

Preface

The constantly changing landscape of Supply Chain Management makes it challenging for experts and practitioners to stay informed of the field's most up-to-date research. That is why Information Science Reference is pleased to offer this three-volume reference collection that will empower students, researchers, and academicians with a strong understanding of critical issues within Supply Chain Management by providing both broad and detailed perspectives on cutting-edge theories and developments. This reference is designed to act as a single reference source on conceptual, methodological, technical, and managerial issues, as well as provide insight into emerging trends and future opportunities within the discipline.

Supply Chain Management: Concepts, Methodologies, Tools and Applications is organized into eight distinct sections that provide comprehensive coverage of important topics. The sections are: (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 paragraphs provide a summary of what to expect from this invaluable reference tool.

Section 1, **Fundamental Concepts and Theories**, serves as a foundation for this extensive reference tool by addressing crucial theories essential to the understanding of Supply Chain Management. Introducing the book is "*Role of Small and Medium Sized Enterprises in E-Supply Chain Management*" by Fang Zhao, a great foundation laying the groundwork for the basic concepts and theories that will be discussed throughout the rest of the book. Another chapter of note in Section 1 is titled "*E-Novation Customer Relationship Management*" by Wesley J. Johnston and Othman Boujena, which discusses the novel techniques of integrating new technologies to assist your firm in its CRM policies and tactics. Section 1 concludes, and leads into the following portion of the book with a nice segue chapter, "*Overview on 3PL Selection Problem*," by Aicha Aguezzoul. Where Section 1 leaves off with fundamental concepts, Section 2 discusses architectures and frameworks in place for Supply Chain Management.

Section 2, **Development and Design Methodologies**, presents in-depth coverage of the conceptual design and architecture of Supply Chain Management, focusing on aspects including data mining uncertain data, risk management modeling, integration strategies, knowledge processing, and many more topics. Opening the section is "*Digital Marketplaces as a Viable Model for SME Networking*" by Nezha Sadguy and Valentina Ndou. This section is vital for developers and practitioners who want to measure and track the progress of Supply Chain Management through the multiple lens of parametric design. Through case studies, this section lays excellent groundwork for later sections that will get into present and future applications for Supply Chain Management, including, of note: "*The Outcome of Knowledge Process for Customers of Jordanian Companies on the Achievement of Customer Knowledge Retention*" by Samer Alhawari, Amine Nehari Talet, and Haroun Alryalat, and "*An Enterprise Architecture Ap-*

proach for Designing an Integrated Wood Supply Management System” by A. F. Marques, J. G. Borges, P. M. Sousa, M. Fonseca, J. Gonçalves, and J. Oliveira. The section concludes with an excellent work by Cécile Gaumand, Alain Chapdaniel, and Aurélie Duzert, titled “*Strategic Knowledge Management System Framework for Supply Chain at an Intra-Organizational Level*.”

Section 3, **Tools and Technologies**, presents extensive coverage of the various tools and technologies used in the implementation of Supply Chain Management. Section 3 begins where Section 2 left off, though this section describes more concrete tools at place in the modeling, planning, and applications of Supply Chain Management. The first chapter, “*B2B eCommerce*,” by Fahri Karakaya, lays a framework for the types of works that can be found in this section, a perfect resource for practitioners looking for the fundamentals of the types of vertical and horizontal chains currently in practice in Supply Chain Management. Section 3 is full of excellent chapters like this one, including such titles as “*A Three-Level Multiple-Agent Early Warning Mechanism for Preventing Loss of Customers in Fashion Supply Chains*,” “*Inventory Management, a Decision Support Framework to Improve Operational Performance*,” and “*Informatics for Medicine Management Systems in Resource-Limited Settings*,” to name a few. Where Section 3 described specific tools and technologies at the disposal of practitioners, Section 4 describes successes, failures, best practices, and different applications of the tools and frameworks discussed in previous sections.

Section 4, **Utilization and Application**, describes how the broad range of Supply Chain Management efforts has been utilized and offers insight on and important lessons for their applications and impact. Section 4 includes the widest range of topics because it describes case studies, research, methodologies, frameworks, architectures, theory, analysis, and guides for implementation. Topics range from RFID, grocery provision resistance, and logistics, to analytic and eco-friendly CRM. The first chapter in the section is titled “*Governance Structures in the EU Milk Supply Chain*,” which was written by Nico Polman, Noortje Krol, Jack Peerlings, Pierre Dupraz, and Dimitre Nikolov. The breadth of topics covered in the chapter is also reflected in the diversity of its authors, from countries all over the globe, including The Netherlands, Iran, China, Turkey, UK, Spain, India, Finland, Canada, Switzerland, and more. Section 4 concludes with an excellent view of a case study in a new program, “*Adding Value to Logistics Services using ICT*,” by Pietro Evangelista.

Section 5, **Organizational and Social Implications**, includes chapters discussing the organizational and social impact of Supply Chain Management. The section opens with “*E-Procurement System and Adoption for SMEs*” by Serdal Bayram and Özalp Vayvay. Where Section 4 focused on the broad, many applications of Supply Chain Management technology, Section 5 focuses exclusively on how these technologies affect human lives, either through the way they interact with each other, or through how they affect behavioral/workplace situations. Other interesting chapters of note in Section 5 include “*Applying Fuzzy Logic and Fuzzy Methods to Marketing*” by Andreas Meier and Laurent Donzé, and “*Key Issues and Challenges for Managing and Evaluating B2B E-Commerce Projects within the Australian Pharmaceutical Supply Chain*” by Chad Lin and Geoffrey Jalleh. Section 5 concludes with a fascinating study of a new development in Supply Chain Management, in “*Coordination in Supply Chain Management*” by Mohsen Sheikh Sajadieh and Alireza Bolooriarabani.

Section 6, **Managerial Impact**, presents focused coverage of Supply Chain Management as it relates to effective uses of strategic partners, coordination policies, total quality management, content analysis, service contracts, supply chain reengineering, and many more utilities. This section serves as a vital resource for developers who want to utilize the latest research to bolster the capabilities and functionalities of their processes. The section begins with “*Preparing for the Worst*,” a great look into best practices in

preparation and some new trends in the field. The 14 chapters in this section offer unmistakable value to managers looking to implement new strategies that work at larger bureaucratic levels. The section concludes with “*Military Involvement in Humanitarian Supply Chains*” by Elizabeth Barber. Where Section 6 leaves off, section seven picks up with a focus on some of the more content-theoretical material of this compendium.

Section 7, **Critical Issues**, presents coverage of academic and research perspectives on Supply Chain Management tools and applications. The section begins with “*Anti-Counterfeit Technologies for Spurious Drugs in India*” by Babak Sohrabi and Mohammad Reza Sadeghi Moghadam. Other issues covered in detail in Section 7 include semiotic evaluation, transparency and accountability, barriers to greening, interoperability, security, and much more. The section concludes with “*Key Issues in the Implementation of Electronic Customer Relationship Management in the Australian Hospitality and Tourism Sector*” by Chad Lin, a great transitional chapter between Sections 7 and 8 because it examines an important trend going into the future of the field. The last chapter manages to show a theoretical look into future and potential technologies, a topic covered in more detail in Section 8.

Section 8, **Emerging Trends**, highlights areas for future research within the field of Supply Chain Management, opening with “*New Perspectives on Adoption of RFID Technology for Agrifood Traceability*” by Filippo Gandino, Erwing Ricardo Sanchez, Bartolomeo Montrucchio, and Maurizio Rebaudengo. Section 8 contains chapters that look at what might happen in the coming years that can extend the already staggering amount of applications for Supply Chain Management. Other chapters of note include “*Consumer-Brand Relationship*” and “*Potential Impact of RFID-Based Tracing Systems on the Integrity of Pharmaceutical Products*.” The final chapter of the book looks at an emerging field within Supply Chain Management, in the excellent contribution, “*Metaheuristic Algorithms for Supply Chain Management Problems*” by Ata Allah Taleizadeh and Leopoldo Eduardo Cárdenas-Barrón.

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, *Supply Chain Management: Concepts, Methodologies, Tools and Applications*, provides researchers, administrators and all audiences with a complete understanding of the development of applications and concepts in Supply Chain Management. Given the vast number of issues concerning usage, failure, success, policies, strategies, and applications of Supply Chain Management in countries around the world, *Supply Chain Management: Concepts, Methodologies, Tools and Applications* addresses the demand for a resource that encompasses the most pertinent research in technologies being employed to globally bolster the knowledge and applications of Supply Chain Management.