



Mississippi Manufacturers Association



Mississippi Manufacturers Association
MANUFACTURING EXTENSION PARTNERSHIP



E3: ECONOMY • ENERGY • ENVIRONMENT
A SUSTAINABLE GROWTH STRATEGY

E3 (Economy, Energy, Environment)

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Presented to:

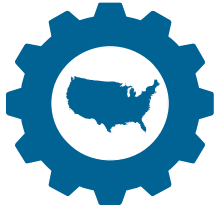
Enhancing Sustainability in the Food and Beverage Industry Workshop

Friday, September 28, 2018 8:30 a.m.

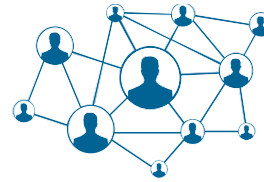


- Manufacturing Extension Partnership (MEP) of Mississippi
 - Hosted by Mississippi Manufacturers Association (MMA)
 - Small headquarters staff plus sub-recipient centers
 - MSU CAVS Extension (Canton)
 - Mississippi Polymer Institute (USM)
 - Itawamba Community (Belden)
 - Mississippi Gulf Coast Community College (Pascagoula)
 - Mississippi Corridor Consortium
 - MEP is a program of the National Institute of Standards & Technology (NIST)

The MEP Program in Short



Program Started in 1988
At least one center in all 50 states by 1996



National Network
System of Centers serving Manufacturers in each State.



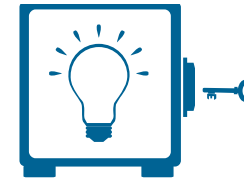
Partnership Model
Federal, State and Industry



MEP System Budget
\$130 Million Federal Budget with Cost Share Requirements for Centers



Global Competitiveness
Program was created by the 1988 Omnibus Trade And Competitive Act



Emphasis on Performance
Program and center performance based upon impact of center services on client firm

MMA-MEP Services

- **Growth services** – innovation , Innovation Jump Start, technology commercialization/ product development support, startup/expansion support
- **Lean solutions** – assessments, on-site and public training, lean certificate program, workshops and Kaizen events, lean leadership, organizational transformation
- **Polymer services** – material testing, mold and die design, prototyping, technical assistance, workforce training
- **Quality systems** – Six Sigma training and certification, SPC training and consulting, quality systems audit, precision measurement services
- **Industrial engineering solutions** – process design, plant layout, simulation modeling, ergonomic workplace, material handling
- **Workforce solutions** – skills assessment, basic and specialty skills training, health & safety training, certifications, leadership, conflict resolution, business culture
- **Strategic solutions** – strategic planning, risk assessment, business continuity planning
- **Sustainability services** – E3 (Economy, Energy, Environment) assessments, P2 (Pollution Prevention) assistance, CHP

MMA-MEP Impacts

For the four quarters ending July 1, 2018,
clients reported

New Sales	\$ 12.7M
Retained Sales	\$ 2.4 M
Jobs Created and Retained	2,626
New Investment	\$ 15.9 M
Cost Savings	\$ 9.7 M
Manufacturers served (with projects)	83
New manufacturing clients served	30

enHance Environmental Stewardship Program



- *enHance* is a voluntary initiative to recognize environmental leaders in Mississippi. Participating organizations make a commitment to address and achieve on-going environmental improvements.
- *enHance* encourages voluntary environmental stewardship by recognizing committed environmental leaders, thus nurturing the reduction of waste and conservation of resources, resulting in long term economic benefits and continuous environmental enhancement.

enHance Membership Tiers



Regulated facilities:

- Associate (Demonstrated history of compliance, signed environmental policy, Environmental Management Plan, self-audit, 1 environmental project)
- Steward (Associate plus: 1 additional environmental project)
- Leader (Steward plus: not more than one NOV in the past 3 years, no fine from the MDEQ or EPA in the past 3 years, Environmental Management System, independent audit, 1 community service project)

Non-regulated facilities:

- Environmental Star (min. 50 employees, min. 200K sq. ft., signed environmental policy, Environmental Management Plan, self-audit, 2 environmental projects) – added 2016

Current Membership Summary



- Total members (since inception): 52
 - Does not include a handful of organizations that were accepted but never submitted an annual report
- Currently active members: 35
 - 18 Leaders
 - 10 Stewards
 - 6 Associates
 - 1 Environmental Star

Mississippi E3



E3 = “Economy, Energy, Environment”

- Sustainable manufacturing initiative
- Provide sustainability assessments for small- to medium-sized manufacturers
- Can include safety assessment, sustainability training, leadership training and coaching
- Follow-on technical assistance, implementation
- 14 assessments completed to date

ME3 Assessment Model

- Pre-assessment questionnaire plus utility bills in advance
- Small team, one day in-plant assessment
 - “Lean and Green” assessment
 - ASHRAE Level 1 energy audit
 - Environmental compliance check
 - Safety audit - mock OSHA inspection
- Identify low/no-cost opportunities for improvement, potential opportunities for more substantial improvements
- Follow-up meeting and final report 3-4 weeks after assessment
 - Potential for follow-on workshops, training, or implementation projects

ME3 Core Team



KHAIRY

CHRIS

WALLY

JOE

TY

2017 Energy Audit Impacts

Four Assessments in 2017 – Potential Benefits:

- Natural gas savings = 6,700 MMBtu/yr
- Electrical power savings = 2.1 million kwh/yr
- Green House Gas reductions = 1,770 tons CO₂
- Energy cost savings = \$190,000 per year
- Average payback of energy efficient measures = 2.2 yrs



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A SUSTAINABLE GROWTH STRATEGY

E3 at Peco Foods

- Mississippi E3 conducted E3 assessments at three Peco Foods facilities in 2017
 - Hatchery
 - Feed mill
 - “Further processing” plant
- Identified potential energy savings totaling \$171,400 per year
- Provided a range of recommendations specific to each facility to reduce waste
 - Short-term, no-cost or low-cost fixes
 - Longer-term improvement projects (capital investment, training, etc.)

Benefits of E3

- ✓ Reduced waste
- ✓ Lower energy costs
- ✓ Reduced hazards
- ✓ Avoided penalties
- ✓ Improved productivity
- ✓ Enhanced sustainability

Thank you!

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