
Manufacturing Extension Partnership

National Institute of Standards and Technology

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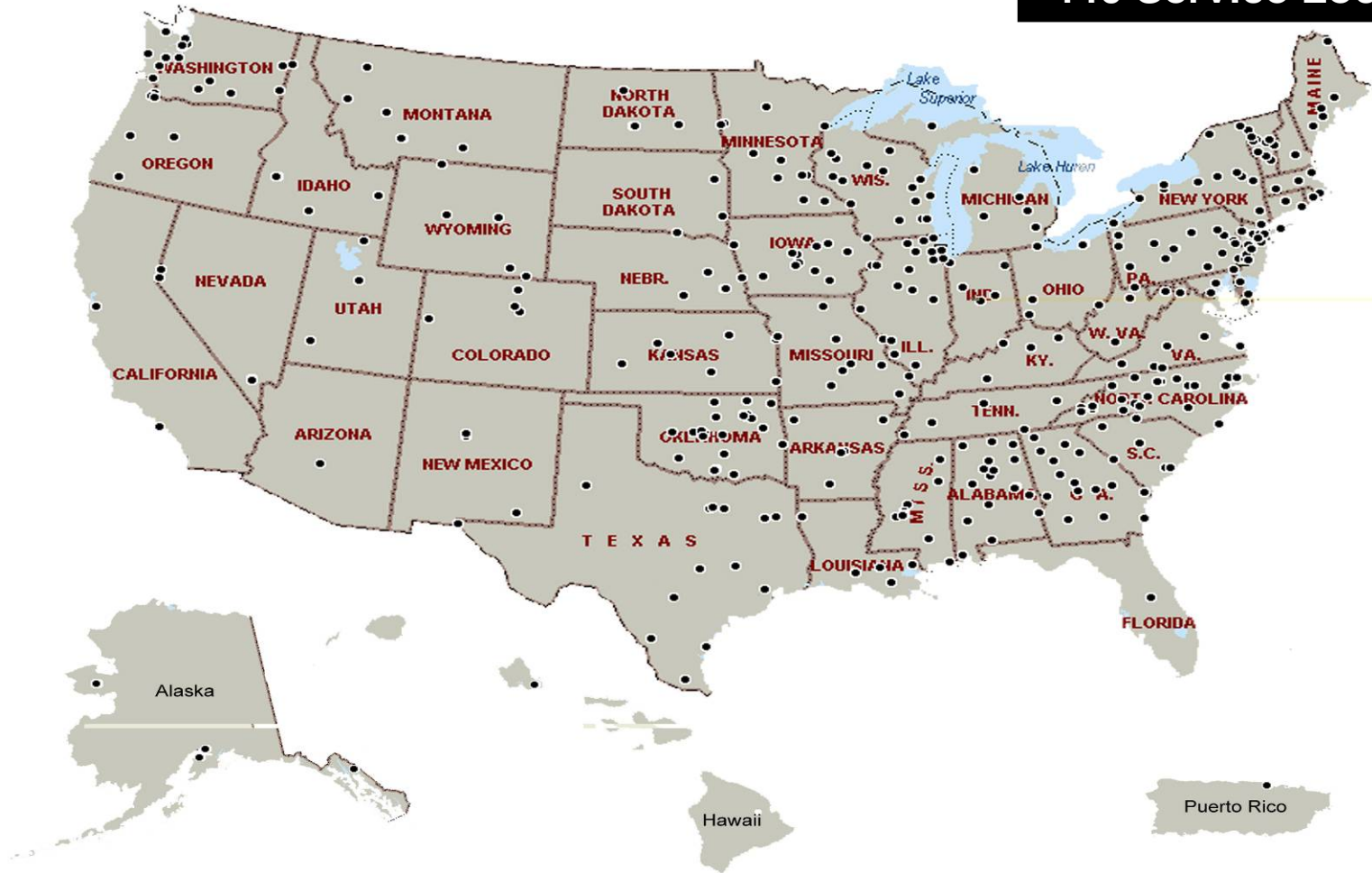
240-426-4649



MEP Office Locations

www.mep.nist.gov – or – 800-MEP-4MFG

59 “Centers”
1600 Field Staff
440 Service Locations



Core Focus Areas of Next Generation MEP Strategic Plan



“Sustainability – Embracing the Green Economy”

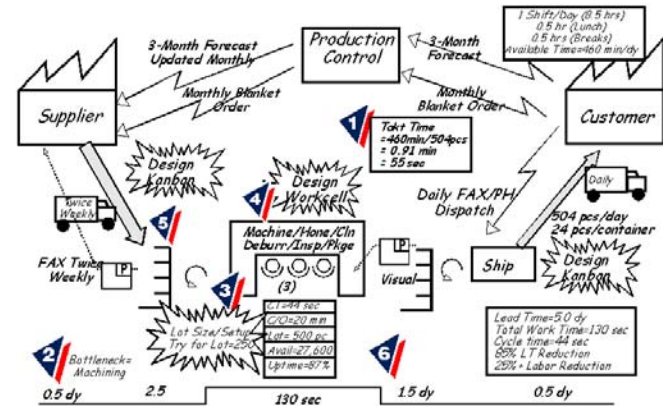
■ NIST MEP Next Generation Strategy

- Reduces costs for manufacturers
- Reduces environmental impacts through reduced energy uses and less harmful materials
- Supports growth of “Green Industries” such as wind power, fuel cells & solar power for example



Basic Approach

- Focus on reducing costs



- Lean Manufacturing = Process Improvement
- Adding focus on Energy
- Adding a focus through Green Suppliers Network on materials usage & handling
- Working with supply chains

Green Suppliers Network

- MEP, EPA & State Experts Partner with Manufacturer
- As MEP analysis conducted, specific focus on:
 - Energy
 - Water usage
 - Pollution, water, air, solid waste



Success Story

HAR-CONN Chrome Company

- Metal finishing company
- 55 employees, \$6M in annual sales
- Hard chrome plating line -- 15% of business

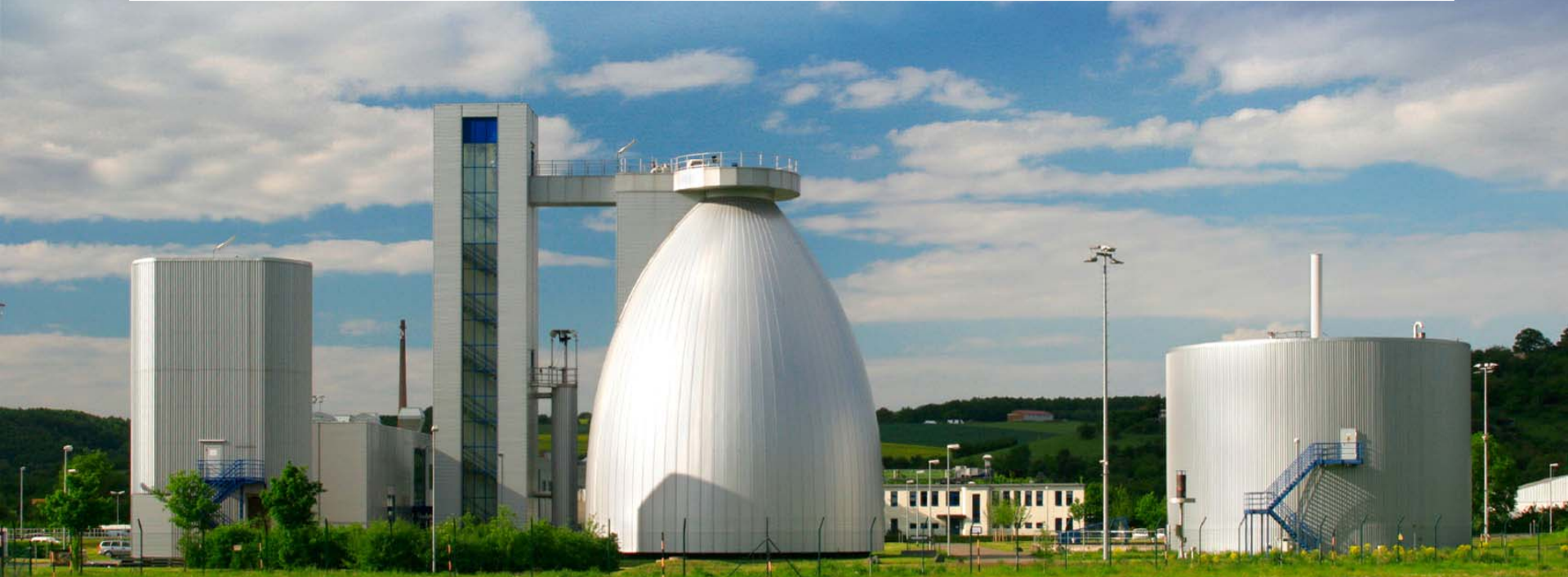


Green Suppliers Network Review Results

- \$425,000 in potential annual savings
- \$77,750 in potential energy savings

Supporting Manufacturing Leadership Through Sustainability

E3: Economy, Energy, and Environment



Next Steps – “E3”

- E3 – Economy, Energy and Environment
- Community targeted approach across five agencies
- Outcomes – stronger manufacturers leads to stronger communities with jobs, wages
- Stronger manufacturers who impact the community less, who use less energy

Supporting Manufacturing Leadership Through Sustainability

E3: Economy, Energy, and Environment



SBA
U.S. Small Business Administration

MANUFACTURING EXTENSION PARTNERSHIP Benefits for Manufacturers



Cost Savings

- Significant cost savings as a result of 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



MANUFACTURING EXTENSION PARTNERSHIP

Cost Savings for Manufacturers

Increase Return on Investment (ROI) Potential

- By *combining* Lean, Clean, and Energy assessments cost savings are significant. For example:
 - Lean and Environment assessments at 11 facilities in Grand Rapids, MI resulted in potential annual savings of **\$860,000** per facility under the **Green Suppliers Network**
 - Recommendations from Energy assessments have averaged about **\$55,000** in potential annual savings for each manufacturer under **Save Energy Now**



MANUFACTURING EXTENSION PARTNERSHIP
E3 On the Ground



San Antonio, Texas

Pilot Projects in:



Columbus, Ohio



MANUFACTURING EXTENSION PARTNERSHIP

E3: Columbus, Ohio

Responding to the Challenge:



Doug Kaempf
Program Manager,
Industrial Technologies
Program
US Department of Energy



Michael B. Coleman,
Mayor, City of Columbus



Jim Jones
Acting Assistant Administrator,
Office of Prevention, Pesticides
and Toxic Substances
US Environmental Protection
Agency



Ronald Mills,
Executive Director,
Solid Waste Authority
of Central Ohio



Roger Kilmer
Director, NIST MEP
Department of Commerce



Michael G. Morris
Chairman, President and CEO
American Electric Power



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E3: Columbus, Ohio

Pilot Update:

- 6 pilot facilities:
 - Central Ohio Welding
 - G and J bottling Co (A Pepsico company)
 - Hirschvogel
 - Crane Plastics
 - Archmittaler
 - Timber Tech
- Technical assessments completed by August 2009
- Each assessment spans 3 to 4 days
- Facilities invited to join pilot program based upon utility review of rate-payers
- Several assessment recommendations expected to be low outlay or fast payback



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E3: Columbus, Ohio

Implementation and Future Funding:

- AEP funding available to support energy efficiency measures
- For capital outlays, engaging local SBA
- City is seeking future funding from the Energy Efficiency and Conservation Block Grants (EECBG)

<http://www.eecbg.energy.gov/>



Process

A Lean Review leading to increased productivity and reduced costs

An Energy Audit which provides tools and insights for reducing energy demand and costs

A Greenhouse Gas (GHG) Evaluation that teaches manufacturers how to calculate GHG emissions and evaluate reduction strategies

A Clean Review resulting in water and energy conservation, reduced emissions, and additional cost savings

Post-Assessment Recommendations to guide each facility toward improvements in overall facility efficiency, reduced waste, more efficient use of resources including energy and water, and cost savings for the facility.

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Implementation Support

E3 will identify appropriate implementation resources, such as:

- **Leveraged Funding**

- o DOC Economic Development Administration grants
- o DOL “green jobs” and workforce development grants

- **Loan Guarantee Programs**

- o SBA 7(a) and 504 loans - General equipment and working capital loans up to \$2 million and manufacturers’ equipment financing up to \$10 million



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Training and Continuous Improvement

Resources for:

- **Green Worker Certificate** – provides a standard approach to ‘green skills’ training that can be used by companies to develop internal capabilities and establish sustainable programs
- **Green Practitioner Certificate** – provides a standard training, evaluation and certification for all practitioners in the E3 program, similar to the Lean Certification program



MANUFACTURING EXTENSION PARTNERSHIP

Who is involved in E3?

E3 MODEL: Federal Programs Working Together with Local Communities

ECONOMY:

DOC's NIST Manufacturing Extension Partnership (**MEP**); **SBA** financing; **DOL** skills training

ENERGY:

DOE's Save Energy Now (**SEN**) program

ENVIRONMENT:

EPA's Green Suppliers Network (**GSN**) and Climate Leaders (**CL**) program

COMMUNITIES:

Large and small manufacturers, utilities, local government, and other municipal authorities

