work to be done, but no Council approval of the rebrand yet, nor any budget to do the work.		
Reflection	Nobody has been able to describe the value proposition attached to this project. I note it has already incurred \$180K of costs and is looking at another \$1M to change over existing branded items (buildings, cars, signage, furniture etc). This really does (again) highlight the need for a robust business case template for all projects, with clear investment hurdles to be met.		
Project Impact/significance	In light of budget issues FM will not adopt any of these costs. They will have to be met by a project budget.		
Forward action	Raise in F&F, impact on FM and by the way, are we clear on the value proposition?		

Situation/Reading	Meeting with CFO	Date 4 AUG 2010	Project SAM and Carbon Zero
Content/events/observations	CFO requested meeting to discuss the CAMP. This is the third meeting. CFO has not mapped out funding sources and balances against the table I have already provided. I asked him to provide the following information using my CAMP cash flow projection: 2009 carry forward + 2010 allocation = 2010 available spend 2010 projected carry forward + 2011 allocation = 2011		

	available spend.
Analysis	CFO is almost seeing how far down the list he can get without really defining the available funds. CAMP will have significantly less money than anticipated
Reflection	CFO seems lost. He has not done this simple work to enable me to prioritise the CAMP against the funds available.
Project Impact/significance	As mentioned previously, MAJOR significance
Forward action	Speak to COO and follow up w/c 16 AUG

Situation/Reading	ICT Strategy Committee	Date 4 AUG 2010	Project SAM
Content/events/observations	<ul style="list-style-type: none"> • Discussion to prioritise the ICT Triennial plan, for similar reasons to CAMP, not enough money • Project reporting discussion highlighting bias from PM to report positively rather than factually • WPPIUD reported with significant 'spin' • ICT dashboard – very comprehensive and impressive. Would be a good model for FM (SAM), but I suspect consumes a lot of resource to produce and maintain • No mention of staff/student id card project • Again, agenda not covered. The agenda is too full, the committee is too big and the subject so technical that it is never adequately covered and represents a partial waste of resource 		
Analysis	Again, agenda not covered. The agenda is too full, the committee is too big and the subject so technical that it is never adequately covered and represents a partial waste of resource		
Reflection	The ICT management and governance structure is enormous and resource intensive. When compared to Budget Management Committee with about 6 people, no sub committees and significantly more organisational impact, it is an absurdity BMC is too small and incestuous for the expanded role and influence it seems to have adopted.		
Project Impact/significance	ICT competes with FM for CAMP funds and therefore impacts on SAM and Carbon Zero. The opportunity to streamline this may come through a combined Strategic Asset Management Committee which would encompass ICT and FM together and dissolve the ICTSC. This would not be an easy change to progress.		

Forward action	Discuss with COO and represent through SAM project
-----------------------	--

Situation/Reading	FC Library video conference	Date 4 AUG 2010	Project SAM
Content/events/observations	Vid link to FC to discuss value add opportunities for the library relocation. Discussion included learning commons and also went as far as to include the Future Classroom concept in Singapore		
Analysis	Good opportunity to be leading edge for a while with relatively low additional costs		
Reflection	The session was something of a brain storming one. Quite useful. This should be explored further once funding is confirmed (or not) at the end of AUG.		
Project Impact/significance	Minor		
Forward action	Progress research around opportunities, distribute Learning Commons material		

Situation/Reading	DWBI project meeting	Date 5 AUG 2010	Project SAM
Content/events/observations	USQ version of dashboard project, built on top of a data warehouse. Discussion raised by CTO about using the WPPIUD data in this new project. Heated debate about the quality of that material and a complete disconnect between Brian and Doug Discussion around the recurring costs of maintaining the data down to unit levels		
Analysis	The data in WPPIUD is wrong, there are many problems with that project and I do not support it being transferred to DWBI unless that is fully recognised and provision made to review and rectify as needed.		
Reflection	Highlights the risk of suppressing or glossing over the quality concerns of the WPPIUD, and not responding to stakeholder feedback		
Project Impact/significance	High potential and absolutely worth doing. It could connect with SAM and Carbon Zero KPI's but very wary of the maintenance issues. We struggle to update web pages at the moment let alone a core USQ data base		
Forward action	Consider in budgets? Consider linkages when developing BEIMS, Archibus and Carbon software		

Situation/Reading	Carbon Trust EOI	Date 6 AUG 2010	Project SAM
Content/events/observations	I became aware of the newly created Carbon Trust based in Brisbane and the funding opportunities on offer. Unfortunately we do not have time to construct a bid		
Analysis	Too late to apply. Focus seems to be on partner approaches and energy reduction. We should be able to meet these criteria quite easily once the ECO Transformation Project is done.		
Reflection	A real shame to have missed this, but encouraging that it exists. I may take the time to meet with the Trust and share our activities and discuss future options.		
Project Impact/significance	Major source of funds, particularly if internal funding is reduced		
Forward action	Diarise key dates for all funding sources and have projects ready to roll for applications. Arrange meeting with Trust staff to discuss.		

Situation/Reading	Budget Process meetings	Date 9 AUG 2010	Project SAM
Content/events/observations	Numerous section meetings today with the Financial Accountant regarding proposed 2011 budgets. Starting position from Finance, same as 2010 minus 2%		
Analysis	Simplistic and inappropriate model that will not provide adequately for the portfolio if this is more than a short term funding lack. A significant number of FM contracts are increasing in cost through CPI and we have reduced service levels already.		
Reflection	Appears to be a political budget model aimed at sharing the pain, rather than a logical and defensible construct. Also assumes that all units have the same starting point in terms of leanness, resource and contribution, which of course they do not		
Project Impact/significance	May impact on CAMP and OPEX ultimately. Should not affect the project delivery too much		
Forward action	Develop argument to BMC and F&F if necessary.		

Situation/Reading	SAM PCG	Date 9 AUG 2010	Project SAM
Content/events/observations	Scheduled PCG meeting. Approved BEIMS BCA module		
Analysis			

Reflection	Straight forward meeting. The BCA module allows us to progress a number of stalled tasks now.
Project Impact/significance	Major enabler
Forward action	Procure module and proceed with further definition of the application

Situation/Reading	Regional Tennis Centre	Date 10 AUG 2010	Project SAM
Content/events/observations	PCG Meeting (JV project, with political partners) main focus of meeting to discuss appointment of Courts Contractor. Unable to appoint due to USQ procurement process and conflicting information re response. Refer multiple emails. Net effect, procurement has gone back to all suppliers asking if they want to resubmit as a result of the removal of the QA requirement.		
Analysis	Technically correct process, but represents the most extreme risk adverse solution. No understanding or willingness to consider the political ramifications and the risk attached to that of delaying the project by up to 3 weeks. We had to cancel a Ministerial visit (sod turning ceremony) as a result of this inflexible approach.		
Reflection	Epitomises the experience to date with USQ procurement and the impotence of the CFO		
Project Impact/significance	Functionally small but good illustration of bureaucracy overriding operational reality		
Forward action	I have requested a 'post-mortem' to see how we can improve process and build in some understanding of the wider risks etc. Ensure all USQ processes are aligned to ensure prompt appointment once the revised tender date is met		

Situation/Reading	Springfield purchase	Date 11 AUG 2010	Project SAM
Content/events/observations	Met Valuer in BSB . Purpose to task Valuer with meeting SLC Valuer and discussing discounting factors for SP buildings. Hopefully we can make some progress on the price issue.		
Analysis	Valuer initially appeared to have forgotten most of the detail. Content of his opinion was largely the same as before. He suggested he may not be able to progress in the required time frame, almost appeared not to want this one. Meeting concluded that Valuer would contact SLC in the next 2 weeks. We would communicate to SLC this intent		

	Discussed concerns re Valuer with Council member and he seemed more comfortable perhaps than I was.
Reflection	I'm not convinced the Valuer is fully motivated by our project
Project Impact/significance	Risk of delay or adequate representation/advocacy
Forward action	Send some additional documents to Valuer: Post note, done.

Situation/Reading	Meeting with TAFE at SP	Date 13 AUG 2010	Project SAM
Content/events/observations	Met with Dean of Business and Tafe to discuss their contribution to the impending SAF bid		
Analysis	Very positive. Tafe suggested they had up to \$3.3M available. They also expect a discounted rent to acknowledge the value to USQ of their involvement in the bid. I suggested that the rent might be higher to reflect USQ's value to TAFE. Not well received, but we left with a balanced outcome. Tafe connection to SAF bid is complimentary not essential		
Reflection	Tafe expected 'favours', I can only assume as a result of local representation and relationships		
Project Impact/significance	SAF does not rely upon it. It is an example of the FM related impact of such partnerships and it was good to be involved at the outset.		
Forward action	Send letter tomorrow confirming discussion and options for Tafe contribution. Post note: Tafe have withdrawn offer of funding (within 24 hours of meeting)		

Situation/Reading	Bookshop WG meeting	Date 18 AUG 2010	Project SAM
Content/events/observations	Meeting to discuss bookshop review		
Analysis	Routine meeting introducing scope and timeline to stakeholders		
Reflection	Stepping slowly through this process due to the HR implications		
Project Impact/significance	This could result in a streamlining of storage and distribution, and academic material delivery models. Impact on space utilisation.		
Forward action	Maintain presence in WG, consider possible structures.		

Situation/Reading	SP SAF update with COO	Date 18 AUG 2010	Project SAM
Content/events/observations	Updated progress from COO. He demonstrated a spreadsheet showing the projections around SAF and that this bid would make the whole organisation more sustainable.		
Analysis	Model heavily reliant upon student load projections being achieved. Model assumes Springfield, yet a number of the functional elements of the bid could be accommodated at Toowoomba, either from new buildings or existing buildings resulting in significantly reduced capital and recurrent costs. No sensitivity analysis included.		
Reflection	COO seems to be making the best of very poor data in some ways. We seem to be pursuing SP again without full understanding of why, or comparative analysis of other delivery models.		
Project Impact/significance	Impacts on SP purchase, also has significant impact on University funds and will potentially exhaust the organisations reserves. Worst case it may drive the organisation 'under' in commercial terms. Best case it may work!		
Forward action	Push COO to consider Toowoomba options if the bid is successful. Push negotiating team to conclude purchase before SAF is announced.		

Situation/Reading	Sub group to discuss BCA use	Date 23 AUG 2010	Project SAM
Content/events/observations	Meeting to discuss how we will use the fields available in the BCA given the compromises required.		
Analysis	Robust discussion. Some semantics around labels and the adoption of one over another.		
Reflection	Good progress, and more importantly allows finalising of the condition template and the actual audit work		
Project Impact/significance	Major. A number of other tasks can now move on.		
Forward action	Explore use of Asset Valuers to aid in condition audit process. Meet with APV.		

Situation/Reading	FM Managers meeting	Date 24 AUG 2010	Project SAM
--------------------------	---------------------	----------------------------	-----------------------

Content/events/observations	Routine meeting. Most of the meeting was spent discussing the proposed budgets and the recent email from Dir Budgets that implies staff cuts.
Analysis	Budgets will result in service level cuts and possible staff reduction, or significant carrying of vacancies to reduce salary component
Reflection	Most unfortunate advisory email. It highlights a disconnect between so many corporate elements and initiatives. Short term solutions for FM may not impact on assets, extended periods would have an impact
Project Impact/significance	De-motivating for whole team and affects Sam delivery potentially May shape SAM focus and CAMP models Illustrates need for good portfolio info and linkages with Strategic drivers
Forward action	Maintain morale and focus of WG. Drive home the linkages and value angle Meet with BMC to explain fixed cost component

Situation/Reading	Meeting USQ Valuers	Date 24 AUG 2010	Project SAM
Content/events/observations	Met with USQ valuers to discuss current annual valuation exercise and content of same. Particular purpose to determine whether we could transfer valuation content to the BCA and align to a single process. They presented some good information re SAM with a Valuer/Finance perspective. For example they referred heavily to Remaining Service Potential as the key factor they assess. This seems to be a generic or collective label for more specific factors that we might identify using the TEFMA model, such as functionality and condition ratings. The use of RSP seems appropriate for predictive modelling at the highest level but not so useful coming from the practical or physical end of the spectrum, seeking to address issues or plan specific projects.		
Analysis	Very thorough software tools presented. They clearly started by seeing a sales opportunity, but still willing to work with FM on this. The Predictor software (if affordable) might be a useful addition, but similarly, Mercury are currently developing a module that will provide this predictive function		
Reflection	I believe we could use this software and the annual valuation to provide a predictive model quite readily, but this would not negate the value of the BCA. They are almost quite separate but related dimensions of asset portfolio data/information. Recent events suggest that the		

	organisation does not have an immediate need for or ability to respond to a predictive SAM tool and whilst useful for CAMP preparation we are still working with a simplistic budget model
Project Impact/significance	The route we take here is very significant for the project. I do want to achieve a predictive model and see it as an essential component of SAM. That said, I am mindful of not growing the software base too far, particularly if something is coming soon from Mercury that will attach to our existing BEIMS
Forward action	If the budget model is revisited, introduce the predictive modelling concept. Explore proprietary software and in-house options. Proceed with BCA and condition assessment exercise

Situation/Reading	Meeting with COO	Date 24 AUG 2010	Project SAM
Content/events/observations	Met with COO re budgets and SAF. COO basically stated that everyone will get the proposed allocation with a full review in May (as before). He included ranging discussion around other things that could make FM more sustainable and asked for ideas. I raised lease revenue, energy and utility budgets, printery commercialisation etc as being designed to create positive performance drivers for those responsible for managing them. But they need to migrate fully to FM. I also talked about areas of duplication and waste and the simplistic budget model. SAF: final contribution re costs, date/time milestones and words for SAF bid. Clearly proceeding with Building 2 as per Building 1 concept.		
Analysis	As before.		
Reflection	As before. We proceed knowing it isn't right but justifying it by saying it's the best we can do at the moment. When in fact there have been several thousand moments leading up to this point during which we could have evolved such that we could do 'it' right.		
Project Impact/significance	Budget and SAF as discussed already.		
Forward action	Nil, but consider BMC next week. SAF, email COO data and words required for the bid. Post note DONE.		

Situation/Reading	VCC Meeting	Date 25 AUG 2010	Project SAM
--------------------------	-------------	----------------------------	-----------------------

Content/events/observations	Attended and presented report. Nothing unusual. PVC SM queried progress with Steel Rudd project as he is taking room bookings for S1 2011 already, but project not started.
Analysis	Student accommodation is a #1 priority, particularly with bookings already made.
Reflection	Failure in communication or FM PM? May be too late to complete for S1
Project Impact/significance	Illustrates need for planning framework and improved project communication. Highlights challenges with workload and procurement processes.
Forward action	Engage with Manager Planning and Space and take corrective action. Post note: exemption from procurement norms requested via VC, contractor on board to fast track once approval received.

Situation/Reading	Meeting Manager Planning and Space re Sciences refurb	Date 25 AUG 2010	Project SAM
Content/events/observations	Manager briefed me on the consultant's work and space planning results.		
Analysis	Outputs appear correct with some minor suggestions from me re format. The model does not clearly illustrate the future proofing component and numbers around proposed programs and initiatives. I asked for confirmation and this to be demonstrated in the tables.		
Reflection	This must provide for the FoSc space needs for the foreseeable future. I would not accept a request for more space or a new building in 2 years time because they are introducing a new program that has already been identified. Credibility with DEEWR impact as we will transfer funds to a refurb (rather than build new)		
Project Impact/significance	Major. This is our first significant faculty engaged space rationalisation project and can be used as proof of concept later.		
Forward action	Review revised report next week.		

Situation/Reading	Sustainable Budget Model WG	Date 25 AUG 2010	Project SAM
Content/events/observations	COO called a meeting to place the work of the group on hold. Meeting decayed into a general criticism of the budget model for 2011 with unanimity around the table regarding the lack of progress and frustration that the same		

	old issues have not been resolved. COO accepted and commented on everybody's body language. COO to develop a sub group to try and resolve one or two particular aspects around HDRS funding.
Analysis	A clear failure of SBMWG with all members feeling very unhappy with the outputs and outcomes achieved.
Reflection	CTO was unusually quiet and I wondered if he has been spoken to in advance, given his past passionate representations of ICT needs.
Project Impact/significance	A rational logical funding model is essential to SAM.
Forward action	If a sub group is formed, participate in that.

Situation/Reading	SP Development Group	Date 26 AUG 2010	Project SAM
Content/events/observations	Meeting to pull together the elements required for the negotiating team. Outcome, I will meet with COO to develop a single page to inform team. Dir SP requested permission to lease 100m in the WKC. I responded that we must be able to find a 1% space saving in the existing building.		
Analysis	Hard to see the lines between this group and SAF. They may be clearer when the SAF bid results are known		
Reflection	I will develop the 1 page and just copy COO. DIR SP confusing objective issues illustrates the need for quality data (people counter?)		
Project Impact/significance	Minor but it has reached a point where the negotiating team can progress hopefully.		
Forward action	Develop one page summary		

Situation/Reading	Meeting with GM SBMI	Date 26 AUG 2010	Project SAM
Content/events/observations	Discussion re how to integrate FM planning with corporate planning. Refer to task resolution template on SAM		
Analysis	Clear opportunities exist. SAM info helps to validate and add value generally to SBMI planning Opportunity to align planning cycles and improve quality whilst reducing the previously dispersed planning workload for all staff.		
Reflection	Good meeting and both leveraging off each other re ideas.		
Project Impact/significance	Major if we can integrate.		

Forward action	Write to GM SBMI and COO with suggested integration For 2011 proceed with template as part of MNW and CE bid round.
-----------------------	--

Situation/Reading	BMC Meeting	Date 30 AUG 2010	Project SAM
Content/events/observations	Invited to BMC to talk re 2011 budgets. On arrival discussion was only about the CAMP. I spoke to CAMP and suggested ideas for freeing up funds for 2011 opex. In particular no MNW program for 2011 and reinvest \$700k to FM (only as a one year strategy). No other feedback around the table.		
Analysis	Members were not prepared. They did not have the CAMP in front of them. They were not able to talk about OPEX.		
Reflection	Indicates no opportunity to move re budgets and very unlikely to achieve a different outcome. Hopefully my suggested solution for 2011 allows some opportunity for them to be seen to be responsive to feedback and achieve a more practical outcome. In later discussion with program Supervisor, this does highlight the lack of strategic focus in constructing budgets and CAMP planning.		
Project Impact/significance	Needs resolving in support of SAM and basic operational activity.		
Forward action	Consider ways to engage the BMC with a strategic SAM focus		

Situation/Reading	Finance & Facilities Report	Date 31 AUG 2010	Project SAM
Content/events/observations	Developing the AUG report for F&F Committee. I have included a line item to raise awareness of possible problems arising from the 2011 budget allocation.		
Analysis	F&F are the only forum in which I can legitimately raise the risk attached to under funding the property portfolio. I raising this to: <ul style="list-style-type: none"> • Ensure F&F visibility of the issue • In the hope that this visibility may result in a more considered approach to 2011 funds • Encourage the development of a more robust and rational funding model 		
Reflection			
Project Impact/significance	Potentially high risk as it may appear to be critical of COO. I have gone to some lengths to ensure he doesn't perceive it in that way.		

Forward action	Report done. Speak to this at the meeting.
-----------------------	--

Situation/Reading	GUILD SLA follow up	Date 31 AUG 2010	Project SAM
Content/events/observations	Meeting to progress leases and licences for Guild		
Analysis	Moving to a formal lease structure with recovery of opex complicates the USQ financial model. The effect may be that FM picks up additional maintenance obligations but the revenue goes to corporate as it is considered a lease income. Also expectations around service levels between Guild and FM as landlord may vary		
Reflection	Guild proceeding with this but concerned about guarantees from USQ that rent collected will go back to SLA.		
Project Impact/significance	Major in terms of services.		
Forward action	Follow up with COO		

Situation/Reading	Meeting with members of ESC	Date 31 AUG 2010	Project Carbon Zero
Content/events/observations	Met with two academic members of ESC to inform them they are no longer ESC members as a result of adding SMD and SBMI. They commented that there is a risk that ESC may become too business oriented and not enough creativity and aspiration		
Analysis	That is a valid point and I must ensure that we retain the visionary component. The inclusion of key business units was meant to help embed the ESC agenda into corporate activity, not to stifle vision, but I can see the risk.		
Reflection	A good point that I had not considered. It would not have changed my decision, but I am impressed by the contribution.		
Project Impact/significance	Minor		
Forward action	Monitor the risk, adjust as necessary		

Situation/Reading	Wok on IPP return to DEEWR	Date 01 SEP 2010	Project SAM
Content/events/observations	New IPP format focusing on condition and utilisation data. Aligned mostly with TEFMA return.		
Analysis	Allows DEEWR to have a better understanding of the organisation's portfolio and use, presumably to be a		

	consideration in future funds allocation?
Reflection	May have implications for USQ as generally good condition but utilisation not good. That said USQ does not receive significant FED funding. Highlighted problems in Archibus that need fixing and also data maintenance (a number of buildings missing)
Project Impact/significance	Further argument in support of a robust SAM framework.
Forward action	Complete and return. Reference SA< project within the return to signal directions at USQ.

Situation/Reading	Meeting with PVC SMD re: Time Tabling Policy	Date 02 SEP 2010	Project SAM
Content/events/observations	Meeting to provide feedback on SMD created policy re centrally time tabled space. Main points relate to linkage with Space Policy and FM role.		
Analysis	SMD unsure re 'ownership' of space, some muddling of space allocation and servicing with allocation management.		
Reflection	Useful meeting. Reinforced the relationship with SMD and clarified a number of value add items as the two policy documents become more aligned.		
Project Impact/significance	Minor		
Forward action	Review amended document		

Situation/Reading	Meeting re SP purchase	Date 02 SEP 2010	Project SAM
Content/events/observations	For my part the purpose was to agree a commitment to try and conclude this by end of OCT. There is still a view that a strategy which suggests USQ will leave SP, or that we are not particularly engaged there is the most likely to succeed. I pointed out that introducing new items with little value would not help us achieve the target date. He suggested that resolving all issues at a meeting in OCT with SLC would be the best way forward.		
Analysis	I do not see how this strategy is credible, when we are having open discussions with SLC re SAF bid, and even including letters of support from SLC in that bid (acknowledging that they are not legally binding). There are almost two completely separate modes at work here; management and governance entities representing very different perspectives on the role of SLC in USQ's future.		

Reflection	<p>We will not achieve the timeline and will therefore lose any leverage opportunity when the SAF bid results are announced. There would still be a remote chance of doing something different but it seems to me our options reduce following the bid result.</p> <p>Indicative of a lack of SAM processes, indicative of real estate planning in response to a funding opportunity, possibly indicative of personal bias around SP location. The valuer represents the greatest risk to the target date as he is working at his own pace and will not be hurried.</p>
Project Impact/significance	Major for USQ
Forward action	Keep trying to resolve and support Council.

Situation/Reading	Meeting with U3A	Date 2 SEP 2010	Project SAM
Content/events/observations	We received an enquiry from U3A re locating at USQ. This was supported by TRC. Meeting held to discuss their financial model and space need. Possible alignment with the new Wagner facility at least in the short term		
Analysis	Useful synergy adding to: TRC relationship; space utilisation, reduced holding costs, increased sales volume for campus retail, community engagement, contribute to summer and winter school activities.		
Reflection	The proposal seems to tick many of the boxes, provided we can agree the terms and conditions.		
Project Impact/significance	Minor		
Forward action	Develop a model that will support their establishment at Toowoomba		

Situation/Reading	DEEWR IPP returns	Date 6 SEP 2010	Project SAM
Content/events/observations	Populating the new format CAMS spreadsheet that forms the asset component of the IPP return. New items include space performance metrics and condition ratings.		
Analysis	Highlighted inaccuracies in the Space Database and the importance of the data quality and appropriate systems to extract and present that data.		
Reflection	Interesting metrics, possibly influencing grant allocations in the future? Supports the creation of the FM Information Officer role.		

Project Impact/significance	Support the systems components of the SAM project, and the BCA and Archibus elements in particular
Forward action	Pursue improvements in systems and data quality.

Situation/Reading	WPP IUD Project	Date 7 SEP 2010	Project SAM and Carbon Zero
Content/events/observations	Meeting to go through in detail the performance of the pilot dashboard. Numerous data errors apparent. The meeting finally resolved to use the data provided in the TEFMA returns		
Analysis	The reality is that the project has achieved little more than a series of screens no more sophisticated than might be achieved with IE and XL. The opportunity and sophistication that might have been captured through timely and dynamic data representing best available knowledge has been lost. The focus has moved away from utility to appearance.		
Reflection	Very disappointing outcome, but may add support to the case for USQ DWBI project		
Project Impact/significance	No short term method of representing FM related KPIs in support of SAM within a corporate system.		
Forward action	Explore WEB page options to host KPIs, or even share point as per the ICT model. Participate in DWBI project		

Situation/Reading	WIN TV re Tennis Centre	Date 7 SEP 2010	Project SAM
Content/events/observations	Interview with WIN re project progress. Focused on benefit to TW community and the region.		
Analysis	A positive story and one of regional and local interest. Portrayed USQ in very positive light		
Reflection	Necessary to promote and an opportunity to reinforce relationships and USQ role in community.		
Project Impact/significance	General impact but illustrates one Strategic enabling role of FM		
Forward action	Continue as planned. Link video clip to Project Web page.		

Situation/Reading	Guild re R Block cafe	Date 8 SEP 2010	Project SAM
Content/events/observations	The Guild asserts that it has not been consulted in the design of the new café. Discussion around layout and fitout and more importantly, the role of the café within an overall strategy		

Analysis	Key thing is that there is no retail strategy to cover the relationship between the 3 catering outlets (C, R and Refectory) and how they will operate and the market they will serve. There are design improvements to be had and a follow up meeting is necessary tomorrow if the project is not to be delayed.
Reflection	Another example of poor project communication, highlighting the need for systematised approach. Raises the question as to how much influence the GUILD should have at this stage given the possibility of using an independent trader.
Project Impact/significance	Minor. Risk that we may miss maximised value around the café function supporting the Refectory.
Forward action	Consider the points at a meeting with the Architects tomorrow.

Situation/Reading	GUILD re R Block	Date 9 SEP 2010	Project SAM
Content/events/observations	Relationship matrix provided by the Guild. Architect reluctant to change anything and not empowered (would not commit, only refer to senior architect in BSB). Our PM is concerned re costs and delays.		
Analysis	The changes requested look reasonable to me and in fact a better design, providing more linkages through the spaces.		
Reflection	Architect client service approach is unusual. PM is more focused on delivery than function or subsequent reputational risk GUILD had good points to make and the overall retail catering strategy is starting to appear		
Project Impact/significance	May delay the HUB a little but worth the changes.		
Forward action	Speak to PM after the meeting to encourage adoption of the proposals.		

Situation/Reading	Mid year performance review EA	Date 13 SEP 2010	Project Carbon Zero
Content/events/observations	Discussion regarding EA professional development aspirations as part of her performance interview. I commented that she has done a lot of higher level work engaging with the Env. Audit process and that she appears interested in that aspect of FM. She confirmed that she was. I suggested she might consider the Environmental Officer role once it is established.		

Analysis	EA is very keen and competent at the coordination and people relations component. Her project management of the Audit was certainly competent. She lacks technical knowledge around sustainability but researches proactively when a gap is identified.
Reflection	EA would be a good candidate for the Env Officer role, particularly around the staff and student engagement component. Tech knowledge can be developed readily enough.
Project Impact/significance	This would be a good development for EA and USQ and it would reduce the risk of not appointing an EO (internal candidate)
Forward action	Encourage as appropriate

Situation/Reading	Radio interview re tennis centre	Date 14 SEP 2010	Project SAM
Content/events/observations	Telephone interview, promoting the benefits of the Tennis Centre		
Analysis	Good news story. Positive focus. Lines up with USQ goals re community engagement, state and federal partnering etc		
Reflection	Ironic, considering we came very close to not participating.		
Project Impact/significance	Limited impact, but can be used as a successful example of JV project with significant community engagement. Leverage for the future perhaps		
Forward action	No particular action, but the experience and observation of political influence will shape the way I approach such projects in the future.		

Situation/Reading	Meeting re water consumption	Date 14 SEP 2010	Project SAM
Content/events/observations	Meeting to discuss problems with USQ excessive water consumption.		
Analysis	USQ has exceeded licence volume largely due to Japanese Garden lake seepage. In addition FoE has recently filled their agriculture dam by using town water supply and a hose pipe.		
Reflection	The lake may not be economically solvable, so we may need to negotiate a site wide licence approach, noting that this does not reduce consumption, but addresses the compliance aspect. The FoE issue should be solvable but also points potentially to a lack of awareness of the initiatives and or the overall water situation for USQ; again something that will be		

	covered once we have an EO
Project Impact/significance	Significant in terms of non-compliance.
Forward action	Solution for sealing lake; locks to be fitted to all external town water outlets; continue rain water retention programme. Possible renegotiation of licence arrangements.

Situation/Reading	DWBI meeting	Date 14 SEP 2010	Project SAM
Content/events/observations	Meeting to discuss project funding bid to ICTSC. Essentially the bid is too large in the 2011 funding climate. I suggested a staged approach with about 500K for next year.		
Analysis	ICT CAMP reduced to 3M Cap and 1M OP. They have about 9M of projects they want to do plus the DWBI		
Reflection	This is probably one of the more important enterprise level projects, but is unlikely to get much traction with out COO and VC pushing.		
Project Impact/significance	DWBI would have direct inputs from and to SAM. Improved data quality, timeliness, KPIs etc		
Forward action	Continue supporting the project		

Situation/Reading	COO Meeting to discuss various issues	Date 14 SEP 2010	Project SAM
Content/events/observations	Guild SLA – I raised lack of progress within interim agreement, need for direction regarding Guild in the HUB and to engage wider commercial opportunity or not. No decision Springfield fire safety: being used as another reason for more space. I undertook to meet with QLD Fire to discuss. FM Structure: I tabled a restructure proposal designed to meet the constraints of the 2011 budget allocation and also refocus on strategic priorities (create the Env Officer position, and a new data/information role so crucial to SAM and engagement. No decision.		
Analysis	Lots of talk little resolved. If the restructure is not accepted we will have some challenges for 2011 and will need to consider how we focus our resources.		
Reflection	2011 funding: is it a one off blip or of more significance? If a one off, then we might just try to get through as best we can, if longer I would want to make some representations		

	in a different way and at higher levels. I might also have a different view of structure.
Project Impact/significance	The restructure is the only way I can appropriately assign resource to SAM and Carbon reduction. These roles are key to the sustainability of the two initiatives once they become embedded in the business as usual.
Forward action	Pursue with COO at regular intervals

Situation/Reading	Meeting re Bookshop, COO and CFO	Date 15 SEP 2010	Project SAM
Content/events/observations	Meeting to discuss, relocation, resources, potential integration of pick , pack and ship functions to main store and mailroom.		
Analysis	CFO reversed his original support and is now very nervous, referring to the model not being broken so why change it. Opportunity to integrate stores and despatch functions and save FTE whilst accessing (through integration) a wider resource base and thereby improving business resilience		
Reflection	Disappointing lack of willingness to engage with enterprise level efficiencies from the CFO, fortunately COO was quite committed to achieving something from this and got it across the line as a pilot project at least.		
Project Impact/significance	Limited impact, but is important to engage these opportunities and to be seen to be doing so.		
Forward action	Continue to work on this project, particularly the pilot. There will be staff resistance so a particularly non-threatening approach is required. Involve Ops Manager so that I can distance myself whilst also driving the change.		

Situation/Reading	Tennis Centre lease documents	Date 16 SEP 2010	Project SAM
Content/events/observations	Ops Manager requested that I run through the lease document and various changes requested by Tennis Queensland. My contribution is two fold, one to align the document with the JV context and two, to provide some development for Ops Manager through the process.		
Analysis	A number of contentious elements are items that go to the original funding agreement and also to the management agreement yet to be developed. The document does need some alteration to suit this unique JV context.		
Reflection	I do see some of the requested changes as low risk for USQ and have recommended to Legal they be made. This was a one hour meeting that took three to finish. Ops		

	Manager very willing to be guided line by line through the document. Excellent.
Project Impact/significance	This is evolving (via the media opportunities) into a flagship project and will attract additional political risk. Also we saw at the beginning that there is no willingness to entrench in a position and stall the project further.
Forward action	Endorse changes

Situation/Reading	Meeting with DEEDI and ULDA	Date 17 SEP 2010	Project SAM
Content/events/observations	Met with DVC(R) plus DEEDI and UDLA. UDLA introduced themselves and their role. In essence they report direct to Queensland Government and are tasked with making projects happen for the greater good of the state. As presented, they can short cut through approval processes, legislation, land titles etc. Their reason for being at USQ is that they are looking for a regional university to undertake some community integration in terms of residential and retail merging with the campus (citing US models and some urban Universities). They referenced discussions with TRC.		
Analysis	ULDA appear to have great power and autonomy. If this can be harnessed or more accurately managed by USQ it could be a good thing. It might also work against us and remove control from USQ with our campus planning done from Brisbane.		
Reflection	General caution about engaging with these folks, particularly with no specific proposals or ideas on the table.		
Project Impact/significance	This could have a significant impact on Campus planning and development. I am unsure if we would perceive those changes as positive or otherwise. I do wonder about the utility of USQ needing to make a case to UDLA about campus space planning and development (worse case scenario).		
Forward action	Follow up with TRC regarding the nature of discussions and their intended level of engagement with UDLA.		

Situation/Reading	Meeting with ICT re computer lab utilisation rates	Date 20 SEP 2010	Project SAM
Content/events/observations	ICT are seeking to reduce the number of ICT labs. They have data that shows low utilisation and some recommendations around which spaces might be reapplied to other use.		

Analysis	Good data and when considered against the functions to be provided in the HUB and learning commons it makes the argument for reduction more compelling.
Reflection	I am delighted that the relationship with ICT is positive to the extent they can approach us like this. I hope that the discussion re space can become a part of the routine FM/ICT meetings
Project Impact/significance	Improved space utilisation, power and facilities cost reduction, recovery of under utilised space are all key outcomes of SAM
Forward action	Support and represent initiative to COO

Situation/Reading	Meeting PVC SM and COO re GUILD SLA	Date 20 SEP 2010	Project SAM
Content/events/observations	General discussion on how its going and how to proceed. Some though t that we have not achieved goals on any level and that an extension with more internal effort during that extension period might be the way to go. I raised again the opportunity to test a commercial provider and also the need to separate the student activity from the commercial provider activity as the Guild mains strategy is to muddle the two and leverage one against the other.		
Analysis	SMD are proceeding with their own agenda with no consideration of the Guild activities or service levels, largely due to a lack of confidence it appears. From an FM perspective we need to design the new retail spaces and this is influenced by who the tenant will be. We also need to finalise the leases for the various guild occupied spaces etc.		
Reflection	I am not sure the COO knows how to deal with this at all. He appears genuinely worried about doing anything which may have a negative (from their perspective) impact on the Guild.		
Project Impact/significance	Minor but impacts on staff and student experience		
Forward action	Keep pushing and contributing. Develop the lease documents to final stages for an April 2011 implementation.		

Situation/Reading	Meeting with Finance	Date 20 SEP 2010	Project SAM
Content/events/observations	2011 budget meeting. Purpose to recheck 2011 figures assuming new structure and points being discussed with		

	COO
Analysis	Interpretation issues around COO and GM FM discussions. Side direction coming from Dir Budgets to our Management Accountant is influencing agreement.
Reflection	Not resolved yet, more COO involvement required and perhaps for some aspects, contrary to Finance preference.
Project Impact/significance	SAM will be impacted by budget constraints for 2011. This needs to be resolved.
Forward action	Follow up again with COO

Situation/Reading	Bookshop staff meeting	Date 20 SEP 2010	Project SAM
Content/events/observations	Meeting to present intentions to staff. Some hostile staff; the manager did not play any leadership role at all, neither did the CFO. The presentation was mainly by the COO with support from me. HR providing some information and clarification for those that needed it. As agreed earlier we suggested a 6 month trial period.		
Analysis	Openly hostile and aggressive by some staff. Needs significant effort from management to bring them on board through the trial. Given the lack of engagement from CFO and Manager Bookshop I would almost suggest a reporting line change to FM.		
Reflection	This needs a very accommodating approach from FM as we are certain to see a list of reasons why it can't work very shortly, particularly around the space and integration aspects. We will do all that we can to remove those excuses without over investing in this pilot project.		
Project Impact/significance	Low for SAM, but if sabotaged will impact significantly on student experience and USQ reputation.		
Forward action	Raise the suggestion with COO and monitor whether there is any improvement in engagement from staff as we approach pilot implementation.		

Situation/Reading	Meeting with Carbon Control	Date 21 SEP 2010	Project Carbon reduction
Content/events/observations	Met re carbon monitoring software. Some issues around the licence document but he was very obliging and changed immediately. Discussion around time frame.		
Analysis	Small company but appears focused.		
Reflection	I am keen to get this implemented this year if possible but it may not be.		

Project Impact/significance	This is a key tool in raising awareness and profile. If we can automate as many of the inputs as possible it will also help in sustaining the reporting regime, which is currently very manual.
Forward action	Project now initiated progress as appropriate. Think about communication strategies and links with FoB for academic use.

Situation/Reading	Meeting re Eco Transformation Project	Date 21 SEP 2010	Project Carbon Reduction
Content/events/observations	Met re project initiation. Positive meeting and gave me confidence around the appointment (technical and realist).		
Analysis	They are able to commence in NOV with on site inspections. Perhaps looking toward Mar or April for completion.		
Reflection	This is a significant part of the strategy for carbon reduction. The ESD elements of this project will be assessed and accepted (planned for funding and implementation) or rejected. We can then develop an overarching strategy based upon (in part) those studies.		
Project Impact/significance	Major, this forms a significant part of the foundations.		
Forward action	Engage and support fully. Project timeline to be submitted within two weeks. Integrate this with USQ project plan and time line.		

Situation/Reading	Paper to VCC re learning materials; provided by GM SBMI	Date 22 SEP 2010	Project SAM
Content/events/observations	Connects with our efforts to integrate DeC industrial processes with FM, plus enterprise level opportunity around PrinterFace software, already a core system, rather than further investment in CPMS.		
Analysis	Incomplete and biased paper. Factually incorrect in places. I made some changes and sent through to COO		
Reflection	DeC offering a very narrow solution to a much wider issue. Why do COO and DVC GLD not pick up on this and send me a copy for input? Highlights the risks around not being a member of VCC. Perhaps I need to soften my approach with DeC to the extent that they feel inclined to consult with us more rather than being in competition?		

Project Impact/significance	Minor to SAM as a whole but significant to USQ in that it avoids an enterprise level efficiency through the integration and centralisation of mail, stores and distribution services.
Forward action	Pursue with COO and DVC (GL). Consider improving the communication with DeC

Situation/Reading	Meeting with legal re SP	Date 22 SEP 2010	Project SAM
Content/events/observations	Purpose, to highlight changes required to the Relationship Deed and communicate those to SLC, in parallel with price discussions		
Analysis	Changes focused on land ownership, operational constraints, strategic planning and mutual support		
Reflection	Whilst it is useful to have this developed it may be antagonistic to present it whilst the debate over price is so heated. It may act as a gap 'multiplier to the negotiation and not serve our purpose.		
Project Impact/significance	Could undermine delicate negotiation. Longer term financial sustainability of campus is improved through ownership, subject to any adjustments through negotiations.		
Forward action	Discuss with Council timing and application of the document and any release.		

Situation/Reading	ESC Meeting	Date 22 SEP 2010	Project Carbon reduction
Content/events/observations	Refer to Minutes but the main purpose was to get endorsement of the environmental audit reports and then release them to VCC		
Analysis	Some dissent amongst the members who needed more time to critique. I agreed to give 2 more weeks and then resolve through a flying minute.		
Reflection	Some folks have not read the documents or fully engaged with the audit. Some are adding real value. This is a good compromise.		
Project Impact/significance	Crucial that we are all happy with the documents.		
Forward action	Pursue with flying minute and consider how to provide to VCC given their current overloaded agendas.		

Situation/Reading	SBMI planning meeting	Date 23 SEP 2010	Project SAM
Content/events/observations	Introduction of enhanced planning format and structure.		

Analysis	Improved from previous, but still too late in the year and therefore 'reactive' mode to a large extent. This should be driving budgets and CAMP etc, but instead we are simply reflecting those items in the plan. In its current form it still runs the risk of being a wish list and not robustly connected with funding envelopes.
Reflection	I note that the SAM faculty planning template (or content from that) is still not included in the corporate planning documents. That was a commitment by GM SBMI that I will follow up on. Important as the current documents do not have any real world linkages to inform FM planning, in that goals are still soft and non specific.
Project Impact/significance	Major, this is crucial to the successful adoption of SAM and FM acting as a strategic enabler.
Forward action	Discuss with GM SBMI

Situation/Reading	Meeting with COO re budgets	Date 23 SEP 2010	Project SAM
Content/events/observations	Further meeting to refine wording around budget response proposal. Still debating deficit carry forward, appointments being dependent upon surpluses being achieved, no ability to operate at the bottom line and move money around within FM cost centres etc.		
Analysis	Significant hurdles: may not move between CC's; deficit carry forward; can not integrate with Printery because finance treats it as a profit centre and therefore we keep it separate??; time is running out for restructure to be effective in 2011; we already carry Asset manager vacancy; service contract implications particularly security		
Reflection	COO appears to be very mistrustful in this area. The offer from me is to operate within the funding envelope required, but to enable that, I need some ability to move funds around as necessary (only within OPEX). Very hard to understand why this is so hard		
Project Impact/significance	Major as funding will influence elemental implementation of SAM, acknowledging that the framework remains in place.		
Forward action	Redraft and resubmit following the meeting.		

Situation/Reading	Meeting with DVC GL and COO re course materials	Date 27 SEP 2010	Project SAM

Content/events/observations	My suggested edits to the VCC paper caused some reaction as DVC realised there is a whole other story to be told. He listened to the verbal brief and agreed that it needed to be changed to consider the enterprise level opportunities. He was also unaware of dialogue that had occurred in 2008 and 2009 around the contraction of DeC and was surprised when I produced copies for his information.
Analysis	DVC seems not have been given a complete brief by his staff. He appears to be genuinely embarrassed by that and engaged in the wider opportunity. COO is treading softly and suggesting that it is up to the DVC what happens with the Y Block space as it is all his Division that reside there. I do not agree; if we abdicate on that basis we lose the enterprise focus.
Reflection	Some progress then. The new Director of DeC also seems to be thinking more holistically, perhaps as she to gets a better understanding of DeC. I will develop this opportunity and arrange a 1 on 1 meeting with her.
Project Impact/significance	Significant space implications and secondary operational and precedent issues
Forward action	Keep up the pressure. Arrange meeting with Dir DeC.

Situation/Reading	Further meeting with COO re budget	Date 27 SEP 2010	Project SAM
Content/events/observations	Further explanation around budget management and structure. COO appears to be on board and states that none of this is a big problem etc.		
Analysis	I am not sure COO is completely familiar around the rules of Finance at USQ. In particular carry forward policy, authority of the cost centre manager.		
Reflection	My impression is that resistance is being experienced via Finance.		
Project Impact/significance	As previously stated		
Forward action	COO to provide edits to the document based on our discussion today and send to me. I will confirm and then hopefully we can move on.		

Situation/Reading	ACTS Conference	Date 29 SEP – 1 OCT 2010	Project Carbon Reduction
Content/events/observations	<i>Refer separate conference notes</i>		

Analysis	
Reflection	
Project Impact/significance	
Forward action	

Situation/Reading	COO edits re budget	Date 30 SEP 2010	Project SAM
Content/events/observations	COO sent through his edits from last weeks meeting. Still fundamental problems. I note it has been sent to Finance as well as the 'agreed document'. It isn't.		
Analysis	This is really highlighting the gap between what is said and what is done.		
Reflection	I will not be public about this but I do need to modify it again. Is this 'say/do' gap a result of disengagement in the meeting or subsequent re-consideration, or some other thing?		
Project Impact/significance	As before		
Forward action	Send email advising some changes needed and send updated version. UPDATE: done		

Situation/Reading	TEFMA /TEMC	Date 3 OCT – 6 OCT 2010	Project SAM
Content/events/observations	<i>Refer separate notes</i>		
Analysis			
Reflection			
Project Impact/significance			
Forward action			

Situation/Reading	Tennis Centre sod turning ceremony	Date 8 OCT 2010	Project SAM
Content/events/observations	Ministerial attendance and sod turning ceremony highlighting the political profile of this project. USQ Council and SEG attended numerous media.		
Analysis	Very positive and cements the commitment of all to the		

	project being a success, plus the positive community messages around collaboration and benefit.
Reflection	I start to believe the hype myself. Perhaps the centre will be very successful. I do hope so. I believe we will have an enormous political challenge should we wish to recover the asset at the expiration of the 10 year lease; something we might consider doing if the financial performance is marginal.
Project Impact/significance	For SAM minimal; highlights political layers, communication, JV projects, leveraging off opportunities like this.
Forward action	Make it work through engagement with the management committee once established.

Situation/Reading	Synoptic CMPBIE stage 3	Date 11 OCT 2010	Project SAM
Content/events/observations	Intro meeting for PCG. Now examining the 'to be' phase of processes around course material development, production and despatch.		
Analysis	One might ask why this is happening now, when there is recently a paper offering all the solutions submitted to VCC from DeC? The scope of this appears to exclude the 'could be' opportunities in that integration of space and production facilities is excluded from scope, as it isn't current practice. Remarkable!		
Reflection	The 'could be' component is what will deliver the value from this significant commission (300K). I will lobby for the scope to be expanded in this regard.		
Project Impact/significance	Space, policy, resource, present implications.		
Forward action	Seek to have scope expanded to include 'could be' having regard to operational and space synergies and opportunities.		

Situation/Reading	Various meeting re ICT relocation from Y Block	Date 23 SEP 2010	Project SAM
Content/events/observations	Meeting with Manager Planning and Space, followed by Meeting with CTO, followed by meeting with ICT Staff representatives. The staff don't want to move. The ICT managers do want to move. A series of specific policy and legislative references have been offered to prevent the move. We have addressed each of them.		

Analysis	My approach was to paint the big picture around space. Starting with the HUB project, learning commons and the bookshop moves, pilot project in O2, Faculty of Science remodelling, Student services consolidation into Y Block, DeC contraction, release of space in E Block through server removal and a desire on ICT management part to consolidation, consistent with wider Uni practice. Following the explanation they appeared happy.
Reflection	This is an internal conflict between ICT management and staff. FM was able to assist ICT management in resolving it through staff engagement. I consider this to have been a win for FM
Project Impact/significance	The logic of the strategic planning and master planning won out. Numbers of staff are also now more informed about how FM operates these things; we were also seen as being responsive to the client.
Forward action	None required other than project delivery. Manager Space to minute the meeting and confirm no outstanding issues.

Situation/Reading	Meeting Dean of Science	Date 13 OCT 2010	Project SAM
Content/events/observations	Following the final space review report I wanted to get confirmation from the Dean that the space solution offered meets the known need of the Faculty for the next 3-5 years.		
Analysis	Dean was a little coy on this as there are other projects under discussion but agreed that based on what we know today it would meet the faculty needs.		
Reflection	I am not fully convinced that sciences won't be back at the end of next year saying they need more space. But I have done as much as possible to avoid that, and I am delighted that we are remodelling existing space rather than building a new facility whilst not closing the old.		
Project Impact/significance	Excellent example of what can be achieved to improve the utility and condition of existing space if there is the will to do so. This was originally a federal grant for a new building; we can now reapply that to the remodelling. A new build would worsen utilisation, increase depreciation and would not release or improve old stock.		
Forward action	Monitor progress; leverage off this project with other Deans; monitor FoSc development plans via regular meetings with Dean.		

Situation/Reading	Paper to Council re PMA	Date 13 OCT 2010	Project SAM
--------------------------	-------------------------	----------------------------	-----------------------

Content/events/observations	The last Council meeting raised a query around guild consultation regarding the R Block Coffee shop.
Analysis	<p>Guild attempting to guarantee their retention as commercial provider by leveraging off the student focus within council. Completely inappropriate.</p> <p>My paper addressed the process around the issue, pointed out that consultation had been open for over 12 months with no feedback, and commented that in addition to the Guild subsidy of \$700k, they were receiving further in kind support to the tune of \$1M being the opportunity costs and unrecovered operating expenses around occupied space and unlicensed activities.</p>
Reflection	We must separate the commercial provider function within the Guild. At the moment the Guild is doing nothing differently from 3 years ago (or longer). We might consider appointing an independent trader as a pilot and see what happens.
Project Impact/significance	Impacts on HUB design, staff and student service levels, USQ revenue and cost recovery.
Forward action	Push for a commercial pilot in one of the cafes.

Situation/Reading	Meeting re Centre for sustainable studies at SP	Date	Project
		14 OCT 2010	SAM
Content/events/observations	Met with new Professor re future growth and plans at SP and his centres space needs. Also discussed SP student levels generally and staff retention issues.		
Analysis	<p>Good discussion, his space needs can be met quite easily over the time frame presented by him.</p> <p>Discussion around student numbers corroborates our impression that students on campus numbers are very low. He said it's like a ghost town and his staff don't like coming into the office because there is no atmosphere or vitality.</p>		
Reflection	The low numbers are known to me but I had focused on the data as a way of slowing premature facilities growth. I had overlooked the impact on staff and student experience. But again it suggests that holding off a new building so that we make the existing busier is the right solution.		
Project Impact/significance	Goes to the core of early advice engagement around Faculty or Unit growth projections/plans, and also illustrates the important bi-product of good utilisation in that staff and students want to be in a busy space.		
Forward action	Refresh with him next year and chase up pedestrian counter installation at SP.		

Situation/Reading	Reviewed draft Action Plan report re ENV Audit	Date 14 OCT 2010	Project SAM
Content/events/observations	Numerous edits and minor changes. Of more significance is the generic nature of many of the recommendations. This becomes increasingly obvious when they try to put this into a specific USQ Action Plan.		
Analysis	The re is not sufficient acknowledgement of the current activities, constraints and plans of the university to make the development of a specific action plan meaningful or useful. It may in fact serve to undermine the report as the mismatch increases. Another concern is the lack of prioritisation, either in terms of GHG impact , or cost, or ease of implementation , or value proposition.		
Reflection	We have probably asked too much of the consultant in this last phase and we should refocus on ESD specific recommendations, supported by Sustainability implementation practice advice. The development of a USQ specific action plan will be essentially be the Carbon Reduction Project Plan. I am not willing to send this to ESC members in its current form.		
Project Impact/significance	Credibility is vital for engagement and adoption.		
Forward action	EA and I to revise document to give indicative changes so that it can be remodelled, refocused and resubmitted.		

Situation/Reading	Develop F&F report for next meeting	Date 20 OCT 2010	Project SAM
Content/events/observations	Taken the deliberate step to try and engage specifically F&F members with the carbon reduction project.		
Analysis	Currently the environmental component gets little exposure or management impetus		
Reflection	I am doing this in the absence of proactivity from management and in the knowledge that some F&F members are interested and engaged with environmental issues and that they also have an audit and risk responsibility that has substantial linkage with our environmental performance. The goal is to achieve a top down and bottom up approach with senior management being the recipients of that flow.		
Project Impact/significance	Could be a significant enabler and at worse it will help to highlight current levels of commitment		

Forward action	Regular inclusion of the environmental component and off line engagement of key members.
-----------------------	--

Situation/Reading	Bookshop meeting	Date 21 OCT 2010	Project SAM
Content/events/observations	Further meeting with COO, CFO HR and Manager Bookshop. As anticipated, the Manager presented the list of reasons why it couldn't work. Although clearly written in a negative way he suggested they were just aspects that needed consideration. CFO nil contribution. He also tabled a floor plan that essentially consumed 50% of the store area and appeared to be a simple pick up and drop exercise from W Block (no consideration of the efficiencies or competing uses).		
Analysis	Another example perhaps of the manager simply being a post box for his staff and not delivering any leadership. The list is a very mechanical one and can be resolved. Some items are enhancements to their existing situation (new phones etc) and will not be necessary for a pilot.		
Reflection	The down side is that it is a list of reasons why not, and signals an attitude. The good news is that we have a list we can deliver against without too much difficulty. The attitude change we will continue to work on and hope that once it is underway the benefits and logic will be apparent.		
Project Impact/significance	Moderate		
Forward action	Continue with the positive engagement. Quick time solutions for the space hardware/fitout. Focus on integrated solutions for the production area rather than two separate but collocated functions		

Situation/Reading	Meeting with TRC and PVC SMD	Date 22 OCT 2010	Project SAM
Content/events/observations	Meeting to introduce PVC to Cllr and to discuss a number of items around closer links with TRC. PVC left after we had covered the student engagement items. For SAM we discussed community facilities that were needed rather than being provided by USQ, we spoke re shared Japanese garden, we spoke re land and also the transfer eventually of Baker Street to USQ to create a contiguous campus. We discussed the ULDA visit and our mutual perspectives of that, around which we seem to have a common and cautious view.		
Analysis	Very good meeting with open and frank dialogue. Cllr is happy to be the POC for me within TRC on matters at this		

	level.
Reflection	Very useful and will assist in the water consumption issue re Japanese garden hopefully
Project Impact/significance	Significant as an enabler
Forward action	Follow up in a couple of weeks

Situation/Reading	Phone call SLC	Date 22 OCT 2010	Project SAM
Content/events/observations	Developed a short cut proposal with SLC to present proactively. Essentially, they offer USQ freehold title of 4ha, no constraints, no volumetric lots, no relationship deed etc and payment over a 5 year window.		
Analysis	We need something to work with if we are to complete by Christmas. This addresses all councils concerns and makes us autonomous at SP, but comes at a cost, in particular earlier and bigger investment than the student load requires.		
Reflection	Finance will have to consider the affordability of any proposal, but the gesture itself is likely to enhance the negotiating environment. This movement also suggests that SLC and Mirvac relations are increasingly relying upon a cash injection.		
Project Impact/significance	This could be a significant step forward if it remains clean. Too often these ideas have failed shortly after their introduction due to bogging down in the detail.		
Forward action	Raise this with Council next week. Chat to SLC on Monday to check further thoughts and progress.		

Situation/Reading	Springfield visit	Date 25 OCT 2010	Project SAM
Content/events/observations	Attend Council meeting and also talk with SLC over lunchbreak. All went well and a good response to the tentative concept (ignoring affordability at this stage) Discussion re the Valuer and his unwillingness to write down his valuation figure. Agreement to use a different Valuer going forward if necessary.		
Analysis	Council welcomed the idea, but more importantly perhaps appeared to be tiring of the negotiation and lack of progress.		
Reflection	Perhaps Council is ready to bring this to a conclusion?		

Project Impact/significance	As before
Forward action	Work with SLC to get a proposal. Check with CFO so that the affordability issue doesn't come as a surprise, plus I may be able to influence the proposal around affordability.

Situation/Reading	Bookshop	Date 27 OCT 2010	Project SAM
Content/events/observations	Meeting with Manager and FM only to inspect space and try to develop floor plans. Discussed need to look at this as an integrated process. All agreed and the floor plans were revised accordingly.		
Analysis	In this forum Manager was quite reasonable. Space needs can be met reasonably. Now need to engage individual staff with the pilot.		
Reflection	Individually the manager is competent, but in the group environment lacks any leadership ability. The space will be suitable in an integrated model and physical changes are minimal.		
Project Impact/significance	Pilot is likely to be more successful. Good example going forward hopefully.		
Forward action	Set up another meeting, revise floor layouts, define HVAC solution and engage bookshop staff directly.		

Situation/Reading	Guild SLA	Date 28 OCT 2010	Project SAM
Content/events/observations	Meeting to talk about next actions with SLA. Similar to the last meeting. I pushed to test a commercial provider. COO very cautious again and suggested we undertake a review. I questioned what we had been doing for the last year if not reviewing. PVC SMD suggested an independent reviewer. COO resisted that and suggested a review panel with an independent on it.		
Analysis	More of the same. The key here is to actually do something to make the Guild sit up and understand that they get in the game or get out of the game. The C Block café provides an idea opportunity to try and source an independent provider and shake up the Guild monopoly. At this moment in time is there anything about the Guilds operation which is different to 3 years ago? No.		
Reflection	COO appears to be so risk averse that I can only assume he has some fear of negative feedback via Council.		

	This puts us in limbo re rent recovery and leases and sets to one side all the work around KPI's and achieving transparency.
Project Impact/significance	Minor for SAM, but moderate for student and staff satisfaction and experience
Forward action	Keep pushing for a trial. Lobby chair of F&F out of session.

Situation/Reading	Meeting with Dir Library	Date 29 OCT 2010	Project SAM
Content/events/observations	Meeting to discuss floor space and impacts for library arising from the HUB project.		
Analysis	Direct engagement is on my agenda and this was the catalyst. Manager Space was not making headway with the library staff around the collection relocation. In this meeting we agreed an outcome that sees the collection going in part to L3 and in part to the new archive building. We also agreed that LTSU would move down to L1 as recommended by GLD review. That gives me an ally when meeting with other stakeholders re unresolved space.		
Reflection	We seem to have experienced tenants going off and designing their own floor plans in isolation of the whole concept. This has occurred all the way through the project and I feel that it is in part due to a lack of communication skills and experience on the part of our team. I now almost expect University tenants to behave that way. Highlights again the importance of good communications (aka the new Information officer PD) and perhaps increased mentoring on my part.		
Project Impact/significance	For the HUB project vital; for SAM it supports the principles and helps reinforce FM's role and contribution.		
Forward action	Set up a meeting with LTSU On the back of this apparent success working together, follow up again re DeC.		

Situation/Reading	Site visit to VUW, NZ	Date 1 NOV 2010	Project SAM
Content/events/observations	<p>Technical innovation</p> <p>Creation of smaller but connectable lecture space with full IP camera surveillance. For web casting. Power points and fully wireless through all of the new build.</p> <p>Student consultation was done via student union and web feedback</p>		

	<p>Reference sites MIT</p> <p>Challenges in design delivery</p> <p>Decant space and compromise around capacity. Frequent worse case scenarios proved to be too onerous or ambitious for the design to accommodate.</p> <p>Open plan office, lab and workshop with light corridors via glazed inserts linking one side of the building too the other. Very positive.</p> <p>Range of space types giving group open and group private spaces. I note that the private ends of the floor tended to be well used. In fact all of it was.</p> <p>Ownership of shared space- operational issues? Significant and still wrestling with this. They have created multiple spaces around the new builds that create opportunity for social interaction with drink and food permitted in all locations. Looking at additional staff and expand duties for existing to deal with the additional cleaning and furniture reconfiguration each day.</p> <p>Student and staff feedback Positive</p> <p>What works well? Light, range of spaces, pc lap top support infrastructure. Increased commercial and catering. Cafe in the bookshop.</p> <p>What would you do differently? Large auditorium could be bigger. More flexible spaces able to be expanded when needed.</p> <p>Importance of colour and furniture design? Ie movable by students? Vital for movable by students. Avoid carpet colours that show all the spills and dirt, no bean bags.</p> <p>Any other comments or suggestions? Might have put some hard wired network jacks as not all wireless is good.</p> <p>Dave observations Amazing to see the difference here. The new buildings are just fantastic and sit in stark comparison to the old. Good benchmark going forward. Video in all rooms and now using a Skype style program so two tiers of Video conferencing</p>
--	--

	<p>available. Via grid for high quality using ISDN lines and "scoria?" using standard IP network for daily use.</p> <p>Extensive glazed offices allowing light right across the floor plate. Some resistance initially but now acceptance.</p>
Analysis	As above
Reflection	Lots of good lessons around the space design that we must try to apply on an appropriate scale.
Project Impact/significance	
Forward action	Feedback to projects team

Situation/Reading	Site visit to Otago University, NZ	Date	Project
		02 NOV 2010	SAM
Content/events/observations	<p>Technical innovation More AV next time, more power points, LAN wiring as well as wireless. Use of borrowed lights and reflectors into the ground floor area. Flexible infrastructure</p> <p>Student consultation Focus groups were engaged at concept stage over 2 years. Included creation and critique of prototypes and mock ups.</p> <p>Reference sites Architects hardy Boltzmann and fifer, maybe fifer associates now.</p> <p>Challenges in design delivery A variety of spaces was required allowing students to choose and reconfigure spaces as far as practicable. Made design ore difficult. Variety of light fittings is vast and this is creating some challenges for maintenance. Energy efficiency measures were difficult, we wanted timers on desk lights but students broke them</p> <p>Ownership of shared space- operational issues? Allowed food and drink into the library and no problems with that. Help and loan desk design wasn't great initially so we removed original fixtures in favour of more functional configuration. Security of collection prevents opening of the link across to the social area. Could it be fixed</p>		

	<p>with RID asset tags? Potential high cost. This was a surprise to FM DIR who thought the link to the social area was generally open; apparently not!</p> <p>Student and staff feedback Still works well, feedback is good. Over 90 percent satisfaction via survey. Heating is sometimes a problem perceived as comfort issues. Maybe a factor with solar gain and fully open plan areas</p> <p>What works well? Lights channels, flexible spaces. View shafts through collection stacks, staff space fully open plan. Would be better with more break-out spaces serving the open plan areas, even open sided but semi private space, as well as enclosed meeting rooms.</p> <p>What would you do differently? Some noise via proximity to link area (reflect for USQ learning commons). Upgrade the furniture quality but keep the diversity of furniture. Beanbags are not good. Keep it movable if possible. People are getting physically bigger, some furniture doesn't work for larger folk.</p> <p>Importance of colour and furniture design? Ie movable by students? Approach to colour is different with a library interior; people bring their own colour with them as does the collection. A neutral palette works best and is sympathetic to the users. Strong colours close in the walls</p> <p>Any other comments or suggestions? Stand alone furniture is more flexible, avoid fixed Relationship between library and fm is vital in keeping the space functioning well, so we have a liaison position for us and fm.</p> <p>Observations Space ratios 4.2m for open plan space 1.4 seats per efts</p>
Analysis	
Reflection	As above. Lessons for the Hub and FC Library redesign.
Project Impact/significance	

Forward action	Document independently and include photos for Simon and Ken.
-----------------------	--

Situation/Reading	Meeting re Campus Ecological Project	Date 4 NOV 2010	Project Carbon Reduction
Content/events/observations	Consultant arrived today for site inspection and data collection. Spent some time sharing ideas and the USQ situation.		
Analysis	It appears that a number of the plant items that were previously decommissioned or removed due to varying power tariff structures would have been useful in a tri-generation model. i.e. radiators for heating, central cooling plant		
Reflection	Hindsight is wonderful, but it is questionable whether that type of decommissioning was warranted on the back of a temporary change in pricing structure. Consider links to EIF funding round being coordinated by DVC (R)		
Project Impact/significance	May impact on the feasibility of some of the ESD solutions available.		
Forward action	Wait for initial report. Requested an early deliverable; campus map indicating locations and type of ESD solution being considered and their linkages if any. I want this to start communicating the project to VCC and F&F.		

Situation/Reading	Restructure of FM	Date 5 NOV 2010	Project SAM
Content/events/observations	Met with HR re restructure proposal for 2011. Agreed to defer to 10 JAN. Apparently there are others and they would like to package them to make it easier to deal with Unions. I commented on the impact of my 2011 budget if I had to carry existing structure for 3 months of 2011. HR indicated they had a carry forward contingency for it.		
Analysis	It appears to be moving now but the cost of delay could be significant if they don't have the funding carry forward. That sounded less than certain to me.		
Reflection	Various risk in this process not least of which is that it will be driven by HR.		
Project Impact/significance	Minor. The important element is that the refocus on Sam and Environmental will occur.		
Forward action	Prepare change proposal paper ready for new year. Send confirmation email of that meeting to COO and signal		

	budget impact of late restructure. UPDATE: DONE
--	---

Situation/Reading	Security Review Progress	Date 8 NOV 2010	Project SAM
Content/events/observations	Meeting with OPS Manager re initial security review findings. Significant physical security items were identified around ICT server spaces, critical academic space at Mt Kent and B Block. Recommendations and their literal implementation require remodelling of floor spaces, physical structure and infrastructure. Also relies upon a common staff id/access control card being in place.		
Analysis	Very thorough and enlightening report, highlighting significant and surprising in most cases, deficiencies.		
Reflection	Needs handling delicately as this cross a number of responsibility areas and initiatives. There is also a tendency to see recommendations from a review as must do items with subsequent expectation increase. I believe this should highlight the need for central coordination of security considerations. The gaps are typical of an ad hoc approach through independent projects.		
Project Impact/significance	Minor in terms of wider SAM, but very significant for security at USQ		
Forward action	Discuss with GM SBMI and have him send a formal request from Audit and Risk to see a copy of the review once completed. This will expose the matter at the highest level across management and governance and ensure suitable response and forward alignment		

Situation/Reading	Bookshop relocation meeting	Date 9 NOV 2010	Project SAM
Content/events/observations	Meeting to discuss progress and resolve detail operational needs. All affected staff attended.		
Analysis	Very negative initially, particularly a couple of the staff. Good ground level input from FM stores staff who were able to state and express issues in a very forthright way that would have seen a different reaction had a manager said something in such a potentially 'insensitive' way. Attitudes were more positive toward the end of the session with most operational issues resolved or at least relegated to a lower level of criticality.		

Reflection	Using equivalent level staff to get a difficult message across or to guide reality is another tool in change communication.
Project Impact/significance	Significant in terms of service provision and resource efficiency. It will also be more important if COO pursues line reporting transfer.
Forward action	Monitor via supervisors. Set up meeting to discuss product lines and possible transfer to APO in order to make them more sustainable.

Situation/Reading	Meeting re budget for 2011 with Finance Rep	Date 9 NOV 2010	Project SAM
Content/events/observations	Met with Management Accountant regarding interpretation of COO email and agreement re 2011 budget.		
Analysis	Useful meeting as she did have slightly different views on the interpretation that we have now resolved. Interestingly she also advised that there have been comments within Finance that we don't need the Asset Manager role as we have managed so long with out one.		
Reflection	Another indicator of the mentality of some people and therefore the business risk that I expose FM to by trying to manage with less and balance the budget. It is easy to see why some areas simply overspend given the lack of consequences within this organisation. If there is a move not to replace the Asset Manager (Facilities Manager role) in the second half of the year then I will need to consider the equity issues around that in terms of myself and the other staff that are all doing extra to cover that gap.		
Project Impact/significance	Major. Our budget is so tight and specific for 2011 that we must have common understanding. The lack of an asset manager retards our progress but does not prevent it.		
Forward action	Monitor 2011 budget discussion and presentation carefully. Discuss with COO the Asset Manager role.		

Situation/Reading	Meeting with COO and CFO	Date 10 NOV 2010	Project SAM
Content/events/observations	COO expressed his intent to transfer line reporting of bookshop to FM unless either myself or CFO has significant objection		
Analysis	This will create additional management load for me as it will be a further change to the bookshop staff environment. One which is warranted in my view, but more work of		

	course.
Reflection	The move allows us to move to a more integrated model and presumably more efficient in that we can do more, with greater resilience but with less people.
Project Impact/significance	Moderate for SAM but a significant precedent and signal going forward in that it demonstrates a commitment to work within a smaller space, capture efficiency opportunities, improve student services, drive change within corporate services division....and therefore all other faculties and units should do the same. Possibly naive but it is a good platform.
Forward action	Confirm with COO I have no objection or concerns. This may align with the FM restructure planned for JAN 2011. Send email to COO suggesting this. UPDATE: email sent

Situation/Reading	CIG Meeting	Date 10 NOV 2010	Project SAM
Content/events/observations	Primary focus was a proposal from GM SBMI and COO re establishing another group to consider all university projects centrally. The need driving this is around the missed opportunity and/or duplication which occur through an uncoordinated approach.		
Analysis	The need is real and there are numerous examples of project overlap, duplication or missed opportunity through a silo environment and approach. That said, this role is supposedly performed by any number of committees, stakeholder groups and project groups. I would not support another hurdle being created.		
Reflection	They have identified a real problem but the solution proposed is the wrong one. More emphasis on communication and oversight rather than coordination. Clarification of the interaction with existing authority is needed as well as scope and levels of interest.		
Project Impact/significance	This will impact on SAM and could be another way FM can have earlier understanding of the Faculty or Unit aspirations and plans. It could also be a forum that FM can use to engage the wider USQ community.		
Forward action	Support SBMI as necessary to refine the proposal.		

Situation/Reading	Visit Ravensbourne facility	Date 10 NOV 2010	Project SAM
--------------------------	-----------------------------	----------------------------	-----------------------

Content/events/observations	Site visit to Ravensbourne. Apparently this facility is hardly ever used, yet we maintain the buildings and the grounds and pay holding costs. Interestingly minor revenue from room hire to a local kindergarten goes direct to FoSc contrary to Accounting policy.
Analysis	This facility is too far away to be of practical value for anything other than field work. FoSc do not use it now.
Reflection	This has highlighted a number of gaps. No transparency around utilisation, inappropriate accounting, wasted FM resource investment and holding costs. I suspect Mt Kent will be a similar case although I appreciate there are international obligations and much higher activity levels there.
Project Impact/significance	This is core to SAM, albeit on a small scale and illustrates a number of the gaps we are attempting to close via the SAM project.
Forward action	Via finance, explore any rent income going to faculties or other business units. Develop a short proposal around disposal for VCC and F&F

Situation/Reading	R Block coffee shop	Date 10 NOV 2010	Project SAM
Content/events/observations	Guild arranged meeting to raise concerns that the revised café layout does not meet my expectation. They are correct, it does not.		
Analysis	Redesign has focussed so much on functional areas that they have missed the customer interface and aesthetics.		
Reflection	Poor project management and lack of contractor supervision, plus disconnect with the high level objectives of this project. May be a result of workload, inexperience or some other reason.		
Project Impact/significance	This would have been an awful outcome for the project and compromised the entire space. Good work from the GUILD		
Forward action	We need to deal with this immediately, based on my very quick concept and example photos. Engage a shop fitting company to refine		

Situation/Reading	F&F Committee Meeting	Date 11 NOV 2010	Project SAM
Content/events/observations	Significant discussion around budget management measures for 2010 and in particular the HR measures around blocking recruitment. COO talked about the need to introduce consequences for mismanagement of budget. Discussion around SP purchase and a clear desire to bring it to a close prior to Christmas. The sense was to do a deal. JB		

	and I are meeting SP on Friday to further this. Budget 2011 discussion deferred to next week.
Analysis	Again, I see a summary and best case interpretation being given to F&F. Very difficult and I can see that the CFO is also very uncomfortable. There is a risk around reaching an agreement with SLC, if we sign up with just a high level document. The problems have always emerged once we drop into the detail and the wording. When Committee sought to defer the budget discussion around 2011, COO became quite agitated regarding the HR measures and clearly wanted to be able to say to the USQ community that council had approved the controls.
Reflection	Springfield negotiation is still being done on the fly but I must say quite effectively given the time left to us. The bulk of council seem to just want it done now, but there are a couple of members that keep taking us back to the detail. This needs managing if we are to achieve sign up by Christmas. There does seem to be an equal desire from SLC to bring this to a close also.
Project Impact/significance	Major. Points to process, management and governance engagement, investment in a growing campus, ahead of student load drivers, relationship with SAF bid.
Forward action	Discuss key issues with Deputy Chancellor on Friday morning on the way down to SP.

Situation/Reading	Meeting with bookshop re product lines	Date 11 NOV 2010	Project SAM
Content/events/observations	Good meeting with a number of lines able to be offered to APO. This is a classic shopping mall style debate around competing tenancies, or sub lines within those.		
Analysis	Reluctant to dispose of some lines, but they did make sense in terms of a bookshop offering.		
Reflection	Some progress and cooperation. Hopefully the APO can benefit also through this shift, allowing them to be more profitable and therefore sustainable at the correct rent level.		
Project Impact/significance	Minor but core to SAM in terms of a sustainable retail strategy.		
Forward action	Manager Ops to meet with APO and discuss; link space implications to HUB project.		

Situation/Reading	Springfield visit	Date 12 NOV 2010	Project SAM
Content/events/observations	<p>In the car:</p> <p>Discussed meeting strategy. Agreed to test the envelope against the SLC document submitted yesterday. Try to get it to a point that we can circulate more widely in side USQ. Discussed price issues and land fit around possible development. I raised Student accommodation need into the long term and suggested we seek an option over the accommodation.</p> <p>Discussed F&F, budgets for 2011, budgets longer term, senior management.</p> <p>SLC Meeting:</p> <p>Very positive. Difference around price; some changes to roads required, but generally all on the same page.</p>		
Analysis	DC was very interested in my view of the 2011 impact for FM. It also revealed that he sees the restrictions extending further than 2011.		
Reflection	Very positive and this solution would solve all the issues raised by Council at their first intervention (sovereignty, expansion, operational constraint etc). The one down side for me is that we are spending a significant sum of money long before we need to, from a load or program perspective. I reconcile myself by considering it as a land investment that we could liquidate if we needed to, and I suspect at the new price for the land we would not be losing money (med term).		
Project Impact/significance	Major.		
Forward action	I will generate briefing email to all, including a copy of the proposal with track changes. I will commission a valuation of the land next week.		

Situation/Reading	Developing a Carbon Reduction Strategy	Date 13 NOV 2010	Project Carbon Zero
Content/events/observations	DPST session to develop a strategy and plan for GHG reduction using Audit report and other elements of the Carbon Zero Project plan.		
Analysis	I can see the elements come together in terms of a prioritised schedule with focused reduction targets that can be communicated to relevant units within USQ. I see the linkage also with financial planning and use of offsets against a decreasing total footprint		
Reflection	Having spent most of the day on this template it occurred to me that the Carbon management Software (about to be		

	implemented) might have this type of forecasting, targeting or modelling capability. Almost a 'my project' function. I will explore with them next week before taking it any further and any IP opportunity.
Project Impact/significance	Major. This is the very essence of the project
Forward action	Discuss next week with supplier

Situation/Reading	Guild SLA	Date 15 NOV 2010	Project SAM
Content/events/observations	Discussion re Guild SLA. Meeting with DVC and COO to review draft ToR for Review document. Document is very broad and could encompass a complete outsourcing review rather than the guild. Discussion drifted toward the obstruction created by Guild CEO and the need for change. Strategy agreed to proceed with C Block Café, this might generate questions with guild board, and then to act upon poor KPI's from the interim contract.		
Analysis	The ability to represent Guild performance via the KPIs is questionable, but they may be sufficient to create a sea change in the Guild. Coupled with C Block café commercialisation it may prompt the required response		
Reflection	Nothing has changed with the Guild. On the contrary some members have drifted back to being over confident and critical. They are not engaged with the commercial imperative.		
Project Impact/significance	Minor to SAM. Links with optimal asset utilisation and revenue creation. Links to service levels and meeting staff and student expectations		
Forward action	Meeting scheduled with Guild. Assess KPI results consistent with the aim		

Situation/Reading	SAF bid	Date 15 NOV 2010	Project SAM
Content/events/observations	Meeting with Dean of Sc and PM to discuss SAF bid progress and the additional SP building. Meeting was an update and agreement of what next. I suggested they refine their ideas for a meeting in two weeks time. FM will attend and engage architect to develop concept drawings and construction costs consistent with the campus development plan and sufficient to meet needs of SAF stage 2 submissions. Dean is seeing this as an iconic building.		

Analysis	Vital to consider SAF against the negotiations as the land holdings and opportunities are quite different for each scenario. Dean and PM are conceptualising the building to a high level of detail.
Reflection	Dean and PM have done a lot of work around space design and building design; possibly too much. However, it is great that they are so engaged and we will manage those issues at the workshop in two weeks.
Project Impact/significance	Significant in that it is the biggest federal bid USQ has ever made and is arguably necessary for USQ to be sustainable in a post Bradley environment. Also highlights the organisational cross communication and contribution that can be achieved when all stakeholders commit to a significant project like this.
Forward action	Arrange meeting, leverage off the opportunity to demonstrate FM as a team player and strategic enabler Consider in the context of the negotiations

Situation/Reading	Appoint Valuer for SP land	Date 15 NOV 2010	Project SAM
Content/events/observations	Consider and appoint Valuer. Phone call to appoint		
Analysis	Difficult exercise due to the varying types of land and the various stages of development across the whole site. The car park will include some development or improvement value. Valuation needed as soon as possible to support the revised Term Sheet. Need to value DCF building		
Reflection	Needs land and Plant and Equipment valuation. I have indicated expected report around 400-500 per meter. EC is particularly hard to value as sales evidence is often in-house for SLC and therefore questionable. Ipswich sales are not so relevant for the unique entity that is EC. A figure of 450 would sit well in the minds of Council members in terms of their expectations and therefore hopefully contribute to the deal proceeding		
Project Impact/significance	Significant. A number outside of expectations will bring the deal to a stop again		
Forward action	Support Valuer with data as required and chase delivery. Develop Term Sheet revisions in anticipation		

Situation/Reading	Meeting with DVC (GL) re Y Block	Date 15 NOV 2010	Project SAM
--------------------------	----------------------------------	----------------------------	-----------------------

Content/events/observations	The COO has previously suggested to DVC GL that as all the staff in Y Block are in his division, he can resolve the space layouts. I commented before that I do not agree with this approach as it ignores the non-Y Block impacts and ignores the enterprise level efficiencies. At the meeting DVC tabled a simple floor plan that gave DeC half the floor. This is bigger than the area previously suggested by DeC themselves in 2009.
Analysis	Again I have to believe that DVC is not getting good or complete info from his team, but he clearly wants this problem to go away.
Reflection	I will develop an overall plan, based on our last data and host a meeting of all the stakeholders and resolve this. If necessary we can agree to the DVC version but with the caveat that there is no spillage demand outside of Y Block as a result of the increased DeC space reducing that available for other tenancies.
Project Impact/significance	Minor, but is in conflict with the goals of SAM and USQ policy. DVC is also a member of SEG and his experience of this encounter with FM may be carried forward to more influential settings.
Forward action	Set up meeting with stakeholders and prepare discussion floor plan.

Situation/Reading	Carbon Control Workshop	Date 16/17 OCT 2010	Project Carbon zero
Content/events/observations	Initiation workshop with stakeholders. Discussion re content, data definitions and sources. Discussion re reporting requirements, levels and appearance.		
Analysis	Significant ability to customise, more than I expected. Opportunity to include GRI G3 framework as a possible additional 'tab' or view. Also to include water data as another type of 'emission' but zero rate the contribution factor.		
Reflection	Clearly the inclusion of GRI and water is outside of scope but equally is a logical evolution of this software. The developer sees that also and will work with us to include these functions. This will be the basis of a corporate reporting tool and also accessible to staff and students for academic integration and behaviour change in support of environmental awareness and carbon reduction		
Project Impact/significance	Significant, as the primary vehicle for tracking progress, identifying areas for focus and community engagement and education.		

Forward action	Support
-----------------------	---------

Situation/Reading	Meeting with ICT re closing labs	Date 16 NOV 2010	Project SAM
Content/events/observations	Initial approach from ICT re the closure of under utilised labs.		
Analysis	Sound proposal, but ICT have hit a brick wall with Faculties and have no idea how to achieve the goal. I have suggested a summary paper to VCC identifying the opportunity and instructing FM and ICT to produce a joint recommendation		
Reflection	Highlights the importance of understanding the process for getting something done in a large corporate with complex structures and significant political layers.		
Project Impact/significance	Minor. It is a sensible proposal and will reduce our operating costs, release space for other initiatives (perhaps HDRS) and contribute to GHG emissions.		
Forward action	Advise COO of initiative, contribute to paper for VCC		

Situation/Reading	SP negotiation team	Date 18 NOV 2010	Project SAM
Content/events/observations	Team met to develop a response to the SLC Term Sheet		
Analysis	Discussion very quickly dropped into legal detail and wording. I kept reminding folks to stay at the high level and that the document was not binding.		
Reflection	The group was very reluctant to stay out of the detail, so much scepticism and risk aversion. But there is no risk as the document contains a clear statement about not being binding etc.		
Project Impact/significance	This response is significant and could move us to a deal or kill the opportunity completely.		
Forward action	I will draft a revision and distribute for comment.		

Situation/Reading	Regional Tennis Centre	Date 19 NOV 2010	Project SAM
Content/events/observations	Project Meeting with all stakeholders. Dominated by tender price discussion and how to address the gap between tenders and budget. Numerous suggestions but all delivering a much reduced product.		
Analysis	USQ has made much of the media coverage around this		

	project. There is a significant reputational risk if we deliver something that is less than public expectation levels.
Reflection	As a safety net to ensure that USQ inherits the asset it requires, I will review the project to see if we can legitimately slice off any elements that could be attributed to a pure USQ need, and thereby fund outside of the JV.
Project Impact/significance	Major, for the project, the stakeholders and community and the reputation of USQ
Forward action	Discuss with Manager Planning and Space

Situation/Reading	ESC meeting	Date 22 NOV 2010	Project Carbon Zero
Content/events/observations	Refer to Minute. Key points agreement from the members to fund ELMO to develop an online induction module to raise awareness of sustainability for all staff/students. Agreed to cover recurrent costs from ESC funding.		
Analysis	Great outcome, we can now implement the first significant stage of the community engagement dimension.		
Reflection	This started as staff induction but can clearly be for staff and students if we pitch it correctly		
Project Impact/significance	Major		
Forward action	Award contract in JAN 11		

Situation/Reading	Meeting with acting CTO re server room energy profile	Date 22 NOV 2010	Project SAM and Carbon Zero
Content/events/observations	The recently installed smart meter has shown that the chillers plant is cycling on and off too frequently. This is not good for the plant but also very bad for power consumption as starting current for inductive loads (motors) is up to 6 x more than running current. This meeting sought CTO approval for FM to investigate and rectify		
Analysis	This is a very direct application of one of the Sam initiatives to reduce operating costs, extend plant life and reduce our carbon footprint.		
Reflection	The previous CTO jealously guarded the server room and FM was not able to access or influence. Very refreshing to have a collegial approach from them now, and to our mutual benefit		
Project Impact/significance	Major for both SAM and carbon zero		

Forward action	Continue to grow the link between ICT and FM. Task CRS to do plant control review and monitor energy profile.
-----------------------	---

Situation/Reading	FM Staff workshop	Date 23 NOV 2010	Project SAM
Content/events/observations	Final staff workshop for 2010 and includes FM staff awards.		
Analysis	Very positive and collegial session. Acknowledgements of cross FM support came from all areas to all areas.		
Reflection	The difference in this workshop to the first 2008 one is striking. In 2008 we had silos and lack of engagement. People had grudges and wouldn't speak to others etc. This week we saw a total team approach, with no structuring or preparation by me, completely of their own accord they have recognised the contribution and value of being an integrated team.		
Project Impact/significance	An effective team approach is essential for operational support, efficiency and information flow (operational and planning).		
Forward action	Send email to FM staff in DEC, thanking and wishing good Christmas Represent staff awards in USQ news and Drawing Board newsletter		

Situation/Reading	Meeting TRC	Date 23 NOV 2010	Project SAM
Content/events/observations	Met with TRC Councillors. Conversation ranged across the operation and the blue sky strategic. Future of Baker St. Can this transfer to USQ for contiguous land holding and campus integration. Future of CBRC and sports ovals – TRC looking for blocks of sports fields; could they operate for USQ or even buy from USQ with rights of access? Similar Taora Park? Japanese Garden operating costs and land ownership. Compliance issues around water licence, TRC contribution is inadequate, long term TRC ownership of land slivers adjoining; why?		
Analysis	Open meeting, good discussion, sowed some seeds for future thought. Land rationalisation seems potentially to be a benefit for both and would allow USQ to make more of the Japanese Garden and perhaps change significantly its relationship with the Guild (CBRC, Ovals)		
Reflection	Great potential. I am unsure of the TRC 'machine' and mechanisms in order to quantify the probability of actually achieving these outcomes.		

Project Impact/significance	Major component of SAM and highlights communication, relationship and strategic planning
Forward action	I will sound out some key folks internally before meeting with TRC again (VC, COO, Deputy Chancellor)

Situation/Reading	Meeting with CEO Guild	Date 25 NOV 2010	Project SAM
Content/events/observations	<p>Met to advise Guild that C Block café will be outsourced to a commercial operator and that the Guild can tender if they like.</p> <p>Prompted a passionate exchange from the CEO. When he regained composure we spoke about the lack of proactivity by the Guild, that they still have no plan to become financially sustainable.</p> <p>I suggested that he might consider dropping the student service role and focusing on being a profitable commercial provider as USQ needed that and frankly it is the majority of their business. He acknowledged that he had never considered it from that perspective and it might be time for that sea change.</p>		
Analysis	SMD is growing rapidly and picking up more and more of the Guild student functions. This should be more transparent to COO, but I am not seeing that. However, if that continues, the GUILD might want to embrace it and use it to be free of the non-profit component of their business.		
Reflection	The Guild CEO will undoubtedly write to VC and COO to pursue this, as I would do. I hope that he considers the longer term and has some solutions to offer, including perhaps' handing the keys' to USQ.		
Project Impact/significance	Corporate significant, links to Sam around student/staff service, leases, licences, revenue streams etc		
Forward action	Follow up with COO		

Situation/Reading	Meeting with SLC	Date 25 NOV 2010	Project SAM
Content/events/observations	<p>Meeting to discuss USQ revisions to the term sheet. Prior to the meeting I met with council rep and pointed out that everything council has wanted in now on the table in this document and that we need to close the deal today. The main issue being around price. I gave him our valuation and pointed out that we could go up to 52M at valuation and that they had a figure around 54. The obvious move and perhaps the only one to get a deal this year would be</p>		

	to split the difference. He spoke about his intention to do the bad cop strategy again and I said we are past that. My mission to day is to get an agreed document that we can each take back to our internal boards and get approved. Very healthy debate, we lost a couple of points but secured certainty over student accommodation and agreed a mid point price. SLC and me to refine the final version for presentation to I&C on 7 DEC and Council on 13 DEC.
Analysis	Good meeting, mainly as a result of the work done behind the scenes in our organisations. This is a good outcome for USQ and ticks all the councils boxes re sovereignty, operational use, expansion area etc.
Reflection	It will be interesting to see the degree of ownership by Council now, not just for the deal but for the campus itself. When they intervened they understood little of the contractual framework and were emotional and at times offended. Now they speak positively of the investment and the campus and the bright future at SP. It has been useful to have a council member on the team and particularly a non-staff one. It also highlights the value of involving other members at key steps in the process.
Project Impact/significance	Major, ownership of a freehold block at SP gives us a real campus that can be fully integrated into USQ and FM planning
Forward action	Develop final document and write a paper for I&C

Situation/Reading	SAM WG	Date	Project
		26 NOV 2010	SAM
Content/events/observations	Routine meeting. Some progress with condition audit and PM templates. Most significant I note the weariness and loss of momentum. I told them all to relax until JAN but to plan for a big commitment in JAN to finish this project. Good progress with condition audit templates and linkages to software.		
Analysis	Due to my own calendar and workload I have not driven this over the last 2 months. Manager space also has suffered personal challenges that see his focus elsewhere. I consider a break until JAN, but with a real focus in JAN to be the best strategy. I will also clear my JAN calendar to focus on SAM		
Reflection	I need to finish the USQ operational component of SAM as Carbon Zero is already starting. On top of SP purchase I will be swamped again. All set against the no staff recruitment backdrop!		

Project Impact/significance	Major. We need to focus to bring these elements to a successful close rather than a dwindling death.
Forward action	I will review the tasks and prioritise for January against the baseline assessment and value proposition.

Situation/Reading	Meeting with DeC and SMD re Y Block	Date 26 NOV 2010	Project SAM
Content/events/observations	Further to my meeting with DVC GL a few weeks ago I arranged this meeting to get all stakeholders together and resolve this issue. I affirmed my view that DeC industrial processes should be in O2 but also stated that we could not accommodate them within at least 6 months even if we had the will to do so. DeC said they have an increasing print/despatch load (particularly calendars). Outcome: DeC status quo for 12 months to assess the impact of DVC GL paper re printed materials etc. SMD move into front half in the new year with substantive fit out. DeC fitout minimal as potentially changes next year.		
Analysis	DeC very defensive and unwilling to contract, SMD aggressively want the space.		
Reflection	This is something that should ideally have dealt with months ago and I observe the unsuccessful dabbling of senior executive in this matter.		
Project Impact/significance	Space planning issue, but highlights lack of data and common vision.		
Forward action	Memo re this meeting and query DeC load growth?		

Situation/Reading	Met with FoB	Date 29 NOV 2010	Project Carbon Zero
Content/events/observations	Meeting to discuss student engagement opportunities around environmental projects.		
Analysis	Very useful, forms a good link to student engagement and also technical review to FM initiatives		
Reflection	May help in updating 2009 data to give 2010 GRI return. Opportunities are far wider than I first imagined and FoB is clearly very enthusiastic		
Project Impact/significance	Major, links very strongly to student and academic engagement and potentially enables a resource for project implementation		
Forward action	Follow up in New Year around specific opportunities Regular part of Env. Officer role to liaise and administer linkage		

	Possible incentive, poster design, video clip, earth hour ideas, templates etc (maybe award an iPad, or commitment to fund viable projects)
--	---

Situation/Reading	Developing I&C paper	Date 29 NOV 2010	Project SAM
Content/events/observations	<p>Today I spent most of the time developing the approval paper to Investments and Contracts sub committee for the SP purchase.</p> <p>Many perspectives and dimensions to this paper including, background, rational, risk but also how much detail to include, creating a document that can go all the way through to Council, addressing the anticipated points of focus that the various and individual members might address. How much pre-distribution or consulting to do with key members in advance. CFO and COO input around the financials, particularly loan and first stage payment.</p>		
Analysis	<p>The core business case is clear and that revolves around an NPV calculation. If I were a member of I&C, I would be drilling into what the consequences are for the rest of the organisation. That is not currently addressed in any detail and simply references a verbal presentation by COO to F&F 2 weeks ago.</p>		
Reflection	<p>Many of council are on board with this proposal, but the risk assessment and specific impacts of this level of expenditure and borrowing has been superficial</p>		
Project Impact/significance	<p>Major, this is the key approval step and if successful sees us 80% of the way to an autonomous, freehold campus at Springfield with enough expansion land for future growth.</p>		
Forward action	<p>Contact COO re impact assessment</p>		

Situation/Reading	Meeting with QLD Fire	Date 1 DEC 2010	Project SAM
Content/events/observations	<p>Meeting to discuss methodology for determining maximum floor capacity of a building. This has arisen because the number of chairs provided at Springfield exceeds the maximum permitted occupants. We discussed diversity, scheduling and audit data to demonstrate there is no real relationship to chairs and headcount.</p>		
Analysis	<p>Currently distance students at SP have to ring and make appointments to come onto campus rather than be able to drop in. The Director blames the fire limits. Not desirable and not warranted perhaps</p>		

Reflection	People counter data might help win the case with the certifier.
Project Impact/significance	Minor at the moment but becomes more important if this is used to justify a lack of space or capacity.
Forward action	Further discussion with the Building Certifier is required to increase the rating

Situation/Reading	Meeting CFO, COO, Manager Risk and GM SBMI	Date 2 DEC 2010	Project SAM
Content/events/observations	Meeting to consider risk assessment for the SP purchase paper. COO introduced the meeting and suggested a way to develop the matrix and possible categories. I suggested that I could support the Manager Risk undertaking this assessment, by providing all papers and verbal briefing/evidence etc of risks considered to date and controls identified and/or implemented.		
Analysis	It is important that a 3 rd party undertake the assessment, to achieve independence of thought and a fresh perspective. Manager Risk is accepted by Council as being the 'expert' in this area. The group approach to this exercise was not going to be effective.		
Reflection	Why do meeting invitees attend meetings without reading or considering in advance the material and deliverables of the meeting? Over confidence, arrogance, apathy or lack of time?		
Project Impact/significance	Significant as this sets a template and precedent for future submissions. It is also clearly an important comfort for USQ Council on this particular submission and a genuine aid to ensuring we have considered all risks.		
Forward action	Meet with Manager Risk and develop matrix		

Situation/Reading	General SP purchase	Date 2 DEC 2010	Project SAM
Content/events/observations	Numerous interactions with people today regarding SP paper		
Analysis	Elements of advice and input received, some useful some not. This is a complex framework and proposal and a number of folks are not fully familiar with it currently		
Reflection	Lots of views, few volunteers		
Project Impact/significance	Paper is taking shape nicely		

Forward action	Limit distribution of drafts as it is generating an unhelpful level of query and input and I don't have time to respond to them and develop the paper.
-----------------------	--

Situation/Reading	Guild finances	Date 2 DEC 2010	Project SAM
Content/events/observations	COO, CFO and me to discuss approach by the Guild re their worsening financial situation.		
Analysis	Guild will be technically insolvent by end of 2012. No meaningful progress with SLA.		
Reflection	The lack of real progress with the SLA has allegedly required the Guild to subsidise their operations on behalf of USQ. This has eroded their capital.		
Project Impact/significance	Complete failure of the Guild would require alternate service provision, presumably some of which would come via FM		
Forward action	Respond as needed with COO in the lead role		

Situation/Reading	Springfield paper	Date 3 DEC 2010	Project SAM
Content/events/observations	Finalised the ICC SP paper today and distributed to Council secretary		
Analysis	Good balance of background, rationale and risk assessment		
Reflection	This paper needs to get through ICC before it can be approved by FFC and then go to Council		
Project Impact/significance	Major		
Forward action	Attend ICC and present, advise SLC that it has been done.		

Situation/Reading	Meeting re SAF	Date 7 DEC 2010	Project SAM
Content/events/observations	Meeting at SP to develop SAF building design. Dean Science joined by phone. Architects attended. Current aspirations need better linkages to SAF submission and scope/scale as described within; needs to be linked as a campus building, not in isolation. There is also no input apparent to me from GLD or FoE		
Analysis	Building is too large, lots of empty and unidentified spaces. No synergies with existing buildings or position on the expanded campus area.		
Reflection	It appears that the quiet waiting period has been used to fully design a building in the minds of the two main project		

	team members. This is a good thing generally, provided we can still consider the wider view
Project Impact/significance	Major, links to campus planning and strategic USQ initiatives. Future decisions around distribution of services and staff will be influenced.
Forward action	Manage the relationship, but stand firm on the role of FM in the final design. Involve the previously established SP Development Group and seek input from GLD and FoE.

Situation/Reading	ICC meeting	Date 7 DEC 2010	Project SAM
Content/events/observations	Meeting of ICC. I presented the SP paper. Various discussions. Chair request a supplementary paper providing the rationale for the purchase of the additional land and Cooling Facility.		
Analysis	I am not fully clear why this is necessary as it is all covered in the primary paper, so I assume that he has not fully read that document.		
Reflection	This is a small undertaking and so I will generate a supplementary paper for the Council meeting.		
Project Impact/significance	Major		
Forward action	Develop supplementary paper. Attend Council meeting		

Situation/Reading	Meeting re Campus Eco Transformation project	Date 9 DEC 2010	Project Carbon zero
Content/events/observations	Initial presentation to FM staff re the technology and data required to conduct the feasibility studies		
Analysis	Very healthy discussion and debate. Lots of engagement from staff.		
Reflection	Very positive		
Project Impact/significance			
Forward action	Monitor and support as needed.		

Situation/Reading	Bookshop	Date 10 DEC 2010	Project SAM
Content/events/observations	Project board meeting. Letter received from a staff member raising numerous concerns which was discussed. Visit to the new space.		

Analysis	Internal resistance from the Bookshop continues. The staff letter is perhaps an expression of frustration rather than real issues.
Reflection	I am uncertain whether this trial will succeed in the current climate.
Project Impact/significance	Minor
Forward action	Continue with the supportive but determined approach. Raise again with COO the need to consider the reporting lines and full integration with FM

Situation/Reading	USQ Council meeting	Date 13 DEC 2010	Project SAM
Content/events/observations	Last meeting of 2010 and I presented the SP paper. Lots of discussion. Deputy Chancellor took a lead role in supporting the paper which was very helpful. Chancellor echoed her support. Council approved the paper with no amendments. The supplementary paper was received with no questions.		
Analysis	All the elements came together at the right time today. Individual support, the papers were good, the Term Sheet was good, delegated authority was understood and reasonable.		
Reflection	This was a superb example of balancing the business and the political spheres to achieve the desired outcome. I would also add it could be a good example of how management and governance can work collaboratively to achieve an enhanced outcome.		
Project Impact/significance	Major		
Forward action	Communicate Term Sheet approval to SLC. Initiate legal action		

Situation/Reading	Meeting ACSB	Date 14 DEC 2010	Project SAM
Content/events/observations	Meeting to discuss current environmental and carbon reduction activity and to explore staff and student engagement opportunities		
Analysis	Very positive meeting. Consider linkages and student opportunity		
Reflection			
Project Impact/significance	Minor		
Forward action	Communicate / update in the New Year		

Situation/Reading	BMS Contractor	Date 14 DEC 2010	Project SAM
Content/events/observations	Meeting to discuss scope and scale of interactive data screens around campus linked to BMS		
Analysis	Common in a lot of newer buildings the screens provide friendly graphics and images that allow the casual user to interrogate the building profile and systems and understand more about their environment.		
Reflection	A very useful tool in engaging with carbon reduction. I will fund this as part of the HUB project		
Project Impact/significance	Minor		
Forward action	Await quote and initiate via HUB project		

Situation/Reading	Environmental Officer	Date 15 DEC 2010	Project SAM
Content/events/observations	Interviews were held today for this position		
Analysis	2 internal candidates, one clearly better.		
Reflection	This appointment is essential to our continued progress in this area, but gives me some challenges elsewhere as it is an internal candidate.		
Project Impact/significance	Major, as we now have a full time resource dedicated to Environmental		
Forward action	Appoint and manage as best we can with the created vacancy. Communicate with work force group around the urgency of a backfill position Communicate the appointment to the University		

Situation/Reading	Meeting with SLC	Date 20 DEC 2010	Project SAM
Content/events/observations	Initial meeting with SLC including lawyers to action the transfer of the Term Sheet into legal form for sale documents		
Analysis	A great deal of work to be done in a relatively short time. It may be too ambitious. Also some different understandings appeared around chilled water and car parking. Significant item: How do we undo this whole deal if the second stage isn't completed? Council approved the whole not just one part.		
Reflection	We will have to guide /instruct our respective lawyers carefully as we saw today how complex this deal is. Even more so if try to mitigate all risks within the legal		

	documents. We may never get it done.
Project Impact/significance	major
Forward action	Follow up after New Year with USQ Lawyer and later SLC

Situation/Reading	Flood event	Date 10 -14 JAN 2011	Project SAM
Content/events/observations	Extreme rainfall impacts Toowoomba and the Campus on Monday. Staff sent home in an ad hoc way. EMG meets on Tuesday and subsequent days.		
Analysis	EMG dysfunctional. Lack of leadership and knowledge. No reference to existing BCP documents, refer email to COO. Faculties disengaged with the corporate and allowed staff to stay home. No support for phone enquiries etc.		
Reflection	EMG needs significant improvement and focus (training and exercises) or it will not be able to cope in a real emergency. BCP needs to be further developed and exercised.		
Project Impact/significance	This event provided enhanced understanding of the relationship environment at USQ between academic and business units.		
Forward action	Support as appropriate.		

Situation/Reading	Communication over a request for travel data	Date 21 JAN 2011	Project Carbon Zero
Content/events/observations	EO has requested data from travel office to populate the Carbon Management Software. Travel Office will not provide due to 'Privacy' issues.		
Analysis	Possibly some privacy issues but unlikely and inconsistent when you consider this is business travel at business expense. We retain all manner of data about employees for business purposes, how is this different? To shortcut, I involved Legal Officer who initially supported the privacy angle. Then reversed position once it had been explained fully. The resistance then switched to not having enough staff to provide the data. At that point I requested a meeting with all concerned to develop a solution.		
Reflection	This is more about Travel Office not wanting to provide the data to FM (as we experienced last year) and potentially exposing some inconsistent practice and lack of policy compliance that would embarrass individuals including the		

	TO.
Project Impact/significance	Very important for the Carbon software and EO moving forward. If we cant have cost centre granularity how can we target behavioural change?
Forward action	Chair meeting and communicate hurdle to COO

Situation/Reading	Meeting with DPST Supervisor	Date 21 JAN 2011	Project SAM
Content/events/observations	Discuss way forward for SAM. In particular close out report, Blue sky paper for USQ council and DPST project review.		
Analysis	Preferable to develop the three deliverables in parallel so that each can inform the other and ensure completeness and consistency.		
Reflection	The close out report format is now defined, the blue sky and DPST review need to be structurally framed		
Project Impact/significance	Major. These documents will be the window into the project for external reviewers		
Forward action	Complete the close out report at the end of FEB. Work on format for the other two in the interim.		

Situation/Reading	Web Systems User Reference Group (WSURG)	Date JAN 2011	Project Carbon Zero
Content/events/observations	The Carbon Management Software (CMS) was intended to be available to all staff via the UConnect page. In sending the request, it was diverted to the WSURG to consider. They came back with a list of questions and complaints around the look and feel not being consistent with USQ standards, unauthorised use of the logo etc. They have requested that the EO attend the WSURG and explain what its all about and why we have this software without their approval. I have declined the offer and referred them to their terms of reference.		
Analysis	Synonymous again with self focus and silos		
Reflection	Once again we see narrow fields of view, ignoring the strategic importance of something and accommodating the greater good. The CMS is externally owned and hosted. USQ leases, so of course it looks different. We tried to make it seamless by linking to UConnect pages and including the latest USQ logo. At this point in the year and with all the work and publicity around the carbon software I am really not inclined to quietly play the game with		

	WSURG.
Project Impact/significance	Moderate-Major. Certainly more exposure if the software is linked via the UConnect page
Forward action	Review once the software is fully operational. Approach Chair of committee or senior member for offline resolution

Situation/Reading		Date FEBRUARY 2011	Project Carbon Zero
Content/events/observations	QLD flooding tended to dominate February. Work proceeded on the Eco transformation, but my efforts focused on completing the SAM project and USQ workload.		
Analysis			
Reflection			
Project Impact/significance			
Forward action			

Situation/Reading	Meeting with TRC, MOU Working Group	Date 14 JULY 2011	Project Carbon Zero
Content/events/observations	<p>This is a slightly higher end group from TRC, seeking to get some wins on the board, on the back of the MOU that was signed earlier in the year between USQ and TRC.</p> <p>Numerous topics were discussed as having some potential. I introduced environmental, spoke about the bus service, the cycle paths, pedestrian routes etc. TRC did not know that we had built 2 x Cycle end of trip facilities. I suggested they might consider building something similar in the CBD to provide an increased convenience and encourage folks to cycle into the centre.</p> <p>I introduced the Eco transformation feasibility study work and asked about their own position on carbon reduction and any projects they are looking at. They have neither.</p>		
Analysis	Carbon reduction does not currently feature in any meaningful way on the TRC radar		
Reflection	<p>I will invite the TRC environmental officer to attend out ESC meetings occasionally and grow the relationship; perhaps we can nudge TRC along and they may even be a strategic partner in some of our reduction projects.</p> <p>Possibly they would be interested in the Paper tendering currently underway.</p>		

	If TRC became an official partner to our carbon reduction efforts it may clear them out of the way when we come to build a PV farm on USQ land (already know the planning section don't want it).
Project Impact/significance	Moderate: but could be major if TRC become a genuine partner either through funding, planning facilitation or resourcing generally.
Forward action	Invite TRC Env. Officer to attend next ESC. Pursue Cycle EOT facility for the CBD, perhaps send a plan over to TRC Executive Officers. Future consideration of a brief to TRC Council members about USQ activity, or even a joint USQ and TRC Council session? Perhaps that might spur them on to do something around the city. I will explore with Vice Chancellor and Senior Management.

Situation/Reading	Carbon pathways report workshop	Date 21 July 2011	Project SAM
Content/events/observations	<p>Transparency of the assumed physical solutions is required to validate estimates ie occupancy sensors, switch replacement or ceiling mounted etc, big difference.</p> <p>Check estimates include all labour for external contractors.</p> <p>Check estimates for gas increase impact, allowed 3 % but is notified as 6%</p> <p>Expand the report to include more info about the possible funding vehicles and potential joint venture partners.</p> <p>Engagement around attire and comfort information to support set point adjustments, example of kobi Japan.</p> <p>Consider off site wind farm, maybe Fraser coast council, or Springfield,</p>		
Analysis	The report is very sound technically but needs some enhancement to present the financial proposals as investment opportunities.		
Reflection	'Selling' the projects in the current capital tight environment (Springfield purchase, SAF building) will be tricky and providing clarity that the payback modelling has been based on borrowed funds is paramount, similarly the opportunity for joint venture partners and specific examples would be very useful.		
Project Impact/significance	This report is extremely important and will be instrumental in the carbon reduction strategy and outcomes.		
Forward action	Modify and plan for Senior leadership engagement following ESC endorsement		

Situation/Reading	Meeting with Prof. Mula USQ	Date 26 July 2011	Project Carbon Zero
--------------------------	-----------------------------	-----------------------------	-------------------------------

	and Prof. Walker ECU		
Content/events/observations	<p>Meeting to discuss energy efficient lighting options and some research opportunities and case study development.</p> <p>Observations:</p> <ul style="list-style-type: none"> • Prof Mula is importing LED lighting from China and half the meeting was spent discussing the merits of the product. • Both were unaware of the work done to date and the pathways to neutrality plan. • Some joint activity planned between USQ and ECU • They are seeking FM funding of materials and labour to conduct comparative research between LED, T5 and standard Fluoro lighting 		
Analysis	<p>The lines between academic and personal interests are very blurred.</p> <p>The request for FM to fund a test installation may be meritorious in terms of the data, but in the absence of clarity around potential conflicts of interest I am cautious to engage with it</p>		
Reflection	<p>The value of real life operational usage data is such that it is helpful but not essential to our project. I would see as much value in the profile and media value as an engagement tool for the USQ community and as a catalyst for increased academic interaction.</p>		
Project Impact/significance	Useful data and engagement tool.		
Forward action	Request a formal paper laying out the scope, objectives, relationships and any conflicts. Include rights to use the IP and media articles.		

Situation/Reading	Corporate Club presentation from MECU	Date 4 AUG 2011	Project Carbon Zero
Content/events/observations	<p>The CEO of the MECU spoke about the MECU approach and commitment to Carbon Neutrality and the response by their share holders to social responsibility.</p> <ul style="list-style-type: none"> • Purchase large land areas for regrowth in Victoria • Plant 7 trees for every car loan, costed into the loan fee • Use of recycled materials for office fitout (USQ example) • Already achieved neutrality • Costs less than Gov carbon price 		
Analysis	Proactive approach, attractive to shareholders		

Reflection	Possible opportunity to participate or duplicate approach as part of the offset considerations. The reduction of emissions is perhaps still a first priority though.
Project Impact/significance	Could be significant and possible due to existing relationships
Forward action	Arrange meeting with MECU to discuss further.

Situation/Reading	Meeting with Supervisor	Date 5 AUG 2011	Project Carbon Zero
Content/events/observations	Regular catch up to discuss progress and planning. Discussion around the Eco transformation project and in particular how it fits within the overall context of the wider project. Also discussed the potential contribution that this project could make in terms of identifying a conceptual framework for developing and adopting a carbon reduction strategy.		
Analysis	The Pathways Report is but one (albeit significant) element of the whole strategy. There is a correlation between the scope 1 and 2 emissions and the Eco Transformation work in both the significance of the impacts and the nature of the solutions.		
Reflection	Consider how to visually represent the framework. Elements of cost/benefit/risk, scope 1,2, and 3 emissions, project dimensions, time, and carbon abatement all need to be reflected.		
Project Impact/significance	Significant. This will provide the over arching framework that conceptualises the project approach and actual implementation and potentially represents a contribution to the body of knowledge		
Forward action	Focus on this aspect.		

Situation/Reading	Meeting with WSP and Infinity Solar	Date 12 AUG 2011	Project Carbon Zero
Content/events/observations	Meeting to discuss the PV feasibility study and possible project with Infinity Solar as a possible JV partner or provider. They discussed two basic delivery models, the first being fully USQ funded with them as service provider, the second being a Build, Own Operate arrangement, over 25 year term. Discussion ranged over: <ul style="list-style-type: none"> • What is driving USQ to do it 		

	<ul style="list-style-type: none"> • Available land • Off site options • Scaling up to use the credits from additional or surplus generation • How to treat depreciation, sinking fund • Another local PV farm (privately owned) currently being built past Highfields and whether USQ could link to that? • Energy Farms Australia also looking for PV investors
Analysis	Very informative and positive meeting. USQ purchased electricity rates are extraordinarily low at the moment and this will make the PV business case harder, but price certainty, certainty of supply, zero generation emissions etc are all part of the rationale that will be developed
Reflection	I imagine the BOO scheme would be attractive to the COO as he is looking for some 21 st century approaches to how USQ conducts its business. I am also aware that there are significant (un-forecast) demands on USQ capital for 2012
Project Impact/significance	Most significant. The ability to identify the funding or delivery model in support of the technical model is paramount, if we are to move forward under the current momentum.
Forward action	<p>Infinity and WSP to collaborate on a short summary proposal by next week. If it gets initial support internally I will reflect that approach in the upcoming CAMP development for 2012 funding (+/- USQ capital funding depending on the model adopted).</p> <p>Infinity will also explore any opportunity to engage with the private PV farm. I see this option being harder to promote within USQ, but will explore if there is willingness and logic to do so.</p> <p>Environmental Officer to research Energy Farms Australia opportunity.</p>

Situation/Reading	USQ Planning forum Ad hoc meeting with academic staff	Date 26 AUG 2011	Project Carbon Zero
Content/events/observations	Opportunity based interaction. J provided a copy of the Climate Works Australia regional carbon plan for Greater Geelong. She is meeting with TRC Councillors next week to discuss a collaborative project to develop a Toowoomba		

	Region plan.
Analysis	<p>The Geelong plan provides a useful example of how the USQ strategy might be presented as a more polished and user friendly document.</p> <p>The use of the MAC curve is consistent with our own Pathways report.</p> <p>The impact of a parallel interaction with TRC is unclear. It could benefit or hinder USQ's own implementation</p>
Reflection	<p>We now seem to have three separate strategic forums in progress with TRC. The town planning level, the strategic business level across all operations, and now the regional carbon plan.</p> <p>This would seem to be a recipe for inefficiency, confusion and inconsistency.</p>
Project Impact/significance	Unknown. Could be significantly good or bad. Good to gain support and facilitation of USQ planned projects plus other broader opportunities arising from the engagement. Bad if it results in slowing or stopping of USQ plans, or demonstrates a lack of TRC support
Forward action	Discuss the disconnect with the COO and try to bring some of these key items into a single coordinating strategic forum, perhaps supported by working groups for specialist areas of activity.

Situation/Reading	Meeting COO and DIR Budgets and Plans	Date 13 SEP 2011	Project Carbon Zero
Content/events/observations	I had provided copies of the Tri-gen, PV, retrofit feasibility studies and wanted support for those independent business cases in advance of the collective submission to VCC.		
Analysis	<p>Neither party had read the documents. Dir Budgets wanted to see the overarching strategy before commenting. I explained that I wanted to have confidence that the financial arguments were sound and would be acknowledged as such by those present. If you like, a QA review of the individual documents. I advised that the overall strategy would go to VCC in OCT.</p> <p>COO commented that we might be able to link some of the solutions to USQ research and get additional funding benefit.</p> <p>I also discussed the external negotiations with AGL and Infinity Solar.</p>		
Reflection	It was clearly useful to engage these two prior to a more public exposure. By so doing we have avoided the initial		

	lack of preparation experience and reactionary comments in a wider forum. Such statements simply stall progress. If we can get a tick re the financial construction then we are left with funding mechanisms and the contract risk associated.
Project Impact/significance	Major. These technologies will form the primary instrument for USQ carbon reduction activity and add a further benefit in terms of business continuity and resilience capability.
Forward action	Await feedback re QA Follow up research activities for synergies and linkages Develop paper for VCC

Situation/Reading	ACTS Conference 2011	Date 02 OCT 2011	Project Carbon Zero
Content/events/observations	<p>ACTS Conference held in Adelaide at the end of SEP 11. The ACTS group is struggling to make the transition from a group of well intentioned colleagues to a professional body, representing the sustainability interests of the Australian tertiary sector.</p> <p>Content from the conference was generally similar to previous years and pitched at the softer, staff and student engagement end of sustainability. There was a lack of prioritisation of climate change and carbon reduction practices and opportunities. Key information was not covered.</p> <p>Awards appeared to be inconsistent with the submission criteria and recipients were largely members of the core ACTS membership.</p>		
Analysis	<p>ACTS is under selling itself in my opinion and should adopt a more focused approach to the content and contribution of its events and terms of reference. There is a lack of senior management and executive representation on the board and consequently it seems to be operating at a lower level with less strategic focus than it should. I also observe that those on the Board are predominantly academic, which reminds me of parallels with USQ's own ESC challenges and the need for restructuring there.</p> <p>Lack of info examples: case study re carbon reduction, MAC based data, funding sources, internal carbon levy, policy templates, procurement policy, KPI's across all areas of operation; product experiences and information; engagement success and failure.</p>		
Reflection	<p>Well intentioned but less effective than it needs to be and could be. Perhaps a change in the Board and closer ties with the Vice Chancellors Association may be beneficial? Opportunity next year for USQ to submit and potentially</p>		

	win some of the Green Gown categories
Project Impact/significance	Minimal for USQ carbon reduction strategy. May be beneficial going forward for marketing and data resource.
Forward action	Review Green Gown award categories and ensure submissions. Consider presenting a USQ case study at the next conference. Feedback to ACTS for improvement Consider volunteering for the ACTS board

Situation/Reading	Draft sustainable procurement policy	Date 14 OCT 2011	Project Carbon Zero
Content/events/observations	Dir Finance Operations has been working on a review of various finance policy including the sustainable procurement section of the main policy. I have previously left this with the Environmental officer to provide CS and ESC input re appropriate content		
Analysis	The draft I saw was very close, but lacked the prescription required to make this a clear policy that will affect behaviour. I made some minor but key changes and sent to Dir FO.		
Reflection	In discussion with Dir FO she acknowledged the changes and had anticipated the same effect being achieved through procurement officer training and guidelines. She went on to express her concern that not all procurement officers would be under her management. That reinforces the need for clear policy prescribing at least the minimum sustainability considerations. I also advise the COO that I had made these changes in order to provide the mandate for genuine sustainability considerations to be included in all levels of procurement evaluation.		
Project Impact/significance	This is a significant tool in creating the business practice changes required to reach our reduction goals.		
Forward action	Generate a separate paper from ESC requesting the certain standards for low level procurement items i.e. phones, white ware, TVs, paper (already under way), vehicles etc. This will ensure the high volume but low cost items are acquired in a manner that reduces our current footprint not expands it.		

Annex B – Quality Review Template



University of Southern Queensland

Strategic Asset Management Project Quality Review Template

This template is intended as a guide for reviewing the delivery of the project at Project Dimension level. This may focus on a particular task or number of tasks and multiple tables may be used. Forward actions should be transferred to the appropriate project documents i.e. Risk Register, Change & Issues Register.

Dimension	Task (optional)	Sub-task (optional)	Date
Observation	What, where, when, who		
Analysis	Why, how		
Reflection	Interpretation, perspective, projection		
Project Impact	Consequences for the project +/-, risk profile change		
Forward action	What do we change now or do differently next time? New opportunities arising?		

Dimension	Task	Sub-task	Date
Observation			
Analysis			
Reflection			
Project Impact			
Forward action			

Completed by:

Date:

Annex C – SAM Working Group Agenda



University of Southern Queensland

Strategic Asset Management Working Party Meeting

Date and Time: Friday 14 May 2010 2.00pm
Location: Facilities Management Meeting Room
Executive Assistant: Alicia Logan Tel: 4631 1362

AGENDA

1. PRESENT

Dave Povey, Simon Pearl, Nathan Jones, Sant Dayal, Peter Smith and Alicia Logan

2. APOLOGIES

Steve Flemming

3. CONFIRMATION OF THE MINUTES

The minutes of the previous Strategic Asset Management Working Party meeting held on Tuesday 27 April 2010 are **attached**. To be taken as read and confirmed.

4. BUSINESS ARISING FROM THE MINUTES

5. TASK PROGRESS REVIEW & SCHEDULE UPDATE

6. PROJECT CONTROL GROUP

Review of the Project Control Group Minutes and Post Meeting Actions

7. OTHER ITEMS

8. QUALITY REVIEW

9. NEXT MEETING

The next meeting of the Strategic Asset Management Working Party will be held on Monday 24 May at 9.00am.

10. CLOSE

Annex D – SAM Project Control Group Agenda



University of Southern Queensland

Strategic Asset Management Project Control Group

Date and Time: Monday 31 May 2010 10.30am
Location: Facilities Management Meeting Room
Executive Assistant: Alicia Logan Tel: 4631 1362

AGENDA

1. PRESENT

Dave Povey – Group Manager Facilities, Barry Mottram – Chief Financial Controller, Steve Ivey – Group Manager Sustainable Business Management & Improvement and Andrew Frowd – Director Facilities Management QUT

2. APOLOGIES

3. CONFIRMATION OF THE MINUTES

The minutes of the previous Strategic Asset Management Project Control Group Party meeting held on Friday 30 April 2010 are **attached**. To be taken as read and confirmed.

4. BUSINESS ARISING FROM THE MINUTES

5. COMMUNICATION PLAN

6. RISK REGISTER

7. CHANGE REQUEST

8. WORKING PARTY PROGRESS


9. OTHER ITEMS

10. NEXT MEETING

The next meeting of the Strategic Asset Management Project Control Group will be held on Monday 28 June at 10.30am.

11. CLOSE

Annex E – VCC Sustainability Presentation

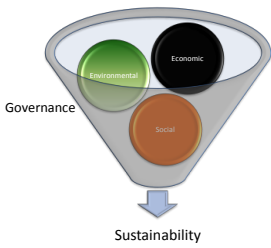


Sustainability at USQ – An outline project proposal

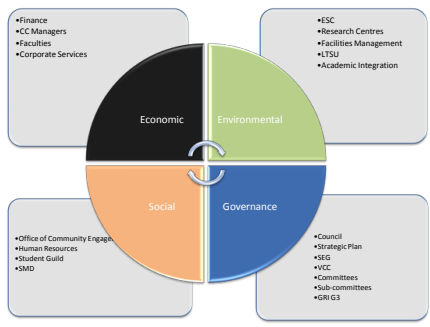
Presented by:
Group Manager Facilities Management – Dave Povey
Group Manager Sustainable Business Management & Information – Steve Ivey

What do we mean by Sustainability?

Development that meets the needs of the present without compromising the ability of future generations to meet their needs. *(World Commission on Environment and Development, 1987)*



Sustainability at USQ – Alignment with current responsibilities



Sustainability at USQ – Alignment with Strategic Plan

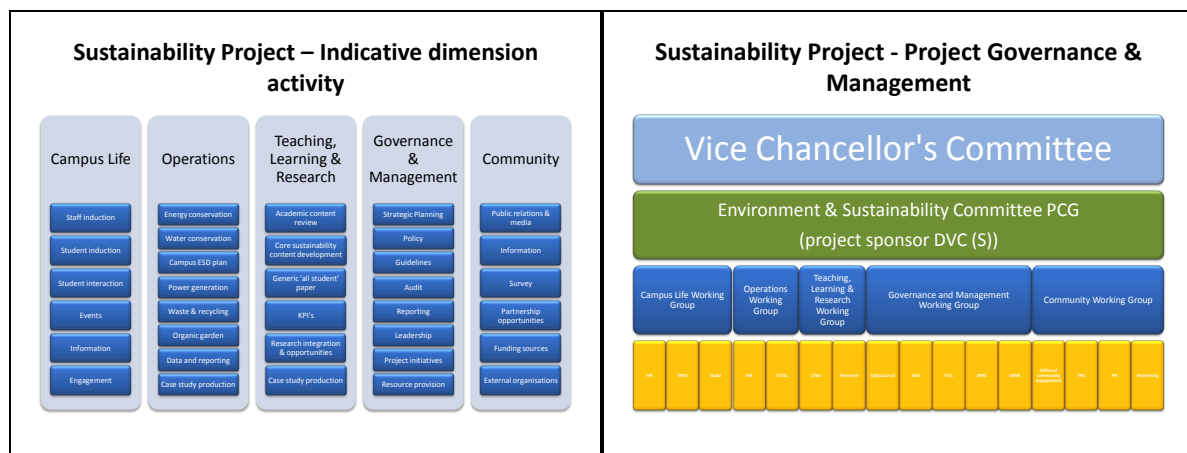
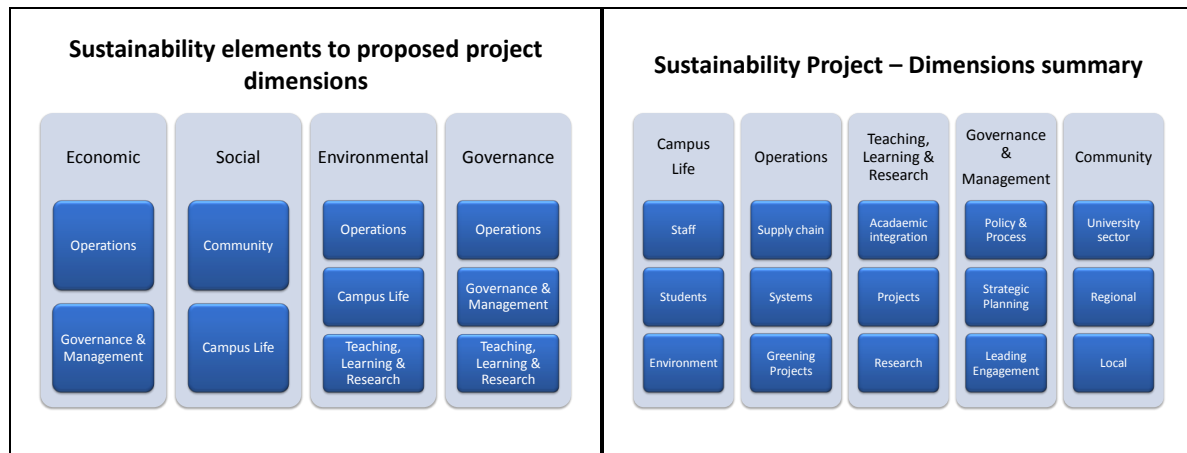
- Goal 1: Learning and Teaching: Objective 1 “Embed in courses and programs ...sustainability”
- Goal 3: Academic Programs: Objective 1 “Introduce new disciplines Sustainability”
- Goal 4: Research: “Objective 3 “Centres of research excellence, SSI and sustainable communities”
- Goal 5: Staff: Objective 2 “sustainability as it relates to corporate and academic activity”
- Goal 8: Engagement and Development: Objective 2 “create a knowledge precinct ...sustainability industry park”
- Goal 9: Enterprise: Objective 2 “Improved reporting via Global Reporting Initiative” Objective 3 “Carbon Neutral Operation by 2020”
- More detail on page 41 of USQ Strategic Plan “Pursuing USQ’s Key Organisational Themes”

Sustainability – Activity to date

- LTSU
- Academic Sustainability Paper (Draft Policy)
- Green Project investment funding via CAMP
- Rainwater catchment projects
- Water use reduction
- Lighting hardware standards amended
- Water and Electricity sub-metering project
- Installation of a weigh station to monitor waste and recycling
- Waste and recycle improvements
- Environmental Audit initiated
- Web site established
- ESC ToR reviewed
- Organic garden created for students

Sustainability – 2010 scheduled

- Creation of the Sustainability Project
- Completion of environmental audit and integration with Sustainability Project
- Academic Integration of Sustainability
- Strengthen research integration
- Green Project funding publicity and bid applications
- Continue rainwater catchment projects (HUB)
- Continue water use reduction technology
- Continue lighting replacements
- Fleet greening
- Sustainable transport initiatives (end of trip facilities, car pooling, buses)
- Water and Electricity sub-metering expansion and reporting
- Installation of a weigh station to monitor waste and recycling
- Waste and recycle improvements and reporting (organic waste and composting)
- Increased reporting of sustainability metrics
- Staff and student induction modules
- Increased event representation
- Bio-diversity trail
- Campus ESD Master-plan development
- Feasibility study for tri-generation plant



- | | |
|--|--|
| <p style="text-align: center;">Sustainability Project – Next Steps</p> <ul style="list-style-type: none"> • Submit Project Mandate through ESC & COO for VCC approval • Appoint Project Manager • Develop Project Plan, resubmit for final approval • Establish PCG and Working Groups • Establish baselines • Project implementation | <p style="text-align: center;">Sustainability Project – Next Steps</p> <ul style="list-style-type: none"> • Submit Project Mandate through ESC & COO for VCC approval • Appoint Project Manager • Develop Project Plan, resubmit for final approval • Establish PCG and Working Groups • Establish baselines • Project implementation |
|--|--|

Annex F – Carbon Reduction Working Group Agenda



University of Southern Queensland

Carbon Reduction Working Party

Date and Time: Tuesday 3 May 2011 1.00pm
Location: Facilities Management Meeting Room
Environmental Officer: Alicia Logan Tel: 4631 1362

AGENDA

1. **PRESENT**
2. **APOLOGIES**
3. **CONFIRMATION OF THE MINUTES**
The minutes of the previous Carbon Reduction Working Party meeting held on Thursday 24 March 2011 are **attached**. To be taken as read and confirmed.
4. **BUSINESS ARISING FROM THE MINUTES**
5. **TASK PROGRESS REVIEW AND SCHEDULE UPDATE**
6. **QUALITY REVIEW**
7. **NEXT MEETING**
8. **CLOSE**

Annex G – Summary of Environmental Initiatives

Summary of key environmental and sustainability initiatives implemented as part of the Carbon Reduction Project 2009 – 2012.

- Environmental Audit
- Greenhouse Gas Emissions inventory and 2009 baseline
- Campus Ecological Transformation Study: Involved a holistic whole of campus review of the campus load and infrastructure against ESD and Sustainable Energy technology based solutions, involving several feasibility studies and informing the USQ Carbon Reduction Strategy
- GRI G3 reporting as part of the USQ Annual Report
- Environmental & Sustainability web pages
- Environmental reporting included within management and governance reporting
- Institutional Memberships of Australasian Campuses Towards Sustainability (ACTS) and Association for the Advancement of Sustainability in Higher Education (ASSHE)
- 5 Star Green Building (GBCA) to be constructed at Springfield Campus in 2013
- Carbon Management Software implementation - emissions based inventory to capture carbon usage and monitor overall environmental performance against individual cost centres (foundation for internal carbon performance targets)
- Carbon Reduction Strategy approved and adopted. 1.9 MW photo-voltaic array currently engaged in procurement process
- Expanded the USQ research platform through synergies with ESD projects
- Student garden created
- Student environmental group created and supported, including media profile
- Student representation on the USQ Environment and Sustainability Committee
- Automatic shutdowns of AV equipment left idling for more than three hours
- Forced shutdown at 23:00 hours each night for new AV systems
- The majority of USQ's projection systems operate in economy mode to reduce power consumption and increase lamp life
- Retrofitting with eco-saving light (replacing iron-core ballasts and tubes with more energy efficient alternatives) R Block and E Block

- Smart Meter Project- installation of electricity, gas and water smart meters connected to the Building Management System (BMS) web enabled power management system
- 10% electricity supply “Green power” via a Government accredited renewable energy program (no net greenhouse gas emissions), 20% for 2012, and 30% planned for 2013
- Sustainable Transport solutions - Greening of USQ Fleet Vehicles (quantity, size, fuel type and emissions); provision of two End Of Trip Cycling Facilities; engagement with Regional Council to improve public transport solutions
- Installation of “Please turn lights off” signage to encourage behavioural change for both staff and students
- ‘Sustainability’ online training module for staff
- Appointment of an Environmental Officer and the creation of an Environmental Office in the main Quadrangle
- Buildings 01,02,03 and K5: installation of potable water plant using 100% harvested rainwater
- Re-sealing of the Japanese Garden lake to reduce town water use by 70%
- Conversion of all single flush toilets to dual flush systems
- Flood mitigation system and storm-water retention (nil town water used for grounds/ovals irrigation since 2009)
- Reusing water from air-con cooling towers for grounds irrigation
- Co-mingled recycling and E-waste programs
- Grounds waste mulching
- Increased furniture recycling and reuse
- Staff/Student Engagement Events - Earth Hour, Ride to Work Day, USQ events, Environmental Charter (achieved approximately 1700 signatures in the first four months), and a staff and student competition (win an iPad) to ‘name’ the Environmental Office leading to the ‘Lilypad’ brand and logo.
- Branded ‘keep cup’ with price incentives at the coffee shop to reduce waste to landfill
- Installation of a weigh station to monitor waste and recycle volumes leaving campus
- Installation of insulation through Residential Colleges roof space

- Interactive touch screen display in the Learning Commons integrating carbon performance with a 3D campus map
- Green walls installed in the Learning Commons area in 2012
- Water feature with flora and fauna introduced to the Learning Commons area in 2011
- Significant (circa 40%) reductions in print media throughout 2010 through to current

Annex H – SAM Paper for EmeraldInsight Publication

Understanding and implementing strategic asset management at the University of Southern Queensland

Abstract

Purpose – This paper outlines an implementation model and framework for those Facilities Management (FM) professionals who are seeking to enhance the strategic role of FM within their organisations, through the development of Strategic Asset Management (SAM).

Design/Methodology/Approach – The project was implemented using an action research framework to capture key outcomes and findings at the same as formal project management techniques were used to govern activities and actions across multiple dimensions.

Findings/Results – As a result of the project, the University of Southern Queensland has significantly matured in its understanding of its real estate portfolio. In particular it has now recognised the importance of appropriate and effective investment, optimal utilisation of space, the latent opportunities residing within an under utilised or 'lazy' portfolio and the significance of SAM in support of organisational objectives and priorities.

Research limitations/implications – This case study provides information, observations and learning that can be applied in other organisations seeking to develop a SAM focus. These outcomes cover, the technical, political, structural, and change management aspects of implementing SAM.

Originality/value – The paper provides guidance on the considerations, implementation experiences and lessons of an organisation with extensive and diverse physical assets engaged with an enterprise level upgrade of its asset management philosophy and practice. This paper comments on a number of organisational dimensions that go beyond the traditional technical areas.

Keywords Strategic Asset Management, Facilities, Organisational Change

Paper type Case Study

1. Introduction

Strategic Asset Management (SAM) is an approach adopted by the Facilities Management (FM) professional that elevates the role and relationship of Facilities Management to that of a strategic partner and enabler rather than simple service provider (Jensen, 2008). Its purpose is to enable the organisation to achieve its goals through the provision of appropriate asset solutions. In determining those solutions the FM professional (through the SAM process) will consider, amongst other things- opportunities within the wider asset portfolio, life cycle costing, procurement choices (purchase, lease, disposal, BOOT or PPF schemes), policy, project constraints (timing, quality, cost), reuse opportunities, revenue creation, value-add opportunities. Barrett and Baldry (2003) propose FM as “an integrated approach to operating, maintaining, improving and adapting the buildings and infrastructure of an organisation in order to create an environment that strongly supports the primary objectives of that organisation”.

A clear indicator of SAM operating effectively within an organisation is when the Facilities Manager receives early advice of a change in organisational need, be that a need for a physical asset or a service. This is essential given not only the lead times associated with the decommissioning, refurbishment or creation of new built assets but also the substantial opportunity costs associated with changing (or creating more) physical assets. The effective application of SAM permits the FM department time to consider how best to respond to that change in need; to thoroughly evaluate the changing demand to ensure all options (including non physical asset solutions) have been fully considered and the most appropriate solution is being adopted. Another significant benefit to the organisation is full transparency of the costs of the proposal through the SAM information. Too often an organisation will engage with an exciting new proposition without considering the full implications and life cycle costs of implementation.

The University of Southern Queensland is not unique in facing the challenge of balancing numerous and various facilities demands in a dynamic market environment. At the time of this project’s inception (end of 2008), both inside and outside the FM department at USQ, there was a significant capability ‘gap’. In this regard Jensen (2008) describes four different types of relationships between FM and Corporate Strategic Planning as follows:

- Integrated strategic (fully integrated, formal and informal);
- Proactive strategic (interdependent planning occurs in parallel with mutual exchange of information);
- Reactive Strategic (FM reacts to but does not influence organisational strategic planning)
- Passive Non-strategic (FM has an administrative relationship and provides support but is not involved in the strategic planning process)

At USQ in 2008, FM was clearly located in the ‘Passive Non-strategic’ quadrant of Jensen’s typology. Consequently, one of the primary challenges for this SAM project has been the development of the necessary understanding, capability and connections between USQ Senior Management, USQ Governance and the FM department, as well as within the

department, to enable the FM department to move towards operating in the 'integrated/proactive' mode.

2. Governance and management

The project was established and implemented using industry standard project management tools and processes, in particular project management techniques and principles as described within the Project Management Body of Knowledge⁵³. A Project Control Group (PCG) and a Working Group (WG) were established for oversight and implementation respectively. The PCG was aimed at building cross enterprise capability and the WG was aimed at building capability across and within the different sections comprising the FM department.

The WG comprised the Group Manager Facilities Management and FM staff members responsible across various areas of the FM operation. There were a number of constraints and benefits that contributed to the rationale for this particular composition:

- The project was internally funded, from within existing budget
- The staff know the current practices, processes and systems
- The staff would benefit from the knowledge acquired through the implementation of this project
- For the initiatives to be sustained the staff will need to have ownership of the project outcomes and deliverables.

The Project Governance Group (PCG) comprised the Group Manager Sustainable Business and Information (GM SBMI), the Chief Financial Officer (CFO), the Group Manager Facilities Management (GM FM) and an external expert being the Director of Facilities Management at the Queensland University of Technology. The GM (FM) is one of the authors of this paper. The other author operated as a mentor to the GM (FM), reviewing all project outcomes and findings and providing guidance and analysis of the overall project. The members of the Governance Group were selected not just for their seniority and subject matter expertise, but for their future role in supporting the changes that were anticipated to successfully implement SAM. It was envisaged that the CFO would need to support linkages with finance and financial planning and the GM SBMI would need to support and accommodate changes in the strategic and operational planning and policy frameworks.

3. Framework and implementation model

⁵³ The Project Management Book of Knowledge or PMBOK, is the definitive text on project management techniques and methodology and is produced via the Institute of Project Management.

The earliest stages of the project involved the development and definition of a conceptual framework using selected FM and SAM literature (Bainbridge & Finch, 2009; Barrett & Baldry, 2003; Institute of Asset Management (IAM), 2012a and 2012b; Yui, 2008)) as well as existing frameworks/models from both related and unrelated organisational settings (Government of South Australia, 1999; Government of Western Australia, 2005; National Asset Management Steering Group, 1998; Tertiary Education Facilities Management Association, 2009a, 2009b and 2009c). The latest edition of the Australasian Tertiary Education Facilities Management Association (TEFMA) Strategic Asset Management Guidelines (2009a) was the most closely aligned of the existing models to the circumstances of USQ and was given considerable attention as it represented the accumulated knowledge of FM professionals operating within the education industry over many years.

The first step in the process in developing a conceptual framework involved detailed consideration of the TEFMA SAM guidelines and subsequent mapping of the various TEFMA SAM elements (e.g. Acquisition Plan, Disposal Plan, Teaching and Learning Plan, Management plan) into a relationship model. This step is considered critical because achievement of SAM is dependent on the cross flow of information, not only across different parts of the whole enterprise but between the elements/functions within FM. Required action arising from one part of the organisation (e.g. Teaching Plan) may have impacts on multiple FM elements (Acquisition and Maintenance). The relationship model charts different sources or pathways of organisational needs and wants and must map these to elements of SAM within FM.

The WG found the TEFMA model to be particularly comprehensive, and concluded that for it to be sustainable and provide the intended benefit (for USQ), it would need to be streamlined or scaled down to suit the USQ environment. The WG was equally clear that the process of streamlining and scaling down should not compromise the quality and utility of the SAM information delivered from the project. The extent to which the USQ model would seek to close the gaps or expand on the opportunities was further informed by a separate SWOT analysis that provided a broader view of the organisational and FM strengths, weaknesses, opportunities and threats.

The integration of the model layers, the SWOT assessment and the resource constraints were considered collectively by the WG and provided the rationale for the construction of the final model. The resultant adopted model for the USQ SAM project therefore (1) integrates a number of functions and reports that are separated in the TEFMA model, (2) builds upon existing USQ strengths and (3) applies focus to areas of USQ weakness where it is required as part of the model.

The adopted USQ SAM model is shown at Figure 1. This figure divides all of the elements of SAM into three categories – Strategic, Tactical and Operational. Then within each of these columns, each of the elements of SAM considered relevant to USQ were plotted as either ‘solid’ or ‘dotted’ boxes. The solid boxes were elements that already existed, the dotted

boxes represent either new or substantially changed/amended elements. Further minor changes occurred throughout the project and at the time of drafting this report, work continues on a number of the elements in regard to the population of data.

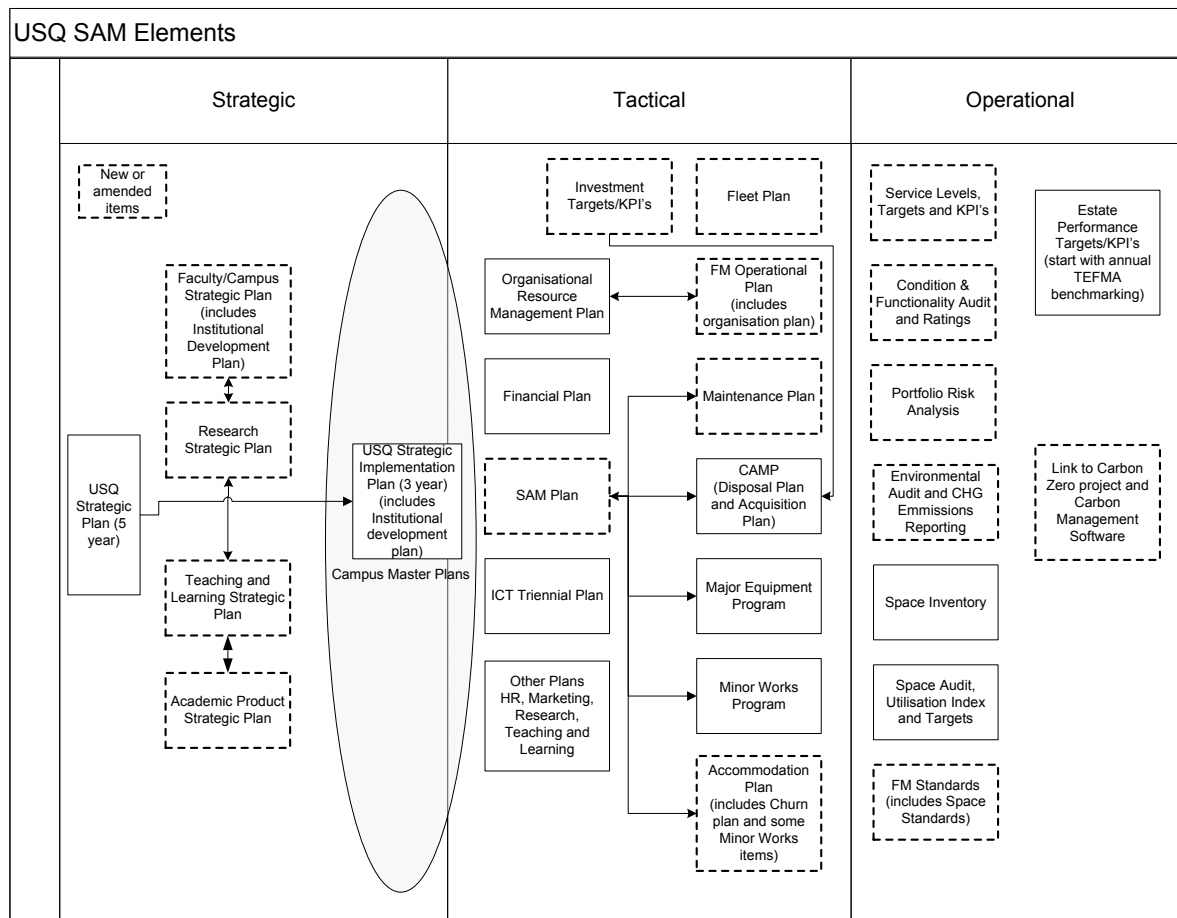


Figure 1: The Conceptual Framework for SAM at USQ

Once the model was agreed by the PCG, the WG revisited the project scope to ensure that it was still an appropriate representation of the overall project and that the proposed model was not taking USQ outside the scope boundaries.

Building on the SAM body of knowledge and the experience gained from a recent University change project, it became apparent that the project would need to have aspects of organisational change management within the delivery methodology: especially if the benefits of SAM were to be sustained. To facilitate the alignment of the management of impacts on individual staff and their teams and the implementation of new or revised elements of FM required for SAM, the project was broken into five key areas or dimensions. Task clusters (aligned with the SAM model) were created under these dimension headings and aided in the development of specific tasks for population of the initial project Gant Chart (or Schedule). Figure 2 shows the project dimensions as five columns and then, within each of these columns, the initial task clusters are identified.

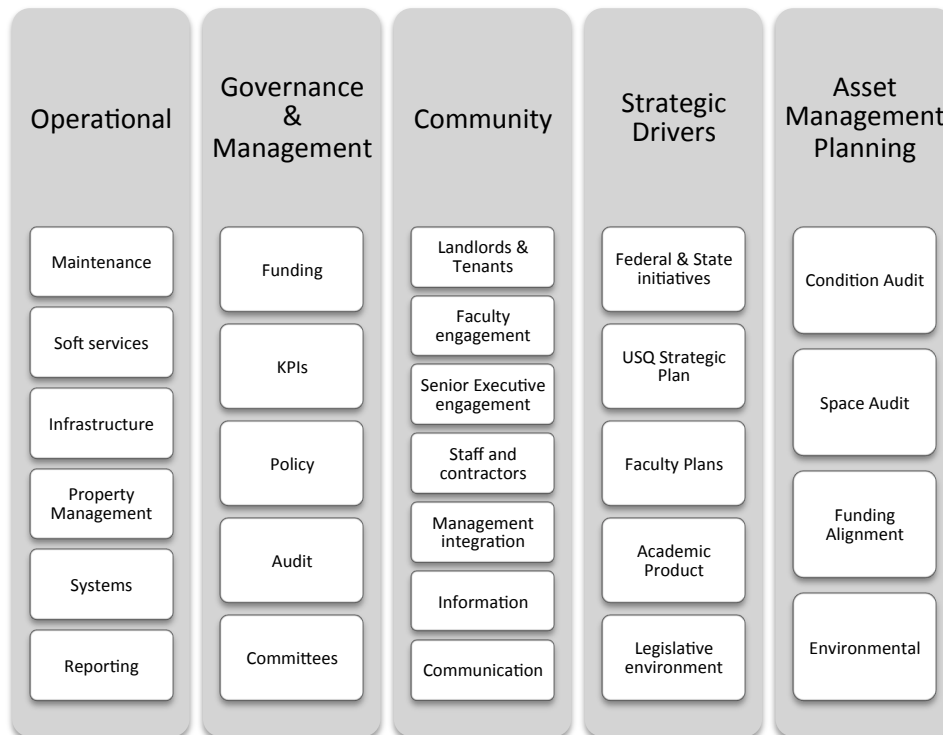


Figure 2: The Implementation Framework for SAM at USQ

The PCG and WG then reviewed the initial project schedule and task structure, adding to the detail as appropriate. This process provided perhaps the most significant value-add opportunity in the project. The willingness to consider SAM holistically created an environment where members of the WG, in particular, saw the project as an opportunity to improve practices at every level and in every area of FM. This broadening of the implementation scope did not compromise the project objectives or scope as stated within the project plan, but did add to the individual workload of the team members. This widening of focus and consequent growth of the task schedule to encompass general quality improvement was endorsed by senior management and the PCG and this has been a major factor in the breadth and depth of the positive changes delivered by this project. Even though everyone in the FM team was not directly involved, the project was communicated and consulted widely within FM and regularly presented as a significant FM project of direct benefit to the University at an enterprise level. Key deliverables (such as templates or survey findings) and data were also presented in various forums to reinforce the progress and utility of the project.

4. Assessment

The adoption of an action research methodology inherently required the capacity to identify changes over time across key project dimensions (Cherry, 1999). As noted earlier, one of the authors played a key role in the project (as the Group Manager Facilities) and worked as a

member of the control group and leader of the working group. All of the data collection, analysis and subsequent actions/findings were handled by these groups and the operation of these groups using project management techniques contributed to reliability and validity of processes, findings and outcomes. One important way of assisting those involved to gain an understanding of the effectiveness of the project, given the scope set out in both the conceptual and implementation models earlier, was to make an assessment of the FM (SAM) environment at the start and finish of the project. This was the subject of some discussion amongst the WG as it sought to develop a starting rating against each dimension and task within the project plan. These discussions provided an opportunity to engage FM staff with the benefits of a systemic approach to their activities at all levels. It became apparent that fully documented, communicated and maintained standard operating procedures did not exist in all areas, and those that did were focused on safety. The need to assess against a robust ratings framework highlighted these deficiencies. Eventually two methods were adopted. The first was the more familiar and simpler TEFMA table (2009). This was initially selected as it is a reporting obligation of the University arising from its membership of TEFMA. The second assessment model and subsequently the primary measure for the WG, was the Institute of Asset Management (IAM) methodology (Reference). The IAM model was considered by the Working Group to offer a far more detailed (23 separately assessed elements) and analytical approach to the assessment than that offered by the TEFMA table. The IAM assessment elements are also very closely aligned with the elements of a generic SAM model and therefore also aligned to the USQ SAM project dimensions. The WG considered that the IAM model as it is presented in standard form, did not require further interpretation or mapping against the specific USQ project dimensions and tasks. The IAM rating scale associates, with each number from one to six, supporting descriptors; these include a maturity scale, and what is called a 'state'. For a rating of one, the maturity scale is 0-5%, and the state is 'innocent'. For a rating of six, the maturity scale is 70-100% and the state is "excellent". The 'starting' and 'target' ratings made by the project team for USQ are shown at Figure 3

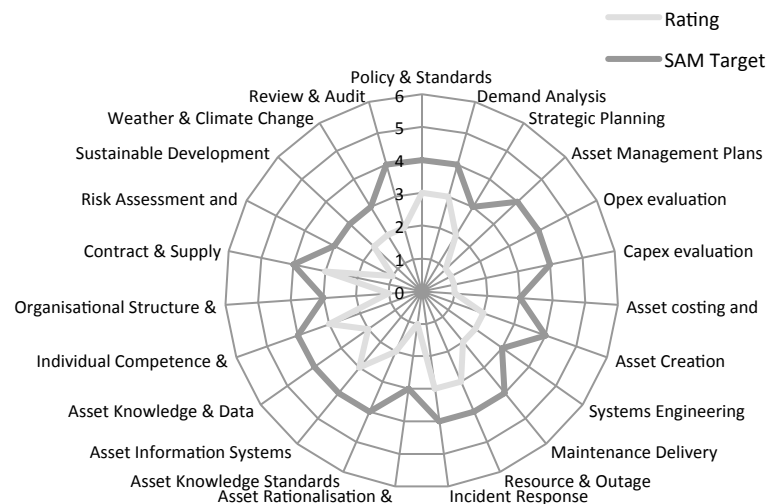


Figure 3: The 'Starting' and 'Target' Ratings for USQ's SAM Project (Based on the IAM (2012a))

Both the TEFMA and IAM assessment methods were applied at a high level and were therefore largely qualitative and to some extent subjective. That said, the assessments were consistently undertaken, and ratings rigorously debated and challenged in the WG environment. This was an interesting debate as the WG members, some of whom were operational FM staff, had a strong sense of ownership which required careful handling in an objective assessment environment. To minimise the risk of bias the ratings were reviewed and challenged in a separate forum involving University senior management.

One other factor was considered in defining the project baseline and that related to the use of an external assessor. The WG and PCG considered that the project scope and budget did not allow for the engagement of a consultant for this purpose. It also considered that an objective assessment undertaken by the WG utilising an international methodology and validated by the PCG would be appropriate given the internal nature of this project. In the end, the USQ SAM project was subjected to review at both commencement in JAN 2009 and 18 months later in JUL 2010. The review went across 23 elements of the IAM SAM assessment framework and was undertaken by both the WG and the PCG. The ratings were moderated using the knowledge and skills available to the organisation. The results are set out in the next section and this whole approach to the project, set in the context of an action research methodology, enabled multiple organisational actors to play a role in developing both SAM and FM capability at USQ. Specifically, it has raised awareness of SAM and the role of the physical asset portfolio at senior management and governance levels, and it has expanded existing staff knowledge and engendered substantial ownership of the project within the wider Facilities team.

5. Results

The overall impact for USQ and FM of this project is considered to be significant across multiple dimensions and at several levels. In summary, as a result of this project, FM has evolved from the 'Passive - Non-strategic' quadrant of Jensen's model and is now operating in the 'Proactive - Strategic' quadrant, and moving rapidly toward 'Integrated Strategic'. This is apparent as the various reports, policy changes and planning linkages generated through this project become integrated with corporate instruments (creating the underpinning information flows and understanding necessary for sustained SAM).

Overall achievement against the project target levels is shown at Figure 4. These targets were developed as a substantial improvement on the existing level of capability assessed at the commencement of the project (as shown in Figure 3).

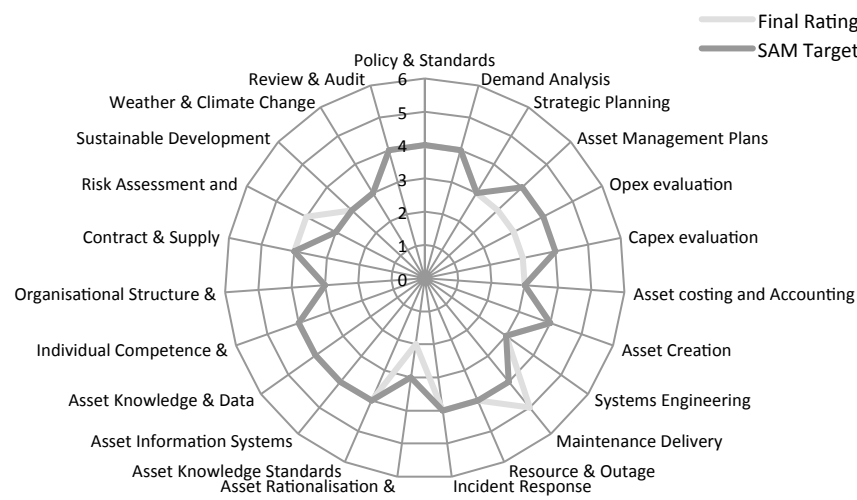


Figure 4: The 'Final' and 'Target' Ratings for USQ's SAM Project (Based on the IAM (2012a))

It is interesting to consider both significant shifts as well as areas where there has been limited progress. Specifically -

- Asset Management Plans, Opex evaluation and Capex evaluation have shown limited improvement and remain lower than the desired level. This is in part due to the distributed ownership of the various parts of the process across a number of sections (including FM). Awareness of these gaps and understanding of the issues created by them has improved and this has provided FM and other key organisational players with the opportunity to initiate separate discussions to mitigate the negative impact on the achievement of SAM.

- Asset rationalisation awareness has improved in regard to targeting improved utilisation, but there is work still to be done around replacement or disposal strategies. This is seen as a key requirement and will need to be embedded in policy if it is to be a sustainable mechanism for limiting unnecessary portfolio growth.
- Risk assessment has significantly improved and now forms a part of all FM activity. In relation to SAM it serves an important role in developing service levels and prioritising the importance of an asset within the portfolio, thereby influencing the resource allocated to support that asset.
- Individual competence has increased and this is attributed to the level of engagement achieved through the action research approach and “learning by doing”, primarily for the members of the WG but also the wider members of FM.

In addition to these demonstrated results, it is important to note that high level awareness of SAM is also growing and has manifest through the inclusion of the GM FM in the 2011 Vice Chancellors Committee (VCC) and University Council Strategic Planning Forum. Subsequent to that forum, and using the data and analysis from the SAM project, the GM FM developed and presented a paper to the VCC regarding the diverging alignment of the real estate portfolio with the strategic direction of the University. The paper represents the culmination of the SAM project, in linking FM with the organisation’s strategy, by summarising the key strategic issues for the real estate portfolio as a contributing element of USQ strategy and bottom line surplus. Some of the key findings and issues from that paper include:

- The misaligned perception and use of the real estate portfolio with the changing business environment of the University. In particular the students’ move away from on-campus study and the lack of a corresponding reduction in teaching space
- The significant investment tied up in the portfolio and the divergence of this against other costs and revenue, impacting adversely on the organisation’s bottom line
- The significant opportunity for improved space utilisation, creating an improved bottom line through the release of real estate for revenue creation and/or deferral of new building projects
- The importance of planning integration and forecasting to both optimise the portfolio operation and value-add in support of strategic initiatives
- Consideration of the role of space into the future as USQ engages in various technology based initiatives both associated with student study modes and expectations
- Consideration of the role of real estate in attracting and retaining particular staff and student cohorts
- Portfolio planning across 3 distinct campuses may take an integrated, synergy based approach or it may consider autonomous development with a degree of duplicated services and function. This is an emerging discussion within USQ senior management

and governance and part of the role of FM is to contribute to a more informed discussion by way of providing additional supporting information, such as comparative development cost, development constraints, regulatory planning environment etc and link those to new initiatives, organisational aspirations, student and staff load forecasts and model the most effective real estate solution against all those dimensions.

There is another aspect of 'results' worthy of review and that is to consider the robustness and useability of the conceptual framework employed. The general reason for employing such a framework was to guide and inform the project and ensure completeness and fit; completeness from the perspective of SAM and fit from the perspective of the particular organisation, in this case USQ.

The conceptual framework had three key dimensions. The first dimension was the development of the systemic model and acceptance of the SAM elements for USQ. The creation of the model in the manner previously described allowed for broader project enhancements around delivery methods, change management and content. The second dimension considered technical delivery and this was founded on established project management principles and was familiar to a varying degree to all members of the PCG and WG. The final dimension related to the action research approach which allowed for the softening of an otherwise potentially rigid project management delivery. The action research methodology allowed members of the PCG and WG the flexibility to reflect and adjust the specifics of the project resulting in personal and organisational growth and engagement.

6. Learnings

The key learnings from this project arise in relation to the (1) the conceptual SAM model employed, (2) the governance and management structure and (3) the integration of the methods employed for both the implementation and research dimensions of this project.

SAM model

This project has demonstrated the importance of embedded planning linkages if FM is to move from service provider to strategic enabler. Embedding the timely capture of the data required for even the simplest space and portfolio planning is essential to move FM to a proactive and informed mode, and thereby allow it to make appropriate and timely contributions to directions of the organisation. To assist in that, the USQ SAM project developed user templates that can be issued annually either from the FM office or ideally embedded into the USQ corporate planning cycle and associated documentation. The latter is currently in progress via the Corporate Planning office and represents a value add to the general planning data as well as meeting FM specific information needs. One of the

unexpected learnings is the number of business and academic units across the University that rely (to a large extent) on the same core data but do not have ready or consistent access to it. Similarly the lack of central oversight of business case development and funding bid submissions, utilising robust data and standard content and form has also been surprising. This latter point has been raised and through this SAM project separate initiatives are underway to address that gap.

The introduction of extended condition audits and space assessments has created a comprehensive data base that will benefit FM planning, room bookings and central timetabling, and also assist in achieving appropriate allocations (timing and value) to support the portfolio at the required service level.

Governance and management

The project established a traditional governance and management structure with the PCG and the WG performing those functions respectively. The key to the success of this project was in the selection of the members of the two groups and the engagement of the VC and the COO in the initial endorsement and approval of the project. There can be no doubt that having top level approval removed a number of organisational road blocks that might otherwise have stalled the project. The PCG captured in its membership key management positions that would be necessary to create the planning and financial linkages for the delivered SAM model to be sustainable. It also included an external expert member to provide independent comment and focus. This was particularly valuable when change proposals were received that were perhaps reflective of the challenges of the USQ environment; in these instances the independent member was able to provide a wider context and contribution that might otherwise have been missed and prevent the final solution from being adversely compromised.

The composition of the WG was a significant factor in the success of this project and a success story in its own right. The decision to pull so many operational staff into the WG was not an easy one. It would impact on their daily time and workload and also may introduce issues or challenges that could delay or derail the project. The opportunity for professional development and the need for ownership and engagement outweighed these considerations and the WG was formed accordingly. The end result, in part through the delivery approach adopted, and in part due to the quality of the individuals involved has been a significant success. As discussed in the results section the degree of corporate and individual knowledge development has been significant and is reflected in the final results assessments. Perhaps most importantly there are high levels of confidence around the sustainability of the solutions arising from the degree of ownership from the FM staff.

Methodology

As previously mentioned the approach adopted in this project has been shaped by two methodologies. They are (1) project management as the primary implementation methodology and action research as the primary research methodology. These methods have been interlinked to ensure (a) the robustness of the operational implementation of a real project [with real risk and threats] and (b) the validity of a research project using a bespoke conceptual framework for SAM intended to expand the capability of an existing FM section that was clearly in a 'reactive' mode of operation at the commencement of the project (as set under Governance and management above).

The adoption of a project management approach was seen as being the most robust and easily accepted delivery model. It is a proven and recognised methodology and generally understood and adopted throughout the University. That said, it was not so familiar to members of the WG and this has been an area of particular professional development.

The adoption of an action research approach was not something that was immediately understood or embraced by the WG. The introduction of a 'Quality' review as an agenda item at each WG meeting allowed for the opportunity (via a simple template) to encourage the 'Plan, Do, Observe, Reflect' cycle. The members became comfortable with the process after a couple of sessions and the learnings and observations captured on the templates were useful to the PCG and the WG alike in making changes to the project scope and methodology. The ownership and engagement of the members of the WG and FM staff generally was clearly enhanced as a result of their observation of the Action Research methodology at work and seeing first hand that their individual thoughts and suggestions could result in a change to the project.

7. Conclusion

Through the implementation of this project USQ has developed a robust SAM capability and in so doing has reached an understanding and awareness of the role of SAM and the benefits of engaging with FM (equipped with a SAM competency and capability) as a strategic partner, rather than a reactive service provider. The decision making of the organisation has been enhanced and this has been demonstrated through the approach taken in acquiring a satellite campus and also the development of a Federal funding bid project, where the principles and considerations of SAM were integrated into the design and development of the build component of the bid. However the results achieved so far, as highlighted by the assessments summarised in Figures 3 and 4, still mean there are more improvements required. Importantly however, this project has provided an opportunity to create the framework and mechanisms by which a core SAM competency (assessed across specific elements and within a defined time frame) has been created, and can be progressively expanded upon, within USQ.

FM staff knowledge, skill and engagement have increased through the delivery of this project and the particular implementation approach adopted. In particular, the expansion across all areas and levels of FM as a quality improvement focus and the involvement of operational staff at all levels in the development and execution of the project.

The FM efficiency and customer service levels have improved as a result of increased understanding, improved communication flows, improved planning and solutions development.

This project has provided a valuable resource for practitioners seeking to raise the value of the contribution of an organisation's real estate portfolio, in the success of that organisation. This case study recognises and records the value of different methodologies (being project management and action research) combining to provide an enhanced outcome in a real world operational environment.

Much has been written about the nature and dimensions of SAM (the 'WHAT' perspective) but the focus of this case study has been on the implementation and application of a comprehensive SAM model (the 'HOW') within a relatively large and complex organisational setting. In so doing, the Strategic and Tactical levels of SAM have been addressed, in addition to the Operational level and in this way it provides a useful case study for those FM professionals seeking to enhance the strategic contribution of FM within their organisations.

References:

Bainbridge, M. & Finch, E. F. (2009) "Getting the Attention the Facilities Manager Deserves", *Facilities*, Vol.27, pp. 277-290.

Barrett, P. & Baldry, D. (2003), *Facilities Management – Towards Best Practice*, Blackwell Publishing, London.

Cherry, N. (1999), *Action Research: a pathway to action, knowledge and learning*, Qualitative Research Methods series, RMIT University Press, Melbourne.

Government of South Australia 1999, *Strategic Asset Management Framework*, Asset Management Policy Series, 2nd edn, Government of South Australia.

Government of Western Australia 2005, *Strategic Asset Management Framework for Western Australian Public Sector Agencies*, Government of Western Australia.

Institute of Asset Management, (2012a), "PAS Assessment Methodology (PAM)", available at <http://theiam.org/products-and-services/pas55-methodology> (accessed 19 February 2012)

Institute of Asset Management, (2012b), "Competencies Framework)", available at <http://theiam.org/products-and-services/competences-framework> (accessed 19 February 2012).

Jensen, P. A. (2008), "The origin and constitution of facilities management as an integrated corporate function", *Facilities*, Vol. 26, pp. 490-500.

National Asset Management Steering Group (1998), *New Zealand infrastructure asset management Manual*, National Asset Management Steering Group, Wellington N.Z.

TEFMA (2009a), "A Review of Approaches to Strategic Management", available at <http://www.tefma.com/publications/publications-overview> (accessed 19 February 2012).

TEFMA (2009b), "How To Undertake a Facilities Audit", available at <http://www.tefma.com/publications/publications-overview> (accessed 19 February 2012).

TEFMA (2009c), "The Strategic Management Guideline", available at <http://www.tefma.com/publications/publications-overview> (accessed 19 February 2012).

Yui, C. Y. (2008), "A conceptual link among facilities management, strategic management and project management", *Facilities*, Vol. 26, pp. 501-511.

Annex I – Summary of Key SAM Initiatives

Summary of key Strategic Asset Management initiatives and outcomes arising from the SAM Project 2009 - 2011

- Development of a Condition Audit guide and template
- Undertaking of two full Condition Audits during the life of the project
- Populated Condition module as part of the USQ Facilities software system
- Framework developed for FM standards with ongoing population of content
- Accepted SAM framework and development of supporting SAM plan documents in line with State Government standards
- Space and Project ‘request’ templates developed and implemented to aid in approval flow and transparency, information collection (timing and quality) and to also help manage stakeholder expectations
- Space Plan linked to Faculty growth and contraction (staff, students and academic product) ‘Faculty Planning Template’
- Improved quality of capital asset management planning (CAMP) with SAM data underpinning most projects
- Accommodation Plan expressing a more granular, short term (annual) perspective on space movements (often referred to as ‘churn’)
- Improvements to the Campus Masterplan reflecting emerging strategic relationships with the Regional Council, and further aspirations around industry and research strategic partners; changes also reflect proposed carbon reduction infrastructure and identify environmentally significant areas of the campus
- Significant improvements to the quality of the space utilisation audit (execution, data and report format) leading to increased use of the space report to inform management and governance decisions
- The knowledge developed through this project has contributed to the improved quality and content of external capital funding bids and annual compliance reporting, as evidenced in the successful 2011 Strategic Adjustment Fund bid
- The institutional understanding of the estates portfolio in regard to the significance and impact of the portfolio on the organisation’s bottom line has significantly increased as a direct result of this journey as evidenced in Artefact 12. To paraphrase; the key learning

was the identification of the ability of a 'lazy' portfolio to become increasingly divergent with the goals of the organisation and thereby draw funds and resources away from core activity.

- In 2012, USQ has scheduled a major space review to identify and address areas of significant space under-utilisation, as well as embedding criteria (arising from the SAM Project) to manage new build expectations.
- Improved quality of the public spaces and Learning Commons area, with increased retail presence, including environmental features and ESD design. This has seen a very positive response from staff and students alike, with significantly higher patronage apparent in 2012 than 2009.

Annex J – Reflection of outcomes against the original Learning Plan

Project 1	Strategic Asset Management (SAM)	Reflection
Context	<p>The RoP project required the introduction of SAM. For FM, this involves the alignment of the property portfolio and the FM service structure to most effectively support the current and future needs of the organisation as described by the USQ Strategic Plan.</p>	<p><i>This statement of context focused on the efficiencies required of the FM area. As a result of the project, the impact of the scale and utilisation of the real estate portfolio on the operating surplus of the organisation has been understood and socialized, leading to increased senior management and governance level interest in estates performance, and its contribution as a strategic enabler.</i></p>
Level	<p>This project is of strategic importance to USQ and will potentially contribute to the achievement of a number of goals within the USQ Strategic Plan, specifically:</p> <ul style="list-style-type: none"> • Goal 2 – Student experience • Goals 1,3 and 4 through the provision of flexible appropriate environments • Goal 5 – Staff by improving the condition of the space and aligning the level of service received with staff needs • Goal 6 – Educational Partnerships through consideration of alliances and development space in campus master planning • Goal 7 – Social Justice and Equity by prescribing spaces that are attractive and 	<ul style="list-style-type: none"> • <i>Outcome of the improved space relationships and design vibrancy</i> • <i>Links to standards and flexible design, understanding the role of space and its relationship to pedagogy</i> • <i>Quality and diversity of space, increased commercial activity and choice ,plus staff facilities identified through the project</i> • <i>Property Management focus, improved leases, estates investment to attract partners</i> • <i>Quality and diversity of space ,identification of single international focus through SAM project</i>

	<p>functional for students of all cultures and socio economic backgrounds.</p> <ul style="list-style-type: none"> • Goal 8 – Engagement and Development through the inclusion of joint venture community projects and consideration of those opportunities as part of strategic FM planning • Goal 9 – Deliver positive social, environmental and economic dividends through the cost effective and environmentally responsible planning, development and operation of the property portfolio <p>The project embeds the tertiary sector’s current understanding of strategic asset management best practice. The outcome of this project will directly influence:</p> <ul style="list-style-type: none"> • property acquisition and disposal decisions • operating expenditure investment • space allocation and utilisation • standards and qualities defining the built environment at USQ 	<ul style="list-style-type: none"> • <i>As above, improved leases, strategic planning, master planning of campus, active partnering and increased commercial focus</i> • <i>SAM paper linking estates to organisational bottom line and expressing efficiency measures.</i> • <i>Carbon reduction strategy to 2014, with specific ESD projects developed and costed projecting 64% reduction in carbon emissions</i> • <i>Expanded understanding of SAM and the concept of Portfolio Mindedness as an evolution of the SAM paradigm</i> • <i>Improved processes but connections with other strategic areas still developing</i> • <i>As above, plus business case improvements (templates)</i> • <i>Significant improvement to space audit process and utilisation improvement actions contained within SAM paper</i> • <i>FM standards under development, condition audit in place, expanded understanding of the role of the estate in student and staff attraction and retention (not just functional)</i>
Scope	The project will require me to undertake extensive research and gain an expert understanding of the	<i>The literature was reviewed and analysed resulting in a USQ model for SAM, aligned with the assets and resources of</i>

	<p>new TEFMA guidelines for Strategic Asset Management as well as wider research into alternate models and concepts. The research gathered will be collated and assimilated into a USQ model and the variances identified and recorded.</p> <p>I will also need to obtain skills appropriate to the production of the case study itself and the presentation paper.</p> <p>Key stages of this project include:</p> <ul style="list-style-type: none"> • Establish the project team and the project within USQ. • Research and knowledge of the TEFMA SAM guidelines. • Research other SAM models and undertake a literature review. • Undertake SWOT analysis of USQ's current situation. • Undertake GAP analysis to identify the 'missing elements' of the wider SAM package. • Develop a USQ model based on TEFMA but tailored to suit USQ's needs, including; <ul style="list-style-type: none"> ○ Appropriate asset service levels ○ Appropriate soft services ○ Funding sources and constraints ○ Condition of assets 	<p><i>the organisation (i.e. providing appropriate levels of information and planning). The elements of that SAM framework are now in use within the organisation (with few exceptions). This thesis includes at Artefact 5 the USQ SAM elements model which may be of value for similar size organisation's seeking to adopt a scalable and sustainable SAM model.</i></p> <p><i>Through this journey my research, analysis, reflection and writing skills have markedly improved, not just in the hard form but also in my interaction with colleagues and consideration of my management and reflective practice generally.</i></p> <ul style="list-style-type: none"> • <i>Completed as planned and sponsored by the Chief Operating Officer.</i> • <i>Done and informed the USQ model</i> • <i>Numerous models assessed and asset management standards e.g. IAS55</i> • <i>Done, and led to opportunities migrating to project tasks</i> • <i>The USQ model expanded beyond the asset focus to supporting areas such as community and communication</i> • <i>Completed, although some central planning linkages are yet to be fully embedded.</i> <ul style="list-style-type: none"> ○ <i>Levels set within asset database</i> ○ <i>Levels extended to soft services</i> ○ <i>Funding sources identified but subject in many cases to political dimensions</i> ○ <i>Condition captured in database</i>
--	--	--

	<ul style="list-style-type: none"> ○ Space utilisation ○ Planned introduction/removal of courses and programmes ○ Strategic priorities ○ Planned revitalisation or retirement of assets ○ Changing technology impacts ○ Fleximode delivery impacts • Develop the identified “GAP” materiel (various policies, guidelines, service level agreements (SLAs) and standards required to underpin the SAM Plan) • Embed the policies and standards within the 	<ul style="list-style-type: none"> ○ <i>Audits completed for all campuses and results engaged</i> ○ <i>The academic linkage is represented through the Faculty/Unit Facilities Plan</i> ○ <i>Planned priorities are illustrated in the Capital Plan, but dynamic, opportunity driven items remain problematic</i> ○ <i>Mid-life refurbishment is not included, relying instead on the condition assessment conducted tri-annually. Retirement is not represented due to the portfolio age.</i> ○ <i>Technology linked with environmental performance has been easier to accommodate. General technology fitout is routinely tested for currency and use fit.</i> ○ <i>Fleximode, relates to on campus, off campus or mixed mode study. The portfolio is focused on flexibility and spaces are designed for multiuse to the extent possible</i> • <i>These documents are in progress. Policy changes have been drafted and provided to the responsible area. SAM and asset management plans are being drafted. The dependency on other areas for policy execution has been challenging, as has the development of comprehensive standards due to the volume of work involved versus resources</i> • <i>This will follow at the appropriate time as part of an enterprise wide policy update</i>
--	--	--

	<p>organisation including appropriate communication</p> <ul style="list-style-type: none"> Development of a predictive funding model based on condition, replacement costs by building element, area, service level and life cycle 	<ul style="list-style-type: none"> <i>This was seen as a fundamental output of the project, but was overtaken by activity within the Finance department and an unforeseen change in valuation methodology. Consequently it is yet to be delivered, and will be engaged as a future action in collaboration with the Chief Financial Officer</i>
Key Deliverable	<ul style="list-style-type: none"> Project plan Project update reports (frequency to be agreed with the Chief Operating Officer (COO) but notionally monthly) Condition assessment of property portfolio Client survey to inform FM service levels Predictive cost modelling informing Operating and Capital funding programmes Introduction of new policy (e.g. Maintenance, Security) Introduction of new standards (e.g. Fit out, furniture, tech equipment) Increased efficiency of space utilisation (monitoring and reporting, achieve targets) Proposals to the Vice Chancellor for the maximisation of revenue from space Amended policy i.e. defer construction of new space until general space utilisation improves Case study providing feedback 	<ul style="list-style-type: none"> <i>Done, refer Artefact 9</i> <i>Done, refer Artefact 12</i> <i>Done and hosted with the BEIMS</i> <i>Done for 2009 and 2010, required for 2012</i> <i>Refer above</i> <i>Refer above</i> <i>Significantly developed but not completed</i> <i>Localised wins, but the space audits have created knowledge and understanding for USQ, and now informs new build or refurbishment requests</i> <i>Done via the paper to VCC, refer Artefact 13</i> <i>Significant space project planned for 2012 arising from the VCC paper.</i> <i>Case study developed as part of the academic paper, refer Artefact 30.</i>

	<p>to TEFMA for their consideration regarding any amendments or clarifications of the SAM Guidelines</p> <ul style="list-style-type: none"> Journal article or conference paper; potentially via TEFMA or the Property Institute of NZ conference or journal 	<p><i>This will be provided to TEFMA later in 2012</i></p> <ul style="list-style-type: none"> <i>Academic Paper accepted for publication by Emerald Insight, refer Artefact 30</i>
Key areas of Learning	<ul style="list-style-type: none"> Best practice Asset Management Project management applied in a multi-faceted technical environment Corporate Leadership, particularly the creation within the organisation of an understanding and acceptance of the impacts of adopting Strategic Asset Management (including the financial impact, associated lead times, the concept of service levels, work flows and approval routing) Academic writing 	<ul style="list-style-type: none"> <i>USQ model considers the body of practice and aligns with the USQ context</i> <i>Adopted through the projects and enhanced participant knowledge and USQ templates</i> <i>The project achieved full understanding of the estates portfolio impact on the organisational bottom line and identified efficiencies. This was achieved at the highest level within the organisation.</i> <i>My academic awareness, knowledge, reflection and expression have improved significantly through this learning journey and that development is evidenced in part by the progressive quality improvements of the artefacts contained within this thesis.</i>
Evidence to be provided	<ul style="list-style-type: none"> Project Plan Project Reports including briefing papers and recommendations to senior management Project Timeline Project Team Meeting papers 	<ul style="list-style-type: none"> <i>Provided at Artefact 9</i> <i>Provided at Artefacts 11,12,13</i> <i>Provided at Artefact 9 and Figure 7</i> <i>Provided at Annex C</i>

	<ul style="list-style-type: none"> • Emails/letters • SWOT and GAP Analysis • Case Study and/or Conference Paper • Journal notes • Copies of various documents associated with the Key Deliverables above • USQ Strategic Asset Management Plan (document) • Reflective Report, bringing together the experiences and learning derived through this project. 	<ul style="list-style-type: none"> • Available via the project Sharepoint site but not included in this thesis. Superseded by the provided Artefacts • Provided at Artefact 6 • Provided at Artefact 29 • Provided at Annex A and excerpts embedded within this thesis • As described • In development at the time of writing. Builds on SAM elements provided at Artefact 5 • Delivered via this thesis
Project 2	Carbon Zero	Reflection
Context	<p>USQ has adopted sustainability as a key theme of the University. Consequently, the USQ strategic Plan includes an objective to be carbon neutral by 2020. Federal and state legislation is also driving carbon emissions reductions and increasing corporate reporting requirements. To facilitate the move to more sustainable technology and infrastructure various funding sources have emerged, targeted at energy and emissions reduction projects, and generally accessed via bid processes.</p> <p>If USQ is to achieve this significant and ambitious objective it will need to take a coordinated and informed</p>	<p><i>As discussed earlier in this thesis, the original focus of the project was to have been a full sustainability implementation across the organisation. This was ambitious and possibly naive, fostered perhaps by a lack of subject matter knowledge and general enthusiasm on my part.</i></p> <p><i>The decision to focus on carbon reduction was an appropriate one and is discussed in Chapter Four. Once this decision had been made the project risk profile changed considerably allowing for the scope to be more ably defined, the sphere of operational influence was aligned to the revised scope and the whole project assumed an air of ‘achievability’ that had</i></p>

	<p>approach, utilising all of the resources at its disposal, including the full support of its staff and students. This project will take the lead role in achieving that outcome for the University.</p>	<p><i>not been present in its previous form.</i></p> <p><i>Further the carbon focus was a more consistent focus in terms of the goal expressed in the USQ Strategic Plan.</i></p>
Level	<p>This project is of strategic importance to USQ and will contribute directly to the achievement of Strategic Plan Goal 9 – Enterprise, objective 3: <i>A carbon neutral operation across all 3 campuses by 2020.</i></p> <p>The project will encompass the latest principles of environmental sustainability with particular focus on the reduction of carbon emissions. The outcome of this project will directly influence:</p> <ul style="list-style-type: none"> • asset acquisition and disposal decisions • operating expenditure investment • capital funding investment • space design • procurement practice • standards and qualities defining the built environment at USQ • general housekeeping and habits of staff and students 	<p><i>The project has continued to be of strategic significance and has been beneficial across a number of areas within the university and to regional partners alike.</i></p> <p><i>The project has delivered a well founded series of carbon reduction sub-projects that will achieve a 64% reduction in carbon emissions by 2015, if fully implemented.</i></p> <ul style="list-style-type: none"> • <i>New assets (all types) are now being considered for their environmental footprints</i> • <i>Energy efficiency and reduction funds are now part of recurrent funding</i> • <i>Capital funds for energy efficiency and environmental projects are now a standing line item on the Capital Asset Management Plan</i> • <i>Space design now routinely considers energy efficiency, material selection, ESD principles</i> • <i>Procurement policy has been amended to include sustainability criterion and considerations</i> • <i>Standards are being adapted to reflect ESD principles</i> • <i>Engagement with staff and students has made significant progress and</i>

	<ul style="list-style-type: none"> • USQ policy and process • investment in technology • investment in infrastructure • USQ consideration of carbon offset solutions <p>The project will involve the acquisition, analysis and synthesis of current knowledge regarding environmental practice, Federal and State level legislative direction and environment, carbon offset and sequestration solutions, communication and engagement strategies and technical understanding sufficient to inform reduction project selection.</p> <p>This project requires a comprehensive and inclusive approach at every level of the organisation, across the strategic and operational, governance and management, and the staff and student environments.</p>	<p><i>will continue to be a focus</i></p> <ul style="list-style-type: none"> • <i>Changes to environmental policy, procurement policy and a new sustainability policy achieved</i> • <i>Smart metering, ICT solutions, motion sensing and many other solutions have been introduced through this project</i> • <i>USQ is now considering proposals for PV farm and intends to call tenders for a tri-gen Plant in 2012</i> • <i>USQ has adopted green power offsets through to 2013. This will be reviewed following the PV and tri-Gen projects.</i> <p><i>The project has made use of several external consultants to acquire and develop the various audits, studies, designs and solutions required as part of the development of the Carbon Reduction Strategy.</i></p> <p><i>Campus Services staff have held oversight at all stages, often undertaking significant work in support of the consultants, including the review, edit, analyses and coordination of various documents and inputs. Through this interaction the knowledge and engagement of the project participants (including myself) has been achieved.</i></p> <p><i>The project has been well communicated and well received by staff and students as discussed in Chapter Four. Governance and senior management have endorsed the Carbon Reduction Strategy and the Strategic Goal remains extant</i></p>
Scope	Develop an organisation wide project to achieve the strategic	<i>The project touched on all areas of the organisation. It has excited and</i>

	<p>objective of Carbon Neutrality by 2020. This project would involve all facets of facilities management, project management, leadership, project planning and management, the acquisition of new and current knowledge of environmental opportunities and solutions, and in particular carbon emissions and offsets, knowledge, evaluation and analysis of systems, tools and solutions and the successful application of that in the USQ environment.</p>	<p><i>motivated many people. It has been received as a positive action on the part of the organisation by many staff, students and partners.</i></p> <p><i>The knowledge, skills and competencies of the Working Group has developed as a direct result of the project, particularly in their understanding of energy reduction and management, project management, carbon management and reporting, business case development (around the PV sub-project) and leadership with Campus Services providing the focus and impetus to USQ's carbon neutrality goal.</i></p>
Key Deliverables	<p>This will be achieved through the structured delivery of an emissions reductions framework and management plan:</p> <ul style="list-style-type: none"> • Environmental Audit • USQ adopted operational plan in support of strategic goal. • Evidenced emissions reduction • Achievement of legislated reporting requirements • Demonstrated reduction in energy consumption • Options paper for offsetting residual emissions 	<p><i>The Carbon reduction strategy is provided at Artefact 28</i></p> <ul style="list-style-type: none"> • <i>Completed with numerous learnings around the USQ data, processes and carbon footprint and boundaries</i> • <i>Carbon strategy and prime sub-projects adopted</i> • <i>Initial GHG emissions inventory developed as baseline. Annual figures developed since indicating reduction in line with project progress and estates growth</i> • <i>Compliance reporting understood through the project and compliance achieved</i> • <i>Highlights the challenges of a simple goal statement. Through the project a new server building was constructed and a campus purchased. The focus is now on the carbon emissions.</i> • <i>Done initially, but now under review for more cost effective offsets</i>

	<ul style="list-style-type: none"> Journal article or conference paper; potentially via TEFMA or Property Institute of NZ conference or journal. 	<ul style="list-style-type: none"> <i>Replaced with academic paper at Artefact 30</i>
Key areas of Learning	<ul style="list-style-type: none"> Environmental sustainability best practice Energy/environmental audit and efficiency concepts Technical skills regarding assessment of energy efficiency proposals Project management with a focus on corporate change and engagement Corporate Leadership, preferably within the higher education sector and particularly how to implement this magnitude of change and acceptance within the organisation, (including defining appropriate levels of communication and involvement throughout the project and the bringing together of the various strands and elements at the project conclusion with a commitment at both Governance and Management levels). Academic writing 	<ul style="list-style-type: none"> <i>Initial sustainability research leading to environmental and particularly carbon management and ESD solutions.</i> <i>This was ongoing throughout but was significantly developed during the CETS feasibility studies and evaluation</i> <i>As above</i> <i>Project management competency and knowledge improved for all participants. The FM Integration project late in 2011 represented a business efficiency realignment and was focused on change management and engaging staff in a new structure</i> <i>This has occurred with acceptance of the CS role in building and maintaining momentum on the carbon initiative. This has been reinforced by the Council and Senior Executive endorsement of the Carbon Reduction Strategy. The knowledge in regard to organisational structure, dynamics and politics arising from the work has been significant.</i> <i>Significant improvement across the span of the journey as evidenced by</i>

		<i>the Artefacts.</i>
Evidence to be provided	<ul style="list-style-type: none"> • Project Plan • Project Timeline • Project Team Meeting papers • Emails/letters • Environmental Audit extract • Sustainability Action Plan • Templates developed • Sub-projects undertaken (e.g. energy efficiency project) • “SWOT” and “GAP” Analysis • Case Study and/or Conference Paper • Journal notes • Copies of various documents associated with the Key Deliverables above • Reflective Report, bringing together the experiences and learning derived through this project. 	<ul style="list-style-type: none"> • <i>Provided at Artefact 19</i> • <i>Provided at Artefact 22 and Figure 16</i> • <i>Provided at Artefact 21</i> • <i>Available via the project Sharepoint site but not included in this thesis. Superseded by the provided Artefacts</i> • <i>Provided at Artefact 23</i> • <i>Replaced with Carbon Reduction Strategy provided at Artefact 28</i> • <i>Provided by various Artefacts</i> • <i>Provided in Annex G</i> • <i>Replaced by Audit and CETS sub-project</i> • <i>Provided at Artefact 30</i> • <i>Provided at Annex A</i> • <i>As described</i> • <i>Provided via this thesis</i>