

SHAVING SIGNIFICANT COST REDUCTIONS OUT OF THE MANUFACTURING COST BASE

By Mary Frances Cox

Success in reducing manufacturing costs comprises a multi-tiered effort that includes better managing processes, production, employees and customer expectations. That was the main theme of the keynote address by Mary Frances Cox, senior vice president of operations at the Schneider Electric North American Operating Division, at the 2006 National Manufacturing Week conference in Rosemont, Ill. Cox's address, titled "Shaving Manufacturing Costs," addressed each of those areas and described in great detail what measures Schneider Electric's North American Operating Division has taken to significantly reduce costs.

"Saving money and reducing costs is of great interest to the executives and engineers attending National Manufacturing Week, especially given the volatility of today's manufacturing industry and the drive to remain competitive," Cox said. "It was our hope that by knowing how Schneider Electric's North American Operating Division did business, those in attendance would be able to find opportunities to shave costs in their own companies."

THE CUSTOMER

Schneider Electric focuses on three main customer-driven initiatives: cycle times, on-time deliveries and product quality. Cycle time is defined as the time it takes a product to be ordered by a customer, assembled with the supplies used by the manufacturer and then the time it takes to ship the finished product to the customer. When the cycle is shortened, customers find the experience increases their trust in the manufacturer. Schneider Electric's North American Operating Division found this to be the case when we launched a new logistics strategy aimed at shortening cycle times. We relocated our distribution services to Athens, Texas in Sept. 2005, which was closer to our customers and manufacturing base. This action reduced the time and transportation costs to reach our customers.

On-time deliveries work to guarantee meeting a customer's deadline for

delivery each and every time. When deliveries are on-time, customers are satisfied and trust they will have the same experience on their next order. When on-time deliveries are not met, costs are incurred throughout the entire supply chain. Time is spent on the phone, sending emails, checking records, checking docks and stocking locations, and the list goes on. The bottom line is that none of the activity is adding value. It represents unnecessary costs and effort and ultimately leads to customer ill-will. Schneider Electric's North American Operating Division strives to insure that deliveries are consistently on-time.

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Finally is the area of product quality, which comes from customers demanding the highest quality product available. In fact, the better the quality of the product manufactured, the less cost is incurred to everyone. Product quality is not just about meeting product specifications; it goes beyond that to anticipating and meeting customers' needs.

THE PROCESS

Next are the process-focused initiatives, and the critical factors of lean manufacturing, Six Sigma and continuous improvement. Lean manufacturing is an initiative aimed at eliminating all waste in the manufacturing process. Its goal is to use less human effort, less inventory and less time to make products in less space. The initiative focuses on becoming highly responsive to customer demands while producing top quality products in the most efficient and economical manner possible.

Six Sigma uses structured application and statistical tools to reduce variation and eliminate defects and is applied on a project-by-project basis to meet each customer's needs. Six Sigma uses

the DMAIC approach – define, measure, analyze, improve and control – where each project is reviewed throughout the process and specifically at the end of each stage. Through this structured approach, we determine and eliminate the root cause of the manufacturing problem. This ensures that we truly solve a problem, rather than just applying a 'quick fix' only to have the problem recur.

The final initiative to address in the process focus is continuous improvement. This initiative is a process driven toward what the customer values and eliminating those things that the customer does not value. Manufacturers want to improve things that increase the value to their customers. Continuous improvement begs the questions, 'How do I get a little better today from what I did yesterday?' 'How do you continue to grow and maintain that drive to keep moving forward without falling back into your old ways?' We always need to look for ways to improve our process and provide flexibility, allowing us to extract a premium in the marketplace.

THE PRODUCT

The third area is the product-focused initiatives and – more specifically from a pruning, design – standardization and purchasing perspective. Pruning is an initiative aimed at reducing the offerings and choices of your product to better fit the needs of your customer. Schneider Electric's North American Operating division has saved significant dollars by pruning back the same product offerings in different markets, as well as trimming down the number of its suppliers and shutting down redundant or inefficient plants.

Design standardization is an area of product focus that involves standardizing the design of your product to best fit the demands of your customer. By standardizing the design of your product, you buy fewer materials, which lowers your costs. Also, it allows for 'late differentiation' of a product to customize it to the specifics of a customer's need. We can offer our customers standardized products and

even add a last minute request because we have flexible designs and processes in place. That way we are assured of conforming to the needs of our customers.

The purchasing initiative centers on what materials are purchased from where, to ensure the best value is available to the customer. Schneider Electric's North American Operating Division has shaved significant costs in this area by using a strategy called localization. The idea behind this concept is that companies buy or try to buy within a 'low cost country' where suppliers are closer to the location where the goods will be used. Schneider Electric was faced with a similar situation with our Asheville, N. C. plant. Schneider Electric was building products at this site for years. At first, we maintained the existing supply base in the U.S. Then, we determined it would be more cost-efficient to move the supply base to Mexico. We knew this decision would shorten the supply chain and eliminate border-crossing delays and fees. The move also reduced transportation, material costs and inventory. The end result is a leaner, more flexible and lower-cost supply chain.

THE PEOPLE

The last area of focus is the "people perspective" which is characterized as the most important cost savings opportunity at Schneider Electric. There are three areas of the people perspective: safety, training and development and employee involvement and engagement.

First is the element of safety. Schneider Electric is committed to safety and we have made it our number one mission to create the safest work environment possible for our workers. We are proud of our safety numbers at Schneider Electric North American Operating Division. In fact, our numbers are the best in the industry and among the best in the country. Our CEO, Dave Petratis was recently recognized as a 2006 CEO 'Who Gets It' for his passion for safety, his commitment to be the best in the industry when it comes to safety results and his personal challenge to everyone to create a safer lifestyle. That tone-at-the-top has resonated with our employees and has led to huge reductions in our medical incident rates and our workers compensation premiums.

In 2005, the company reduced its medical incident rate by 33% across all of its North American facilities, encompassing 17,700 employees. In the U.S., the medical incident rate for 2005 was 1.5, compared to the weighted industry average medical incident rate of 5. Reductions at Schneider Electric occurred in the overall number of medical cases, in lost time accidents and in lost days from accidents in plant environments. The company's Schiller Park, Ill. facility set a new plant record in 2005 by finishing the year with a 0.9 medical incident rate. And just last month, the facility celebrated an entire year without a medical incident.

The company also revised its all-employee safety training requirements last month. All office-based employees must complete a minimum of two online safety courses. All field-based employees, including the company's sales and services departments, must complete a minimum of three online courses. In addition, all office and field-based employees will receive "Safe Start" training that helps employees think about what conditions lead to hazards – whether they be physical, like blocked walkways, or mental, like fatigue or frustration.

The second element of the "people perspective" is training and development, a factor crucial to aligning the efforts with the priorities of the organization. Without proper training,

employees do not understand what is expected of them, and why, and this increases their resistance to change and hinders a company's growth. Being taught the tools and principles that are required to make the change reduces the amount of time required for the change and increases the probability that the change will be successful.

The final element of the "people perspective" is employee involvement and engagement. Schneider Electric's business model is built on the belief that by involving and engaging our employees in our processes, the company will gain huge benefits in terms of attitude, commitment to the organization and a more efficient and productive workforce.

By involving our people in the processes and keeping them in the loop, in terms of progress and next steps, they feel they have a voice in the future of their plant. They also feel they are recognized by management as being an expert in their area.

CONCLUSION

In summary, we hope you've found opportunities to shave costs in your own company. We're confident that these processes work. At Schneider Electric, since 2001, we've saved \$237 million dollars.

Mary Cox is responsible for advanced manufacturing, manufacturing operations, purchasing, logistics, safety, health and environmental issues.

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