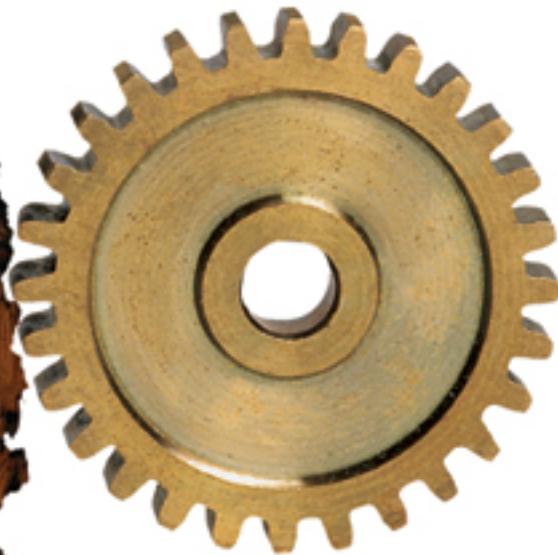


It's not that  
easy being  
green....





# EASIER THAN YOU THINK

The Green Suppliers Network

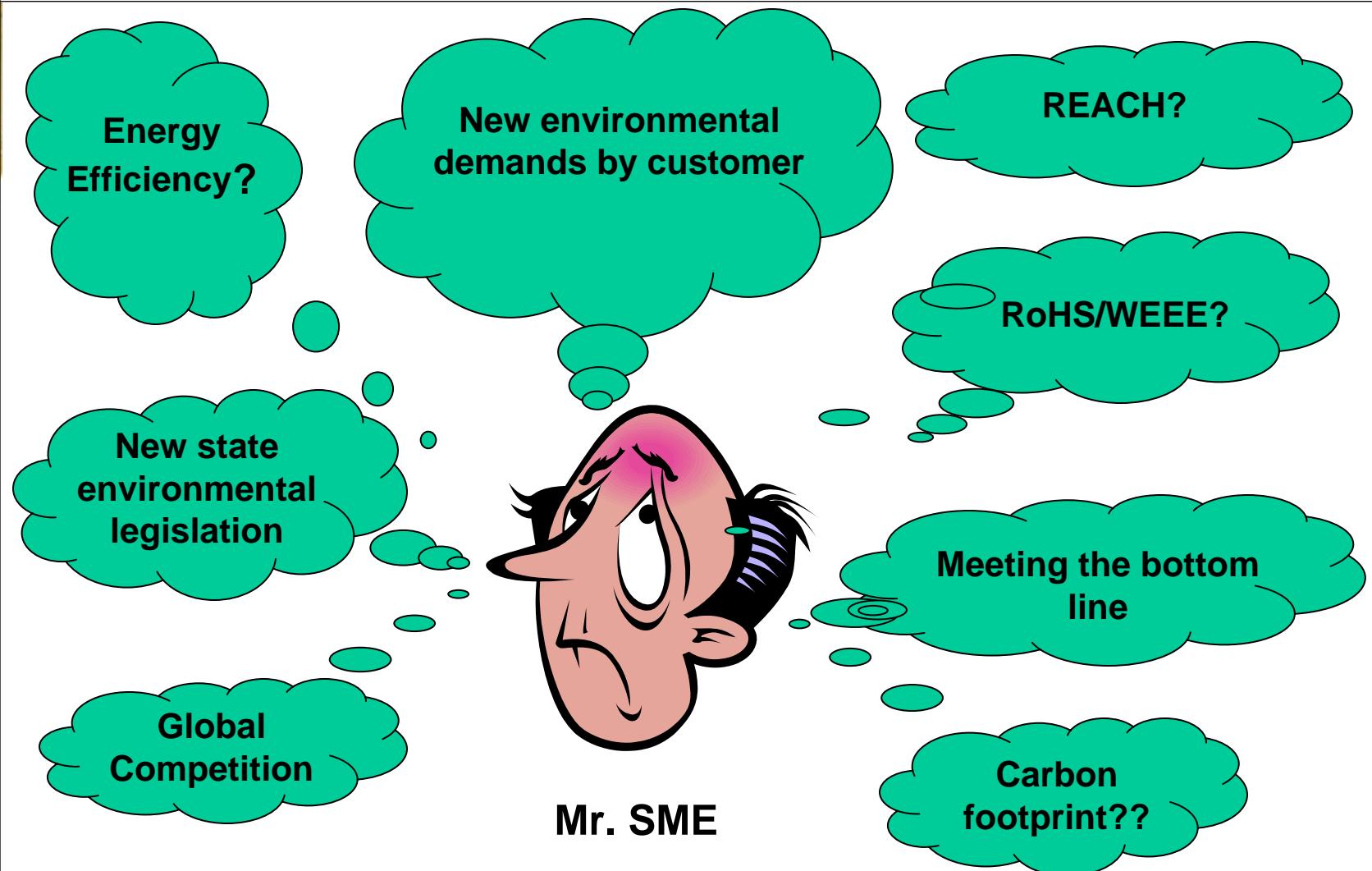
A Public Private Partnership,  
Delivering Impact



Green Suppliers Network



# Mr. SME's Needs are Evolving





# What is the Green Suppliers Network?

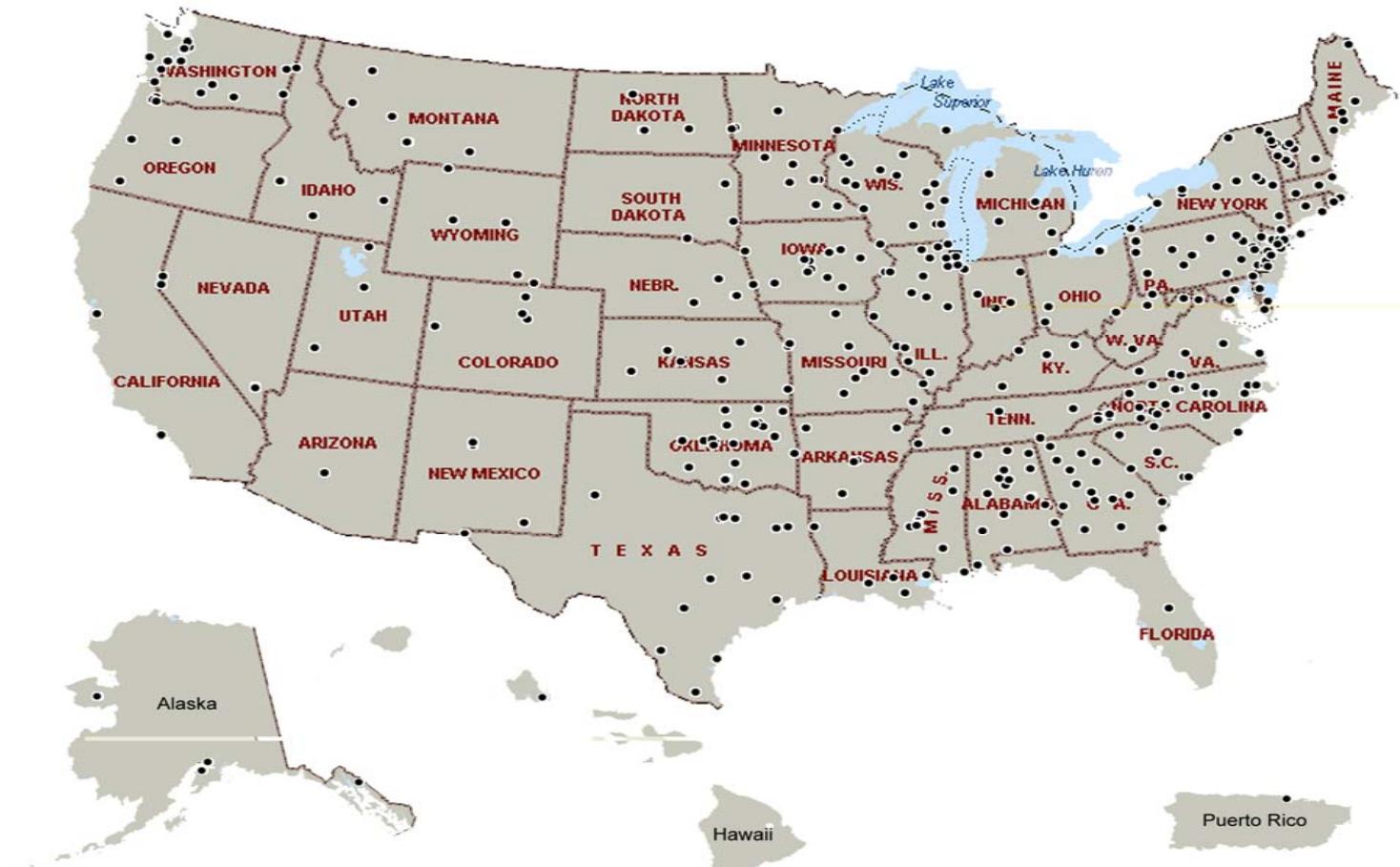
---

A partnership between the U.S. EPA and the U.S. DoC  
NIST Manufacturing Extension Partnership

- Focus: Small & mid-sized manufacturing suppliers
- Approach: Lean & Clean on-site reviews
- Value Add: Expands lean definition of waste to include environmental considerations
- Deliverable: Measurable business and environmental impacts



# Where is the Green Suppliers Network?



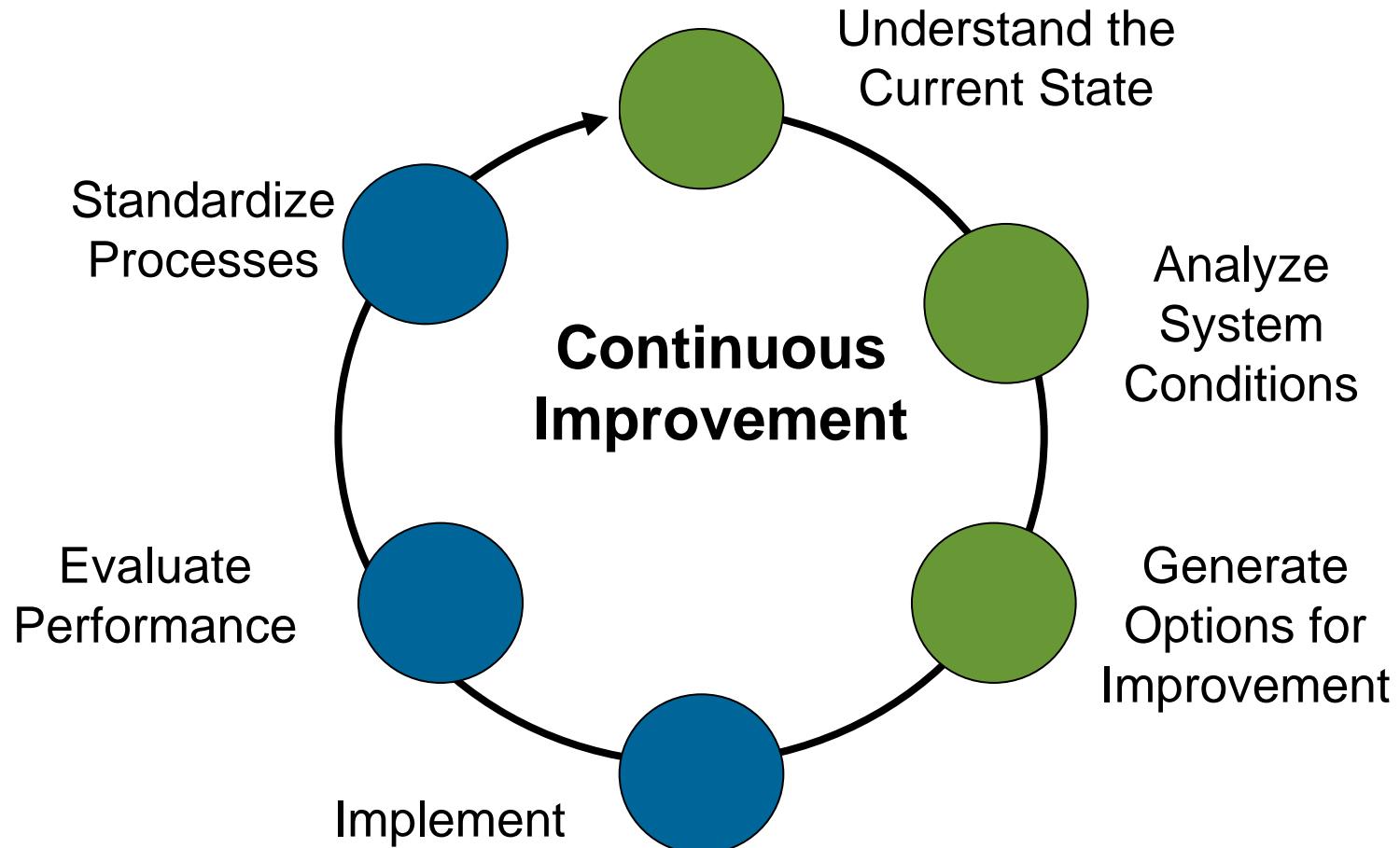
# Opportunities Identified – 54 Projects



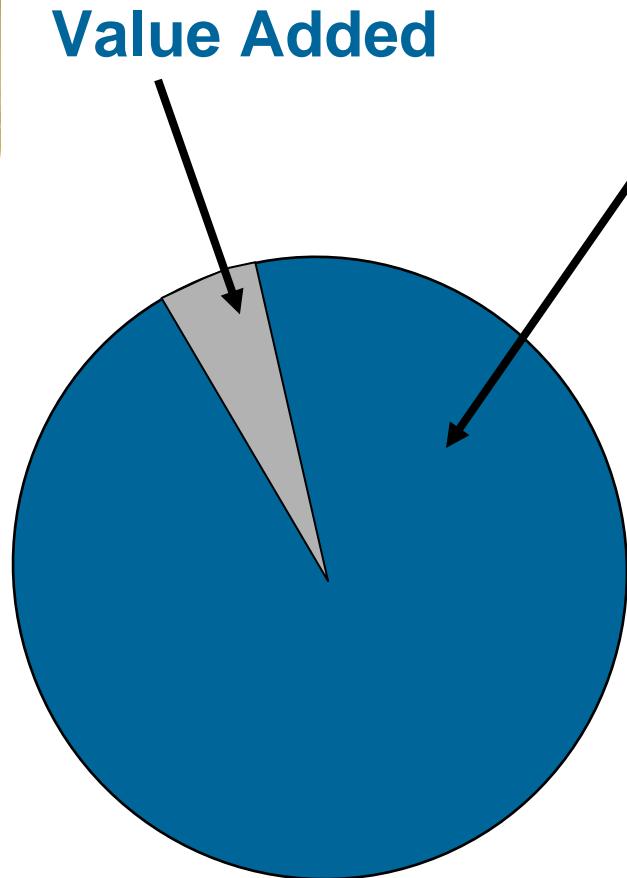
Cost Savings from Environmental Impact Opportunities	\$9,301,286/yr
Energy Conservation (MM Btu)	258,368
Water Conservation (gallons)	11,850,672
Water Pollution Reduction (lbs)	132,288
Air Emissions Reduction (lbs)	89,215
Solid Waste Reduction (lbs)	1,389,901
Cost Savings from Lean Opportunities	\$20,661,872/yr
Cost Savings from Other Opportunities	\$199,193/yr
<b>Total Potential Cost Savings</b>	<b>\$30,162,351/yr</b>
One-Time Lean Impact Opportunities	\$19,829,477



# Lean: Continuous Improvement



# Lean: Eliminating Wastes



## Non-Value Added

- » Defects
- » Overproduction
- » Waiting
- » Non-Value Added Processing
- » Transportation
- » Inventory
- » Motion
- » Employees Underutilized

Typically 95% of all lead time is non-value added



# Lean & Clean Manufacturing



## “Lean” eliminates...

- Defects
- Overproduction
- Waiting
- Non-utilized resources
- Transportation
- Inventory
- Motion
- Extra processing

## “Clean” adds...

- Full use of Raw Material
- Energy Efficiency
- Water conservation
- Elimination of Toxics
- Reduction of:
  - Packaging Wastes
  - Emissions to Air & Water
  - Solid & Hazardous Wastes
  - Regulatory obligations and risks





# Environmental “Blind Spots”

- **Hidden environmental waste** buried in overhead & facility support costs
- **Environmental and human health risks** not considered in lean initiatives
- **Environmental impacts throughout the product lifecycle** affecting customers & stakeholders





# The Lean & Clean Advantage

---

- Efficient use of labor, time, capital, energy & raw materials
- Maximum quantity of products from least number of inputs
- Freed up resources to focus on opportunities





# GSN Specifics

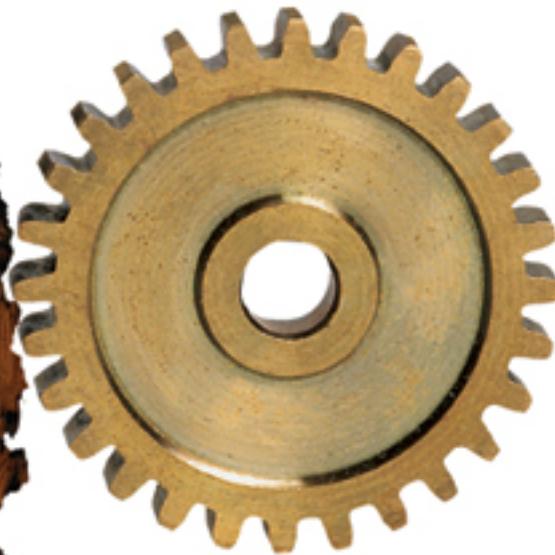
---



- Assessment and Business Case 2-3 days
  - \$6,500 Cost of review
  - \$2,000 GSN buy down\*
  - \$4,500 Total cost to supplier
- Implementation
  - Green Suppliers Network provides access to implementation support \$1,000 additional credit
- Measurement
  - NIST MEP administers an independent follow-up survey to assess impacts

\*Suppliers Must Qualify Under SBA Definitions – 500 or Fewer Employees per Facility





Green Suppliers  
Network

**CASE STUDIES  
MAKING IT REAL**



Green Suppliers Network





# Supplier Behavior Change Metalworks - Ludington, MI

## Manufacturer of metal filing cabinets

- Reduced water use by 16 million gallons from new parts washing practices
  - saving \$30,000 annually
- Reduced chemical use in parts washing by 20%
  - Saving \$20,000
- Saved \$50,000 in natural gas costs from redesigning curing oven orifices
- Saved \$50,000 in natural gas costs to improved controls on air make up



# H & L Advantage Grandville, Michigan

## Injection molding manufacturer to the office furniture industry

- Lowered overall operating costs by 20%
- Increased inventory turns by 30%
- Moved from three day to one day lead-time on parts
- Reduction of travel distance for product flow (180 feet)
- 41% reduction in inventory for the targeted product
- Additional events have lead to reduced equipment run times, equipment upgrades and increases in production square footage area in the plant (30,000 square feet)





# Sermatech Connecticut Manchester, Ct.

---



## Development and applications of high performance protective coatings for aerospace applications

- A \$4500 investment in the Green Suppliers Network review has yielded \$1000 per month due to waste minimization, and an operating profit increase of \$25,000 a month, representing a 45% productivity improvement, for a total of \$26,000 per month in savings.
- Reduced re-work by 75%
- Reduced hazardous waste by 30%
- Reduced VOC emissions by 66%





# Green Suppliers Network – Evolving to meet those needs

---

- Pollution Prevention Best Practices
- Chemical evaluative tools for risk assessment and informed decision making
- Green Buildings
- Coordinated Energy Issues
- Environmentally Preferable Purchasing
- Climate Change Strategies





# Summary of Program Benefits

---

- Reduced environmental impacts
- Increased efficiency and quality
- Improved supply chain relationships
- Stronger supply base
- Comprehensive approach



# www.greensuppliers.gov



A screenshot of the Green Suppliers Network website homepage. The header features a green background with a gear and wood grain graphic, and the text "Green Suppliers Network" with a globe icon. Below the header is a navigation bar with links to "Home", "Review Team", "News Articles", and "Contact Us". The main content area has a blue header with the text "Welcome to the Green Suppliers Network". It includes a search bar, a sidebar with links to "About Green Suppliers Network", "Membership", "Program Results", "Tools &amp; Resources", "Beyond Lean and Clean", and "Frequent Questions". A quote from Rick Fleming of The Right Place, Inc. is displayed: "We must stop thinking of lean and clean as separate initiatives. This is not about inserting clean where it fits with lean approaches. They are symbiotic, each leveraging off the other in achieving beneficial, profitable impacts for a company. Integrating the two as one process is the only solution to a lean and clean future." Below the quote is a photo of a worker welding. The right side of the page features a "Green Suppliers Network Highlights" section with text about attending conferences and training sessions, and a photo of a booth at a trade show. Logos for the U.S. Environmental Protection Agency, U.S. Department of Commerce, and NIST are at the bottom, along with a note about the joint effort of these agencies.

Alex Folk, NIST MEP  
Alex.Folk@NIST.gov  
301-975-8089

Kristin Pierre, US EPA  
Pierre.Kristin@epa.gov  
202-564-8837