

10 Lean Construction Institute

A surprisingly simple way for students to master any subject--based on one of the world's most popular online courses and the bestselling book A Mind for Numbers A Mind for Numbers and its wildly popular online companion course "Learning How to Learn" have empowered more than two million learners of all ages from around the world to master subjects that they once struggled with. Fans of these strategies earlier and ask how they can help their kids master these skills as well. Now in this new book for kids and teens, the authors reveal how to make the most of time spent studying. We all have the tools to learn what might not seem to come naturally to us at first--the secret is to understand how the brain works so we can unlock its power. This book explains:
• Why sometimes letting a child struggle is better
• How to avoid "rut think" in order to think outside the box
• Why having a poor memory can be a good thing
• The value of metaphors in developing understanding
• A simple, yet powerful, way to stop procrastinating Filled with illustrations, application questions, and exercises, this book makes learning easy and fun.

Since the invention of double-entry bookkeeping, managers have judged a company's worth by sales and profits. Now, Richard J. Schonberger, the architect of the worldwide Just-In-Time revolution, reaches beyond "financials" to redefine excellence -- and reveals, with new benchmark data, how pioneers become dynasties. Schonberger's pathbreaking new research reveals that, from 1950 to 1990, repeatedly, industrial decline and ascendancy correlated perfectly with inventory turnover -- one of two key nonfinancial indicators and a bedrock measure, along with customer satisfaction, of a company's power, strength, and value. In this immensely readable book, he captures these new metrics -- the true predictions of future success -- in 16 customer-focused principles created from self-sufficient practices of leading manufacturers in nine countries. Armed with new world-class benchmark data, Schonberger redefines excellence in terms of competence, capability, and customer-focused, employee-driven, data-based performance. For front-tine associates to senior executives, Schonberger has written manufacturing's action agenda for the next decade. This book will be indispensable reading for manufacturing executives, managers, and stockbrokers.

During the past several decades, the manufacturing and service industries significantly increased their levels of productivity, quality, and profitability through the application of process improvement techniques and information technology. Unfortunately, the construction industry lags far behind in the application of performance improvement and optimization techniques, as well as its overall competitiveness. Syed M. Ahmed, both highly regarded for leadership and innovation, Modern Construction: Lean Project Delivery and Integrated Practices offers cutting-edge lean tools and other productive strategies for the management of people and processes in the construction industry. Drs. Forbes and Ahmed focus mainly on lean construction methodologies, such as The Last Planner(R) System, The Lean Project Delivery(TM). The tools and strategies offered draw on the success of the world-renowned Toyota Production System (TPS) adapted to the construction environment by construction professionals and researchers involved in developing and advocating lean construction methods. The book also discusses why true lean construction can best occur when all the construction stakeholders, owners, architects, engineers, and contractors are committed to the concept of optimizing the flow of activities holistically while de-emphasizing their self-interest. The authors also reintroduce process improvement approaches such as TQM and Six Sigma as a foundation for the adoption of lean methodologies, and demonstrate how these methods can improve projects in a so-called traditional environment. The book integrates these methodologies with the use of information technology and Building Information Modeling (BIM), while recognizing the human element in relation to motivation, safety, and environmental stresses. Written specifically for professionals in an industry that desperately needs to play catch up, the book delineates cutting-edge approaches with the benefit of successful cases and explains how their deployment can improve project performance. Discover BIM: A better way to build better buildings Building Information Modeling (BIM) offers a novel approach to design, construction, and facility management in which a digital representation of the building product and process is used to facilitate the exchange and interoperability of information in digital format. BIM is beginning to change the way buildings look, the way they function, and the way they are managed. The BIM Handbook, Third Edition provides an in-depth understanding of BIM technologies, the business and organizational issues associated with its implementation, and the profound advantages that effective use of BIM can provide to all members of a project team. Updates to this edition include: Information on the ways in which professionals should use BIM to gain maximum value New topics on major construction clients, BIM standards and guides A discussion on how various professional roles have expanded through the widespread use and the new avenues of BIM practices and services A wealth of new case studies that clearly illustrate exactly how BIM is applied in a wide variety of conditions Painting a colorful and thorough picture of the state of the art in building information management for readers to successful implementations, helping them to avoid needless frustration and costs and take full advantage of this paradigm-shifting approach to construct better buildings that consume fewer materials and require less time, labor, and capital resources.

Power Plant Construction Management

Lead With Respect

The Design Manager's Handbook

A Practical Guide

Workface Planning for Construction Projects

Lean Quality in Construction Project Delivery

Learning How to Learn

Shows how to make the most of conversations by communicating clearly and forcefully, offering advice on how to overcome barriers to meaningful conversation, confront tough issues, and leverage new skills for frictionless debate.

Choosing By Advantages is a set of concepts and methods designed to make decisionmaking more effective for organizations, communities, and individuals. The system is particularly useful for strategic planners, engineers, consultants, and managers, though anyone, from families to the largest firms, will find the concepts valuable and simple to follow.

The design and construction of buildings is a lengthy and expensive process, and those who commission buildings are continually looking for ways to improve the efficiency of the process. In this book, the second in the Building in Value series, a broad range of topics related to the processes of design and construction are explored by an international group of experts. The overall aim of the book is to look at ways that clients can improve the value for money outcomes of their decisions to construct buildings. The book is aimed at students studying in many areas related to the construction industry including architecture, construction management, civil engineering and quantity surveying, and should also be of interest to many in the industry including project managers, property developers, building contractors and cost engineers.

Senior experts within the Toyota Production System often draw simple maps when on the shop floor. These maps show the current physical flow of a product family and the information flow for that product family as the wind through a complex facility making many products. Much more important, these simple maps - often drawn on scrap paper - show where steps can be eliminated, flows smoothed, and pull systems introduced in order to create a truly lean value stream for each product family. In 1998 John Shook and Mike Rother of the University of Michigan wrote down Toyota's mapping methodology for the first time in Learning to See. This simple tool makes it possible for you to see through the clutter of a complex plant. You'll soon be able to identify all of the processing steps along the path from raw materials to finished goods for each product and all of the information flows going back from the customer through the plant and upstream to suppliers. In plain language and with detailed drawings, this workbook explains everything you will need to create accurate current state and future state maps for each of your product families and then to turn the current state into the future state rapidly and sustainably.

A Principle Based Leadership Guide for Assistant Supers and Superintendents in Construction

International Research and Practice

Achieving Success at Work & in Life, One Conversation at a Time

The Lean Builder: A Builder's Guide to Applying Lean Tools in the Field

Proceedings of 11th Construction Industry Development Board (CIDB) Postgraduate Research Conference

Resolving the Efficiency Paradox

Building Lean, Building BIM

This book gathers the proceedings of the EPPM 2019 conference, and highlights innovative work by researchers and practitioners active in various industries around the globe. Recent advances in science and technology have made it possible to seamlessly connect and integrate various elements of engineering systems, and opened the door for innovations that have transformed how we live and work. While these developments have yielded enhanced efficiency and numerous improvements in our current practices, the problems caused by the increased complexity of these integrated systems can be extremely difficult. Accordingly, solving these problems involves applying cross-disciplinary expertise to address the heterogeneity of the various elements inherent in the system. These proceedings address four main themes: (I) Smart and Sustainable Construction, (II) Advances in Project Management Practices, (III) Toward Safety and Productivity Improvement, and (IV) Smart Manufacturing, Design, and Logistics. As such, they will be of interest to and valuable to researchers and practitioners in a range of industries seeking an update on the translational fields of engineering, project, and production management.

This book gathers papers from the 11th Construction Industry Development Board (cidb) Postgraduate Research Conference, held on 28–30 July 2019 in Johannesburg, South Africa. The conference provided an essential forum for reviewing and generating knowledge on Construction 4.0 and, consequently, highlighted processes and practices that allow us to deliver and operate built environment assets more effectively and efficiently by focusing on physical-to-digital and digital-to-physical transformation. The event addressed three broad themes: Industrial production (prefabrication, 3-D printing and assembly, offsite and advanced manufacturing); Cyber-physical systems (actuators, sensors, IoT, robots and cobots for repetitive and dangerous tasks, and drones for mapping, progress monitoring, safety and quality inspections, lifting, moving and positioning); and Technologies (digital ecosystems, digital platforms, BIM, video and laser scanning, AI and cloud computing, big data and data analytics, reality capture, blockchain, simulation, virtual and augmented reality, data standards and interoperability, and vertical and horizontal integration). Given its scope, the book will be of interest to all construction industry and architectural professionals who want to learn about cutting-edge technologies applied to construction

A convergence of lean management and quality management thinking has taken place in organizations across many industries, including construction. Practices in procurement, design management and construction management are all evolving constantly and understanding these changes and how to react is essential to successful management. This book provides valuable insights for owners, designers and constructors in the construction sector. Starting by introducing the language of total quality, lean and operational excellence, this book takes the reader right up to the latest industry practice in this sector, and demonstrates the best way to manage change. Written by two of the world's leading experts, Total Construction Management: Lean quality in construction project delivery offers a clearly structured introduction to the most important management concepts and practices used in the global construction industry today. This authoritative book covers issues such as procurement, BIM, all forms of waste, construction safety, and design and construction management, all explained with international case studies. It is a perfect guide for managers in all parts of the industry, and ideal for those preparing to enter the industry.

Architectural Management represents the state of the art of research and practice in the field and includes contributions from leading international figures. The book looks back at over a decade of research into architectural management, considers the present challenges and opportunities, and looks to the future. You'll find a review of earlier work and developments as well as a focus on new research areas. The book is divided into six sections representing topical themes, each section contains two research-based chapters and one practical case study. Case studies are from six European countries - Belgium, Denmark, Finland, The Netherlands, Norway, and the UK.

Elevating Construction Superintendents

The Construction Industry in the Fourth Industrial Revolution

Even More Schedule for Sale

The 10th International Conference on Engineering, Project, and Production Management

Using the A3 Management Process to Solve Problems, Gain Agreement, Mentor and Lead

Proceedings of the 5th International Conference on Smart Learning Ecosystems and Regional Development

Lean Project Delivery

Lean Project Delivery and Integrated Practices in Modern Construction is the new and enhanced edition of the pioneering book Modern Construction by Lincoln H. Forbes and Syed M. Ahmed. This book provides a multi-faceted approach for applying lean methodologies to improve design and construction processes. Recognizing the wide diversity in the landscape of projects, and encompassing private and public sector activity, buildings and infrastructure, the book expands upon the detailed coverage of integrated project delivery and new lean tools and techniques to include: Greater emphasis on the importance of creating a lean culture and the initiatives required to transform the industry; Expanded discussions of the foundational writings in lean construction theory; Exploration of the synergies between "lean" and "green" initiatives; Specific procedures for modifying planning and scheduling activities to improve the performance of the project team; Expanded sections on quality, and topics that have become a part of the lean lexicon, such as Choosing by Advantages, "line of balance"/location-based scheduling, virtual design teams, takt time planning and set-based design; Discussion questions for beginners and advanced lean practitioners; and Improved cross-referencing within the text to help the reader navigate the frameworks, techniques and tools to support the application of lean principles. The techniques described here enhance the use of resources, reducing waste, minimizing delays, increasing quality and reducing overall costs. They enable practitioners to improve the quality of the built environment, secure higher levels of customer/owner satisfaction, and simultaneously improve their profitability. This book is essential reading for all those wanting to be at the forefront of construction management and lean thinking.

This book provides a definitive guide for the future direction of the practice and profession of architecture. In five parts, Cliff Moser provides you with all the tools and know-how to implement changes that will serve you and your practice in the short, medium and long term. Written at a crucial time for the industry, this is essential reading for every architect.

Lean Project Delivery - Building Championship Project Teams This book was inspired by the need for an integrated resource for those in the design and construction industry wanting to better understand how Lean can improve project performance and outcomes. In eye-opening stories and brilliant color graphics, David and Dan share the value proposition and mechanics of Lean design and construction. The authors have broken the book into bite-size units on the origins of Lean, the compelling case for the need for Lean, a history of Lean as it has evolved in the AEC industry, Lean thinking and various Lean tools with specific applications and examples in design and construction, making learning Lean fun, and how to effectively establish an organizational and project culture that will enable and sustain Lean practices. In the spirit of Lean visual management, this book is purposefully designed with color illustrations. Whether you are a design professional, site superintendent, project manager, or C-suite executive, this book will help all understand how Lean can make your team perform at a championship level.

To be a great superintendent, you need training. Without this, you may become defensive, learn to accept waste and low standards, or even espouse false concepts that will lead to certain failure. However, with proper fundamental training, learning from the best builders throughout history, and effectively using the modern concepts of lean, we can guide superintendents to have the best trained role in construction. Right now in our industry, project managers and project engineers are better trained, better paid, and are becoming leaders of the entire team. The positions of superintendents and project managers should be equal, but to be equal, we need to step up and take our place as the driving force of the project. This book will help you to do that and bring respect back to field positions everywhere. Before writing Elevating Construction Superintendents - The Art of the Builder, I had never found a book available for the art and form of being a superintendent. Yes, there are books about lean; yes, there are books about construction management; and yes, there are books about the skills of a superintendent, but there are none that cover the art of the builder in construction and the back-to-basics fundamental attributes of a true leader in the field. This is the first revision of the book we need and want for our wonderful builders in the field of construction. This book is filled with principles and actionable steps for assistant superintendents. I invite you to learn these, take massive action, and implement each step one-by-one. Please keep driving until everything on your project brings you joy. That is the measure of success. Expect more - Step up - Let's go

Value and Waste in Lean Construction

An Action Guide for Leaders

An Introduction to Lean Construction

Lean Project Delivery and Integrated Practices

A Guide to Building Information Modeling for Owners, Designers, Engineers, Contractors, and Facility Managers

Fundamental Concepts for Owners, Engineers, Architects, and Builders

A Practical Guide to Company Management

This timely second edition of Power Plant Construction Management: A Survival Guide is revised and updated to include new technologies, evolving regulations, and the changing power generation mix between gas and coal plants. Hessler expands upon the first edition and provides a thorough plan for managing the financials of building a power plant. He covers the entire process from preplanning to contingency planning to the business of on-site construction management. The book includes checklists, guidelines, photos, and examples that serve as useful tools in the decision-making process. With a focus on finances, management skills, regulations, technology, and much more, this book is a must-read for anyone with a stake in the power plant construction process.

Construction productivity--how well, how quickly, and at what cost buildings and infrastructure can be constructed--directly affects prices for homes and consumer goods and the robustness of the national economy. Industry analysts differ on whether construction industry productivity is improving or declining. Still, advances in available and emerging technologies offer significant opportunities to improve construction efficiency substantially in the 21st century and to help meet other national challenges, such as environmental sustainability. Advancing the Competitiveness and Efficiency of the U.S. Construction Industry identifies five interrelated activities that could significantly improve the quality, timeliness, cost-effectiveness, and sustainability of construction projects. These activities include widespread deployment and use of interoperable technology applications; improved job-site efficiency through more effective interfacing of people, processes, materials, equipment, and information; greater use of prefabrication, preassembly, modularization, and off-site fabrication techniques and processes; innovative, widespread use of demonstration installations; and effective performance measurement to drive efficiency and support innovation. The book recommends that the National Institute of Standards and Technology work with industry leaders to develop a collaborative strategy to fully implement and deploy the five activities

This book gathers papers presented at the 11th International Conference on Construction in the 21st Century, held in London in 2019. Bringing together a diverse group of government agencies, academics, professionals, and students, the book addresses issues related to construction safety, innovative technologies, lean and sustainable construction, international construction, improving quality and productivity, and innovative materials in the construction industry. In addition, it highlights international collaborations between various disciplines in the areas of construction, engineering, management, and technology. The book demonstrates that, as the industry moves forward in an ever-complex global economy, multi-national collaboration is crucial, and its future growth will undoubtedly depend on international teamwork and alliances.

Design management as a recognised role in the built environmentindustry is relatively new, initially arising from the need forbetter co-ordination and delivery of design information from designteams to main contractors - particularly important as procurementroutes involving contractor led design have become much morecommonplace. The advent of design packages driven by specialistsub-contractors has also increased the need for co-ordination andmanagement of the design process. With the growing complexity ofconstruction projects, effective design management is increasinglycentral to project success. BIM, as it gains acceptance across theindustry will undoubtedly have a huge impact on project deliveryprocess and the role of the Design Manager. The CIOB Design Manager's Handbook covers subjectssuch as design process and management tools, the role of the DesignManager, value management and innovation, procurement routes andimplications, people dynamics, and factors that will affect thedevelopment of the Design Manager's role in the future,including BIM. It will ensure Design Managers understand theprocesses, tools and skills that are required to be successful inthe role, and will assist them in delivering real value to complexconstruction projects. Written for both the Design Manager practitioner and students onconstruction related degree courses, anyone interested inconstruction based design management will also find the bookuseful.

Advancing the Competitiveness and Efficiency of the U.S. Construction Industry

The Toyota Way

The Choosing by Advantages Decisionmaking System

Lean Project Delivery and Integrated Practices in Modern Construction

How to Succeed in School Without Spending All Your Time Studying; A Guide for Kids and Teens

Design and Construction

Advanced Work Packaging, for Construction Projects

Non-value adding activities are otherwise known as 'waste' in the lean construction lexicon. The aim of this collection is to build a common understanding of the role and contribution of value-adding activities in achieving stipulated objectives and continuous improvement in construction projects, and to contrast this with waste. Although the lean approach to construction projects has been widely covered, this is the first book that explicitly provides the link between value and waste in the Architecture, Engineering and Construction (AEC) sector. This internationally researched collection seeks to create a paradigm shift, which will shape work processes and future directions for how value is conceptualized and operationalized in both the project management and business aspects of construction. The readers will gain an understanding of: The value-adding paradigm in construction How to make value-supporting decisions Waste identification and control in practice With contributions from South Africa, Brazil, Norway, and the USA, the implications of this book are globally relevant. This is essential reading for all higher level students of construction management and economics, and all professionals interested in value management.

Richard Schonberger, in his fourth and most important book yet, introduces a powerful new concept: that the many links between and within the four main business functions -- design, operations, accounting, and marketing -- form a continuous "chain of customers" that extends to those who buy the product or service. Everyone has a customer -- the next department, office, shop, or person -- at the hundreds of pioneering companies Schonberger has studied throughout the world. Schonberger demonstrates the universality of customer wants: Both the next and final customers want ever better quality, quicker response, greater flexibility, and lower cost. This condition provides a common strategy and calls for common methods to be used across the organization. Every employee is a data gatherer and analyst, unearthing more and better ways to provide for these customers' wants -- before the competition does so. As the new thinking and methods permeate every corner of the firm, they topple departmental walls and adjust gang-like mind-sets and "them-versus-us" attitudes. Performance is no longer measured by internal costs but by improvement as seen by the next customer; direct control of causes generally replaces after-the-fact control of costs. Design is brought out of isolation. Finally, with the rest of the firm reoriented toward customer service, marketing escapes from a "negative" mode -- covering up for failures -- to a positive one -- crowing about the firm's competence and ability to improve. With the close attention to detail for which he has become famous, Schonberger constructs a blueprint for unifying corporate functions, brilliantly describing the new microcosms that will make up the company of the 1990s -- focused teams of multi-skilled, involved employees arranged according to the way the work flows or the service is provided -- that compose the chain of customers. Aetna, for example, is organizing customer-focused teams that cut across underwriting and the administrative functions. At Hewlett-Packard, teams of marketing, manufacturing, and R&D people have already gone through several iterations of "activity-based costing", which provides product designers with previously unavailable data for shaving costs throughout product life cycles. And at Du Pont, even production people on the factory floor are involved in assessing competitors' product quality and probable costs and methods. Through these and hundreds of other real company examples, Schonberger shows how the customer-driven chain of action leads directly to the kinds of bottom-line performance that have been so elusive to executives who manage at a distance "by the numbers" -- namely, higher profits, greater security, and gains in market share at the expense of the laggard competition.

A revolutionary, collaborative approach to design and construction project delivery Integrated Project Delivery is the first book-length discussion of IPD, the emergent project delivery method that draws on each stakeholder's unique knowledge to address problems before they occur. Written by authors with over a decade of research and practical experience, this book provides a primer on IPD for architects, designers, and students interested in this revolutionary approach to design and construction. With a focus on IPD in everyday operation, coverage includes a detailed explanation and analysis of IPD guidelines, and case studies that show how real companies are applying these guidelines on real-world projects. End-of-chapter questions help readers quickly review what they've learned, and the online forum allows them to share their insights and ideas with others who either have or are in the process of implementing IPD themselves. Integrated Project Delivery brings together the owners, architect, engineers, and contractors early in the development stage to ensure that problems are caught early, and to address them in a collaborative way. This book describes the parameters of this new, more efficient approach, with expert insight on real-world implementation. Compare traditional procurement with IPD Understand IPD guidelines, and how they're implemented Examine case studies that illustrate everyday applications Communicate with other IPD adherents in the online forum The IPD approach revolutionizes not only the workflow, but the relationships between the stakeholders -- the atmosphere turns collaborative, and the team works together toward a shared goal instead of viewing one another as obstructions to progress. Integrated Project Delivery provides a deep exploration of this approach, with practical guidance and expert insight.

The book presents a mixed research method adopted to assess and present the Toyota Way practices within construction firms in general and for firms in China specifically. The results of an extensive structured questionnaire survey based on the Toyota Way-styled attributes identified were developed and data collected from building professionals working in construction firms is presented. The quantitative data presented in the book explains the status quo of the Toyota Way-styled practices implemented in the construction industry, as well as the extent to which these attributes were perceived for lean construction management. The book highlights all the actionable attributes derived from the Toyota Way model appreciated by the building professionals, but alerts the readers that some attributes felled short of implementation. Further findings from in-depth interviews and case studies are also presented in the book to provide to readers an understanding how these Toyota Way practices can be implemented in real-life projects. Collectively, all the empirical findings presented in this book can serve to enhance understanding of Toyota Way practices in the lean construction management context. The readers are then guided through to understand the gaps between actual practice and Toyota Way-styled practices, and the measures that they may undertake to circumvent the challenges for implementation. The book also presents to readers the SWOT analysis that addresses the strengths, weaknesses, opportunities and threats towards the implementation of the Toyota Way in the construction industry. The book prescribes the Toyota Way model for use in construction firms to strategically implement lean construction management. The checklist presented in the book enables readers to draw lessons that may be used additionally as a holistic assessment tool for measuring the maturity of firms with respect to their Toyota Way implementation. Consequent to this, management would then be in a better position to develop plans for Toyota Way implementation by focusing on weak areas, strengthening them, and thus increasing the likelihood of success in the implementation of the Toyota Way. In a nutshell, this book provides a comprehensive and valuable resource for firms not only in the construction industry but also businesses outside of the construction sector to better understand the Toyota Way and how this understanding can translate to implementation of lean construction/business management to enhance profitability and survivability in an increasingly competitive global market place.

The Disruptive Design Practice Handbook

Valuing People in Construction

Building Power, Strength, and Value

Applying Lean to Construction Organizations and Processes

Schedule for Sale

Building Championship Project Teams

A Survival Guide

"Lead With Respect is a terrific book that puts the elements of genuine motivation into a broader context and helps leaders translate those principles into action." ||Daniel H. Pink, author of To Sell Is Human and Drive "The Ballé books are a great way to get started or to speed up your pace of transformation, personal and organizational." ||Jim Womack, Founder of Lean Enterprise Institute In their new business novel Lead With Respect, authors Michael and Freddy Ballé reveal the true power of lean: developing people through a rigorous application of proven tools and methods. And, in the process, creating the only sustainable source of competitive advantage—a culture of continuous improvement. In this engaging and insightful story, CEO Jane Delaney of Southcape Software discovers from her sensei Andy Ward that learning to lead with respect enables her to help people improve every day. ||For us, lean is all about challenging yourself and each other to find the right problems, and working hard every day to engage people in solving them.|| he says. Lead With Respect's timely message brings a new understanding of lean. While lean has become essential for companies to compete in today's global economy, most practitioners see it as a rigorous focus on process to produce higher quality goods and services—a limited understanding that fails to realize the true power of this approach. This new novel by the Ballés, the third in a series that includes Shingo Research Award-winners The Gold Mine and The Lean Manager, breaks new ground by sharing huge amounts of practical information on the most important yet least understood aspect of lean management: how to develop people through a rigorous application of lean tools. You'll learn: How to apply Lead With Respect attitudes to the lean tools you are using now so that you develop a truly sustainable lean culture.What specific steps to follow to make lean leadership behaviors daily habits.How to manage with respect through the emotion, conflict, tension, and self-doubt that you'll face during a lean transformation.

This book presents papers from the 5th International Conference on Smart Learning Ecosystems and Regional Development, which promotes discussions on R&D work, policies, case studies, entrepreneur experiences, with a particular focus on understanding the relevance of smart learning ecosystems for regional development and social innovation, and how the effectiveness of the relation of citizens and smart ecosystems can be boosted. The book explores how technology-mediated instruments can foster citizens' engagement with learning ecosystems and territories, providing insights into innovative human-centric design and development models/techniques, education/training practices, informal social learning, innovative citizen-driven policies, and technology-mediated experiences and their impact. As such, it will inspire the social innovation sectors and ICT, as well as economic development and deployment strategies and new policies for smarter proactive citizens.

Building Lean, Building BIM is the essential guide for any construction company that wants to implement Lean Construction and Building Information Modelling (BIM) to gain a strategic edge over their competition. The first of its kind, the book outlines the principles of Lean, the functionality of BIM, and the interactions between the two, illustrating them through the story of how Tidhar Construction has implemented Lean Construction and BIM in a concerted effort over four years. Tidhar is a small-to-medium-sized construction company that pioneered a way of working that gave it a profit margin unheard of in its market. The company's story serves as a case study for explanation of the various facets of Lean Construction and BIM. Each chapter defines a principle of Lean and/or BIM, describes the achievements and failures in Tidhar's implementation based on the experiences of the key people involved, and reviews the relevant background and theory. The implementation at Tidhar has not been a pure success, but by examining their motives alongside their achievements and failures, readers will learn about what pitfalls and pinnacles to expect. A number of chapters also compare the experience of Tidhar with those of other companies who are leaders in their fields, such as Skanska and DPR. This book is highly relevant and useful to a wide range of readers from the construction industry, especially those who are frustrated with the inefficiencies in their companies and construction projects. It is also essential reading for Lean and BIM enthusiasts, researchers and students from a variety of industries and backgrounds.

The definitive contracting reference for the construction industry, updated and expanded Construction Contracting, the industry's leading professional reference for five decades, has been updated to reflect current practices, business methods, management techniques, codes, and regulations. A cornerstone of the construction library, this text presents the hard-to-find information essential to successfully managing a construction company, applicable to building, heavy civil, high-tech, and industrial construction endeavors alike. A wealth of coverage on the basics of owning a construction business provides readers with a useful "checkup" on the state of their company, and in-depth exploration of the logistics, scheduling, administration, and legal aspects relevant to construction provide valuable guidance on important facets of the business operations. This updated edition contains new coverage of modern delivery methods, technology, and project management. The field of construction contracting comprises the entire set of skills, knowledge, and conceptual tools needed to successfully own or manage a construction company, as well as to undertake any actual project. This book gives readers complete, up-to-date information in all of these areas, with expert guidance toward best practices. Learn techniques for accurate cost estimating and effective bidding Understand construction contracts, surety bonds, and insurance Explore project time and cost management, with safety considerations Examine relevant labor law and labor relations techniques Between codes, standards, laws, and regulations, the construction industry presents many different areas with which the manager needs to be up to date, on top of actually doing the day-to-day running of the business. This book provides it all under one cover || for the project side and the business side. Construction Contracting is a complete working resource in the field or office.

Collaboration and Integration in Construction, Engineering, Management and Technology

World Class Manufacturing: The Next Decade

Building a Chain of Customers

Lean Construction Management

Improving Construction the Tidhar Way

BIM Handbook

Modernisation, Mechanisation and Industrialisation of Concrete Structures

Modernisation, Mechanisation and Industrialisation of Concrete Structures discusses the manufacture of high quality prefabricated concrete construction components, and how that can be achieved through the application of developments in concrete technology, information modelling and best practice in design and manufacturing techniques.

This book is relevant to any kind of business and is currently being used by a number of multi-national companies, including AstraZeneca, Ericsson, Scania and Volvo.

Even More Schedule for Sale is the second guidebook by Geoff Ryan on the subject of construction productivity for industrial projects. It describes the step-by-step application of the industry's best practice of advanced work packaging and ties it into the logic from the first book, Schedule for Sale, on workforce planning. As the name suggests, there is even more schedule to be gained over just getting the construction team organized (workface planning) by aligning engineering and procurement deliverables with the needs of construction (advanced work packaging). This transition of workface planning into advanced work packaging is the bigger picture of construction productivity and the natural evolution of the road map that leads to the right stuff, ending up in the right place, in the right sequence.

Valuing People in Construction provides contemporary perspectives on the 'glue' that binds the construction process together: people. The book addresses people issues in the construction industry where behavioural outcomes impact upon business and project performance. The main proposition of the book is that as people continue to lead the completion of construction activities, their health, safety, and well-being should be seen as a priority, and valued by stakeholders. As employers and employees, the role of people in construction must be to strive for the improvement of individual lives and society. This edited collection, which is the first book to focus specifically on placing value on people in construction, focuses on people at work, gender at work, conditions at work, and respect at work. In addition to an editorial overview, the book presents tested and refined empirical work and case studies by leading construction researchers from Africa, Australia, and Europe. Essential reading for researchers, students and professionals interested in construction management, the sociology of construction, HRM in construction, gender, work and health studies.

Project Management for Construction

Total Construction Management

Core Concepts and New Frontiers

Architectural Management

This is Lean

Lean Construction

Fierce Conversations

In Developing Lean Leaders at all Levels we build on the theory in the original book, The Toyota Way to Lean Leadership, and answer the questions: How can I apply this in my organization? What concrete actions can I take to begin the journey of becoming a lean leader? How can I spread this learning to all parts of the organization? What critical tools are needed to turn the theory to practice? This book adds examples from over twenty years of experience by Dr. Liker in working with companies outside of Toyota. The book treats you as a student who will be actively engaged in developing lean leader skills as you read. It acts as a tutorial for beginning the journey.

This book collates the main research developments around Lean Construction over the past 25 years with contributions from many seminal authors in the field. It takes stock of developments since the publication of Koskela's (1992) Application of the New Production Philosophy to Construction and, in doing so, challenges current thinking and progress. It also crystallises theoretical conceptualisations and practically situated learning whilst identifying future research challenges, agendas and opportunities for global collaborative actions. The contributors present the development of Lean Construction as a fundamental part of improving construction productivity, quality and delivery of value to clients and users of built infrastructure. In doing so, the book introduces the reader to the foundational principles and theories that have influenced the way we now understand Lean Construction and has provided very useful insights to students, practitioners and researchers on key junctures over the last 25 years. Highlighting the key contemporary developments and using global case study material the chapters demonstrate good practice but also help introduce new thinking to both lay readers and experienced practitioners alike. This book is essential reading for undergraduate and postgraduate students, researchers and practitioners with an interest in Lean Construction and construction management, providing a general understanding of the area, current state of the art knowledge as well as providing an insight into areas for future research.

This is a resource prepared for practitioners of Integrated Project Delivery. It is a step by step guide to the implementation of Integrated Project Delivery for new and experienced leaders. It is full of real project examples and pictures.

Architecture 3.0

Modern Construction

Proceedings of the 11th International Conference on Construction in the 21st Century, London 2019

Integrated Project Delivery

Ludic, Co-design and Tools Supporting Smart Learning Ecosystems and Smart Education

Developing Lean Leaders at All Levels

A Novel of Lean Practice