Demand Driven MRP Case Studies from the Demand Driven Institute

Oregon Freeze Dry Case Study

OREGON FREEZE DRY

Mountain House Division:

- Sales increased 20%
- Customer Fill Rate improved from 79% to 99.6%
- **60% reduction in inventory**

Industrial Ingredient Division:

- 60% reduction in make to order lead time
- 100% On-Time-Delivery
- 20% reduction in inventory

Raw Material

No out of stock

Reduced inventory $2.5M+

LeTourneau Case Study

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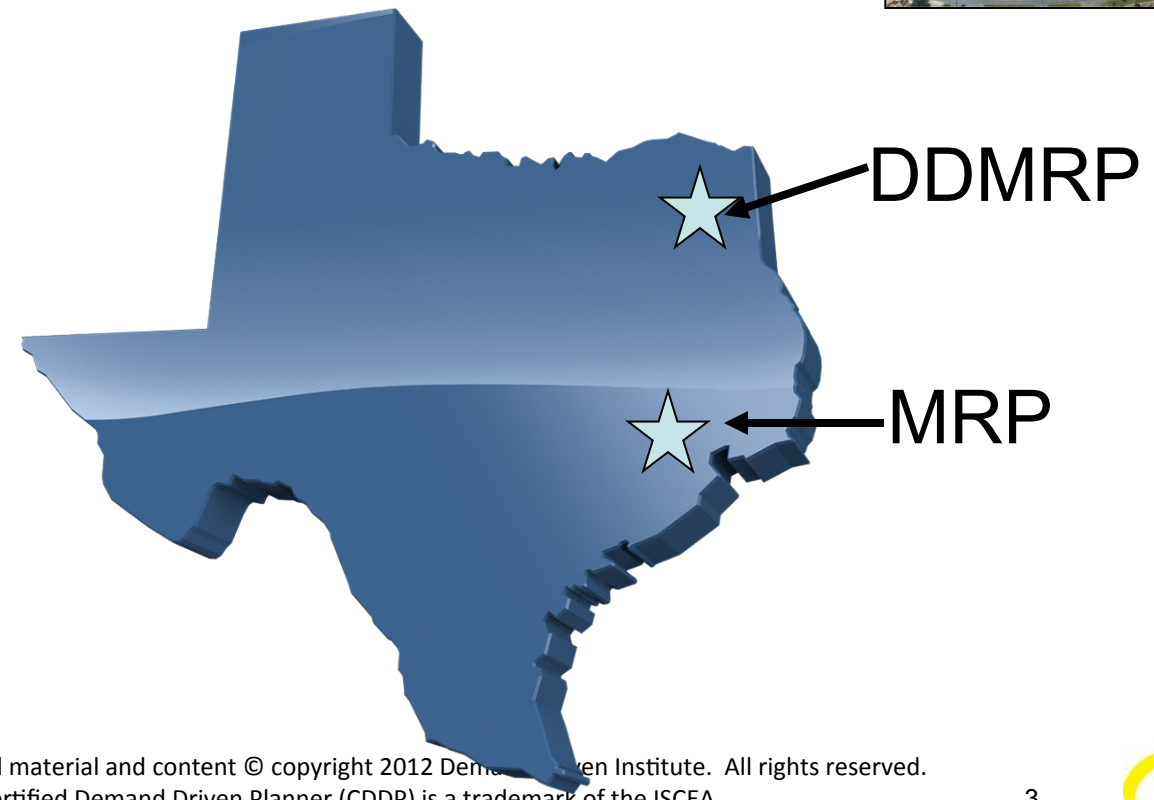
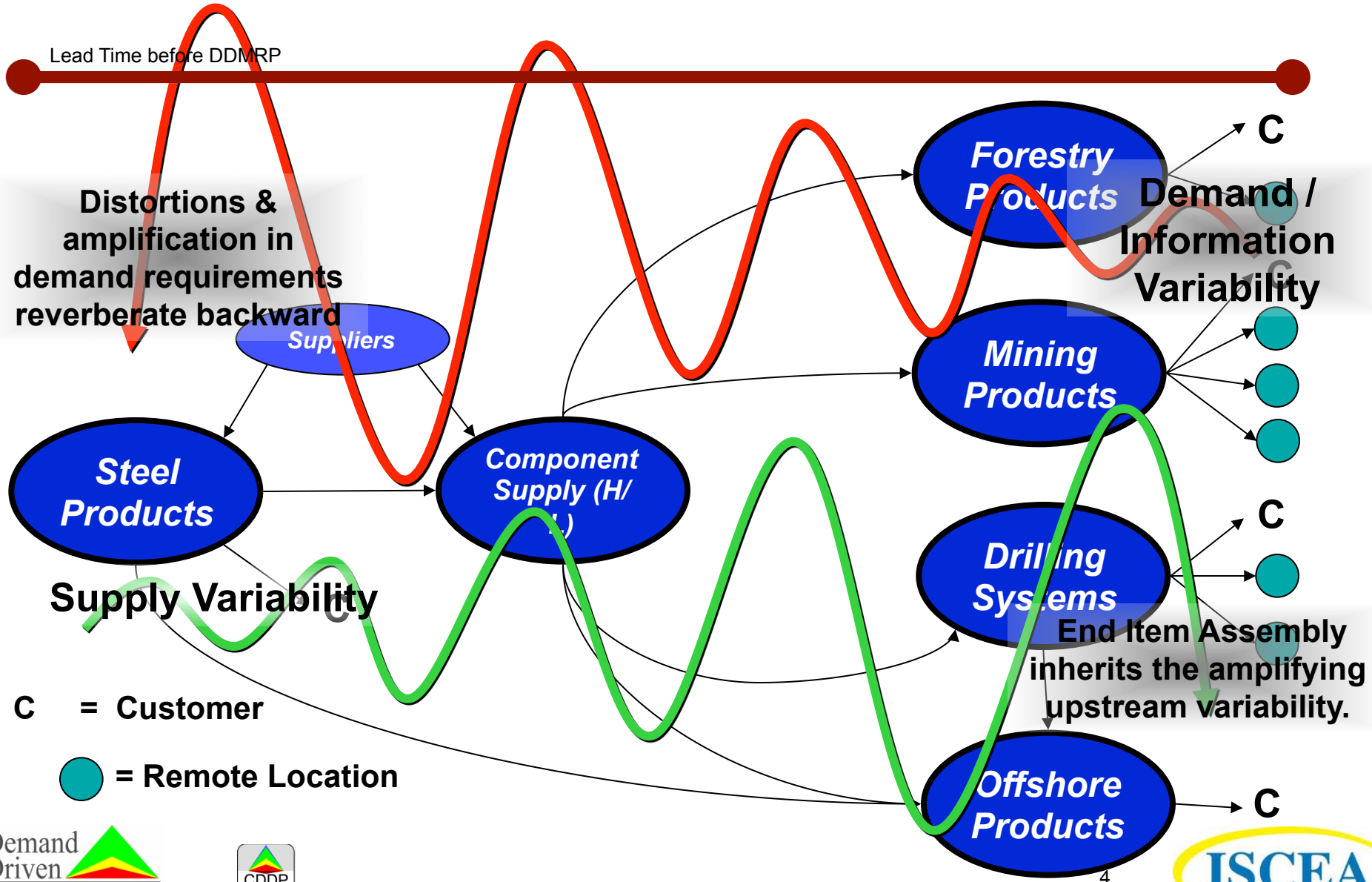
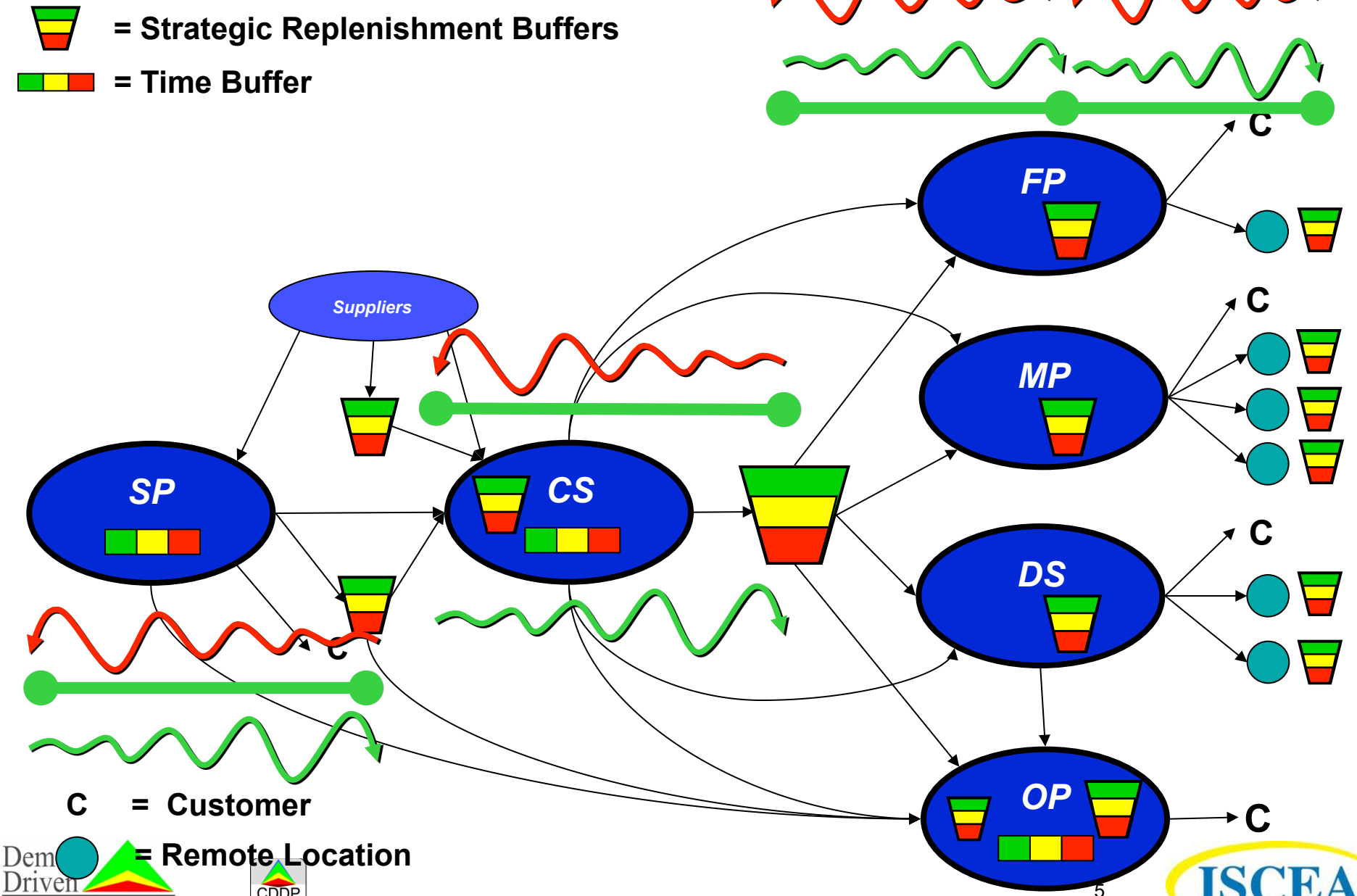
Built On Experience. Driven By Vision.



Synchronization and Flow Challenge



DDMRP Design



DDMRP (Longview) vs. MRP (Houston)

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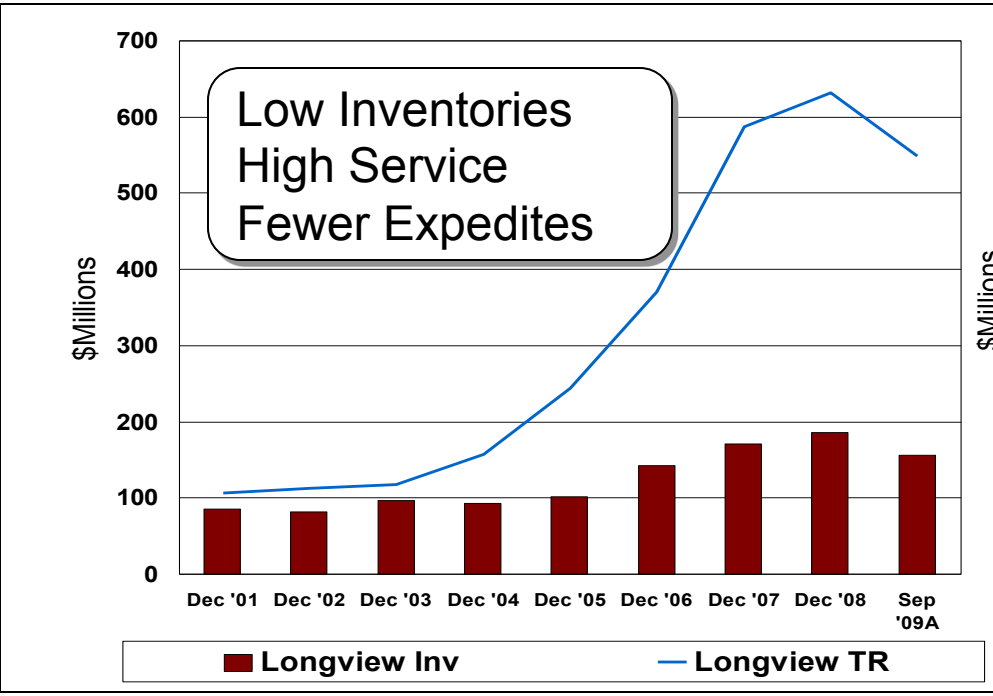
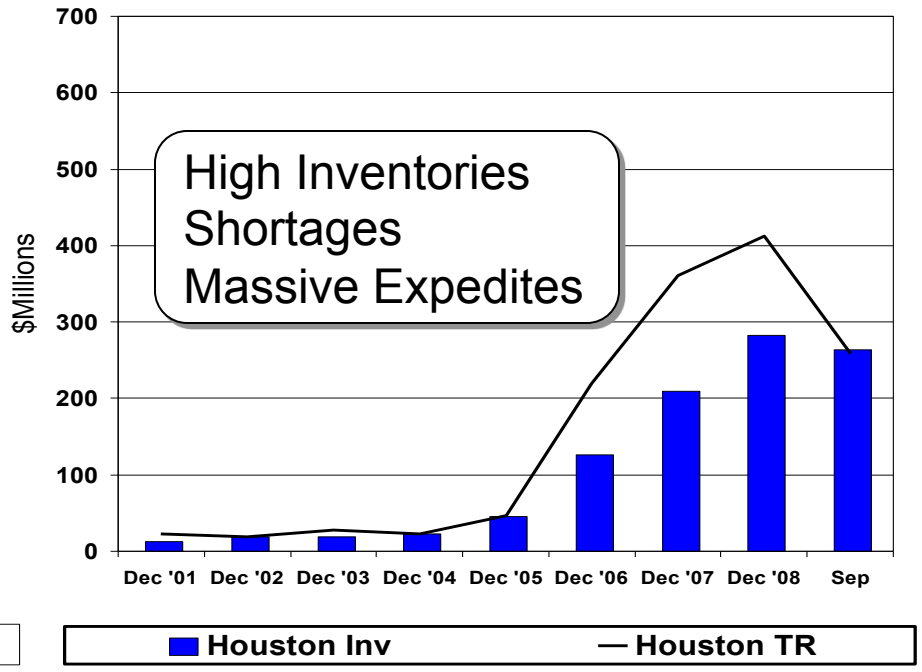


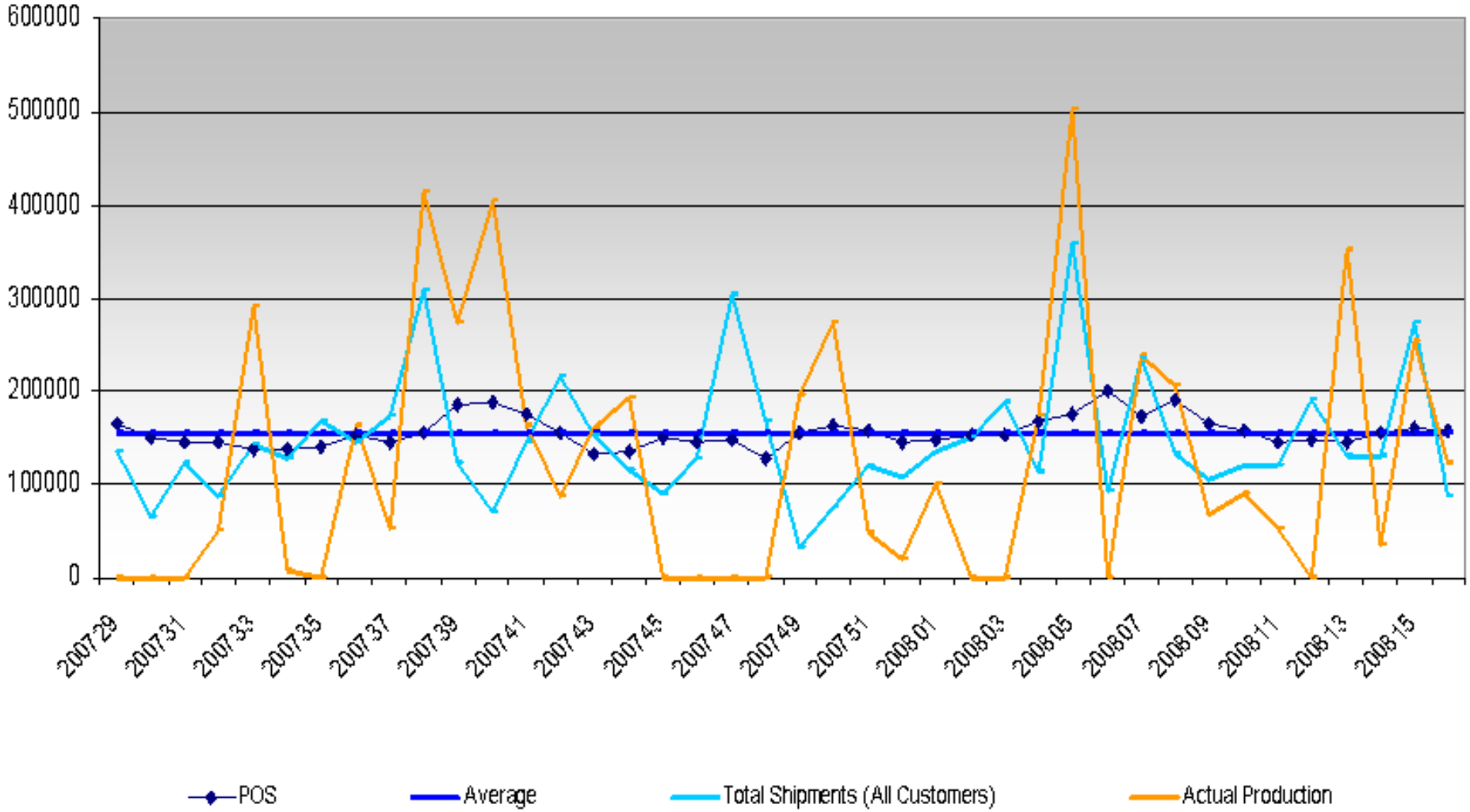


Demand Driven INSTITUTE

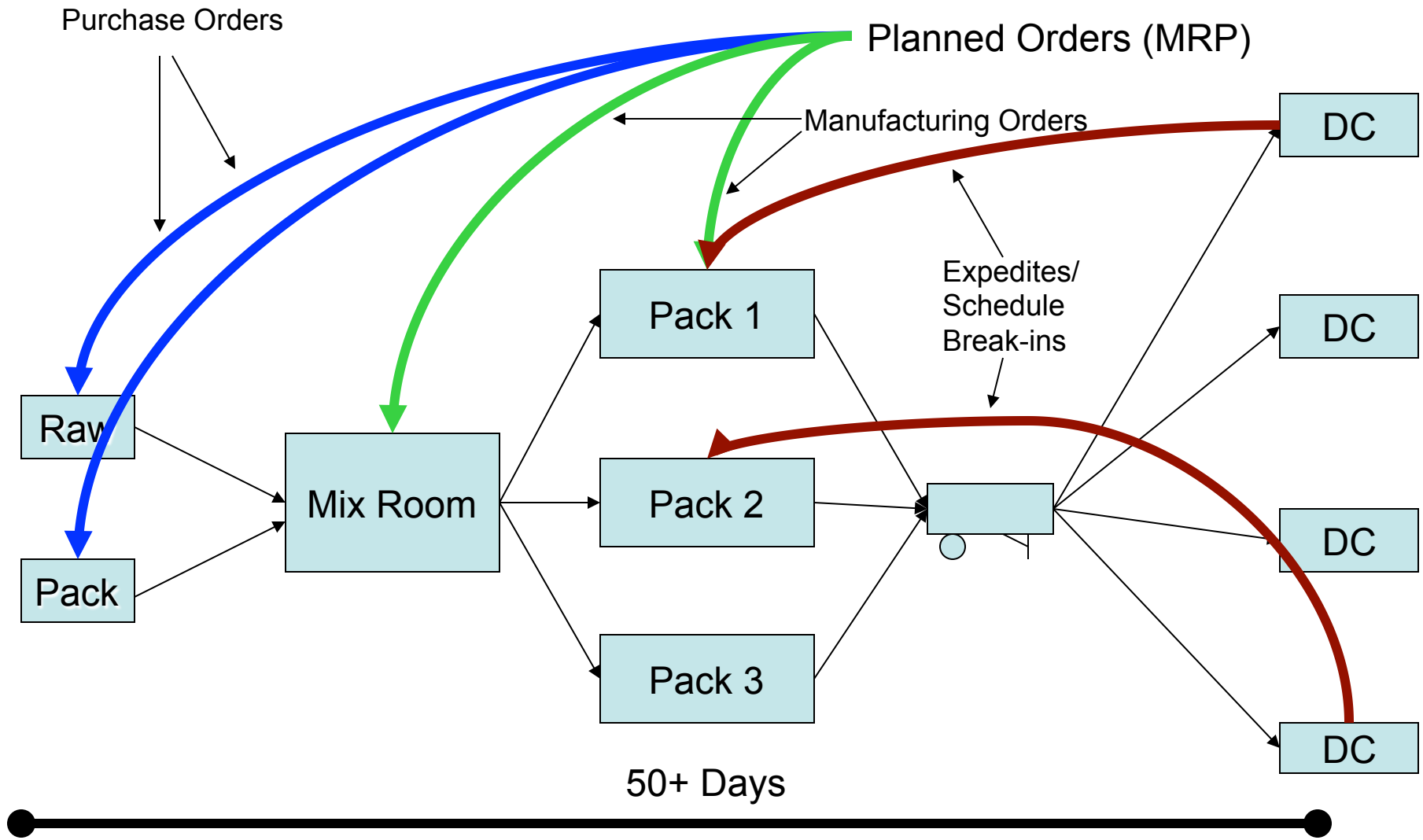
CDDP

ISCEA

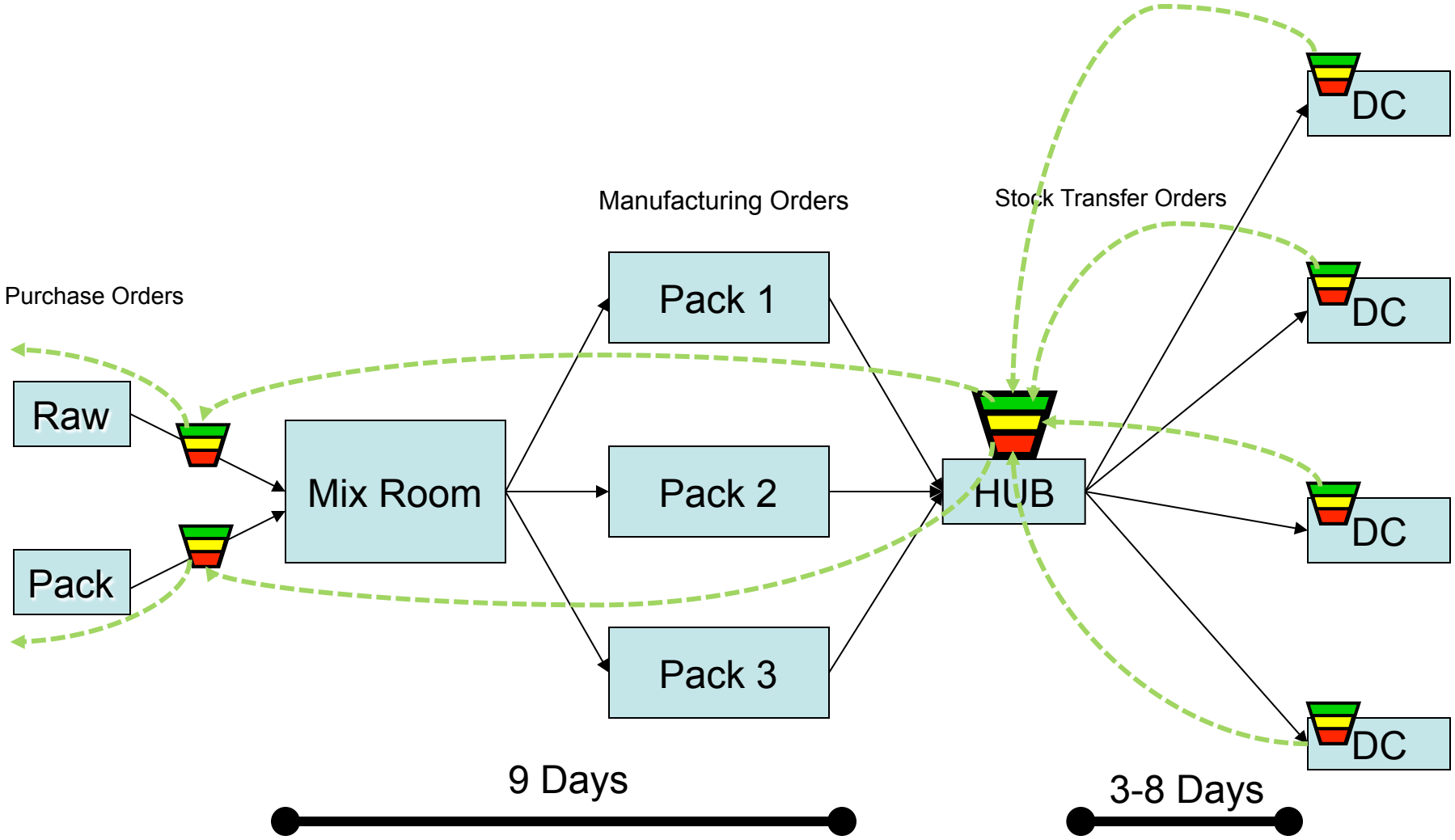
Before Demand Driven – FMCG Example (soap powder)



Before Demand Driven – FMCG Example (soap)



DDMRP Design – FMCG Example (soap)



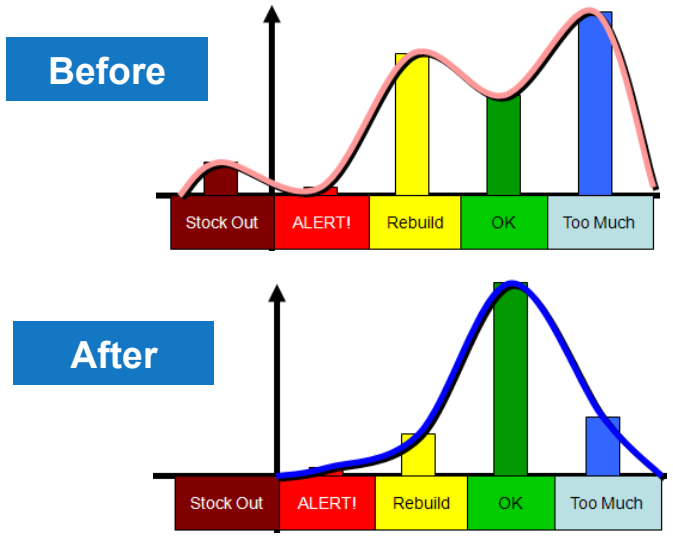
Immediate Results for Materials – FMCG (soap)

300 Materials are buffered without increase in RPW inventory. This is accomplished with 18% less total RPW.

Dampened the bull whip, now operating more effectively, with less working capital

Replenishment lead time has been reduced 82% to 9 days from 50 days, becoming Responsive

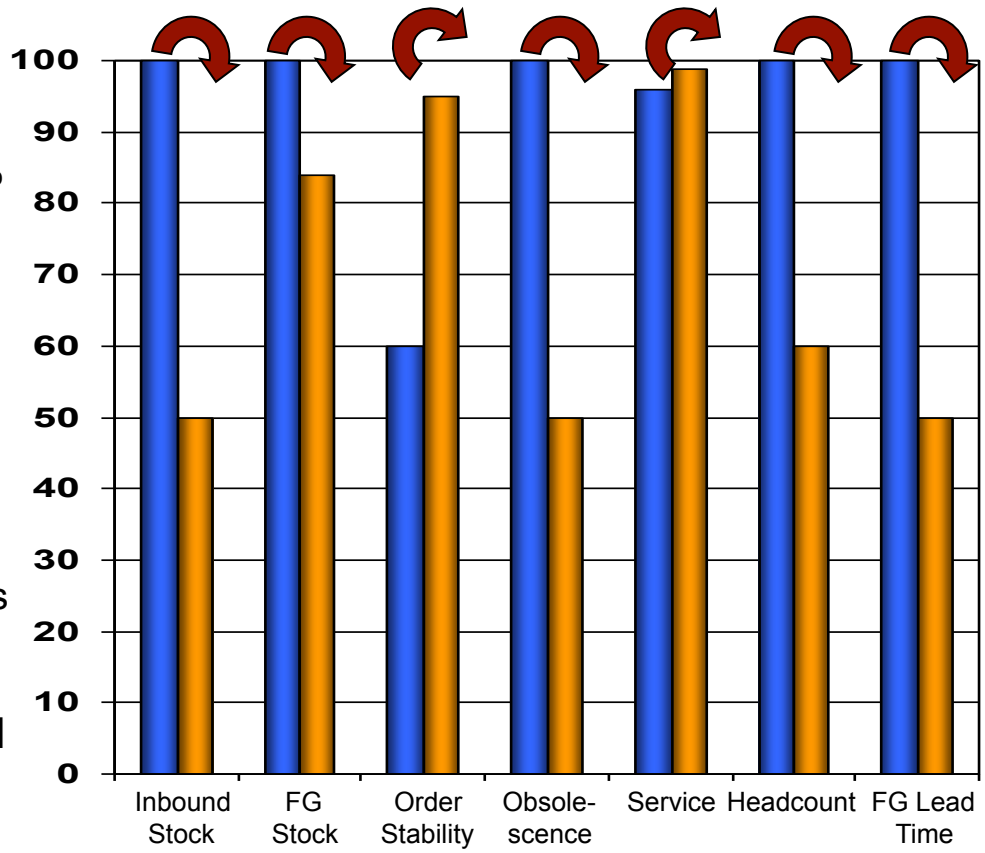
Finished Goods dropped 45+% with consistent services level at or above 99.7%



A few cases from Orchestr8

O8 Boots Contract Manufacturing Case Study

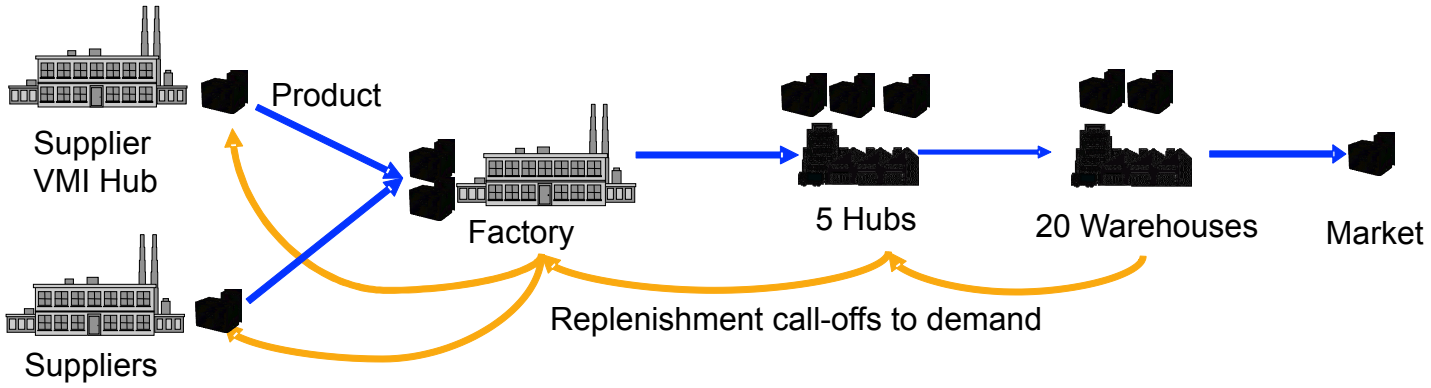
- Move from MRP based Planning to a Pull based philosophy
- Inbound
  - Doubled inventory turns
  - Improved schedule stability from 60% to 95%
- In-house Bottle Blowing
  - Reduced lead time from 6 weeks to 1 week
  - 33% stock reduction
- Finished Goods
  - 30% reduction in stock in 6 months
- In November 2007 BM switched off MRP
  - added remaining factory cells
  - 20% total FG stock reduction
  - Lead time reduced from 12 weeks to 4 weeks
  - Internal Service level improvement to 98.9%
  - Obsolescence reduced by 50%
- Now planning all items Internal and External using O8 processes
  - Enabled BM to win additional third party manufacturing business: P&G Manufacturing partner of the Year 2008
- Re-designed the Planning structure to match new way of working
  - 40% head count reduction



The BCM Management report shows wide ranging value to the business

People	Processes	System	Financial Benefits
Time Saving • Workload Reduction • Redistribution of Tasks	Establish 'Pull' Planning Methodology • Remove effect of MRP Noise	Volume Variability Analysis • Categorise Replenishment Techniques	Lead Time Reduction • Finished Goods • Components **Cash Flow Impact**
Supports New Structure • Headcount Reduction • Provide more intuitive tools	Daily Processes • Stabilise Demand • Swifter Reaction to change • Ability to Challenge	Target Stock Calculation • Setting & Reviewing Correct Levels • Simulation / Budget Preparation	Inventory Reduction • Finished Goods - VMI • Components **Cash Flow Impact**
Interaction with External Customers • Web Portal Functionality • VMI Opportunities • Enables Innovation Discussions	Support development of S&OP Process • Daily / Weekly Activities – One Set of Numbers • Monthly Analysis – Capacity Planning	Reporting • KPI Dashboard • Schedule Adherence • OTIF	Historical Picture of Supply & Demand • Supplier & Customer Order Points / Liability • Forecast Comparison
Interaction with Internal Customers • VMI	Interaction with Suppliers • VMI of Components • Supply Discussions • Greater Stability	Phase Out Process • Discontinue Dates • Control Obsolesence	

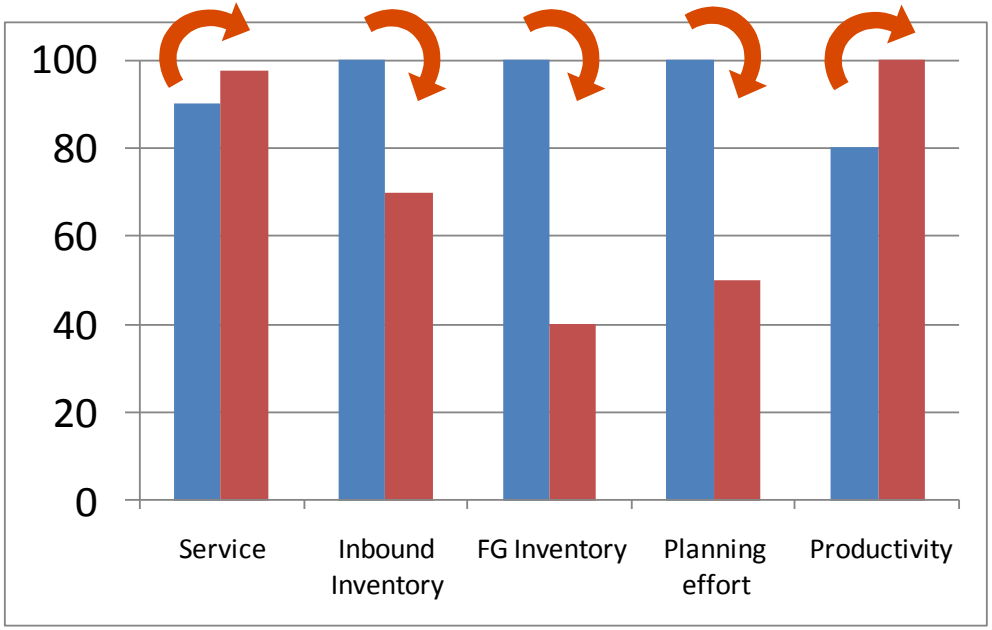
3M Finished Goods Planning



- Stocking locations in hubs and warehouses across Europe
- Planning done centrally
- Stock targets set in each location based on volume and order patterns at that point
  - Local warehouse stock set by market demand, lead time to ship from Hub & batch size to ship
  - Hub stocks set by call off demand pattern, lead time & batch size to make in the factory
  - Supplier stocks set against factory demand and lead time to resupply

3M Occupational Health
Inbound & Distributed finished goods

- Stock held in 5 EDCs and 20 local warehouses and inbound to the 3M factory
- 30% reduction in on-hand inbound inventory
- 60% reduction in FG Inventory across all sites
- Service performance better than the 97% target
- Elimination of process gaps in factory between Lean / Pull methods and planning approach
- Process delivers better productivity, reduction in Non-value added activity and better communication & relationships across the supply chain



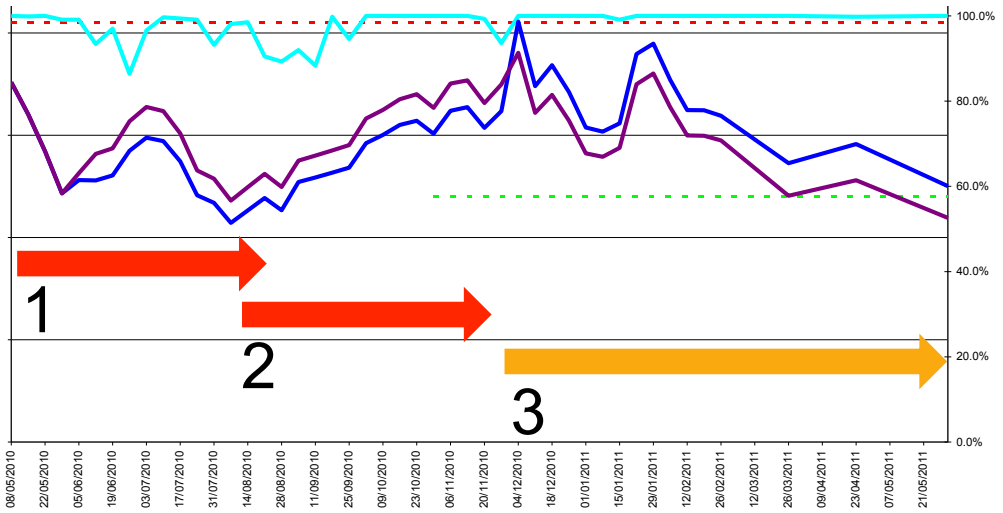
"Working with O8 has put us back in control of the supply chain"

S Alexander, 3M Supply Chain Manager, OH & ES, Europe

O8 Implemented in Thailand to support UK Warehouse

- Requirement to run a VMI style process from Thailand
- O8 system installed in Thailand in the summer of 2010
- The planning parameters changed to VMI in November 2010
- O8 system influenced stock levels in the UK from January 2011

	Cases 000s	Pallets	Value %	Weeks Stock
Jan 11	337	2,965	100%	5.6
May 11	181	1,797	65%	4.3
Var	-155	-1,168	-35%	-1.3



1. Stock reduced to target using standard internal safety stock optimisation led to decreased service levels
2. Stock levels returned to original level to solve service issues
3. O8 implemented: Service remains high whilst stock levels drop

Business Benefits

GRUNDFOS

Spare parts

O8 SmartChain

- Stock reduction by approx. 500K EUR (c.15%)
- High availability maintained – over 98%
- Scalability
  - one person handle all parts with no major challenges
  - No additional team required when implemented in new regions
- Low levels of ‘noise’ when changing the parameters
  - each month approx. 1,500 changes compared with 2,500
- Use of O8 ABC analysis to adjust lot sizes/rounding values with optimum balance between number of inbound order lines and stock level
- Clean up components and introduce more Kits
  - Easy to customize various aspect of it (rules, filters etc.)
  - Strong tool to make various simulations on a “what if” bases and find the optimum set of parameters
  - Extra potential available

Process benefits achieved with O8

- Monthly target process down to 2 days for 70K skus (spare parts) using standard rules
- System provides full simulation capability to trial alternate rule settings and support new implementations
- Control provided through the Phase In / Out controls
- Removal of mistakes through elimination of spread sheets
- ‘Cloud’ system allows installation across multiple SAP instances
  - Now live in Singapore
  - Current roll out in Australia and India