
Manufacturing Strategy At Leading Industrial Hardgoods Manufacturer: Creating Sustainable Cost Improvements

The Challenge: Out client, a leading manufacturer of industrial hardgoods and accessories, used two U.S. plants as its manufacturing base. As part of cost reduction efforts, the former CEO had created a plan to move all domestic operations to Mexico. After a review of ongoing strategic plans, the newly appointed CEO questioned the stated manufacturing strategy and asked us to assist in determining the appropriate manufacturing strategy based on a review of all sourcing options, including automation of U.S. factories, outsourcing, and relocation.

The Partnership:

Analysis: Working with the manufacturing management, we developed a profile of manufacturing operations by product and process type. This profile included estimated U.S. labor content, overhead structure, capital equipment state and future needs, labor skill requirements, supply requirements, and customer needs. Additionally, we developed a comparative profile of selected sites in Mexico and Asia.

For operations suitable for outsourcing (e.g., non-strategic, available 3rd party capabilities), we developed an economic profile of labor, overhead, outsourced cost, and capital avoidance. For operations that presented an automation opportunity, we developed a business case for capital investment.

Strategy: After evaluating the merits of different options, our joint team recommended a hybrid approach in order to balance customer needs, cost savings requirements, and local skill and supply base. The recommended strategy included:

- Moving high-volume assembly operations to a site in Mexico
- Implementing lean manufacturing cells in new Mexican assembly operations
- Outsourcing forging operations and forging machining to an Italian manufacturer able to provide higher quality parts and reduce inventory via VMI
- Consolidating low-volume assembly operations to a lean cell-based system in a single U.S. plant
- Replacing old cam-based machining equipment with CNC equipment that afforded faster changeovers, reduced EOQs, improved line flexibility, decreased part lead time, and improved quality.

This recommended configuration strategy enabled closure of 1 of the 2 U.S. manufacturing facilities.

Execution: We worked with the management team to develop a detailed transition plan for implementing the strategy. The plan prioritized the sequence of implementation based on several factors, including resource requirements, cost savings, and capital requirements. The first phase, spanning 6 months, focused on setting up the assembly facility in Mexico and automating operations where payback would be achieved in less than 2 years. Phase 2, carried out over the subsequent 6 months, focused on capturing remaining opportunities, including forging outsourcing, low-volume assembly setup, further automation, and closure of a U.S. facility. We provided ongoing assistance to the management team on an as-needed basis throughout the implementation.

The Results: With the execution of this manufacturing strategy, the client:

- Captured \$9.0MM in labor savings via movement to Mexico and automation
- Completed the closure of one of the U.S. facilities, eliminating \$2MM in annual overhead expense
- Avoided \$6–7MM in capital expense through the outsourcing of forging machining operations
- Improved quality of affected products through updated processes, machinery, and vendors.