

Premier Reference Source

Decision Management

Concepts, Methodologies, Tools, and Applications



Information Resources Management Association



Volume I

Decision Management

Concepts, Methodologies, Tools, and Applications

The implementation of effective decision making protocols is crucial in any organizational environment in modern society. Emerging advancements in technology and analytics have optimized uses and applications of decision making systems.

Decision Management: Concepts, Methodologies, Tools, and Applications

is a compendium of the latest academic material on the control, support, usage, and strategies for implementing efficient decision making systems across a variety of industries and fields. Featuring comprehensive coverage on numerous perspectives, such as data visualization, pattern analysis, and predictive analytics, this multi-volume book is an essential reference source for researchers, academics, professionals, managers, students, and practitioners interested in the maintenance and optimization of decision management processes.

Topics Covered:

- Asset Management
- Control and Adaptive Systems
- Data Visualization
- Grid Technology
- Managerial Communications
- Pattern Analysis
- Performance Measurement
- Predictive Analytics
- Systems Thinking



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Volume I



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E-mail: cust@igi-global.com
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Preface

The constantly changing landscape of Decision 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 four-volume reference collection that will empower students, researchers, and academicians with a strong understanding of the critical issues within Decision 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 to provide insight into the emerging trends and future opportunities within the discipline.

Decision Management: Concepts, Methodologies, Tools, and Applications is organized into seven 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 Applications;
5. Organizational and Social Implications;
6. Critical Issues and Challenges; and
7. 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 Decision Management. Introducing the book are two chapters, "Architecture Leadership and Systems Thinking" by Raghuraman Krishnamurthy and "Literature Review" by Wu Lu, that provide a great foundation by laying the groundwork for the basic concepts and theories that will be discussed throughout the rest of the book. Section 1 concludes, and leads into the following portion of the book, with a nice segue chapter, "Use Team Building to Make the Most of Your Public-Private Partnerships" by Martin Negron.

Section 2, "Development and Design Methodologies," presents in-depth coverage of the conceptual design and architecture of Decision Management. Opening the section is "Designing Measures for Managing the Effectiveness for Integrated Service Delivery" by Jari Vuori. Through case studies, this section lays excellent groundwork for later sections that will get into present and future applications for Decision Management. The section concludes with an excellent work by Ekaterini Galanou and Marios Katsioloudes, titled "Cultural Integration with Strategic Decision-Making Process in Determining Innovation Performance."

Section 3, “Tools and Technologies,” presents extensive coverage of the various tools and technologies used in the implementation of Decision Management. The first chapter, “The Impact of Balance Score Card Implementation on Supply Chain Firms” by Josiah Edmond and Fawzy Soliman, offers a framework for the types of works that can be found in this section. The section concludes with “Fuzzy Adaptive Controller for Uncertain Multivariable Nonlinear Systems with Both Sector Nonlinearities and Dead-Zones” by Abdesslem Boulkroune. Whereas Section 3 described specific tools and technologies at the disposal of practitioners, Section 4 describes the use and applications of the tools and frameworks discussed in previous sections.

Section 4, “Utilization and Applications,” describes how the broad range of Decision Management efforts has been utilized and offers insight and important lessons on their applications and impact across various industries. The first chapter in the section is titled “Interactive Data Visualization Techniques Applied to Healthcare Decision Making,” written by Zhecheng Zhu, Heng Bee Hoon, and Kiok-Liang Teow. This section includes the widest range of topics because it describes case studies, research, methodologies, frameworks, architectures, theory, analysis, and guides for implementation. The breadth of topics covered in the section is also reflected in the diversity of its authors, from countries all over the globe.

Section 5, “Organizational and Social Implications,” includes chapters discussing the organizational and social impact of Decision Management. The section opens with “Strategic Information Systems and Business Outcomes” by Alberto Bento, Regina Bento, Lourdes White, and Ana Bento. This section 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.

Section 6, “Critical Issues and Challenges,” presents coverage of academic and research perspectives on Decision Management tools and applications. The section begins with a case study, “How to Measure Performance in Cooperatives?” by Davide Giacomini, Elisa Chiaf, and Mario Benito Mazzoleni. Chapters in this section discuss theoretical approaches and offer alternatives to crucial questions on the subject of Decision Management.

Section 7, “Emerging Trends,” highlights areas for future research within the field of Decision Management. It opens with “A New Approach to Supply Chain Performance Measurement” by Amit Kumar Marwah, Girish Thakar, and R. C. Gupta. This section contains chapters that look at what might happen in the coming years that can extend the already staggering number of applications for Decision Management. The final chapter of the book, “A New Framework for Industrial Benchmarking” by Gürdal Ertek, Mete Sevinç, Firdevs, Özlem Köse, and Güvenç Şahin, looks at an emerging field within Decision Management. It offers a comprehensive benchmarking framework using Data Envelopment Analysis (DEA) and information visualization.

Although the primary organization of the contents in this multi-volume work is based on its seven 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. As a comprehensive collection of research on the latest findings related to using technology to providing various services, *Decision Management: Concepts, Methodologies, Tools, and Applications* provides researchers, administrators, and all audiences with a complete understanding of the development of applications and concepts in Decision Management. Given the vast number of issues concerning usage, failure, success, policies, strategies, and applications of Decision Management in countries around the world, *Decision 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 Decision Management.

Section 1

Fundamental Concepts and Theories

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Adeel, Muhammad / <i>International Islamic University, Pakistan</i>	1436
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Chen, Yu-Che / <i>University of Nebraska at Omaha, USA</i>	1710
Chengalur-Smith, InduShobha / <i>University at Albany, USA</i>	1625
Chiaf, Elisa / <i>University of Brescia, Italy</i>	2118
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Gupta, R. C. / <i>SGSITS, India</i>	2222
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Jain, Harsh / <i>Indian Institute of Information Technology, Allahabad, India</i>	1205
Jena, Goutam / <i>Lawrence Technological University, USA</i>	1412
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Keydar, Eyal Jacob / <i>TAMAR Regional Elementary School, Israel</i>	1847
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Kumar, Manish / <i>Indian Institute of Information Technology, Allahabad, India</i>	1205
Lackhove, Christoph / <i>German Aerospace Center (DLR), Germany</i>	1524
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Masys, Anthony J. / <i>University of Leicester, UK</i>	1395
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