Partnership brings lean to small wood manufacturers

Managers at Trappist Caskets in Peosta needed help solving inefficiencies in their manufacturing process, so they sought assistance from Warren Johnson, Limestone Bluffs resource, conservation, and development coordinator. In response to their request in 2005, Johnson made contacts that led to a partnership and creation of a lean applications program designed specifically for small wood processors of 30 employees or less.

“I began contacting people that could help Trappist Caskets—Iowa DNR and CIRAS at Iowa State—and it became evident that with a little extra effort, we could reach multiple wood product manufacturers who have similar needs,” says Johnson. “As we brought people and resources together, pulling funding from one place and expertise from another, we created a project that benefits the small wood products manufacturing industry.”

Verl “Andy” Anders, CIRAS wood products project manager, and Jeff Mohr, CIRAS lean project manager, teamed up with Johnson; Dennis Michel, Iowa DNR; Tom Kammer, Northeast Iowa Community College; and Brian Brashaw, Natural Resources Research Institute, University of Minnesota Duluth wood industry specialist, to form the Iowa Wood Lean Partnership. The partnership’s success is built upon a simulation developed by Brashaw’s NRRI team and their cooperators at Crystal Cabinet Works in Princeton, Minnesota. Also contributing to the Iowa partnership’s success was partial funding from the U.S. Forest Service Wood Education Resource Center.

Brashaw had learned from his work with wood manufacturers that they could benefit from lean processes. He also realized the standard lean simulation—an electronic circuit board—was not one that they could easily relate to their work environment. Several years before the Iowa partners contacted him, Brashaw had applied his knowledge of lean and created a new simulation using the construction of a dovetail drawer. He continued to fine-tune the training as he delivered it across Minnesota, Wisconsin, and Michigan’s Upper Peninsula.

“During my wood lean training, participants actually put a drawer together using lean principles. They really get it, because they can relate every step of the process to their own shop,” says Brashaw. “By sharing the simulation with the members of the Iowa Wood Partnership, the training has improved because I have gained a better understanding of lean practices from the CIRAS experts.”

The partnership, which included and relied on the networking of community college economic developers and the Iowa Wood Industries Association, developed a five-phase project and introduced it to northeast Iowa wood processors. During the first phase, Brashaw presented the simulation to a large delegation of wood product senior managers to get buy-in and commitment from five companies. The companies that joined the partnership were Distinctive Wood Works Inc., Earlville; Dras Cases Inc., Lake Mills; Kendic Forest Products, Edgewood; Dubuque Sash & Door Mfg., Dubuque; and Trappist Caskets.

A tour of Betch Cabinet Mfg. Inc., a Waterloo cabinet manufacturer, gave the partners a first-hand look at lean principles in action. Employees of each Iowa Wood Partnership company then received the Wood Lean 101 training, with CIRAS following up with value stream mapping at each facility for a selected product family.

“At the first lean training, I could almost picture how to do it in the shop,” says Matt Cable, owner of Distinctive Wood Works Inc. “When my five employees took the Wood Lean 101 training, they came back and completely reorganized the shop—in two hours. They were instantly able to apply what they heard and move on. We saw improvements immediately.”

Amy Peterson, of Dras Cases Inc., believes that people going into lean training automatically think of eliminating waste in the production line process, but it goes much deeper than that. “Through lean we have reevaluated all the processes in our company from the front office to the back shipping dock,” says Peterson. “The greatest end result of implementing lean into our company is the realization that there is no finish line. It is all about continuous improvement.”
Tim and Rhonda Kendrick, Kendrick Forest Products owners, attended the first meeting for managers and knew that lean could help their business, but they didn’t take the time to put it in practice right away.

“We felt we had always believed in the principles of lean manufacturing, but believing in something and doing it are quite different,” says Rhonda Kendrick. “About a year after the training, we had issues arise in the cabinet shop, and we knew it all related back to lean. By not getting started on lean we now had a mess at the shop, and we needed to get it started.”

Over the next year the cabinet shop and sawmill employees received additional lean training, and new practices were put in place. Cellular manufacturing now makes the shop more efficient, and continuous-flow manufacturing keeps made-to-order products moving through the shop. Kendrick Forest Products’ sawmill now has a system in place that helps them manage their inventory better, matching product availability with product demand.

“As we face difficult times in our industry, lean is what holds us together,” says Kendrick. “It is a concept we can understand, apply, and see immediate positive results. There are times when we fall back into our old ways, then we have to stop and rethink again.”

The five companies in the partnership received a list of “30-day quick hitters” and mentoring from the CIRAS specialists through summer 2007. The two or three follow-up visits by CIRAS included a version of lean training, value stream mapping, and an individualized plan for each company. Trappist Caskets, whose request for assistance initiated the program, improved their efficiency and received help setting up a new facility. Trappist Caskets was the only made-to-stock company in the partnership; the rest were made-to-order companies. Trappist also had an atypical work force; half were New Melleray Abbey monks.

Through the partnership, Trappist Caskets established standardized training in workstation areas and focused on flow, safety, and cost of goods. By meeting on a regular basis, management and employees improved communication and now work better as an overall team.

“After lean management trainings, we estimated some early results with a 20-percent increase in sales and a 3-percent gain in sales retention,” says Kelly Myers, Trappist Caskets assistant manager. “We realize that every company has bottlenecks and that production can only move as fast as the slowest bottleneck, no matter what else you do. So we focus on decreasing waste at the bottlenecks to increase our production.”

Myers, the other managers, and all their employees know that even during very busy times, they can’t forget what they learned during the lean training: every person in the shop affects the bottom line. To be productive, they have to stay on the same page.

“We must remember what we learned,” Myers says, “and grow with that knowledge.”

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