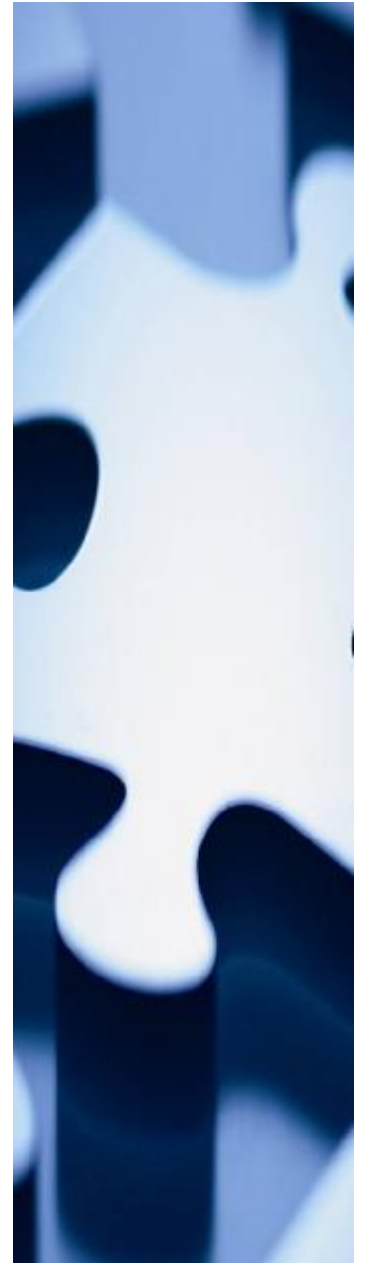


# The Hollings Manufacturing Extension Partnership –

## *The Network Effect*

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



# MANUFACTURING EXTENSION PARTNERSHIP

## Topics

- § MEP Structure & Operations
- § Networking – Partnerships – Collaboration
- § Next Generation MEP
- § Initiatives & Services
  - Innovation & Technology Acceleration
  - Supply Chain
  - Sustainability
- § National Partnerships

## MANUFACTURING EXTENSION PARTNERSHIP

### Hollings 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 370 field locations
  - System wide, non-Federal staff of over 1,450
  - 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

# MANUFACTURING EXTENSION PARTNERSHIP

## What MEP Does

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

§ MEP Center areas of common strength

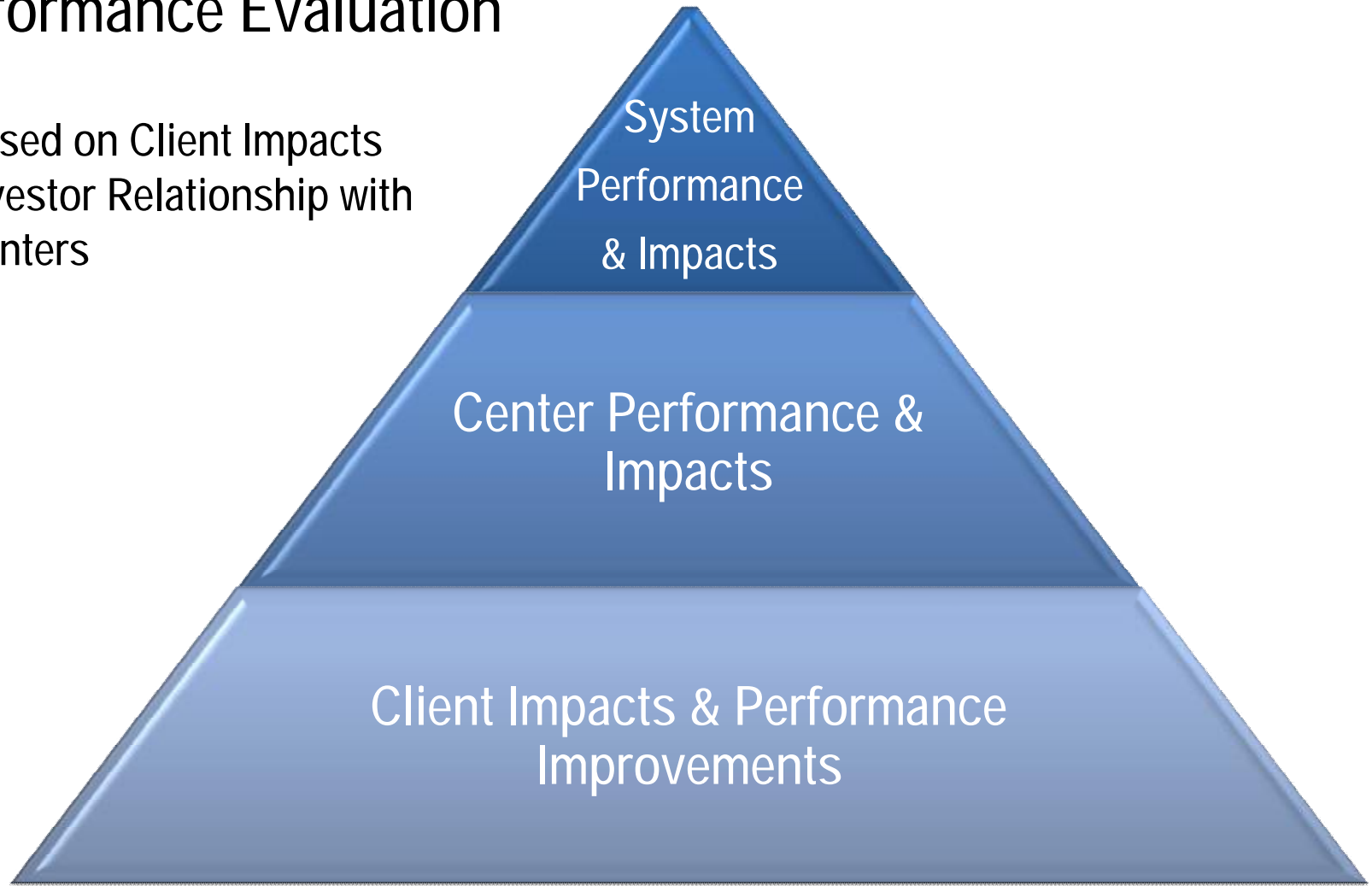
- Engineering Services – products and processes
- Growth Services – new or expanded market opportunities
- Lean Manufacturing
- Quality Systems
- Environmental Services
- Workforce Development

§ Reach over 34,000 manufacturing firms and complete nearly 10,000 projects per year\*

\*Based on FY2010 MEP Center reported performance data.

## Performance Evaluation

- Based on Client Impacts
- Investor Relationship with Centers



## MANUFACTURING EXTENSION PARTNERSHIP

### Client Impacts Resulting from MEP Services – FY2009

§ New Sales	\$3.5 Billion
§ Retained Sales	\$4.9 Billion
§ Capital Investment	\$1.9 Billion
§ Cost Savings	\$1.3 Billion
§ Jobs Created and Retained	72,075



## MANUFACTURING EXTENSION PARTNERSHIP

### Meeting Manufacturers' Needs through: Networking – Partnerships – Collaboration

§ MEP is an integrated multi-level, multi-entity network of public-private partnerships – national, state and local

§ NIST MEP role –

- Integrate the network of centers
- Link and share resources and solutions

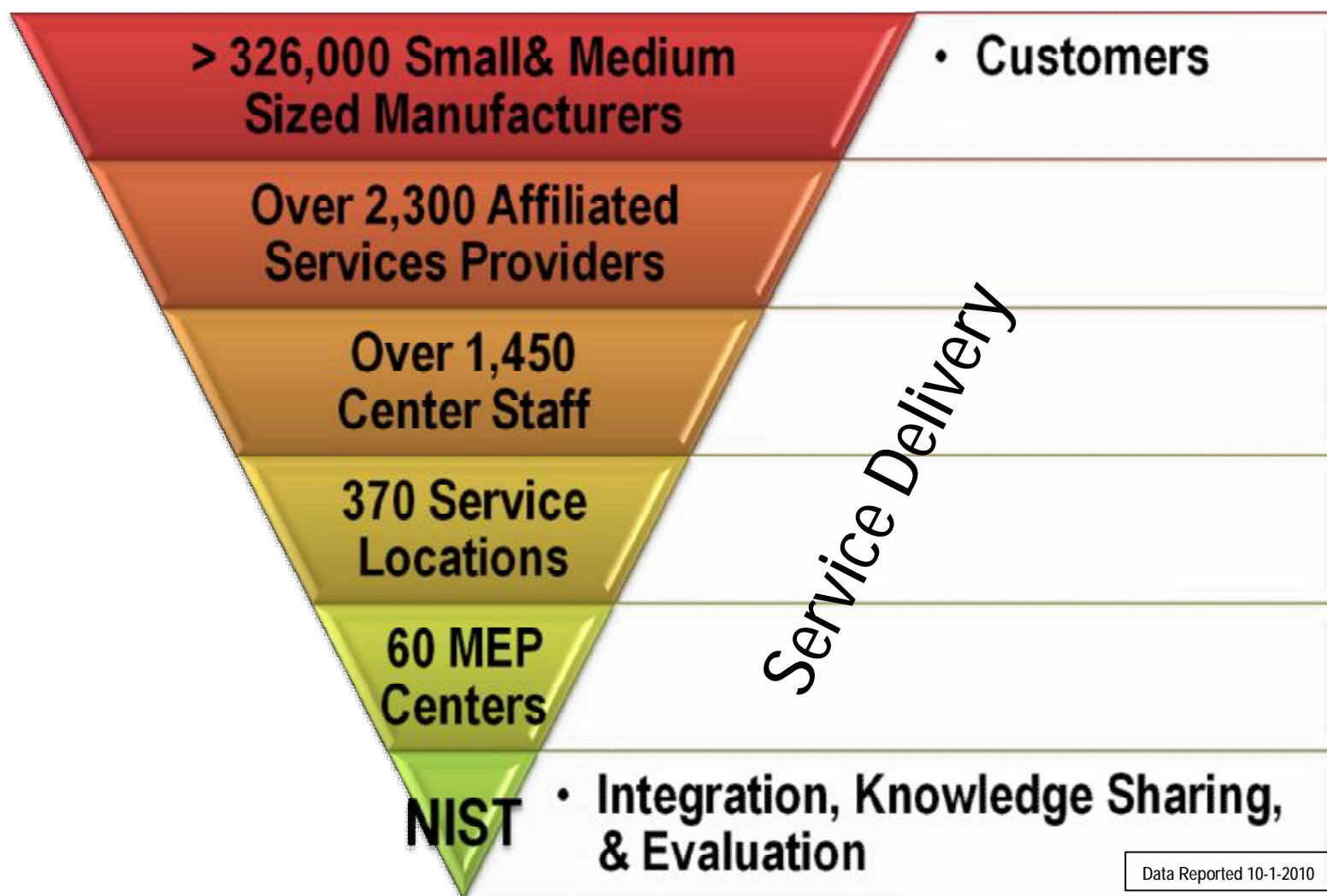
§ Center partnerships with state and local organizations for service delivery, resources and solutions

§ National partnerships – federal agencies & trade associations

§ Tools to support the network, collaboration and service delivery

## MANUFACTURING EXTENSION PARTNERSHIP

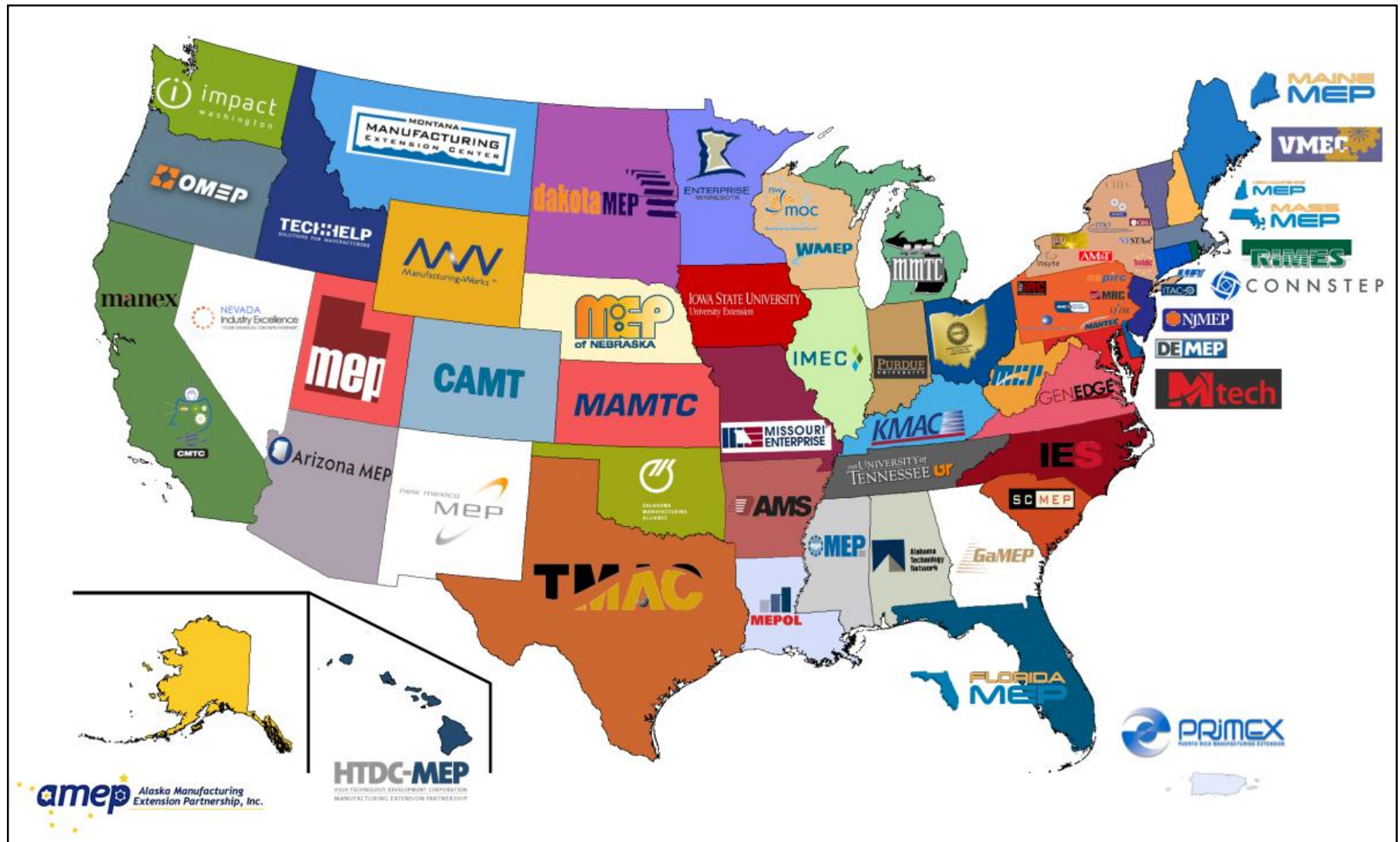
### Partnering to Drive a National Program





# MANUFACTURING EXTENSION PARTNERSHIP

## MEP Nationwide Network of Centers



## MANUFACTURING EXTENSION PARTNERSHIP

### MEP Center in Hawaii – HTDC MEP



§ Host: High Technology Development Corporation (HTDC)

§ Center Director: Janice Kato

§ Partners:

- Department of Business, Economic Development and Tourism – DBEDT
- State of Hawaii Foreign Trade Zone #9
- Hawaii Center for Advanced Transportation Technologies – HCATT
- Hawaii Strategic Development Corporation

§ Location:

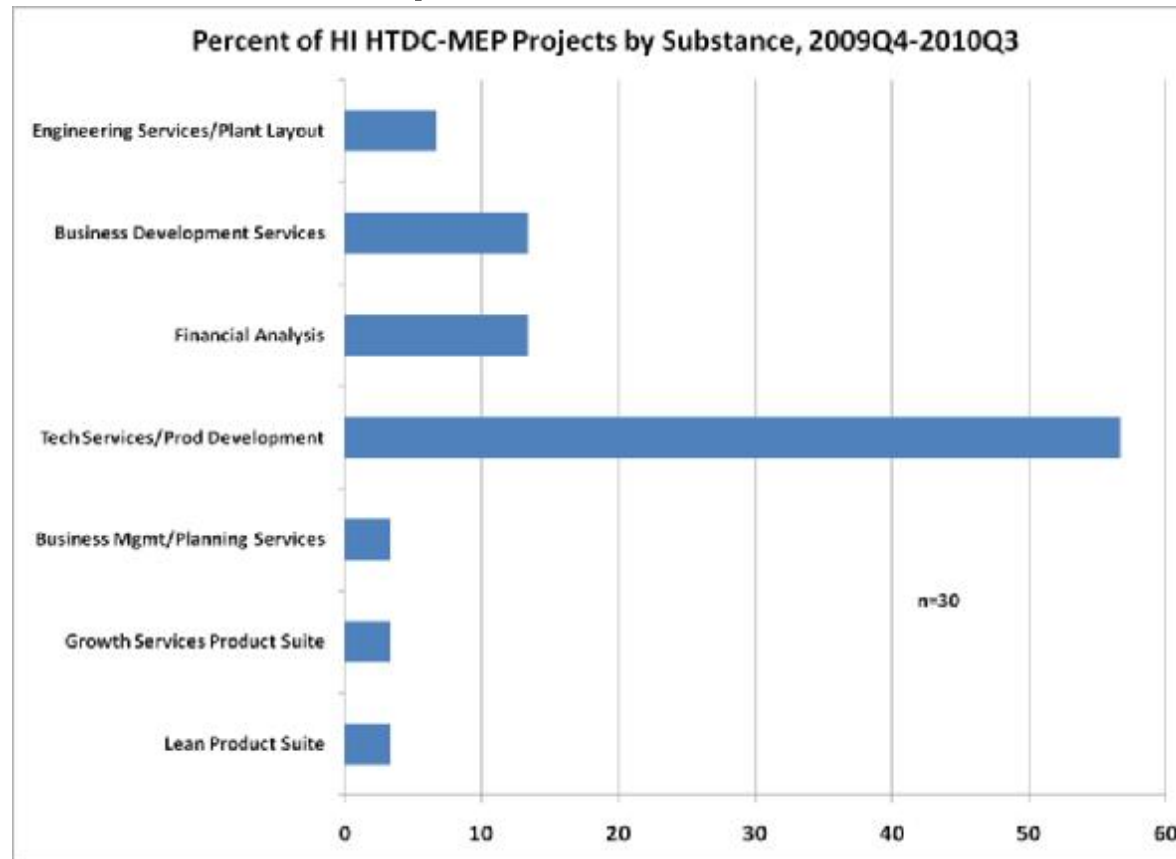
Manoa Innovation Center  
2800 Woodlawn Drive, Suite 100  
Honolulu, Hawaii 96822  
Tel: (808) 539-3806; Fax: (808) 539-3795

Email: [htdc@htdc.org](mailto:htdc@htdc.org)

Web: <http://www.htdc.org/programsservices/mep.html>

# MANUFACTURING EXTENSION PARTNERSHIP

## HTDC Results and Impacts



FY	New Sales	Retained Sales	New Jobs	Retained Jobs	New Investment	Cost Savings
2007	\$5.1M	\$1.2M	113	127	\$7.0M	\$5.5M
2008	\$3.1M	\$1.0M	28	28	\$2.0M	\$1.6M
2009	\$1.6M	\$3.7M	76	78	\$7.9M	\$7.9M
Total	\$9.8M	\$5.9M	217	233	\$16.9M	\$15.0M

What we all know...

*Manufacturing has and continues to change!*

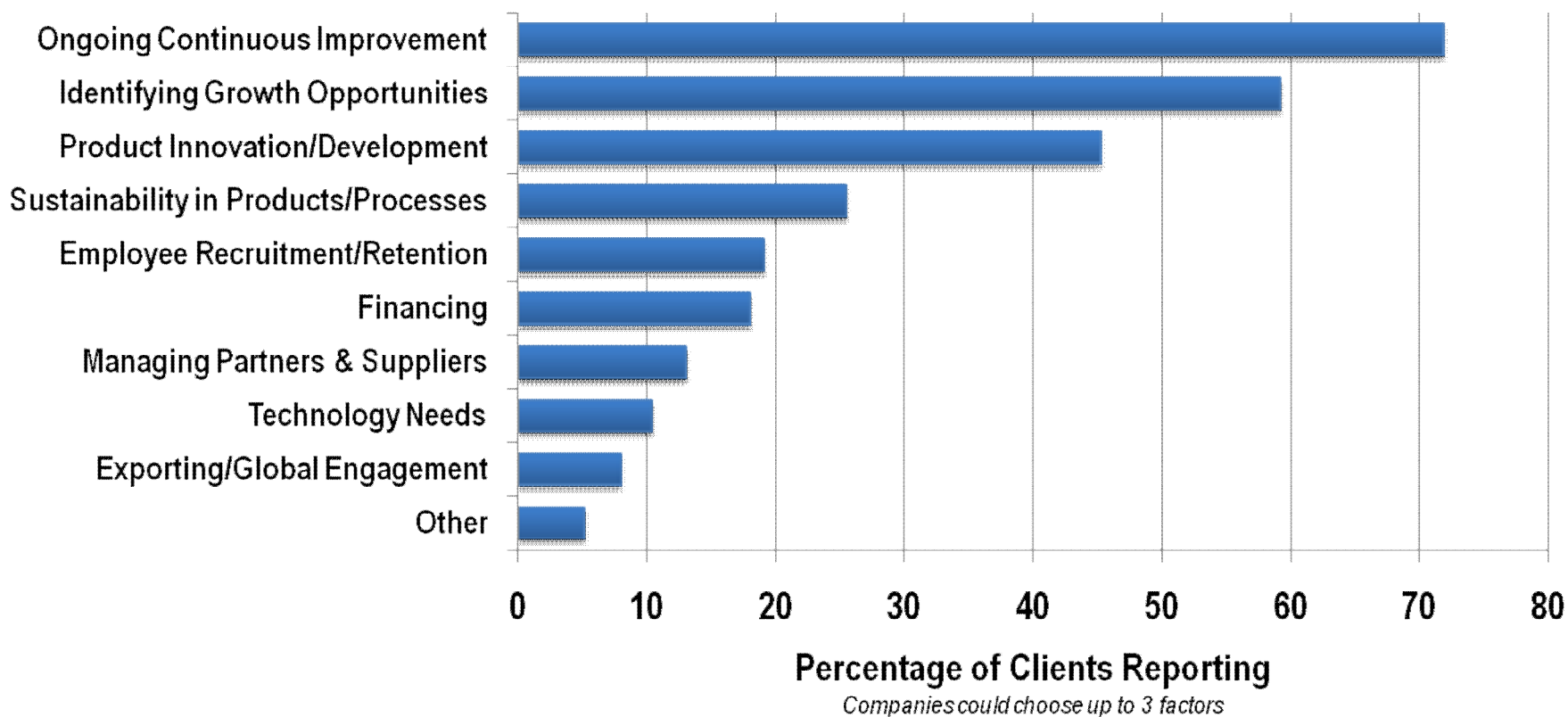
- § Globalization is here to stay and U.S. manufacturing firms are adapting to increasing competition.
- § Supply Chains are becoming more global, more exclusive, and more competitive.
- § Innovation (product, process, service & business model) is critical for survival.
- § Technology advances will be 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.



## Current Landscape for U.S. Manufacturers

### *Client Challenges*

*As you look forward over the next 3 years, what do you see as your company's three most important strategic challenges?*



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



## Challenges Report by HTDC MEP Clients





# MANUFACTURING EXTENSION PARTNERSHIP

## MEP Program Evolution – The Next Generation



## Next Generation MEP Strategy

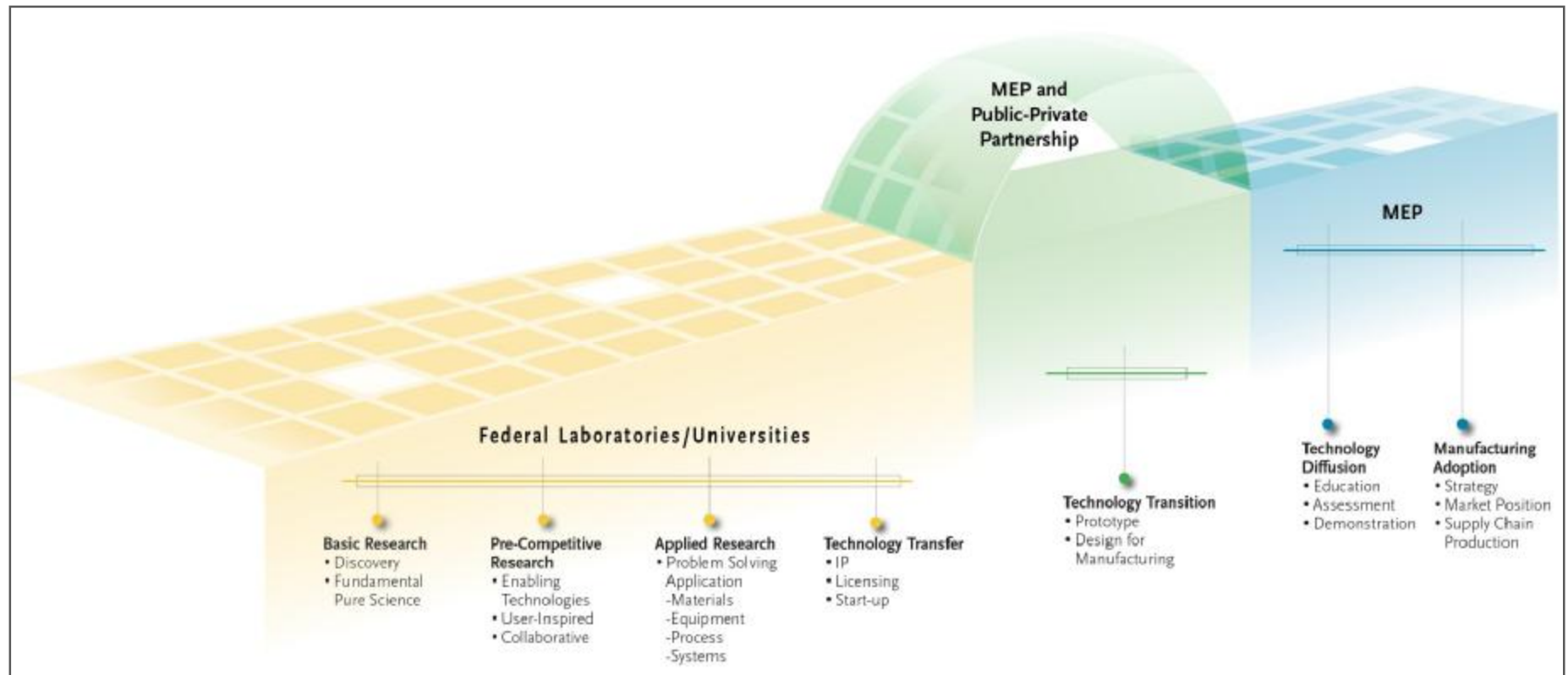
- § Increasing manufacturers' profitable growth is the overarching strategy for the MEP.
- § The approach is to provide a framework for manufacturers that:
  - Reduces bottom line expenses through lean, quality, & other programs targeting plant efficiencies – which frees up capacity for business growth.
  - 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





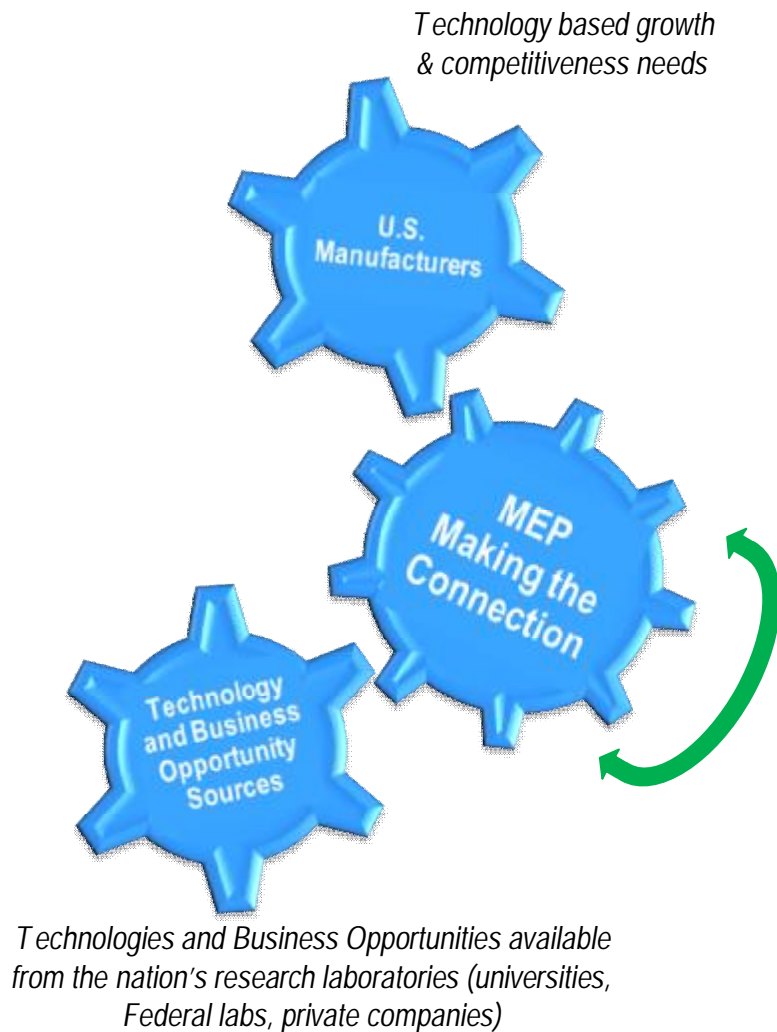
# MANUFACTURING EXTENSION PARTNERSHIP

## Technology Acceleration Framework



# MANUFACTURING EXTENSION PARTNERSHIP

## 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 3<sup>rd</sup> party partners
- Test and develop new tools and approaches:
  - § National Innovation Marketplace
  - § Technology Scouting, Supplier Scouting, SBIR

## MANUFACTURING EXTENSION PARTNERSHIP

### The National Innovation Marketplace – NIM

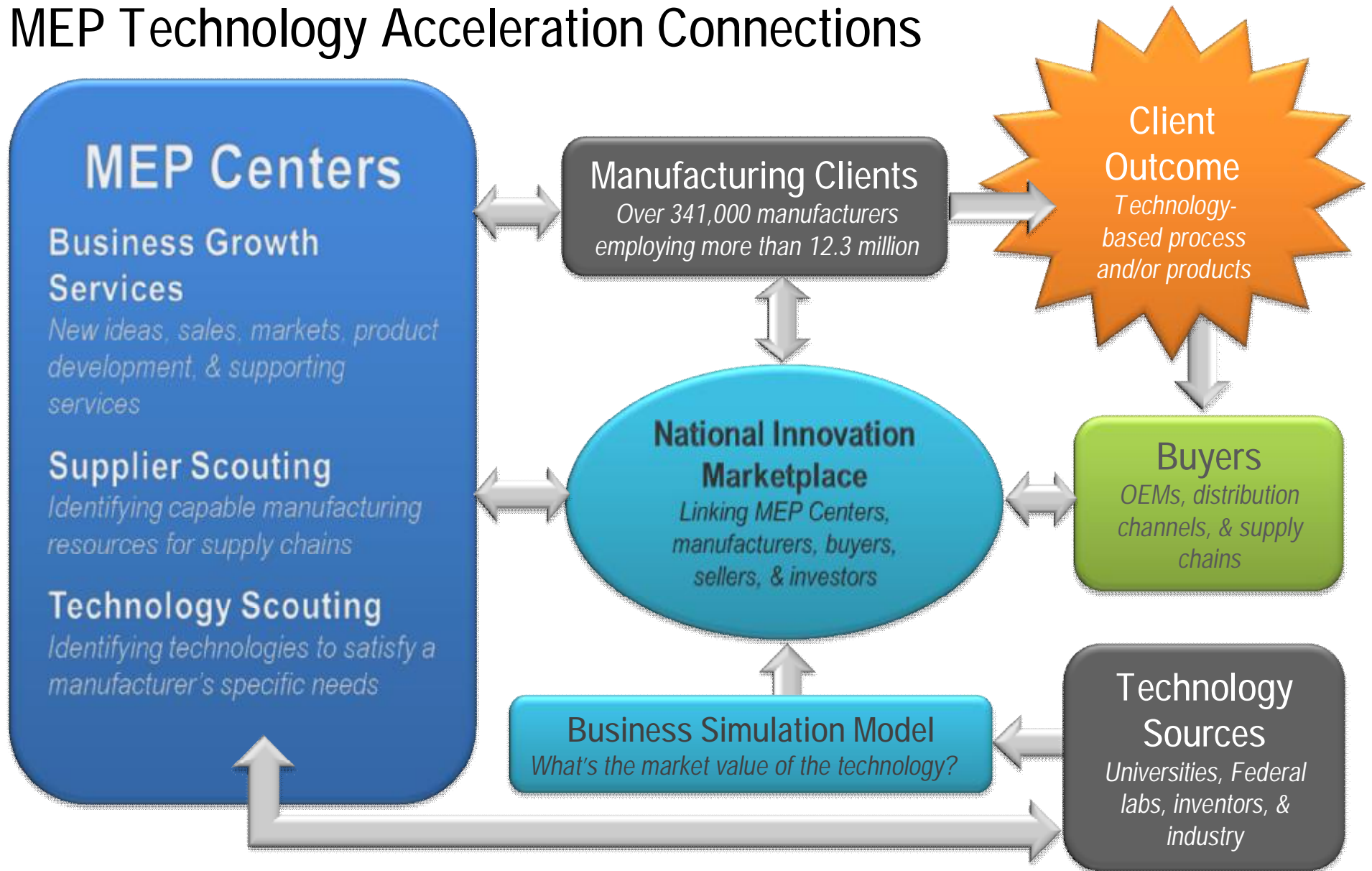
- § MEP is pilot testing the tools and resources to connect manufacturers to technology and business opportunities resulting in new markets and new products through an online marketplace – NIM.
- § The NIM involves the translation of emerging technologies first into business applications, second into 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.



[www.usainnovation.org](http://www.usainnovation.org)

# MANUFACTURING EXTENSION PARTNERSHIP

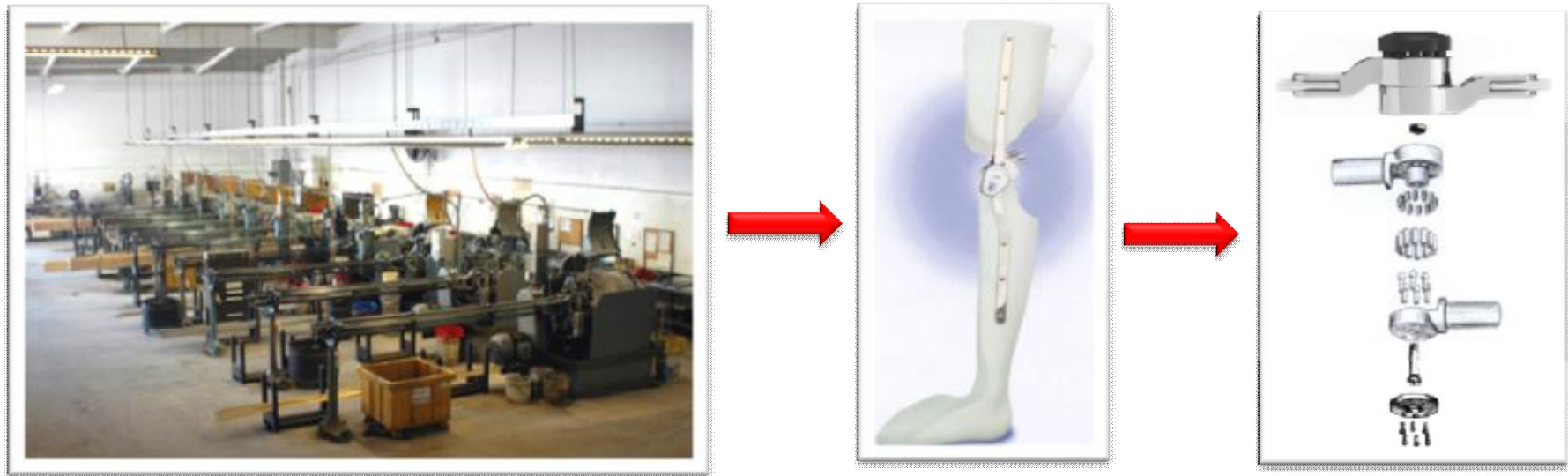
## MEP Technology Acceleration Connections



## MANUFACTURING EXTENSION PARTNERSHIP

### 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.



Medical Prosthetics

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.



### 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..

**Defense Supply Center Columbus**  
*Taking the Lead in Land and Maritime Support*

- § 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.

**BAE SYSTEMS**

- § 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.



## MANUFACTURING EXTENSION PARTNERSHIP

### DOE Buy American Supplier Scouting

#### § Department of Energy Office of Energy Efficiency

*Helping recipients of DOE American Recovery and Reinvestment Act (ARRA) grants find U.S. manufacturers to satisfy Buy American provisions applying to expenditure of ARRA funding*



#### § Leveraging MEP national network reach and knowledge of local manufacturer capabilities to bring them business opportunities

- *(Pre)Qualify supplier manufacturing/technology capabilities and capacity*
- *Provide MEP assistance to suppliers as needed*
  - *Can include market diversification approaches to assist manufacturers to enter new markets for new and existing products and processes*

**As of December 2010, 39 exact/partial matches out of 74 opportunities, 22 deemed by DOE as viable US suppliers**

## MANUFACTURING EXTENSION PARTNERSHIP

### 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



*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.*



# MEP Partnering to Support Manufacturing through Sustainability

GSN: Green Suppliers Network

E3: Economy, Energy, and Environment



## 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. <https://www.greensuppliers.gov/gsn/home.gsn>

## 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*

## Benefits for Manufacturers & Communities

### Cost Savings

- \$ Increased process efficiencies and reduced waste
- \$ Profitable sustainability practices

### Increased Competitiveness

- \$ State-of-the-art sustainable business practices
- \$ Technical support to drive entry into new markets
- \$ Job creation and retention

### Access to Technical and Financial Resources

- \$ Additional funding through federal and state programs
- \$ Enhanced skills and capabilities for workers

### Economic Growth

- \$ Improved competitiveness of existing manufacturers
- \$ Enhanced ability to attract new business
- \$ Increased manufacturing jobs or job retention
- \$ Trained workforce with skills for a sustainable economy

## MANUFACTURING EXTENSION PARTNERSHIP

### MEP Federal Agency Collaborative Partnerships

- § EPA: GSN, 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 (INEAP): 248 members, 82 Federal Programs, and 36 non-government programs <https://www.ineap.nist.gov/ineap/home.ineap>

# MANUFACTURING EXTENSION PARTNERSHIP

## Sample of Federal INEAP Programs

### 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

## MANUFACTURING EXTENSION PARTNERSHIP

### 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

## MANUFACTURING EXTENSION PARTNERSHIP

For Further Information on MEP:

<http://www.nist.gov/mep>

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Gaithersburg, MD 20899



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