Designing Intelligent Construction Projects

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ISBN: 978-1-119-69080-1 August 2022 Wiley-Blackwell 256 Pages

DESCRIPTION

Designing Intelligent Construction Projects

Explore the potential impact of management cybernetics, lean methodologies, and digitalization on the construction sector

As a heavily asset-driven industry, construction is at the crossroads of a transformation. Digitalization has already begun and is acting as a beacon. Intelligently designed project organizations and systems must follow to make construction projects fit for the future.

In *Designing Intelligent Construction Projects*, a distinguished project manager and engineer and a lean and integrated management system manager deliver a comprehensive exploration of the fundamentals of management cybernetics, lean management in general and lean construction in particular, and construction-oriented digital tools. In the book, the authors describe how these disciplines can be combined to successfully transform construction projects.

Preliminary discussions of management cybernetics and lean management are followed by specific discussions of how these topics can be adapted to the construction industry. The book connects the principles of management cybernetics and digitalization, accessibly describing the potential impact of digitalization on construction projects.

Readers will also find:

- Illuminating case study material that highlights how change management methodologies, game theory, and collaborative contractual design can deliver results
- Strategies for achieving lean, viable, and digitally oriented construction leadership fit for the modern market
- Rigorous discussions of the current and potential future impact of digitization on construction firms

Perfect for built environment professionals and practitioners, *Designing Intelligent Construction Projects* will also earn a place in the libraries of postgraduate and advanced undergraduate students of civil engineering, architecture, and project management with an interest in construction management.

ABOUT THE AUTHOR

Michael Frahm was educated in Stuttgart, Kaiserlautern, and Saarbrücken in engineering and business law, and has fifteen years of professional experience in mega construction project management. He is director of the non-profit association for Systems and Complexity in Organisation (SCiO) for Germany and is a Certified Advanced System Practitioner of this organization.

Carola Roll was educated in Straubing and Krems in technical business administration, lean operations management, and integrated management systems and has over 20 years of professional experience in interface positions between business administration and technology in various medium-sized companies. She is director of the non-profit association for System and Complexity in Organisation (SCIO) for Germany and head of Bavaria's related practice group.