The U.S. Manufacturing Extension Partnership - MEP

Roger D. Kilmer
Director, MEP
National Institute of Standards and Technology (NIST)
U.S. Department of Commerce

roger.kilmer@nist.gov
301-975-5020
http://www.nist.gov/mep/
MANUFACTURING EXTENSION PARTNERSHIP

Topics

- Obama Administration Innovation Strategy
- MEP Policy Dimensions
  - Structure & Operations
  - Next Generation MEP
  - Innovation & Technology Acceleration
  - Partnerships
  - Performance Evaluation
The Importance of Innovation

“History should be our guide. The United States led the world’s economies in the 20th century because we led the world in innovation. Today, the competition is keener; the challenge is tougher; and that is why innovation is more important than ever. It is the key to good, new jobs for the 21st century. That’s how we will ensure a high quality of life for this generation and future generations. With these investments, we’re planting the seeds of progress for our country, and good-paying, private-sector jobs for the American people.”

- President Barack Obama, August 5, 2009
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Strategy for American Innovation

Innovation for Sustainable Growth and Quality Jobs

Catalyze Breakthroughs for National Priorities
- Unleash a clean energy revolution
- Support advanced vehicle technology
- Drive breakthroughs in health, IT
- Address the “grand challenges” of the 21st century

Promote Competitive Markets that Spur Productive Entrepreneurship
- Promote American exports
- Support open capital markets that allocate resources to the most promising ideas
- Encourage high-growth and innovation-based entrepreneurship
- Improve public sector innovation and support community innovation

Invest in the Building Blocks of American Innovation
- Restore American leadership in fundamental research
- Educate the next generation with 21st century knowledge and skills while creating a world-class workforce
- Build a leading physical infrastructure
- Develop an advanced information technology ecosystem

http://www.whitehouse.gov/assets/documents/SEPT_20_Innovation_Whitepaper_FINAL.pdf
The Manufacturing Extension Partnership – MEP

Objective is to improve the productivity and competitiveness of U.S. manufacturers, with a focus on small and medium sized firms.

Program started in 1988, with at least one center in all 50 states by 1996.

60 centers with over 400 field locations
- System wide, non-Federal staff of over 1,550
- Contracting with over 2,300 affiliated service providers

Partnership Model – Federal/State/Industry

MEP System ~ $300M [Proposed doubling of Federal budget by 2015]
- 1/3 Federal, 2/3 State and Industry (fees for services)

Emphasis on performance – program and center – measured based upon impact of center services on client firms.
Partnering to Drive a National Program

- NIST
  • Integration, Knowledge Sharing, & Evaluation
- 60 MEP Centers
- 400 Service Locations
- Over 1,550 Center Staff
- Over 2,300 Affiliated Services Providers
- > 330,000 Small & Medium Sized Manufacturers
- Customers
The Balancing Act

Client & Economic Impact

Financial Stability
2 to 1 Cost Share of Expenses

Market Penetration
What MEP Does

Focus on meeting manufacturer’s short term needs, but in context of overall company strategy

MEP Center areas of common strength

- Engineering Services – products and processes
- Growth Services – new or expanded market opportunities
- Lean Manufacturing
- Quality Systems
- Environmental Services
- Workforce Development

Reach nearly 33,000 manufacturing firms and complete over 10,000 projects per year*

*Based on FY2009 MEP Center reported performance data.
What we all know...

Manufacturing has and continues to change!

- **Globalization** is here to stay and U.S. manufacturing firms are adapting to increasing competition.
- **Supply Chains** are becoming more global, more exclusive, and more competitive.
- **Innovation** (product, process, service & business model) is critical for survival.
- **Technology** advances will be incremental and disruptive. Unfortunately, technology adoption rates at smaller firms still lag those of larger ones.
- **Sustainability** is an increasingly powerful business driver for industry. The triple bottom-line approach to economic, environmental, and societal balance is defining many corporate strategies.
Manufacturing Extension Partnership

MEP Program Evolution – The Next Generation

Build on MEP Foundation = National Coverage + Trusted Partnerships + Proven Solutions
As you look forward over the next 3 years, what do you see as your company’s three most important strategic challenges?

- Ongoing Continuous Improvement: 70%
- Identifying Growth Opportunities: 60%
- Product Innovation/Development: 50%
- Sustainability in Products/Processes: 30%
- Employee Recruitment/Retention: 20%
- Financing: 20%
- Managing Partners & Suppliers: 10%
- Technology Needs: 10%
- Exporting/Global Engagement: 10%
- Other: 10%

Companies could choose up to 3 factors.

Data from MEP Clients responding to a Client Impact Survey conducted in April/May 2009.
MEP Strategy

Increasing manufacturers’ **profitable growth** is the overarching strategy for the MEP.

The approach is to provide a framework for manufacturers that:

- Reduces bottom line expenses through lean, quality, & other programs targeting plant efficiencies – which frees up capacity for business growth.
- Adds to top line sales through business growth services focused on the development of new sales, new markets, and new products.

There are 5 key areas of the strategy:

- Continuous Improvement
- Technology Acceleration
- Supplier Development
- Sustainability
- Workforce
Technology Acceleration Framework
Technology based growth & competitiveness needs

**MEP Approach to Technology Acceleration**

- Accelerate technology deployment by connecting needs of US manufacturers to technology sources
- Translate new technologies into real-world applications by:
  - Connecting manufacturers with solutions
  - Providing commercialization assistance to manufacturers –
    - manufacturing strategy, product development, IP management, financing, manufacturing scale-up
  - Leveraging 3rd party partners
- Test and develop new tools and approaches:
  - National Innovation Marketplace
  - Technology Scouting, Supplier Scouting, SBIR

Technologies and Business Opportunities available from the nation’s research laboratories (universities, Federal labs, private companies)
The National Innovation Marketplace – NIM

- MEP is pilot testing the tools and resources to connect manufacturers to technology and business opportunities resulting in new markets and new products through an online marketplace – NIM.

- The NIM involves the translation of emerging technologies first into business applications, second into market opportunities, and third into the adoption of new products.

- Uses an open innovation strategy, which includes partnering, licensing, and co-developing innovation with partners outside of a company instead of the traditional, internal research and development. The NIM connects innovation sellers, buyers, investors and distributors in all industries.

- Targets significant reduction of transaction costs associated with technology commercialization.
MEP Technology Acceleration Connections

MEP Centers
- Business Growth Services
  New ideas, sales, markets, product development, & supporting services
- Supplier Scouting
  Identifying capable manufacturing resources for supply chains
- Technology Scouting
  Identifying technologies to satisfy a manufacturer’s specific needs

Manufacturing Clients
- Over 341,000 manufacturers employing more than 12.3 million

National Innovation Marketplace
- Linking MEP Centers, manufacturers, buyers, sellers, & investors

Business Simulation Model
- What’s the market value of the technology?

Buyers
- OEMs, distribution channels, & supply chains

Technology Sources
- Universities, Federal labs, inventors, & industry

Client Outcome
- Technology-based process and/or products

NAS US-Germany Innovation Conference
MEP Federal Agency Collaborative Partnerships

- EPA – Green Suppliers Network, E3, Pollution Prevention Assistance Program, Environmental Innovation, SBIR
- USDA – Food Security Workforce Training, Technology Transfer, Disaster Preparedness and Response
- HHS – NIH SBIR, FDA
- DOL – Business Relations Group- National Lean Certificate Program, Advanced Manufacturing grant solicitation, Occupational Safety and Health Administration Small Business Assistance
- SBA – Small Business Development Center, Small Business Technology Development Center, SBIR
- DOE – Hydrogen Workforce Training opportunity, Industrial Technologies Program, SBIR, Tech Transfer, Buy American Supplier Scouting
- DOD – OSD (AT&L), Defense Logistics Agency, Office of Technology Transition, Procurement Technical Assistance Centers
- Treasury – Small Business and Community Development
- DOC – ITA, EDA, NIST, USPTO
- Interagency Network of Enterprise Assistance Providers – Multi Agency
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Current Federal INEAP Members

Department of Energy
- Industrial Technologies Program

Department of Commerce
- International Trade Administration
- Export Assistance Centers
- Economic Development Administration
- Manufacturing Extension Partnership
- Minority Business Development Agency
- Office of Intellectual Property Rights
- Minority Serving Institutions Programs
- US Commercial Service
- Trade Development Agency
- National Institute of Standards and Technology

Department of Veterans Affairs
- Center for Veterans Enterprise

Small Business Administration
- Small Business Development Centers
- Office of Technology
- SCORE
- Women’s Business Centers
- SBIR
- Entrepreneurial Development
- Veterans Business Development
- Office of Disaster Assistance

White House
- Council on Environmental Quality

Environmental Protection Agency
- Green Supplier Network
- Pollution Prevention Control
- National Center for Environmental Innovation

Export Import Bank of the United States
- Environmental Exports Program
- City/State Partnership Program

Department of Defense
- Office of Technology Transition

Department of Agriculture
- Cooperative Extension, Education and Research

Department of Labor
- Employment and Training Administration- WIRED
- OSHA

Department of Treasury
- Small Business and Community Development

Dept. of Transportation
- Educational & Government Partnerships

US Agency for International Development
- Educational & Government Partnerships

Veterans Administration
- Center for Veterans Enterprise

Housing & Urban Development
- Community Planning & Development

Security and Exchange Commission
- Investor Education and Advocacy
Additional INEAP members

- The National Academies
- Association for Procurement Technical Assistance Centers
- Association of Small Business Development Centers
- US Chamber of Commerce
- US Women’s Chamber of Commerce
- American Small Manufacturing Coalition
- American Association of Community Colleges
- Iowa State University Center for Industrial Research Service
- Brookings Institution
- International Economic Development Council
- National Association of Counties
- National Association of Manufacturers
- Society of Manufacturing Engineers
Levels of Performance
Evaluation System – Center Performance

- **Operating Plan**: Annual plan (linked to the center’s strategic plan) that outlines the anticipated activities and results for the coming year.

- **Quarterly Data Reporting**: Center reports progress and client project data quarterly.

- **Annual Review**: Each year prior to annual renewal of federal funding, the performance of the center is reviewed comprehensively by NIST-MEP or an external panel.

- **External Peer Panel Review**: At least every two years, the center is reviewed by a peer panel that assesses the center performance and alignment with NIST-MEP programmatic strategic goals.

- **Third Party Client Survey**: NIST sponsors a national survey conducted by an independent third party that quarterly collects data from center clients on the business impacts of the services provided by their local center. NIST-MEP uses this performance data as a core component in reviewing center performance. The results also provide the centers with a tool to measure their effectiveness and benchmark their performance against other centers.
Evaluation System – Program Performance

Impact Data from Third Party Client Impact Survey: new sales, cost-savings, investments, and job impacts attributed to MEP services [GPRA metrics].

Longitudinal Studies: focuses on comparing the competitive performance of MEP clients relative to similar firms that did not receive MEP services.

REMI: regional economic analysis of the impact of MEP.

Case Studies: focus on successful MEP projects to gain insight into variables at both the firm and industry-level that impact technology adoption and business transformation.
### Manufacturing Extension Partnership

**Client Impacts Resulting from MEP Services – FY2008**

<table>
<thead>
<tr>
<th>Category</th>
<th>Impact (in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Sales</td>
<td>$3.6 Billion</td>
</tr>
<tr>
<td>Retained Sales</td>
<td>$5.5 Billion</td>
</tr>
<tr>
<td>Capital Investment</td>
<td>$1.7 Billion</td>
</tr>
<tr>
<td>Cost Savings</td>
<td>$1.4 Billion</td>
</tr>
<tr>
<td>Jobs Created and Retained</td>
<td>52,948</td>
</tr>
</tbody>
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*NAS US-Germany Innovation Conference*