

MANUFACTURING: CAPACITY



Overview:

North American business unit growth constrained by manufacturing capacity and supply chain strategy

- 28+% growth in revenue
- 20+% growth in orders
- -33.6% reduction in product availability
- Product Lead Times 4 weeks → 12 weeks

184% INCREASE IN CAPACITY (\$2.6MM)

Overview: A manufacturer of sealing elements for the Oil and Gas industry was constrained by manufacturing and supply chain capacity. The product not only represented high margin (70+%) and high revenue, more importantly the product was an enabler to selling *systems* vs. individual *components*

Baseline data:

- Manufacturing & Supply Chain Capacity 85/wk
- “Make to order” manufacturing strategy in place
- 12 week product lead times (38% OTD)
- Increasing customer dissatisfaction
- Margin erosion due to overtime and premium freight costs

Project overview: Utilized Enterprise Value Stream approach to identify key opportunities to increase manufacturing and supply chain capacity to support 200+% increase in demand.

Lean Manufacturing and *Lean Supply Chain* techniques used to dissect the current value stream and identify keys to mobilizing capacity to support revenue, relieve backlog and reduce lead time without compromising quality or cost.

Implementation and deployment involved mobilization of four suppliers, development of two manufacturing cells and a shift

in supply chain strategy from a 100% “make to order” model to a “pull” model for 80% of total volume. The additional manufacturing and supply chain capacity created was used to first relieve order backlog (revenue), second to populate the Pull (Kanban) system for high runners and third to support the strategic growth of key products with strategic customers.

Managing for Daily Improvement and Visual management integrated into project and project solutions. Lean Events and projects used to build new processes and material systems. MDI formed basis for ongoing *continuous improvement*.

Results:

- Capacity increased from 85/mo to 240/mo within 100 days
- Increased product revenue \$2.6mm (associated system revenue increased by \$5+mm)
- Inventory turns of 24+
- Lead time reduced to <5 days for high runners; <2 weeks for balance
- On Time Delivery increased to 95+%

The model developed and used for this product was similarly deployed to resolve both manufacturing and supply chain constraints in South America, Central Europe and Asia.



- Lean Manufacturing techniques used to address capacity, lead time and productivity opportunities
- Lean Supply Chain used to design supply chain strategy most appropriate to product line
- Managing for daily improvement and Visual Management integrated into process

