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Manufacturing/Operations

Creating Stable and Predictable Operations with a Demand Driven Operating Model

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SUMMARY Today's volatile, uncertain, complex and ambiguous supply chain and operations environments require stabilizing, agile and resilient operating models. A Demand Driven Operating Model (DDOM) is a supply order generation, operational scheduling and execution model using actual demand in combination with strategic decoupling and control points and stock, time and capacity buffers in order to create such a stable, reliable and agile system in the operational relevant time horizon. A DDOM is designed around four basic elements: (1) It paces to actual demand. (2) Strategic decoupling points absorb variability. (3) Operational control points are used for scheduling, gating and resource and order synchronization as required. (4) Dynamic stock, time, and capacity buffers protect the decoupling and control points. The DDOM is designed specifically for today's environment. It provides clear operational priorities to ensure high customer service, controlled inventory levels and short lead times even under adverse conditions. Within the DDOM, Demand Driven Material Requirements Planning (DDMRP) generates replenishment orders (work orders, purchase orders or stock transfer orders) for the stock buffers at the strategic decoupling points on the basis of actual demand and the buffer configuration. Detailed resource scheduling is driven around and through the operational control points. Pace setting control point resources (drums) are scheduled finitely, using the order request dates generated by DDMRP. Demand Driven Execution (Buffer Management) actively manages stock, time, and capacity buffers in relation to all open and released orders and scheduled activity. Time buffers protect the control point schedules. Capacity buffers define non control point resources' ability to absorb execution variability or support additional flow. On a continuous basis, alerts are provided as signals to DDMRP and order progress to Demand Driven Scheduling to enable early and proactive intervention as necessary to protect the flow. Adaptation describes the closed-loop feedback and the analysis of past and projected future model performance, feeding into DDS&OP and resulting in a reconfiguration of the DDOM. The model configuration or "Master Settings" replace the conventional notion of the Master Production Schedule. The presentation explains the underlying concepts and how a DDOM operates by discussing its components and interactions and illustrates its functioning through the case of a machining component manufacturer.

SPEAKER BIO Christoph Lenhartz, MBA, Jonah, TOCICO-certified, Certified Consultant (bdvb), DDPP, DDLP, SCOR-P, CSCP, CSCA and TOCICO Board Member, Past TOCICO Chair. In over 20 years Christoph has acquired a wide-ranging, international experience in industry, as a successful entrepreneur and also a leader of management consulting teams in high complexity TOC implementations. He has led strategic, business transformation, supply chain management and IT projects and his expertise also includes post-merger integration of supply chain operations for major international groups. One of the leading experts in Europe in TOC and Demand Driven methodologies he is the General Manager of Catena Strategies, a TOC-based consultancy in management and operational excellence. He also serves as Master Instructor for the Demand Driven Institute. He has published articles on TOC and management topics in journals such as "Quality Progress" and has translated and written books on TOC and management topics in German. Christoph holds an MBA from Clemson University (USA), has graduated from the University Essen (Germany) as a Diplom-Kaufmann and has pursued post-graduate studies at Washington State University (USA).