Manufacturing Technology Acceleration Centers

Improving small and medium size U.S. manufacturers' supply chain competitiveness

Making an Impact on U.S. Manufacturing

MEP • MANUFACTURING EXTENSION PARTNERSHIP

National Institute of Standards and Technology

Manufacturing Technology Acceleration Center (M-TAC) Pilot Projects

The Hollings Manufacturing Extension Partnership (MEP) helps accelerate technological innovation in U.S. manufacturers. MEP is a program of the U.S. Department of Commerce's National Institute of Standards and Technology (NIST) and is located in all 50 states and Puerto Rico. MEP is a public/private partnership that works with small and mid-sized U.S. manufacturers to help them create and retain jobs, increase profits, and save time and money. The MEP program serves a vital and diverse role as a nationwide provider of hands-on technical and business assistance supporting the development and competitiveness of manufacturing supply chains.

To help small U.S. manufacturers grow and compete within specific supply chains, MEP is operating a series of Manufacturing Technology Acceleration Center (M-TAC) pilot projects in 2014 and 2015. MEP's M-TAC projects focus on understanding the technological needs and trends of specific supply chains, and in turn providing assistance to small manufacturers to help them adopt, adapt, and integrate appropriate technologies into their business.

The MEP M-TAC projects bring together teams of experts in specific technology and supply chain areas to offer small manufacturers an array of services and deep expertise relating to technology acceleration, transition, and commercialization – within the context of specific supply chains. The M-TAC pilot projects identify where manufacturers most need assistance in adopting or adapting technology. The projects also test and demonstrate business models that will allow small manufacturers to access the technology transition and commercialization services they need to most effectively compete within those supply chain markets.

The following five projects are operating as M-TAC pilots:

Defense Aerospace Supply Chain M-Tac

The Defense / Aerospace Supply Chain M-TAC project is led by the Texas Manufacturing Assistance Center (TMAC), and MEP Center project partners include all seven of TMAC's MEP service locations. The project is working with multiple Defense/Aerospace-related innovation ecosystems in Texas. It is identifying ecosystem gaps and strategies to fill those gaps, and mapping differentiated research, advanced technology, and intellectual property resources for Defense/Aerospace and related supply chains within Texas.

A goal of the Defense / Aerospace Supply Chain M-TAC project is to provide an array of technical assistance to high-potential manufacturers – those identified by the project as fast growing companies or those that possess the attributes to become fast growing – as participants in these Defense/Aerospace supply chains. This project is:

- Identifying critical needs of aerospace and related industries
- Identifying differentiating technologies for regional advantage
- Engaging with primes, as well as lower tier suppliers
- Identifying and engaging with fast / poised to be fast growing manufacturing companies
- Delivering technology transition and commercialization services to targeted manufacturers within the supply chain
- Concurrently assessing and working to enhance the regional innovation ecosystem
- Refining the MEP outreach approach, value proposition, and manufacturer service delivery model

Food and Beverage Processors M-TAC

The Food and Beverage Processors M-TAC project is led by Oregon MEP, and MEP Center project partners include Impact Washington and Idaho TechHelp. The project is working in collaboration with the Northwest Food Processors Association to identify technical and business challenges faced by small manufacturers in the food and beverage processing supply chains of the northwest U.S., and to identify new product and process technologies appropriate to these challenges.

Through online Emerging Technology Showcases, the Food and Beverage Processors M-TAC project virtually introduces vetted technology products or services to small food and beverage manufacturers. If a manufacturer is interested in a particular showcased technology, the Food and Beverage Processors M-TAC then assists the manufacturer in adopting the respective technology. In addition to this assistance, participating manufacturers will have access to services from MEP to adopt, integrate and commercialize any other product and/or process technologies they are interested in. The project will serve to identify and support the adoption of appropriate new technologies from research universities, entrepreneurs, and manufacturers operating in the northwest U.S.

The Food and Beverage Processors M-TAC project is seeking to support an accelerated technology commercialization process by providing an informed and market-driven voice to research universities, and by sharing relevant technology information with industry.

Great Lakes M-TAC

The University of Wisconsin-Stout Manufacturing Outreach Center, Northwestern Wisconsin MEP, leads the Great Lakes M-TAC project, with Wisconsin MEP as a project participant. The Great Lakes M-TAC pilot is targeting the technology needs of key Wisconsin-based companies whose growth in their supply chains is limited by the identification and application of technologies. The M-TAC pilot will enable companies to access and apply advanced manufacturing technology acceleration services that propel small manufacturers to be globally competitive. Some of the industries targeted include: metal manufacturing, sand processing, plastic extrusion, dairy product manufacturing; transportation equipment; electrical equipment manufacturing; and foundries.

The Great Lakes M-TAC seeks to connect established industry and supply chain working groups in the target industries with existing and emerging research consortia and institutions to identify new or emerging advanced technologies and establish a new model for technology adoption. The Great Lakes M-TAC project also works with OEMs and small manufacturers within the target supply chains to obtain information about technology needs and assess technology shortfalls. The project then acts as the conduit for matching emergent technologies with those needs. Technologies within scope for this project are those that are identified as implementation-ready for transition and adoption within a one-year period.

Southeast Automotive M-TAC

The Southeast Automotive M-TAC project is led by Georgia MEP, and MEP Center partners include the Alabama Technology Network, Innovate MEP Mississippi, South Carolina MEP and Tennessee MEP. The project is working with state Automotive Manufacturer

Associations and automotive OEMs in the Southeast U.S. to determine technology needs of the automotive supply chain. Automotive OEMs operating in this region that are targeted for participation include Nissan, Volkswagen, Toyota, Honda, Mercedes Benz, Hyundai, Kia, and BMW.

The Southeast Automotive M-TAC project utilizes available MEP tools and services to identify potential R&D capabilities in the nation relative to the identified technology needs, and chronicle opportunities and challenges of effectively connecting small manufacturer automotive suppliers with R&D capabilities and available technologies.

The project is establishing "lessons learned" regarding which tools and models can successfully identify and connect technology to address existing challenges within the southeast auto supply chain at all levels. The project will also result in understanding of how MEP engagement strategies should operate with manufacturers along the different tiers of the automotive supply chain, as well as with appropriate Technology Centers (especially those Centers located in the southeast region, but also located around the country). And because of the multi-MEP Center collaboration, this project will provide best practices regarding how MEP Centers can work together to serve the same regional supply chains.

Transportation M-TAC

The Transportation M-TAC is led by California Manufacturing Technology Consulting (CMTC), and MEP Center partners include GENEDGE Alliance (VA), the Illinois Manufacturing Excellence Center, and the Corporation for Manufacturing Excellence (CA). The project addresses the Transportation Equipment Manufacturing supply chain, encompassing industries such as aerospace, automotive, trucking, shipping and rail. A sampling of Transportation Equipment Manufacturing OEMs targeted for participation in the project include: GE Aviation, Bridgestone, Emerson Electric Motor Division, and Raytheon Transportation.

The Transportation M-TAC project takes a systems view of technology needs within these supply chains by working with Top/Mid-Tier manufacturers to identify their needs and the needs of small manufacturers within their supply chains. The project also then directly works with the supply chains' small manufacturers to provide awareness about the needs of Top/Mid Tiers, as well as assistance in implementing specific technologies.

The project is conducting pilots with proactive Top/Mid – Tier manufacturers in the transportation sector to:

- Identify and enable the adoption of technologies in supply chains
- Improve supplier capabilities, performance, and value
- Create opportunities for small manufacturers to grow within these supply chains

Additional information about MEP's M-TAC Pilot Projects, including specific information about each project can be found by contacting the project managers below:

- Defense / Aerospace Supply Chain M-TAC project:
  David Stieren (david.stieren@nist.gov)
- Food Processors M-TAC project:
  David Stieren (david.stieren@nist.gov) or Clara Asmail (clara.asmail@nist.gov)
- Great Lakes M-TAC project:
  David Stieren (david.stieren@nist.gov) or Mark Schmit (mark.schmit@nist.gov)
- Southeast Automotive M-TAC project:
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- Transportation M-TAC project:
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The NIST Manufacturing Extension Partnership is a nationwide network transforming manufacturers to compete globally, supporting greater supply chain integration, and providing access to technology for improved productivity. MEP is built around manufacturing extension centers locally positioned throughout the U.S. and Puerto Rico addressing the critical and often unique needs of America's manufacturers.

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