

## Preface

Information is a key resource of a contemporary organization that deserves effective management. Gaining information and knowledge to develop foresight about future opportunities and threats and quickly reacting to the opportunities and threats becomes a core competency of a winning organization. This is evident (www.50lessons.com) by the following remarks from executives:

*It's important for any organisation to continually reappraise the business environment and how it might change. Thinking about changes that might take place, and being ready to respond to them with well-developed plans that are properly executed, means the organisation will move much faster than its competitors to any such scenarios.*  
~ Paul Skinner, Rio Tinto Plc

*Spotting and seizing opportunities that mark major shifts in a company's strategy takes a lot of courage—but is invaluable to an organisation's progress.* ~ Peter Birch, Land Securities Group

*In today's rapidly changing business world the need for timely and accurate market intelligence will increase. We need to know what our competitors are doing almost before they do.* ~ A manager from Royal Life Plc

The analogy between the business world and the battlefield is not something beyond comprehension. Being wary of the enemy is a consistent theme in the writing of the art of war. For example, Sun Tzu (403-221 BC) wrote,<sup>1</sup>

*The reason why the enlightened ruler and the wise general are able to conquer the enemy whenever they lead the army and can achieve victories that surpass those of others is because of foreknowledge.*

*Know yourself, know your enemies; a hundred battles, a hundred victories;  
Know your enemy, know yourself, and your victory will not be threatened. Know the terrain, know the weather, and your victory will be complete.*

The urgency of effectively managing strategic intelligence is reinforced by two trends witnessed: one is the business environment becomes more turbulent and competition becomes ever fiercer, thus gaining strategic intelligence and sharing knowledge become one of the greatest challenges that faces a company's senior management. The other is computing technology for information processing that has become more sophisticated and more affordable, which offers great potential to advance the current techniques and technologies used for intelligence gathering, processing, dissemination, and knowledge sharing.

To be more specific, managing strategic intelligence faces the following challenges: firstly, the nature and the importance of strategic intelligence are not often understood by many organizations until crises and problems occurred. Secondly, strategically important information, that is, strategic intelligence, is not a piece of static information that is readily available. It is often scatted in the organization's internal and external environment, which requires scanning effort. The subjects may be unfamiliar to the inquirer, and the scanning process may be costly. Thirdly, interpreting intelligence is essentially a human cognition and intuition process that is subtle.

Strategic intelligence needs sense making of senior managers, which requires managerial knowledge and judgement that are not often possible for computers to possess. Fourthly, an individual manager has limited capacity to notice and process all the information from the internal and external environments, which results in limiting the scope of input coverage and the stretch of the output delivery. Lastly, the ad hoc behavior of managers in acquiring/receiving strategic intelligence and functionally divided intelligence process in organizations lead to misjudgement and corporate blind spots.

Where there is an unanswered question, there is an undiscovered answer. The challenges in managing strategic intelligence will be met by emerging techniques and technologies. This can be envisaged from two perspectives: first, organizations that are actively engaged in competitive intelligence gathering, business intelligence mining are often their industry leaders. The techniques and strategies used by these organizations have wide implications to improve the practice of managing strategic intelligence. Second, the latest development in Internet technology, intelligent agent, ontology, semantic Web, data mining, wireless sensors, and scanning technologies provide opportunities for organizations to revitalize existing or to develop new infrastructure of managing strategic intelligence.

This book, thus aims to develop sound understanding of strategic intelligence and to exhibit techniques and technologies that can be used to enhance strategic intelligence scanning, analyzing, interpreting, sense-making, and support. The realm of the book is not limited to competitive intelligence, but also includes intelligence from an organization's far environment and beyond. The book provides a rich source of research on the current practice in intelligence gathering, latest thinking and conceptual models related to intelligence function, process, structure, and culture, which will underpin future development and implementation of innovative intelligence systems. The book offers not only technical solutions, but also organizational solutions for organizations to adopt so as to enhance the effectiveness and efficiency of managing strategic intelligence.

The primary target audience of this book will be senior managers, IS/IT managers, information officers, knowledge workers, intelligence specialists of any organisations that need to enhance their organizations' sensibility and capability towards environmental changes and challenges. The book provides future direction and practical guidance to system developers to develop novel system for managing strategic intelligence. It will be of value to business consultants, researchers, academics, senior undergraduates, and students at master level, as it provides a wealth of information and references for research into this challenging arena.

Fourteen chapters are included in this book. They are organized into four sections according to the thematic meaning of the topic of the chapter, which is based on the arbitrary judgement of the editor. Thus, it is quite possible that a paper in one section may also address issues in other sections. Even though, the four sections reflect most of the topics sought in the initial call for chapters.

The first section, **Section I: Understanding Strategic Intelligence**, includes two chapters. This section focuses on the theme of understanding the concept and the importance of strategic intelligence and the related terminologies.

The second section, **Section II: Strategic Intelligence Framework and Practice**, includes four chapters. Chapters III-V focus on framework and conceptual models related to managing intelligence. Chapter VI reports some empirical findings of intelligence from Executive Information Systems.

The third section, **Section III: Enhancing Environmental Scanning and Intelligence Practice: Techniques**, comprises four chapters. Chapter VII presents a unique technique to identify intelligence needs. Chapter VIII introduces a diagnostic tool to assess environment scanning practice. Chapter IX demonstrates a mathematic model showing the relationship between environment factors and corporate performance. Chapter X discusses complex methods of inquiry and paraconsistent logic from soft system perspective.

The last section, **Section IV: Supporting Strategic Intelligence Processing: Technologies**, includes four chapters. This section develops the theme on technologies for intelligence processing. Grid technology, radio frequency identification (RFID) technology, intelligent agent, ontology technology, and bibliometry technology are discussed in the context of managing strategic intelligence.

A brief introduction to each of the chapters follows:

Chapter I, *Leveraging What Your Company Really Knows: A Process View of Strategic Intelligence*, by Professor Marchand and Hykes: The authors introduce the information orientation (IO) framework—a tool that managers can use to determine the company’s level of effective information management and to identify areas where they can make improvements. They suggest that effective information management requires specific information-processing practices, employee behaviors and values, and technology. Examples are used to demonstrate that IO mature companies are most successful at collecting and openly sharing strategic intelligence that their employees need in order to successfully monitor and proactively react to future market trends or events.

Chapter II, *Business Intelligence: Benefits, Applications, and Challenges*, by Maguire and Suluo: The chapter identifies the important role and challenges of business intelligence (BI) in business function—corporate finance, supply chain management (SCM), and customer relationship management (CRM). It addresses the question how companies understand BI and how companies use it for gaining competitive advantage by using two case companies that are currently using ERP and BI.

Chapter III, *The Nature of Strategic Intelligence, Current Practice and Solutions*, by Xu and Kaye: In this chapter, the authors discuss the nature of strategic intelligence from various perspectives, for example, internal-external view, historical-future view, and the challenges of scanning, analysing and interpreting intelligence. Empirical evidence is used to demonstrate the current practice of intelligence gathering. The authors suggest a solution that comprises of organisational-wide intelligence scanning which incorporates a corporate radar system (CRS), knowledge enriched intelligence refining and intelligence specialist support. Implementation issues are also addressed.

Chapter IV, *A Strategic Marketing Intelligence Framework Reinforced by Corporate Intelligence*, by Trim and Lee: The authors examine how marketing strategists and corporate intelligence officers can work together in order to provide a high level, proactive strategic intelligence operation that enhances marketing strategy development and implementation. Aspects of corporate counterintelligence are addressed in the context of gathering intelligence, and guidance is provided as to how organizational strategists can develop a strategic marketing intelligence framework that incorporates a counterintelligence dimension.

Chapter V, *Supporting Executive Intelligence Activities with Agent-Based Executive Information Systems*, by Ong, Duan, and Mathews: The authors review the theoretical underpinning for supporting executive intelligence activities, and argue the necessity of revitalizing EIS with intelligent technologies and Web-based technologies. A three-level agent-based EIS model that comprises a “usability-adaptability-intelligence” trichotomy for supporting executive intelligence activities is designed, which is based on empirical studies conducted with executives in the UK.

Chapter VI, *Managing Executive Information Systems for Strategic Intelligence in South Africa and Spain*, by Averweg and Roldán: This chapter reports empirical findings on the current situation in respect of information in EIS based on survey of companies in South Africa and Spain. Parallelisms and differences are identified and implications for gathering strategic intelligence and improving EIS development are discussed.

Chapter VII, *Understanding Key Intelligence Needs (KINs)*, by du Toit: The author explains how to translate an organization’s strategic aims into key intelligence needs (KINs) and how to prioritise and categorise the needs. Determining a set of KINs and how to break down KINs into general and specific KINs will assist CI (competitive intelligence) professionals to gather appropriate competitor intelligence. The application of KINs in a practical situation is illustrated using a case study of a South African company.

Chapter VIII, *Awareness and Assessment of Strategic Intelligence: A Diagnostic Tool*, by Brouard. In this chapter, the author addresses the importance of awareness and assessment from managers and external consultants on strategic intelligence activities in organizations, and presents an expert-system based diagnostic tool for firms to assess the level of environment scanning for intelligence. Problem of awareness and assessment faced by organizations are identified and discussed.

Chapter IX, *Gaining Strategic Intelligence Through the Firm’s Market Value: The Hospitality Industry*, by Nicolau: The author develops a mathematic model to examine the impact that different factors and actors within the environment have on a firm’s performance, which is measured by the stock market value of the firm. Direct

link between the environmental factors and their effects on firm performance is found. The model not only detects the events affecting the organization but also quantifies their impacts.

Chapter X, *Knowledge Creation and Sharing: A Role for Complex Methods of Inquiry and Paraconsistent Logic*, by Bednar and Welch: The authors discuss complex methods for inquiry as an emerging method to address a problem situation encountered by human analyst during the process of intelligence gathering and knowledge sharing. The purpose of complex analysis in relation to strategic intelligence is to develop an ability to make informed decisions. A model which lays the foundations for the development of software support, which can tolerate the inherent ambiguity in complex analysis, based on paraconsistent (multivalued) mathematical logic is developed.

Chapter XI, *Using Grid for Data Sharing to Support Intelligence in Decision-Making*, by Bessis, French, Burakova-Lorgnier, and Huang: The authors conceptualizes the applicability of grid related technologies for supporting intelligence in decision-making. The chapter addresses how the open Grid service architecture—data, access integration (OGSA-DAI) can facilitate the discovery of and controlled access to vast datasets, to assist intelligence in decision making. A minicase is employed incorporating a scenario.

Chapter XII, *Intelligent Supply Chain Management with Automatic Identification Technology*, by Li, Wang, Liu, and Kehoe: The authors develop a RFID-enabled business model in order to innovate supply chain management. The model demonstrated benefits from automatically captured real-time information in supply chain operations. The resulting visibility creates chances to operate businesses in more responsive, dynamic, and efficient scenarios.

Chapter XIII, *Developing an Ontology-Based Intelligent System for Semantic Information Processing*, by Xu with Ong and Duan: The authors in this chapter explore the ways of adopting intelligent agent and ontology technologies to revitalise executive information systems (EIS) with a focus on semantic information scanning, filtering and reporting/alerting. Executives' perceptions on an agent-based EIS are investigated through a focus group study in the UK, and the results are used to inform the design of such a system. This study presents a specific business domain for which ontology and intelligent agent technology could be applied to advance information processing for executives.

Chapter XIV, *Bibliometry Technique and Software for Patent Intelligence Mining*, by H. Dou and J.-M. Dou: The authors provide useful insight into the techniques of using bibliometry software to mine intelligence from both formatted and unformatted data sources. Patent intelligence mining is used as an example. It demonstrates how bibliometry information can add value to the intelligence process. An overview of the bibliometry software is provided.

## ENDNOTE

<sup>1</sup> Ames, R. (1993). *Sun Tzu: The Art of Warfare*. New York: Ballantine Books.