

Big Data Driven Supply Chain Management A Framework For Implementing Analytics And Turning Information Into Intelligence Ft Press Analytics

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Emerging Applications in Supply Chains for Sustainable Business Development - Kumar, M. Vijaya 2018-09-07

The application of sustainability practices at the system level begins with the supply chain. In the business realm, incorporating such practices allows organizations to redesign their operations more effectively. *Emerging Applications in Supply Chains for Sustainable Business Development* is a pivotal reference source that provides vital research on the models, strategies, and analyses that are essential for developing and managing a sustainable supply chain. While highlighting topics such as agile manufacturing and the world food crisis, this publication is ideally designed for business managers, academicians, business practitioners, researchers, academicians, and students seeking current research on sustainable supply chain management.

Creating a Data-Driven Organization - Carl Anderson 2015-07-23

"What do you need to become a data-driven

organization? Far more than having big data or a crack team of unicorn data scientists, it requires establishing an effective, deeply-ingrained data culture. This practical book shows you how true data-drivenness involves processes that require genuine buy-in across your company ... Through interviews and examples from data scientists and analytics leaders in a variety of industries ... Anderson explains the analytics value chain you need to adopt when building predictive business models"--Publisher's description.

Big Data Driven Supply Chain Management - Nada R. Sanders 2014-05-07

Master a complete, five-step roadmap for leveraging Big Data and analytics to gain unprecedented competitive advantage from your supply chain. Using Big Data, pioneers such as Amazon, UPS, and Wal-Mart are gaining unprecedented mastery over their supply chains. They are achieving greater visibility into inventory levels, order fulfillment rates, material and product delivery... using predictive data analytics to match supply with demand;

leveraging new planning strengths to optimize their sales channel strategies; optimizing supply chain strategy and competitive priorities; even launching powerful new ventures. Despite these opportunities, many supply chain operations are gaining limited or no value from Big Data. In *Big Data Driven Supply Chain Management*, Nada Sanders presents a systematic five-step framework for using Big Data in supply chains. You'll learn best practices for segmenting and analyzing customers, defining competitive priorities for each segment, aligning functions behind strategy, dissolving organizational boundaries to sense demand and make better decisions, and choose the right metrics to support all of this. Using these techniques, you can overcome the widespread obstacles to making the most of Big Data in your supply chain — and earn big profits from the data you're already generating. For all executives, managers, and analysts interested in using Big Data technologies to improve supply chain performance.

[Software Engineering in IoT, Big Data, Cloud and Mobile Computing](#) - Haengkon Kim 2021

This edited book presents scientific results of the International Semi-Virtual Workshop on Software Engineering in IoT, Big data, Cloud and Mobile Computing (SE-ICBM 2020) which was held on October 15, 2020, at Soongsil University, Seoul, Korea. The aim of this workshop was to bring together researchers and scientists, businessmen and entrepreneurs, teachers, engineers, computer users, and students to discuss the numerous fields of computer science and to share their experiences and exchange new ideas and information in a meaningful way. Research results about all aspects (theory, applications and tools) of computer and information science, and to discuss the practical challenges encountered along the way and the solutions adopted to solve them. The workshop organizers selected the best papers from those papers accepted for presentation at the workshop. The papers were chosen based on review scores submitted by members of the program committee and underwent further rigorous rounds of review. From this second round of review, 17 of the conference's most promising papers are then published in this Springer (SCI) book and not the

conference proceedings. We impatiently await the important contributions that we know these authors will bring to the field of computer and information science.

[Big Data Analytics in Supply Chain Management](#) - Iman Rahimi 2020-12-20

In a world of soaring digitization, social media, financial transactions, and production and logistics processes constantly produce massive data. Employing analytical tools to extract insights and foresights from data improves the quality, speed, and reliability of solutions to highly intertwined issues faced in supply chain operations. From procurement in Industry 4.0 to sustainable consumption behavior to curriculum development for data scientists, this book offers a wide array of techniques and theories of Big Data Analytics applied to Supply Chain Management. It offers a comprehensive overview and forms a new synthesis by bringing together seemingly divergent fields of research. Intended for Engineering and Business students, scholars, and professionals, this book is a collection of state-of-the-art research and best practices to spur discussion about and extend the cumulant knowledge of emerging supply chain problems.

Proceedings of the 6th International Conference on Decision Support System Technology - ICDSST 2020 on Cognitive Decision Support Systems & Technologies - Isabelle Linden 2021-05-27

Artificial Intelligence Applications and Innovations - Ilias Maglogiannis 2021-06-22

This book constitutes the refereed proceedings of the 17th IFIP WG 12.5 International Conference on Artificial Intelligence Applications and Innovations, AIAI 2021, held virtually and in Hersonissos, Crete, Greece, in June 2021. The 50 full papers and 11 short papers presented were carefully reviewed and selected from 113 submissions. They cover a broad range of topics related to technical, legal, and ethical aspects of artificial intelligence systems and their applications and are organized in the following sections: adaptive modeling/ neuroscience; AI in biomedical applications; AI impacts/ big data; automated machine learning; autonomous agents; clustering; convolutional NN; data mining/ word counts; deep learning;

fuzzy modeling; hyperdimensional computing; Internet of Things/ Internet of energy; machine learning; multi-agent systems; natural language; recommendation systems; sentiment analysis; and smart blockchain applications/ cybersecurity. Chapter “Improving the Flexibility of Production Scheduling in Flat Steel Production Through Standard and AI-based Approaches: Challenges and Perspective” is available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.

Applied Data Science - Martin Braschler
2019-06-13

This book has two main goals: to define data science through the work of data scientists and their results, namely data products, while simultaneously providing the reader with relevant lessons learned from applied data science projects at the intersection of academia and industry. As such, it is not a replacement for a classical textbook (i.e., it does not elaborate on fundamentals of methods and principles described elsewhere), but systematically highlights the connection between theory, on the one hand, and its application in specific use cases, on the other. With these goals in mind, the book is divided into three parts: Part I pays tribute to the interdisciplinary nature of data science and provides a common understanding of data science terminology for readers with different backgrounds. These six chapters are geared towards drawing a consistent picture of data science and were predominantly written by the editors themselves. Part II then broadens the spectrum by presenting views and insights from diverse authors – some from academia and some from industry, ranging from financial to health and from manufacturing to e-commerce. Each of these chapters describes a fundamental principle, method or tool in data science by analyzing specific use cases and drawing concrete conclusions from them. The case studies presented, and the methods and tools applied, represent the nuts and bolts of data science. Finally, Part III was again written from the perspective of the editors and summarizes the lessons learned that have been distilled from the case studies in Part II. The section can be viewed as a meta-study on data science across a broad range of domains, viewpoints and fields.

Moreover, it provides answers to the question of what the mission-critical factors for success in different data science undertakings are. The book targets professionals as well as students of data science: first, practicing data scientists in industry and academia who want to broaden their scope and expand their knowledge by drawing on the authors’ combined experience. Second, decision makers in businesses who face the challenge of creating or implementing a data-driven strategy and who want to learn from success stories spanning a range of industries. Third, students of data science who want to understand both the theoretical and practical aspects of data science, vetted by real-world case studies at the intersection of academia and industry.

Big Data at Work - Thomas Davenport
2014-02-04

Go ahead, be skeptical about big data. The author was—at first. When the term “big data” first came on the scene, bestselling author Tom Davenport (Competing on Analytics, Analytics at Work) thought it was just another example of technology hype. But his research in the years that followed changed his mind. Now, in clear, conversational language, Davenport explains what big data means—and why everyone in business needs to know about it. Big Data at Work covers all the bases: what big data means from a technical, consumer, and management perspective; what its opportunities and costs are; where it can have real business impact; and which aspects of this hot topic have been oversold. This book will help you understand:

- Why big data is important to you and your organization
- What technology you need to manage it
- How big data could change your job, your company, and your industry
- How to hire, rent, or develop the kinds of people who make big data work
- The key success factors in implementing any big data project
- How big data is leading to a new approach to managing analytics

With dozens of company examples, including UPS, GE, Amazon, United Healthcare, Citigroup, and many others, this book will help you seize all opportunities—from improving decisions, products, and services to strengthening customer relationships. It will show you how to put big data to work in your own organization so that you too can harness the

power of this ever-evolving new resource.

The Big Data-Driven Digital Economy: Artificial and Computational Intelligence - Abdalmuttaleb

M. A. Musleh Al-Sartawi 2021-05-28

This book shows digital economy has become one of the most sought out solutions to sustainable development and economic growth of nations. This book discusses the implications of both artificial intelligence and computational intelligence in the digital economy providing a holistic view on AI education, economics, finance, sustainability, ethics, governance, cybersecurity, blockchain, and knowledge management. Unlike other books, this book brings together two important areas, intelligence systems and big data in the digital economy, with special attention given to the opportunities, challenges, for education, business growth, and economic progression of nations. The chapters hereby focus on how societies can take advantage and manage data, as well as the limitations they face due to the complexity of resources in the form of digital data and the intelligence which will support economists, financial managers, engineers, ICT specialists, digital managers, data managers, policymakers, regulators, researchers, academics, students, economic development strategies, and the efforts made by the UN towards achieving their sustainability goals.

Data Science for Business - Foster Provost
2013-07-27

Written by renowned data science experts Foster Provost and Tom Fawcett, *Data Science for Business* introduces the fundamental principles of data science, and walks you through the "data-analytic thinking" necessary for extracting useful knowledge and business value from the data you collect. This guide also helps you understand the many data-mining techniques in use today. Based on an MBA course Provost has taught at New York University over the past ten years, *Data Science for Business* provides examples of real-world business problems to illustrate these principles. You'll not only learn how to improve communication between business stakeholders and data scientists, but also how participate intelligently in your company's data science projects. You'll also discover how to think data-analytically, and fully appreciate how data

science methods can support business decision-making. Understand how data science fits in your organization—and how you can use it for competitive advantage Treat data as a business asset that requires careful investment if you're to gain real value Approach business problems data-analytically, using the data-mining process to gather good data in the most appropriate way Learn general concepts for actually extracting knowledge from data Apply data science principles when interviewing data science job candidates

Logistics 4.0 - Turan Paksoy 2020-12-18

Industrial revolutions have impacted both, manufacturing and service. From the steam engine to digital automated production, the industrial revolutions have conducted significant changes in operations and supply chain management (SCM) processes. Swift changes in manufacturing and service systems have led to phenomenal improvements in productivity. The fast-paced environment brings new challenges and opportunities for the companies that are associated with the adaptation to the new concepts such as Internet of Things (IoT) and Cyber Physical Systems, artificial intelligence (AI), robotics, cyber security, data analytics, block chain and cloud technology. These emerging technologies facilitated and expedited the birth of Logistics 4.0. Industrial Revolution 4.0 initiatives in SCM has attracted stakeholders' attentions due to it is ability to empower using a set of technologies together that helps to execute more efficient production and distribution systems. This initiative has been called Logistics 4.0 of the fourth Industrial Revolution in SCM due to its high potential. Connecting entities, machines, physical items and enterprise resources to each other by using sensors, devices and the internet along the supply chains are the main attributes of Logistics 4.0. IoT enables customers to make more suitable and valuable decisions due to the data-driven structure of the Industry 4.0 paradigm. Besides that, the system's ability of gathering and analyzing information about the environment at any given time and adapting itself to the rapid changes add significant value to the SCM processes. In this peer-reviewed book, experts from all over the world, in the field present a conceptual framework for Logistics 4.0

and provide examples for usage of Industry 4.0 tools in SCM. This book is a work that will be beneficial for both practitioners and students and academicians, as it covers the theoretical framework, on the one hand, and includes examples of practice and real world.

Large-Scale Data Streaming, Processing, and Blockchain Security - Saini, Hemraj

2020-08-14

Data has cemented itself as a building block of daily life. However, surrounding oneself with great quantities of information heightens risks to one's personal privacy. Additionally, the presence of massive amounts of information prompts researchers into how best to handle and disseminate it. Research is necessary to understand how to cope with the current technological requirements. Large-Scale Data Streaming, Processing, and Blockchain Security is a collection of innovative research that explores the latest methodologies, modeling, and simulations for coping with the generation and management of large-scale data in both scientific and individual applications. Featuring coverage on a wide range of topics including security models, internet of things, and collaborative filtering, this book is ideally designed for entrepreneurs, security analysts, IT consultants, security professionals, programmers, computer technicians, data scientists, technology developers, engineers, researchers, academicians, and students.

Proceedings of the Seventh International Forum on Decision Sciences - Xiang Li

2020-09-17

These proceedings focus on selected aspects of the current and upcoming trends in transportation, logistics, supply chain management, and decision sciences. In detail the included scientific papers analyze the problem of Decision Making under Uncertainty, Stochastic Optimization, Transportation, Logistics and Intelligent Business. The variety of the papers delivers added value for both scholars and practitioners. This book is the documentation of the symposium "The Seventh International Forum on Decision Sciences", which took place in Windsor, Canada.

New Horizons for a Data-Driven Economy -

José María Cavanillas 2016-04-04

In this book readers will find technological

discussions on the existing and emerging technologies across the different stages of the big data value chain. They will learn about legal aspects of big data, the social impact, and about education needs and requirements. And they will discover the business perspective and how big data technology can be exploited to deliver value within different sectors of the economy. The book is structured in four parts: Part I "The Big Data Opportunity" explores the value potential of big data with a particular focus on the European context. It also describes the legal, business and social dimensions that need to be addressed, and briefly introduces the European Commission's BIG project. Part II "The Big Data Value Chain" details the complete big data lifecycle from a technical point of view, ranging from data acquisition, analysis, curation and storage, to data usage and exploitation. Next, Part III "Usage and Exploitation of Big Data" illustrates the value creation possibilities of big data applications in various sectors, including industry, healthcare, finance, energy, media and public services. Finally, Part IV "A Roadmap for Big Data Research" identifies and prioritizes the cross-sectorial requirements for big data research, and outlines the most urgent and challenging technological, economic, political and societal issues for big data in Europe. This compendium summarizes more than two years of work performed by a leading group of major European research centers and industries in the context of the BIG project. It brings together research findings, forecasts and estimates related to this challenging technological context that is becoming the major axis of the new digitally transformed business environment.

The Elements of Big Data Value - Edward Curry 2021-08-01

This open access book presents the foundations of the Big Data research and innovation ecosystem and the associated enablers that facilitate delivering value from data for business and society. It provides insights into the key elements for research and innovation, technical architectures, business models, skills, and best practices to support the creation of data-driven solutions and organizations. The book is a compilation of selected high-quality chapters covering best practices, technologies, experiences, and practical recommendations on

research and innovation for big data. The contributions are grouped into four parts: · Part I: Ecosystem Elements of Big Data Value focuses on establishing the big data value ecosystem using a holistic approach to make it attractive and valuable to all stakeholders. · Part II: Research and Innovation Elements of Big Data Value details the key technical and capability challenges to be addressed for delivering big data value. · Part III: Business, Policy, and Societal Elements of Big Data Value investigates the need to make more efficient use of big data and understanding that data is an asset that has significant potential for the economy and society. · Part IV: Emerging Elements of Big Data Value explores the critical elements to maximizing the future potential of big data value. Overall, readers are provided with insights which can support them in creating data-driven solutions, organizations, and productive data ecosystems. The material represents the results of a collective effort undertaken by the European data community as part of the Big Data Value Public-Private Partnership (PPP) between the European Commission and the Big Data Value Association (BDVA) to boost data-driven digital transformation.

Global Supply Chain Management: Leveraging Processes, Measurements, and Tools for Strategic Corporate Advantage - G. Tomas M. Hult 2013-11-08

LEVERAGE YOUR SUPPLY CHAIN FOR MAXIMUM PROFIT Do you have a global supply chain strategy designed for the long run? About 90 percent of global demand is not fully met by local supply, and global supply chains will soon account for 25 percent of multinational firms' performance--meanwhile, supply chains need to become 43 percent more global in the next decade just to maintain a firm's competitive edge. Written by three of today's leading experts on the subject--each from Michigan State University, the uncontested world leader of supply chain management--Global Supply Chain Management gives you the know-how and tools to dramatically boost supply chain efficiency by making it a core element of your overall corporate strategy. Global Supply Chain Management takes you step by step through the process of creating and managing a global

supply chain strategy and aligning it with the conditions of your industry. Learn everything you need to know about developing a core strategy plus strategies for each of the critical supply chain functions: LOGISTICS--Integrate logistics strategy and tactical activities PURCHASING--Manage the transition to purchasing globally OPERATIONS--Systematically design, direct, and control processes MARKET CHANNELS--Effectively connect your supply chain to customers With in-depth case studies and data showing how American Express, AB InBev, Dell, FedEx, Daimler, Microsoft, Nestlé, Nokia, and several other prominent companies have applied global supply chain strategy to increase profits and growth, Global Supply Chain Management helps you take action to drive similar success in your company. If you're serious about competing today--and in the future--you must integrate and leverage strategic supply chain management into your overall corporate strategy. Global Supply Chain Management provides everything you need to build a strategy designed for the long run. PRAISE FOR GLOBAL SUPPLY CHAIN MANAGEMENT "This book does a superb job of using a total value perspective and integrating business functions into a strategic framework for global supply chain management that can be leveraged for success." -- Leif Johansson, Chairman of the Board of Directors of AstraZeneca, Ericsson, European Round Table of Industrialists, and the International Advisory Board of the Nobel Foundation "Written by a superb team of world-leading authors on global supply chain management, this book provides a great framework for companies to leverage global supply chain functions and processes, measurements, and tools to achieve sustained strategic advantage in the global marketplace." - - Michael Lawton, Chief Financial Officer (CFO) and Executive Vice President of Finance of Domino's Pizza, Inc. "In our company, we have come to recognize the strategic importance of building and maintaining a global supply chain. This book does an excellent job of identifying a framework for considering the implications of an integrated model for global supply chain management. It's clear that the authors have tremendous experience, and they have shared their insights in an innovative and integrative

way." -- John Shull, Vice President and Global Procurement Officer of Steelcase Inc. "Global supply chains are critically important to companies in delivering products and services that satisfy customers. Hult, Closs, and Frayer provide an excellent model for how to drive the strategic and operational dimensions of global supply chain management to maximize end-customer value." -- Claes Fornell, Chairman of the Board of Directors of CFI Group Worldwide and ForeSee, and founder of the American Customer Satisfaction Index (ACSI)

Advances in Production Management Systems. Artificial Intelligence for Sustainable and Resilient Production Systems - Alexandre Dolgui 2021-09-01

The five-volume set IFIP AICT 630, 631, 632, 633, and 634 constitutes the refereed proceedings of the International IFIP WG 5.7 Conference on Advances in Production Management Systems, APMS 2021, held in Nantes, France, in September 2021.* The 378 papers presented were carefully reviewed and selected from 529 submissions. They discuss artificial intelligence techniques, decision aid and new and renewed paradigms for sustainable and resilient production systems at four-wall factory and value chain levels. The papers are organized in the following topical sections: Part I: artificial intelligence based optimization techniques for demand-driven manufacturing; hybrid approaches for production planning and scheduling; intelligent systems for manufacturing planning and control in the industry 4.0; learning and robust decision support systems for agile manufacturing environments; low-code and model-driven engineering for production system; meta-heuristics and optimization techniques for energy-oriented manufacturing systems; metaheuristics for production systems; modern analytics and new AI-based smart techniques for replenishment and production planning under uncertainty; system identification for manufacturing control applications; and the future of lean thinking and practice Part II: digital transformation of SME manufacturers: the crucial role of standard; digital transformations towards supply chain resiliency; engineering of smart-product-service-systems of the future; lean and Six Sigma in services

healthcare; new trends and challenges in reconfigurable, flexible or agile production system; production management in food supply chains; and sustainability in production planning and lot-sizing Part III: autonomous robots in delivery logistics; digital transformation approaches in production management; finance-driven supply chain; gastronomic service system design; modern scheduling and applications in industry 4.0; recent advances in sustainable manufacturing; regular session: green production and circularity concepts; regular session: improvement models and methods for green and innovative systems; regular session: supply chain and routing management; regular session: robotics and human aspects; regular session: classification and data management methods; smart supply chain and production in society 5.0 era; and supply chain risk management under coronavirus Part IV: AI for resilience in global supply chain networks in the context of pandemic disruptions; blockchain in the operations and supply chain management; data-based services as key enablers for smart products, manufacturing and assembly; data-driven methods for supply chain optimization; digital twins based on systems engineering and semantic modeling; digital twins in companies first developments and future challenges; human-centered artificial intelligence in smart manufacturing for the operator 4.0; operations management in engineer-to-order manufacturing; product and asset life cycle management for smart and sustainable manufacturing systems; robotics technologies for control, smart manufacturing and logistics; serious games analytics: improving games and learning support; smart and sustainable production and supply chains; smart methods and techniques for sustainable supply chain management; the new digital lean manufacturing paradigm; and the role of emerging technologies in disaster relief operations: lessons from COVID-19 Part V: data-driven platforms and applications in production and logistics: digital twins and AI for sustainability; regular session: new approaches for routing problem solving; regular session: improvement of design and operation of manufacturing systems; regular session: crossdock and transportation issues; regular

session: maintenance improvement and lifecycle management; regular session: additive manufacturing and mass customization; regular session: frameworks and conceptual modelling for systems and services efficiency; regular session: optimization of production and transportation systems; regular session: optimization of supply chain agility and reconfigurability; regular session: advanced modelling approaches; regular session: simulation and optimization of systems performances; regular session: AI-based approaches for quality and performance improvement of production systems; and regular session: risk and performance management of supply chains *The conference was held online.

Big Data Analytics Using Multiple Criteria Decision-Making Models - Ramakrishnan Ramanathan 2017-07-12

Multiple Criteria Decision Making (MCDM) is a subfield of Operations Research, dealing with decision making problems. A decision-making problem is characterized by the need to choose one or a few among a number of alternatives. The field of MCDM assumes special importance in this era of Big Data and Business Analytics. In this volume, the focus will be on modelling-based tools for Business Analytics (BA), with exclusive focus on the sub-field of MCDM within the domain of operations research. The book will include an Introduction to Big Data and Business Analytics, and challenges and opportunities for developing MCDM models in the era of Big Data.

Disrupting Logistics - Christian Wurst 2021-03-02

This book presents trends, developments, and examples of how digital disruption is currently reshaping the logistics industry. Logistics is the invisible force behind the global economy, influencing and providing a lens into all economic activities. Chapters written by respected experts in the field describe how new technologies such as autonomous vehicles, blockchain, Internet of things (IoT), and state-of-the-art freight management solutions are fundamentally changing supply chain solutions. Special emphasis is placed on promising start-ups and venture capital firms around the world that are now investing in the future of logistics. *Design, User Experience, and Usability: Design Discourse* - Aaron Marcus 2015-07-20

The three-volume set LNCS 9186, 9187, and 9188 constitutes the proceedings of the 4th International Conference on Design, User Experience, and Usability, DUXU 2015, held as part of the 17th International Conference on Human-Computer Interaction, HCII 2015, in Los Angeles, CA, USA, in August 2015, jointly with 13 other thematically similar conferences. The total of 1462 papers and 246 posters presented at the HCII 2015 conferences were carefully reviewed and selected from 4843 submissions. These papers address the latest research and development efforts and highlight the human aspects of design and use of computing systems. The papers accepted for presentation thoroughly cover the entire field of Human-Computer Interaction, addressing major advances in knowledge and effective use of computers in a variety of application areas. The total of 132 contributions included in the DUXU proceedings were carefully reviewed and selected for inclusion in this three-volume set. The 61 papers included in this volume are organized in topical sections on design thinking, user experience design and usability methods and tools, DUXU management and practice, emotional and persuasion design, and storytelling, narrative and fiction in DUXU.

Supply Chain Analytics - Peter W. Robertson 2020-11-25

Supply Chain Analytics introduces the reader to data analytics and demonstrates the value of their effective use in supply chain management. By describing the key supply chain processes through worked examples, and the descriptive, predictive and prescriptive analytic methods that can be applied to bring about improvements to those processes, the book presents a more comprehensive learning experience for the reader than has been offered previously. Key topics are addressed, including optimisation, big data, data mining and cloud computing. The author identifies four core supply chain processes - strategy, design, execution and people - to which the analytic techniques explained can be applied to ensure continuous improvement. Pedagogy to aid learning is incorporated throughout, including an opening section for each chapter explaining the learnings designed for the chapter; worked examples illustrating how each analytic technique works,

how it is applied and what to be careful of; tables, diagrams and equations to help 'visualise' the concepts and methods covered; chapter case studies; and end-of-chapter review questions and assignment tasks. Providing both management expertise and technical skills, which are essential to decision-makers in the supply chain, this textbook should be essential reading for advanced undergraduate and postgraduate students of supply chain analytics, supply chain leadership, and supply chain and operations management. Its practice-based and applied approach also makes it valuable for operating supply chain practitioners and those studying for professional qualifications. Online resources include chapter-by-chapter PowerPoint slides, tutorial exercises, written assignments and a test bank of exam questions.

Collaboration in a Data-Rich World - Luis M. Camarinha-Matos 2017-09-06

This book constitutes the refereed proceedings of the 18th IFIP WG 5.5 Working Conference on Virtual Enterprises, PRO-VE 2017, held in Vicenza, Italy, in September 2017. The 68 revised full papers were carefully reviewed and selected from 159 submissions. They provide a comprehensive overview of identified challenges and recent advances in various collaborative network (CN) domains and their applications, with a strong focus on the following areas: collaborative models, platforms and systems for data-rich worlds; manufacturing ecosystem and collaboration in Industry 4.0; big data analytics and intelligence; risk, performance, and uncertainty in collaborative data-rich systems; semantic data/service discovery, retrieval, and composition in a collaborative data-rich world; trust and sustainability analysis in collaborative networks; value creation and social impact of collaboration in data-rich worlds; technology development platforms supporting collaborative systems; collective intelligence and collaboration in advanced/emerging applications: collaborative manufacturing and factories of the future, e-health and care, food and agribusiness, and crisis/disaster management.

Surviving Supply Chain Integration - National Research Council 2000-03-23

The managed flow of goods and information from raw material to final sale also known as a "supply chain" affects everything--from the U.S.

gross domestic product to where you can buy your jeans. The nature of a company's supply chain has a significant effect on its success or failure--as in the success of Dell Computer's make-to-order system and the failure of General Motor's vertical integration during the 1998 United Auto Workers strike. Supply Chain Integration looks at this crucial component of business at a time when product design, manufacture, and delivery are changing radically and globally. This book explores the benefits of continuously improving the relationship between the firm, its suppliers, and its customers to ensure the highest added value. This book identifies the state-of-the-art developments that contribute to the success of vertical tiers of suppliers and relates these developments to the capabilities that small and medium-sized manufacturers must have to be viable participants in this system. Strategies for attaining these capabilities through manufacturing extension centers and other technical assistance providers at the national, state, and local level are suggested. This book identifies action steps for small and medium-sized manufacturers--the "seed corn" of business start-up and development--to improve supply chain management. The book examines supply chain models from consultant firms, universities, manufacturers, and associations. Topics include the roles of suppliers and other supply chain participants, the rise of outsourcing, the importance of information management, the natural tension between buyer and seller, sources of assistance to small and medium-sized firms, and a host of other issues. Supply Chain Integration will be of interest to industry policymakers, economists, researchers, business leaders, and forward-thinking executives.

Integrating Blockchain Technology Into the Circular Economy - Khan, Syed Abdul Rehman 2022-03-11

In recent decades, the industrial revolution has increased economic growth despite its immersion in global environmental issues such as climate change. Researchers emphasize the adoption of circular economy practices in global supply chains and businesses for better socio-environmental sustainability without compromising economic growth. Integrating blockchain technology into business practices

could promote the circular economy as well as global environmental sustainability. Integrating Blockchain Technology Into the Circular Economy discusses the technological advancements in circular economy practices, which provide better results for both economic growth and environmental sustainability. It provides relevant theoretical frameworks and the latest empirical research findings in the applications of blockchain technology. Covering topics such as big data analytics, financial market infrastructure, and sustainable performance, this book is an essential resource for managers, operations managers, executives, manufacturers, environmentalists, researchers, industry practitioners, students and educators of higher education, and academicians.

Graph Algorithms - Mark Needham 2019-05-16

Discover how graph algorithms can help you leverage the relationships within your data to develop more intelligent solutions and enhance your machine learning models. You'll learn how graph analytics are uniquely suited to unfold complex structures and reveal difficult-to-find patterns lurking in your data. Whether you are trying to build dynamic network models or forecast real-world behavior, this book illustrates how graph algorithms deliver value—from finding vulnerabilities and bottlenecks to detecting communities and improving machine learning predictions. This practical book walks you through hands-on examples of how to use graph algorithms in Apache Spark and Neo4j—two of the most common choices for graph analytics. Also included: sample code and tips for over 20 practical graph algorithms that cover optimal pathfinding, importance through centrality, and community detection. Learn how graph analytics vary from conventional statistical analysis

Understand how classic graph algorithms work, and how they are applied Get guidance on which algorithms to use for different types of questions Explore algorithm examples with working code and sample datasets from Spark and Neo4j See how connected feature extraction can increase machine learning accuracy and precision Walk through creating an ML workflow for link prediction combining Neo4j and Spark
The World Is Flat [Further Updated and Expanded; Release 3.0] - Thomas L. Friedman

2007-08-07

This new edition of Friedman's landmark book explains the flattening of the world better than ever- and takes a new measure of the effects of this change on each of us.

Business Transformations in the Era of Digitalization - Mezghani, Karim 2019-01-22

In order to establish and maintain a successful company in the digital age, managers are digitally transforming their organizations to include such tools as disruptive technologies and digital data to improve performance and efficiencies. As these companies continue to adopt digital technologies to improve their businesses and create new revenues and value-producing opportunities, they must also be aware of the challenges digitalization can present. Business Transformations in the Era of Digitalization is a collection of innovative research on the latest trends, business opportunities, and challenges in the digitalization of businesses. Highlighting a range of topics including business-IT alignment, cloud computing, Internet of Things (IoT), business sustainability, small and medium-sized enterprises, and digital entrepreneurship, this book is ideally designed for managers, professionals, consultants, entrepreneurs, and researchers.

Next Generation Supply Chains - Rosanna Fornasiero 2020-12-31

This open access book explores supply chains strategies to help companies face challenges such as societal emergency, digitalization, climate changes and scarcity of resources. The book identifies industrial scenarios for the next decade based on the analysis of trends at social, economic, environmental technological and political level, and examines how they may impact on supply chain processes and how to design next generation supply chains to answer these challenges. By mapping enabling technologies for supply chain innovation, the book proposes a roadmap for the full implementation of the supply chain strategies based on the integration of production and logistics processes. Case studies from process industry, discrete manufacturing, distribution and logistics, as well as ICT providers are provided, and policy recommendations are put forward to support companies in this

transformative process.

Supply Chain Management - Nada R. Sanders 2017-10-19

Supply chain management, rapidly-advancing and growing ever more important in the global business climate, requires an intense understanding of both underlying principles and practical techniques. Including both a broad overview of supply chain management and real-world examples of SCM in companies ranging from small to large, this book provides students with both the foundational material required to understand the subject matter and practical tips that demonstrate how the latest techniques are being applied. Spanning functional boundaries, this well-regarded book is now in its second edition and has quickly become a standard course text at many universities. This newest edition continues to provide a balanced, integrative, and business-oriented viewpoint of the material, and deeply explores how SCM is intertwined with other organizational functions. New material has been added to address the importance of big data analytics in SCM, as well as other technological advances such as 3-D printing, cloud computing, machine learning, driverless vehicles, the Internet of Things, RFID, and others.

Analytics at Work - Thomas H. Davenport 2010

As a follow-up to the successful *Competing on Analytics*, authors Tom Davenport, Jeanne Harris, and Robert Morison provide practical frameworks and tools for all companies that want to use analytics as a basis for more effective and more profitable decision making. Regardless of your company's strategy, and whether or not analytics are your company's primary source of competitive differentiation, this book is designed to help you assess your organization's analytical capabilities, provide the tools to build these capabilities, and put analytics to work. The book helps you answer these pressing questions: What assets do I need in place in my organization in order to use analytics to run my business? Once I have these assets, how do I deploy them to get the most from an analytic approach? How do I get an analytic initiative off the ground in the first place, and then how do I sustain analytics in my organization over time? Packed with tools, frameworks, and all new examples, *Analytics at*

Work makes analytics understandable and accessible and teaches you how to make your company more analytical.

Supply Chain Management in the Big Data Era - Chan, Hing Kai 2016-11-04

Technological advancements in recent years have led to significant developments within a variety of business applications. In particular, data-driven research provides ample opportunity for enterprise growth, if utilized efficiently. *Supply Chain Management in the Big Data Era* is an authoritative reference source for the latest scholarly material on the implementation of big data analytics for improved operations and supply chain processes. Highlighting emerging strategies from different industry perspectives, this book is ideally designed for managers, professionals, practitioners, and students interested in the most recent research on supply chain innovations.

The Cloud-Based Demand-Driven Supply Chain - Vinit Sharma 2018-11-06

It's time to get your head in the cloud! In today's business environment, more and more people are requesting cloud-based solutions to help solve their business challenges. So how can you not only anticipate your clients' needs but also keep ahead of the curve to ensure their goals stay on track? With the help of this accessible book, you'll get a clear sense of cloud computing and understand how to communicate the benefits, drawbacks, and options to your clients so they can make the best choices for their unique needs. Plus, case studies give you the opportunity to relate real-life examples of how the latest technologies are giving organizations worldwide the opportunity to thrive as supply chain solutions in the cloud. Demonstrates how improvements in forecasting, collaboration, and inventory optimization can lead to cost savings Explores why cloud computing is becoming increasingly important Takes a close look at the types of cloud computing Makes sense of demand-driven forecasting using Amazon's cloud Whether you work in management, business, or IT, this is the dog-eared reference you'll want to keep close by as you continue making sense of the cloud.

Big Data, Analytics, and the Future of Marketing & Sales - McKinsey Chief McKinsey Chief Marketing & Sales Officer Forum

2014-08-16

Big Data is the biggest game-changing opportunity for marketing and sales since the Internet went mainstream almost 20 years ago. The data big bang has unleashed torrents of terabytes about everything from customer behaviors to weather patterns to demographic consumer shifts in emerging markets. This collection of articles, videos, interviews, and slideshares highlights the most important lessons for companies looking to turn data into above-market growth: Using analytics to identify valuable business opportunities from the data to drive decisions and improve marketing return on investment (MROI) Turning those insights into well-designed products and offers that delight customers Delivering those products and offers effectively to the marketplace. The goldmine of data represents a pivot-point moment for marketing and sales leaders. Companies that inject big data and analytics into their operations show productivity rates and profitability that are 5 percent to 6 percent higher than those of their peers. That's an advantage no company can afford to ignore.

Research Anthology on Big Data Analytics, Architectures, and Applications - Information Resources Management Association 2021-09-24 Society is now completely driven by data with many industries relying on data to conduct business or basic functions within the organization. With the efficiencies that big data bring to all institutions, data is continuously being collected and analyzed. However, data sets may be too complex for traditional data-processing, and therefore, different strategies must evolve to solve the issue. The field of big data works as a valuable tool for many different industries. The Research Anthology on Big Data Analytics, Architectures, and Applications is a complete reference source on big data analytics that offers the latest, innovative architectures and frameworks and explores a variety of applications within various industries. Offering an international perspective, the applications discussed within this anthology feature global representation. Covering topics such as advertising curricula, driven supply chain, and smart cities, this research anthology is ideal for data scientists, data analysts, computer engineers, software engineers, technologists,

government officials, managers, CEOs, professors, graduate students, researchers, and academicians.

Big Data Driven Supply Chain Management - Nada Sanders 2018-09-15

Operations and Service Management: Concepts, Methodologies, Tools, and Applications - Management Association, Information Resources 2017-11-30

Organizations of all types are consistently working on new initiatives, product lines, and workflows as a way to remain competitive in the modern business environment. No matter the type of project at hand, employing the best methods for effective execution and timely completion of the task is essential to business success. Operations and Service Management: Concepts, Methodologies, Tools, and Applications is a comprehensive reference source for the latest research on business operations and production processes. It examines the need for a customer focus and highlights a range of pertinent topics such as financial performance measures, human resource development, and business analytics, this multi-volume book is ideally designed for managers, professionals, students, researchers, and academics interested in operations and service management.

Digital Supply Networks: Transform Your Supply Chain and Gain Competitive Advantage with Disruptive Technology and Reimagined Processes - Amit Sinha 2020-07-21

Deliver unprecedented customer value and seize your competitive edge with a transformative digital supply network Digital tech has disrupted life and business as we know it, and supply chain management is no exception. But how exactly does digital transformation affect your business? What are the breakthrough technologies and their capabilities you need to know about? How will digital transformation impact skills requirements and work in general? Do you need to completely revamp your understanding of supply chain management? And most importantly: How do you get started? Digital Supply Networks provides clear answers to these and many other questions. Written by an experienced team comprised of Deloitte consultants and leading problem-driven scholars

from a premier research university, this expert guide leads you through the process of improving operations building supply networks, increasing revenue, reimagining business models, and providing added value to customers, stakeholders, and society. You'll learn everything you need to know about: Stages of development, roles, capabilities, and the benefits of DSN Big data analytics including its attributes, security, and authority Machine learning, Artificial Intelligence, Blockchain, robotics, and the Internet of Things Synchronized planning, intelligent supply, and digital product development Vision, attributes, technology, and benefits of smart manufacturing, dynamic logistics, and fulfillment A playbook to guide the digital transformation journey Drawing from real world-experience and problem-driven academic research, the authors provide an in-depth account of the transformation to digitally connected supply networks. They discuss the limitations of traditional supply chains and the underlying capabilities and potential of digitally-enabled supply flows. The chapters burst with expert insights and real-life use cases grounded in tomorrow's industry needs. Success in today's hyper-competitive, fast-paced business landscape, characterized by the risk of black swan events, such as the 2020 COVID-19 global pandemic, requires the reimagination and the digitalization of complex demand-supply systems, more collaborative and connected processes, and smarter, more dynamic data-driven decision making—which can only be achieved through a fully integrated Digital Supply Network.

Data Science for Supply Chain Forecasting - Nicolas Vandepuut 2021-03-22

Using data science in order to solve a problem requires a scientific mindset more than coding skills. *Data Science for Supply Chain Forecasting*, Second Edition contends that a true scientific method which includes experimentation, observation, and constant questioning must be applied to supply chains to achieve excellence in demand forecasting. This second edition adds more than 45 percent extra

content with four new chapters including an introduction to neural networks and the forecast value added framework. Part I focuses on statistical "traditional" models, Part II, on machine learning, and the all-new Part III discusses demand forecasting process management. The various chapters focus on both forecast models and new concepts such as metrics, underfitting, overfitting, outliers, feature optimization, and external demand drivers. The book is replete with do-it-yourself sections with implementations provided in Python (and Excel for the statistical models) to show the readers how to apply these models themselves. This hands-on book, covering the entire range of forecasting—from the basics all the way to leading-edge models—will benefit supply chain practitioners, forecasters, and analysts looking to go the extra mile with demand forecasting.

Operations Management and Data Analytics Modelling - Lalit Kumar Awasthi 2021-12-30
Operations Management and Data Analytics Modelling: Economic Crises Perspective addresses real operation management problems in thrust areas like the healthcare and energy management sectors and Industry 4.0. It discusses recent advances and trends in developing data-driven operation management-based methodologies, big data analysis, application of computers in industrial engineering, optimization techniques, development of decision support systems for industrial operation, the role of a multiple-criteria decision-making (MCDM) approach in operation management, fuzzy set theory-based operation management modelling and Lean Six Sigma. Features Discusses the importance of data analytics in industrial operations to improve economy Provides step-by-step implementation of operation management models to identify best practices Covers in-depth analysis using data-based operation management tools and techniques Discusses mathematical modelling for novel operation management models to solve industrial problems This book is aimed at graduate students and professionals in the field of industrial and production engineering, mechanical engineering and materials science.