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How the MEP Can Help Manufacturers Innovate and Grow

Boosting small and midsize manufacturers' capacity for innovation is the core mission of the Manufacturing Extension Partnership.

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By Josh Cable How important is innovation to the success of U.S. manufacturing? It's so important that the National Institute of Technology's Hollings Manufacturing Extension Partnership believes that innovation is a prerequisite for growth -- not to mention survival -- in today's global economy.

Through its staff of more than 1,300 technical experts at 430 locations throughout the United States and Mexico, the MEP focuses on its overarching strategy: Boosting small and midsize manufacturers' capacity for innovation to enable profitable growth.

"We really take a two-pronged approach to this," MEP Director Roger Kilmer explained during a presentation at the 2012 North American Manufacturing and Invention Expo in Cleveland.

"You still have to be lean and mean. You still need to be efficient. But rather than just cutting costs or putting that money in your pocket, you really need to be looking at that as, 'I've now created excess capacity. How can I use that capacity to make new products, to get to new customers, to get to new markets?' Or if you've actually made a few dollars, 'How do I reinvest that into the company to really look at the future?'"

Kilmer highlighted some of the services that the MEP provides to help manufacturers cut their bottom-line expenses -- which frees up capacity for growth -- and add to their top-line sales.

For the bottom line, the MEP offers <u>one-day workshops</u> ranging from the 101-level "Principles of Lean Manufacturing" to the more advanced "Value-Stream Mapping" and "Cellular/Flow Manufacturing."

Among the success stories resulting from the implementation of cellular-manufacturing layout, a precision machine shop increased production flow by 50%, boosted capacity by 15%, developed a new product and maintained its workforce at full capacity thanks to the switch to a U-shaped design, according



Kilmer: If you already have a product idea, "we can help you evaluate that idea to see if it's For top-line growth, the MEP guides manufacturers through its "Define-Discover-Develop-Deliver" methodology, which is a structured framework designed to make the innovation process as simple as possible, Kilmer explained.

"If you have an idea and you've already defined something, we can help you evaluate that idea to see if it's really feasible, if there's a market for it, and help you make a go/no-go decision before you really get into that development and delivery phase," Kilmer said.

"If you don't have any ideas, one of the things we're prepared to do with the centers is to bring in some other thoughts, to bring in some other experts who can help create some of those ideas for you, and help you explore how technology could help you in your manufacturing processes and how technology could be integrated into your products."

The MEP's tool and services supporting innovation include:

- The <u>Innovation Engineering Leadership Institute</u>, which "uses advanced education programs and digital tools that build confidence in your ability to lead the creation, communication and commercialization of meaningfully unique ideas," according to the MEP.
- ExporTech, which aims to help companies enter or expand in global markets. "The program assists your company in developing an international growth plan, provides experts who will vet your plan, and connects you with organizations that will help you move quickly beyond planning to actual export sales," according to the MEP.
- <u>Technology Scouting</u>, a "pull-based" service that helps manufacturers search outside normal channels to find solutions for unmet technology needs.

From Medical Devices to Humvee Jacks

Kilmer pointed to several innovation success stories, including that of <u>CreatiVasc Medical LLC</u>, a Greenville, S.C.-based startup that was founded in 2004 to create and commercialize medical devices that address problems of vascular access for dialysis patients.

The <u>South Carolina MEP</u> shepherded the company through the product-development process, from a composite application sketch on a napkin to approved FDA testing. CreatiVasc expects its first product to be ready by the end of 2012, according to the MEP.

Another success story is that of the Pasco, Wash.-based <u>Bogert Group</u>, which previously had been making hydraulic jacks exclusively for the aviation industry. With the help of <u>MEP experts in</u> <u>Washington state</u>, Bogert designed, prototyped and manufactured a jack that enables a single person to lift an armored Humvees in under three minutes.

The new jack enabled Bogert to secure a contract with the U.S. military, and the expansion into a new market boosted Bogert's sales from \$500,000 in 2006 to \$17 million in 2009.

"It doesn't matter what kind of company you are," Kilmer said. "There are innovative things that you can do to improve your product and make new products. The approach that we have actually can help you through that process much quicker and cheaper."

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