Emphasis on knowledge and information is one of the key factors that differentiate the intelligent business enterprise of the 21st century. In order to harness knowledge and information to improve effectiveness, enterprises of the new millennium must capture, manage, and utilize information with rapid speed in an effort to keep pace with the continually changing technology. Knowledge management is an important means by which organizations can better manage information and, more importantly, knowledge. Not easily defined, knowledge management embodies a plethora of categories within the field of information science and technology.

Over the past two decades, numerous researchers have developed a variety of techniques, methodologies, and measurement tools that have allowed them to develop, deliver, and, at the same time, evaluate the effectiveness of several areas of knowledge management. The explosion of these technologies and methodologies has created an abundance of new, state-of-art literature related to all aspects of this expanding discipline, allowing researchers and practicing educators to learn about the latest discoveries in the field of knowledge management.

Rapid technological changes, combined with much greater interest in discovering innovative techniques to manage knowledge in today’s modern organizations, have led researchers and practitioners to continually search for literature that will help them stay abreast of the far-reaching effects of these changes, as well as to help develop and deliver more innovative methodologies and techniques utilizing new technological innovation. In order to provide the most comprehensive, in-depth, and recent coverage of all issues related to knowledge management, as well as to offer a single reference source on all conceptual, methodological, technical, and managerial issues, as well as the opportunities, future challenges, and emerging trends related to this subject, Information Science Reference is pleased to offer a six-volume reference collection on this rapidly growing discipline, in order to empower students, researchers, academicians, and practitioners with a comprehensive understanding of the most critical areas within this field of study.

This collection, entitled Knowledge Management: Concepts, Methodologies, Tools, and Applications, is organized in eight 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 exhaustive reference tool by addressing crucial theories essential to the understanding of knowledge management. Chapters such as, “Knowledge Management Success Models” by Murray E. Jennex, as well as, “Knowledge Synthesis Framework” by Kam Hou Vat provide an excellent framework in which to position knowledge management within the field of information science and technology. “Beyond Knowledge Management:
Introducing Learning Management Systems” by Audrey Grace and Tom Butler offers excellent insight into the critical incorporation of learning systems into the global enterprises, while chapters such as, “Knowledge Management, Communities of Practice, and the Role of Technology: Lessons Learned from the Past and Implications for the Future” by Wee Hin Leo Tan, Thiam Seng Koh, and Wei Loong David Hung address some of the basic, yet crucial stumbling blocks of information management. With 43 chapters comprising this foundational section, the reader can learn and chose from a compendium of expert research on the elemental theories underscoring knowledge management discipline.

Section 2, Development and Design Methodologies, provides in-depth coverage of conceptual architectures and knowledge management frameworks to provide the reader with a comprehensive understanding of the emerging technological developments within the field of knowledge management. “Supporting Research and Development Processes Using Knowledge Management Methods” by Thomas Hahn, Bernhard Schmiedinger, and Elisabeth Stephan offers research fundamentals imperative to the understanding of research processes within the knowledge management discipline. On a more global scale, Adekunle Okunoye and Nancy Bertaux’s, “KAFRA: A Context-Aware Framework of Knowledge Management in Global Diversity” explores cultural and infrastructural issues related to the management of knowledge in developing countries. From basic designs to abstract development, chapters such as “Stages of Knowledge Management Systems” by Peter Gottschalk and “Autopoietic Approach for Information System Development” by El-Sayed Abou-Zeid serve to expand the reaches of development and design technologies within the knowledge management community. This section includes over 45 contributions from researchers throughout the world on the topic of information development and knowledge sharing within the information science and technology field.

Section 3, Tools and Technologies, presents an extensive coverage of various tools and technologies available in the field of knowledge management that practitioners and academicians alike can utilize to develop different techniques. Chapters such as Tobias Mueller-Prothmann’s, “Use and Methods of Social Network Analysis in Knowledge Management” enlightens readers about fundamental research on one of the many methods used to facilitate and enhance the knowledge sharing experience whereas chapters like, “Technology and Knowledge Management: Is Technology Just an Enabler or Does it also Add Value?” by Helen Mitchell explore the intrinsic value of technology and knowledge management. It is through these rigorously researched chapters that the reader is provided with countless examples of the up-and-coming tools and technologies emerging from the field of knowledge management. With more 28 chapters, this section offers a broad treatment of some of the many tools and technologies within the knowledge management community.

Section 4, Utilization and Application, discusses a variety of applications and opportunities available that can be considered by practitioners in developing viable and effective knowledge management programs and processes. This section includes more than 50 chapters such as “Knowledge Management and the Leading Information Systems Journals: An Analysis of Trends and Gaps in Published Research” by Todd Peachey, Dianne J. Hall, and Casey Cegielski which reviews knowledge management literature published in top-tier journals, offering findings on the most popular trends researched within the academic community. Additional chapters such as Hyung Seok Jeong and Dulcy M. Abraham’s, “Knowledge Management in Civil Infrastructure Systems” discuss the utilization of knowledge management within the governmental realm. Also considered in this section are the challenges faced when utilizing knowledge management with healthcare systems as outlined by Martin Orr’s, “The Challenge of Privacy and Security and the Implementation of Health Knowledge Management Systems.” The adaptability of governmental agencies in response to disasters is given consideration in chapters such as, “Knowledge Management and Hurricane Katrina Response” by Tim Murphy and Murray E. Jennex which investigates the major hurdles faced in knowledge sharing in the face of disasters, spanning the globe. Contributions
included in this section provide excellent coverage of today’s global community and how knowledge management research is impacting the social fabric of our present-day global village.

Section 5, **Organizational and Social Implications**, includes a wide range of research pertaining to the social and organizational impact of knowledge management technologies around the world. Introducing this section is Daniel L. Davenport and Clyde W. Holsapple’s chapter entitled, “Knowledge Organizations” providing a comprehensive introduction of the modern-day knowledge organization. Additional chapters included in this section such as “The Role of Culture in Knowledge Management: A Case Study of Two Global Firms” by Dorothy Leidner, Maryam Alavi, and Timothy Kayworth explore the difference in the community approach versus the process approach to knowledge management within two cultural paradigms. Also investigating a concern within the field of knowledge management is Bendik Bygstad’s, “Some Implementation Challenges of Knowledge Management Systems: A CRM Case Study” which provides a study of the varying challenges when implementing knowledge management systems. The discussions presented in this section offer research into the integration of technology to allow access for all.

Section 6, **Managerial Impact**, presents contemporary coverage of the social implications of knowledge management, more specifically related to the corporate and managerial utilization of information sharing technologies and applications, and how these technologies can be facilitated within organizations. Core ideas such as training and continuing education of human resources in modern organizations are discussed through these more than 35 chapters. “Networks of People as an Emerging Business Model” by Lesley Robinson discusses strategic planning related to the organizational elements and knowledge sharing program requirements that are necessary to build a framework in order to institutionalize and sustain knowledge management systems as a core business process. Equally as crucial, chapters such as “Bridging the Gap from the General to the Specific by Linking Knowledge Management to Business Processes” by John S. Edwards and John B. Kidd address the gap between theory and practical implementation within the knowledge sharing community. Concluding this section is a chapter by Catherine C. Schifter of Temple University, “Faculty Participation in Distance Education Programs”. Directing the reader’s focus forward, the final chapter of this section, “Outcomes of Knowledge Management Initiatives.” by Vittal S. Anantatmula riteria helps to establish a basis for assessing the value of knowledge management while evaluating its results within business enterprises.

Section 7, **Critical Issues**, contains 25 chapters addressing issues such as intellectual capital and knowledge management, communities of practice, and critical social theory and ontology-supported Web service composition. Within the chapters, the reader is presented with an in-depth analysis of the most current and relevant issues within this growing field of study. Franz Hofer’s, “Knowledge Transfer Between Academia and Industry” develops an excellent model for researchers and practioners as attempts are made to simultaneously ease and expedite the transfer of knowledge from the private to the public sector. Forming frameworks in which to position the issues faced in this growing field are provided by research found in chapters such as, “Communities of Practice and Critical Social Theory” by Steve Clarke and “Aristotelian View of Knowledge Management” by David G. Schwartz—both chapters that take the core psychological paradigms of sociology and translate them into applicable ideas within the exploding realm of information sharing. Crucial examinations such as that presented in Richard L. Wagoner’s chapter, “We’ve Got a Job to Do - Eventually: A Study of Knowledge Management Fatigue Syndrome” serves to reinforce the ideas presented in this section while simultaneously enticing and inspiring the reader to research further and participate in this increasingly pertinent debate.

The concluding section of this authoritative reference tool, **Emerging Trends**, highlights research potential within the field of knowledge management while exploring uncharted areas of study for the advancement of the discipline. Introducing this section is David G. Schwartz’s, “The Emerging Discipline
of Knowledge Management” which sets the stage for future research directions and topical suggestions for continued debate. Providing an alternative view of knowledge management is the chapter, “Culture-Free or Culture-Bound? A Boundary Spanning Perspective on Learning in Knowledge Management Systems” by Robert M. Mason. This chapter researches the cultural dimension of knowledge management systems, particularly the relationship of learning and culture in knowledge management projects. Another debate which currently finds itself at the forefront of research within this field is presented by Nieves Pedreira, Julián Dorado, Juan Rabuñal, and Alejandro Pazos’ research, “Knowledge Management as the Future of E-Learning” which explores the inevitable increase in complexity and quantity of the information that is available for students of all backgrounds postulating that we must move towards a model that offers the student room for individual exploration and self-learning. Found in these 21 chapters concluding this exhaustive multi-volume set are areas of emerging trends and suggestions for future research within this rapidly expanding discipline.

Although the primary organization of the contents in this multi-volume 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 include 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 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 knowledge seekers.

Knowledge management as a discipline has witnessed fundamental changes during the past two decades, allowing knowledge seekers around the globe to have access to information which two decades ago, was inaccessible. In addition to this transformation, many traditional organizations and business enterprises have taken advantage of the technologies offered by the development of knowledge management systems in order to expand and augment their existing programs. This has allowed practioners and researchers to serve their customers, employees, and stakeholders more effectively and efficiently in the modern virtual world. With continued technological innovations in information and communication technology and with on-going discovery and research into newer and more innovative techniques and applications, the knowledge management discipline will continue to witness an explosion of information within this rapidly evolving field.

The diverse and comprehensive coverage of knowledge management in this six-volume authoritative publication will contribute to a better understanding of all topics, research, and discoveries in this developing, significant field of study. Furthermore, the contributions included in this multi-volume collection series will be instrumental in the expansion of the body of knowledge in this enormous field, resulting in a greater understanding of the fundamentals while fueling the research initiatives in emerging fields. We at Information Science Reference, along with the editor of this collection, and the publisher hope that this multi-volume collection will become instrumental in the expansion of the discipline and will promote the continued growth of knowledge management.