

# Preface

In today's digital 21st century, almost all businesses face intense competition from competitors all around the globe. The rapid change of the global environment forces enterprises to seek suitable business strategies to sustain them in the competitive marketplace. This leads enterprises to change their existing ways of conducting and operating businesses, and transform themselves in a way that will enable them to cope with the global challenges, compete globally and eventually grow. The winners in this phenomenon are the companies that implement their business operations in the most creative and innovative manner possible. Needless to say, this is done through the incorporation of information technology (IT) into the business strategies and goals.

In the past few years, IT has been recognized as an imperative factor that drives companies toward global operations (Palvia, Palvia, & Whitworth, 2002). Moreover former U.S. President Bill Clinton (2002) also stated in his address at the University of California, Berkeley: "A world characterized not just by a global economy, but by a global information society. When I took the oath of office as president on January the 20th, 1993, there were only 50 sites on the World Wide Web in '93. When I left office, there were over 350 million and rising. Today they're probably somewhere around 500 million. There's never been anything like it." It has evidently indicated that the globalization process will not thrive without judicious exploitation of information technology. Consequently the key words that emerge in performing innovative business operations are "globalization" and "information technology."

Globalization is not merely conducting businesses outside of home regions or countries. It involves the coordination of business structure, functions, activities, units, and employees together with the incorporation of appropriate global strategies. In order to implement the global strategy, efficient operation and management of global information systems seem to be the imperative success factor.

The fact that businesses are speculating on the significance of globalization is not so much of an issue. However the global challenge has presented enterprises with new types of economic opportunities and threats. Accommodating

these opportunities and threats by means of operating the global information systems dynamically to provide senior executives making decisions accurate and prompt information is crucial for successful global business operations and is at the heart of this book.

This book addresses the importance of information technology management and issues in operating information systems in the global dynamic business environment. It embraces discussions of the global information technology theory, frameworks and IT architecture, discovery of global knowledge management, improvement of the global information systems development methodologies, and applications of the latest technologies, such as mobile technology and web services, in the global information systems development and operations.

The book is considered a collection of new ideas, the latest technology applications and experiences in the global information systems development and operations. It will significantly contribute to the academic, research, and corporate business communities.

By surveying the literature in related fields, most discussions have been focused on the management issues in developing and implementing global information systems. Nevertheless, there is a lack of apparent attention for applying the latest information technologies to enhance the performance of global information systems.

The book will document the technical and managerial aspects of global information systems and provide insights into how the latest information technologies such as intelligent agents, dynamic decision support systems, and mobile technology could be initiated and embedded to the global information systems.

The book will also address the architecture of an integrated supply chain in global business operations; what process improvement is required to implement global information systems; and how organizations handle knowledge generated from various information sources globally. The book is intended to convey a high-level understanding of managing and applying the latest information technology for global information systems operation. In this book we are particularly interested in exchanging concepts, new ideas, research results, experience, and other related issues that could contribute to the academic arena and also benefit the corporate business community.

## **Organization of the Book**

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The systematic presentation of chapters gives readers an organized structure of the material. It embodies research and experience reports from global researchers. Although the book is not formally divided into parts, each group of

related chapters has a different focus on global information systems development and operations. The book is organized into 13 chapters.

Chapter I defines the evolution and key indicators of the information society, which is being triggered by the Information Wave in the last 25 years. Several aspects of the information society will be reviewed and their developmental path will be defined. The fast development of the “global economy” is based on the information communication technology (ICT) supported by the information society. Depending on the different levels of national ICT development, different levels of complexity and influence are implied on the global economy. Hence it is imperative to recognize various development phases, solutions, and internal and external consequences of the information society. The key question appears to be whether the information society is a new tool of thought or a new way of life.

Chapter II highlights the problem of inefficiency of classical business systems in an era of dynamic changes of global business environment. By analyzing business models on the conceptual level, it is proven that business structures in classical business systems significantly influence the shaping and performing of business processes. The author concludes that a single business system re-engineering project is not the definitive answer. In the global business environment, changes are constant. The efficiency of business processes can be maintained and increased in the long term only by constant but effortless adaptation of structures. This is possible by the introduction of the organizational structure without hierarchy and the mechanism for dynamic adaptation of structures to business processes. The model of “process organization” is described in the chapter.

Chapter III discusses the risks related to the organizational transformation process to globalization. This chapter aims at providing organizations that are considering the move to globalization with clear understanding of the entire transformation process and all the prerequisites for a successful transition. A full explanation of what is involved in the globalization process is at the start of the chapter, followed by a comprehensive investigation of the key success factors that may impact the process. Additionally the chapter discusses some of the common problems that might face management and workers during the globalization process. It is intended to provide detailed global transformation information to both managers and researchers for their use as the globalization guidelines.

Chapter IV presents how a medium-sized manufacturing organization transformed itself from a manual to an IT-based document transacting business process. This lesson in documents transaction helped the organization score large gains in productivity, in cost cutting, and in evolving a sound performance measurement system. However globalization also opened up opportunities and threats. The old system had sufficient IT backing but it failed in motivating employees

in adopting a global information challenge. In order to compete internationally through differentiated products with high quality, this firm then reengineered its manufacturing. Information from the market substituted quality as driver of information transactions. The goal of the project was to web-enable the firm. The IT project had to define business transactions as the unit, which would define transactions in information in object language first and subsequently as transactions in documents. Browser-enabled communication proved acceptable to employees who had previous learning in information transactions.

Chapter V investigates one of the major hindrances to the utilization of rapid evolution of information communication technology through global alliances, cross-cultural issues. While technology renders the geographical boundaries redundant, it aggrandizes the chasms in socio-cultural value systems of physically disparate alliance partners. This chapter first discusses the gamut of global e-business alliances: the primary reasons for their need, their socio-cultural perspective, and the various factors that influence such alliances. Secondly the corresponding mitigating approaches to those negatively influencing factors are suggested.

Chapter VI discusses concepts and characteristics of decision support methods and demonstrates the gap between the decision maker and the decision support systems techniques. It examines the experience of the government of Egypt in building its information infrastructure to help develop the decision-making process both at the government level as well as at the local public administration level.

Chapter VII proposes a framework for making decisions dynamically in a global organization. This framework enables data to be retrieved and analyzed dynamically with the aid of technology. The chapter starts with the discussion of various types of global organizations and departments within a global organization. It is followed by the investigation and identification of organizational data and decisions that make up the global organization; it also examines the different enabling technologies that can be applied for information retrieval. Finally the chapter concludes with a discussion of the proposed framework for making decisions dynamically in a global organization.

Chapter VIII is dedicated to the major managerial, organizational, and technological aspects of development of data warehouses in a global information environment, when different external sources of information are available and potentially may have value for decision support and managerial analysis. It summarizes the major benefits that become available for businesses if they decide to integrate information from external sources into their data warehouses. It also introduces the overall organizational framework of development of data warehouses that are based upon the information from different external sources.

Chapter IX explores the impact of web services in creating a paradigm shift in the way businesses strive to globalize. This fundamental shift in the paradigm of the globalization process occurs due to the fact that with web services, it is not one single organization that starts dealing with its clients electronically but, rather, a number of organizations (a cluster) with common needs and complimentary services that start dealing with each other electronically. Web services enable business applications to talk directly with each other without human intervention, resulting in rapid interactions amongst businesses at a global level.

Chapter X discusses quantitative modeling to introduce and manage new information technology successfully in global business operations. The mathematical models that involve conceptualization of the problem and its abstraction to a quantitative framework are the main discussion of the chapter. Furthermore the dependent and the independent variables are identified and mathematical relationships are established between them. Results, analysis, and recommendations are discussed to conclude the chapter.

Chapter XI explores the concept of enterprise, or organizational mobility. The authors examine how mobility in a business can provide a competitive advantage and enhanced sustainability. Potential industry applications for mobile technology are discussed. The authors delve further by exploring the growth areas of mobile technologies and outline key success factors for the stakeholders in the mobile technology arena. The many opportunities mobile technology brings to various businesses are assessed. Furthermore the impacts of mobile technology on organizations and society are evaluated. The chapter concludes by outlining various competing mobile technologies available to the market both today and in the future.

Chapter XII reviews the components of e-business from a procurement perspective in order to explore the key value propositions of e-business practices in the global automotive industry. Using an exploratory case study of the automotive industry, the key questions for identifying a true value proposition of e-business are identified, including their e-procurement, e-catalog order processing, e-auction, and e-capacity systems. It is undisputed that e-business will bring at least some level of benefit to a vast majority of organizations, regardless of size or industry. This chapter intends to be valuable for evaluating and implementing a successful e-business strategy, structure, and solution.

Chapter XIII discusses how globalization in the publishing domain is achieved through global information and communication systems. Global information systems (GIS) enable not only integration of applications within an organization but also enable extensive connectivity between applications across varied platforms and software domains both within and outside the organization. This timely connectivity has created tremendous opportunities for the publishing industry — increasingly dependent on split-second timing to report news — to integrate

its business processes as well as devise new and innovative ways of collecting, assimilating, and disbursing information. This chapter is based on the experience of the lead author in one of Australia's largest publishing groups, John Fairfax Holdings Ltd.

## References

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