

# Demand Driven MRP

*From “Push and Promote” to “Position and Pull”*

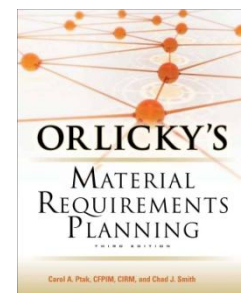
**A Supply Chain Planning and Execution Revolution is Happening Now.**

## **The Problem with Traditional Planning Systems**

Traditional material planning and control system (ERP/MRP and distribution requirements planning systems) are systems in which detailed forecasts are used to procure needed materials and push manufacturing orders through the production and distribution system to the point of consumption. This system is typically called “Push and Promote.” These legacy rules and systems are causing enormous amounts of friction and compromises within and between manufacturers in today’s more complex and volatile supply chains.

Most Purchasing and Materials Managers feel like they are caught between a rock and a hard spot. Shortages of critical items must be eliminated while at the same time inventory levels must be dramatically reduced and expedite related expenses minimized. In today’s economic climate this conflict is more acute than ever. Unfortunately most of today’s available tool sets are insufficient to effectively resolve this conflict in the face of increasing demand and supply volatility and variability. Learn about the shortcomings of tools like MRP and kanbans as well as the conflict that they have with each other in the face of this volatility and variability. Discover a new and innovative demand driven approach that takes the relevant and meaningful attributes of tools like MRP and kanbans and combines innovative planning and execution techniques to satisfy both traditional planning personnel and Lean advocates.

Demand Driven MRP is introduced in the groundbreaking third edition of *Orlicky’s Material Requirements Planning* (Ptak and Smith, 2011)



## **What is Demand Driven MRP?**

Demand Driven Material Requirements Planning is an innovative formal planning methodology that aligns resources, working capital and supply chain planning and execution to actual demand. Through innovative and intuitive approaches and fundamental planning changes DDMRP ends the compromises and dramatically augments the effectiveness of a company’s planning organization.

The five components of DMRP are; 1. Strategic Inventory Positioning; 2. Buffer Profiles and Level Determination; 3. Dynamic Buffers; 4. Demand Driven planning; 5. Highly Visible and Collaborative Execution. For more information on the methodology [www.demanddriveninstitute.com](http://www.demanddriveninstitute.com)

### **CDDP Program Content**

<p><i>Module 1: MRP in the Modern World – the materials challenge in the 21st Century</i></p> <ul style="list-style-type: none"> <li>• Key questions for planning and flexibility</li> <li>• Dealing with Variability</li> <li>• Materials or Capacity - Where to Focus First</li> <li>• Continued Relevancy of MRP formal planning</li> <li>• The Challenge of MRP in Today’s Environment</li> <li>• MRP and Pull-Based Methods (e.g. Lean, DBR)</li> <li>• The Stagnation of MRP</li> <li>• The MRP Conflict</li> </ul>	<p><i>Module 2: Demand Driven Material Requirements Planning Introduction</i></p> <ul style="list-style-type: none"> <li>• What does “Demand Driven” mean?</li> <li>• Blending Independence and Dependence</li> <li>• Part Types in DDMRP</li> <li>• Planning and Execution</li> <li>• The Five Primary Components of Demand Driven MRP</li> <li>• DDMRP Comparison to Past Practices</li> </ul>
<p><i>Module 3: Strategic Inventory Positioning</i></p> <ul style="list-style-type: none"> <li>• The Positioning Factors</li> <li>• ASR Lead Time</li> <li>• ASR Lead Time and Matrix BOMs</li> </ul>	<p><i>Module 4: Distribution Network Positioning</i></p> <ul style="list-style-type: none"> <li>• Distribution network factors</li> <li>• Cumulative variability</li> <li>• Demand driven versus push and promote</li> <li>• Network Configurations and Options</li> </ul>
<p><i>Module 5: Buffer Profile and Level Determination</i></p> <ul style="list-style-type: none"> <li>• Inventory – Asset or Liability</li> <li>• Buffer Profiles</li> <li>• Buffer Zones</li> <li>• Calculating Buffer Levels</li> <li>• Continuous Improvement and Buffers</li> <li>• Buffer Level Summary</li> </ul>	<p><i>Module 6: Dynamic Buffers</i></p> <ul style="list-style-type: none"> <li>• Recalculated Adjustments</li> <li>• Planned Adjustments</li> <li>• Manual Adjustments</li> </ul>
<p><i>Module 7: Demand Driven Planning – Stocked Parts</i></p> <ul style="list-style-type: none"> <li>• Part Planning Designations</li> <li>• The DDMRP Planning Process</li> <li>• Supply Order Generation for Stocked Items</li> <li>• DDMRP Supply Order Generation Considerations</li> <li>• Supply Generation for Non-Stocked Items</li> <li>• Decoupled Explosion</li> </ul>	<p><i>Module 8: Highly Visible and Collaborative Execution</i></p> <ul style="list-style-type: none"> <li>• Challenging Priority by Due Date</li> <li>• Buffer Status Alerts</li> <li>• Synchronization Alerts</li> <li>• Execution Collaboration</li> </ul>
<p><i>Module 9: DDMRP and Master Scheduling</i></p> <ul style="list-style-type: none"> <li>• DDMRP Impacts to a Master Production Schedule</li> <li>• DDMRP and Capacity Scheduling Implications</li> <li>• DDMRP and Sales and Operations Planning</li> <li>• DDMRP impacts to ERP</li> </ul>	<p><i>Module 10: DDMRP Performance Reporting and Analytics</i></p> <ul style="list-style-type: none"> <li>• DDMRP Performance Reporting</li> <li>• Analytics</li> </ul>

### *DDMRP Solution Summary*

Certified Demand Driven Planner (CDDP) is a trademark of the International Supply Chain Education Alliance

Questions and Answers:

**Q.: For who is this training intended ?**

A.: Business Process VP's Directors of Supply Chain, Demand Planners, Business Operation Planners, experienced schedulers, in other words Supply Chain Practitioners. The methodology is highly intuitively, but puts numbers to the 'feeling' and enables proven control mechanisms.

**Q.: What makes DDMRP so different than e.g. APICS Training Modules.**

A.: DDMRP is an integral methodology which encompasses many of the elements thought by APICS. See this as an advanced training which deals with the problems of many operational (out of date) MRP systems. It also deals with the dynamic market conditions and sets in place tangible and operational tools in the process, irrespective of the IT support system.

**Q.: I have followed an APICS training, what is the added value of pursuing this training ?**

A.: The APICS Training is a good and solid basis in Material Management and Operational Principles. The DDMRP Training which can lead to the official and ISCEA accredited education degree of Certified Demand Driven Planner can be seen as an advanced training. All terms and acronyms used are consistent with those used in APICS training modules. It is not required though to be APICS certified to join the training sessions, most Supply Chain practitioners understand the methodology well.

**Q.: Which business functions benefit most by following this methodology?**

A.: Source, DDMRP allows a comprehensive method to create calling off-schedules which can be managed well by schedulers. This can be created in conjunction with your (main) suppliers.  
 Make; The Bill of Material can be provided with tangible 'buffers' and shortened lead times.  
 Deliver; the methodology allows for optimization of the Delivery Network

**Q.: What kind of production processes are best positioned to benefit from the DDMRP Methodology ?**

A.: Discrete Manufacturing, Batch Type Processing, Assembly Lines, Value Added Logistics (VAL), continuous processing to a certain extend.

**Q.: What can a Business or Process expect as Benefit from an implementation ?**

A.: Shorter Lead-times, Improved (customer) Fill Rates, Higher Return of Assets (ROI), and – in most cases – high(er) inventory turns (i.e. lower total inventories) and therefore have a positive effect on a(ny) business' bottom line financial performance.

Early Adopters:



### About Carol Ptak



**Carol Ptak** is currently a partner with the Demand Driven Institute, and was most recently at Pacific Lutheran University as Visiting Professor and Distinguished Executive in Residence. Previously, she was vice president and global industry executive for manufacturing and distribution industries at PeopleSoft where she developed the concept of demand driven manufacturing (DDM). Ms. Ptak is also a past president of APICS and has authored several books on MRP, ERP, Lean and Theory of Constraints (TOC).

Praise for the new Orlicky's Material Requirements Planning (Ptak and Smith, McGraw-Hill, 2011)

**"It is in short the best book in this subject area that I have ever seen."**  
John G. Schleier Jr.

**"This is a very useful and brilliant book. Ptak and Smith have resolved the core problems of MRP systems."**  
Eli Berniker PhD

**"This comprehensive text will, in my opinion, become THE new standard for anyone who wants to get ahead in manufacturing."**  
William M Hewitt

**"Carol and Chad: as one of the original MRPs, I applaud you and thank you for your work, and for advancing, with this book, our science more than any other has done in many years."**  
Bob Reary

### About the Demand Driven Institute

The Demand Driven Institute (DDI) was founded by Carol Ptak and Chad Smith, co-authors of *Orlicky's Material Requirements Planning, Third Revised Edition* in order to proliferate and further develop demand driven strategy and tactics in industry.



For more information about DDMRP: [www.demanddriveninstitute.com](http://www.demanddriveninstitute.com)

Interested ? You can sign-up for the 2 day training in Namur or Gent, BEL

**Dates in 2015: Namur = May 21-22th, and October 8-9<sup>th</sup>**

**Gent = March, 26-27<sup>th</sup> and November 5-6<sup>th</sup>**

See also Transitive Management's Website: [www.transitivemanagement.com](http://www.transitivemanagement.com)

### About Transitive Management SPRL

Transitive Management is highly specialized in end to end Supply Chain optimization. Our team consist of senior experts and practitioners with strong international experience .



Instructor for the sessions in Belgium: Marc Foret



With over 18 years of experience in Supply Chain Management, Marc has held several operational and tactical management positions across planning, sourcing, manufacturing, and logistics, in local, regional and global functions. He provides diagnostics, training, education and coaching services as well as expert counseling in the field of supply chain management to companies in various industries.

He is an associate professor at the Louvain School of Management in the Center of Excellence in Supply Chain Management (CESCM). Marc is a APICS SCC Qualified SCOR® Instructor. He is endorsed instructor for CDDP program. He speaks regularly at international supply chain conferences.