

Modelling for efficiency

A strong Canadian dollar, an increase in offshore imports, a shortage of skilled labour and rising raw material costs are all impacting the profitability of the Canadian wood products industry. While companies are using a variety of strategies to overcome these issues, many are beyond the control of individual businesses. One issue that manufacturers across the country can control, however, is the use of technical knowledge to improve manufacturing processes.

Companies that innovate, and that are determined to continually improve business processes, will be successful in the long run. The key lies in the ability to generate new ways to add value, and in the desire to build and run efficient operations that can deliver these products to customers quickly, and in ways that our competitors cannot.

One company making strides along these lines is Pacific Homes of Cobble Hill. Located on Vancouver Island in B.C., when the company's management had the chance to move its growing wall-panel operation into a newly vacated building, it seized the opportunity.

"It wasn't long, however," says production manager Lorne Winship, "before the company realized that greater floor space was only the first step towards increased production. To take full advantage of the larger space, we needed to put in place a plant layout that would deliver greater efficiency.

"The job had to be done quickly and the plant layout had to be 98 per cent right, or better, the first time. Trial and error was not an option," adds Winship.

For Pacific Homes, a successful layout had to correctly include the role of the new framing tables and computerized sawing equipment. In addition, it would need to accurately gauge how these new changes would affect product flow, space allocation and the positioning of employees.

Despite the complexity of these factors, a plan was developed that showed how the new layout would operate when it was up and running. To help Pacific evaluate future opportunities, a simulation model was developed. The model allowed management and production staff to try various scenarios to determine the optimal

placement of employees and equipment within the plant.

The model also gave workers an opportunity to see their roles in the new plant layout and make suggestions. This fostered support and enthusiasm for the plan amongst employees – a step that is critical to any major change in production.

"Using the simulation model gave us the data and the confidence to push forward," says Winship. "Our increased wall panel production has allowed us to boost production in other areas. This has resulted in increased sales overall and an improved bottom line. We anticipate significant savings this year and we expect this to rise substantially over the next few years."

Both small and large companies can experience the gains from improving production flow, product quality and eliminating the wasteful steps that have a habit of creeping into the manufacturing process. The use of simulation modelling technology at Pacific Homes allowed the company to get on the right track, before making physical, and potentially costly, changes.

In future columns we will take a look at how technology is helping a number of other Canadian companies in their quest to become more competitive.

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