

Manufacturing Business Technology

IT FOR MANUFACTURING EXECUTIVES

Applications & Services

Lean, in the most general sense

Serious lean adopters move initiatives beyond the factory cell to maintenance, the front office, and the supply chain

By Nancy Bartels, senior editor

“Lean thinking always works when applied in a comprehensive way,” say James P. Womack and Daniel T. Jones in a 1996 *Harvard Business Review* article titled *Beyond Toyota: How to Root Out Waste and Pursue Perfection*. While most lean initiatives start on the factory floor, experts say smart manufacturers eventually apply the basic philosophies of lean—continuous improvement and elimination of waste—to other parts of the enterprise.



Lynne Degand, CFO, Quincy Compressor, credits BigMachine's Lean Front-End software with streamlining the company's complex order process. Valuable intellectual property is collected and put in a format that can be used by the entire sales staff.

In fact, a 2004 survey from Boston-based analyst firm **Aberdeen Group**, *The Lean Strategies Benchmark Report*, concludes that when a manufacturing operation successfully applies a lean strategy across the entire organization, it is as much as three times more like-

ly to be an industry best-in-class performer than the so-called “laggards.” It’s also 2.5 to six times less likely to be as severely affected by customer pricing and service demands and the related squeeze on profits.

While a lean philosophy doesn’t require significant investment in technology, software solutions that support lean thinking, ensure its integration into enterprise systems, and ease its movement well beyond the manufacturing floor are now readily available.

The lean front office

Quincy Compressor—an 84-year-old, Bay Minette, AL.-based manufacturer of reciprocating and rotary screw air compressors, vacuum pumps, and air treatment components—has been successfully using lean principles on the manufacturing side of

its operations for at least five years.

But one area of opportunity remained untapped: its sales, order-entry, and engineering processes. Build-to-order products, such as Quincy’s compressors, require labor-intensive, error-prone order configuration.

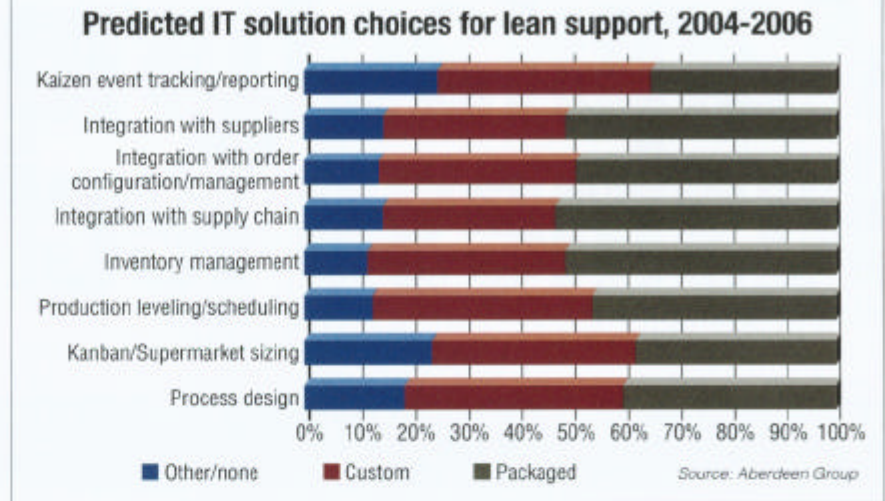
To address these inefficiencies, Quincy went to **BigMachines**, a supplier of what it calls Lean Front-End (LFE) software that supports Web-based configuration, quoting, and ordering capabilities. BigMachines created a global platform for Quincy that integrated the company’s comprehensive knowledge of compressor configuration, specifications, and tools into a single system.

“LFE is configuration and beyond,” says Lynne Degand, Quincy’s VP of finance. “It creates a quote for the distributor to present to a customer. The distributor can then click a button to convert the quote to an order. At that point, it links to our ERP system to create a bill of material. It also creates shop orders, and in that way supports the manufacturing process.”

One main benefit for Quincy has been knowledge capture. “LFE offered us a way to standardize and synchronize our front-end processes,” says Degand. “The old process required a lot of redundant order checking and batch-processing. We always needed very knowledgeable people to do the orders. This software allowed us to standardize the knowledge and make the system mistake-proof.”

Quincy's LFE rollout began with its Bay Minette, Ala. plant. Now it's taking the system to the Illinois operation, and eventually to its plant in Kunshan, China.

Since implementing the system at Bay Minette, Quincy's inside sales has achieved a 20-percent productivity improvement. Order processing time also has been cut from 36 hours to two, while orders that had to be routed through engineering were cut by 60 percent. Updates to bills of material are simple and done in real time, and



The use of IT solutions to enable lean practice across the enterprise will continue to grow over the next 12 to 24 months. Less than 30 percent of manufacturers surveyed by Aberdeen Group will use manual methods, down from nearly 60 percent that currently use them for parts of their lean initiatives.

redundant checking and hand-offs have been eliminated. The staff has more time to devote to informing customers about accessories, new products, and value-add services.

The lean supply chain

Lean experts consistently say lean is not a single technique or strategy, but a way of thinking that should pervade the entire operation. With the advent of software solutions that incorporate lean philosophies, moving lean out of the manufacturing cell and into the rest of the enterprise becomes easier. It also gives manufacturers the option of starting their lean journey not at the manufacturing cell, but at the place in their operations where the biggest payback can come in the fastest amount of time. ■

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