

case study

COOL Kids: A Lean Journey

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Have you ever spent an hour following a 5-year-old around a playground, doing exactly as he or she does: jumping, sliding, climbing? A famous athlete attempted this a few years ago and had to admit he couldn't keep up. If you can last 30 minutes, you're in good shape.

Now imagine trying to stay ahead of that child, to know in advance where his imagination might lead. This has been the mission of Landscape Structures for more than 30 years – to stay one step ahead of an entire world of children and the builders, city parks and school administrators who buy their playground equipment. To do this, Landscape Structures' owners, Steve and Barb King, revolutionized the playground as we know it.



In 1967, Steve King wrote his senior thesis for Iowa State University at Ames on an idea he had called continuous play. A landscape architecture major, Steve had been researching ways to use landscaping to compliment a new type of housing development that was becoming prominent – one with small individual lot sizes and houses built nearly to the edge, with communal parks for green space. Going beyond the question of shrubs and walkways, Steve considered how to bring these communities together with playgrounds and then how to bring kids together on the playgrounds. Consulting with a child development specialist, he came up with the idea of connecting the discrete slides, monkeybars and climbing poles to create large, connected play forts.

By now, you probably recognize the description because Steve King's design, originally made in redwood and now in plastic and coated steel and aluminum, is the industry standard. And therein lies the challenge.

The story of Landscape Structures is not unlike that of other idea-driven companies. The Kings started out with a great idea and a loan of \$1,000 – using



\$600 on a radial arm saw and \$400 on an attorney for incorporation papers – and started work in their Golden Valley, Minnesota garage. They were on their way to building a multi-million-dollar manufacturing company.

Along the way, of course, they were copied. City parks officials and schools raved about their connected wood play equipment. So other small companies sprang up and replicated the designs. When the Kings decided to move away from using redwood for environmental reasons and went to brightly colored, coated metal, the industry followed. Larger corporations (Legos, Little Tykes) saw the opportunity and purchased Landscape competitors, entering the market with corporate cash and big advertising budgets.

Soon, Landscape Structures had two distinguishing characteristics: quality and cost. Landscape Structure's playground equipment is still the best in the business. Pieces have the kind of sturdiness that shows up competitors' over time. Their products are also the most expensive in the business by about 30 percent. With 80 percent of their business going through a bidding process at school districts and city or municipal parks, that extra 30 percent can be hard to justify when the competition all looks similar.

When we first met with the Kings in mid-2000, we all agreed that differentiation in the market was the goal. Unlocking hidden capacity in the plant would give us the tools – and the resources – to create standout strategies and differentiate Landscape Structures in the industry. Opportunity was all around. A traditional batch operation, Landscape Structures' three manufacturing buildings in Delano, Minnesota were stacked to the ceiling with work in process in some areas. They had run out of room.

Because the company sees a steep spike in demand during summer months, leadership had a habit of hiring a lot of temporary help during that time. And everyone believed they needed tons of

spare parts and SKUs to be ready for the summer rush. As 12-year shop floor veteran Terry Grengs puts it, the old way was comfortable: "I was used to cutting 100 of these, welding 100 of those, and then putting them on the shelf so we had the dingdang-doodle when we needed it."

By late 2000, we got to work. Using the energy and leadership of guys like Pat Faust, vice president of manufacturing, and Tom Barrett, director of continuous improvement, we broke up the functional groups of saws, benders and drills and created cells. We did Routing Standardization on the paint line and tackled throughput, quality and lead time in the rotational molding building. In six months, we had six cells and manufacturing lead time went from 27 days to two days. In LeanSigma® events, we uncovered the reason that tiny holes would sometimes appear in the PVC coating above the welds on pipes and corrected the root cause.

Within a year, we were creating kits of parts and were eating through so much inventory, there was actually space to move around. Out of 330,000 square feet of manufacturing space at Landscape Structures, our kaizen events freed up 75,000 square feet. So, when Steve King wanted to launch his next great idea – equipment for customizable skate parks – we could easily provide space and workers that had been freed up in other events. Now, Landscape Structures creates the ramps and rails that kids across the country are clamoring for, also known as Skatewave, in just 1,500 square feet of manufacturing floor space. *(continued on next page)*



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lets go!



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We have also taken lean into the front office, where Design Services used to receive paperwork from field representatives that was 70 percent incomplete and would take two or three weeks to process due to rework loops. Now, they can process an order in one or two days. In an industry where the total standard lead time is 10-12 weeks, Landscape Structures can now promise delivery in 2-3 weeks.

Being with a family company also means paying close attention to the culture, making sure everyone comes along. Leadership has made the COOL journey (Creating and recognizing Opportunities to improve, Opportunities to grow, Learning as we go and loving what we do!) everyone's business. With

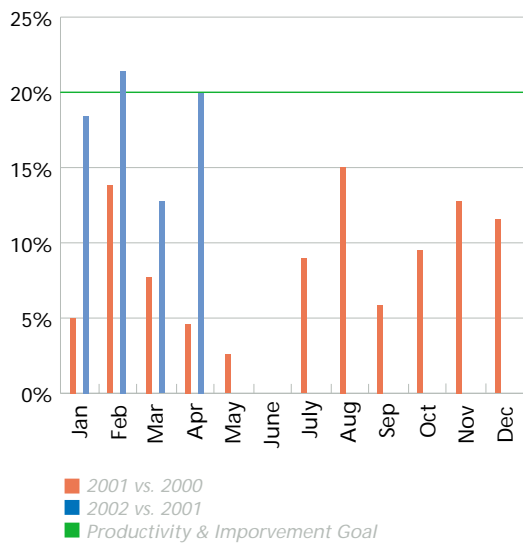
COOL Times, a colorful, weekly newsletter, they announce the results of events and celebrate teams; and COOL shirts are everywhere. Keeping the theme of play at the forefront, they've renamed the cells after favorite parks and waterspiders are called park rangers. "Just having the power to really move things has been great. It's fun," said Lori Wanha, a quality inspector.

"A lot more people feel involved, and they're willing to give ideas because they see things really do change."

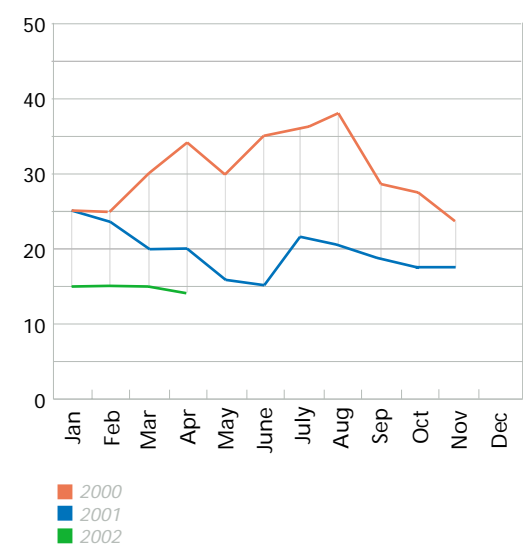
Steve Nowak, a park ranger, was pretty nervous before joining his first team. "I was afraid we were all getting laid off. But now, we work smarter and that helps us in the marketplace because each piece needs fewer labor hours."



Productivity Improvement vs. Prior Year



Delivery: Average System Leadtime



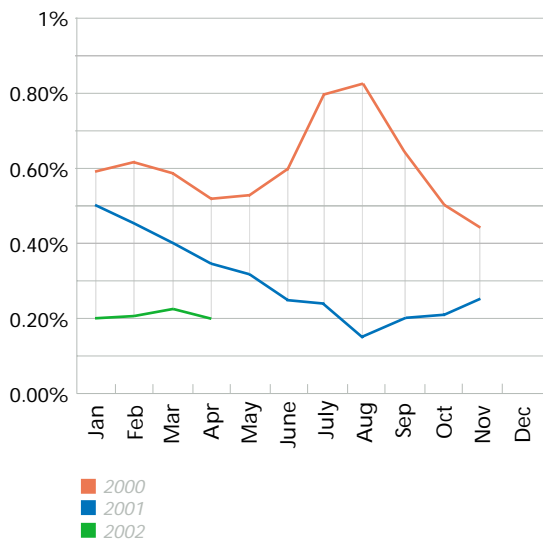


There is still plenty of opportunity at Landscape Structures, as Steve King will point out, particularly in new product development. Like most anxious entrepreneurs, he wants his ideas in the marketplace as quickly as possible. "After a design is finished," he tells me, "I think it should be ready to go in a couple of weeks."

And that's where we're heading. Tom Barrett and Pat Faust have their eyes firmly on the bottom line metrics and on the horizon. With their LeanSigma green belts on hand, and with more training and kaizen events, they can get Steve King's ideas into production and out the door faster all the time. That's the way this game will be won. ■



Quality: Scrap as a Percentage of Sales



2000-2001 Inventory Comparison

