

Sustainability for Small and Medium Manufacturers

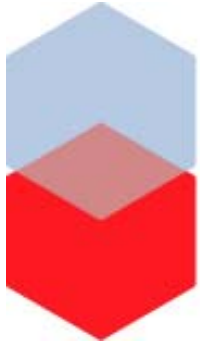
CMC creates value through our passion for the business of manufacturing

William F. Hoffman III, Ph.D.

**Director of Sustainability Services
Chicago Manufacturing Center**

**iNEMI Sustainability Summit
September 23, 2008**





CHICAGO MANUFACTURING CENTER



MEP • MANUFACTURING
EXTENSION PARTNERSHIP

Mission Statement

“To strengthen the global competitiveness of US-based manufacturing by providing information, decision support, and implementation of innovative approaches focused on leveraging technologies, techniques, and business best practices.”



NIST MEP: 1,600 Nationwide Experts

Lean/Operational Excellence; Continuous Growth; Sustainability



Third Party Survey Results of Clients

- **New Sales** \$2.842 Billion
- **Retained Sales** \$3.408 Billion
- **Capital Investment** \$2.248 Billion
- **Cost Savings** \$1.304 Billion
- **Jobs Created/Retained** 53,219

The **Manufacturing Extension Partnership (MEP)** is a program of the National Institute of Standards and Technology (NIST); an agency of the U.S. Department of Commerce Technology Administration. Information can be found at its website: www.mep.nist.gov

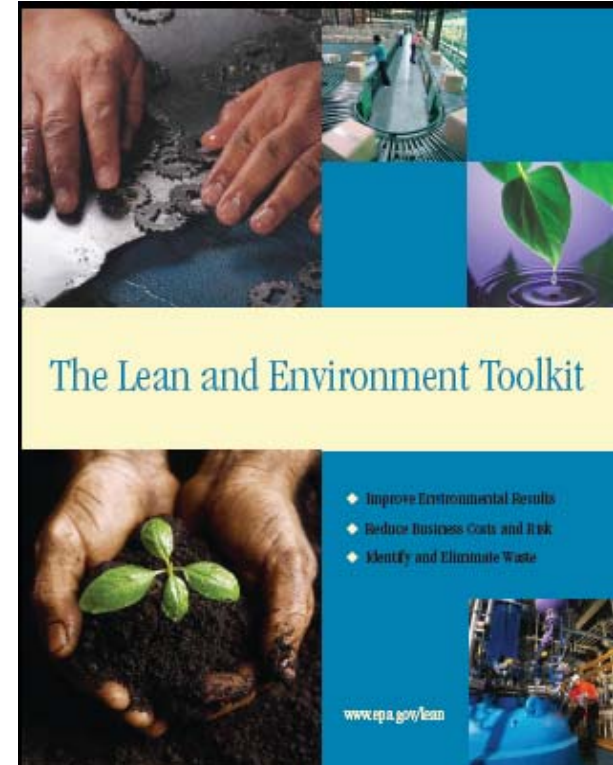
FY 2006 economic impact results are based on a survey of 4,726 MEP-served establishments out of 5,261 attempted.



Lean and Green

Practical strategies, tools, and techniques for incorporating environmental considerations into already existing Lean initiatives.

- 1. Learning to see and eliminate hidden environmental wastes during Lean implementation can lead to more efficient production by improving the time, quality, and cost results of Lean initiatives.*
- 2. Coordination of Lean and environmental management can facilitate more process improvement and make it easier to apply Lean to processes with environmental regulatory constraints.*
- 3. A significant competitive advantage can be attained by providing customers with products and services with less environmental impacts, and by improving the work environment for employees.*





Green Suppliers Network



Green Suppliers Network



Why focus on suppliers?

- Concerns about supply chains: on-time delivery, quality, cost
 - **“Supply chain inefficiencies can increase operating costs as much as 25%” BSR, 2000**
- OEMs facing increased liability and responsibility for *full* product life cycle
- Suppliers need technical assistance on environmental issues



Suppliers Need Help

Suppliers need help to meet your needs

- 2005 survey by *The Manufacturer*.
 - 63% of respondents said they are receiving extreme or significant pressure from customers to reduce costs
 - Yet, only 2% said their customers were providing assistance in the form of resources and technical assistance
 - 46% said their customers demand improvements but do not provide direction on how to achieve

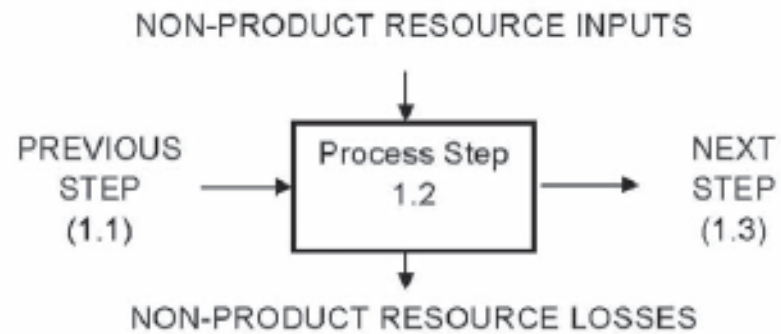


How the Program Works

- Corporate Champions join program
- Champions nominate suppliers
- Review team conducts assessment
- Supplier implements opportunities
- Champion and Green Suppliers Network get aggregated data

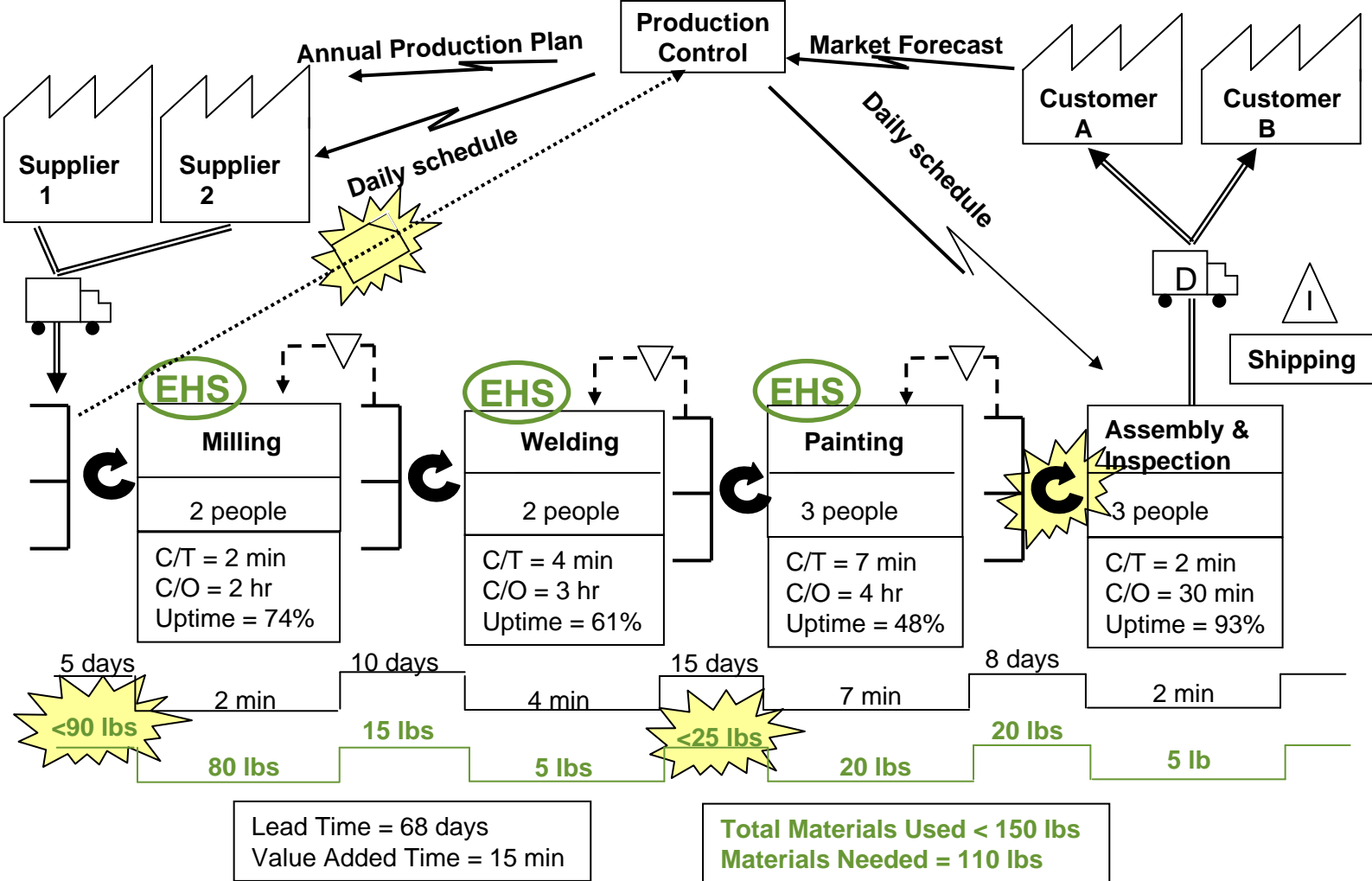


Unit Process



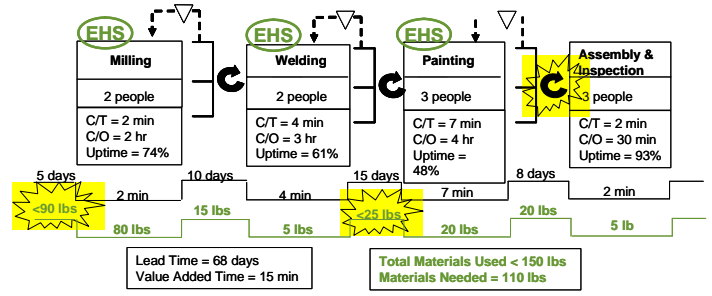
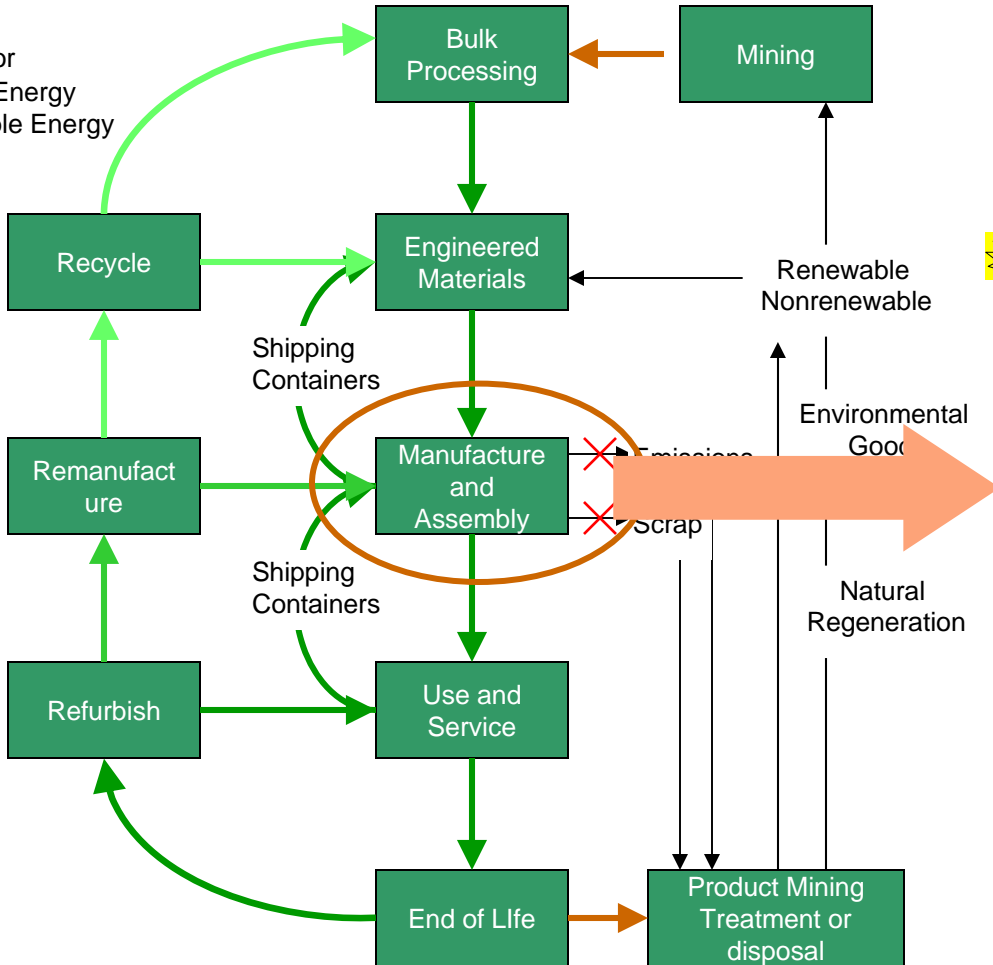
Lean and Clean: Tools and Techniques

Example Future State VSM

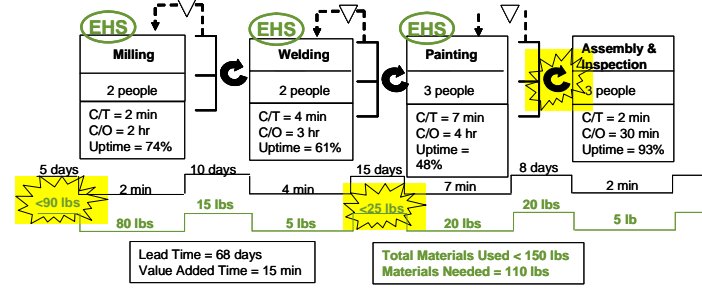


Industrial Ecology

Human Labor
Renewable Energy
Nonrenewable Energy



Material Flow



Beyond Lean and Green

- **Lean and Green**
 - **Internal Focus – make what I do better**
- **Sustainability**
 - **External Focus – make my network better**
- **HOW?**
 - **Design**
 - **Materials**
 - **Suppliers**
 - **Customer**





CHICAGO WASTE TO PROFIT NETWORK

WTPN is a City of Chicago and Chicago Manufacturing Center collaborative service directly connecting organizations to transform byproducts (wastes) into industrial feedstock (profits)

Build regional industrial ecosystem infrastructure between small and mid size industry, large corporations and community based organizations to advance sustainability. WTPN will expand through the NIST MEP network across regions.



WTPN 2007 Innovation Members

- **Abbott**
- **Acme Refining**
- **Advanced Ground Care**
- **Akzo Nobel**
- **Baxter International**
- **Carmeuse Lime**
- **Christy Webber**
- **Cloverhill Bakeries**
- **Cook Composites & Polymers**
- **Curb Appeal**
- **East Balt Commissary**
- **Endres Services**
- **Engineered Glass Products**
- **EPI Concrete Products**
- **General Iron**
- **Geocycle**
- **Goose Island Brewery**
- **Lafarge**
- **Lincoln Park Zoo**
- **Midwest Generation**
- **Mittal Steel**
- **Naylor Pipe**
- **Notebaert Nature Museum**
- **Ozinga RMC**
- **PortionPac Chemical Corporation**
- **Prairie Materials**
- **S&C Electric**
- **Sara Lee**
- **Schulze Burch**
- **Shedd Aquarium**
- **Sherwin Williams**
- **Smurfit Stone**
- **USG**



The M Word - Money

- **Move from bottom line savings**
 - Lean and green
- **To top line growth**
 - **Eureka! Winning Ways – designing the “sustainable” product**





Eureka! Winning Ways



Doug Hall, founder of the nationally known Eureka! Ranch innovation think tank, has spent his 25-year career creating and developing ideas and new products for large firms like: American Express, Nike, Procter Gamble, and Walt Disney.

Eureka Winning Ways and NIST MEP have collaborated to offer a disciplined process that systematically and efficiently helps small and medium size manufacturers develop growth ideas.

Sixty times more effective than classic brainstorming, Eureka! Winning Ways couples idea engineering with data-driven screening and filtering through a system that has 88% reliability in forecasting the probability of success.

The Chicago Manufacturing Center (CMC) is the local affiliate of the NIST/Manufacturing Extension Partnership (MEP) and is the exclusive provider of Eureka! Winning Ways in the Chicago area.

*DATELINE NBC - CBS - NPR - CNN
CNBC - CBC - ABC American Inventor*





Beautiful Surfaces from Recycled Glass.

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About

Gilasi was developed by InnerGlow Surfaces in 2002 to provide designers, architects, builders and homeowners with beautiful, innovative, environmentally sustainable solutions to interior finishes. We manufacture Gilasi, a durable, elegant, solid surface made from locally recycled glass that is destined to go to landfill.

Made in Chicago

Gilasi surfaces are manufactured in Chicago in a day-lit facility. All materials that comprise Gilasi are sourced locally, within 250 miles of our factory and most of the material is sourced right in Chicago. Our location allows us to take advantage of public transportation.

Recycled content

Gilasi countertops are composed of a minimum 81% recycled materials by weight up to 87%, the bulk of which is glass that can not be recycled in traditional methods.

Locally sourced materials

The materials used in Gilasi are locally sourced. They include waste glass from a local manufacturer we partnered with through the City of Chicago's [Waste to Profit Network](#).

Reducing waste

Gilasi slabs currently are available in 27, 31.5 or 42 inch width, 1.3 inch thickness, and lengths up to 94.5 inches. Customizing the length of slabs reduces waste and unnecessary cost to customers.

GILASI: YOU DON'T HAVE TO TEAR DOWN A MOUNTAIN TO GET IT.

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BROWSE STYLES



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“For far-sighted companies, the environment may turn out to be the biggest opportunity for enterprise and invention the industrial world has ever seen.”

