Preface

In today’s competitive and global business environments, knowledge is recognised as one of the most important strategic assets for modern organisations. In the light of this, knowledge management (KM) continues to receive much attention both from the academic and business communities. With improvements in IT-based systems for handling knowledge, KM is becoming an essential theme of research into business success as well as a subject of new business initiatives. There is a growing emphasis on innovation through ‘knowledge work’ and ‘knowledge workers’ and on the leveraging of ‘knowledge assets’ (Swan et al., 1999).

It is important to note that the effective management of knowledge involves more than simply exploiting the data held on information systems. It also requires attention to the ‘softer’ parts of the corporate knowledge base, as found in the human and cultural aspects of businesses, particularly the experiences and tacit knowledge of employees. The integration of these ‘hard’ and ‘soft’ parts of the knowledge base is believed to be critical to business success, especially in the context of the global digital economy (Hlupic et al., 2002).

So far, the literature has been unable to agree on a definition for the term ‘knowledge management’ (Brooking, 1999; Malhotra, 1998; Trauth, 1999). The possible reason for this might be that discussions of, and approaches to, the subject are rooted in different academic disciplines and areas of professional expertise. From the information systems perspective, for example, KM is often looked upon as synonymous with new forms of ‘data mining’ and ‘warehousing’ — the ‘hard’ tools that allow for sophisticated pattern searches of raw data (Trauth, 1999). From the innovation management perspective, a ‘cognitive’ approach is adopted, which looks at the transfer of explicit and tacit knowledge through product development and organisational change procedures (Kuhn and Abecker, 1997; Nonaka and Takeuchi, 1995; Leonard-Barton, 1995). The management literature particularly emphasises the ‘organisational learning,’ focusing on structures that encourage creativity and knowledge sharing (Ruggles, 1997). It is increasingly evident that approaches to KM research and practice often do not adopt a multi-disciplinary view (Hlupic et al., 2002), despite the multi-disciplinary interest in KM (Phillips and Patrick, 2000). Instead, a managerial perspective is often predominant, that does not necessarily accommodate the capabilities of information systems. Sveiby (1999) acknowledges this implicitly when he divides research publications in this field into two categories: ‘Management of Information’ and ‘Management of People.’

Knowledge management and management of business processes are two (often) separated but inseparable areas. Business processes should incorporate activities related to generation, codification and transfer of critical organisational knowledge. On the other hand, knowledge about the key business processes should play an important role in redesigning such processes. Because of such interconnections,
this book aims to coin a term “knowledge and business process management,” recognising the importance of integrated and interdisciplinary approach to research and practice of managing both knowledge and business processes.

This book is a result of the editor’s belief that knowledge and business process management must move towards a more holistic approach to nurturing and exploitation of knowledge assets in both ‘traditional’ and ‘virtual’ business environments, as well managing business processes from a socio-technical perspective. For this purpose, the book brings together multi-disciplinary research and practical expertise in the areas of information systems, knowledge management, systems engineering, e-commerce, business, management and marketing.

The book provides a timely compilation of views on the most recent knowledge and business process management research and practice, contributed by renowned experts from academia and industry. As such, the book provides a significant contribution to the area of knowledge and business process management. The book is divided into three sections, and each section contains five chapters. The first section addresses current research issues in knowledge and business process management. Section Two deals with the practical aspects of knowledge and business process management. Finally, Section Three discusses current socio-technical trends in knowledge and business process management where the particular emphasis is on people and/or technology. The following paragraphs describe in more detail the content of each chapter.

Chapter 1 discusses trends in knowledge management research, based on an empirical analysis of European research projects. The chapter argues that Knowledge and Information Management (KIM) has existed as a separate field of scientific research for almost a decade. The author finds surprising that very few studies to date have been concerned with the identification of the scope and boundaries of the field, as well as the sub-topics and research themes that constitute it. The chapter reports on the results of an empirical analysis of more than 200 EU-funded research projects in Knowledge and Information Management. Using an inductive methodology of pattern matching analysis, a more accurate definition of knowledge management is provided, and an innovative taxonomy of research sub-themes within the ‘umbrella’ area of Knowledge and Information Management is proposed. Furthermore, a trend towards a gradual maturation of the presently prevailing research paradigm is identified, indicating a need for a ‘paradigm shift’ that will provide a new direction and vision for future research in the area. The author suggests that targeted future research efforts in the area of knowledge technologies will contribute to the development of the ‘next generation’ knowledge management systems that will transform the existing ‘passive’ knowledge repositories into ‘active’ learning environments.

Chapter 2 provides an overview of issues related to knowledge economy. The author claims that the dramatic development of information and communications technology, the increased speed of scientific and technological progress and the increased global competition led to the growing importance of knowledge and technology for economy. Modern economy, therefore, increasingly includes fea-
tures of knowledge economy, an economy based on production, distribution and use of knowledge. Also, more and more the growth of companies depends on innovation, and innovation is based on knowledge. The chapter further describes the categorisation and characteristics of knowledge, analyses features of knowledge assets, and describes the reasons for the importance of information and communications technology for knowledge economy. Finally, it describes the production, transmission and dissemination of knowledge, as well as the measurement of knowledge required for providing adequate economic indicators for the new economy.

Chapter 3 investigates several management innovation and change programs including: Total Quality Management, Just in Time, Business Process Re-Engineering, Process Innovation and Knowledge Management, and discusses how simulation modelling could increase their effectiveness. These change management approaches are compared and contrasted, and the applicability of simulation modelling to support the principles of these methods is investigated. The authors argue that there are many similarities among these change management programs, and simulation modelling could be viewed as a missing link between them.

Chapter 4 considers how knowledge management can create new business opportunities in the electronic commerce-based business environments. The authors argue that intelligent systems can offer additional capabilities and advantages for knowledge management in the context of electronic commerce, in comparison with more traditional information technologies. The chapter specifically investigates the potential of intelligent agent-based software for more effective knowledge management for e-commerce-based organisations, adopting the perspective of an SME involved in development of intelligent agents-based knowledge management software. The chapter concludes with a research agenda for knowledge management research in e-commerce.

Chapter 5 investigates the fundamental issues of knowledge management and knowledge market. Although the debate on the nature of ‘knowledge’ and ‘information’ is far from settled, in the authors’ opinion, it is now taken for granted throughout the academic world that the two notions are related but fundamentally distinct. This result, and its significant consequences, still need to be realised and understood by the great majority of the business world. In the first section of this chapter, the authors briefly comment on some characteristic views of ‘knowledge’ and ‘knowledge management,’ and subsequently analyse in-depth the core constituent notion of the latter, that is, knowledge. Furthermore, the authors outline three major consequences of their analysis. The first concerns the limits of management for a certain class of activities involving knowledge. The second concerns the scope and limits of technology for the same class of activities. The third concerns the issue of knowledge market. The thesis the authors develop is that knowledge cannot be taken as a commodity; in other words, the notion of a knowledge market cannot be implemented.

Chapter 6 presents the experience of Infosys Technologies, an IT consultancy based in India, in implementing knowledge management initiatives. The authors claim that the mission of these initiatives is to move the company towards a “Learn
Once, Use Anywhere” paradigm. A KM deployment architecture that addresses each of the four focal areas of KM — people, process, technology and content — and uses the proprietary KMM (Knowledge Management Maturity) Model as an underlying framework is described. A description of the Knowledge Shop (KShop), Infosys’s integrated knowledge portal, is also given. Furthermore, the Knowledge Currency Unit (KCU) scheme that serves both as an incentivisation and measurement mechanism is described, as well as the role of this scheme in helping to create a knowledge-sharing culture.

Chapter 7 addresses the issues of learning enactment within a single organisation. More particularly, the authors look into theory and provide some empirical evidence regarding the exploration and exploitation of organisational knowledge and capabilities through innovative technological intervention. To this end, the link between work practices and knowledge enactment, knowledge enactment as capability development, capability development in the context of organisational learning, and the role of technology along this course are explored. The study of work practices is anchored on the notion of business processes. The chapter intends to justify the need of contemporary firms to ‘manage’ knowledge in the context of their business processes, and to establish the main drivers shaping the role of technology in the enactment of learning processes within this perspective.

Chapter 8 also attempts to link knowledge management to business processes. The authors claim that, in general, there is a gap between theory and practical implementation. They believe that this is a particular problem in knowledge management, where much of the literature consists of general principles written in the context of a ‘knowledge world’ that has few, if any, references to how to carry out knowledge management in organisations. In this chapter, the authors put forward the view that the best way to bridge this gap between general principles and the specific issues facing a given organisation is to link knowledge management to the organisation’s business processes. After briefly reviewing, and rejecting alternative ways in which this gap might be bridged, the chapter goes on to explain the justification for, and the potential benefits and snags of, linking knowledge management to business processes. Successful and unsuccessful examples are presented. The authors conclude that linking knowledge management in terms of business processes is the best route for organisations to follow, but that it is not the answer to all knowledge management problems, especially where different cultures and/or cultural change are involved.

Chapter 9 addresses the issue of designing organisational memory in knowledge-intensive companies, where organisational memory is defined as a company’s collective expertise and experience that is cultivated through human and technological networks for improving organisational performance. The authors present a case study that has been carried out in a knowledge-intensive company, discuss the key findings from the case study, and propose a framework to assist knowledge-intensive organisations in implementing and managing a corporate knowledge base.

Chapter 10 discusses opportunities for data mining and customer knowledge management for shopping centres. Relying on complex interdependencies between
shoppers, retailers and owners, shopping centres are perceived to be ideal for knowledge management study. Nevertheless, although retailers have been in the forefront of data mining, in the authors’ opinion, little has been written on Customer Knowledge Management for shopping centres. In this chapter, the authors aim to demonstrate the possibilities and draw attention to the possible implications of improving customer satisfaction, using data mining techniques and an exploratory survey. Aspects of customer knowledge management for shopping centres are considered on the basis of survey results. The objectives of a Customer Knowledge Management system could include increasing rental incomes and bringing new life back into shopping centres and towns.

Chapter 11 discusses managing knowledge in a collaborative context. In particular, it proposes a model describing four conditions necessary for successful collaboration: shared spaces and collaborative culture enable collaboration, whereas goal congruency and resource constraints are required for collaboration to take place. The authors further describe how collaborative technologies have created shared spaces for more efficient and effective collaborative work, and discuss knowledge management activities constraining collaborative culture. The creation of goal congruency and overcoming resource constraints are seen by the authors to be brought about through the creative use of electronic collaboration and simulation technologies. Examples of collaborative contexts in which personalised knowledge is managed are provided, and finally, the chapter concludes with implications and guidelines for managing knowledge in collaborative contexts.

Chapter 12 deals with the technical aspects of knowledge management. The authors claim that one of the repercussions of the continuing popularity of knowledge management is a sudden increase in the number and range of knowledge management tools available on the software market. This can present a problem for organisations that are required to sift through the vast number of tools in the hope of finding one that meets their requirements. Moreover, guidelines describing how to go about selecting a commercial knowledge management tool do not currently exist. The chapter presents a set of guidelines to aid the evaluation and selection of a commercial knowledge management tool. In order to achieve this, a methodology is proposed that outlines factors and issues that could be taken into consideration during the selection of a knowledge management tool. Furthermore, an overview of criteria specific to knowledge management tools that can be used to evaluate and ascertain the features present in a knowledge management tool is also provided.

Chapter 13 reflects on experiences when traditional IT approaches were used to design large IT systems and ended in failure. The main reflections focus on the reasons for system failure and how they relate to the diversity of knowledge, managing knowledge, and the understanding gaps that may exist between the business and the system developers. The study reveals that the understanding gaps mainly result from lack of knowledge of business operations on the developer side, matched by lack of technical appreciation and knowledge on the user side. To help address the knowledge gap problem, a Knowledge Requirement Framework (KRF)
employing soft-systems methodology, diagramming and set mapping techniques, is proposed and described.

Chapter 14 discusses the impact of knowledge economy on leadership in organisations. The author claims that as the world economy is moving from the industrial age to knowledge economy, everybody’s work will change, affecting the flow of new ideas into enterprises, their management, organisation and procedures. These changes have major impacts on the roles leaders need to play, and on the skills they need. The focus of a leader has shifted towards more intangible issues, being a visionary, a storyteller and a change agent. The chapter reviews the literature on the skills and abilities leaders need to be successful in the knowledge economy, and describes the way in which they need to manage their organisations by managing the organisation’s business model, creating a risk-encouraging culture, and by playing different roles.

Chapter 15 addresses the role of teams in the context of business process change. The author claims that the concept of reengineering teams is not new to business process change practice and research. However, frameworks that describe the organisational changes that need to be undertaken in order to establish reengineering teams, in particular, are not available. The chapter proposes such a framework, based on a case study approach. This framework can be used by practitioners and academics to determine beforehand what to expect before the actual re-engineering team is formed. Additionally, the chapter describes the characteristics that surround the planning and design teams. This can be used as a suggestion for organisations in order to decide if they do have the appropriate numbers of individuals within a team. In general, the chapter can serve as a guideline that organisations undertaking business process change in the future can utilise for dealing with the issue of teams.

To conclude, this book provides a unique and timely compilation of multi-disciplinary views related to knowledge and business process management, addressing theoretical and practical aspects from a socio-technical perspective. As such, the book provides a unique contribution to knowledge and business process management research and practice.

REFERENCES


