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# **Strategic IT Governance and Alignment in Business Settings**



**Steven De Haes and Wim Van Grembergen**





# Strategic IT Governance and Alignment in Business Settings

Technology is constantly changing the way enterprises conduct business by optimizing current practices. As information technology continues to evolve and become a prevalent feature in day-to-day activities within organizations, it has become necessary to manage these technologies in order to meet the strategic objectives of an organization.

**Strategic IT Governance and Alignment in Business Settings** investigates emergent research methodologies involving the application of information technology in organizations. Focusing on best practices, implementation issues, and empirical research within the field, this book is ideally suited for researchers, academics, students, and practitioners interested in the governance, strategy, architecture, and management of information systems.

## Topics Covered:

- Enterprise Architecture
- Enterprise Modeling
- Investment Consistency
- IT-Enabled Investments
- Media Streaming Models
- Networked Business
- Organizational Performance
- Two-Sided Markets



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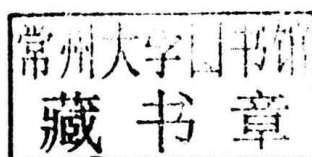
# Strategic IT Governance and Alignment in Business Settings

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# Preface

Information Technology (IT) has become crucial in the support, sustainability and growth of enterprises. Previously, governing boards and senior management executives could delegate, ignore or avoid IT decisions. In most sectors and industries, such attitudes are now impossible, as enterprises are increasingly completely dependent on IT for survival and growth. Given this centrality of IT for enterprise risk management and value generation, a specific focus on Enterprise Governance of IT (EGIT) has arisen over the past two decades.

Within the University of Antwerp and Antwerp Management School, we have been executing and stimulating applied research in this domain for more than 15 years. We established the IT Alignment and Governance Research Institute in 2003 ([www.antwerpmanagementschool.be/itag](http://www.antwerpmanagementschool.be/itag)) to organize and disseminate our research and launched the International Journal on IT/Business Alignment and Governance ([www.igi-global.com/IJITBAG](http://www.igi-global.com/IJITBAG)) in 2010 for further build an international ecosystem in this research area. The International Journal of IT/Business Alignment and Governance (IJITBAG) focuses on management and governance issues within the IT-related business domain. The emphasis is on how organizations enable both businesses and IT people to execute their responsibilities in support of business/IT alignment and the creation of business value from IT-enabled investments. This journal distributes leading research that is both academically executed and relevant for practice in the professional IT and business community. The journal encourages practice-oriented research papers from academics, case studies, and reflective papers from practitioners. Both quantitative and qualitative research papers are welcome, and special attention is given to explorative research reports that leverage innovative research methodologies to explore new insights in the practitioners' field and theory.

With this manuscript, we want to highlight some of the research that was published in the journal in the period 2013, 2014 and 2015. Authors were asked to improve and update their work with new empirical findings, insights and discussions that they have obtained after publishing their original work in the journal. These enhanced manuscripts are now collected and published in this edited book.

The target audience for this book is threefold:

- Researchers and academics in the field of enterprise governance of IT and alignment, who are interested in new advances in this research area.
- Master students, for whom this textbook can be used in courses typical on IT strategy, Enterprise Governance of IT, IT management, IT processes, IT and business architecture, IT assurance/audit, information systems management, etc.
- Executive students in business schools, for MBA type of courses where IT strategy or IT management modules are addressed.
- Practitioners in the field, both business and IT managers, who are seeking research based fundamentals and practical implementation issues related to it in the domain of Enterprise Governance of IT.

We hope that with this book, we can contribute to further developing the knowledge domain of Enterprise Governance of IT. This book is one of the outcomes of our work within the University of Antwerp – Antwerp Management School – IT Alignment and Governance (ITAG) Research Institute and we would like to thank all business managers, IT managers, audit and control professionals, academics and colleagues who shared their experiences with us during our teaching, research and advisory activities.

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# Table of Contents

**Preface**..... xiv

**Chapter 1**

A Business Case Process for IT-Enabled Investments: Its Perceived Effectiveness from a Practitioner Perspective ..... 1

*Kim Maes, Antwerp Management School, University of Antwerp, Belgium*

*Steven De Haes, Antwerp Management School, University of Antwerp, Belgium*

*Wim Van Grembergen, Antwerp Management School, University of Antwerp, Belgium*

**Chapter 2**

IT Governance Maturity Patterns in Portuguese Healthcare ..... 24

*Ruben Pereira, ISCTE - Instituto Universitário de Lisboa, Portugal*

*Miguel Mira da Silva, Universidade Nova de Lisboa, Portugal*

*Luís Velez Lapão, Universidade Nova de Lisboa, Portugal*

**Chapter 3**

A Framework for Research on Information Technology Governance in SMEs..... 53

*François Bergeron, Université du Québec, Canada*

*Anne-Marie Croteau, Concordia University, Canada*

*Sylvestre Uwizeyemungu, Université du Québec à Trois-Rivières, Canada*

*Louis Raymond, Université du Québec à Trois-Rivières, Canada*



## **Chapter 4**

Business/IT Alignment in Two-Sided Markets: A COBIT 5 Analysis for Media Streaming Business Models.....	82
---	----

*Yannick Bartens, University of Hamburg, Germany*

*Hashim Iqbal Chunpir, German Climate Computing Centre, Germany*

*Frederik Schulte, University of Hamburg, Germany*

*Stefan Voß, University of Hamburg, Germany*

## **Chapter 5**

Aligning Information Systems and Technology with Benefit Management and Balanced Scorecard.....	112
---	-----

*Jorge Gomes, Instituto Superior de Economia e Gestão, Portugal & Universidade de Lisboa, Portugal*

*Mário Romão, Instituto Superior de Economia e Gestão, Portugal & Universidade de Lisboa, Portugal*

## **Chapter 6**

Contemporary Demands on Business and IT Alignment: How Can Enterprise Modeling Help? .....	132
--	-----

*Julia Kaidalova, Jönköping University, Sweden & University of Skövde, Sweden*

*Ulf Seigerroth, Jönköping University, Sweden*

## **Chapter 7**

IT Investment Consistency and Other Factors Influencing the Success of IT Performance .....	176
---	-----

*Tomi Dahlberg, Åbo Akademi University, Finland & University of Turku, Finland*

*Hannu Kivijärvi, Aalto University, Finland*

*Timo Saarinen, Aalto University, Finland*

## **Chapter 8**

The Impact of IT Governance Compliance on Enhancing Organizational Performance in Abu Dhabi .....	209
---	-----

*Zoheir Ezziane, University of Pennsylvania – Abu Dhabi, UAE & Higher Colleges of Technology, UAE*

*Abdulla Al Shamisi, Al Ain Women's College, UAE*

**Chapter 9**

Enterprise Architecture: A Snapshot from Practice..... 237  
    *Michael Clarke, The Open University, UK*  
    *Jon G. Hall, The Open University, UK*  
    *Lucia Rapanotti, The Open University, UK*

**Compilation of References ..... 256**  
**About the Editors ..... 293**  
**Index ..... 295**

# Detailed Table of Contents

Preface.....xiv

Chapter 1

A Business Case Process for IT-Enabled Investments: Its Perceived Effectiveness from a Practitioner Perspective..... 1

*Kim Maes, Antwerp Management School, University of Antwerp, Belgium*  
*Steven De Haes, Antwerp Management School, University of Antwerp, Belgium*  
*Wim Van Grembergen, Antwerp Management School, University of Antwerp, Belgium*

Many organisations perform an adequate job in order to build a sound justification for their decision-making on IT enabled investments. It is recognised that developing a detailed business case is an essential step in order to realise the value potential of IT enabled investments. However, many business cases are often disregarded after the investment approval. Such an attitude towards business case use might be risky. Moreover, several advantages attributed to business cases could only be achieved if they are used continuously throughout the investment life cycle. It is suggested that the latter approach would be more capable to enable benefit realisation and increase the investment success. According to some scholars, a rational transformation is therefore required in which the perspective on business cases shifts from document thinking to process thinking. This study presents an interesting part of the exploration of a process perspective on business cases. Prior research has been helpful to explore individual practices that could support a continuous business case approach and to develop a conceptual model for a business case process. As an important step to increase the validity of the conceptual model and business case practices, the present study investigates through what practices the business case process can be effective in order to enable well-founded investment decision-making and to ultimately increase investment success? Therefore, the article has a threefold aim: (1) to obtain a validated list of business case practices and definitions, (2) to understand the practices' perceived effectiveness / ease of implementation, and (3) to identify



a minimum set of key business case practices. In order to achieve these objectives, a group of academic and practitioner experts participated in a Delphi study and validated in total 31 business case practices, of which the majority was perceived as highly effective to support the objectives of a business case process. The paper ends with an exploration of the practical application of business case process practices in the context of COBIT 5, as an instance of a widely used practitioner’s framework.

**Chapter 2**

IT Governance Maturity Patterns in Portuguese Healthcare ..... 24  
    *Ruben Pereira, ISCTE - Instituto Universitário de Lisboa, Portugal*  
    *Miguel Mira da Silva, Universidade Nova de Lisboa, Portugal*  
    *Luís Velez Lapão, Universidade Nova de Lisboa, Portugal*

The pervasive use of technology in organizations to address the increased services complexity has created a critical dependency on Information Technology (IT) that calls to a specific focus on IT Governance (ITG). However, determining the right ITG mechanisms remains a complex endeavor. This paper uses Design Science Research and proposes an exploratory research by analyzing ITG case studies to elicit possible ITG mechanisms patterns. Six interviews were performed in Portuguese healthcare services organizations to assess the ITG practices. Our goal is to build some theories (ITG mechanisms patterns), which we believe will guide healthcare services organizations about the advisable ITG mechanisms given their specific context. We also intend to elicit conclusions regarding the most relevant ITG mechanisms for Portuguese healthcare services organizations. Additionally, a comparison is made with the financial industry to identify improvement opportunities. We finish our work with limitations, contribution and future work.

**Chapter 3**

A Framework for Research on Information Technology Governance  
in SMEs..... 53  
    *François Bergeron, Université du Québec, Canada*  
    *Anne-Marie Croteau, Concordia University, Canada*  
    *Sylvestre Uwizemungu, Université du Québec à Trois-Rivières,*  
        *Canada*  
    *Louis Raymond, Université du Québec à Trois-Rivières, Canada*

The need to effectively manage IT resources such that they enhance the business value of firms makes IT Governance (ITG) an important issue for both IS researchers and practitioners. The purpose of this paper is to build a conceptual framework for ITG in small and Medium-Sized Enterprises (SMEs). The authors first analyze the main theories applied in ITG research, and confront them with the specificities of SMEs. The authors then highlight the limits of those theories in SMEs context and discuss

adaptations needed or alternative theories in such context. The resulting framework is then applied to generate a set of six research propositions on ITG in SMEs.

## Chapter 4

Business/IT Alignment in Two-Sided Markets: A COBIT 5 Analysis for Media Streaming Business Models.....	82
---	----

*Yannick Bartens, University of Hamburg, Germany*

*Hashim Iqbal Chunpir, German Climate Computing Centre, Germany*

*Frederik Schulte, University of Hamburg, Germany*

*Stefan Voß, University of Hamburg, Germany*

Business/IT alignment can be considered a key challenge in IT governance and becomes especially important in IT-heavy and internet based business models. Recent discussions express the need for a bi-directional paradigm for internet based business models. IT governance frameworks support business/IT alignment but mostly follow a business-driven alignment paradigm. We identify characteristics of internet based business models and use the case of streaming to examine how the IT governance framework COBIT 5 can integrate these characteristics under consideration of a bi-directional business/IT alignment process. We reveal that requirements for streaming business models may not be fully covered by the framework. Based on a structural description of internet based business models and the COBIT 5 Goal Cascade, we explain these specific requirements and propose a possible integration of a bottom-up alignment. With this work we provide guidance in the challenge of business/IT alignment for internet based business models and show pathways for IT governance frameworks to better support a bi-directional alignment.

## Chapter 5

Aligning Information Systems and Technology with Benefit Management and Balanced Scorecard .....	112
--	-----

*Jorge Gomes, Instituto Superior de Economia e Gestão, Portugal & Universidade de Lisboa, Portugal*

*Mário Romão, Instituto Superior de Economia e Gestão, Portugal & Universidade de Lisboa, Portugal*

Investments in Information Systems and Technology (IS/IT) have not always generated the business value or the financial revenue that should be expected. Some authors argue that the result of those studies that related investments in IS/IT to increased organisational performance over the last thirty years were far from true. Others say that the amount spent on IS/IT and business success has no direct connection. The relationship between IS/IT and performance is widely discussed, but is little understood. Organizations today need to deliver more complex products and demanding services in a better, faster, and cheaper way. The challenges that companies

address today require enterprise-wide solutions that call for an integrated approach and the effective management of organizational resources in order to achieve business objectives. Benefits Management (BM) approach proposes a continuous mapping of the benefits of IS/IT investments, implementing and monitoring intermediate results. Balanced Scorecard (BSC) is an innovative approach that considers the financial and non-financial perspectives in determining the performance level of an organization. Not only does it represent a measurement tool, but it is also a multi-dimensional system of performance management which focusses on the alignment of all business initiatives with the strategy. In this paper, the authors propose a link between these two approaches to improve the management of business benefits and to ensure that actions taken along the investment life-cycle lead to foreseen benefits realization. The goal of this integration is to propose a framework that combines the “best of” the both methods. A key issue of this combination lies in the fact that all involved stakeholders must understand more clearly what is required, what is realistically expected, and what is possible to achieve from these investments.

**Chapter 6**

Contemporary Demands on Business and IT Alignment: How Can Enterprise Modeling Help? ..... 132

*Julia Kaidalova, Jönköping University, Sweden & University of Skövde, Sweden*

*Ulf Seigerroth, Jönköping University, Sweden*

The call for Business and IT Alignment (BITA) is an everlasting and increasing concern for today’s enterprises. BITA is no longer just a technical or local concern. Instead we need to embrace various dimensions in the concept of BITA, for instance strategic, structural, social and cultural. In addition to this, the development of concepts like Digital Innovation (DI), Internet of Things (IoT), Cyber Physical Systems (CPS) has further challenged the success of BITA. As one approach to deal with the multi-dimensional BITA problem and to move the BITA positions forward, Enterprise Modeling (EM) has been acknowledged as a helpful practice. Particularly, EM provides the opportunity to facilitate the creation of integrated models that capture and represent different focal areas of an enterprise, and allows representing the numerous points of view of the key stakeholders. In order to consider the points of view of different stakeholders and create a shared understanding between them the participative character of EM sessions can play an important role. This chapter presents various challenges that EM practitioners face during participative EM sessions, and a number of recommendations that can help to overcome these challenges.