



MEP Supply Chain OPTIMIZATION

Supply Chain Optimization

A company's supply chain is critical to its overall business strategy and can influence a significant percentage of operating results. The Manufacturing Extension Partnership's Supply Chain Optimization provides a step-by-step roadmap to help manufacturers address risk, increase visibility and create supply chains that function optimally. Manufacturers can benefit from the program which promotes a better flow of product from suppliers to customers resulting in reduced cost, improved quality and shortened lead times.

Supply Chain Optimization helps increase visibility and demonstrates how understanding the total cost of ownership helps equip manufacturers to identify and mitigate volatility, while increasing their ability to make the best sourcing decisions.

Strategic Approach. Supply Chain Optimization is a comprehensive approach to solving the challenges of U.S. manufacturers. The program helps you focus on the critical areas of the supply chain at all levels; from the top tier through all supporting tiers and value chains, down to the lowest tier.

MEP's Supply Chain Optimization roadmap includes a set of workshops and strategy sessions:

Executive Engagement - This series of working sessions focuses on the critical components required to create and implement a supply chain plan that delivers higher value, including profitability and satisfaction, for every stakeholder within the system. By the end of the program, executives will better understand cause and effect within supply chains and have a clear strategy for improving supply chain performance.

Partner Engagement - In this supply chain strategy session, suppliers and partners identified in the Executive Engagement phase are introduced to Constraint Theory and a methodology for holistically resolving choke points within the supply chain. This is contrasted to the supplier development method, which narrowly focuses on problem areas, resulting in suboptimal solutions.

Risk Management - Evaluating, assessing, and prioritizing the probability of unexpected events are part of Risk Management, which is essential for an effective supply chain. This session helps participants create a risk impact analysis, including the financial implications of unexpected events.

Total Cost of Ownership (TCO) - TCO is a method for quantifying the costs for every activity along the supply stream, including acquisition, transportation, storage, and selling of goods. TCO allows strategic sourcing decisions to incorporate social costs, which historically have been difficult to assess. The working session also introduces a TCO calculator, which allows a side-by-side comparison of up to four suppliers and the analysis of multiple sourcing scenarios.

For more information visit www.mepsupplychain.org or contact Mark Schmit (mark.schmit@nist.gov).

Measuring Results

Impacts are based on clients receiving supply chain optimization services in 2014



\$31 Million

Total New and Retained Sales



\$3 Million

Cost Savings



\$8 Million

New Client Investments

NEXT STEPS



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SUPPLY CHAIN OPTIMIZATION



SUPPLY CHAIN OPTIMIZATION LEADS SYN STRAND TO GREATER PROFITABILITY

Established in 1987, Syn Strand, Inc. located in Summerville, SC, employs 60 people. The company specializes in the manufacturing of technical monofilament solutions for paper machine clothing and additional monofilament products.

Situation. In 2011, Syn Strand began to look at its business from a different perspective and challenged itself to find a way to contribute more to the profitability. A likely solution would have been to simply expand the plant. However, Syn Strand decided to dig deeper and determine if there was a way to advance without the capital expenditure of plant expansion. To embark on this project, Syn Strand turned to the South Carolina Manufacturing Extension Partnership (SCMEP).

Solution. SCMEP began with an internal audit of the company which identified several areas to investigate. One focus was on supply chain. SCMEP's supply chain expert worked with Syn

Strand to research and evaluate specific areas, collect data and develop a systematic method applying the Theory of Constraints (TOC).

The company developed a new model that included planning system adjustments along with consistent visibility across systems. The company worked with SCMEP's Supply Chain expert to help implement Drum- Buffer-Rope (DBR) scheduling algorithms with the existing IT software. This not only helped boost performance at Syn Strand, but it greatly improved demand visibility for the entire chain. This scheduling system improved the IT software at Syn Strand and helped improve the huge investment at other plant locations using the same IT software.

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8 Jobs Retained
\$2 Million increased Sales
\$200,000 in Cost Avoidance per year
\$3 Million in Cost Avoidance
10% in Capacity Increase

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