HOLLINGS MANUFACTURING EXTENSION PARTNERSHIP ADVISORY BOARD REPORT 2011





MEP • MANUFACTURING EXTENSION PARTNERSHIP

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

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Letter From the MEP Advisory Board

The most recent MEP program metrics show that the nationwide MEP network provided services to small and mid-size manufacturers (SMEs) that led to \$3.6B in new sales and \$4.6B in retained sales during the most reporting year (2010). In addition, the MEP system provided services that saved \$1.3B in operating costs and resulted in 19,170 new jobs and 41,327 retained jobs. Early indicators suggest that the program was even more effective in 2011 with more than \$30 in SME economic growth for every Federal dollar of investment. An increase in MEP funding in FY 2010 allowed MEP to expand partnerships and broaden the services offered to manufacturers. The NIST MEP system continued its focus on growing clients' top and bottom line through efforts to identify and transition new technologies and concepts into products.

The 2011 Board interfaced with organizations that are studying methods to stimulate re-shoring of portions of the U.S. manufacturing base. The Board members participated in public panels and met with state and federal officials who were seeking individual or collective opinions of Board members. Many of these discussions focused on the importance of private-public partnerships and their role in federal initiatives to increase and improve the interaction between manufacturers, states, and the federal government. Discussions often focused on the MEP as a program that bridges the gulf between Federal initiatives and individual manufacturers.

In 2011, we saw a rapidly developing national discussion regarding the importance of manufacturing to the nation's balance of trade, its job growth, its security, and its general economic health. Several Board members noted that this was the first time in their three to four decade manufacturing careers that there was such a wide recognition of the importance of the manufacturing sector. With manufacturing at the forefront of national debate, and with relatively broad bipartisan support for manufacturing catalysts, the coming year is likely to see its continuation as a national priority with the opportunity for Board members to use their experience and knowledge in advising the National Institutes of Standards and Technology, the Congress, and the public at large about ways to further enhance the competitiveness of the manufacturing sector of the economy and to continue to grow and improve the service offerings of the Manufacturing Extension Partnership.

We also saw in 2011 a continuation of the national debate on workforce development given the ongoing retirement of a large portion of the nation's skilled workforce. MEP Centers know the workforce development needs of small and mid-size companies and can be instrumental in bringing manufacturers together with high schools, vocational schools, community colleges, colleges and Universities to accelerate the generational and skill transitions in the manufacturing workforce. The MEP centers can also bridge gaps between educational organizations to help coordinate workforce development will be central to the Board's activities. Despite the participation of many federal and state agencies in workforce development, the relationship between small and mid-size manufacturers and local educational organizations remains either weak or non-existent in many parts of the country. Workforce development is an element of MEP's Next Generation strategy and the program needs to position the MEP system to be able to respond given the magnitude of this problem.

The role of the Federal government in value chain development was a topic of interest in 2011. Led by studies by the Information Technology and Innovation Foundation (ITIF), the Board was educated on European and Asian programs to protect and stimulate manufacturing – often by strengthening value chains. This data is being incorporated in ITIF recommendations for legislative change. The capabilities of the U.S. supply chain have eroded with the reductions in our manufacturing sector in our recent history. The way in which the supply chain is rebuilt will have a long-lasting effect on the vitality of the U.S. manufacturing sector. While value chain development is driven by the disaggregated decision-making of thousands of private firms, the government can play a catalytic role through the MEP program, in providing the information and lowering the cost of business transactions that are vital to America's manufacturing supply chains. This will be a second area of Board focus in the coming year.

The 2011 MEP national conference offered the first broad opportunity for members of the National Advisory Board to meet with members of the Boards of the individual MEP centers. These discussions were content rich and provide an important communications mechanism to ensure that local needs and opinions are effectively heard by the National Advisory Board and the MEP staff. The MEP staff led this initiative and has encouraged local board members to attend the 2012 conference in greater numbers. The 2011 conference offered important board training sessions for attendees. The 2012 conference promises to expand this important function based on the previous year's experiences.

The Board continues to believe that the MEP model represents the best in private-public partnerships and given the need to reinvest in our manufacturing base and job growth, the MEP program should be grown to take advantage of the high return on the public's investment that this model offers.

Sincerely,

Mark S. Rice, President Maritime Applied Physics Corporation Baltimore, Maryland

Denny Dotson, Chairman Dotson Iron Castings Mankato, Minnesota

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Edward W. Hill, Dean Maxine Goodman Levin College of Urban Affairs Cleveland State University, Cleveland, Ohio

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James Bean, President Preco Electronics Boise, Idaho

Eileen Guarino, President & COO Greno Industries Scotia, New York

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James Jacobs, President Macomb Community College Warren, Michigan

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Fred Keller, CEO Cascade Engineering Grand Rapids, Michigan

Ken Priest, President Kenway Corporation Augusta, Maine

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Vickie Wessel, CEO Spirit Electronics, Inc Phoenix, Arizona

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Edward Wolbert, President Transco Products Inc. Chicago, Illinois

Preface:

About the Manufacturing Extension Partnership

The Omnibus Trade and Competitiveness Act of 1988 created the Manufacturing Extension Partnership program (MEP) to improve the competitiveness of U.S-based manufacturing by making manufacturing technologies, processes and services available. During the past two decades, MEP has focused on bridging the manufacturing productivity gap, identifying opportunities for growth, and encouraging technology deployment.

Growing from a pilot project of just three centers to a national network of 60 affiliated organizations, MEP provides its manufacturing customers with a wide array of fundamental services in business and process improvements. Today, the MEP Centers and their partners, including community colleges, associations, and private consultants provide manufacturers with the services needed to reduce bottom-line expenses and grow top-line profits, both necessary to thrive in the global marketplace.



About the Manufacturing Extension Partnership Advisory Board

In August 2007, Congress passed the America Competes Act (P.L. 110-69) establishing the Manufacturing Extension Partnership Advisory Board. The Board meets biannually to provide advice and recommendations on:

- The programs, plans and policies of MEP;
- The soundness of MEP's plans and strategies; and
- Current performance in relation to MEP program plans.

The MEP Advisory Board consists of members broadly representing the interests and needs of the manufacturing sector. The MEP Advisory Board met twice in 2010 and performed its three chartered functions. In addition, individual Board members worked directly with the MEP staff and attended relevant meetings to collect information on MEP program status and planning activities.

This report highlights the Advisory Board observations, findings and recommendations. Detailed meeting minutes are available on the MEP website at: <u>http://www.mep.nist.gov/about-mep/mep-advisory-board.htm</u>.

Board Members

BOARD MEMBERS



JAMES R. (Jim) BEAN, VICE CHAIR Term expires: April 2013

Jim Bean is the President and CEO of Preco Electronics, Inc. a wholly owned subsidiary of Saber Holdings, Inc. Preco is recognized worldwide as an innovator, designer and manufacturer of vehicle communications systems. He has over 20 years of operational

experience with Fortune 500 companies including National Semiconductor Corporation, Apple Computer, and Sun Microsystems. He held positions in both domestic and international manufacturing. While at Sun, he was part of the executive team responsible for taking the company public and its rapid growth as a market leader. In addition to his experience as an employee in the international economy, he has served on the Board of Directors for both public and private organizations. He currently serves on the advisory board for TechHelp, the MEP-affiliate center in Idaho. He holds a degree in Industrial Engineering from New Mexico State University in Las Cruces, New Mexico.

DENNIS DOTSON

Term expires: April 2013

Dennis Dotson is a third generation foundryman serving as chairman of Dotson Iron Castings in Mankato, Minnesota. The company is in the top tier of foundry suppliers and has been acknowledged by the industry's society as the "Metalcaster of the Year" out of 1,700 North American facilities. Denny has been very active in the industry serving on

various boards and as president of the Ductile Iron Society. He is also president of People Driven Performance, a startup company providing performance improving software and service delivered via shop floor touch screen kiosks. Dennis has a strong commitment to education and is a trustee emeritus of the Minnesota State Colleges and Universities, the governing board for the 35 post-secondary state institutions. He is a U.S. Navy veteran and a graduate of the University of Notre Dame (1967 BBA) and the University of Chicago (1968 MBA). He currently serves on the board of Enterprise Minnesota (a MEP affiliate). The constant in his career has been the involvement in new community, educational and business startups.



EILEEN GUARINO

Term expires: May 2014

Eileen Guarino is currently President and COO of Greno Industries located in Scotia, New York. Ms. Guarino attended the University of South Carolina. Early in her career, Ms. Guarino was a buyer for a clothing company which represented apparel in various resort

locations throughout SC, Florida and Georgia. There she developed a woman's clothing line that retailed in nine locations. Her responsibilities ranged from coordination of the annual buys to importing fabrics to be manufactured in the US. In 1988, Ms. Guarino relocated to upstate New York, where she lent her talents to her new career in the manufacturing parts business as what she calls "part of the Greno team". Greno Industries is a family owned business, and is a recognized minority women owned business in New York State. Ms. Guarino has worked to expand the company's clients to now include successful relationships in new markets throughout Europe and Asia, as well as leading the company's strategic planning growth efforts of its 60,000 sq. ft. manufacturing facility. As a result of her "Greno team" approach, she works to enhance the personal and professional growth of employees to be trained in Six Sigma and Lean Principles. One of her successes in her business career, of which she is most proud, was creating and implementing an in house high school MFG internship training program with local high school students. Ms. Guarino was the past President of the Tech Valley Global Business Network, and current Vice President of the Center of Executives Network of Manufacturing. She is also an active civic member in her chambers of commerce and the Women's Business Enterprise Network Council.



EDWARD W. (Ned) HILL, PAST CHAIR Term expires: April 2014

Edward W. (Ned) Hill is Dean, Professor, and Distinguished Scholar of Economic Development at Cleveland State University's Maxine Goodman Levin College of Urban Affairs. He is also a Nonresident Senior Fellow of the Metropolitan Policy Program at The

Brookings Institution, a Nonresident Visiting Fellow of the Institute of Government at the University of California at Berkeley, and Adjunct Professor of Public Administration at South China University of Technology. He edited *Economic Development Quarterly* from 1994 to 2005. Hill is a member of the board of directors of MAGNET, the MEP affiliate organization in Northeast Ohio. Ohio Department of Development Director Christine Schmenk appointed Hill to Ohio's Manufacturing Task Force in 2011 and he has been a member of Ohio's Cooperative Education Advisory Council since 2009. Hill and his team completed a major study of advanced manufacturing for Pennsylvania's Industrial Resource Network Program in 2010. In 2011 and 2012 they advised JobsOhio, Ohio's economic development organization, and Northeast Ohio's economic development network on development strategy in 2011 and 2012. The Ohio Manufactures Association presented Hill with its Legacy Award in 2005.



JAMES JACOBS

Term expires: March 2013

James Jacobs is President of Macomb Community College in Michigan. Prior to this, he served as the Associate Director for Community College Operations at the Community College Research Center as well as the Director of the Center for Workforce Development

and Policy. He was the former president of the National Council for Workforce Development. Currently, he is the Vice President for Partnerships and Collaborations for the National Council for Workforce Education (NCWE), a national postsecondary organization of occupational education and workforce development specialists. He is a national expert on workforce development and community colleges with more than two decades' experience working through community colleges to meet the training needs of manufacturers in multiple industries. At Macomb Community College, he initiated the Machinist Training Institute, a college program that trained entry level machinists for small and medium sized manufacturing firms. This program was the first NMCS (National Metalworking Standards Council)-certified machining center at any community college in the nation. He was also responsible for the establishment of community colleges. He coordinated the Mid-American Training Group, a group of 15 major community colleges in the mid-west that performed education and training activities with auto and steel manufacturers in their communities. He has conducted major studies on the impact of new

manufacturing technologies on skill requirements of firms both for the U.S. Department of Education and the U.S. Department of Labor.



FRED P. KELLER

Term expires: March 2013

Fred P. Keller is chairman and CEO of Cascade Engineering, a leading multi business manufacturer in the renewable energy, automotive, industrial, and recycling industries, primarily with plastic injection molded products. A materials engineer by

training, he founded the Company in 1973,. The Company's industry recognition includes the Society for Human Resource Management's top 10 "Best Medium Companies to Work for in America"; the White House's Ron Brown Award for Corporate Leadership; and Goodwill Industries' "Employer of the Year" award, and Chrysler's "Technology Role Model" award. In 2004, he was named to the U.S. Department of Commerce Manufacturing Advisory Council and served for 2 years as Chair before retiring in 2011. He is also the recipient of a "Distinguished Service Award" from the National Governors Association. He served as a director of Meijer, Inc. and serves on the W.K. Kellogg Foundation, is past chairman of the Economic Club of Grand Rapids, and has chaired several community boards. His innovative management approach and work in advancing sustainability are featured regularly in business and industry publications, and he serves as a visiting lecturer on Sustainability at Cornell University's Johnson School of Management. A Grand Rapids native, he earned a B.S degree from Cornell and a master of business management from Renssalaer Polytechnic Institute.



KENNETH G. (Ken) PRIEST II Term expires: April 2013

Ken Priest is the President and Chief Executive Officer of Kenway Corporation, Chief Executive Officer of Maritime Marine LLC and a member of Priest and Priest LLC. After working as Project Engineer and Engineering Manager of St Regis/Champion International Paper Company Bucksport Me for over 10 years, he acquired ownership in

the family business Kenway Corporation. He has diversified the company from a manufacturer serving the composite needs of the Pulp and Paper Industry to a leader and innovator in composites for a variety of industries including Defense, Marine, Power Generation, Waste Water Treatment and Aquaculture. Ken serves on the Board of Directors, Maine Composites Alliance; MEP-affiliate center in Maine; Past Board of Directors, American Composites Manufacturing Association; Maine Technology Institute; Member of Compliance Advisory Panel Maine Department of Environmental Protection. He has a BS in Engineering from the University of Maine and is a licensed Professional Engineer in the State of Maine.



MARK RICE, CHAIR

Term expires: April 2014

Mark Rice is President of the Maritime Applied Physics Corporation. After working for several engineering firms and U.S. Government laboratories, he formed Maritime Applied Physics Corporation (MAPC) in 1986. MAPC has both R&D and production work with

offices in Maryland, Virginia and Maine. MAPC currently designs and manufactures electro-mechanical systems that range from submarine and surface ship components to commercial motion control systems. The company has recently completed two unmanned surface vessels for the U.S. Navy along

with prototype distributed power and water systems for use by individual families in Afghanistan. MAPC has had several export contracts supplying ship components to foreign shipbuilders. He is a member of the local District Export Council for the Department of Commerce as well as a member of the National Association of Manufacturers. He has a BA in Physics from the University of Maine and is a licensed Professional Engineer.



VICKI WESSEL Term expires: May 2014

Vickie Wessel is the founder and President of Spirit Electronics, Inc. She has more than 30 years of experience in the electronics industry, including sales, marketing, procurement, operations, contracts, finance and quality systems management. Since its

founding in 1979, Spirit has grown to support broad line electronic component distribution, supply chain solutions, and component value-added services. Her commitment to continuous improvement is evidenced by Spirit's ISO9002 and AS9000 certifications and her on-going participation in lean manufacturing and process improvement activities. Vickie's passion for improving the contracting environment for the benefit of small businesses throughout the nation has led to her active affiliation with the National Minority Supplier Development Council, the Grand Canyon Minority Supplier Development Council, the Aerospace Industries Association Supplier Management Council (SMC), the Arizona Minority Business Enterprise Center, and the Women's Business Enterprise National Council. In 2005, she received AIA's "Amelia Earhart Award", recognizing women who achieve excellence in the aerospace and defense industry. She currently chairs the SMC Small Business Committee and the Legislative Committee, working as an advocate for small, disadvantaged and woman-owned businesses. Vickie a member of the Board of Directors for the Arizona Manufacturing Extension Partnership and is the former Chair of the Board of Directors.



ED WOLBERT

Term expires: May 2014

Ed Wolbert is the president of Transco Products Inc., a leading U.S. medium-sized manufacturer and contractor dedicated to nuclear power. Mr. Wolbert has been in the nuclear power industry for over 30 years, has been with Transco for the last 26 years, and has served as its president for the last 14 years. Mr. Wolbert oversees the daily strategic

direction and tactical operations of the company, including direct guidance of its foreign activities. Mr. Wolbert is a member of the American Nuclear Society, and is also a member of ASTM (serving on the C16 committee). Mr. Wolbert continues in his service on the governing board of the Illinois Manufacturing Extension Center, the Illinois affiliate of the NIST MEP Program. Mr. Wolbert is the current chairman of the Department of Commerce's Civil Nuclear Trade Advisory Committee (CINTAC), after having served as the vice-chair for that same committee during its inaugural term, and has been a vocal advocate and champion for small/medium size enterprises in the nuclear power market.

Advisory Board Activities in 2011

The Advisory Board held two very productive meetings in 2011. The Spring meeting was held in conjunction with the Manufacturing Innovations 2011 Conference in Orlando, Florida. The second meeting was held in September in Washington, DC. During these two meetings, the Board received presentations on topics relevant to the future of the MEP program. These included:

- Information on the performance of the MEP centers and the system during the previous year including the results of several competitive processes
- MEP efforts on setting the stage for job creation
- Overview of MEP's Innovation System
- Discussions about a national manufacturing strategy
- Importance of technology in the manufacturing industry
- A Report on benchmarking countries' SME manufacturing and technology support programs
- MEP strategy update
- Innovation strategies for manufacturers: perspectives from an MEP center, an MEP field agent, and a small manufacturer.

During the Spring 2011 meeting, the MEP Advisory Board had the opportunity to engage with members of the local MEP Center Boards. There were dedicated breakout sessions allowing the MEP Advisory Board members to meet in smaller groups with MEP Center Board representatives. The MEP Advisory Board members found these interactions invaluable and have plans for further engagement in 2012. There are two specific objectives for these exchanges:

1. Enhance communication between local boards and the NIST MEP board regarding the strategic future of the MEP program with particular emphasis on gaining regional and sector-specific input from the local level

2. Provide the local board members with an opportunity to provide input into the activities and white papers that may be produced by the NIST MEP board.

MEP Activities Highlighted in FY2011

In FY2011, MEP built upon partnerships and collaborations to develop and expand the tools, services and resources needed by the manufacturers. During the meetings in FY 2011, the Board received a number of updates on several key partnerships and initiatives.

MEP Innovation Services

NIST MEP is positioning the MEP system to provide business leaders with a reliable process for faster commercialization of new products and expansion into new markets. Launched in FY 2011, MEP's innovation services are designed to both teach manufacturing companies the concepts of innovation and to help these companies implement management systems to support continuous innovation. NIST MEP is making significant investments in the professional development of MEP Center staff and partners. The result will be a nation-wide network of professionals able to deliver consistent, quality, MEP innovation services to the nation's small and mid-sized manufacturing community.

Innovation services that are rooted in a foundation of continuous improvement and innovation are critical to the success of American manufacturers. To stimulate a culture of continuous innovation within a manufacturing company the MEP Centers need to engage at the strategic level to both understand the overall direction of the company and provide an appropriate suite of solutions and services.

The MEP Advisory Board had the opportunity to engage with Joe Perrotto from Country Home Products (CHP). CHP has worked with the Vermont Manufacturing Extension Center (VMEC), the NIST MEP affiliate in Vermont. CHP provides an excellent example of how a smaller manufacturer can implement the innovation services and drive new product development and increase profits.

As MEP continues to focus on innovation services, the MEP Board is interested in feedback from additional MEP centers and clients on the effectiveness and impact of these offerings.

MEP Collaborations with Other Agencies

ExporTech

MEP, in partnership with the U.S. Commercial Service, and local export assistance centers, has been working with U.S. manufacturers to increase their exports through ExporTech. ExporTech assists companies in developing an international growth plan, provides experts who will vet those plans, and connect the companies with organizations to help them move quickly beyond planning to actual export sales. ExporTech leads companies through a facilitated process that prepares them for profitable growth in global markets. Customized to the specific needs of participating companies, each workshop is limited to

"You can't put a price on the value of this program - the contacts, the resources and the knowledge I gained saves us tons of time and tens of thousands of dollars."

Barbara Biller – intelliTech, Inc

six to eight participants to provide sufficient time and attention to each company's specific challenges. MEP has completed ExportTech projects in 23 states with a total of 360 companies. Results are proving the value of this service with companies generating sales with an average sales increase of \$170K.3 to 6 months after completing the workshop

Supplier Scouting

MEP's Supplier Scouting initiative is focused on bringing business opportunities to small U.S. manufacturers with specific capabilities and capacities. In response to the supply chain needs of federal agency and original equipment manufacturer (OEM) partners, MEP leverages the vast knowledge of local manufacturer capabilities to identify and pre-qualify supplier capabilities and capacities, and provide assistance to suppliers as needed. The MEP's Supplier Scouting program began as collaborations with several Department of Defense (DOD) agencies including the Defense Logistics Agency, Naval Air Systems Command, and the Department of Veterans Affairs. The national MEP system scouts for U.S. manufacturing capabilities and capacities in an effort to solve supply chain and procurement issues facing the DOD. MEP Supplier Scouting includes:

- Connecting potential suppliers with DOD procurement sources
- Assisting manufacturers with product expansion and/or alterations for additional uses
- Product reverse engineering to produce necessary technical data for production

The Supplier Scouting process streamlines communications between the agency and contractors and most importantly, increases the number of U.S.-made products the can be used in federally funded projects. In addition to DOD, the Department of Energy (DOE), the Department of Transportation (DOT) and National Institute of Standards and Technology (NIST) are currently using the supplier scouting process.



Department of Energy: The MEP's Supplier Scouting process resulted in 47% of the Buy American waivers being matched to domestic manufacturers. MEP reviewed 83 waivers finding 39 matches with 65 different manufacturers.



Department of Transportation: MEP worked with DOT's Federal Transit Authority (FTA) and verified that no domestic suppliers were readily able to produce girder rail for America's streetcars. MEP found seven companies with the capability and business interest to produce girder rail. The partnership between US DOT and the MEP is expanding, with the MEP serving as a key advisor to both manufacturers and the FTA to develop a domestic rail capacity.



National Institute of Standards and Technology: The MEP was presented with two waiver requests from contractors to the NIST Net Zero Energy Residential Test Facility. The contractor wished to purchase a product from an overseas vendor. The MEP system found U.S. manufacturers that were able to meet or exceed the specifications requested under both waivers. In one case the MEP found a manufacturer with an exact match to the requested item, resulting in the purchase of the U.S.-made product within one month.

Manufacturing Policy and Studies

In 2011, there was considerable national attention given to the importance of manufacturing and the desirability of developing a national manufacturing strategy. The MEP Advisory Board had the opportunity to interact with several groups interested in developing public policy to enhance the competitive position of U.S. manufacturers. The Board received two briefings from The Information Technology and Innovation Foundation (ITIF). One focused on the rationale for developing such policies. The second provided comparisons with types and levels of support provided to manufacturers in other countries.

In general, the Board was encouraged with the conversation about the importance of manufacturing and on the elements of a national policy. As the ITIF report, "The Case for a National Manufacturing Strategy" (<u>http://www.itif.org/publications/case-national-manufacturing-strategy</u>) outlines manufacturing is vitally important to the U.S. economy. Manufacturing is:

- Needed to close the trade deficit.
- A key source of employment and good jobs.
- A key source of research and development.
- And services are inseparable and complementary.
- Vital to U.S. national security.

A national manufacturing strategy needs to be multi-faceted and emphasize what ITIF calls the "Four T's" – taxes, trade, talent, and technology. The Board recognizes that the MEP program has a role in a developing and implementing a national strategy and its program offerings constitutes important elements of a comprehensive pre-competitive public policy strategy. The MEP's focus on helping manufacturers develop export opportunities, connecting companies to the skilled workforce, and putting technology into the hands of smaller manufacturers addresses three of the four T's.

In 2011, ITIF released another report entitled, "International Benchmarking of Countries' Policies and Programs Supporting SME Manufacturers," <u>http://www.itif.org/publications/international-benchmarking-countries%E2%80%99-policies-and-programs-supporting-sme-manufacturer</u>.

This report builds on the earlier report and identifies the manufacturing support programs for small and medium sized enterprises (SMEs) that have been implemented in ten foreign countries, Argentina, Australia, Austria, Canada, China, Germany, Japan, Korea, Spain, and the United Kingdom.

Other countries provide support for SMEs for much the same reason the U.S. does:

- To help SMEs become more competitive,
- To reduce the productivity gap that exists between large and SME manufacturers,
- To help SMEs be more productive,
- To overcome knowledge/information gaps, and
- To provide information and advisory services to SMEs.

The report points out some important differences between the U.S. and other countries support for the SMEs. In particular,

- Foreign countries are investing more than the U.S. does in manufacturing support services.
- U.S. investment in manufacturing support services has decreased in real dollar terms over time.
- Many programs are expanding their focus from manufacturing process improvements to include innovation and research-and-development (R&D) services.
- Nations with rapidly developing economies are moving up the technology ladder and are actively providing support to their manufacturers in terms of technology transfer, applied research and development, and education and training. All are designed to move their industrial base up to capture larger shares of the value of globally traded manufactured products.

Reviewing the support other countries provide to their SMEs was extremely valuable and provided the Board with useful comparisons when considering recommendations and suggestions for the future direction of the MEP program. In general, the Board looks forward to continuing discussions around how MEP can play a role in developing and implementing a national manufacturing strategy and be better positioned to serve the unique needs of the smaller manufacturer.

MEP Advisory Board 2011 Recommendations

- 1. Recommendation that MEP strategic efforts in the area of work force development be expanded by looking for collaborative efforts with other Federal Agencies that address specific work force gaps of interest to SMEs.
- 2. Recommendation that the MEP develop specific metrics for the Innovation Engineering program and that the MEP continue its efforts to more directly brand the Innovation Engineering program as an MEP activity while considering options to broaden the range of service providers under this program.
- 3. Recommendations to enhance communications in the following areas:

a. That NIST MEP link it's Centers to other NIST advanced manufacturing initiatives allowing MEP center staff exposure to and potential participation in these initiatives.

b. That NIST MEP request a more formal mechanism within NIST to interact with the Visiting Committee on Advanced Technology (VCAT) to ensure that the SME perspective is reflected in strategic advice given to the NIST Director.

c. That NIST MEP continue to fund key studies to provide strategic context for program growth and evolution.

d. That NIST MEP initiate a personnel exchange program with the MEP Centers so that Federal staff and MEP Center staff can deepen their understanding of their respective roles in this public private partnership and provide more effective services to U.S. manufacturers.

Looking Ahead

The MEP Advisory Board is encouraged by the national discussion on the importance and value of manufacturing. As the discussions continue, the Board is optimistic about the opportunities for the MEP program and looks forward to engaging national leaders on how to transition this industry to a more competitive and prosperous future; a future that provides family-friendly earnings and successful careers for Americans.

In FY2012, the Board will continue to review strategic objectives, the evolution of the nation's manufacturing base, and make recommendations for the evolution of the MEP's service offerings. The Board is looking forward to additional collaborations with local boards to continue conversations around the needs of manufacturers and MEP's service offerings that, if filled, would enhance the competitiveness of U.S. manufacturers.

The Board wishes to express its sincere appreciation for the MEP management's support of the Board and its initiatives during 2011. The input of the Board is openly received and has fostered extremely productive discussions both at NIST and within the broader community. This role is enabled by the open and frank interactions that the Advisory Board has with MEP program managers.