

VMEC aims to boost manufacturing

By PEG ARMITAGE

For almost 20 years, the staff at Vermont Manufacturing Extension Center has been quietly solving problems faced by the state's manufacturers.

According to VMEC's 2013 Impact Report, which measures the organization's statewide impact from July 2012 to June 2013, this nonprofit has lived up to its overall goal: "Providing Systems and Solutions to Help Vermont Manufacturers Innovate, Plan, Perform, and Grow."

The center's staff of 12 is highly experienced in one or more areas of company leadership, management, administrative Lean, and Lean manufacturing, engineering, plant layout, business growth through innovation, marketing, training and global engagement. Since 1996, they have served over 881 of the approximately 2,000 manufacturers that exist in Vermont, according to the 2013 Impact Report. The report states that VMEC had a total impact of \$178,332,000 on the Vermont economy from July 2012 to June 2013. That number includes the direct client impact reported by clients via third-party survey, the indirect impact generated when clients' firms increase their purchases from suppliers, and the induced impact caused by increased household expenditures generated by direct and indirect effects.

The companies that VMEC assists vary greatly in size and type, from the makers of lathe-turned wooden bowls to technology giant IBM. VMEC is not limited exclusively to the Vermont manufacturing sector. Spokesperson Patricia Giavara said they have selectively assisted enterprises in health care, higher education, finance and energy.

Giavara is the center's assistant director, working with VMEC Director/CEO Bob Zider, and she's one of five Innovation Engineering Black Belts. VMEC's 2012-2013 Impact Report describes the center's mission as "working with companies to transform plant and office administrative processes, lower costs, increase output, and improve customer and employee satisfaction."

"We are hosted by the Vermont Technical College and are an affiliate of the nationwide Hollings Manufacturing Extension Partnership (MEP) through the National Institute of Standards and Technology (NIST) within the U.S. Department of Commerce," Giavara said. "Our NIST-MEP connection gives us access to numerous national resources. The State of Vermont and the Vermont Technology Council have been strong VMEC partners since 1995, and we receive some State financial support through an appropriation to the



Patricia Giavara, VMEC's assistant director, joined the organization in 2003. She said the State of Vermont and the Vermont Technology Council have been important partners with VMEC since 1995.

Vermont State Colleges specifically for VMEC. We are fee-for-service consultants, trainers and coaches who also partner with other State agencies, organizations and trusted third parties to achieve measurable impact and results."

Put another way, the 2012-2013 report states that, "Each client dollar spent on VMEC assistance returned an average of \$122 over the past 3 years."

An interesting example of two generations of a prominent Vermont manufacturing family occurred when Simon Pearce engaged VMEC to analyze his recently launched pottery division in Windsor, VT, followed by his son Andrew Pearce, who sought VMEC advice for improving his wooden-bowl factory's

production in Bethel. Simon and Andrew Pearce went through the complete process that is typical for all VMEC clients.

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Earlier this year, Simon Pearce opened the Pottery Division retail shop in Windsor. The Windsor and Quechee locations currently have 330

employees, of which 200 work full-time. The Pottery Division was selected for a pilot project when Pearce's client manager saw that adopting Lean principles would be a good fit.

A VMEC advisor commenced with an on-site Lean 101 workshop attended by Pearce's key pottery employees. Next, they drew a Value Stream Map (VSM) detailing the flow of a typical pottery

product from job start to sale in the retail store. All pottery personnel as well as representatives of marketing, sales, retail, finance and operations created the VSM. They were challenged with excess Work in Process (WIP) and excess finished goods, several bottlenecks restricting product flow, lack of organization, not enough room, "and a lot of time spent looking for tools." They also ran very large batches that contributed to inventory issues.

Ultimately, the Windsor workers were able to maintain the same defect rate while maintaining a more difficult product of "high-end luxury items."

"By implementing the tools learned in the VMEC workshop, we have improved morale of the people on the shop floor because they feel more vested," said Neil Cockwill, director of the Pottery Division for Simon Pearce.

As for Andrew Pearce, his business appeared on the cover of the 2013 VMEC Report. After 10 years working for his father in Quechee, Andrew and Simon Pearce visited a northern Vermont woodworking factory that had recently closed.

Andrew was drawn to an ancient lathe that roughed out wooden bowls. He knew at once that native cherry and black walnut were his materials of choice, and designed and helped build an improved version to rough out multiple sizes of bowls.

Having attended VMEC's Lean workshop, Andrew moved the new business to an open-space plant on River Street in Bethel, VT, and moved with his wife and infant daughter into a South Royalton home. His business and home are near a Bristol logger, his source of cherry and other Vermont hardwoods. Pearce kiln-dries the green woods to a controlled percent of moisture before turning the bowls, sanding them by hand on a lathe, and finishing them with boiled walnut oil that stabilizes the wood.

Andrew Pearce received the same VMEC coaching as that of his father's pottery, except that the different raw materials and production procedures required greater or lesser attention. In marketing his product, he says, special part is where they are made. "It's the fact that they are made in Vermont, a state well known for its ingenuity and innovation. And it's custom-made machinery."

VMEC's board of directors is made up of experienced manufacturers and other business leaders, who serve without compensation for a minimum of two years. For more information on VMEC's work and to view the full 2013 Impact Report, visit www.vmec.org.

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