Learn and Apply: La-Z-Boy’s 5S Blitz

Creating a model for learning and improvement.

Karen Wilhelm

Hurricanes and tornadoes put the Dayton, TN La-Z-Boy plant in a catch-up situation. Hurricane Rita left a chemical plant under eight feet of water in late 2005. It makes a key ingredient of the foam that makes your big recliner comfy. That caused a foam shortage, hampering production at the Dayton plant. Then a tornado hit a La-Z-Boy plant in Newton, IA, putting plywood in short supply.

Now the Dayton plant was churning its way through huge backlog of orders, scrambling to get furniture out to customers. Increasing throughput by ten percent would make a big difference. Though stopping production was not an option, La-Z-Boy thought a concentrated lean improvement blitz might help. (Note: Two years ago, La-Z-Boy embarked on its lean journey. Its current goal is to move from batch-and-queue to cellular manufacturing in all its plants. The Dayton, TN plant is about 25 percent of the way there.)

Senior leaders showed their support. Don Butcher, then vice president of the Dayton plant, told 5S champions in a letter that, while the project would take a week, 5S would continue. “I will be in attendance during the training and helping out during the event,” he wrote. “This process offers you an opportunity and a mechanism to capture and incorporate all the creative ideas that you have to offer. Rise to the challenge, and do not forget that your commitment, support, and participation are what will enable our company and our people to benefit from this effort.”

Learn and Apply: A Model

Besides improving throughput at the Dayton plant, La-Z-Boy wanted to create a model for intensive learn-and-apply events that could be used throughout the company. Progress in lean depends on having people who understand the principles and tools of lean and can apply them to the problems at hand. “Our folks have been playing with the lean tools for a while now,” remarked Richard Kunst, vice president for continuous improvement, “but they need to get to the next level of professionalism.”

A plant makeover in Dayton gave La-Z-Boy a way to train 5S champions from all over in one location. Getting everyone together meant they would start sharing ideas and establishing e-mail contacts. If people exchanged implementation experience, they would not have to reinvent things going forward.

In Brief

Neither hurricanes nor tornadoes can keep the people at La-Z-Boy from their goal of trimming a huge backlog of orders. This article reflects the “lessons learned” during a 5S kaizen event at the company’s Dayton, TN operations, as participants learned how to boost throughput through 5S activities, creating a model for intensive learn-and-apply events throughout the company.
In order to bring more resources to the site, Kunst invited suppliers, members of AME and SME, and 5S champions from other La-Z-Boy plants to spend a week in Dayton. There they could play and learn, network, and leverage their lean knowledge. About 20 sets of volunteer “outside eyes” turned out. Two La-Z-Boy plant managers volunteered to participate, showing that they saw value in enhancing their own facilities, and that they thought the model might work for them.

**Plan**

The La-Z-Boy continuous improvement people worked hard during the preparatory phase. Chris White, the on-site event coordinator, spent nearly 1100 hours taking pictures and identifying projects. A student intern, White had already worked at Nestlé, learning about 5S and other lean principles from Mariela Castaño. As Kunst said, “That means he knows what 5S has to look like.” Based on the photos and his observations, White made assignment sheets for the problem areas to be attacked.

**Learn**

Classes and workshops would cover one “S” per day, beginning with a full-day simulation. Each day after that would begin with a short training session, on subjects such as sorting out waste on the plant floor and red-tagging, creating a visual workplace, using simple components to make tool holders and component storage locations, developing visual standard work instructions, and sustaining improvements with total productive maintenance (TPM).

**Apply**

Right after their classroom sessions, participants were dispatched to apply what they learned. At the conclusion of each day, there was a debriefing to share success and benchmark best practices.

Plant 19 in Dayton was one of the locations where 5S champions were deployed to apply what they had learned. Charlotte Swafford and Kathy West concentrated on 5S-ing the cutting and sewing areas.

The cutting department operators have tools to replace their knife blades and do maintenance and adjustments to the equipment, depending on the fabric being cut. For years, these tools have been kept in an old wooden cabinet. One of Chris White’s pictures showed that this area needed attention.

Kunst, White, West, and Swafford clustered around Raymond Monday’s workstation. With the plant’s order backlog, he ran production at the same time as the team tackled the tool cabinet. To head off any alarm Monday might feel, the team spoke with him about the plan the day before they touched anything, giving him time to get used to the idea. They told him they wanted to pull everything out of the cabinet, see how important each item was, and get rid of the rest. Then his tools would be more visible and he’d be able to go straight to them without having to go through a lot of other things.

**5S at La-Z-Boy**

**Sort** — Identify what you need to do your job, and eliminate the non-essential from the essential. If you have not used it within the past 30 days, get rid of it!

**Straighten** — Organize needed items. Make them accessible within 30 seconds with minimal reach. Set locations and establish quantity, height, size limits, etc. Review and update procedures.

**Scrub** — Eliminate dirt, dust, oil, scrap, foreign materials, etc.

**Stabilize** — Develop standards, guidelines, and procedures to maintain the first three Ss.

**Sustain** — Audit and measure results. Correct abnormalities. Communicate and provide feedback to people.
looking for what he needed.

Monday’s been in the cutting department for 32 years, running the automatic cutter since the day it came into the plant. That’s given him time to accumulate quite a few things. There were 25 standard Bostich staplers, probably costing about $10 apiece. When one quit working, he threw it in the cabinet and got another.

If maintenance worked on Monday’s machines and left things behind, he didn’t want to throw them away, so he just kept them. West estimated that 85 percent of the stuff in the cabinet actually belonged to maintenance. When all was said and done, a lot of things went back there.

Once the cabinet was emptied, Monday was asked to pick out what he actually needed to do his job. It only took him five minutes to decide on about 20 items, including a drop cord, a knife blade, and the tools required for changing out the cutter blades.

With the old wooden cabinet empty and ready to go away, a new Creform cabinet was designed to take its place. Creform is a system of powder-coated tubes that, along with connectors, wheels, and fixtures, lets people create all sorts of workplace organizers like cabinets, rolling carts, and shelving.

More Changes

When West and Swafford participated in training sessions led by Rhonda Kovera of Visual Workplace, they learned how to go beyond traditional 5S and understand that the visual workplace is self-managing, self-directing, and self-explaining. That got them ready to design the new pegboards and “shadows” for required tools.

While sorting through the cutting workstations, Swafford and West found a number of cutting machine blades. Each blade costs the company $120 and is supposed to last 20 hours. The operators said some of them do, but many don’t. The defective blades can be returned to the supplier for credit, so a kanban system would be set up to collect them. The blades are a high-consumable item used on several cutters, so the money due could be considerable.

In the sewing area, sets of pillows are cut, sewn, stuffed, and shipped. Swafford and West cleaned, shadow-boxed workstations and storage containers, and planned a couple of Creform cabinets to replace the old wooden ones there.

Frank Patton was one employee who caught the spirit and built a broom holder out of Creform components. It might sound like a small thing, but it would never happen in most traditionally-managed plants. Everyone will now know where to find the broom, and know at a glance when someone hasn’t put it back where it belongs. More importantly, Patton had the satisfaction of taking action to eliminate the waste of searching.

Upholstery Line

Ronnie Angel is in charge of the traditional upholstery line. He’s been there 19 years, so he knows what things were like before lean practices began to be implemented. He’s been part of making lean changes and improvements happen, and has become a committed advocate.

Angel has worked with 5S long enough to learn that it isn’t just about housekeeping and production standards. Those are positive outcomes, but the real meaning this time would be the throughput gained.

Angel’s team worked on sorting and standardizing in areas where defects were being created. They decided to designate two lines as pilot lines, where they would make initial improvements before changing the dozen others.

It’s culture change, in Angel’s words. He was preparing the operators, getting them to break old habits. For example, aisleways had been cleared, but making sure they stayed that way was going to take enforcement, backed up by management commitment.

Poly Department

Jason Smith was focusing on Plant 19’s poly department. Right after the first day’s classes, his team went through the department with a trash bin. They soon had a six-foot-high load of boxes, old fixtures, broken tools, and damaged parts.

They red-tagged 13 items to send to the bone yard. That might not seem like a remarkable number, but it followed a red-tagging sweep held about two months before. Smith said the earlier blitz helped open their eyes to the larger meaning of 5S. He explained, “just like Ronnie says, 5S is not just housekeeping; it affects your
throughput and is an overall morale booster for the employees.”

Next, Smith's team went back to some of the operators' workstations to add tool pegboards and signs, and to tape off storage areas and label them. As in the other parts of the facility, the operators worked the entire time the 5S activities took place. Smith said there was a lot of buy-in from the operators, who liked things like the new tool stations. But Smith agreed with Angel that management was going to have to enforce rules like using the toolboard shadows, and see that the operators put all items back in place at the end of each shift.

Sustaining gains made in blitz events is tough in any company. To help, La-Z-Boy is implementing TPM. At the cutting, poly, and sewing machines, operators fill out TPM checklists, which include 5S tasks. Some of the equipment represents a large dollar investment, and it needs general daily maintenance. Operators are trained to do this work, so it doesn't have to wait for a busy maintenance staff. The operators know they are doing something important.

The 5S champions agreed that sorting out the old, unused, and excess stuff — anything not used in the last six months — was the highlight of the blitz. Across all the areas of Plant 19, the red-tag total was up to 60 or 70 items.

Richard Kunst reflected on the progress made by the folks in plant 19. “I think this particular facility has turned the corner,” he said. “They get it, they're engaged. I honestly believe this activity is not going to stop now.”

By being on-site, Kunst learned that tools and materials for making toolboards, labels, and other visual workplace items were in Plant 06, about the distance of three football fields from Plant 19. Not being able to build their own toolboards, etc. had been holding back improvement.

One example: Angel had come up with the concept of having a cart with a unit's components follow it down the line. But after seven months, he was still waiting for the carts to be built. Angel was frustrated because he wasn't meeting his production plan, and the carts would have increased throughput.

This example showed that management had to provide the tools to make people less dependent on others when they want to make change. Now each plant will have its own workshop. Kunst said, “We're doing it improve production and to make our employees happier.”

Building Enthusiasm

Being empowered to create an improvement does affect the way people feel about their jobs. Swafford and West said Frank Patton, maker of the broom holder, was really excited about what he had done. He was proud.

Angel talked about how that would have happened in the past. The employee would have had to make a drawing, submit it, wait for it to be approved, and again wait for it to be made. Now, he said, with their own Creform workshop at the plant, “You’re limited only by your imagination. You can create something. You can solve the problem. You’ve got the power.” Through its continuous improvement program, La-Z-Boy was freeing people up so they could make the improvements they'd only thought about before.

The learning and excitement wasn't limited to the folks on the day shift. Yancy Allen, the second shift supervisor, showed up hours before the start of his shift. He said three second-shift people had been taking part in the blitz that week. They wanted to make sure they got the knowledge to sustain the efforts.

Reflect

At the end of each day and on the last day of the event, everyone got together to talk about what had been done. Because La-Z-Boy wants to develop a model for using such week-long events for accelerated learning and improvement, it was important to learn what to do differently in the next events.

Teams wanted more time, and more employee involvement. More advance notice, and a site visit a month before the event would allow better definition of scope and resources. For faster learning — and future study — a textbook was recommended.
Overall, participants were happy with the teamwork, information sharing, and networking they experienced. They thought the Creform training was good. They felt the visual factory training was very helpful, and recommended having more instructors in the future.

Most important of all, perhaps, it was the theme of the event — learn and apply — that allowed participants to really experience new ideas and put them to work.

An event of this magnitude is difficult to facilitate and coordinate, Kunst warned. The initial challenge is getting the support from leaders who may be focused on short-term issues and crises, or afraid to jeopardize daily production. He advised focusing on a key strategic indicator or goal, as La-Z-Boy did by aiming to increase throughput by ten percent with existing resources.

Such an event takes a great deal of preparation, starting weeks in advance. Kunst said he felt fortunate to have a well-grounded student intern available to capture ideas, opportunities, and assignments in the time leading up to the event.

Kunst said that if he had it to do over again, he would have placed more emphasis on the learning and less on the operational goals. Participants said they felt they had learned a lot, however.

Dayton employees know they have their work cut out for them but with new friends and new energy, they won’t be sitting down soon. On the never-ending journey to lean, they know they have much more to learn and apply.

Karen Wilhelm has been involved in publishing practical information about manufacturing, including what is now called “lean,” since 1986. Recently retired from the Society of Manufacturing Engineers (SME), she is a freelance writer, editor of SME’s Lean Directions, and publishes a blog, Lean Reflections.

© 2006 AME® Association for Manufacturing Excellence
www.ame.org

Competitive?
We can make it happen.

Experts in Kaizen and Lean Manufacturing

“Your Lean Solutions Source”™ for Practical and Cost-Effective Implementations

Let our consulting team of experts guide you to Baldrige Award, Shingo Prize, & IndustryWeek Best Plants levels of performance.

(210) 561-4800
sales@m2globalsolutions.com
www.m2globalsolutions.com

M2 GLOBAL SOLUTIONS
A Division of M2 Global, Inc