Preface

The successful creation and implementation of effective business information systems is critical to an organization's success and productivity. Current business information systems within organizations and the technological advancements have revolutionized financial transactions, management infrastructure, and knowledge workers. From decision support systems and business intelligence to data warehousing and enterprise information systems, this ever-advancing field of business information systems is critical to the success of modern businesses, academic communities, and consumers.

With the constant changes in the landscape of business information systems, it is a challenge for researchers, practitioners, and experts to take in the volume of innovative advances and up-to-the-moment research in this diverse field. Information Science Reference is pleased to offer a four-volume reference collection on this rapidly growing discipline, in order to empower students, researchers, academicians, and practitioners with a wide-ranging understanding of the most critical areas within this field of study. This collection provides the most comprehensive, in-depth, and recent coverage of all issues related to the development of cutting-edge business information systems, as well as a single reference source on all conceptual, methodological, technical and managerial issues, and the opportunities, future challenges and emerging trends related to the development, application, and implications of business information systems.

This collection entitled, **"Business Information Systems: Concepts, Methodologies, Tools and Applications"** is organized in eight (8) distinct sections, providing the most wide-ranging coverage of topics such as: 1) Fundamental Concepts and Theories; 2) Development and Design Methodologies; 3) Tools and Technologies; 4) Utilization and Application; 5) Organizational and Social Implications; 6) Managerial Impact; 7) Critical Issues; and 8) Emerging Trends. The following provides a summary of what is covered in each section of this multi-volume reference collection:

Section 1, *Fundamental Concepts and Theories*, serves as a foundation for this extensive reference tool by addressing crucial theories essential to the understanding of business information systems. Chapters such as "Introduction to Current Techniques for Effective ICT Development" by S.C. Koh and Stuart Maguire, and "Business Computing in the Internet Era" by Nijaz Bajgoric give an introduction and overview of business information systems in a contemporary business environment. "Business Plus Intelligence Plus Technology Equals Business Intelligence" by Ira Yermish, Virginia Miori, John Yi, and Rashmi Malhotra shows how the development of the world-wide-web and inexpensive mass storage provided the environment to facilitate the convergence of business operations and decision support into business intelligence.. Additional selections, including "An Overview of Enterprise Resource Planning for Intelligent Enterprises" by Jose Framinan and Jose Molina, and "Fundamentals of Collaborative Business" by Bhuvan Unhelkar, Abbass Ghanbary, and Houman Younessi focus on providing backgrounds and introductions to specific concepts within business information systems. These and several other foundational chapters provide a wealth of expert research on the elemental concepts and ideas surrounding business information systems.

Section 2, **Development and Design Methodologies**, presents in-depth coverage of the conceptual design and architecture of business information systems, focusing on aspects including enterprise resource planning, service-oriented architecture, and decision support systems. Designing and implementing effective processes and strategies are the focus of such chapters as "Developing and Implementing an ICT Strategy" by S.C. Koh and Stuart Maguire, and "Developing Efficient Processes and Process Management in New Business Creation in the ICT-Sector" by Arla Juntunen. "Expanding the Strategic Role of Information Interactions in the Enterprise Environment" by Judit Olah and Ole Axvig offers a model that puts a user-centered focus on business process model building by mapping all information interactions surrounding the business processes. Rahul Singh's "Multi-Agent Architecture for Knowledge-Driven Decision Support" presents an architecture for knowledge-based decision support, delivered through a multi-agent architecture. With contributions from leading international researchers, this section offers copious developmental approaches and design methodologies for business information systems.

Section 3, **Tools and Technologies**, presents extensive coverage of the various tools and technologies used in the development and implementation of business information systems. This comprehensive section includes such chapters as "Interactive, Flexible, and Adaptable Decision Support Systems," by John Wang, James Yao, and Jeffrey Hsu, and "Flexible Spatial Decision-Making and Support" by Shan Gao and David Sundaram, which describe various techniques and models for providing flexible decision support systems. "Extending Enterprise Application Integration (EAI) with Mobile and Web Services Technologies" by Abbass Ghanbary and Bhuvan Unhelkar demonstrates how the technologies of web services open up the doors to collaborative enterprise architecture integration and service oriented architecture resulting in business integration. Finally, chapters such as "A Survey of Parallel and Distributed Data Warehouses" by Pedro Furtado, and "An Integrated Data Mining and Simulation Solution" by Mouhib Alnoukari, Asim El Sheikh, and Zaidoun Alzoab present tools to adapt to the challenges of various data warehousing mechanisms. In all, this section provides coverage of a variety of tools and technologies that inform and enhance modern business information systems.

Section 4, **Utilization and Application**, describes how business information systems have been utilized and offers insight on important lessons for their continued use and evolution. Including chapters such as "Delivering the Whole Product" by Joseph Feller, Patrick Finnegan, and Jeremy Hayes, and "Business IT Systems Implementation" by Calin Gurau, this section investigates numerous methodologies that have been proposed and enacted in business information systems, as well as their results. As this section continues, a number of case studies in the use of business information systems are presented from multiple industries across the world, in selections such as "Evolution of Electronic Procurement in Egypt" by Sherif Kamel, "The Impact of Information Technologies on the US Beef Industry's Supply Chain" by Brian Neureuther and George Kenyon, and "Decision Support Systems in Indian Organized Retail Sector" by Ankush Sharma and Preeta Vyas. Contributions found in this section provide comprehensive coverage of the practicality and current use of business information systems.

Section 5, **Organizational and Social Implications**, includes chapters discussing the organizational and social impact of business information systems. "Factors Influencing the Use of Decision Support Tools of Enterprise Resource Planning Systems" by Emad Kamhawi presents evidence demonstrating that perceived shared benefits, system characteristic, and the degree of knowledge of the system are significant influences on an individual's willingness to use enterprise resource planning systems. "The Impact of E-Commerce Customer Relationship Management in Business-to-Consumer E-Commerce" by Pauline Ratnasingam examine the impact of e-commerce customer relationship management in a small business firm that engages in B2C e-commerce. This section continues with chapters such as "Towards the Realization of an Integrated Decision Support Environment for Organizational Decision Making" by Shaofeng Liu, Alex Duffy, Robert Whitfield, and Iain Boyle, which explains the benefits of an Integrated Decision Support Environment (IDSE) for organizational decision making, which can

configure and re-configure its functions to support various decision applications, and "A Conceptual Framework for Business Process Modeling in Virtual Organizations" by Dimitris Folinas, Tania Pavlou, Bill Karakostas, and Vicky Manthou, which discusses ways to support the modeling and coordination of the complex and shared business processes. Overall, these chapters present a detailed investigation of the complex relationship between individuals, organizations and business information systems.

Section 6, *Managerial Impact*, presents focused coverage of business information systems as it relates to improvements and considerations in the workplace. "A Resource-Based Perspective on Information Technology, Knowledge Management, and Firm Performance" by Clyde Holsapple and Jiming Wu investigates the determinants of firm performance and also broadens understanding of the relationships among information technology, knowledge management, and firm performance. Other chapters such as "Management Considerations for B2B Online Exchanges" by Norm Archer discuss management considerations, the evaluation and adoption of B2B applications, and the technical infrastructure supporting these systems. In all, the chapters in this section offer specific perspectives on how managerial perspectives and developments in business information systems inform each other to create more meaningful user experiences.

Section 7, *Critical Issues*, addresses vital issues related to business information systems, which include customer relationship management, critical success factors and the business strategies. Chapters such as "The Importance of Data Within Contemporary CRM" by Diana Luck, and "Customer Value and New Product Retailing Dynamics" by Rajagopal discuss the success of customer relationship management based on technology, people and processes.. Additional selections, such as "A Critical Success Factors (CSFs) for Enterprise Resource Planning (ERP) Solution Implementation in SMEs" by Simona Sternad, Samo Bobek, Zdenko Dezelak, and Ana Lampret, "Business Process Management as a Critical Success Factor in EIS Implementation" by Vladimír Modrák, and "Elements that Can Explain the Degree of Success of ERP Systems Implementation" by Carmen de Pablos Heredero and Mónica de Pablos Heredero address critical success factors in the deployment of business information systems. This section also asks unique questions about the role of business intelligence in developing countries and system development lifecycles.

The concluding section of this authoritative reference tool, *Emerging Trends*, highlights areas for future research within the field of business information systems, while exploring new avenues for the advancement of the discipline. Beginning this section is "Evolving e-Business Systems" by Denis Caro. This selection posits that transgenic governance forces are evolving and will engage future international e-business professionals in a multi-polar world of 2050. Innovative simulation systems *are* presented in "Using Simulation Systems for Decision Support" by Andreas Tolk, and "What-if Simulation Modeling in Business Intelligence" by Matteo Golfarelli and Stefano Rizzi. These chapters explore the merits of simulation systems and discuss their effectiveness. *T*hese and several other emerging trends and suggestions for future research can be found within the final section of this exhaustive multi-volume set. Although the primary organization of the contents in this multi-volume work is based on its eight sections, offering a progression of coverage of the important concepts, methodologies, technologies, applications, social issues, and emerging trends, the reader can also identify specific contents by utilizing the extensive indexing system listed at the end of each volume. Furthermore to ensure that the scholar, researcher and educator have access to the entire contents of this multi volume set as well as additional coverage that could not be included in the print version of this publication, the publisher will provide unlimited multi-user electronic access to the online aggregated database of this collection for the life of the edition, free of charge when a library purchases a print copy. This aggregated database provides far more contents than what can be included in the print version in addition to continual updates. This unlimited access, coupled with the continuous updates to the database ensures that the most current research is accessible to knowledge seekers.

As a comprehensive collection of research on the latest findings related to using technology to providing various services, *Business Information Systems: Concepts, Methodologies, Tools and Applications*, provides researchers, administrators and all audiences with a complete understanding of the development of applications and concepts in business information systems. Given the vast number of issues concerning usage, failure, success, policies, strategies, and applications of business information systems in organizations, *Business Information Systems: Concepts, Methodologies, Tools and Applications* addresses the demand for a resource that encompasses the most pertinent research in business information systems development, deployment, and impact.