Hollings Manufacturing Extension Partnership

National Institute of Standards and Technology

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MANUFACTURING EXTENSION PARTNERSHIP

Partnering to Drive a National Program

331,000 Small & Medium Sized Manufacturers

Over 3,100 Affiliated Service Providers

Over 1,600 Center Staff

440 Service Locations

60 MEP Centers

NIST

Customers

Service Delivery

Integration, Knowledge Sharing, & Evaluation

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MEP Office Locations
www.mep.nist.gov – or – 800-MEP-4MFG

60 “Centers”
1600 Field Staff
440 Service Locations

NIST MEP
What MEP Does

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

MEP Center projects
- Business Growth Services – new market opportunities
- Technology Services for products and processes
- Lean Enterprise – continuous improvement philosophy
- Quality Systems and other standards
- Energy, Environment, and Sustainable Services
- Talent Development to meet future manufacturing needs

Reach 32,000 manufacturing firms and complete 8,000 projects per year*

*Based on FY2008 MEP Center reported performance data.
Client Impacts
Resulting from MEP Services
FY2008

- New Sales $3.6 Billion
- Retained Sales $5.5 Billion
- Capital Investment $1.7 Billion
- Cost Savings $1.4 Billion
- Jobs Created and Retained 52,948
Arkansas Client Impacts
Resulting from AMS Services
FY2008

- New and Retained Sales: $592 Million
- Capital Investment: $25.0 Million
- Cost Savings: $12.7 Million
- Jobs Created and Retained: 3,335
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.
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MEP Program Evolution – The Next Generation

Build on MEP Foundation = National Coverage + Trusted Partnerships + Proven Solutions

2006
- Deliver Higher Value-Added Services
  - Deliver High Value
  - Increasing Company Productivity
  - Lean Manufacturing
  - Capturing National Value of Integration
  - Workforce Training

2009
- Focus on Strategic Management
  - Focus on Growth
  - Making Companies Competitive
  - Growth Management
  - Product Development
  - Supply Chain Positioning
  - Highly Skilled/Highly Involved Workforce

- Exploit Technology
  - Foster Innovation
  - Catalyzing Innovation: Products, Processes, Services, Business Models
  - Nationwide Technology Deployment System
  - Entrepreneurial Workforce

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MEP’s strategy to address this changing world

Reduce Costs
Take 20% off bottom line expenses through lean, quality, & other programs targeting plant efficiencies

Increase Profitability
Add 20% to top line sales through business growth services resulting in new sales, new markets, and new products.
Providing a reliable scientific system that guides companies through the creation of new ideas, discovery of market opportunities, and the tools to drive the ideas into development.
Eureka! Winning Ways

Helping Companies Find, Filter & Fast Track Ideas for More Profitable Customers, Products and Markets

Eureka! Winning Ways is a “hands on” facilitated process that gives manufacturers the tools to generate ideas for new sales, markets or products. The program quickly identifies and validates new ideas to increase top-line revenues, using proven idea-creation and deployment methodology.

Case Study: Precision Analysis LLC
Riverton, Wyoming
Home water testing kits

Results:
- Re-vamped their marketing message to attract new markets
- Created a new home water testing kit to keep in check with EPA regulations
- Developed & released the new product within 5 months
- Doubled their sales within 5 months
- Created 3 new jobs, retained 8 jobs

Eureka! Winning Ways is a collaborative effort between Commerce’s NIST MEP and the Eureka! Ranch
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ExporTech
Helping Companies Enter and Expand into Global Markets

ExporTech is a “how to” service to help companies expand into global markets by developing a proactive international growth plan customized for their business, moving the company into actual, profitable export sales.

Case Study: Wilco Machine & Fabrication
Marlow, Oklahoma

Manufacturer of fabricated and machined equipment, products, and tools for the energy industry.

Results:

- Visited the Middle East to establish relationships
- Negotiations for a joint venture in Brazil
- 2008, exports accounted for less than 8% of total revenue
- Halfway through 2009, exports jumped to 51%
- Predicting that exports will be 60% of total revenue by end of 2009

ExporTech is a collaborative effort between Commerce’s NIST MEP, the U.S. Export Assistance Centers, and District Export Councils, the SBA’s Small Business Development Centers, and State-based international trade programs.

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Diversification: New Customers/Markets

With an assessment, MEP matched market trends and data with the specific process capabilities of J.C. Gibbons Manufacturing, Livonia, Michigan.

Through this effort, MEP helped the company move from automotive to medical appliances while using the same equipment and the same manufacturing processes, and retaining 25 jobs.
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TECHNOLOGY ACCELERATION

Systematically identifying, and capitalizing on, opportunities to leverage technology into the processes, products, and services of manufacturers

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Technology Deployment Framework

Federal Laboratories/Universities

Basic Research
Discovery Fundamental Pure Science

Pre-Competitive Research
Enabling Technologies User-Inspired Collaborative

Applied Research
Problem Solving Application Materials Equipment Process Systems

Technology Transfer
Start-up IP Licensing

Technology Transition
Prototype Facility Design Design for Manufacturing

Technology Diffusion
Education Assessment Demonstration

Manufacturing Adoption
Strategy Market Position Supply Chain Production

MEP
Bridging the Gaps, Strengthening the Connection Between Research and Commercialization

MARKET

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NIST MEP
Technology Acceleration Approach

MEP is accelerating technology deployment and utilization by getting the needs of U.S. manufacturers to Technology Sources and getting new technologies translated into real-world product concepts by:

- Connecting manufacturers with solutions and opportunities
- Providing development & commercialization assistance
- Leveraging 3rd party partners

Technology based growth & competitiveness needs

Technologies available for commercialization from the nation’s research laboratories (universities, Federal labs, and private sources)

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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 SME transaction costs associated with technology commercialization.
Arkansas Innovation Marketplace (AIM)

Arkansas Science and Technology Authority (ASTA) on behalf of Arkansas Manufacturing Solutions (AMS) contracted with Merwyn Research, Inc. to create a state-based marketplace http://www.planeteureka.org/marketplace/arkansas/

AIM provides a window into all the intellectual property, requests and capabilities of its entrepreneurs, inventors, and companies in the state.

To date AIM has approximately 50 technologies posted and 50 company needs and wishes

20 matches and 2 licensing deals

Currently no cost to post technologies during this initial phase – afterwards $2,000

For more information contact: Dan Curtis, 501-683-4411
Supplier Development

Helping manufacturers strategically understand, maintain, and expand their positions in supply chains

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Supplier Scouting

*Pilot Projects*

- **Defense Logistics Agency (DLA), Defense Supply Center Columbus**: Helping DLA find manufacturers capable of producing hard-to-source National Stock Number (NSN) parts by leveraging the knowledge and relationships of our national network.

- **BAE Systems, Inc.**: Working with BAE Systems and Army ManTech to assess and develop capabilities of military suppliers to operate in a Model-Based Enterprise (MBE) environment as a critical step in DOD’s implementation of MBE throughout its supply chain.

- **Department of Veterans Affairs / NAVAIR**: Developing procedures to find and assist veteran-owned and service-disabled-veteran-owned U.S. manufacturers capable of supplying material to meet NAVAIR demands.

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SUSTAINABILITY

Helping manufacturers gain a competitive edge, maintain profitability and job creating growth while increasing energy efficiency and reducing environmental impacts.
What are GSN and E3?

Innovative models for collaboration among manufacturers, utilities, local government, and federal resources to enhance sustainability and competitiveness in local and regional economies as well as supply chains and to spur job growth and innovation.

Partners

The joint collaboration has expanded to include five U.S. federal agencies: DOC, SBA, DOL, DOE, and EPA. These federal partners work directly with local utilities, local government, and small- and medium-sized manufacturers.

"The goal I had for Central Metal Finishing Inc. from this program, provided by the Massachusetts Manufacturing Extension Partnership, was to achieve improvement in our competitive position operationally and environmentally. Based on our actions in the past six months, I project a savings of $125,000. The total savings over an 18-month timeframe, which represents the timeframe to complete our project outline, is $400,000. The most significant improvement which cannot be quantified is the capability and capacity of the CMF organization to understand the needs to be efficient in all that is done and to be flexible towards meeting the needs of the business and our customers." - Carol Shibles, President
GSN and E3
Project Impacts

Green Suppliers Network
125 Reviews
Impacts to Date:
- Environmental Impact Savings........$ 24,621,055
- Energy Conservation............861,436,419 kWh
- Productivity Cost Savings..............$ 36,214,040

E3 – Economy, Energy, Environment
4 Reviews
Columbus, OH Pilot Impacts:
- Environmental Impact Savings........$ 1,909,538
- Energy Conservation...............7,911,579 kWh
- Capital Job Creation..................33

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Helping manufacturers develop a strong, engaged, and skilled workforce that spans all levels of the organization necessary for business growth.
Layoff Aversion
*EMT Meets the Fitness Trainer*

- Utilize early warning networks, including state and local partners, to identify and stabilize “at-risk” companies before they reach critical condition.
- Work with companies to reduce operating costs and, once the company is in stable condition, identify business growth opportunities.
- Prevent layoffs – start by saving existing jobs and then begin creating new, secure positions within the company.
- Expand Labor Workforce Investment Act - Commerce MEP collaboration.

Preventive vs. Emergency Care

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# Layoff Aversion

## Missouri Layoff Aversion Results

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td># of companies engaged</td>
<td>29</td>
<td>25</td>
<td>15</td>
<td>69</td>
</tr>
<tr>
<td>Jobs retained</td>
<td>76</td>
<td>169</td>
<td>126</td>
<td>371</td>
</tr>
<tr>
<td>Jobs created</td>
<td>47</td>
<td>86</td>
<td>69</td>
<td>202</td>
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<tr>
<td>Sales Increases</td>
<td>$3,454,000</td>
<td>$27,973,112</td>
<td>$10,825,000</td>
<td>$42,252,112</td>
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<tr>
<td>Sales Retained</td>
<td>$7,208,000</td>
<td>$14,321,000</td>
<td>$3,855,000</td>
<td>$25,384,000</td>
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<tr>
<td>Cost Savings</td>
<td>$8,371,392</td>
<td>$22,595,212</td>
<td>$10,257,659</td>
<td>$41,224,263</td>
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<tr>
<td>Investments</td>
<td>$1,770,200</td>
<td>$3,182,715</td>
<td>$1,753,535</td>
<td>$6,706,450</td>
</tr>
</tbody>
</table>

Impact as reported by clients on surveys at the end of the project - estimated or anticipated.