Presentation Outline

- Background and context
- ITSM process assessment
- International standard for process assessment ISO/IEC 15504
- Software-mediated process assessment approach

- Automating business assessments
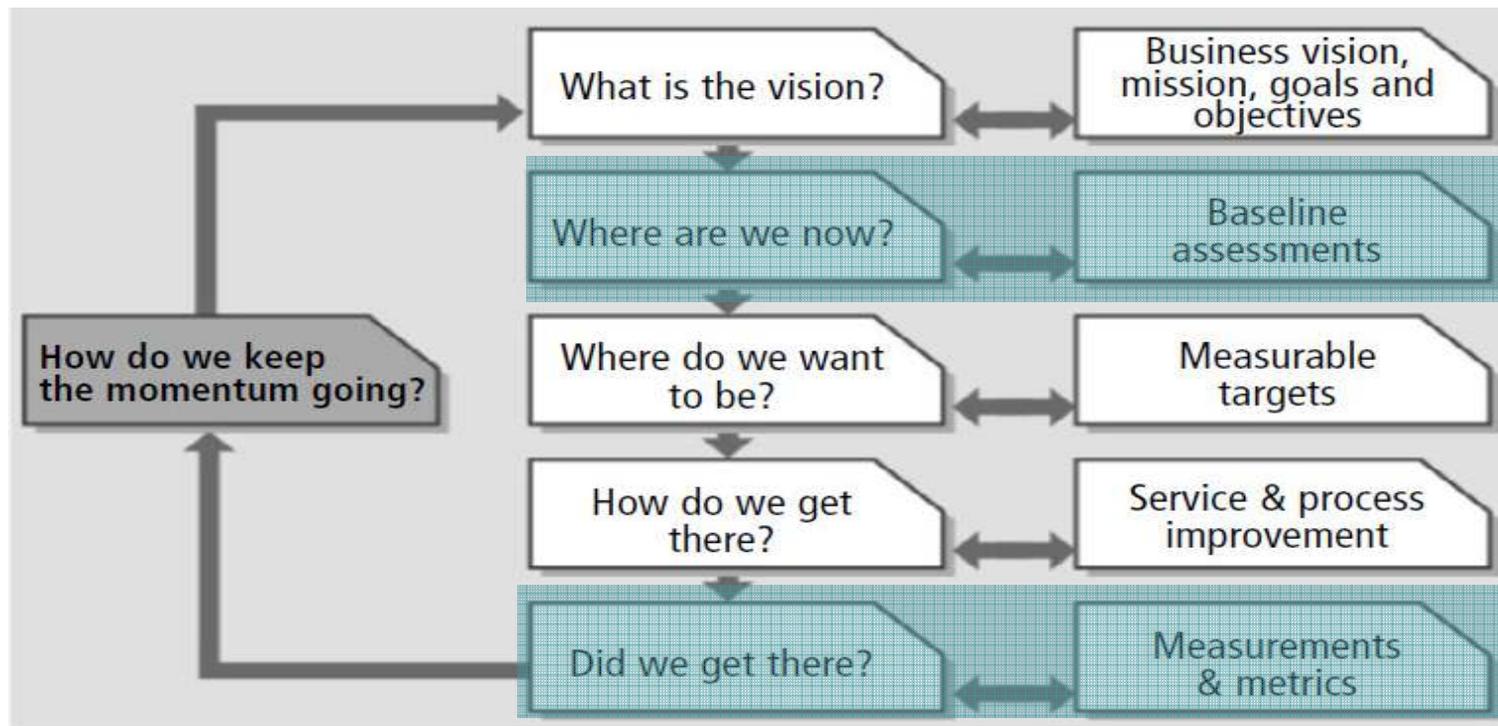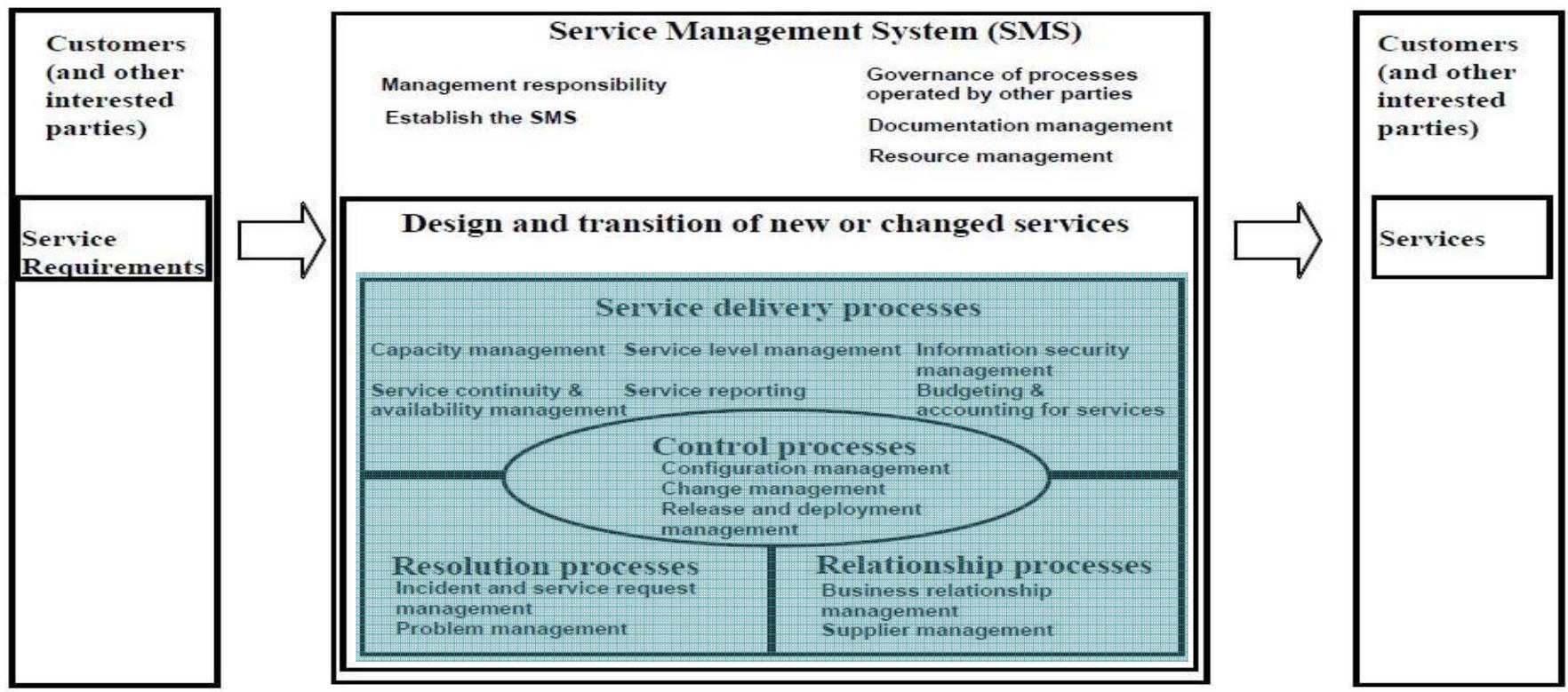- Research project value

Research Project

- ISO/IEC 15504 + ISO/IEC 20000
- Research project supported by Australian Research Council (ARC) – Aileen Cater-Steel
- USQ with partners:
  - Assessment Portal – Paul Collins
  - Queensland Government ICT Division (CITEC) – Maria Canard
  - Toowoomba Regional Council (TRC) – Paul Fendley
  - Griffith University – Terry Rout

#LEADit

ITIL CSI Approach

ISO/IEC 20000

Service Management System (SMS)

Management responsibility
Establish the SMS

Governance of processes operated by other parties
Documentation management
Resource management

Design and transition of new or changed services

Service delivery processes

Capacity management | Service level management | Information security management

Service continuity & availability management | Service reporting | Budgeting & accounting for services

Control processes
Configuration management
Change management
Release and deployment management

Resolution processes
Incident and service request management
Problem management

Relationship processes
Business relationship management
Supplier management

Customers (and other interested parties)

Service Requirements

Customers (and other interested parties)

Services

ITSM Process Capability Assessment Frameworks

Findings

- Reference model:
  - ITIL®

- Measurement frameworks:
  - Capability Maturity Model Integration® (CMMI)
  - ISO/IEC 15504

Issues

- **WHAT** are we measuring?
  - ITIL compliance ??

- **HOW** are we measuring?
  - Assessment method ??

What does Level 3 mean?

ITSM Process Assessment	Achieving Capability Level **3** means…
itSMF self-assessment tool	Relevant <u>outputs</u> of the process are produced.
ITIL Process Maturity Framework (ITIL PMF)	Process has been <u>defined</u> and <u>documented</u>.
Tudor ITSM Process Assessment (TIPA)	Process is <u>adapted</u> from an <u>established standard</u> process.
SCAMPI for CMMI for Services (CMMI-SVC)	Process is <u>institutionalized</u> as a defined process.
COBIT Assessment Programme	Process is <u>adapted</u> from an <u>established standard</u> process.
PinkSCAN	A <u>standardized and documented</u> level of process.

#LEADit itSMF

ITIL CSI Book

- Disadvantages of ITSM Process Assessments
  - Subjective Evaluation
  - High Costs
  - Limited Expertise in Assessments

Software-Mediated Process Assessment (SMPA)

Use of a software tool for a **TRANSPARENT approach** to data collection, analysis and reporting

TECHNICAL REPORT

ISO/IEC TR 20000-4

First edition 2010-12-01

Information technology — Service management —

Part 4:
Process reference model

Reference Model

INTERNATIONAL STANDARD

ISO/IEC 15504-2

First edition 2003-10-15

Software engineering — Process assessment —

Part 2:
Performing an assessment

Measurement Framework

TECHNICAL SPECIFICATION
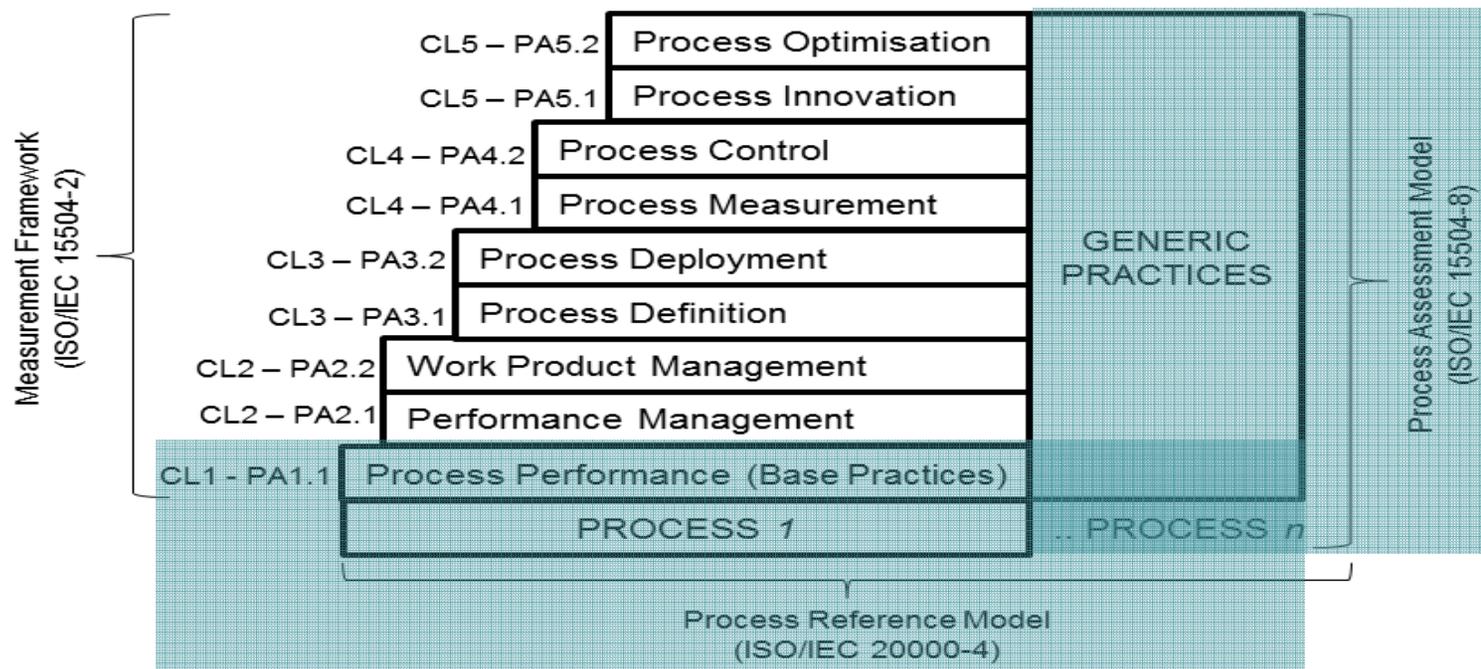
ISO/IEC TS 15504-8

First edition 2012-09-15

Information technology — Process assessment —

Part 8:
An exemplar process assessment model for IT service management

Assessment Model

ISO/IEC 15504

- Standard for Generic Process Assessment
- Originally referred to as 'SPICE'

Process Assessment Model

- ISO/IEC 15504 provides the most transparent Process Assessment Model (PAM) for ITSM

SMPA Tool Development

- **Goal-Question-Metric** Approach

- Provides a top-down process measurement approach

    – ISO/IEC 20000-4

    – ISO/IEC 15504-8

    – ISO/IEC 15504-2

Example: Goal Statement

Analyse (Which Process?)	Problem Management Process
For the purpose of (Why ?)	Process Capability Determination / Supplier Capability Determination / Process Improvement Recommendations
With respect to (What Aspect?)	PA2.1 Performance Management (Managing Process Performance)
From the viewpoint of (Whose Opinion?)	Process Performers / Process Managers / External Stakeholders of the Process
In the context of	Service Improvement Project / Process Improvement Project / Self-Assessment / ISO/IEC 20000 certification / Audit

Example: Assessment Question

ISO/IEC 15504 Indicator	Assessment Question
GP3.1.2 The standard process's sequence and interaction with other processes are determined.	Do you think the standard process workflow addresses interfaces to related processes? *(Note: when answering this question, consider use of process model diagrams and integration of the process with other ITSM or business processes).*

Example: Metric Calculation

Answer Options	Rating Scale	Scale %	Mean Value of Scale %
Yes, always	Fully	86 - 100	93
Yes, most of the time	Largely	51 - 85	68
Yes but only sometimes	Partially	16 - 50	33
No, never	Not	0 - 15	7.5
Don't know	N/A	N/A	N/A
Don't understand the question	N/A	N/A	N/A

More than Assessment

- Gap Analysis

- Process Improvement Recommendations (ITIL®)

- Don't expect this to be
a turn-key solution!

SMPA Tool Architecture
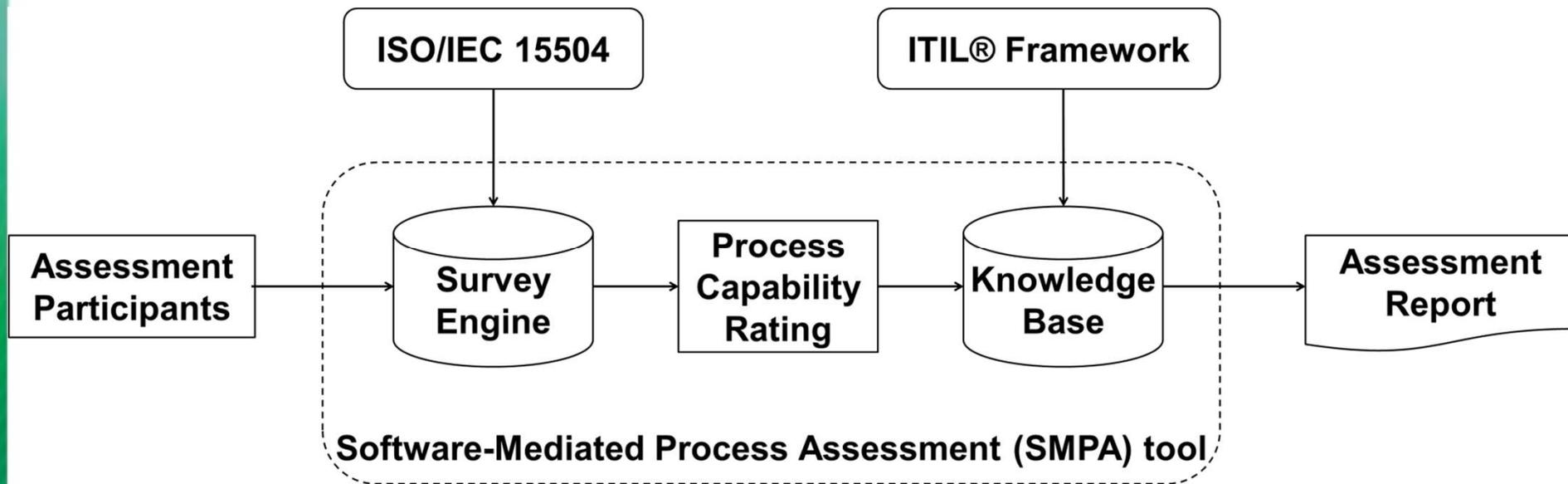
Evaluation of SMPA Tool

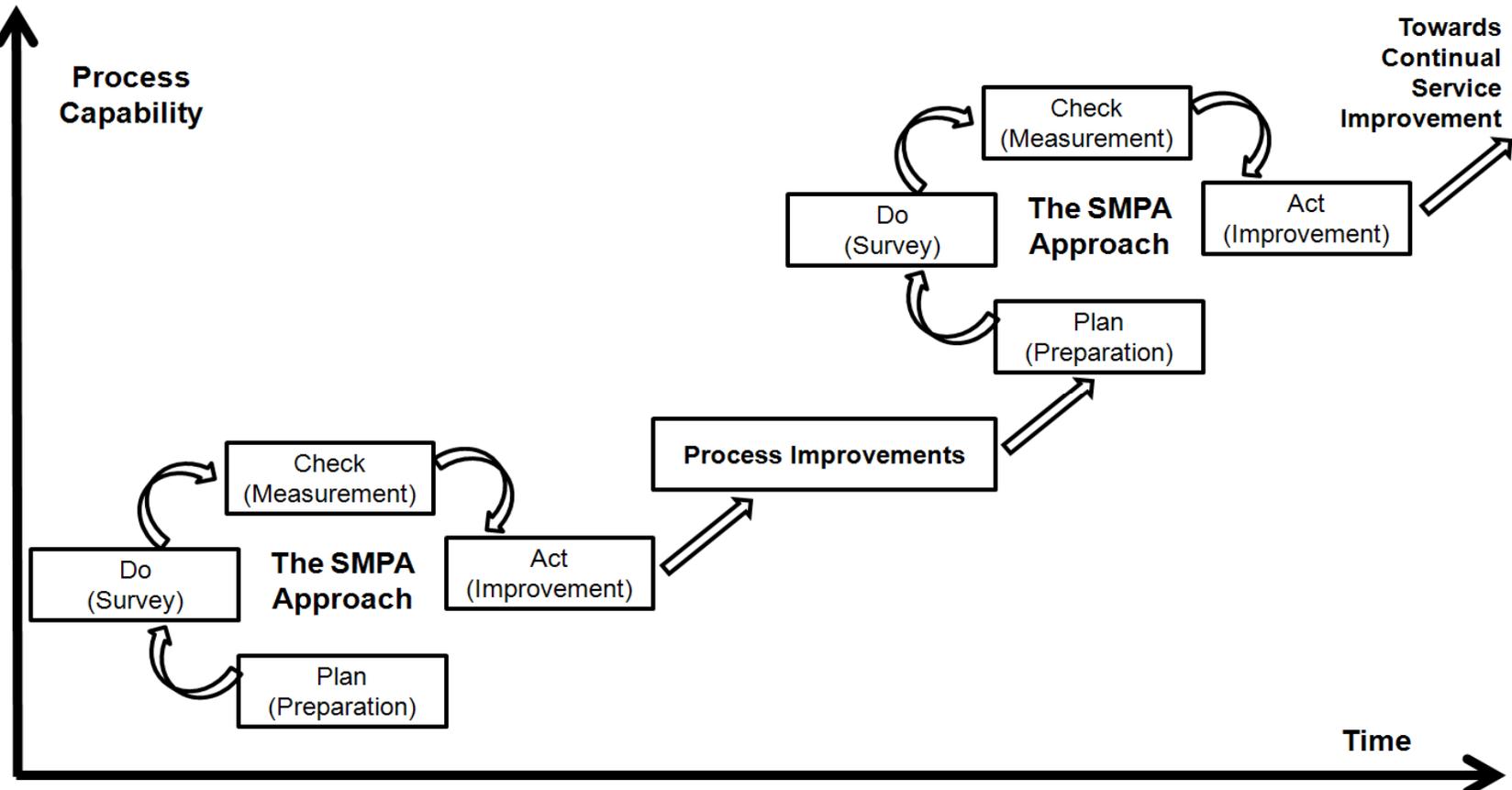| Evaluation Factor	Result	Supporting Comments
Usefulness	Negative	*"too clinical in the way questions were based on the standard.."* *"questions need to be more clear…"* *"need better examples to understand questions …"* *"need to be able to discuss questions in doubt with peers…"*
Trustworthiness	Positive	*"dependable approach…"* *"able to obtain more honest and truthful answers…"* *"follows international standards…"*
Effectiveness	Positive	*"does its job…"* *"capability to ask more people…"* *"evidence-based decision making…"* *"scalable and democratic approach… can compare assessment results easily…"*
Efficiency	Positive	*"impressive turnaround time for self-assessments…"* *"a click of a button to send online surveys… a click of a button to generate assessment results…"* *"automates assessments so that we can focus on improvements…"*

Why use ISO/IEC 15504?

- Used by some of the popular frameworks: TIPA and COBIT

- Most transparent and detailed process assessment model available for ITSM

- International community support

- Potential synergy with ISO/IEC 20000 certification for ITSM or process assessment certification for consultants

ISO/IEC 15504 for CSI

- One of many improvement frameworks for CSI

- Flexible: self-assessments OR formal assessments

- Assessment results are consistent & comparable for benchmarking & CSI

- Provides a **measure** for improvement; but does NOT specify HOW an organisation should improve!

Process
Capability

Towards
Continual
Service
Improvement

Check
(Measurement)

Do
(Survey)

**The SMPA
Approach**

Act
(Improvement)

Plan
(Preparation)

Process Improvements

Check
(Measurement)

Do
(Survey)

**The SMPA
Approach**

Act
(Improvement)

Plan
(Preparation)

Time

#LEADit itSMF

ISO/IEC 15504 updates

- ISO/IEC 15504 was created in a software engineering context - ongoing challenges in applying this to a service management context

- Upcoming changes:

  ISO/IEC 330xx Process Assessment Standard series (Nov 2014?)

- Watch out for:

  – **ISO/IEC 33062**: Process Assessment Model for ITSM Processes

And so we became an industry partner in an academic project

Which has been a great experience for us

Project synergy

= Academic rigour + Industry relevance

The most important outcome for us ?

An independent valuation by academics and international standard experts has confirmed utility and validity of
Assessment Portal

what's in It for us?

we have contributed to the validation of international standard assessment practice ...

and therefore to the body of knowledge of continual improvement ...

Endorsed by a track record of academic and industry publications and presentations

#LEADit *it*SMF

There is of course devil in the detail

Use of statistical tools in providing… accurate and reliable assessment results

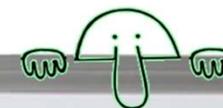Rigorous formulas to derive assessment consensus ratings

$E=MC^2$

Blah Blah..

Use of ISO/IEC 15504 process assessment standard ...
- A general process assessment framework....

Academic papers have been published on:
- Our process selection approach
- Our ITSM process assessment method
- Case studies of successful evaluation of our assessment engagements

Streamlined and accurate responses due to better structuring of assessment questions..

Thank You

- Questions?

Action Plan

- **Monday Morning (PLAN)**
  - Review ISO/IEC 15504 – ISO/IEC 330xx measurement framework
  - Gather organisation support for an ongoing assessment framework as part of your CSI plan

- **Next 90 Days (DO & CHECK)**
  - Administer transparent and efficient self-assessments using online surveys
  - Conduct gap analysis (**where are we now?** & **where do we want to be?**) supported by ITIL® best practice guidelines

- **Next Year (ACT)**
  - Plan/ Consult/ Implement/ Review improvements **(How do we get there?)**
  - Checkpoint Assessments **(Did we get there?)** – make assessments a natural and ongoing part of CSI – a means to an end!

Additional Resources

- ## USQ ePrints – research on ITSM

- ## ISO/IEC 15504 ITSM Process Assessment Model

- ## ISO/IEC 20000 Process Reference Model

- ## TIPA Online Resource on ISO/IEC 15504

- ## Contact: Anup Shrestha

  PhD in ITSM Process Assessments

  School of Management & Enterprise

  University of Southern Queensland

  Phone: 07 4631 1194

  anup.shrestha@usq.edu.au

References

- Basili, V.R., G. Caldiera, H.D. Rombach, and R. van Solingen, *Goal Question Metric (GQM) Approach.* J. Marciniak: Encyclopedia of Software Engineering, 2002. 1: p. 578-583.
- CMMI, *CMMI® for Services, Version 1.3* 2010, Software Engineering Institute: Carnegie Mellon University, MA, USA.
- ISO/IEC, *ISO/IEC 20000-1:2011 – Information technology – Service management – Part 1: Service management system requirements* 2011, International Organization for Standardization: Geneva, Switzerland.
- ISO/IEC, *ISO/IEC 15504-2:2004 – Information Technology – Process Assessment – Part 2: Performing an Assessment* 2004, International Organization for Standardization: Geneva, Switzerland.
- ISO/IEC, *ISO/IEC TS 15504-8 Information technology - Process assessment - Part 8: An exemplar process assessment model for IT service management* 2012, International Organization for Standardization: Geneva, Switzerland.
- Lloyd, V., *ITIL Continual Service Improvement* 2011, The Stationery Office, London, UK.
- MacDonald, I., *ITIL Process Assessment Framework* 2010, The Cooperative Financial Services: Manchester, UK.

#LEADit *itSMF*