



Green Manufacturing Industrial Consortium Semi-Annual Member Update Meeting WMU Parkview Campus May 3, 2010

Associate Director's Report
David Meade, Ph.D.



Outline

- Membership Update
 - New Members
 - Research Activities with Members
 - Recruiting Efforts
 - Budget Review
- West Michigan E3 (WM-E3) Integration
- Action Items



Membership Update

- Members:
 - Fabri-Kal
 - Landscape Forms
 - Post/RalCorp
 - Short List (target by next semi-annual meeting)
 - Cascade Engineering
 - Haworth
 - Kellogg's
 - Herman Miller
 - Denso
- Hope for 3 out of 4***



Research with Members

- Landscape Forms – furthest along
 - WMU Assessment – site work complete, report by May 19
 - Michigan Industrial Energy Center (MIEC) - site work complete, waiting for report (any day)
 - Green Supplier Network – Lean/Green Value Stream Assessment, 70% complete
 - Target Projects taking shape:
 - » Wood utilization improvement
 - » Oven waste heat reclamation for washer
 - » Sawdust-to-energy (biomass) study
- LF is also participating in the Waste Powder Paint User Group



Research with Members (continued)

- Post (RalCorp)
 - Chose not to do Assessments, instead chose to utilize GMIC resources on existing projects
 - » Saves \$3,300 in “outside contracting” costs
 - 2 projects selected:
 - » “Dumpster Dive” to evaluate other recycling “opportunities” in current waste stream
 - » Heat management of drying ovens – analysis to determine the “optimal” operating parameters (curves) to minimize gas use under an environment of varying process input conditions



Research with Members (continued)

- Fabri-Kal:
 - Held Assessment Process Kick-Off meeting on March 4
 - FK site coordinator identified – Tom Bush, V.P. of Engineering
 - MIEC “on-site” scheduled for May 23, report takes 6-8 weeks
 - WMU team assessment to take place in early May
 - GSN Value Stream assessment TBA (likely June)



Member Recruitment Activates

- Presentations

- SW Michigan Alliance, Niles, MI (Jan 13, 2011)
- Cornerstone Alliance, Benton Harbor, MI (Jan 14, 2011)
- Lean Supplier Network – Steelcase (Jan 26, 2011)
- Michigan Energy Conference FSU, Big Rapids, MI (April 13, 2011)
- Waste Powder Paint User Group WMU, Grand Rapids, MI (April 19, 2011)

- Calls

- Haworth, Holland, MI (December 3, 2011)
- JCI, Holland, MI (December 8, 2011)
- Rapid Line, Wyoming, MI (Dec 17, 2011)
- Heinz, Holland, MI (Jan 31, 2011)
- Wright Coatings, Kalamazoo, MI (Feb 17, 2011)
- Light Corp., Grand Haven, MI (Feb 18, 2011)
- Technocoat, Holland, MI (Feb 18, 2011)
- Cascade Engineering, Grand Rapids, MI (Mar 10, 2011)
- L3 Communications, Muskegon, MI (April 21, 2011)
- International Automotive Components, Mendon, MI (May 5, 2011)

Articles

WMU's Green Manufacturing Industrial Consortium continues to grow

Published: Thursday, April 28, 2011, 9:00 AM



By **Olivia Pulsinelli** | Business Review West Michigan

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6



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Patten

Western Michigan University's Green Manufacturing Consortium is halfway to its initial goal of six member companies to continue that growth.

Post Foods in Battle Creek is the third company to join the consortium, "a partnership designed to assist West Michigan businesses in developing energy-efficient manufacturing processes," according to the university.

Post also is the first founding member of the consortium. The other two founding member companies are Fabrikal and Fabri-Kal.

Rapid-Line focuses on energy overhead

MONDAY, MAY 02, 2011

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WYOMING — Rather than worry about business factors he cannot control, Mark Lindquist, president of Rapid-Line Inc., has set his sights squarely on a familiar target: energy usage.

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Project activities in target member companies (funded by GMI)

- Greener Paint processing:
 - Waste Paint minimizing, reuse and recycling (Haworth, Herman Miller, Steelcase, Stryker, Irwin Seating, General Motors, Rapid Line)
 - Oven Door Seal and Waste Heat reduce/reuse (Wright Coatings, Rapid Line)
 - Alternative paint materials (Herman Miller)
- Incineration process waste and heat reclamation (Herman Miller & Sauder Woodworking)
- Real-Time Energy Monitoring & Electrical Energy Peak Power Management (RapidLine w/dmStratigists)
- Quad Generation (Bells Brewery)



Center Development

- First Year Focus – Energy and Materials
 - “Quick return” focus – low hanging fruit
- Target Areas: *(Environmental Focus)*
 1. Material Intensity/Efficiency (recycling is an indication of inefficient material use)
 2. Energy Efficiency (membership fee could easily be saved through low/no-cost improvements in energy use)
- Activity:
 1. Site assessments to identify a list of \$ savings opportunities in focus areas
 2. Completion of one applied research project chosen from list – goal: ROI on membership fee

One cost savings project per company leveraging the collective knowledge and experience of the consortium member companies




Project Identification

- We have partnered with the Michigan Manufacturing Technology Center (MMTC) to jointly roll-out the EPA's E3 Program (Economy, Energy, and Environment) in West Michigan (WM-E3)
- Benefit to Consortium Members: Three Phase Assessment Process





West Michigan E3 (EPA/MMTC)



U.S. ENVIRONMENTAL PROTECTION AGENCY

Green Suppliers Network

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E3: Economy, Energy and Environment

[What Is the E3 Initiative?](#)
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What is the E3 Initiative?

Evolving from the Green Suppliers Network, the E3 Initiative is a coordinated federal and local technical assistance initiative to help manufacturers adapt and thrive in a new business era focused on sustainability. The program provides technical assessments of production processes and training in four key areas:

- Lean
- Clean
- Energy
- Greenhouse Gas Emissions

Depending on the processes of a company, either large or small, the assessments and training target opportunities to:

- Maximize energy efficiency
- Reduce environmental wastes
- Identify opportunities for reducing carbon emissions

It's Official

October 21, 2010 -- EPA announced that E3 became official with a September 25, 2010, memorandum of understanding (5pp, 1.63M, [About PDF](#)) signed by EPA and four other federal agency sponsors. The MOU outlines the agencies' responsibilities to coordinate and provide resources to communities under the initiative. [Read the Press Release.](#)

Events

Southeast Michigan December 2010

The Department of Commerce will host a [SMART tour](#) [EXIT Disclaimer](#) in Southeast Michigan featuring E3.

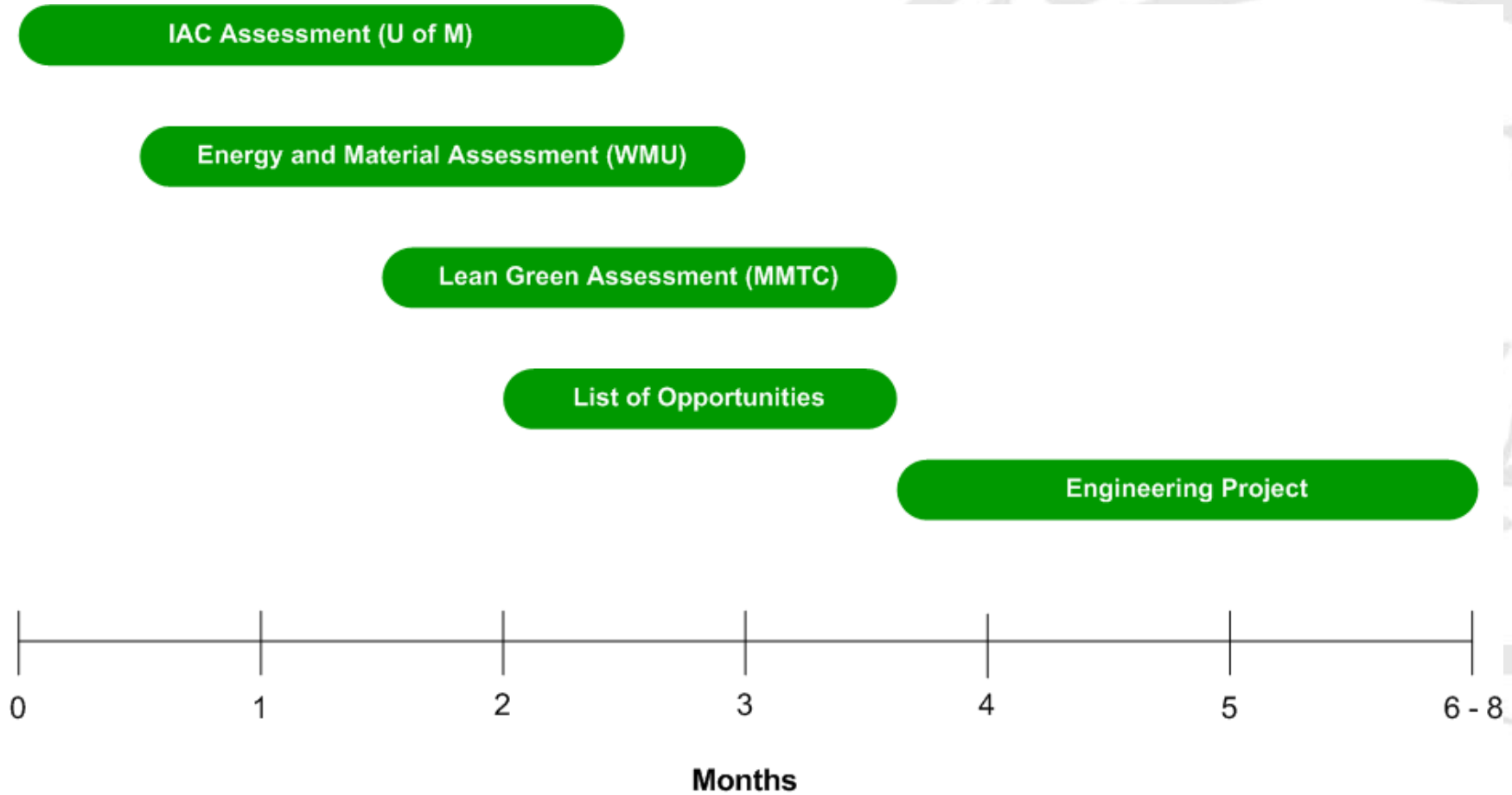


Assessments

- Phase I: Energy Audit
 - Conducted by the Michigan Industrial Assessment Center (MIAC) housed at the University of Michigan
 - \$10,000 Value, funding provided by the U.S. DoE
- Phase II: Targeted Material and Energy Intensity Audit
 - Conducted by a WMU student/faculty assessment team
 - Deep dive in key areas of material and energy waste
- Phase III: Lean & Green Assessment
 - Conducted by the MMTC
 - Targets one “value stream” for a detailed analysis of all aspects of waste elimination in both traditional lean areas (7-wastes) and green areas (utilities, materials, and environment)
 - \$10,000 Value, funding provided by Consumers Energy, member dues and other sponsors



Approximate Assessment/Project Process Timeline



Action Items

- Continue to recruit members – target 3 by the end of summer
- Complete the assessment process for Landscape Forms (mid June) and Fabri-Kal (end of July)
- Select projects for Landscape Forms and Fabri-Kal, Assemble project teams, initiate projects
- Complete projects for Post, Landscape Forms, and Fabri-Kal (Dec 2011 – Jan 2012)



Questions?

Thank You