

BORGWARNER MORSE SYSTEMS

GLOBAL INVENTORY MANAGEMENT

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BorgWarner is one of the leading suppliers in the transmission and power train segment, valued close to \$10.5 Billion. Morse Systems is a division specializing in engine timing systems, drivetrain chain, and variable cam timing systems for engine, transmission and transfer case applications. For Morse Systems to keep its competitive advantage, they need to manage costs effectively while maintaining high service levels to their customers. As a result, inventory management practices have become a key element for management attention.

To help Morse Systems increase inventory turns, the Tauber team traveled to corporate headquarters and manufacturing plants in the United States, Mexico, India, Poland, and China, including two plants that are currently reporting the lowest inventory turns and another nascent plant in Morse Systems. Initial expectations were to increase inventory turns within five years by 25% in Plant A and 20% in Plant B. For the nascent Plant C, the initial expectation was to propose a supply chain model that would allow them to hit a minimum of 15 inventory turns by 2016.

The team studied their supply chain models and conducted root cause analysis and benchmarking to identify areas of opportunity, followed by deep dive analysis and simulation to support a set of recommendations that would improve their inventory management performance. The team's findings did not only target supply chain operation processes but also other opportunities related to the company's reporting system and plant's utilization of ERP technologies. For all these opportunities, the team documented some of the principles and best practices applicable in a ~30-page living document called Global Guidelines, which will be used in the future to rollout and deploy continuous improvement initiatives across plants.

After carefully prioritizing areas of opportunity, the team developed a set of recommendations mostly focused on the management of raw materials, which included developing a template to determine policies by using optimized inventory models. Through these recommendations, the plants would be able to achieve inventory turns improvements of 66% in Plant A and 25% in Plant B within five years. For Plant C, projection shows it can achieve over 15 turns by 2016 and 28.83 inventory turns by 2019, overall exceeding initial expectations.

After implementation of the recommendations, the team estimated **\$2.1 Million** savings over the next five years.