Hollings Manufacturing Extension Partnership
A Program of the National Institute of Standards and Technology,
Technology Administration, U.S. Department of Commerce

Next Generation Strategic Plan - "Think globally, act locally, and innovate together"

Background

In 2006, the Hollings Manufacturing Extension Partnership (MEP) Program will celebrate 17 years of existence. With partnerships that serve manufacturers in all 50 states and Puerto Rico, the program has had remarkable success. In FY 2004 alone, MEP served over 16,000 small and mid-sized manufacturing firms, resulting in $720 million dollars of cost saving, $4.5 billion in new and retained sales, over $900 million private sector dollars invested in modernization improvements, and more than 43,000 jobs created and retained.

The program's success is in part due to its primary guiding principle of being industry driven, market defined, and customer focused with an ability to meet the ever changing needs of the manufacturing community. The responsiveness of the program can be seen in the continual evolution of products and services provided to customers ranging from technical point solutions, to system level solutions such as quality and lean manufacturing, to enterprise level solutions such as strategic marketing and transformation services. The success of the program can also be attributed to the dedication of staff, boards, and legislatures and their overwhelming commitment to U.S.-based small and midsize manufacturers.

The MEP program has been following a simple strategy of improving the productivity of U.S.-based manufacturing. Additionally, the preponderance of manufacturers' needs, and subsequently MEP's service, has been to reduce cost and delivery time of current products. MEP centers have leveraged their relationships within the network to share and jointly develop products and services that provide high value to manufacturers. In more recent years, the MEP network has begun to support supplier development strategies for U.S. supply chains. These efforts provide an operating base from which the Next Generation MEP can evolve to meet the increasing demands of the global marketplace. As the MEP program enters this next stage of life, the program's resiliency and shared commitment will once again be tested with ever changing trends of intense pricing pressure, increased quality performance of foreign competitors, and accelerated product life cycles.

Guiding Values

- **Industry driven and market defined.** We believe that the marketplace provides the primary guidance for the selection and the delivery of information, knowledge, products, and services, and that industry provides the evaluation of the quality and effectiveness of these services that enable manufacturers to successfully address changes in the global business environment.
- **Continuous improvement.** We believe that the continuous assessment, understanding, improvement, and innovation of our approaches are essential to the delivery of relevant information, products, and services to our customers. We further believe that MEP is in a unique position to capture the collective experience and knowledge of the entire system, and then accelerate the sharing of that knowledge throughout the system to better enable local centers to provide timely and quality services.
- **Leveraging all available resources.** We believe that investments in infrastructure, new product development, and market research should be continuously leveraged across the system in order to enhance the services to all manufacturers. Furthermore, we believe that effective partnerships with existing national, state, and local resources, as well as private sector organizations, allows for the most efficient and effective delivery of services to manufacturers.
- **Efficiency and Integrity.** We believe that our operations should model the business practices and technologies required to be efficient and effective in the global marketplace, and we are committed to carry out our business in the highest ethical manner possible.

Manufacturing Extension Partnership Program

Vision

MEP will be an essential U.S. strategy for America's industrial infrastructure.

Mission

To strengthen the global competitiveness of U.S.-based manufacturing by providing information, decision support, and implementation of innovative approaches focused on leveraging new technologies, techniques, and business best practices.

The Future

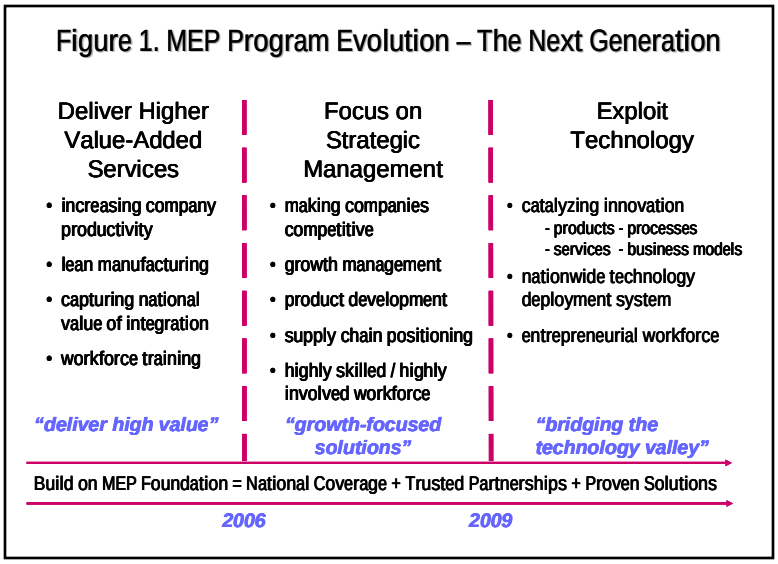
Productivity will continue to be a focus as global competition forces firms with low productivity to change or be driven out of the marketplace. While

manufacturers in virtually all industries recognize that quality and lean processes are required to be in business, productivity and growth gained exclusively from these cost reduction efforts are just the first steps to maintaining a competitive position. The needs of the manufacturers include not only cost reduction solutions but how to grow their businesses and develop the flexibility to remain globally competitive. With success in the marketplace dependent upon product differentiation, service innovation, and speed to market, MEP is prepared to position manufacturers to compete in this global economy through services that are grounded in business strategy development, advanced marketing techniques, new product development, the integration of supply chains, and increasing the technical and problem solving skills of the workforce.

The broader U.S. manufacturing community has become more interdependent and complex over the past 17 years as supply chains have become global and other countries have aggressively funded and implemented national industrial policies. In the U.S., state economic development organizations are beginning to broaden their focus from industry recruiting to including programs aimed at growing new and existing industries. The States are increasingly investing in technology incubators, commercialization programs, and entrepreneurial initiatives. MEP, through its partnerships and connection with State technology development organizations, Federal labs, and university researchers, is uniquely positioned to serve as a resource in bringing together technological advances to meet the process improvement and product development needs of small manufacturers.

With a focus on the changing educational and training needs of the workforce and significant skill shortages predicted over the next 10 years, the States and the Federal government are investing heavily in training and educational programs focused on preparing the workforce for the future. The aging workforce coupled with the outdated image of manufacturing has elevated the pending skills shortage to national attention. With an outdated image of manufacturing that is narrowly portrayed as assembly line and shift production work, many believe manufacturing is no longer a viable career path for professional jobs nor is it an economic advancement path for blue collar employment. With MEP's development of long-standing relationships with manufacturers, educational institutions, and Federal partners, the program is well positioned to use the relationships with our partners to develop a manufacturing talent pool that includes highly skilled manufacturing workers, entrepreneurial managers, and CEOs that are focused on growing their business through the development of new products and the implementation of innovative technologies.

Figure 1. MEP Program Evolution – The Next Generation



The future of U.S.-based manufacturing depends upon the skillful adoption and successful implementation of innovative technology and market driven knowledge. As depicted in Figure 1, the Next Generation MEP leverages the knowledge and experience gained from the delivery of shop floor solutions to providing strategic services focused on transforming and growing manufacturers. Beyond this growth focused phase, the Next Generation MEP will enable U.S.-based manufacturers to continue to remain globally competitive long into the future by exploiting technologies to meet the needs of their markets. Success depends on integrating three key ingredients, including:

- methodologies that guide manufacturers continual innovation of products, processes, services and business models,

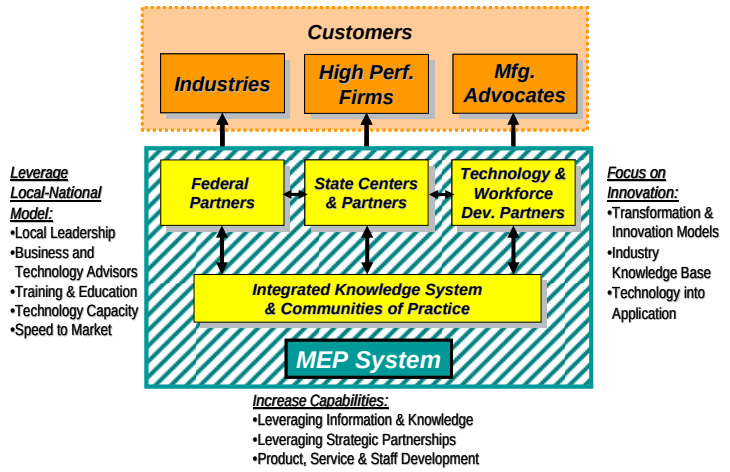
- a nationwide technology deployment system that systematically assesses manufacturers' needs, identifies potential technologies, evaluates alternatives for technical and commercial potential, and transitions technologies into practical solutions, and
- an entrepreneurial workforce equipped to utilize decision support tools and market intelligence to drive change.

This describes the evolution MEP must strive to achieve to continually re-position U.S.–based manufacturers as successful competitors in the global marketplace.

Next Generation MEP Strategy

The demands of the future will call for new services and support from MEP. Overall, MEP's customer base has broadened with supply chains competing for market share and communities and countries competing for supply chains. The impact of this on the manufacturing supply base is substantial in terms of integration issues, increased technical requirements, and overall management demands. In short the MEP system has to move its focus on the manufacturer from the shop floor to the entire enterprise and its position in the marketplace. Also, in addition to the needs of individual manufacturers, the Next Generation MEP must focus on industry/supply chain requirements as well as overall economic development trends. With this broadening customer base, the MEP system now has three interdependent, yet distinct customer sets as depicted in Figure 2. These three sets are: supply chains and industry sectors - *Industries*; manufacturers – *High Performance Firms*; and government, academic, and industrial organizations supporting manufacturing – *Manufacturing Advocates.*

Figure 2. Next Generation MEP Strategy



To meet the needs of these unique customers, MEP will need additional resources, processes, and services. While continuing to leverage the trusted relationships created over the past 17 years, partnering at both the Federal and local level with other organizations with complementary goals will provide one means of serving manufacturers' needs.

Finally, the Next Generation MEP requires additional development and expansion of the knowledge management and sharing systems to incorporate these new dimensions critical to continuing the improvement of manufacturers' global competitiveness.

Key Strategic Thrusts

The actions required to accomplish the Next Generation MEP strategy fall into three areas: leverage the partnership model, focus on innovation, and grow capacity and skills. Elements within these areas have differing timing and resource requirements, but all are essential to the success of MEP in fulfilling its vision and mission.

1) Leverage the local identity/national partnership model – MEP's legacy may indeed be the partnership structure that leverages the assets of nationwide resources with local leadership to provide precise and timely solutions to today's global challenges. The first priority of MEP's Next Generation strategy focuses on the continued expansion of the partnership model through several integrated initiatives.

- **Provide local leadership targeted on advancing manufacturing –** MEP will continue to expand its leadership and technical competencies to aggressively position the system to be the primary resource for manufacturing enterprise excellence. The MEP system must fully understand current global and commerce trends, focus on emerging technologies, develop linkages to key industries, and convene and engage senior executives. The MEP staff must have the time, skills, and opportunity to participate in professional, industry, and economic development associations. In short, the entire MEP system must be strong advocates for manufacturing at both the State and Federal levels.

- **Position MEP as value-added business and technology advisors –** With a knowledge of industry trends and emerging technologies, MEP will serve as key business and technology advisors for manufacturers. MEP will work with manufacturers on the formation of key business strategies, development of focused business plans, and the evolution of growth initiatives that allow manufacturers to aggressively compete as high-performing companies.

- **Expand local partnerships to include technology resources** – Through effective partnerships focused on the development of new technologies, the MEP system will develop a network of technology resources with university and Federal laboratories that connects technology developers with end users to facilitate the development and ultimate implementation of new technologies into advanced products, processes, and services.

- **Expand employee workforce development partnerships –** Working with current and expanded partnerships, including community colleges, universities, and other State and Federal agencies, the MEP system will focus on understanding the future needs of highly skilled workforce and work with partners to develop innovative training solutions to respond to changing needs.

- **Operate system-wide business processes that accelerate knowledge sharing and the speed to market of new services** – To ensure knowledge sharing, training, and the effective and efficient delivery of services, the MEP system will continue development of the knowledge management system and will establish a system-based product development process that leverages the system's collective knowledge and insight into customer and market needs.

2) Focus on innovation – The second component of the Next Generation strategy is to position MEP as a product and processes innovation catalyst for the manufacturing supply base. MEP's reputation for providing professional, non-biased technical services is key in the transition to providing more focused strategic services and product offerings. Three system-wide initiatives will accelerate the development and delivery of services focused on innovation and product development.

- **Develop and maintain innovation models and processes that support the supply base** – Product development, ideation processes, and business transformation are just a few of the models and tools that will be required to position manufacturers to maintain their competitive edge. The MEP system will develop and support processes and methodologies focused on manufacturers' creation of innovative products, processes, services, and business models.

- **Develop and maintain an industry knowledge base** – The MEP system will leverage publicly available data on industry and supply chain trends along with MEP's collective knowledge of manufacturers' needs and perspectives in the creation of a knowledge base that supports and fosters innovation.

- **Leverage technology into application -** In-depth understanding of current and emerging technologies is essential for product and process innovation. The MEP system will work with other technology partners to provide a vital component of the innovation infrastructure by effectively describing and categorizing technology needs at the firm-level, matching those needs with available and emerging technologies, and catalyzing the implementation within manufacturers.

3) **Grow the capacity and skills of the MEP system –** The final component of the MEP strategy is focused on growing the capacity and skill set of the MEP system in order to meet the demand for services and the changing needs of the manufacturers in responding to expanding global market competition. Growth will be accomplished through the following efforts:

- **Integrate additional resources –** MEP will continue to develop initiatives at the State and Federal level in an effort to secure additional resources to support growing the capacity and skills of the system. MEP will pursue opportunities with other complementary State and Federal programs and coordinate and support activities at the local level.

- **Leverage strategic partnerships –** State and Federal governments invest significant resources in technology research and development and workforce development programs. Through effective partnership arrangements, the MEP system will leverage the deployment of the results from these programs to increase the return on this public investment. Partnerships with these programs to deploy technologies and better understand the needs of manufacturers will provide additional needed capacity.

- **Capture and leverage system information and knowledge –** The MEP system knows more about the needs of and trends of manufacturers than any other organization in the country. MEP will aggregate the system knowledge with other secondary research to improve staff skills, and provide precise information to accelerate firm-level transformation and support technology deployment initiatives.

- **Continually align system capabilities - products, services, and staff skills – to meet changing manufacturer needs –** The MEP system will focus existing resources on new delivery requirements that support manufacturer adoption and implementation of innovative approaches to meet changing market dynamics.

Three-year Strategic Goals for the System

1. Shift significant capacity to the delivery of projects focused on supporting manufacturer business growth and transformation.
2. Build strategic partnership connections to technology and workforce development providers with capacity to support manufacturers.
3. Establish strategic alliances with Federal agencies to provide significant and complementary capacity to support and strengthen manufacturers' competitiveness.
4. Embed local MEP strategy and activities in the respective State's economic development strategy to insure capacity and connectivity.
5. Improve the quality and stability of State and Federal funding.

Six-year Strategic Goals for the System

1. Establish and deliver complete set of products and services to support manufacturer innovation.
2. Establish a nationwide technology deployment system through State and Federal initiatives.
3. Establish MEP as the primary program used by Federal agencies for technology deployment to manufacturers.
4. Conduct local MEP strategy development jointly with State and partner programs.
5. Increase system capacity through State, Federal and industrial initiatives.