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## Information Technology Governance and Service **Management: Frameworks and Adaptations**

Edited By: Aileen Cater-Steel, University of South Queensland, Australia

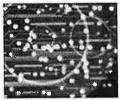
#### Description:

Increasingly, information technology governance is being considered an integral part of corporate governance. There has been a rapid increase in awareness and adoption of IT governance as well as the desire to conform to national governance requirements to ensure that IT is aligned with the objectives of the organization.

Information Technology Governance and Service Management: Frameworks and Adaptations provides an in-depth view into the critical contribution of IT service management to IT governance, and the strategic and tactical value provided by effective service management. A must-have resource for academics, students, and practitioners in fields affected by IT in organizations, this work gathers authoritative perspectives on the state of research on organizational challenges and benefits in current IT governance frameworks, adoption, and incorporation.

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**Detailed Table of Contents** 

### Section 1 Reviews of IT Governance Research

Chapter I: The Current State of Information Technology Governance Literature

Sherrena Buckby

Jenny Stewart

Buckby, Best and Stewart provide a comprehensive understanding of the current state of IT governance literature across five key focus areas: strategic alignment of business and IT systems; delivery of value from IT systems; risk management of IT systems; management of IT resources; and measurement of the performance of IT systems. The objectives are to present a detailed overview of research across the key focus areas of ITG, identify important gaps in ITG research, and to guide future thinking and research on ITG.

Chapter II:  $\Pi$  Governance-based  $\Pi$  Strategy and Management: literature review and future research directions

Junghoon Lee Changjin Lee

This chapter aims to clarify the concept of ITG through conducting a literature review, suggesting some implications of this work for practitioners and indicating directions for the future study of ITG. Most managers acknowledge the importance of managing IT assets within a framework of IT governance (ITG), but only a small number of academic treatments deal with ITG, meaning that businesses often find themselves making their governance decisions in a vacuum.

Chapter III: IT governance: a critical review of the literature David Musson

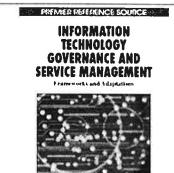
This chapter proposes that there are three different concepts that are grouped together as IT governance: IT governance as a framework or audit process; IT governance as IT decision-making; and IT governance as a branch of corporate governance. Through a review of the literature, Musson brings together the disparate views of IT governance so as to permit a broader view of this important subject.

### Section 2: IT Governance Case Studies

Chapter IV: Adoption and Implementation of IT Governance: Cases from Australian Higher Education

Jyotirmoyee Bhattacharjya Vanessa Chang

This chapter introduces key IT governance concepts and Industry standards and explores their adoption and implementation in the higher education environment. It provides a valuable example to practitioners by demonstrating that IT governance processes, structures and relational mechanisms adopted by these institutions generate value through improvements in a number of key focus areas for IT management.



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Chapter V: Tailoring CobiT for Public Sector IT Audit: an Australian case study Lynne Gerke Gail Ridley

Using a public sector audit office in an Australian state, Gerke and Ridley examine the potential to use an audit program based on the Control Objectives for Information and Related Technologies (CobiT) framework. The results suggest that the CobiT-derived instrument was effective for IT audit, and was able to be tallored to the needs of the organisation, when evaluated against a number of criteria.

Chapter VI: Comprehensive Architecture Rationalization and Engineering
Tony C Shan
Winnle W Hua

Shan and Hua consider the challenges in managing the complexity in architecture design. They define a methodical approach to effectively manage the complexity in architecture design and rationalize the architectural assets of IT application portfolios in a service oriented paradigm. The holistic framework provides a multidisciplinary approach of portfolio analysis and service-oriented architecture planning. A case study in the finance industry illustrates the use of this framework in real-world scenarios.

Chapter VII: Analysis of Three Korean Firms: Applying an IT Governance Framework Junghoon Lee Jung Woo Lee Ja Young Lee

This study compares the IT Governance setups of three large service sector firms in Korea. It seeks to identify the activities, types, and determinants of firms' ITG decision making processes, and to suggest the basis on which forms of ITG may represent rational selections for given service companies. The proposed and partially validated ITG framework should be useful for further research and practice of ITG.

Chapter VIII: The impact of ICT Governance within Australian Companies Breanna O'Donohue Graeme Pye Matthew J Warren

The Australian Standard for the Corporate Governance of Information and Communication Technology (ICT) AS8015 (Standards Australia, 2005) is used as the focus of this chapter. Recommendations are provided to enhance the effective implementation of this Standard's principles within an organisation. These recommendations concern such factors as identifying and addressing issues surrounding the implementation of this Standard and the actions that could be undertaken to improve the effectiveness of ICT governance by sharply focusing upon the governance aspects of ICT within business, as opposed to the management aspect of ICT.

Chapter IX: Improving ICT Governance – a Radical Restructure Using CobiT and ITIL Mark Toleman Alleen Cater-Steel Brian Kissell Rob Chown Michael Thompson

This case study reports on a major restructure incorporating both CobiT and ITIL principles. As well as describing the new reporting and internal structures of the Division, the alignment of the goals of the Division to the corporate goals is discussed. Care was taken to ensure that the new ICT structure was logical and conducive to operational effectiveness, efficiency and sound ICT governance, and could provide pathways and opportunities for career progression, client-focus and role delineation and functional accountability.

Section 3: IT Governance: Its Relationship to Business and Other Frameworks
Chapter X: Managing IT Security Relationships Within Enterprise Control Frameworks
Brian Cusack

The control frameworks of CobiT and ITIL provide a mapping of organizational roles from the capital interest at the highest level, through to the implementation level in an enterprise system. Security affects all processes within an organization structure and both control frameworks provide varying capability for control at different levels in an organization. In this chapter the security process is mapped from two control frameworks at the strategic layer and the issue of effective management tactics discussed from the theoretical structures within the problem area.

Chapter XI: Unexplored Linkages Between Corporate Governance and IT Governance: An Evaluation and Call to Research
Michael Borth
Randy V Bradley

This chapter focuses on the importance of both corporate and IT governance, and demonstrates that IT governance is a very important sub-component of corporate governance. The authors present a framework which should facilitate a strong understanding of the different factors and mechanisms that impact firm governance. A number of interesting empirical results relating to these governance mechanisms are presented with examples that link corporate and IT governance.

Chapter XII: I-Fit: Optimizing the Fit between Business and  $\Pi$  Alea Fairchild

Martin Smits Frik van Geel Geert Snijder

The I-Fit research project commenced as a joint activity of a regional ICT consultancy with a university research center. The main goal of the project is to help the consultants to improve alignment between business and IT in the client organizations. The I-Fit project takes the perspective of the business manager: how a business manager can influence and increase the value of the IT services received. The I-Fit model was developed based on the literature on strategic alignment and Information Quality. The model assumes causal relationships between 'IT governance', 'Strategic Alignment, 'Information Quality', and 'Business Performance' in an organization. Performance' in an organization.

Chapter XIII: Competence of information technology professionals in Internet-based ventures Tobias Kollmann Mattlas Hasel

This chapter focuses on young Internet-based firms and articulates the knowledge and skills This chapter rocuses on young Internet-based firms and articulates the knowledge and skills required by IT professionals. Building on the general IT governance principle of aligning business and IT, it introduces an adequate competence model, outlines its dimensions, and suggests a framework for modeling the effects of factors internal and external to the firm on the value propositions of the different dimensions. The authors hope that a comprehensive understanding of the role of IT-related competence will assist founders not only in finding suitable partners, but also in aligning e-business strategy and information technology in Internet-based ventures.

Chapter XIV: The Role of Maturity Models in IT Governance: A Comparison of the Major Models and Their Potential Benefits to the Enterprise

G. Phillip Rogers

Rogers assesses the role maturity models can play in enterprise IT governance. Frameworks such as the Capability Maturity Model make it possible to assess maturity in key areas. The such as the capability maturity model make it possible to assess inaturity in key areas. The author describes additional maturity models that have no formal association with a comprehensive framework, the application of which represent significantly less overhead than the larger frameworks that include a maturity model component. The author seeks to present a broad perspective on maturity models that enterprises can use as a preliminary means of evaluating available tools. This overview of maturity models can facilitate the selection of a model to bring about improved IT governance in one or more focus areas. selection of a model to bring about improved IT governance in one or more focus areas.

Chapter XV: Governance of Software Development: The Transition to Agile Scenario Yael Dubinsky Avi Yaell Yishal Feldman Emmanuel Zarpas Gil Nechushtai

This chapter aims to bridge the gap between high-level IT governance and software development governance. A model for governance in general is presented and then used to describe IT and software development domain-specific governance. The model is built based on a review of the literature and a set of scenarios. The process of transition to agile software development is used to demonstrate the domain-specific governance schemes.

Chapter XVI: Rethinking IT Governance and Risks when IT is Outsourced

The aim of this chapter is to alert decision makers to the fact that outsourcing IT incorporates residual risks even when widely-recommended operational controls are incorporates residual risks even when widely-recommended operational controls are implemented. After briefly reviewing existing formal governance frameworks and their treatment of IT outsourcing, an analytical model for considering outsourcing benefits and risks is introduced. Some strategic IT governance issues that become critical once a firm outsources a significant proportion of its IT services are highlighted. Effective control processes are necessary, but not sufficient for good corporate governance and those responsible for corporate governance should ensure that both operational and strategic governance issues are considered when IT is substantially outsourced. governance issues are considered when IT is substantially outsourced.

Chapter XVII: IT Portfolio Management: A pragmatic approach to implement IT Governance Murali Ramakrishnan

Portfolio Management principles are the foundation of building effective governance. This chapter is intended primarily for managers who are preparing to implement portfolio management concepts in an organisation and students of IT Project Management, who wish to understand the difference between Project and Portfolio Management. While there is to understand the difference between Project and Portions Management. While there is literature available discussing portfolio management at the conceptual level, there is not enough available which translates these concepts into tactical implementation. Practitioners can benefit from discussing implementation approaches that can be tailored to suit individual needs. This chapter shows one of the many ways to implement a portfolio management

Chapter XVIII: Applying Organisational Theories to realise Adaptive IT Governance and Service Management Andrew Dowse

Edward Lewis

The purpose of this chapter is to help business and information managers to adapt IT management arrangements to suit the organisational context by examining the issues associated with alignment of IT governance and service management, identifying contingencies and developing a framework. After examining the requirements for IT governance, the organisation is considered as a system and competing needs for integration and differentiation within the organisation are examined. The emerging concept of information systems as a contributor of value is also discussed and a framework developed.

Section 4: IT Service Management Frameworks
Chapter XIX: Implementing IT Service Management: Lessons learned from a University IT Jon Iden

A real life ITIL project is presented and analysed based on a longitudinal case study. The purpose is to illustrate how the ITIL process reference model for some processes may be used almost as a blueprint, while ITIL for other processes may be profoundly adapted to suit the context and the needs of the implementer. Furthermore, the success factors and the impediments for successful implementation are discussed. This chapter will especially inform practitioners about how ITIL may be utilised and how an implementation project might be organised.

Chapter XX: Developing an IT Service Strategy Neil McBride

This chapter describes a suggested model for developing a service strategy within IT services. It discusses the content and process of developing an IT service strategy. The example of hospital information systems is used to illustrate the strategic process. In order to set the scene for the strategic process, the state of information systems strategy research is discussed and set in the context of the developing service management research literature. A case is made for a migration from an IT strategy based primarily on the development of a portfolio of IT systems to a service-strategy based on the development of a portfolio of business services.

Chapter XXI: An Overview of Models and Standards of Processes in the SE, SwE and IT disciplines

Manuel Mora Rory O'Connor Francisco Alvarez Jorge Macias-Luevano

A descriptive-conceptual overview of the main models and standards of processes formulated in the Systems Englneering (SE), Software Engineering (SWE) and Information Systems (IS) disciplines is provided. Given the myriad of models and standards reported, the convergence suggested for the SE and SwE models and standards, and the increasing complexity of information systems, the authors argue that these standards become relevant to the IS discipline. Based on the aims and principles identified, the authors report and posit the concepts of process, system and service as conceptual building-blocks for describing such models and standards. Initial theoretical and practical implications for the Information Systems discipline of such models and standards are discussed.

Chapter XXII: Perspectives of IT-Service Quality Management - A Concept for Life Cycle based quality management of IT-Services

Claus-Peter Praeq

Based on the IT-industrialisation and an increased customer orientation in IT-Service management, the aspect of quality becomes increasingly important. This chapter introduces an IT-Service management framework for the use of quality management concepts in the context of the life cycle phases of IT-Services. It argues that IT-Service management, combined with quality management and a life cycle approach for IT-Services provides a new perspective for organisations to provide high quality IT-Services. The aim is to support organisations in the effective use of quality management concepts depending on IT-Service

Chapter XXIII: Measuring Return on Investment from Implementing ITIL: a literature review Chee Ing Tiong Alleen Cater-Steel Wui-Gee Tan

This study explores financial metrics that organisations could use in measuring the return on Investment from their adoption of the IT Infrastructure Library (ITIL) framework. ITIL outlines an extensive set of best practices for IT service management in organisations but as yet there is limited academic research on measuring the return on investment from ITIL adoption. This literature review discusses the importance of measuring return on investment in ITIL and some of the available measurement metrics for IT investment that could be adapted. A measurement model for measuring investment return on ITIL service management is proposed.

Chapter XXIV: Integrated product life cycle management for software - CMMI, SPICE and ISO

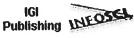
Dirk Malzahn

Malzahn describes how models for software development and service delivery can be Integrated into a common approach to reach an integrated product life cycle for software. The models include SEI's Capability Maturity Model Integration (CMMI), SPICE (Software Process Improvement and Capability Determination, ISO 15504) and ISO 20000 (Service Management). Whilst the CMMI constellation approach delivers an integration perspective defined in three models (development, acquisition and services), SPICE and ISO 20000 need additional alignment to be usable in an integrated approach.









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