Managing The Design Factory

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The Machine That Changed the World - James P. Womack 2007-03-13
The classic, nationally bestselling book that first articulated the principles of lean production, with a new foreword and afterword by the authors. When The Machine That Changed the World was first published in 1990, Toyota was half the size of General Motors. Twenty years later Toyota passed GM as the world's largest auto maker. This management classic was the first book to reveal Toyota's lean production system that is the basis for its enduring success. Authors Womack, Jones, and Roos provided a comprehensive description of the entire lean system. They exhaustively documented its advantages over the mass production model pioneered by General Motors and predicted that lean production would eventually triumph. Indeed, they argued that it would triumph not just in manufacturing but in every value-creating activity from health care to retail to distribution. Today The Machine That Changed the World provides enduring and essential guidance to managers and leaders in every industry seeking to transform traditional enterprises into exemplars of lean success.
The Competitive Edge - National Research Council 1991-02-01
To maintain competitiveness in the emerging global economy, U.S. manufacturing must rise to new standards of product quality, responsiveness to customers, and process flexibility. This volume presents a concise and well-organized analysis of new research directions to achieve these goals. Five critical areas receive in-depth analysis of present practices, needed improvement, and research priorities: Advanced engineered materials that offer the prospect of better life-cycle performance and other gains. Equipment reliability and maintenance practices for better returns on capital investment. Rapid product realization techniques to speed delivery to the marketplace. Intelligent manufacturing control for improved reliability and greater precision. Building a workforce with the multidisciplinary skills needed for competitiveness. This sound and accessible analysis will be useful to manufacturing engineers and researchers, business executives, and economic and policy analysts.
Developing Products in Half the Time - Preston G. Smith 1998
Advance praise for Developing Products in Half the Time Second Edition New Rules, New Tools Preston G. Smith * Donald G. Reinertsen "This is an exceptional book! Get a new highlighter before you start. There are so many 'ah ha's' in each chapter you will never make it through with an old one." Don LaCombe, Ford Motor Company, Product Development Process Leadership "An excellent book with a strong treatment of the cycle-time consequences of overloading your development capacity. It provides powerful and practical concepts for dealing with this issue." Andrew Aquart, Director Product Development, Cordis, a Johnson & Johnson Company "This is practical, useful stuff for people competing in

highly competitive fast moving business." Dr. Paul Borrill, Chief Scientist, Sun Microsystems "3M has absorbed many of the tools from the original edition, and this new one will be even more useful. The topic of incremental innovation is crucial to us, and I really appreciate its balanced treatment." Ronald H. Kubinski, Manager New Product Commercialization Services, 3M Company "As the authors correctly point out, the Fuzzy Front End is the least expensive place to reduce cycle time. This book is one of the only sources of concepts, methods, and metrics for compressing this critical portion of the development process." David M. Lewis, Product Manager, Eastman Kodak Co. "Using these tools we've more than cut our time to market in half. The new edition of this classic crystallizes the synergy of the fast-to-market techniques, and the icons in the margins highlight the opportunities and pitfalls." Mike Brennan , Vice President of Product Development, Black & Decker

Advances in Production Management Systems. Smart Manufacturing for Industry 4.0 - Ilkyeong Moon 2018-08-24

The two-volume set IFIP AICT 535 and 536 constitutes the refereed proceedings of the International IFIP WG 5.7 Conference on Advances in Production Management Systems, APMS 2018, held in Seoul, South Korea, in August 2018. The 129 revised full papers presented were carefully reviewed and selected from 149 submissions. They are organized in the following topical sections: lean and green manufacturing; operations management in engineer-to-order manufacturing; product-service systems, customer-driven innovation and value co-creation; collaborative networks; smart production for mass customization; global supply chain management; knowledge based production planning and control; knowledge based engineering; intelligent diagnostics and maintenance solutions for smart manufacturing; service engineering based on smart manufacturing capabilities; smart city interoperability and cross-platform implementation; manufacturing performance management in smart factories; industry 4.0 - digital twin; industry 4.0 - smart factory; and industry 4.0 - collaborative cyber-physical production and human systems.

The Principles of Product Development Flow - Donald G. Reinertsen 2009

This is the first book that comprehensively describes the underlying principles that create flow in product development processes. It covers 175 principles organized into eight major areas. It is of interest to managers and technical professionals responsible for product development processes.

The Goal - Eliyahu M. Goldratt 2016-08-12

Alex Rogo is a harried plant manager working ever more desperately to try and improve performance. His factory is rapidly heading for disaster. So is his marriage. He has ninety days to save his plant - or it will be closed by corporate HQ, with hundreds of job losses. It takes a chance meeting with a colleague from student days - Jonah - to help him break out of conventional ways of thinking to see what needs to be done. Described by Fortune as a 'guru to industry' and by Businessweek as a 'genius', Eliyahu M. Goldratt was an internationally recognized leader in the development of new business management concepts and systems. This 20th anniversary edition includes a series of detailed case study interviews by David Whitford, Editor at Large, Fortune Small Business, which explore how organizations around the world have been transformed by Eli Goldratt's ideas. The story of Alex's fight to save his plant contains a serious message for all managers in industry and explains the ideas which underline the Theory of Constraints (TOC) developed by Eli Goldratt. Written in a fast-paced thriller style, The Goal is the gripping novel which is transforming management thinking throughout the Western world. It is a book to recommend to your friends in industry - even to your bosses - but not to your competitors!

The New Management of Engineering - Patrick O'Connor 2005

The first book that explains why managing engineering is more difficult, more demanding and more important than managing any other human activity in modern society. It explains how, by adhering to the principles taught by Peter F. Drucker in his landmark book "The Practice of Management," managers can exploit the full potentials of their peoples' talents and of changing technologies, methods and markets. It brings together the whole range of methods used by the world's best

performing engineering companies, including research, design, development, testing, production and maintenance. The philosophy and methods for achieving excellence in quality and reliability are fully described. The book offers fresh insights into a wide range of current engineering management issues, including education, MBA training, quality and safety standards and the roles of institutions, cultures and governments in engineering.

Engineering Decision Making and Risk Management - Jeffrey W. Herrmann 2015-03-13

IIE/Joint Publishers Book of the Year Award 2016! Awarded for ‘an outstanding published book that focuses on a facet of industrial engineering, improves education, or furthers the profession’. Engineering Decision Making and Risk Management emphasizes practical issues and examples of decision making with applications in engineering design and management Featuring a blend of theoretical and analytical aspects, this book presents multiple perspectives on decision making to better understand and improve risk management processes and decision-making systems. Engineering Decision Making and Risk Management uniquely presents and discusses three perspectives on decision making: problem solving, the decision-making process, and decision-making systems. The author highlights formal techniques for group decision making and game theory and includes numerical examples to compare and contrast different quantitative techniques. The importance of initially selecting the most appropriate decision-making process is emphasized through practical examples and applications that illustrate a variety of useful processes. Presenting an approach for modeling and improving decision-making systems, Engineering Decision Making and Risk Management also features: Theoretically sound and practical tools for decision making under uncertainty, multi-criteria decision making, group decision making, the value of information, and risk management Practical examples from both historical and current events that illustrate both good and bad decision making and risk management processes End-of-chapter exercises for readers to apply specific learning objectives and practice relevant skills A supplementary website with instructional support material, including worked solutions to the exercises, lesson plans, in-class activities, slides, and spreadsheets An excellent textbook for upper-undergraduate and graduate students, Engineering Decision Making and Risk Management is appropriate for courses on decision analysis, decision making, and risk management within the fields of engineering design, operations research, business and management science, and industrial and systems engineering. The book is also an ideal reference for academics and practitioners in business and management science, operations research, engineering design, systems engineering, applied mathematics, and statistics.

Managing Factory Maintenance - Joel Levitt 2004

Tap into Joel Levitt's vast array of experience and learn how to improve almost any aspect of your maintenance organization (including your own abilities)! This new edition of a classic first educates readers about the globalization of production and the changing of the guard of maintenance leadership, and then gives them real usable ideas to aid in these areas. Completely reorganized so that material is presented within the context of major sections, the second edition tells the story of maintenance management in factory settings. It provides coverage of potential problems and new opportunities, what bosses really want, specifics for improvement of maintenance and production, World Class Maintenance Management revisited and revised, quality improvement, complete coverage of current maintenance practices, processes, process aids, interfaces and strategies, as well as personal and personnel development strategies. Contains a specialized glossary so users can more easily understand the specialized language of factory maintenance. Provides specific "how-to" tips and concrete techniques and examples for continuous improvement. Updates the 20 steps to world class maintenance to include the 6 areas of focus for world class maintenance. Includes a completely updated maintenance evaluation questionnaire that reflects new techniques and technologies. Breaks down and explains the three-team approach to maintenance work. Offers new sections on: managing shutdowns, craft training, and communications. Contains

major revisions to the RCM discussion and includes a new discussion about PMO.

Visual Controls - Chris A. Ortiz 2018-06-28

An effective visual communication system can help manufacturing employees eliminate significant waste from daily tasks. From work-zone color coding to posted metrics, visual controls clarify and simplify the path to enhanced processes and profits. Leaving little to chance, Visual Controls: Applying Visual Management to the Factory provides a detail

Managing Innovation - John C. Huber 2001

This book is filled with practical advice for inventors and managers. It charts the course from ideas and needs through selecting the best projects and turning them into successes. Also, the exclusive Inventor Profile is a powerful tool for identifying people with the most inventive potential. It comes from the most productive inventors in the U.S.. There are 45 figures and tables, all backed up with new methods of research and analysis. Yet the style is direct and highly readable.

The Idea Factory - Jon Gertner 2013-02-26

The definitive history of America’s greatest incubator of innovation and the birthplace of some of the 20th century’s most influential technologies “Filled with colorful characters and inspiring lessons . . . The Idea Factory explores one of the most critical issues of our time: What causes innovation?” —Walter Isaacson, The New York Times Book Review “Compelling . . . Gertner's book offers fascinating evidence for those seeking to understand how a society should best invest its research resources.” —The Wall Street Journal From its beginnings in the 1920s until its demise in the 1980s, Bell Labs-officially, the research and development wing of AT&T-was the biggest, and arguably the best, laboratory for new ideas in the world. From the transistor to the laser, from digital communications to cellular telephony, it's hard to find an aspect of modern life that hasn't been touched by Bell Labs. In The Idea Factory, Jon Gertner traces the origins of some of the twentieth century's most important inventions and delivers a riveting and heretofore untold chapter of American history. At its heart this is a story about the life and work of a small group of brilliant and eccentric men-Mervin Kelly, Bill Shockley, Claude Shannon, John Pierce, and Bill Baker-who spent their careers at Bell Labs. Today, when the drive to invent has become a mantra, Bell Labs offers us a way to enrich our understanding of the challenges and solutions to technological innovation. Here, after all, was where the foundational ideas on the management of innovation were born.

Managing to Learn - John Shook 2008

"The process by which a company identifies, frames, acts and reviews progress on problems, projects and proposals can be found in the structure of the A3 process ... follow the story of a manager ... and his report ... which will reveal how the A3 can be used as a management process to create a standard method for innovating, planning, problem-solving, and building structures for a broader and deeper form of thinking - a practical and repeatable approach to organizational learning"--Publisher's description.

Managing the Design Factory - Donald Reinertsen 1997-10

From the bestselling author of Developing Products in Half the Time, this book presents a comprehensive approach to managing design-in-process inventory.

A Factory of One - Daniel Markovitz 2017-08-09

Most business readers have heard of the Lean principles developed for factories a set of tools and ideas that have enabled companies to dramatically boost quality by reducing waste and errors producing more while using less. Yet until now, few have recognized how relevant these powerful ideas are to individuals and their daily work. Every person at

Handbook of New Product Development Management - Christoph Loch 2008

This text provides a comprehensive view of the challenges in managing the development of new products from well-known and leading contributors in the field.

Agile Software Requirements - Dean Leffingwell 2010-12-27

“We need better approaches to understanding and managing software requirements, and Dean provides them in this book. He draws ideas from three very useful intellectual pools: classical management practices,

Agile methods, and lean product development. By combining the strengths of these three approaches, he has produced something that works better than any one in isolation." –From the Foreword by Don Reinertsen, President of Reinertsen & Associates; author of Managing the Design Factory; and leading expert on rapid product development Effective requirements discovery and analysis is a critical best practice for serious application development. Until now, however, requirements and Agile methods have rarely coexisted peacefully. For many enterprises considering Agile approaches, the absence of effective and scalable Agile requirements processes has been a showstopper for Agile adoption. In Agile Software Requirements, Dean Leffingwell shows exactly how to create effective requirements in Agile environments. Part I presents the "big picture" of Agile requirements in the enterprise, and describes an overall process model for Agile requirements at the project team, program, and portfolio levels Part II describes a simple and lightweight, yet comprehensive model that Agile project teams can use to manage requirements Part III shows how to develop Agile requirements for complex systems that require the cooperation of multiple teams Part IV guides enterprises in developing Agile requirements for ever-larger "systems of systems," application suites, and product portfolios This book will help you leverage the benefits of Agile without sacrificing the value of effective requirements discovery and analysis. You'll find proven solutions you can apply right now–whether you're a software developer or tester, executive, project/program manager, architect, or team leader.

Global Manufacturing Management - Thomas Friedli 2021-10-30

Using site-specific optimization approaches in international manufacturing networks is increasingly proving insufficient. To solve this problem, several holistic and integrated alternatives have been developed to reflect a global perspective. This book presents advances in the St. Gallen Global Manufacturing Network Model and its application in numerous industry-, benchmarking- and research projects. The contents combine data-driven solutions with qualitative management frameworks for the strategic optimization of international manufacturing networks. In the first part, the book addresses the foundation of manufacturing network management and further describes the St. Gallen Operational Excellence approaches to manage plant performance. On this basis, the authors show how plant- and network-level performance can be enhanced via key improvement domains (e.g., strategy, configuration, coordination, performance management, digitalization). In turn, the second part demonstrates the application of the constructs in manufacturing companies from various industries. By combining research and practice, the book offers unique perspectives on the management of global production striving toward higher performance on manufacturing site and network level.

London's Global Office Economy - Rob Harris 2021-04-08

London's Global Office Economy: From Clerical Factory to Digital Hub is a timely and comprehensive study of the office from the very beginnings of the workplace to its post-pandemic future. The book takes the reader on a journey through five ages of the office, encompassing sixteenth-century coffee houses and markets, eighteenth-century clerical factories, the corporate offices emerging in the nineteenth, to the digital and network offices of the twentieth and twenty-first centuries. While offices might appear ubiquitous, their evolution and role in the modern economy are among the least explained aspects of city development. One-third of the workforce uses an office; and yet the buildings themselves – their history, design, construction, management and occupation – have received only piecemeal explanation, mainly in specialist texts. This book examines everything from paper clips and typewriters, to design and construction, to workstyles and urban planning to explain the evolution of the 'office economy'. Using London as a backdrop, Rob Harris provides built environment practitioners, academics, students and the general reader with a fascinating, illuminating and comprehensive perspective on the office. Readers will find rich material linking fields that are normally treated in isolation, in a story that weaves together the pressures exerting change on the businesses that occupy office space with the motives and activities of those who plan, supply and manage it. Our unfolding understanding of offices, the changes through which they have passed, the nature of office work itself and its continuing evolution

is a fascinating story and should appeal to anyone with an interest in contemporary society and its relationship with work.

Introduction to Business - Lawrence J. Gitman 2018

Introduction to Business covers the scope and sequence of most introductory business courses. The book provides detailed explanations in the context of core themes such as customer satisfaction, ethics, entrepreneurship, global business, and managing change. Introduction to Business includes hundreds of current business examples from a range of industries and geographic locations, which feature a variety of individuals. The outcome is a balanced approach to the theory and application of business concepts, with attention to the knowledge and skills necessary for student success in this course and beyond.

Project Management, Planning and Control - Albert Lester 2007

A comprehensive book on project management, covering all principles and methods with fully worked examples, this book includes both hard and soft skills for the engineering, manufacturing and construction industries. Ideal for engineering project managers considering obtaining a Project Management Professional (PMP) qualification, this book covers in theory and practice, the complete body of knowledge for both the Project Management Institute (PMI) and the Association of Project Management (APM). Fully aligned with the latest 2005 updates to the exam syllabi, complete with online sample Q&A, and updated to include the latest revision of BS 6079 (British Standards Institute Guide to Project Management in the Construction Industry), this book is a complete and valuable reference for anyone serious about project management. â€¢The complete body of knowledge for project management professionals in the engineering, manufacturing and construction sectors â€¢Covers all hard and soft topics in both theory and practice for the newly revised PMP and APMP qualification exams, along with the latest revision of BS 6079 standard on project management in the construction industry â€¢Written by a qualified PMP exam accreditor and accompanied by online Q&A resources for self-testing

Managing Software for Growth - Roy W. Miller 2004

- Helps managers combat the manufacturing mindset that dominates business thinking, and shows why this mindset is harmful to software development - Introduces predictability to the historically unpredictable world of software development - Allows organizations to improve job satisfaction by fostering an environment of creativity among developers

Industry 4.0: Managing The Digital Transformation - Alp Ustundag 2017-09-14

This book provides a comprehensive guide to Industry 4.0 applications, not only introducing implementation aspects but also proposing a conceptual framework with respect to the design principles. In addition, it discusses the effects of Industry 4.0, which are reflected in new business models and workforce transformation. The book then examines the key technological advances that form the pillars of Industry 4.0 and explores their potential technical and economic benefits using examples of real-world applications. The changing dynamics of global production, such as more complex and automated processes, high-level competitiveness and emerging technologies, have paved the way for a new generation of goods, products and services. Moreover, manufacturers are increasingly realizing the value of the data that their processes and products generate. Such trends are transforming manufacturing industry to the next generation, namely Industry 4.0, which is based on the integration of information and communication technologies and industrial technology.The book provides a conceptual framework and roadmap for decision-makers for this transformation

Flexible Product Development - Preston G. Smith 2007-09-10

In this landmark book, Preston Smith attributes the recent declinein innovation to pressure from financial markets that drivesmanagement toward rigid development approaches such as phaseddevelopment processes, Six Sigma, and project office. Theseprocesses have unintentionally (but effectively) made changesduring development more difficult, disruptive, and expensive, whilethe need for change continues at an accelerating pace. Flexible Product Development is a hands-on resource thatprovides the tools and strategies needed to restore flexibility toany organization and remove the obstacles that stand in the

way ofresponsive new product development. Preston Smith introducesapproaches that can enhance development process flexibility bycreating and maintaining development options, delaying decisions,and, in general, reducing the cost of change. Step-by-step, heexplains the basics of flexible product development, provides abroad array of flexibility-enhancing tools, and guides the readerin modifying the organization?s values to embrace this new way ofoperating.

Advances in Production Management Systems - Jan Olhager 2007-12-24

This book brings together some of the latest thinking by leading experts from around the world on integrating systems and strategies in production management and related issues that are relevant for making production into a competitive resource for the firm. This book is composed of five parts, each focused on a specific theme: Linking systems and strategies; Strategic operations management; IS/IT applications in the value chain; Modelling and simulation; Improving operations.

Managing Digital - Charles Betz

About This Book This book, "Managing Digital: Concepts and Practices", is intended to guide a practitioner through the journey of building a digital-first viewpoint and the skills needed to thrive in the digital-first world. As such, this book is a bit of an experiment for The Open Group; it isn't structured as a traditional standard or guide. Instead, it is structured to show the key issues and skills needed at each stage of the digital journey, starting with the basics of a small digital project, eventually building to the concerns of a large enterprise. So, feel free to digest this book in stages — the section Introduction for the student is a good guide. The book is intended for both academic and industry training purposes. This book seeks to provide guidance for both new entrants into the digital workforce and experienced practitioners seeking to update their understanding on how all the various themes and components of IT management fit together in the new world. About The Open Group Press The Open Group Press is an imprint of The Open Group for advancing knowledge of information technology by publishing works from individual authors within The Open Group membership that are relevant to advancing The Open Group mission of Boundaryless Information Flow™. The key focus of The Open Group Press is to publish high-quality monographs, as well as introductory technology books intended for the general public, and act as a complement to The Open Group Standards, Guides, and White Papers. The views and opinions expressed in this book are those of the author, and do not necessarily reflect the consensus position of The Open Group members or staff.

Azure Data Factory Cookbook - Dmitry Anoshin 2020-12-24

With the help of well-structured and practical recipes, this book will teach you how to integrate data from the cloud and on-premise. You'll learn how to transform, clean, and consolidate data into a single data platform and get to grips with using ADF as the main ETL and orchestration tool for your data warehouse or data platform project.

Managing Service Operations - Bill Hollins 2006-09-18

`Bill Hollins continues his practical investigation of design in the service sector. In this new book with Sadie Shinkins, he provides a down to earth approach to an important topic in the field´ - Naomi Gornick, Honorary Professor, University of Dundee Guiding readers through each stage in the design and implementation of service operations, this book combines lively examples that are easy to relate to with clearly explained theory. Throughout, chapters contain pedagogical features that will help students to get the most from the ideas and examples being presented in the book. They include: - Chapter objectives; - Short cases; - Student exercises; - Chapter summaries; - Further reading section; - A glossary of key terms.

Design Patterns - Erich Gamma 1995

Software -- Software Engineering.

Handbook of Design, Manufacturing and Automation - Richard C. Dorf 1994

Comprehensive, detailed, and organized for speedy reference—everything you need to know about modern manufacturing technology… From concurrent engineering to fixture design for machining systems, from robotics and artificial intelligence to facility

layout planning and automated CAD-based inspection, this handbook provides all the information you need to design, plan, and implement a modern, efficient manufacturing system tailored to your company's special needs and requirements. Handbook of Design, Manufacturing and Automation does more than simply present the characteristics and specifications of each technology—much more. Each technology is discussed both in terms of its own capabilities and in terms of its compatibility with other technologies, and the trade-offs involved in choosing one option over another are explored at length. An entire section is devoted to the business aspects of converting to the new technologies, including acquisition of automation, managing advanced manufacturing technology, and issues of cost and financing. The focus is on incorporating these technologies into a cohesive whole—an efficient, cost-effective manufacturing system. Other important topics include: Design for automated manufacturing Nontraditional manufacturing processes Machine tool programming techniques and trends Precision engineering and micromanufacturing Computer-integrated product planning and control Image processing for manufacturing And much more

Delivering the Goods - Damon Schechter 2002-12-30

We often think of great battles as having been won by superior strategy, bravery, or weaponry. Often, however, the greatest battles are decided by a much more mundane factor: logistics. Delivering the Goods looks at business logistics through the history of successful military logistical operations undertaken by leaders from Alexander the Great to General Norman Schwarzkopf, and offers practical guidance on applying proven logistical principles to your business.

Guidelines for the Management of Change for Process Safety - CCPS (Center for Chemical Process Safety) 2011-09-20

Guidelines for the Management of Change for Process Safetyprovides guidance on the implementation of effective and efficientManagement of Change (MOC) procedures, which can be applied toimprove process safety. In addition to introducing MOC systems, thebook describes how to design an initial system from scratch,including the scope of the system and the applications over a plantlife cycle and the boundaries and overlaps with other processsafety management systems. Note: CD-ROM/DVD and other supplementary materials arenot included as part of eBook file.

Principles of Operations Management - Jay H. Heizer 2004

In this textbook, Heizer (business administration, Texas Lutheran U.) and Render (operations management, Rollins College) provide a broad introduction to the field of operations management. A sampling of topics includes operations strategy for competitive advantage, forecasting, design of goods and services, human resources, e- commerce, project management, inventory management, and maintenance. The CD-ROM contains video case studies, lecture notes, Excel OM and Extend software, and additional practice problems. Annotation copyrighted by Book News Inc., Portland, OR

Re-engineering Manufacturing for Sustainability - Andrew Y. C. Nee 2013-04-08

This edited volume presents the proceedings of the 20th CIRP LCE Conference, which cover various areas in life cycle engineering such as life cycle design, end-of-life management, manufacturing processes, manufacturing systems, methods and tools for sustainability, social sustainability, supply chain management, remanufacturing, etc.

Managing the Design-manufacturing Process - John E. Ettlie 1990

This practical guide describes the administrative practices, policies, tools, and methods that promote better coordination, and shows how design-manufacturing integration helps a company reduce costs, improve product quality, and respond quickly to customer needs and demands. It examines the issues that have traditionally prevented design-manufacturing collaboration and reports on the findings of a four-year domestic plant study of the best strategies for promoting the integration of design and manufacturing.

Product Design and Development - Karl T. Ulrich 2003

Treating such contemporary design and development issues as identifying customer needs, design for manufacturing, prototyping, and industrial design, Product Design and Development, 3/e, by Ulrich and

Eppinger presents in a clear and detailed way a set of product development techniques aimed at bringing together the marketing, design, and manufacturing functions of the enterprise. The integrative methods in the book facilitate problem solving and decision making among people with different disciplinary perspectives, reflecting the current industry trend to perform product design and development in cross-functional teams.

Practical E-Manufacturing and Supply Chain Management - Gerhard Greeff 2004-08-11

New technologies are revolutionising the way manufacturing and supply chain management are implemented. These changes are delivering manufacturing firms the competitive advantage of a highly flexible and responsive supply chain and manufacturing system to ensure that they meet the high expectations of their customers, who, in today's economy, demand absolutely the best service, price, delivery time and product quality. To make e-manufacturing and supply chain technologies effective, integration is needed between various, often disparate systems. To understand why this is such an issue, one needs to understand what the different systems or system components do, their objectives, their specific focus areas and how they interact with other systems. It is also required to understand how these systems evolved to their current state, as the concepts used during the early development of systems and technology tend to remain in place throughout the life-cycle of the systems/technology. This book explores various standards, concepts and techniques used over the years to model systems and hierarchies in order to understand where they fit into the organization and supply chain. It looks at the specific system components and the ways in which they can be designed and graphically depicted for easy understanding by both information technology (IT) and non-IT personnel. Without a good implementation philosophy, very few systems add any real benefit to an organization, and for this reason the ways in which systems are implemented and installation projects managed are also explored and recommendations are made as to possible methods that have proven successful in the past. The human factor and how that impacts on system success are also addressed, as is the motivation for system investment and subsequent benefit measurement processes. Finally, the vendor/user supply/demand within the e-manufacturing domain is explored and a method is put forward that enables the reduction of vendor bias during the vendor selection process. The objective of this book is to provide the reader with a good understanding regarding the four critical factors (business/physical processes, systems supporting the processes, company personnel and company/personal performance measures) that influence the success of any e-manufacturing implementation, and the synchronization required between these factors. · Discover how to implement the flexible and responsive supply chain and manufacturing execution systems required for competitive and customer-focused manufacturing · Build a working knowledge of the latest plant automation, manufacturing execution systems (MES) and supply chain management (SCM) design techniques · Gain a fuller understanding of the four critical factors (business and physical processes, systems supporting the processes, company personnel, performance measurement) that influence the success of any e-manufacturing implementation, and how to evaluate and optimize all four factors

Construction Supply Chain Management Handbook - William J. O'Brien 2008-10-20

Mounting emphasis on construction supply chain management (CSCM) is due to both global sourcing of materials and a shortage of labor. These factors force increasing amounts of value-added work to be conducted off-site deep in the supply chain. Construction Supply Chain Management Handbook compiles in one comprehensive source an overview of the diverse research and examples of construction supply chain practice around the world. Reflecting the emergence of CSCM as an important area of multi-national research and practice, this volume takes an interdisciplinary perspective with contributions from leading international authors in three major areas: production and operations analysis, organizational perspectives, and information technology. The book begins with a survey of the current literature on modeling construction supply chain production and describes a set of approaches

and methods for designing and operating project supply chains with references to design and materials production. It provides the basic framework for understanding the challenges and approaches to representing and improving supply chain performance. The next section recognizes the importance of considering arrangements between the different firms involved in designing, procuring, and assembling construction, and reviews various perspectives to understanding and improving organizational issues in the supply chain. The final section provides an overview of a range of information technologies that can contribute to supply chain performance, as well as examples of effective use. The organization and sourcing of materials is increasingly complex across the global construction industry. Construction clients are demanding faster, more responsive construction processes and higher quality facilities. This volume provides an invaluable resource to understanding the implications of supply chain management, which is sure to result in more effective construction project execution.

Process Management in Design and Construction - Rachel Cooper 2008-04-15

To deliver a construction project on time, at cost and of appropriate quality, it is critical to manage the design and construction process effectively... This book provides a comprehensive introduction to the field of process management in design and construction in order to meet the business needs of the construction industry as they change in today's highly competitive global environment. It identifies the current state of the industry in the process management field, describing trends and developments (including information technology), and demonstrates these through case study evidence. Practical guidance is offered by identifying potential pitfalls, illustrating best practise drawn from construction and appropriate manufacturing applications. The overall approach is a holistic one, based on practical experience gained throughout the past decade both in the academic and industrial environments, including leading a number of research projects on process and IT related topics in construction and manufacturing industries. Process Management in Design and Construction will provide students on construction and project management related courses with a description of the state of process management in design and construction - including current process models – as well as a future vision based on up-to-date research findings and good practice in the construction industry. The book also offers practical guidance to industrial and consultancy organisations on undertaking and implementing process management projects - including re-engineering their customer delivery processes through effective project

Handbook Factory Planning and Design - Hans-Peter Wiendahl 2015-04-20

This handbook introduces a methodical approach and pragmatic concept for the planning and design of changeable factories that act in strategic alliances to supply the ever-changing needs of the global market. In the first part, the change drivers of manufacturing enterprises and the resulting new challenges are considered in detail with focus on an appropriate change potential. The second part concerns the design of the production facilities and systems on the factory levels work place, section, building and site under functional, organisational, architectural and strategic aspects keeping in mind the environmental, health and safety aspects including corporate social responsibility. The third part is dedicated to the planning and design method that is based on a synergetic interaction of process and space. The accompanying project management of the planning and construction phase and the facility management for the effective utilization of the built premises close the book. The Authors Prof. em. Dr.-Ing. Dr. mult. h.c. Hans-Peter Wiendahl has been director for 23 years of the Institute of Factory planning and Logistics at the Leibniz University of Hannover in Germany. Prof. Dipl.-Ing. Architekt BDA Jürgen Reichardt is Professor at the Muenster school of architecture and partner of RMA Reichardt – Maas – Associate Architects in Essen Germany. Prof. Dr.-Ing. habil. Peter Nyhuis is Managing Director of the Institute of Factory Planning and Logistics at the Leibniz University of Hannover in Germany.