

Quality Time **Written by: Helen Richardson**

When companies plan for quality at the strategic level, everyone wins.

Product quality and ISO 9000 standards are the quality buzzwords of yesteryear. Today's leading-edge companies are approaching quality at the strategic level, according to George Alukal, vice president of quality and process improvement with Chicago Manufacturing Center (CMC), a consulting firm in manufacturing and distribution, and a member of the American Society for Quality.

Quality-conscious companies, Alukal notes, are considering quality from the top down. "They are exploring how to be innovative and forward looking, using techniques such as Six Sigma and Lean Enterprise, Kaizen and Strategic Quality. They are talking about continuous improvement and learning," he says. "Concepts such as communication, teamwork, empowerment, motivation and cultural change management have become more prominent parts of quality management," Alukal continues. "Companies that think quality at the strategic level are thinking in terms of creativity before capital investment. Quality management is now linked to both innovation and corporate strategy."

Increasingly, corporate strategists are moving manufacturing offshore, lending greater importance to quality in logistics and distribution.

"If a manufacturer moves to China or Mexico, product has to be brought back to the U.S. or moved elsewhere around the globe. So, in the U.S., logistics is growing as manufacturing declines," claims Alukal. "Companies want to hang onto their core competencies and outsource the rest. They're outsourcing logistics to companies that are good at logistics and supply chain management."

Working in a cooperative relationship with its third-party logistics provider (3PL) has yielded quality benefits for Goodyear Tire and Rubber, according to Ted Augustine, director of logistics and product supply for the tire manufacturer's North American tire division.

"We recently established a continuous improvement process with Exel," Augustine notes. "We identify best practices in key activities and work with Exel to institute those practices across our network. To determine what tools and processes we could implement

to improve the way we go to market, we continue to solicit input from Exel people based on their experience with other clients."

Goodyear is currently implementing an inventory management software program suggested by Exel. "We felt we could do a better job of managing inventory, but we needed tools," Augustine explains. So he asked Exel who, in their client base, does the best job of managing inventory. An Exel customer in the U.K. uses software from a firm headquartered in South Africa. "By the fourth quarter, we will be using the inventory management software across all of our business," states Augustine.

Augustine is also working with Exel to close other quality gaps. "For example, we need a more sophisticated labor management tool and a more robust warehouse management system (WMS)," he notes. "Again, we asked Exel what their other clients are doing, and we're looking to upgrade or replace our current WMS to be more functional."

Christian Benvenuti, director of operations with industrial robot manufacturer Adept Technology Inc., has realized improved quality in tracking warranty status through implementation of new technologies that give his team instant visibility. "A 10-digit bar code service identification number links to a database containing the entire service history of a part," explains Benvenuti.

"We sell robots and robot controls that are more expensive than cars and last a lot longer. Many 22-year-old robots are still in operation," Benvenuti points out. "Of course, we continually develop entirely new smart platforms. However, half of our business is re-manufacture of our existing install base. Our robots work, they don't break, and they even survive corrosive environments."

With products that have such a lengthy service life, tracking warranty data is critical. The service ID number has opened a new world of warranty enforcement and revenue for warranty sales at Adept. Benvenuti's team can understand the manufacturing history, tie the customer's warranty claim to a given purchase order, and track to the day and hour when the warranty is in effect.

"We can understand what warranties are about to expire and sell an extended warranty. When we replace a part, we can enter the revised warranty expiration date," he explains.

The software behind the bar code, a solution from consulting company D.W. Morgan Co., is accessed through a web link. "It lets us see what other equipment was in a shipment as well as track parts and labor warranties," Benvenuti adds.

The software functions by tying in to other software. For example, the sales force can see the customer's history — what they bought, when warranties will expire, what software improvements or upgrades they might add to bring their equipment up to state-of-the-art. "We can see trends, making it a great marketing tool," notes Benvenuti.

The bottom line is Adept has cut warranty costs in half, according to Benvenuti. Only part of that improvement is credited to use of the service ID number and related software. "At the same time, we implemented failure analysis. We determine root cause of failure and fix the design," says Benvenuti.

"In the closed loop process, if we ship something and it fails in the field, the customer calls our customer service department and reads the service ID number," Adept's Benvenuti continues. "If it's still under warranty, the customer receives a free replacement anywhere in the world within 24 hours. The customer returns the failed unit, which is segregated from new production in the factory. The returned part is debugged to find root cause of failure. It is repaired and returned to inventory. The data gathered goes into our database and to our engineering team which determines how to resolve failures."

Adept benchmarks its total cost of quality against its industry.

"If you look at our amount of money spent on warranty as a percent of cost in our warranty install base, the dollar value is below 2%. Standard for the industry is 4%," Benvenuti claims.

In addition to eliminating failures in its products, Adept has taken a strategic approach to cut unnecessary processes in its operations. The manufacturer has focused on its core competencies and outsourced or discontinued other processes.

To eliminate processes, Benvenuti suggests, the key is to start with a flow chart. Follow the flow through the manufacturing floor the way it actually is. Evaluate each step. Why are you doing a step? Can you combine steps? Find things you're not good at and outsource them.

For example, outsourcing assembly to an integrated cable vendor netted Adept a 100% increase in product quality. "Our electronics contract manufacturer knows what they're good at. We could never do as well as cheaply," says Benvenuti.

"Overnight, we realized a 25% margin gain on half of our electronics products. Outsourcing to a contract manufacturer gives us more flexibility in volume as well as better quality."

On the logistics front, Adept's outsource program with D.W. Morgan is only three months old but already yielding improved quality. "They manage our entire logistics program — transportation and warehousing — as well as the IT solution behind the bar code service ID numbers," Benvenuti explains. "The relationship allows us to have service depots anywhere in the world that D.W. Morgan has a facility, the backbone behind our promise of 24-hour repair service."

Exel didn't start out managing the entire logistics function for Goodyear. The partners spent six years building a relationship and communicating needs.

"Any arrangement with a 3PL is based on the rules of engagement. We surround the agreement with processes, policies and metrics," notes Goodyear's Augustine. "We've become good communicators with Exel the last three years, letting them know what requirements we need." A year and a half ago, Exel became Goodyear's lead logistics provider (LLP).

To keep the relationship on track and to ensure Goodyear's quality standards are met, teams from Goodyear and its LLP meet monthly and quarterly at the tactical level, and quarterly and annually at the strategic level.

"In the strategic meetings, we define our go-to-market strategy and determine how Exel will meet our strategic plan and how we will measure their performance," Augustine explains. "We have a long list of key performance indicators (KPIs). On a tactical basis, we review those KPIs monthly and quarterly with the Exel team," he adds.

KPIs include measuring Exel's performance in on-time outbound shipments and in making inbound shipments available. "They are at 99.97% on the metrics we use to measure time to execute an order to ship," says Augustine. "We measure against our goal for inbound performance — from the time they are notified an inbound trailer is due until product is available. They are at 100%. We also look at shipment cut rate — when the computer says product is in the warehouse but they cannot find it. Our goal is 1.5%; Exel is at 0.8 or 0.9%," states Augustine.

Partnering with a firm that performs to precise quality standards offers opportunities for increased business. Two years ago, Goodyear was able to rationalize its distribution system from 22 U.S. locations down to 17. Fifteen of those locations are operated by Exel, two by Goodyear.

"We used a comprehensive request for proposals with our five 3PLs and quickly narrowed it down to two," notes Augustine. "In the final analysis, there was not a significant difference in capability, industry knowledge, experience, nor ability to perform. However, we saw in Exel a focused process to build, educate and develop their middle management group. We see that group as key to Exel's success and ours. We believe a strong middle management team is the link between the strategy upper management understands and execution at the hourly worker level," Augustine states.

Focusing on building a quality team with depth was a winning strategy for Exel, and it's a smart approach for any company that wants to improve quality management.

"To do better, focus like a laser beam on the human side of management," urges CMC's Alukal. "Employees are the key. Recognize the importance of proper screening and selection of new hires, training, appropriate rewards and recognition, and employee satisfaction."

Whether hiring and training employees or investing in a technology upgrade, make sure quality management is the focus at the strategic level in your company.