# Preface

Enterprise Resource Planning systems are key to optimizing organizational performance; however, choosing which system to implement, when to perform the implementation, and how to minimize costs while maximizing system acceptance are all important issues to businesses considering an ERP implementation. As the business world focuses more upon e-business and incorporates the Internet into daily business transactions, ERP systems have to be able to keep up with the e-business world, but this requires modifications. Business leaders seeking to understand or implement ERP systems and researchers and academics seeking access to the most recent technological advances, need to have access to the most current research and practice concerning Enterprise Resource Planning systems. The chapters in this book provide up-to-date case studies and theoretical discussion of ERP systems and are a must-read for anyone considering an ERP implementation or desiring to improve upon an already existing ERP system. The authors, all renowned for their expertise in the field of ERP systems represent a diverse cultural and organizational background and share their insights in the following chapters.

Chapter 1 entitled, "ERP + E-Business = A New Vision of Enterprise System" by Betty Wang and Fiona Fui-Hoon Nah of the University of Nebraska-Lincoln (USA) discusses the importance of having an Enterprise Resource Planning (ERP) infrastructure in place when beginning to do business on the Web. The authors look at the best practices consisting of real-time, cross-enterprise Internet-based flow of information documents and processes which requires the constant development and deployment of new e-business models.

Chapter 2 entitled, "e-ERP: A Comprehensive Approach to e-Business" by Colin Ash and Janice Burn of Edith Cowan University (Australia) reports on the results of research carried out over the last two years on the state of e-business developments within ERP environments worldwide. The authors used structured interviews to collect data in two stages: organizations from Australia and organizations from around the world. The results indicate that facilitators in e-business change management, including cultural readiness, knowledge and learning capabilities, are recognized by organizations, but their incorporation varies greatly among organizations.

Chapter 3 entitled, "The Evolution of ERP Systems: A Historical Perspective" by Mohammad Rashid of Massey University-Albany (New Zealand), Liaquat Hossain of Syracuse University (USA) and Jon Patrick of the University of Sydney (Australia) concludes that the growth and success of ERP adoption and development in the new millennium will depend on the legacy ERP system's capability of extending to customer relationship management, supply chain management and other extended modules and integration with the Internet-enabled applications.

Chapter 4 entitled, "Towards an ERP Life-Cycle Costs Model" by José Manuel Esteves of the Universitat Politècnica de Catalunya (Spain), João Álvaro Carvalho of the Universidade do Minho (Portugal) and Aldemar Santos of the Universidade Federal de Pernambuco (Brazil) describes an exploratory study that identifies costs related to ERP systems during their life-cycle. The authors define and categorize the various costs and categorize the costs as tangible or intangible. The chapter also puts forth a case study where costs related to the three initial phases of the life-cycle are analyzed.

Chapter 5 entitled, "The Myth of Integration: A Case Study of an ERP Implementation" by Rosio Alvarez of the University of Massachusetts (USA) examines the implementation process of an ERP system and shows that implementation cannot be viewed solely in instrumental terms. The chapter presents a case study of an ERP implementation at a large non-profit. The case study demonstrates how ERP systems are often chosen not to be incorporated into existing organizational culture, but rather to reconstruct the organization's values and explores the implications of the choice of ERP systems.

Chapter 6 entitled, "ERP Systems: Training Quality and Resultant Use Quality Perceptions" by Nicole Mayer investigates the product quality of a training program developed at an Australian University implementing PeopleSoft, to develop a definition of training quality. The chapter compares use quality characteristics and user perceptions with training results. The authors conclude that high quality training leads to positive user perceptions of an ERP system.

Chapter 7 entitled, "Assessing Enterprise Resource Planning (ERP) Adoption in the Philippines" by Maria Divina Gracia Z. Roldan of the University of Philippines Cebu College, Antonio Zamora of De La Salle University and Frederick Amores of Third Wave Software Associates (The Philippines) describes and analyzes the factors which facilitate and restrain ERP adoption by Philippine business enterprises. The chapter also presents views and assumptions on the value of ERP in gaining a competitive advantage and provides insights on how organizational factors and culture contribute to successful ERP adoption.

Chapter 8 entitled, "The Next Wave in ERP Implementation" by Keng Siau and Yuhong Tian of the University of Nebraska-Lincoln (USA) provides a

discussion of the background of ERP and discusses how ERP systems must be changed in order to meet the challenge of E-Business. The authors indicate that ERP systems will continue to maximize internal efficiency and will be able to adapt to the Internet needs of organizations.

Chapter 9 entitled, "The Impact of Enterprise Resource Planning Systems on Organizational Effectiveness: An Artifact Evaluation" by Jonas Hedman of Lund University and Andreas Borell of Tetra Pak Information Management (Sweden) presents an artifact evaluation of the functionality and perceived benefits of ERP systems based upon the Competing Values Model. The evaluation illustrates the effectiveness of ERP systems related to internal process and rational goal models and points out weaknesses in the areas related to human relationships and open systems models.

Chapter 10 entitled, "Transnational ERP Systems: Three Case Studies in Brazilian Subsidiaries of Multinational Enterprises" by Cesar Alexandre de Souza and Ronaldo Zwicker of the University of São Paulo (Brazil) identifies aspects involved in the use of ERP systems as transnational information systems. Specifically, the chapter analyzes three implementation cases of ERP systems at Brazilian subsidiaries of multinational enterprises.

Chapter 11 entitled, "Enterprise Resource Planning and Knowledge Management Systems: An Empirical Account of Organizational Efficiency and Flexibility" by Jimmy Huang of Nottingham University Business School, Sue Newell of the University of London, Robert Galliers of the London School of Economics and Political Science (United Kingdom) and Shan-Ling Pan of the National University of Singapore compares the characteristic differences and similarities between enterprise resource planning systems and knowledge management. The authors suggest that the two initiatives are complementary, but are only synergistic when the design of organizational routines and practices fits into the metaroutines imposed by ERP and KM.

Chapter 12 entitled, "The ERP Marketplace: An Australian Update" by Andrew Stein and Paul Hawking of the Victoria University of Technology (Australia) presents the preliminary results of an analysis of the Australian ERP marketplace. The study looks at the market movement and demographics of SAP, the dominant ERP vendor within the Australian marketplace. The chapter looks specifically at Australia and SAP's dominance. The authors then examine their directions for future research and questions that need to be answered in the future.

Chapter 13 entitled, "A Framework for Assessing ERP Systems Functionality for the SMEs in Australia" by Liaquat Hossain of Syracuse University (USA), Mohammad Rashid of Massey University–Albany (New Zealand) and Jon Patrick of the University of Sydney (Australia) reports the results of a study aimed at identifying the strengths, weaknesses, opportunities and threats (SWOT) of ERP

systems offered by the five leading vendors for small and medium enterprises (SMEs) in Australia. The authors develop a SWOT framework to study the functionality of the ERP systems offered by these vendors.

Chapter 14 entitled, "The SAP Ecosystem: A Knowledge Perspective" by Greg Timbrell and Guy Gable of Queensland University of Technology (Australia) explores the concepts of knowledge sourcing and knowledge strategy friction. The chapter then describes a preliminary attempt to instantiate these concepts through an exploratory case study of the SAP services ecosystem. The chapter is part of a larger study and seeks to explore the broader objective to test the power of a knowledge sourcing world-view and the explanatory power of such a perspective with emphasis on the ERP marketplace.

Chapter 15 entitled, "A Study of the ERP Selection Process in New Zealand" by Maha Shakir of Massey University (New Zealand) and Liaquat Hossain of Syracuse University (USA) provides an exploratory investigation of the ERP software selection process in New Zealand. The chapter gives a brief background describing the main features of ERP. The authors describe exploratory case studies on the ERP selection process and suggest that the selection of ERP guides the implementation process. The results further suggest that consultants play a large role in the selection process.

Chapter 16 entitled, "Beyond ERP Systems as a Hype: Understanding ERP Sysems as Distinct Technological, Organizational and Cognitive Phenomena" by Eveline van Stijn of the University of Twente (The Netherlands) shows that ERP systems are not simply hype or buzz, but are rather technological, organizational and cognitive in nature. The authors indicate that ERP systems are distinguishable from other information systems because of their differences, but there are similarities as well. The authors discuss the future of ERP in academic research.

Chapter 17 entitled, "Big-Bang ERP Implementation at a Global Company" by Nava Pliskin and Marta Zarotski of Ben-Gurion University of the Negev (Israel) describes the case study of Dead Sea Works, an international multi-firm producer of Potash and other chemicals. The case study describes the purchase and implementation of a big-bang ERP implementation of SAP R/3 and the organizations attempt to minimize risk through strategic purchasing and a steering committee. The R/3 system was implemented on time and on budget. The case examines the keys to successful implementation.

Chapter 18 entitled, "Selecting and Implementing an ERP System at Alimentos Peru" by J. Martin Santana, Jaime Serida-Nishimura, Eddie Morris-Abarca and Ricardo Diaz-Baron of ESAN (Peru) describes the implementation process of an ERP system at Alimentos Peru, one of the largest foods manufacturing companies in Peru. The case explains the criteria used to evaluate and select the

system as well as problems that arose during implementation. Finally, the chapter discusses the benefits and challenges the new system provided.

From ERP systems' roles in e-business to guidance on how to select the best ERP system and ensure organizational acceptance and from a theoretical discussion on the definition and role of ERP systems to practical case studies describing each step in the process of ERP implementation, the chapters in this book provide essential information to all those concerned with effective ERP implementation. From managers wondering about the appropriate time or correct software to researchers concerned with the perception of ERP as a cognitive process, the chapters in this book represent the best practices and the most up-to-date research in ERP systems.

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