

Total Construction Management: Lean Quality in Construction Project Delivery

By John Oakland and Marton Marosszeky

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“We’ve always done it this way” is one of the most infuriating phrases overheard on any construction jobsite. It symbolizes stagnation, an aversion to change and a reluctance to learn from past mistakes. It is an anathema for an industry rapidly being transformed by technology and globalization. Fortunately, the authors of *Total Construction Management* advance a refreshing alternative. By combining lessons from lean manufacturing and quality management into the idea of “lean quality,” John Oakland and Marton Marosszeky lay out a comprehensive vision for an agile, more value-driven industry. This vision is built quickly at first, then gradually deepened through the use of case studies and the unification of innovative management theories and tools from the past two decades. But, there is a trade-off in this approach. Many of the theories and tools used to build the authors’ vision of lean quality can and do have entire books written about them. Thus, anyone seeking a how-to book on pull planning or total quality management (TQM) should look elsewhere, perhaps to several of the authors’ prior works. *Total Construction Management* is a more of a primer that brings an extensive breadth of seemingly disparate management ideas together to establish lean quality as a lens for advancing effective management. That said, the variety of ideas being presented is unlikely to be fully appreciated by undergraduate students, making the book more suited for graduate-level study and industry professionals with a few years of practical experience in construction management.

Before delving too deeply into the book’s structure and content, the qualifications of the authors cannot be understated. John Oakland brings his expertise on the quality side of the lean quality equation, having researched, published on and promoted TQM in organizations for nearly three decades. Marton Marosszeky, on the other hand, brings his knowledge of lean management and production processes obtained firsthand through his work as a Civil engineer, professor and Consultant. Both authors are well-regarded in the field and their combined experiences strike a successful balance between academic and practical perspectives.

The book itself contains 19 chapters, subdivided into six major sections. Each chapter ends with a list of bulleted highlights of important concepts and each major section ends with discussion questions clearly designed to test the reader’s ability to apply those concepts. The first section (Chapters 1-4) provides a foundational background on lean quality that reviews the current state of lean management in construction, defines quality through the eyes of the customer and reviews various TQM models. Section 2 (Chapters 5-8) presents an exhaustive summary of lean planning techniques, ranging from supply chain partnerships to pull planning, building information modeling and the design structure matrix to name a few. Section 3 (Chapters 9-11) discusses perhaps the most important aspect of lean quality: measuring and benchmarking performance. These chapters highlight commonly used measures for efficiency, productivity and



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effectiveness. Section 4 (Chapters 12-15) is all about process management and making these measures part of a continuous improvement effort. Section 5 (Chapters 16-18) is dedicated to the human resources and cultural shifts that make lean quality a reality, specifically the communication, leadership, and learning skills needed in project managers. Lastly, Section 6 (Chapter 19) discusses the implementation of lean quality at an organizational level. While short, this chapter has some valuable insights and warnings about forcing too much change, too soon within a construction firm. Throughout each chapter, the writing is approachable, consistent and well-supported by diagrams and other visuals. The authors also make use of descriptive case studies, with roughly 150 pages in the book dedicated to 14 studies.

One limitation in the book's content is a lack of detail regarding how project delivery methods and their associated contractual arrangements fit within the lean quality framework. Early on, the authors highlight the Lean Construction Institute's quality triangle and suggest that embracing all three sides – integrated organization, aligned commercial interests and lean operating methods – is crucial to achieving lean quality. However, only integrated project delivery and perhaps some versions of design-build are contractually structured to meet that challenge. Does this mean that lean quality is not attainable in more traditional project delivery methods, such as design-bid-build? Or, is there still value in applying select process improvements and tools? The answer to these questions will almost certainly determine the rate and extent of lean quality adoption in the construction industry.

As stated earlier, the single greatest strength of *Total Construction Management* is its broad and unifying vision for the industry. The authors successfully expand the concept of quality from a product-centered view of the building, to a process-centered view of the project. Synthesized from the best management theories and tools of the past two decades, this perspective recognizes the importance of waste-reducing management and organizational efforts in creating value for the customer beyond that of the product itself. In other words, lean quality is the antithesis of “we’ve always done it this way.” With this book, John Oakland and Marton Marosszeky have written a roadmap making this vision a reality.

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