Tim Heston, senior editor of *The FABRICATOR*, can be reached at timh@thefabricator.com.

What else do customers need?

Eberl Iron Works gets lean and adds value

Eberl Iron Works of Buffalo, N.Y., went through a business transformation that, putting jargon aside, came about by everyone asking two questions: How can we do our jobs faster and better? And as we get faster and better, what else can we provide to attract more customers and grow the business?

These are the ideas behind myriad business and production improvement efforts we've all read about, perhaps to the point of *ad nauseam*. But Eberl Iron Works' story proves that the concepts really are practical for business improvement.

The organization is difficult to pigeonhole. It's a metal fabrication job shop, but it also offers installation services as well as various products, including rooftop support systems, walkways, material handling systems, stair pan risers, floor-plate stair treads, medical support systems, and fall-arrest systems. All these ventures are grouped under five divisions: contract metal fabrication, Unistrut Buffalo (the distribution business), systems installation, traffic safety products (also primarily a distribution business), and rooftop support systems. And here's the kicker: The entire organization employs just 22.

Though the business has its fingers in a lot of pies, many seem to be baking in the same general oven—commercial and industrial real estate. Surely, 2009 wasn't a good year, right? Wrong. "We had a pretty decent year, actually," said Nora Eberl, controller and third-generation member of the family business. Eberl added that today staff does have more time to spend on additional improvement projects. *More time? That meant that sales were down, right?* No again, she said. Sales actually increased slightly, thanks to having fingers in so many pies. "We have five divisions in our company, and though [contract] fabrication was down, the other divisions saw some significant growth to make up for it, and then some. Our production employees had extra time in 2009 because a lot of the increased sales were from products we distribute."

The shop started its lean efforts at the right time, before the downturn. In 2006, just as sectors of the economy were ramping up to new (and, as it turned out, unsustainable) highs, Eberl partnered with the Center for Industrial Effectiveness at SUNY Buffalo and, with the financial help of a grant from the New York State Department of Labor, started down the lean manufacturing path.

This included basic 5S: general organization, shadow boards for tools, and the like. They also drew up value-stream maps and introduced demand-pull product flow and kanban concepts. Again putting jargon aside, Eberl described how jobs are routed through the shop floor using color-coded job cards. The color indicates the kind of job and what machines the material must flow through to get the job done. "The job cards all used to be in a pile," Eberl recalled. "Now we have bins where the jobs are organized and color-coded. The inventory is also color-coded. We reduced inventory by about 20 percent."

This was just a start.

"We didn't have a lot of space, and lean has helped make the most of what we have," said John Eberl, sales and marketing director. "We have better-positioned material staging areas, and we were able to install some new equipment that we simply didn't have room for before."

For several years now managers have held periodic kaizens and monthly meetings in an effort to make continuous improvement, well, continuous. Much of it involved simply analyzing a worker's daily tasks, conducting time studies, and asking questions. For instance, why does that worker need to step away from a machine to unload a truck, or wait for a hoist to unload material? This is why the 22-person shop plans to hire a water spider, a person whose job is to find and organize material and manage material flow through the shop.

Cross training became a priority. "We basically want everyone to be cross-trained on every operation," Nora said.

The decision to cross-train came about not just because it sounded like a good idea, but also because the data supported it. "When we did a time study, we found a lot of wasted time happened when people were unsure about an operation," Nora explained. "We wanted to empower employees to make decisions on the spot, instead of hanging out and waiting to ask questions."

This dovetailed into the company's latest effort: improved training of new hires. Today a new employee will shadow various workers on the shear, the press brake—all machines on the shop floor, in fact. This isn't just for a few days or weeks; it's for an employee's first six months.

This program feeds into another tenet of lean: documentation. The company is in the middle of a manual-writing project, documenting exact procedures to ease training and improve consistency on the shop floor. Sure, employees are empowered to find better ways to get the job done; but when they discover a way, it's documented, so that new way can be taught to everyone in the organization. In management-speak, this increases a company's "shared knowledge."

Lean efforts like this aren't always sustained. Sometimes it's a management or employee buy-in issue. Sometimes employees just stop meeting to discuss improvement techniques, and let the effort fall by the wayside.

Not at Eberl. Lean manufacturing increased the company's capacity to produce, and managers set out to fill that capacity. For instance, the company recently expanded its rooftop support system product line. It had made many of these rooftop components in-house, and then sent them separately to the customer, who assembled them.

Now Eberl preassembles these rooftop support systems in-house before delivering them. This creates more customer value and helps the company sustain its business through one of the worst real estate markets in recent memory.

Nora summed it up simply: "We can save companies money by preassembling our products. And these days, everybody's looking to save money." FAB

Eberl Iron Works Inc., 128 Sycamore St., Buffalo, NY 14204, 800-285-3065, www.eberlironworks.com.