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Peter Bebersdorf • Arnd Huchzermeier

Variable Takt Principle

Mastering Variance with Limitless
Product Individualization

 Springer

Peter Bebersdorf
AGCO, Fendt
Marktobersdorf, Germany

Arnd Huchzermeier
WHU – Otto Beisheim School of Management
Vallendar, Germany

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*For Annette, Lotta, Paul and Mats. For your
love, strength, warmth and the future with
you.*

Peter

*For Claudia, Alexandra and Stefanie. For
your love, patience and support.*

Arnd

Foreword

While the west was focused on better control and optimization of assets, Toyota was discovering how to build and manage integrated systems for creating value. Key principles included linking activities in a continuous flow driven by the pull and mix of demand. They also developed a Heijunka methodology for levelling the mix over each production cycle.

But could this be used where the work content for different products varied considerably. Early on the clothing industry did just that with what became known as the “Toyota Sewing System.” This book describes the theory and practice in a manufacturing setting. This also creates a common rhythm or Takt time enabling everyone to see progress to plan in real time.

However, Toyota also discovered that integrated systems only work if each step can be performed “right first time—on time—every time.” To do this they also engage those carrying out the work in the detailed design of the work steps for each type of product, to maintain quality at source, and to respond quickly to the frequent interruptions that arise throughout any integrated system.

This experience lays the basis for continuous detailed improvements to the system, are valuable in responding to changing circumstances and for teams designing next-generation products and processes. Indeed, they lay the foundation of a common problem-solving language for operatives and engineers throughout the organization. This book describes an important building block in designing responsive and adaptive systems to meet the challenges of the future.

Lean Enterprise Academy
Llandudno, UK

Daniel T. Jones

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