Hollings Manufacturing Extension Partnership: Advisory Board Annual Report 2010

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Letter From the MEP Advisory Board

The MEP program continued to evolve in 2010 and the Board applauds the efforts of both the NIST management team, State participants, and the over 1400 staff members in the 60 MEP Centers for their execution of initiatives in supplier development, sustainability, technology acceleration, continuous improvement, and workforce. The extent of this change was evident in the MEP National Conference held in May of 2010. While many of our Board members have been the recipients of services offered by MEP Centers, we nonetheless continue to be impressed with the ability of this public private partnership to stay exceptionally relevant to the needs of local manufacturers. While the program was created in the late 1980s in response to foreign competition based on lean manufacturing principles, today's program offers a much broader range of very relevant services that run the gambit from export training to assistance with new product development. It is this ability to remain relevant through continuous change when combined with broad geographic coverage that makes the MEP a critical element of the nation's efforts to sustain manufacturing prowess and thereby increase employment.

A number of policy recommendations have been released recently that suggest that funding to the MEP be cut to support deficit reduction. While the Board members fully understand the need for deficit reduction, we are adamantly opposed to reductions in funding for this program for the following reasons:

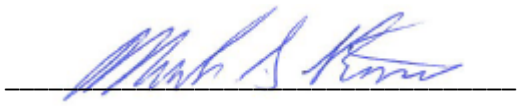
1**. Return On Investment:** The MEP Centers provide a very high rate of return on Federal dollars invested. The latest estimates indicate that the Program provides $32.00 of manufacturing GDP growth for every tax dollar invested. Assuming an average effective manufacturing tax rate of 20%, this suggests a Federal Government rate of return of $6.40 in the first year for every dollar invested.

2**. Jobs:** The MEP program serves small and mid size companies that have been the manufacturing job growth engine for the last 20 years. While national manufacturing jobs have been drastically cut in larger firms, the small and mid size manufacturers continue to add net jobs. The most recent data reported by MEP clients for services received in FY2009 indicate that more than 72,000 have been created or retained as a result of MEP assistance. The relatively small subsidy provided by the Federal Government is matched by state and commercial funds to provide services that would not otherwise be affordable or accessible to small and mid size firms.

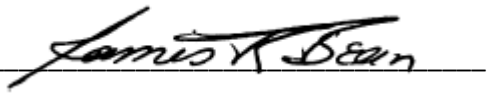
3. **Federal/Industrial Collaboration:** This year brought a rapid increase in the use of MEP centers as a mechanism for other parts of the Federal Government to cost effectively reach small and mid-size manufacturers. The Department of Energy and the Environmental Protection Agency is teamed with the MEP program in developing building efficiency improvements. The U.S. Commercial Service works closely with the Centers in delivering training on exporting. There is growing recognition that the MEP public partnership offers a model for flexible and efficient government-industry interactions. NIST MEP managers have accordingly recognized the need to spur appropriate Center services and in FY 2010 ran a competitive grant program focused on expanding and developing new tools and services to support growth in the manufacturing industry.

The Board believes that the MEP model represents the best in public private partnerships and given the need to reinvest in our manufacturing base and job growth, we believe that the MEP program should be grown to take advantage of the high Return on Investment that this model offers.

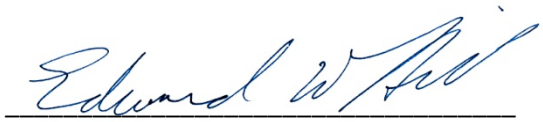
Sincerely,



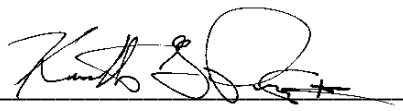
Mark S. Rice, President
Maritime Applied Physics Corporation
Baltimore, Maryland



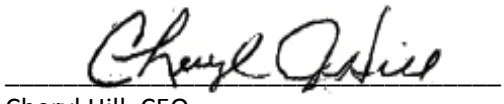
James Bean, President
Preco Electronics
Boise, Idaho



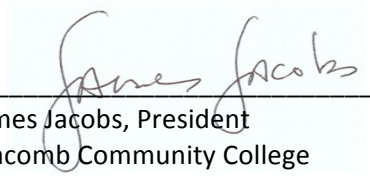
Edward W. Hill, Dean
Maxine Goodman Levin College of Urban Affairs
Cleveland, Ohio



Ken Priest, President
Kenway Corporation
Augusta, Maine

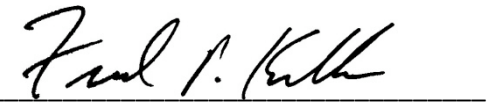


Cheryl Hill, CEO
Hill Manufacturing, Inc.
Boise, Idaho



James Jacobs, President
Macomb Community College
Warren, Michigan

Denny Dotson, Chairman
Dotson Iron Castings
Mankato, Minnesota



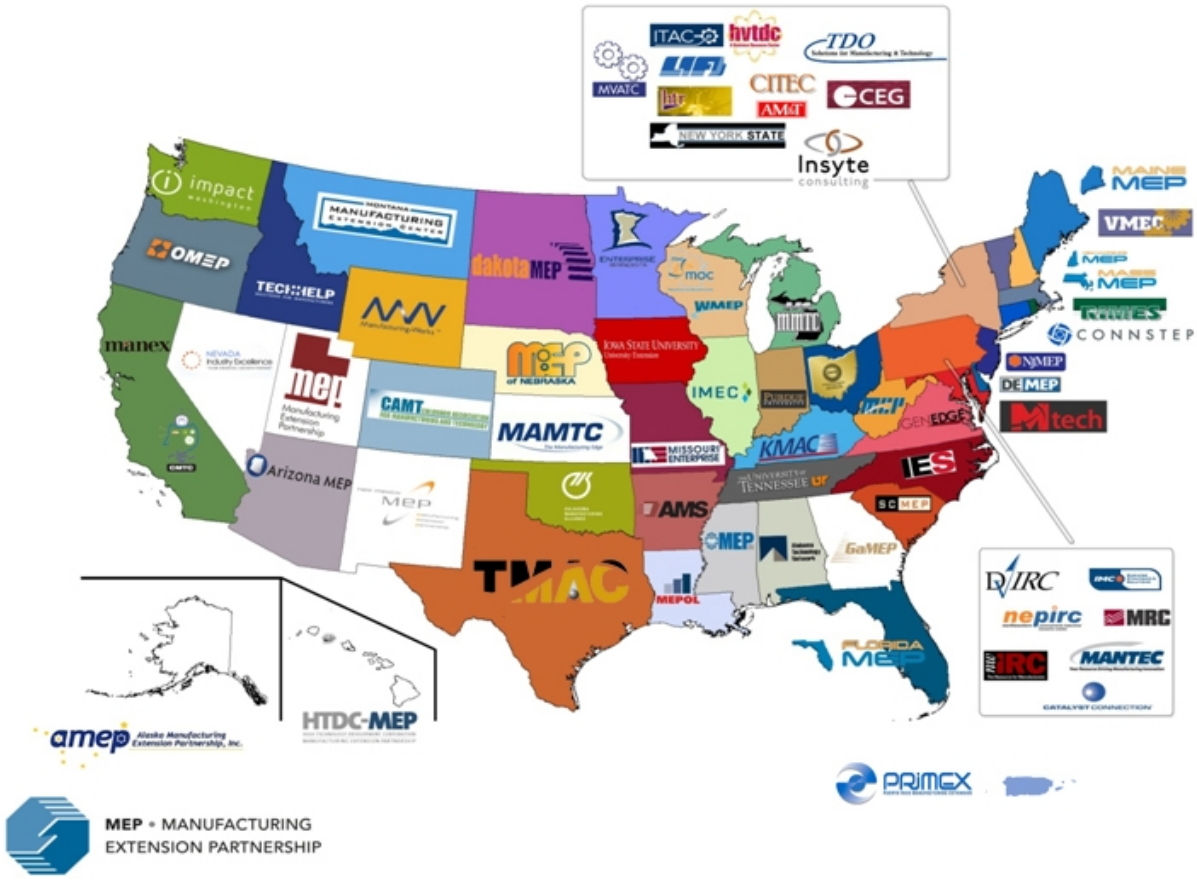
Fred Keller, CEO
Cascade Engineering
Grand Rapids, Michigan

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: http://www.mep.nist.gov/about-mep/mep-advisory-board.htm.

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.

CHERYL HILL
Term expires: April 2011

Cheryl Hill is owner and CEO of Hill Manufacturing, Inc. in Broken Arrow, Oklahoma. Hill Manufacturing is a 65 employee CNC machine shop with customers in energy, aerospace, and other industries. In June 1996, she became sole owner of Hill Manufacturing with five employees and annual sales of less than $500,000. Since that time, she has purchased Ketchum Manufacturing (later renamed Hill Aerospace) and created an additional firm, Hill Equipment Manufacturing. Her company's sales have grown to more than $7,500,000. She was elected to the board of directors of the Oklahoma Manufacturing Alliance in 2002 and is currently serving her second year as board chair of the Alliance, the MEP affiliate in Oklahoma. She is an active business owner and articulate advocate for Oklahoma's manufacturing community. In addition, she has been a mentor to other women in manufacturing through the Oklahoma Women in Business and Agriculture Conference. She also has been a speaker at State Career and Technology Education Conferences on behalf of manufacturers. She currently serves on the Bank of Oklahoma Wealth Advisory Board and is a valued member of the prestigious Executive Women's Forum. She is assisting the mayor of Tulsa with the development of a manufacturing training program for incarcerated offenders as they are released from prison. A member of the 2007-2008 class of Leadership Oklahoma, she serves on the board of the Oklahoma Academy. She attended Mankato State College in Mankato, Minnesota, and moved to Oklahoma in 1974.

EDWARD W. (Ned) HILL, PAST CHAIR
Term expires: April 2011

Edward W. (Ned) Hill is Dean, Professor, and Distinguished Scholar of Economic Development in the Maxine Goodman Levin College of Urban Affairs. He is also a Nonresident Senior Fellow of the Metropolitan Policy Program at The Brookings Institution, an independent public policy research organization in Washington, D.C. and a Nonresident Visiting Fellow of the Institute of Urban and Regional Development at the University of California at Berkeley. He edited Economic Development Quarterly from 1994 to 2005. Economic Development Quarterly is dedicated to publishing research on the development of the American economy. He lead a joint Deloitte Consulting-Cleveland State University team that wrote two manufacturing strategy reports: Industry-based Competitive Strategies for Ohio: Managing Three Portfolios and Manufacturing Pennsylvania's Future.

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 college training programs between the Industrial Technology Institute and Michigan 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, following an earlier career as a metallurgist with Pratt & Whitney. Cascade has been widely recognized for its business achievements and community involvement. 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, where he was recently named Chairman. He is also the recipient of a "Distinguished Service Award" from the National Governors Association. He serves as a director of Meijer, Inc. and 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 science in business management from Michigan.

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 2011

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.

There are currently two vacancies on the MEP advisory board.

Advisory Board Activities in 2010

The Advisory Board held two meetings in 2010. The Spring meeting was held in conjunction with the MEP National Conference in Orlando, Florida. The second meeting in September held in conjunction with an MEP quarterly review meeting in Denver. During these two meetings, the Board received presentations on topics relevant to the future of the MEP program. These included:

- Partnership between MEP and the Society of Mfg. Engineers
- Overview of the Current State of Manufacturing
- Federal Manufacturing Policies
- National Export Initiative
- Panel Discussions of MEP Center Operations, Services, and Structures
- Overview of MEP Growth Services and the National Innovation Marketplace
- Results of a Research Study on MEP Business Model Report: Expanding the Reach of the MEP Program
- Impact of the Recession on MEP Centers
- Report from the Chair of the Dept of Commerce Manufacturing Council
- A Report on the Initiative to Enhance Technology Transfer from Federal Laboratories
- A Report on the NIST Small Business Innovation Research (SBIR) Program and Linkage to the MEP Centers
- A Report on MEP's Offering of the ExporTech Service to Train Emerging Export Companies

The Denver meeting included a session where the NIST MEP Advisory Board met with members of the local Boards of individual Centers. These exchanges have begun to set the stage for higher levels of strategic collaboration between the local and NIST MEP board. A series of meetings are planned at the 2011 Manufacturing Innovations Conference to be held May 15 -18, 2011 in Orlando, FL. 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.

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.

It is emphasized that this communication link is not appropriate for the discussion of tactical issues, system management decisions, or contracting matters and that such content remains the exclusive responsibility of Center Directors and NIST Management.

MEP Partnerships and Activities Highlighted in FY2010

In FY 2010, MEP built upon partnerships and collaborations to develop and expand the tools, services and resources needed by the manufacturers. During the meetings in FY 2010, the Board received a number of updates on several key partnerships and initiatives.

Small Business Innovation Research

NIST has enhanced its SBIR program by adding a technology transfer component. The NIST SBIR TT program solicits R&D proposals and funds innovations that are based on Federally developed technology. The additional research needed to move the idea to market can be supported with SBIR funds and available technical resources. The NIST SBIR TT approach is gaining interest in other agencies and MEP is supporting the expansion in other agencies by mentoring TT, SBIR, legal and acquisition staff at several agencies. The MEP program is in a unique position to support this initiative with tools to assist SBIR awardees, including proposal preparation, access to supporting R&D resources, tools to translate the concept into market opportunities, and providing product development and export support.

This is an expanding area for MEP in support of technology acceleration for small manufacturers. The Board feels MEP has a unique role to serve in this area and encourages the program to continue to explore opportunities to support expansion of SBIR activities in the Centers.

Business Plans for Exporting

For the past four years, MEP, along with the U.S. Commercial Service, and local export assistance centers, has been working with U.S. manufacturers to increase their exports. ExporTech assists companies in developing an international growth plan, provides experts who will vet their plans, and connects 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 learning needs of participants, each workshop is limited to six to eight participating companies to provide sufficient time and attention to each company's specific challenges. So far, MEP has completed 36 ExportTech projects in 20 states with a total of 264 companies participating.

> "ExporTech provided the opportunity to learn how international business works, from infrastructure to shipping, legal to logistics, strategy and country knowledge," says Conrad Karbowniczak, vice president of

MEP has recently begun to offer other versions of their training program, including condensed and industry- and market-specific models. MEP has also begun to sponsor ExporTechs in target countries so attendees have access to local resources. One is planned for Ireland during the spring of 2011.

The MEP Board believes the ExporTech program is a complement to the Administration's efforts under the National Export Initiative and encourages the MEP program to identify further opportunities to collaborate to support the initiative.

Department of Energy

In FY 2010, MEP awarded $1.5 M over 3 years to the Delaware Valley Industrial Resources Center (DVIRC) and the New Jersey Manufacturing Extension Partnership (NJMEP), the MEP affiliate centers in Philadelphia and New Jersey to encourage expanded manufacturing of energy-efficient building technologies. This award complements a larger U.S. Department of Energy project that provides up to $122M to the Pennsylvania State University for an Energy Innovation Hub. To be located at the Philadelphia Navy Yard Clean Energy campus, the Hub will focus on developing energy-efficient building designs that will save energy, cut pollution, and position the United States as a leader in this industry.

This project represents the first time that federal, state, and local public and private resources were pooled to create a formal applied research/manufacturing cluster that spans from the lab bench, through production to implementation. The Energy Innovation Hub will pursue a research, development and demonstration (RD&D) program targeting technologies for single buildings and district-wide systems. These new building systems and components will need to be manufactured, presenting a unique opportunity for businesses in the area to get in on the ground floor. The DVIRC in collaboration with its sister-center, the NJMEP, will leverage their knowledge of and relationships with region companies to identify technologies such as sensors, new building materials, and computer simulation tools developed by the Energy Innovation Hub, and translate them into components they can license, develop and manufacture.

The Board is encouraged by this expanded partnership with other agencies to address the growing need of energy-efficient building design. The Board believes the work stemming from DVIRC and NJMEP's participation will be of value to the entire MEP network.

MEP Cooperative Awards

Also in FY 2010, MEP provided $9.1M to 22 awardees designed to enhance the productivity, technological performance and global competitiveness. The projects funded address one or more of five areas MEP has identified as vital for strategic growth in U.S. manufacturing, including:

- Responding to evolving supply chains;
- Accelerating the adoption of new technology to build business growth;
- Implementing environmentally sustainable processes;

- Establishing and enabling strong workforces for the future, and;
- Encouraging cultures of continuous improvement.

The new awards will foster increased collaboration among the MEP systems as new tools are developed and disseminated. In addition, the awards have brought new partners into the MEP network, expanding the capacity and capabilities of the system to address the needs of U.S. manufacturers.

MEP Advisory Board 2010 Recommendations

The 2010 Board has provided MEP Managers with the following recommendations regarding the strategic execution of the program:

1. The Board endorses the recommendations of the MEP Business Model Report: ***Expanding the Reach of the Hollings Manufacturing Extension Partnership***. The Board believes that this report correctly charts the development path for the program as a whole and for individual Centers. On the topic of cost share, the Board feels the appropriate cost share structure should include a financial involvement from the states to better leverage the innovation and business development efforts at the state-level.

2. The Board feels that there are three areas where the MEP service delivery model would benefit from additional strategic insight and will focus on drafting a series of white papers on these areas that include specific recommendations for the program to consider. These topics include:

- **Competitive Assessment of Foreign Manufacturing Policies:** The MEP ExporTech program has illustrated the need for greater international business knowledge among typical small and mid-size manufacturers. While the U.S. Commercial Service is instrumental in providing specific knowledge to their client companies, the broader manufacturing community is largely unaware of the impact of foreign trade policies on their ability to export. As the MEP Centers interact with clients, we believe that there is a need for greater emphasis on the international market with a specific need for knowledge of the trade policy differences between the U.S. market and key international markets.

- **Structural Change to Enable Successful Manufacturing Futures:** The MEP program is collaborating with a number of agencies, including the Departments of Defense, Energy, and Labor. The success of these collaborations suggests that the MEP service delivery model is of broader interagency value in delivering and coordinating services for small and mid size manufacturers. To realize the benefits of this broader collaboration, the Board will look at possible structural changes that would improve the competitiveness of U.S. manufacturers with emphasis on the interagency delivery model.

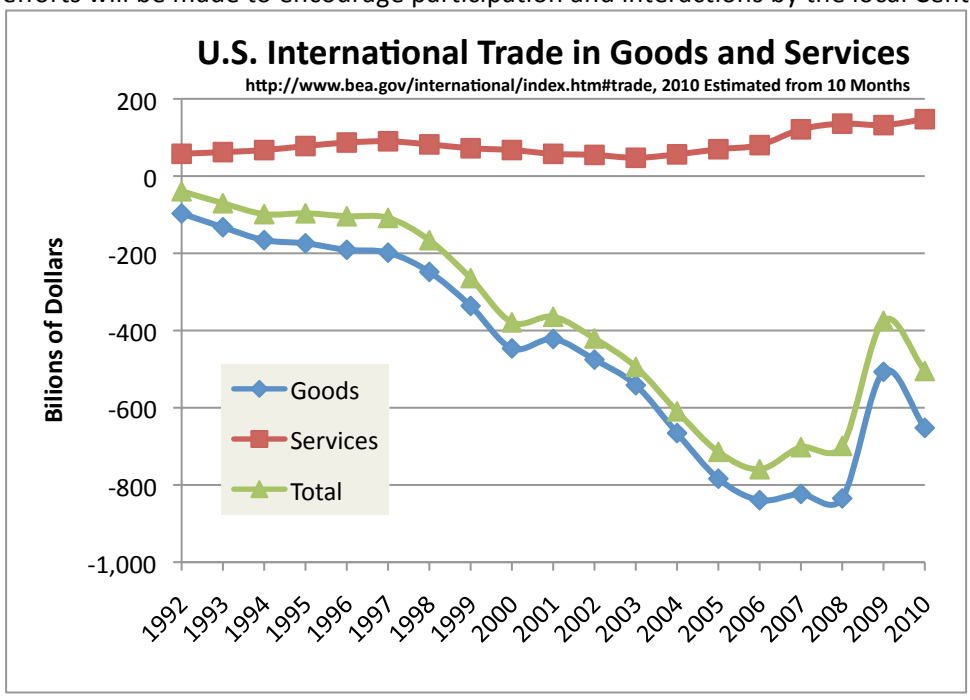
- **Educating the Next Generation Manufacturer:** A career in manufacturing has not been among the nation's most desirable career paths for more than 50 years. In that time, manufacturing professions have changed markedly and these high-paying high-skill jobs need public recognition if the manufacturing sector is to grow. The Board will prepare a

white paper that highlights the need for a resurgence in manufacturing education at all levels, and will discuss the efforts needed to revise the outdated view of manufacturing jobs in America.

The Board believes the white papers will provide context for specific recommendations to the Director of the MEP Program, the Director of NIST, and to Congress.

Looking Ahead

MEP Advisory Board Priorities for FY2011 will continue to be on the review of MEP strategic objectives with associated recommendations for MEP program evolution. In particular, the 2011 Board is seeking collaboration with local boards to define gaps in the MEP offerings that, if filled, would enhance the competitiveness of U.S. manufacturers. As the MEP Board sets future meeting agendas, efforts will be made to encourage participation and interactions by the local Center Board members to ensure all perspectives are addressed when considering manufacturers needs and the role of the MEP.



While there have been many substantial accomplishments over the life of the MEP, considerable work and support is still needed to help manufacturers thrive. As evidenced in Figure 1, there is a great need for accelerated efforts to rebuild the U.S. manufacturing base. This Board believes MEP is a prime example of a public private partnership that should be leveraged and expanded to support manufacturing's growth. The MEP centers should continue to evolve and fill growing roles in the delivery and coordination of key services that are attuned to local manufacturing sectors.