

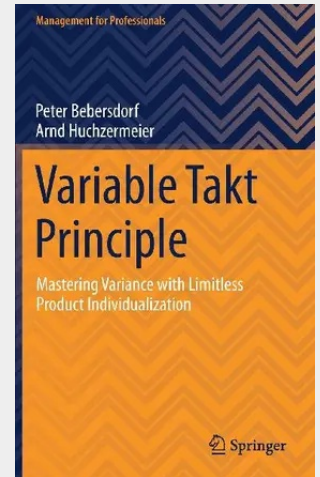
Variable Takt Principle

This book describes how the implementation of variable rate launching in the context of a mixed-model assembly line with unlimited customization flexibility promotes customer-centric production.

Variable rate launching (VRL) – as opposed to fixed rate launching (FRL) – eliminates idle time and utility work in mixed-model assembly lines. Even in the context of limitless customization, which runs the risk of concentrated peak workloads and possible longer assembly lines, a variable takt proves to be more economical than a fixed takt. On the technical side, a fixed takt requires both a healthy balance of process times and optimal scheduling to create feasible production schedules, as using average takt does not allow workers enough time to complete their tasks for more complex products. Because the variable takt relies on similar process times for a given product across the entire line for one product, and all products are given exactly the time they need for assembly, optimal series-sequencing and regular task rescheduling can be eliminated.

This book is intended as a reference guide for experienced executives in manufacturing and academics teaching operational effectiveness for customer-centric production, and makes extensive references to AGCO Fendt's modern tractor line in Marktoberdorf, Germany. The book also offers application case studies from companies in related industries such as automotive, electronics, and machine tools. The book's key message is that variation should not be universally eliminated from manufacturing. As such, the book represents a counterpoint to the philosophy advocated by the Toyota Production System.

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