This book, *Strategies for Information Technology Governance*, is aimed at improving the understanding of Information Technology (IT) Governance and its structures, processes and relational mechanisms. As will be defined in this book, IT Governance is the organisational capacity exercised by the Board, executive management and IT management to control the formulation and implementation of IT strategy and in this way ensure the fusion of business and IT. Theoretical models and practices regarding IT Governance will be discussed in the different chapters of this book and attention will be paid to its mechanisms, including IT steering committee structures, Balanced Scorecards, control objectives and management guidelines developed by ISACA, and relational mechanisms such as business/IT job rotation.

This book brings together 14 papers on IT Governance written by academics and practitioners from different countries including Belgium, Canada, Finland, Greece, The Netherlands, Norway, Spain, the United Kingdom and the United States.

The authors of the different chapters have been included in the review process and have reviewed and critiqued the manuscripts of their colleague-authors. I wish to thank the contributors to this book for submitting their chapter(s) and for assisting me in the review process as well.

The overall structure of this book follows a logical sequence: introducing the IT Governance frameworks in Section I; reviewing performance management mechanisms in Section II; presenting other IT Governance mechanisms in Section III; and illustrating how IT Governance can work in practice in Section IV.
Section I: IT Governance Frameworks

This section introduces the IT Governance concepts and consists of three chapters.

Chapter I: Structures, Processes and Relational Mechanisms for IT Governance by Wim Van Grembergen, Steven De Haes and Erik Guldentops respectively from the University of Antwerp, the University of Antwerp Management School (Belgium), and the IT Governance Institute (US), defines the IT Governance concepts and overviews the different IT Governance mechanisms. It records and interprets some important existing theories, models and practices on IT Governance. The chapter is based on relevant academic and professional publications and integrates also the main contributions of the other chapters in this book.

Chapter II: Integration Strategies and Tactics for Information Technology Governance by Ryan Peterson from the Instituto de Empresa (Spain) has three objectives. First of all, to describe past developments and current challenges complex organisations are facing governing the IT portfolio of IT applications, IT development, IT operations and IT platforms. Secondly, to discuss how organisations can diagnose and design IT governance architecture for future performance improvement and sustained business growth. Finally, to provide a thorough understanding and holistic picture of effective IT governance practices, and to present a new organising logic for IT governance.

Chapter III: An Emerging Strategy for E-Business IT Governance by Nandish Patel from Brunel University (UK) develops a framework for global e-business IT governance. This framework is based on fundamental re-directions in global e-business IT governance thinking and it applies to companies that seek to integrate Internet, intranet and World Wide Web technologies into their business activities in some form of an e-business model. The framework explains and elaborates e-business strategies for coping with emergent organisations and planned aspects of IT. The basic premise of the proposed framework is that organisation, especially virtual organisation, is both planned and emergent, diverging from the dominant premise of central control in IT governance.

Section II: Performance Management as IT Governance Mechanism

Section II: Performance Management as IT Governance Mechanism reviews IT governance mechanisms including Balanced Scorecards, business-IT alignment maturity assessment models, ROI measurement and technical IT measurements. This part consists of six chapters.

Chapter IV: Assessing Business-IT Alignment Maturity by Jerry Luftman from Stevens Institute of Technology (USA) discusses an approach for assessing the maturity of the business-IT alignment. The proposed strategic alignment maturity assessment approach provides a vehicle to evaluate where an organisation is and where it needs to go to attain and sustain business-IT alignment. The careful assessment of a firm’s alignment maturity is an important step in identifying the specific actions necessary to ensure IT is being used to appropriately enable or drive the business strategy.

Chapter V: Linking the IT Balanced Scorecard to the Business Objectives at a Major Canadian Financial Group by Wim Van Grembergen, Ronald Saull and Steven De Haes respectively from the University of Antwerp (Belgium), Great-West Life, Londen
Life, Investors Group (Canada), and the University of Antwerp Management School (Belgium) illustrates how the Balanced Scorecard concepts can be used to support the business-IT fusion. The development and implementation of an IT Balanced Scorecard within this financial group is described and discussed. An IT Balanced Scorecard maturity model is developed and used to determine the maturity level of the scorecard under review. An important conclusion is that an IT Balanced Scorecard must go beyond the operational level and must be integrated across the enterprise in order to generate business value. This can be realised through establishing a linkage between the business Balanced Scorecard and different levels of IT scorecards.

Chapter VI: Measuring and Managing E-Business Initiatives through the Balanced Scorecard by Wim Van Grembergen and Isabelle Amelinckx both from the University of Antwerp (Belgium), applies the Balanced Scorecard concepts to e-business projects. A generic e-business scorecard is developed and presented as a measuring and management instrument. The proposed e-business scorecard consists of four perspectives: the Customer Perspective representing the evaluation of the consumer and business clients, the Operational Perspective focusing on the business and IT processes, the Future Perspective showing the human and technology resources needed to deliver the e-business application, and the Contribution Perspective capturing the e-business benefits. It is argued that a monitoring instrument such as the proposed e-business scorecard is a must when building, implementing and maintaining an e-business system because these initiatives are often too technically management and are often initiated without a clear business case.

Chapter VII: A View on Knowledge Management: Utilizing a Balanced Scorecard Methodology for Analyzing Knowledge Metrics by Alea Fairchild from Vesalius College/Vrije Universiteit Brussel (VUB) (Belgium) addresses the problem of developing measurement models for Knowledge Management metrics and discusses what current Knowledge Management metrics are in use, and examines their sustainability and soundness in assessing knowledge utilisation and retention of generating revenue. The chapter also discusses the use of the Balanced Scorecard approach to determine a business-oriented relationship between strategic Knowledge Management usage and IT strategy and implementation.

Chapter VIII: Measuring ROI in E-Commerce Applications: Analysis to Action by Manuel Mogollon and Mahesh Raisinghani respectively from Nortel Networks (US) and the University of Dallas (USA) focuses on measuring the Return on Investment (ROI) as a key element of the IT Governance process. The research in this chapter aims to provide an overview of how to calculate the ROI for e-commerce applications so that this information, and the attached ROI Calculator Tool Template, can be used by organisations to reduce time in preparing the ROI for a project.

Chapter IX: Technical Issues Related to IT Governance Tactics: Product Metrics, Measurements and Process Control by Michalis Xenos from the Hellenic Open University (Greece) deals with some technical aspects of the strategies for IT Governance and aims at introducing the reader to software metrics that are used to provide knowledge about different elements of IT projects. Internal metrics are presented that can be applied prior to the release of IT products to provide indications relating to quality characteristics, and external metrics are introduced that can be applied after IT product delivery to give information about user perception of product quality. The chapter also analyzes the correlation between internal and external metrics and discusses how these metrics can be combined in a measurement program.
Section III: Other IT Governance Mechanisms

Section III: Other IT Governance Mechanisms describes other mechanisms including roles and responsibilities within the IT organisation, the control objectives and management guidelines of COBIT, and the IT outsourcing solution. This part consists of three chapters.

Chapter X: Managing IT Functions by Petter Gottschalk from the Norwegian School of Management (Norway) discusses imperatives for IT functions, organisation of IT functions, roles of IT functions, roles of chief information officers (CIOs) and key issues in IT management. A survey conducted in Norway revealed that CIOs find the role of entrepreneur most important and the role of liaison least important. This survey also revealed that “Improving links between information systems strategy and business strategy” was ranked as most important key issue in IT management in Norway.

Chapter XI: Governing Information Technology through COBIT by Erik Guldentops from the IT Governance Institute (USA) reviews the COBIT framework that incorporates material on IT Governance. COBIT presents an international and generally accepted IT control framework enabling organisations to implement an IT Governance structure throughout the enterprise. Its management guidelines component consists of maturity models, critical success factors, key goal indicators and key performance indicators for 34 identified IT processes. This structure delivers a significantly improved framework responding for management’s need for control and measurability of IT by providing means to assess and measure the organisation’s IT environment against COBIT’s IT processes.

Chapter XII: Governance in IT Outsourcing Partnerships by Erik Beulen from Tilburg University (The Netherlands) is based on 11 international IT outsourcing partnerships, five expert interviews and on literature. Three dimensions are described in a descriptive IT outsourcing partnership governance framework: the outsourcing organisation, the maintenance of the relationship, and the IT supplier. In this framework, 11 governance factors are defined including the existence of a clear IT strategy at the outsourcing organisation, a mutual trust between the outsourcing organisation and the IT supplier, and an adequate contract and account management. Furthermore, the chapter focuses on the IT outsourcing contract.

Section IV: IT Governance in Action

Section IV: IT Governance in Action describes the application of IT Governance structures in respectively an enterprise and in the health care industry. Section IV includes two chapters.

Chapter XIII: The Evolution of IT Governance at NB Power by Joanne Callahan, Cassio Bastos and Dwayne Keyes, from New Brunswick Power Corporation (Canada) describes the IT Governance framework that NB Power has implemented. Through IT Governance the organisation was able to address the results of a diagnostic study on their internal IT service provider who was attempting to respond to a seemingly endless list of requests for IT support. Now, after four years, factors critical to the success of implementing an IT Governance framework are evident. The IT Governance framework is still evolving, but the organisation is now well positioned to take advantage of its IT investment.

Chapter XIV: Governance Structures for IT in the Health Care Industry by Reima Suomi and Jarmo Tähkäpää from the Turku School of Economics and Business Admin-
istration (Finland) discusses the role of IT in the health care industry and focuses on the question of which governance structures are best for managing IT within this industry. Two Finnish cases are described — a small health care federation of municipalities and a medium-sized health care unit — to illustrate internal and external governance structures. It is shown that internal governance structures such as developing a comprehensive business strategy are essential parts of IT Governance and that outsourcing activities suggest that there is a need for developing and managing external governance structures.

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