

Book Information

Handbook of Product Lifecycle Management (PLM)

Fundamentals, Components, and Implementation Best Practices

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Book Description

The *Handbook of Product Lifecycle Management (PLM)* provides a structured guide to PLM, from its foundations and strategic role through implementation, value realization, emerging technologies, and PLM 5.0. Organized into five parts, the handbook connects PLM principles with practical implementation through frameworks, examples, business scenarios, and insights from global thought leaders. It addresses both the strategic and technological dimensions of PLM and explores how organizations can use PLM to support digital transformation, sustainable innovation, and long-term business value. The handbook is intended for PLM and digital transformation professionals, manufacturing organizations, consultants, educators, researchers, and students seeking a practical and comprehensive perspective on modern Product Lifecycle Management.

Five-Part Structure

Part I – Understanding Product Lifecycle Management

Digital Realm; Principles of Product Lifecycle Management

Part II – Digital Product and Process Strategy

Product Development Business Strategy; PLM Strategy to PLM Process

Part III – Technological Environment of PLM

PLM Modules; Modern Technologies Complement PLM

Part IV – Value Drive of PLM Execution

PLM Implementation Best Practices; PLM Business Scenarios

Part V – PLM 5.0

Smart Sustainable PLM; PLM Visionaries: Insights from Global Thought Leaders; PLM Economics

Distinctive Elements

- Practitioner-oriented perspective on PLM strategy and implementation
- Connects business strategy, PLM processes, technology, and value realization
- Covers PLM implementation best practices and real-world business scenarios
- Explores emerging technologies complementing modern PLM environments
- Introduces the concept of PLM 5.0 and Smart Sustainable PLM
- Includes insights from global PLM thought leaders
- Addresses the economics and business value of PLM
- Designed for both technical and non-technical audiences
- Applicable across small, medium, and large manufacturing enterprises

Publisher

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Publisher Page

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Book Landing Page

<https://neelsmartec.com/plm-handbook/>

1. Short Book Description

The Handbook of Product Lifecycle Management (PLM) provides a structured practitioner perspective on modern PLM, connecting business strategy, product and process development, technology, implementation, and value realization. It brings together practical guidance, business scenarios, emerging technologies, PLM 5.0, sustainability, PLM economics, and perspectives from global PLM thought leaders to help organizations understand and apply PLM in today's changing industrial environment.

2. Standard Book Description

The *Handbook of Product Lifecycle Management (PLM)* provides a structured practitioner reference for understanding, planning, implementing, and advancing Product Lifecycle Management in modern industrial organizations.

The handbook takes readers through the complete PLM journey; from understanding the principles and digital foundations of PLM to developing product and process strategies, establishing the technological environment, executing PLM initiatives, and realizing business value.

Across five parts, it addresses PLM strategy and processes, PLM modules and complementary technologies, implementation best practices, business scenarios, Smart Sustainable PLM, PLM 5.0, and PLM economics. It also brings together perspectives from global PLM thought leaders, reflecting the diverse ways in which PLM is evolving across industry, academia, consulting, and technology.

Designed for PLM professionals, manufacturing and engineering leaders, consultants, educators, researchers, and students, the handbook connects strategic thinking with practical implementation considerations and provides a broader perspective on the role of PLM in digital transformation and long-term business value.

Author Biography

Short Bio — 60 words

Uthayan Elangovan is an independent PLM Strategy and Digital Transformation Advisor with more than 20 years of experience across Product Lifecycle Management, IIoT, and Industry 5.0. He has worked across manufacturing industries and PLM ecosystems including Windchill, ThingWorx, OpenBOM, and ERP environments. He is the Founder of Neel SMARTEC Consulting and the author of books on PLM, IIoT, and Industry 5.0.

Author Standard Bio — 130 words

Uthayan Elangovan is an independent PLM Strategy and Digital Transformation Advisor and the Founder of Neel SMARTEC Consulting. With more than 20 years of hands-on experience in Product Lifecycle Management, IIoT, and industrial digital transformation, he works with manufacturing organizations on PLM strategy, process transformation, implementation, capability assessment, and technology adoption. His experience spans PLM and digital technologies including PTC Windchill, ThingWorx, OpenBOM, and ERP environments, across automotive, electrical, medical, industrial, and electronics sectors. His work focuses on connecting business strategy, product development processes, technology, and measurable business value.

Uthayan is the author of books covering Product Lifecycle Management, IIoT, and Industry 5.0, published internationally by CRC Press and Momentum Press. He holds a Master's degree in Computer Integrated Manufacturing from PSG College of Technology and also contributes to industry and academic communities through teaching, lectures, and professional engagement.

Key Messages

1. PLM is a business discipline, not only a technology initiative
The handbook presents PLM in the context of business strategy, product development, processes, technology, implementation, and value realization.
2. PLM needs to connect strategy with execution
The book connects product development business strategy → PLM strategy → PLM processes → technology → implementation → business value, providing a structured view of the PLM journey.
3. Implementation matters as much as technology
The handbook gives particular attention to PLM implementation best practices and business scenarios, reflecting the practical challenges organizations face when translating PLM concepts into operational environments.
4. Modern PLM extends beyond the traditional PLM platform
The technological environment of PLM is evolving. The handbook examines PLM modules alongside modern technologies that complement PLM, recognizing that organizations increasingly operate across interconnected digital environments.
5. PLM should be evaluated through business value
The handbook addresses value-driven PLM execution and PLM economics, emphasizing the importance of understanding the business impact of PLM rather than viewing implementation simply as a software investment.
6. PLM is evolving toward PLM 5.0

The final part explores Smart Sustainable PLM, global thought-leader perspectives, and PLM economics, examining how PLM is evolving in response to sustainability, digital transformation, and changing industrial requirements.

7. PLM knowledge is collaborative

The handbook brings together perspectives from industry, academia, consulting, enterprise leadership, and technology communities, including contributions from global PLM thought leaders.

One-line positioning statement

The Handbook of Product Lifecycle Management (PLM) connects PLM strategy, processes, technology, implementation, and business value while exploring the evolving role of PLM in digital transformation and PLM 5.0.

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