

## Preface

Strategic information systems planning (SISP) has been the subject of much attention over the past decade. While it has evolved in method and style, the thesis that SISP is important because it emphasizes the need to bring IT to bear on and sometimes influence strategic direction of the corporation is widely accepted by researchers. This is particularly true in today's dynamic environments where harnessing the power of technology resources could be critical for competitiveness. However, while there have been studies that examine the "what" questions of SISP, particularly concerning the issue of Information System and Business alignment, there has been little on the "how" questions, which include the process of planning and whether this yields effective outcomes. Furthermore, is it reasonable to presume that organizations will change their planning processes over time in an attempt to improve their effectiveness as well as leverage their investment based on SISP?

It is useful to examine evolution and maturing of planning processes as companies strive toward achieving more effective planning systems. This can serve the purpose of delineating changes in process characteristics that can lead to greater planning effectiveness over time. The authors in this book therefore attempt to address the fundamental questions: How does SISP evolve? Is it becoming more effective? If yes, can organizations optimize the planning of IT systems—particularly when there is a portfolio of IT systems that require investment and continual support? What adaptations do firms need to make in order to improve planning to leverage on enterprise architecture and global supply of IT resources?

The SISP concept has undergone significant evolution since the initial discussions of the 1980s. The changing technology and the recognition of its importance as a corporate resource drove this evolution. Specifically, the proliferation of E-Commerce, outsourcing, and enterprise resource systems tended to push developmental activities outside the exclusive domain of professional IS groups, creating challenges that did not exist when SISP was first conceived. Also, firms are aggressively searching for new ways to leverage information, knowledge, and IT in supporting strategic goals and competitiveness. Hence, SISP in many firms refers to both a proactive search for competitive and value-adding opportunities, as well as the development of broad policies and procedures for integrating, coordinating, controlling and implementing the IT resources.

This book which entitled "Strategic Information Technology and Portfolio Management" is organized in four sections to provide comprehensive coverage of topics in SISP such as: (1) Emerging Concepts in SISP; (2) IT Portfolio Management; (3) Capability development; and (4) Enterprise Architecture. The following provides a summary of what is covered in each section of this book:

### **SECTION I: EMERGING CONCEPTS IN SISP**

This section focuses on new methods and concepts of creating a tighter linkage between business requirements and the IT investments that can deliver better IT plans. For example, David Van Over proposes a

new framework in Chapter I to address three key elements of SISP: what decisions are to be made, who should make the decisions, and how decisions are to be made and monitored. Albert Wee Kwan Tan in Chapter II expands the SISP to develop the IT capabilities for an industry as part of industry development and transformation while Teay Shawyun in Chapter III argue the need for SISP to matches the market needs with the firm's value proposition to deliver the product/service. Finally, Dimitris and Bill in Chapter IV propose a new approach to utilize a Fuzzy Cognitive Map to align strategic objectives with IS opportunities as business needs are changing dynamically.

## **SECTION II: IT PORTFOLIO MANAGEMENT**

This section examines some of the issues in IT portfolio management and have some of the authors propose new methods to maximize the value from managing the IT portfolio. Luke Ho and Anthony Atkins in Chapter V provides an introduction to advent of Information Technology Outsourcing (ITO) and its impact on portfolio management in modern day decision-making, highlighting the strengths and weaknesses in some of the common decision making frameworks for outsourcing. Stanley Loh, Ramiro Saldana, and Leo Failer Backer in Chapter VI presents a method that include the identification of different scenarios, and how to plan IS and IT resources to manage each scenario. Vassilis Syrris in Chapter VII describes the exploration of Information Technology Portfolio Management (ITPM) in conjecture with Modern Portfolio Theory and how its limitations can be overcome by a meta-heuristic approach to find near-optimal solutions in a reasonable amount of computation time. Dejan Petrović, Marko Mihić, and Biljana Stošić in Chapter VIII presents the concept of strategic information technology portfolio management for development of innovation competences in a project-oriented company that takes into consideration the key aspects of IT – innovation relationship, and introduces the organizational support to the Portfolio Management Office. Cuthbert, Tan and Tran in Chapter IX propose an IT planning framework for E-Government targeting the developing countries where infrastructures are poor and funds are limited. Finally, Anand Sanwal and Subhradeep Mohanty in Chapter X describe an IT Reengineering and Portfolio Management Model (RPM) that will address the question of “what is the value of IT?” and approach it in a more objective and dispassionate manner.

## **SECTION III: CAPABILITY DEVELOPMENT**

This section examines the different approaches to develop capacity and capability to support IT organization as well as the challenges faced in SISP. Al Lederer and Alice Johnson in Chapter XI summarized a research work to investigate the effect of frequency and channel richness on CEO/CIO mutual understanding of the impact of existing information systems and of the impact of the portfolio of planned information systems. Teay Shawyun in Chapter XII proposes a “capacity and capability” model to manage its human, information and organization capitals critical to the successful IS/IT implementation and utilization. Finally, Evon M. Abu-Taieh, Asim A. El Sheikh, and Jeihan M. Abu-Tayeh in Chapter XIII discuss some of the challenges in implementing information technology plan and suggest ways to rectify and deflect the negative impact of the challenges.

## **SECTION IV: ENTERPRISE ARCHITECTURE**

This section examines how enterprise architecture and design can assist in SISP. Anthony Ioannidis and Nikolaos Skarpetis in Chapter XIV expand the design further using the Enterprise Architecture Approach (EA) to meet specific need, as it provides the “blue-prints” to strategically organize information. Tony Shan and Winnie Hua in Chapter XV further propose a framework that provides a comprehensive multidisciplinary approach to conduct strategic and tactical technology planning for both near-term needs and long-term goals. Finally, Eric Kenji Tachibana and David Ross Florey in Chapter XVI discuss how design pattern methodology can solve a business problem using the multivariate vector map.

## **SECTION V: FURTHER READINGS**

Last but not least, some additional readings are included in this book to provide readers with a wider coverage of SISP and also serve as a supplement to the existing chapters in search of better methods for SISP. In fact, with the pervasiveness of IT and increasing pressure on firms to leverage their IT assets, the importance of SISP has never been stronger. SISP is more than a narrow methodology or sequence of steps. It is a complex set of organizational activities that can be characterized by a number of process characteristics, which form an evolutionary pattern as they change as a firm’s experience grows in adapting to a changing environment and technological base. Therefore, firms should take advantage of the latest techniques and methods in SISP proposed in this book to align their IT resources with business objectives.