

MANUFACTURING

Lean manufacturing techniques take hold in variety of industries

Concept empowers employees to do their jobs more efficiently

BY TRACY CARBASHO

Although many U.S. manufacturers are struggling to remain competitive in today's global marketplace, traditional manufacturing techniques are now putting other business sectors on the road to success.

Ken Smith, president of the Green Tree-based H.B. Maynard and Co. Inc., said concepts that have been used in manufacturing for decades are helping nonmanufacturing industries improve their productivity, decrease waste and create a culture of continuous improvement. The trend is catching fire not only on a national basis, but also among local companies.

H.B. Maynard, a national productivity consulting firm, was founded in Pittsburgh in the 1930s with the goal of helping manufacturing companies improve workplace performance. The company, which has expanded its mission over the years, drew more than 50 percent of its business from retail and nonmanufacturing clients in 2003.

"In 1999, we began to formulate the Maynard Workplace Performance Model depicting the disciplines that we could take to our customers," said Mr. Smith. "We discovered that the lean manufacturing techniques used by Toyota could be applied to any industry. We've known this for some time, but it became more apparent as we put our model together."

The model is aimed at continuous improvement in the areas of managing performance, staffing and reporting, wage system alignment, engineered standards, work force training, work flow design, best methods, setup efficiency and organization of the work environment.

Matthews International Corp., a manufacturer of products for the funeral and packaging industries, headquartered on the North Shore, has seen a 20 percent improvement in productivity as a direct result of implementing continuous

flow manufacturing techniques at its plant in York, Pa.

Matthews, a Maynard client, has four manufacturing plants in Pittsburgh and operates a total of 23 facilities throughout the world.

Dave Kelly, president of Matthews, describes continuous flow manufacturing as an assembly-line approach where each employee is assigned a single task. Prior to the process being utilized, employees worked at stations and were required to complete multiple jobs.

"When you have improved workflow, a byproduct is improved quality," said Mr. Kelly.

Maynard, which provides consulting, training and software services, also helped Matthews apply the principle known as "5-S" at its local plant on West Liberty Avenue and a facility in Arkansas. Mr. Kelly expects the improvement processes to eventually be used at all of Matthews' locations.

The 5-S concept, also derived from Toyota, has helped Matthews create a work environment that is organized, efficient and uncluttered by keeping tools and equipment in designated locations so they are easy to find. Ralph Schwartzmiller, project manager in the bronze division at Matthews, serves as companywide facilitator of the 5-S project.

"Consumers are demanding better products at better prices and most companies are seeing increased competition," said Mr. Kelly. "The manufacturing techniques are a good example of what companies can do to increase productivity and stay viable."

Mr. Smith said the 5-S philosophy is being used by the 90 Maynard employees. The five steps involved in the process of organizing the workplace include:

- **Sort and remove:** Keep only those items that are appropriate and necessary in the workplace.

- **Shine and inspect:** Ensure equipment is clean and in good working order.

- **Set locations and visual cues:** Have specified locations for all tools, equipment and other work-related items. Post a list of what needs

to be done at each work station and label where items should be stored.

- **Systematize:** Create a system for keeping the workplace organized and clean.

- **Stay the course:** Encourage and reward employees for maintaining the 5-S concept.

Officials at Pressley Ridge, a nonprofit human services organization based on the North Side that provides a variety of services to troubled children and their families, said manufacturing techniques have helped them improve their business processes.

George Pashel, executive vice president and chief financial officer at Pressley Ridge, said a value stream mapping tool was used to assess how the process for recruiting foster parents could be improved. As a result, a new interview process was designed to give Pressley Ridge a better indication of which parents are likely to complete the necessary training.

Cliff Shannon, president of SMC Business Councils in Churchill, said manufacturing principles can be effective in virtually any setting, including health care. In fact, he noted the Pittsburgh Regional Health Initiative relies on the same concept used in the production system at Toyota, which cites improvements and suggestions by team members as the cornerstone of its success.

"Toyota's production system has as its foundation the principle that each person is responsible for taking the necessary action to ensure the production process is free of defects," said Mr. Shannon.

He said the PRHI uses the same notion of empowering everyone involved in the delivery of patient care to point out errors and take action to find out why the problems occurred.

"The leadership that produces the best results is where all employees are empowered and they all work together, but this might be a difficult concept for managers who are used to the top-down concept," said Mr. Shannon.

"Empowering employees does not slow down the process; it speeds things up in the long term."

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