

# Hollings Manufacturing Extension Partnership

## Advisory Board Annual Report 2008



February 2009



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## **PREFACE**

### **Manufacturing Extension Partnership Program**

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 59 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 provide manufacturers with the services needed to reduce bottom-line expenses and grow top-line profits, both necessary to thrive in the global marketplace.

### **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 as a group in 2008 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



**EDWARD W. (Ned) HILL,  
CHAIR**

**Term expires: April 2011**

Edward W. (Ned) Hill is Vice President for Economic Development at Cleveland State University and Interim 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*.



**MARK RICE, VICE  
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.



**JAMES R. (Jim) BEAN**  
Term expires: April 2010

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.



**LYDIA CARSON**  
Term expires: April 2011

Lydia Carson is President and CEO of Balm Innovations, LLC (BI), a University of Arkansas for Medical Sciences (UAMS) Arkansas BioVentures firm established to commercialize Omnibalm®, a topical cream developed by a UAMS pharmaceutical researcher. She founded BI in 2004 and negotiated a license on behalf of BI to obtain exclusive, worldwide rights to the intellectual property associated with Omnibalm. After leading BI to a successful market launch of Omnibalm in late 2005, she introduced a second Omnibalm product in 2006 and Omnibalm Daily Foot Therapy in 2008. Prior to Omnibalm, she served as Vice President of Industry for the Arkansas Science & Technology Authority and as Director of Arkansas Manufacturing Solutions (AMS), the MEP-affiliate center in Arkansas. She has also held engineering and leadership roles with Lexmark International and Ford Motor Company,. Currently, she serves on the Arkansas District Export Council (DEC). She also serves on the Planet Eureka! National Innovation Marketplace Advisory Board and the American Society of Mechanical Engineers (ASME) Strategic Initiatives & Innovation Committee and on the boards of the Central Arkansas Chapter of the National Association of Women Business Owners (NAWBO), the Arkansas State Chamber of Commerce, and the Arkansas Inventors' Network. She was awarded the NAWBO Rising Star Award in 2006. She graduated from Vanderbilt University with a Bachelor of Engineering in Mechanical Engineering and earned a MBA through the University of Arkansas at Little Rock (UALR) Executive MBA program.



**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.



**JAMES JACOBS**

Term expires: March 2010

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 2010

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 Rensselaer Polytechnic Institute.



**MERRITT R. MARQUARDT**  
Term expires: April 2009

Merritt R. Marquardt recently retired from the 3M Company where he served in the Office of General Counsel. His work involved legal practice in the areas of anti-trust, government contracts, and counsel to numerous operating units of the company across a broad range of business matters. Each corporate division has its own R & D, marketing, manufacturing and sales departments which are governed by an operating committee which functions as a board of directors for that business. Over the years, he served on the operating committees of more than a dozen of such business units. He has also been active in both and professional and community affairs, including service on the Board of Directors of Enterprise Minnesota and numerous Minnesota State Bar and Minnesota Supreme Court committees. He currently is engaged in teaching courses on Western Political Philosophy at both the University of Minnesota and the University of St. Thomas-Minnesota as an adjunct professor. He graduated from the University of Wisconsin-Madison and the George Washington School of Law, and during the interim spent time on destroyers as an officer in the US Navy.





**CAPERS W. McDONALD**

Term expires: March 2009

Capers McDonald is presently an Executive in Residence and faculty member of Johns

Hopkins University's Carey Business School. For 12 years previously, he led BioReliance Corporation as President and CEO, providing innovative testing and manufacturing services for the biotechnology and pharmaceutical industries from operations in the U. S. and Europe. When acquired during 2004, the company was valued at a 32-fold increase and greater than 33% annual return for investors and employees over his 12 years of leadership. During 2003, BioReliance was ranked #1 nationally by *Forbes* in earnings per share growth among "200 Entrepreneurial Hot Shots" and #11 by *Fortune Small Business* among "America's Fastest-Growing Small Companies." He has served three terms as Chair of the Technology Council of Maryland and was named a 2002 Greater Washington Entrepreneur of the Year. He has been recognized as a national Distinguished Eagle Scout and included among *Who's Who in Science and Engineering* and *Who's Who in the World*. He earned an M.B.A. from Harvard Business School, an M.S. in Mechanical Engineering from MIT, and a B.S. in Engineering from Duke University.

## NEXT-GENERATION MEP STRATEGIC PLAN

The MEP program is in the second year of a realignment of the services it provides to the U.S. manufacturing sector. This transformation of the MEP program led the Board to spend the majority of its advisory work reviewing and commenting on the **Next Generation Strategic Plan**. MEP presented a draft plan at the April 2008 Board meeting. The Advisory Board provided comments and input for the program's consideration as they moved forward in developing the plan. In October 2008, MEP presented a revised version of the plan that incorporated feedback from the Advisory Board, MEP Center staff as well as key stakeholders.

The Next Generation MEP will focus on increasing manufacturer's business growth, competitiveness, and profitability. MEP will develop the tools, services and connections needed by manufacturers in five key areas: continuous improvement, technology acceleration, supplier development, sustainability, and workforce. Together, this framework integrates continuous improvement – one of MEP's core services - with strategies focused on new product development, market expansion, and workforce – all necessary components for increased competitiveness.

By encouraging firms to invest in themselves across all elements of their organization, MEP is creating an environment that puts firms in position to innovate in order to create new sales, enter into new markets and adopt new technologies that build competitive advantage. Launched in April 2007, MEP is building on the MEP 20/20+ Vision for manufacturers' by developing the services and tools to reduce bottom-line expenses by

**20/20+ VISION FOR YOUR COMPANY IS WITHIN YOUR SIGHTS**

Here's how to bring it into focus:

- Take 20% off your bottom line expenses through Lean, Quality and other programs that target plant efficiencies
- and
- Add 20% to your top line sales through *Eureka! Winning Ways*® and other growth services

+Only your local MEP specialists can help you plan, implement, and achieve this perfect balance. For more information, visit [www.mep.nist.gov](http://www.mep.nist.gov) or call 1-800-MEP-4MFG.

**MANUFACTURING EXTENSION PARTNERSHIP**  
National Institute of Standards and Technology • U.S. Department of Commerce

20 percent and grow top-line sales by 20 percent.

MEP outlined to the Board several key elements necessary to support its new Strategic Plan:

- Staying true to MEP's public mission of helping U.S.-based manufacturers,
- Establishing partnerships at the national, regional, state, and local levels,
- Leveraging available and emerging resources and solutions,
- Being proactive and adapting to national, state, and local needs, strategies, and opportunities,
- Allowing flexible implementation to take into account such elements as resources, economic environment, and new approaches,
- Looking at all possible financial resources, including Congress, other federal agencies, state programs, and industry, and
- Continuing to assess the evaluation of MEP program and Center

performance with the central focus on MEP's public mission.

The Board commended MEP for transforming itself, emphasizing the importance of MEP's role in making the case that manufacturing is key in the restoration of the country's economic health. The Board noted that manufacturing has been and can be the backbone of the U.S. economy. The Board commented that the U.S. has experienced a deficit in the balance of trade in manufactured goods that had grown from approximately \$77B in 1991 to \$819B in 2007. While quality improvements and manufacturing efficiency were the rationale for starting the MEP program, today's problems, as reflected in the balance of trade in manufactured goods, warrant an expansion of MEP functions to include growth services.

The Board acknowledged that NIST, through MEP, is a key federal program as it is one of the few programs focused on manufacturing. The MEP program offers two key benefits not normally found in federal initiatives: 1) the Program works across federal and state lines to pull together a large number of organizations, funding sources, and manufacturing advocates, and 2) the program operates through 59 regional non-profit centers to provide an exceptional level of service that can be tailored to the regional needs of manufacturers. These two elements and an agile management structure allow the program to rapidly flex to meet the needs of the community it serves.

During the last year, the MEP initiated collaborative work with a wide variety of organizations and programs. MEP took a strong leadership role in collaborating with other federal agencies (such as the Department of Labor, the Small Business

### **Hollings Manufacturing Extension Partnership**

#### **Vision**

MEP is a catalyst for strengthening American manufacturing – accelerating its ongoing transformation into a more efficient and powerful engine of innovation driving economic growth and job creation.

#### **Mission**

To act as a strategic advisor to promote business growth and connect manufacturers to public and private resources essential for increased competitiveness and profitability.

Administration, and the U.S. Commercial Service) to support U.S. manufacturers. The MEP also collaborated with a large number of state and industry groups ranging from the National Governors Association to regional and national industry groups. The Board urged MEP to continue to be the "connector" of partnerships in sharing best practices to the U.S. manufacturing community and promoting American manufacturing, especially during the Nation's current economic crisis.

In its program financial oversight function, the Board noted that the MEP program funding has been widely dispersed to the 59 non-profit centers. The breadth of the program's reach and its leveraging of other funding sources make it a highly effective expenditure of Federal funding. The MEP program leverages \$100 million in federal funding over \$200 million in additional state investment and client fees to reach over 30,000 companies each year.

The Board feels strongly that funding for the MEP program should be increased allowing the program to support product innovation. While it may be inevitable that labor cost pressures result in some manufacturing

moving offshore, American innovation will create new products and processes that will fill both product catalogs and order books. These products will strengthen U.S. manufacturing, lead to increased exports, and improve the balance of trade. The Board strongly recommends that funding for the MEP program be increased to a level that is commensurate with the problems that the program is addressing.

## GROWTH SERVICES

During the 2008 meetings, the Board received a comprehensive update on MEP's growth service initiatives.

MEP's growth services initiatives are designed to provide companies with the tools and mindset to target new sales, new products, and new markets. They build on MEP's core suite of services aimed at creating bottom-line efficiencies, particularly in Lean manufacturing. While services in those areas are still in great demand and beneficial both to companies and the industry, MEP is now adding a new line of services to address top-line opportunities for growth by helping companies generate and implement new ideas systematically.

Officially launched in April 2007, Eureka! Winning Ways (E!WW) is the first of a series of MEP product offerings in the area of growth services. E!WW was developed in partnership with Eureka! Ranch and is uniquely designed to support growth in smaller manufacturers. A number of Board members attended E!WW sessions and became personally familiar with the process.

The E!WW method provides a simple, disciplined approach to significantly grow business by quickly identifying and validating new ideas focused on increasing top-line revenues. The E!WW product offering has been well received by both MEP Centers and their manufacturing clients. In 2008, more than 190 MEP growth coaches were trained and 261 projects with manufacturing clients were completed or underway.

The MEP expansion from manufacturing process improvements focused on improving production efficiencies to a broader growth

agenda has required changes in the 59 MEP centers. The Board noted that MEP management has introduced this change with great skill and persistence.

*"With Eureka! Winning Ways, we've learned how to create practical ideas that have great potential for exponential growth and to put resources toward them to turn them into reality. With our first idea from it, we could triple the size of our business."*

Gary Marmer, Questech, Rutland, VT

The Board was shown evidence that the MEP program is beginning to see the economic impact of its growth services line and E!WW. Based on initial project activity, 28 clients have reported \$43M in new and retained sales, \$14M in cost savings, and almost \$14M in new investments.

The second tool in MEP's suite of growth services is ExporTech. ExporTech was developed in collaboration with MEP and the Department of Commerce's U.S. Export Assistance Center, located in Baltimore, Maryland. The ExporTech program leads companies through a facilitated process that prepares them for profitable growth in global markets through the development and implementation of a customized international growth plan.

During three sessions, spanning several months, participants gain an understanding of how exports can be a major growth driver, identify hurdles to expansion, and work with the facilitators to develop a customized international growth plan for their company. Participants work as a group through a process that accelerates the pace and increase the success rate of international sales efforts. Unlike a static

classroom environment, ExporTech is customized to the specific learning needs of participants and produces an international growth plan for each company. Participants also have the opportunity to work with international business experts to refine their international strategies.

*“This was one of the best uses of my time since the start of the company. ExporTech will help me avoid a lot of mistakes. If you are trying to export, you have to go through this program. I would hate to go through the export process without having been through ExporTech.”*

Chad Osborne, Economy Drilling Solutions,  
Altus, OK

Center should understand the needs of their region and offer the appropriate mix of products and services for its local manufacturing community. The Board understands that full implementation across the entire MEP system will take time. The collaborative nature of the MEP Centers and their individual characters are a core strength of the MEP program.

2008 was a pilot year for the ExporTech program with MEP centers in Maryland, Oklahoma, and New York conducting sessions. In total, more than 32 companies participated. For 2009, MEP anticipates expanding the program offering with approximately 12 sessions provided by 11 different MEP centers.

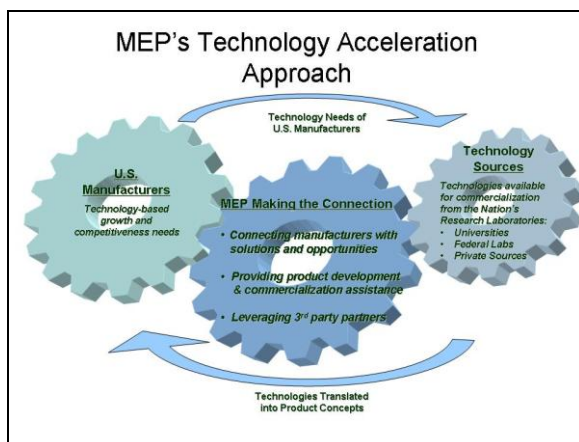
The Board is supportive of MEP’s progress in developing and deploying a suite of tools and services focused on helping companies create new products and expand into new markets. The Board is encouraged by the MEP program’s ability to quickly respond to manufacturers needs by leveraging resources of partner organizations as well as modifying tools to meet smaller manufacturer’s particular implementation needs.

The Board met with several MEP Center Directors and heard concerns about the ability of some Centers to adopt and offer the expanding set of MEP products and services. MEP recognizes that not every Center will offer all services. Each MEP

## TECHNOLOGY ACCELERATION

During 2008, MEP provided the Board with updates on these activities and progress made on developing a technology acceleration program specifically targeted to smaller manufacturers.

The objective of technology acceleration is to systematically identify and capitalize on technology relevant to improving processes, developing new products and expanding services provided by manufacturers. Currently, existing technology transfer systems and mechanisms are not sufficient to respond to shortened product life cycles and rapidly evolving technologies.



MEP is connecting sources of technology and manufacturers. MEP will focus on providing tools to translate the scientific descriptions of technology into business and product opportunities. In support of this, MEP is researching processes and tools to help manufacturers access and pull technologies from government laboratories, universities, and the private sector into production. MEP, working with partners, will develop processes to capture and document the technology needs of manufacturing clients and build scouting networks to access technology sources for those manufacturing clients.

As part of its technology acceleration efforts, MEP is also focused on developing tools and services to provide commercialization support to its manufacturing clients. Specifically, MEP is collaborating with federal agencies, such as the U.S. Patent and Trademark Office, to help manufacturers understand intellectual property (IP) issues and develop strategies to protect their "knowledge assets." MEP recognizes that protecting IP is vital in commercializing technology. To support these efforts MEP developed, in 2008, a training class for MEP field staff and clients on identifying and protecting knowledge assets.

The Board agreed with MEP's concern regarding the protection of IP, particularly in cases where a small company supplier is working to meet the product development needs of a larger company. The Board cautioned MEP to be aware that outside critics may see MEP becoming too involved in "owning" new technology or directing who is the beneficiary of a new technology. MEP acknowledged the Board's concern and emphasized that MEP sees its role as helping define, not develop, the next generation of technology/tools for manufacturers. In essence, the MEP is a knowledgeable information broker bridging failures in information flow between laboratory and market.

The Board asked MEP leadership to reflect on the differences between the services offered by the MEP Centers (with federal funding) and those that may be offered by commercial providers. While the MEP Centers often recommend or collaborate with commercial service providers, the Board concluded that the MEP role is distinctly different and well justified by the following factors:



- 1) Due to its federal status, the MEP is more effective than commercial service providers, in coordinating federal and state resources. Examples include links with the SBA programs, the U.S. Commercial Services, and recent efforts to coordinate state and federal activity through the National Governors Association.
- 2) The MEP can act to implement federal initiatives and policies that are often outside of the purview or economic interests of the commercial service providers.
- 3) The MEP Centers are widely trusted as unbiased and un-conflicted sources of advice and expertise.
- 4) Problems such as manufacturing productivity and the balance of trade in manufactured goods result in federal initiatives that can be regionally implemented through the MEP structure.
- 5) MEP's ability to reach companies located in rural areas and those with few employees that do not have easy access to external support resources.

The Board grappled with these issues and concluded that there is clear and urgent justification for an expansion of the MEP function.

## SUPPLIER DEVELOPMENT

With today's global economy, the competitiveness of U.S. manufacturing depends on far more than the activities that occur within the walls of factories. It depends on the performance of the full value chain. Helping manufacturers meet the growing challenges of international competitiveness requires MEP to focus not only on expanding service to traditional manufacturers themselves, but also on improving the performance of companies in related sectors that affect the cost and quality of manufacturing. The supply chain influences the ability of manufacturers to bring their products to world-wide markets.

In the most basic terms, small- and medium-sized manufacturers cannot stay in business without sales to Original Equipment Manufacturers (OEMs). OEMs cannot compete without lean, flexible and innovative companies supplying necessary parts and components. Recognizing this, MEP has embarked on a supplier development initiative to help manufacturers strategically understand, maintain and expand their positions in the supply chain.

MEP uses a "bottom up" approach with suppliers and a "top down" approach when working with OEMs. Specifically, MEP works with the suppliers to make their operations more efficient and flexible to better meet the needs of their OEM. MEP also works with OEMs to better understand their processes, technology needs, and strengthen the connection between the OEM and small and medium-sized suppliers. With this knowledge, MEP can advise suppliers on which technologies, products and services will be most valued by OEMS in the future.



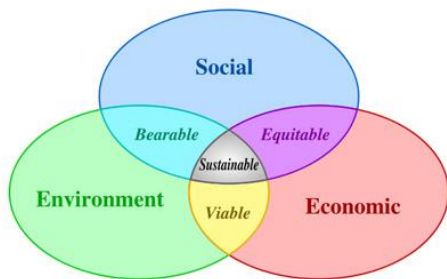
The MEP System has been involved with supplier development across multiple supply chains over the last 10 years. One specific effort MEP highlighted with the Board is the Northrop Grumman Supply Chain program that involves 67 suppliers working with 17 MEP centers. For Northrop Grumman, the program provides greater flexibility, improved material availability, and reduced prices. Suppliers achieved reduced cycle time, improved agility, and increased capacity. Together, both sides improved business relationships and communications, and increased profitability.

The Board believes that the current recession makes the MEP supplier development work extremely relevant to preserving jobs as well as providing opportunities for companies to diversify the supply chains in which they participate, opening the door for new jobs.

## SUSTAINABILITY

Sustainability has become a key driver of economic growth as global demands for diminishing resources increase, renewable and alternative energy technology needs expand, and environmental concerns heighten. Whether it is simply a response to rising energy and resource costs or as a corporate growth strategy, sustainability seeks to balance economic, environmental, and societal challenges and opportunities.

MEP's sustainability initiative is designed to help manufacturers gain a competitive edge create growth and jobs and maintain profitability while increasing energy efficiency and reducing negative environmental impacts.



MEP has a 20 year history of expertise in this area from process improvements that reduce waste and improve efficiencies to green product design and product innovation focused on developing eco-friendly products. Broadening capabilities and capacities in this area will require MEP to develop and expand partnerships at all levels of government as well as industry. This is necessary to ensure that sustainability concepts are embraced at all levels of the economy – from the largest employer to the smallest suppliers to the workforce itself.

During 2008, MEP provided the Board with updates on several key partnerships in this area. Specifically,

- **The Green Suppliers Network** – MEP and the Environmental Protection Agency are working with manufacturers and their supply chains to reduce their environmental footprint while simultaneously leaning their business and improving their supply-chain relationships. Through on-site technical reviews and follow up implementation, “Lean and Clean” programs identify and reduce harmful emissions and hazardous wastes, maximize energy efficiency, and find eco-friendly material substitutes. The results are greater competitiveness, higher profits, and fewer negative environmental impacts.
- **Energy Industrial Assessment Centers** – Through a collaboration with the Department of Energy, MEP provides manufacturers access to comprehensive energy assessments as well as money and energy saving informational resources. These energy assessments examine plant sites, facilities, services, and manufacturing operations to identify opportunities to improve energy efficiency and reduce waste in order to maximize cost savings and productivity while minimizing pollution and consumption.
- **Green-Collar Jobs** – Implementing green technologies requires a trained workforce and adaptable manufacturers to support new production demands. MEP is committed to supporting efforts to develop a US supplier base for

renewable energy and green technologies, creating new opportunities for high wage, high skilled jobs.

As a core element of the program's strategic direction, MEP is looking to expand efforts in the area of sustainability and develop new services, tools and partnerships to reach additional manufacturers and offer services throughout the MEP system.

The Board acknowledged the importance of MEP's sustainability efforts and suggested that there be strong efforts to use the existing MEP network as the regional centers for coordinating, facilitating, and implementing the national strategy for energy independence. As new federal initiatives become clear, it is recommended that the MEP leadership make a sustained effort to collaborate with the new programs. The Board recommended that the sustainability function be closely tied to the "innovation" services as there is an ongoing national need to transition advanced energy technology into products manufacturer in the U.S.

## MEP SYSTEM AND CENTER PERFORMANCE

In addition to providing input on the plans and strategic direction of the MEP program, the MEP Advisory Board also assessed the performance and effectiveness of the program. In 2008, the Board received two briefings outlining the results of the MEP services on the manufacturing base and was provided with detailed information on the program's evaluation system and assessment tools.

One of the main purposes of MEP's evaluation system is to determine how well the National MEP System is performing. The MEP's evaluation system is designed not only to drive program accountability but to stimulate continuous improvement among the centers and identify programs and ideas that work so that knowledge can be transferred across the system.

Over time, MEP has modified its approach to its system evaluation. MEP now measures 1) overall economic impacts and 2) client-level results rather than project specific results. The changes have led to improvements in the data collection process and demonstrable economic returns.

After 10 years of capturing performance data, MEP's evaluation process illustrates that:

- Program impacts (new sales, investment, and cost savings) have increased while federal funding has remained fairly constant,
- The number of client interactions has increased,
- The number of clients served by MEP centers has increased,
- Total client bottom-line impacts have increased, and

- Overall client investment-leverage ratio has increased.

MEP feels that there are three primary reasons for the positive results: 1) the National MEP System is a maturing program; 2) MEP Centers are continuously improving and working on a new set of priorities; 3) there has been a shift, at both NIST MEP and the MEP Centers, to services focused on growing manufacturing profitability.

### **MEP Services Generate Significant Impacts**

- New and retained sales of over \$10 billion
- More than \$1.4 billion in cost savings from improved processes and waste reduction
- Investments in new equipment and business operations totaling almost \$2.2 billion
- The creation and retention of 57,079 jobs

Data from an independent follow-up survey of clients completing projects with MEP Centers in FY2007.

The Board discussed the survey questions that MEP clients are asked and how the burden of responding could be reduced. MEP continually reviews the survey instrument, seeking improvements and ways to streamline the process. The Board also suggested that regional patterns of impacts also be presented.

The Board believes that the MEP performance evaluation system is a reasonable quantitative method of tracking the performance of individual Centers and the program as a whole. The Board noted that the Centers are diverse, both as organizations and in their sources of non-federal funding. There are significant MEP management challenges given this diversity. Furthermore, the performance measures

must reflect the diversity among centers. While there is understandable pressure from the federal funding process to achieve accurate quantitative measures, the Board believes that the subjective measures of performance should also be given consideration.