Reshoring Advanced Manufacturing
Jobs in Mississippi: Enhancing Skills and Building Competitiveness

“Make it in Mississippi”
Clay Walden, Ph.D.
Director of CAVS Extension
"Make it in Mississippi" ... Program Motivation

The Boston Consulting Group predicts that rising costs will soon drop China’s cost advantage to single digits - suggesting growth opportunities for states such as Texas, Alabama, Georgia, and Mississippi. ("Reshoring U.S. Manufacturing: A Wave of the Present", businessclimate.com)

"I am optimistic we will be a leader in reshoring," said Brent Christensen, head of the Mississippi Development Authority, the state's economic recruiting agency. (as quoted in Business Week August 21, 2012)
“When all costs are taken into account, certain U.S. states ... “will turn out to be among the least expensive production sites in the industrialized world. .. The early evidence of such a shift is mounting.”

Made in America, Again; Boston Consulting Group, August 2011
Illustration … Closing the Gap

Advantage: Domestic

- Developing Competitive SMEs within economically distressed areas.

Advantage: Offshore

- Ignored Costs
- Hidden Costs
- Time Variation
- Qualitative Factors
- ‘Best’ Practices

More Competitive Supply Chain
Broad Coalition of Partnerships

**Associations**
- Mississippi Manufacturers Association (MMA)
- Community Colleges
- Mississippi Delta Community College
- Itawamba Community College
- East Mississippi Community College

**State Agencies**
- Mississippi Development Authority (MDA)
- Mississippi Department of Employment Security (MDES)

**Private Industry**
- Entergy
- Franklin Corporation
- Nissan

**Workforce Investment Boards**
- Three Rivers Planning & Development District, Inc.
- South Delta Planning and Development District | Greenville, MS

**Federal Agencies**
- Delta Regional Authority
- EDA (U.S. Economic Development Administration)
- ARC (Appalachian Regional Commission)
- National Center for Intermodal Transportation for Economic Competitiveness (NCITEC)

**Non Profits**
- InnovateMEP Mississippi
- Reshoring Initiative

**University**
- Franklin Furniture Institute
- Bagley College of Engineering (Mississippi State University)
- Industrial & Systems Engineering
Program ... “Make it in Mississippi”

Sharing Best Practices & Linking OEMs with Suppliers...

Annual Reshoring Summit

Innovation Supply Chain Collaboratory

EDA (MSU, MDA)

NIST/MEP (Innovate Mississippi)

EDA (MSU, MDA)

NIST/MEP (InnovateMEP Mississippi)

EDA (MSU, MDA)

EDA (MSU, MDA, Innovate Mississippi)

EDA (MSU)

DRA (MSU)

ETA (Miss. Partnership WIA, Delta WIA) ICC, EMCC, MDCC, Holmes CC, MSU

Impacts: $40 million in Private Investment and economic impact, 750 jobs created or saved. (MEP Survey)

Longitudinal Tracking of Career Advancement: 276 “Advancement Maintenance Internships” with 85% placement, 50% advancement of incumbent workers trained. (nSPARC)

Opportunity Scouting: (Existing OEMs & SMEs)

Reshoring “Tiger Team”

Developing SMEs through Technical Assistance.

Partnering to Build Workforce Capacity in Critical, High Demand Skill Sets

EDA

NIST/MEP (Innovate Mississippi)

EDA

DRA

EDA

Innovation Supply Chain Collaboratory

Collaboratory

Collaboratory
Grant Highlights ...

• Strengthening the Supply Chain
  – Listening Sessions – CAVS-E (Canton, MS); ICC – Belden Center (Tupelo, MS) ... *Completed (20 manufacturers)*
  – Upcoming October 30, 2014 ... Capps Center (Indianola, MS)
  – “Tiger Team” Sourcing & Technical Assistance Projects ... *Active Projects (30)*

• Developing the Workforce
  – Professional Development ... Lean Certificate, Six Sigma Green Belt, Management & Supervisory Training
  – Advanced Manufacturing Internships (ICC, Holmes CC, MDCC, EMCC) ... *All programs are active.*

Note: Above training opportunities are free for “qualified” participants (geography, ...).
DEVELOPING THE WORKFORCE
### Building Workforce Capacity in Critical Skill Sets

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number of Times</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC Advanced Maintenance Internships</td>
<td>93</td>
<td>ICC</td>
</tr>
<tr>
<td>EMCC Advanced Maintenance Internships</td>
<td>93</td>
<td>EMCC</td>
</tr>
<tr>
<td>MDCC Advanced Maintenance Internships</td>
<td>30</td>
<td>MDCC</td>
</tr>
<tr>
<td>Holmes CC Advanced Maintenance Internships</td>
<td>60</td>
<td>Holmes CC</td>
</tr>
<tr>
<td>Conduct Management &amp; Supervisory training</td>
<td><strong>3 Workshops</strong></td>
<td>MSU Franklin Furniture Institute</td>
</tr>
<tr>
<td>Conduct workshops for enhancing engineering and tech professionals career paths. (e.g., Industry recognized certifications in Lean, 6 Sigma)</td>
<td><strong>36 Workshops</strong></td>
<td>MSU CAVS Extension</td>
</tr>
<tr>
<td>Longitudinal tracking on internship recipients and incumbent training (jobs, advancement).</td>
<td><strong>3 (Annual)</strong></td>
<td>nSPARC</td>
</tr>
</tbody>
</table>
Career Accelerated Manufacturing Pathway
# Advanced Manufacturing Pathways

<table>
<thead>
<tr>
<th>Community College</th>
<th>Total Numbers of Internships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Itawamba Community College</td>
<td>93</td>
</tr>
<tr>
<td>East Mississippi Community College</td>
<td>93</td>
</tr>
<tr>
<td>Holmes Community College</td>
<td>60</td>
</tr>
<tr>
<td>Mississippi Delta Community College</td>
<td>30</td>
</tr>
</tbody>
</table>

**276 Advanced Manufacturing Internships**
STRENGTHENING THE SUPPLY CHAIN
Manufacturers Engaged
*(Listening Session & “Tiger Teams”)*

- Solar Group
- Multi-Craft
- Syntron (FMC)
- K&S Custom Whse
- Miss. Prison Industries
- Varsity Pro
- Grenada Mfging
- Advantage Pharmacy Service
- Leggett & Platt
- Hyperion
- Laurel Machine & Foundry
- Rod Sox
- Electro National
- Affordable Furniture
- SCP Polymers
- Hickory Springs
- Hyperion
- Composite Building Systems.
Solar Group (Taylorsville, MS)

- Redesigned production line to increase productivity, reduce WIP, freeing up additional line.
- Increased Competitiveness => opportunity to bring work back from China and prevent offshoring.
## Developing More Competitive SMEs

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<th>Activity</th>
<th>Number of Times</th>
<th>Responsibility</th>
</tr>
</thead>
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<tr>
<td>Basic Lean VSM, Supervisory, Export Technical Assistance Projects within the DRA area</td>
<td>1/yr * 2 years = 2</td>
<td>MSU FFI</td>
</tr>
<tr>
<td>General Technical Assistance Projects</td>
<td>1/year * 3 years = 3</td>
<td>MSU CAVS Extension</td>
</tr>
<tr>
<td>Conduct Innovation Jumpstarts within the Delta Region</td>
<td>1/year * 2 years = 2</td>
<td>MSU CAVS Extension</td>
</tr>
<tr>
<td>Management and Supervisory Training</td>
<td>2/year *2 years= 4</td>
<td>MSU FFI</td>
</tr>
<tr>
<td>Conduct Sustainability Program</td>
<td>1/year * 2 years = 2</td>
<td>MSU FFI</td>
</tr>
<tr>
<td>Conduct Innovation Events around the broader region.</td>
<td>1 / year * 3 years = 3</td>
<td>MSU CAVS Extension</td>
</tr>
<tr>
<td>Support Innovation Events through recruitment, and results tracking.</td>
<td>Ongoing</td>
<td>Innovate Mississippi</td>
</tr>
<tr>
<td>Track Project Results</td>
<td>Quarterly</td>
<td>Innovate Mississippi</td>
</tr>
</tbody>
</table>
Recent Success Stories ... (Lean & Six Sigma)

- North Mississippi manufacturer ... **Roller Trough**
- Impact: Reduced LT from 90 days to 10 days...
  - Inventory investment reduced by $500,000
  - Reduced transportation cost by $50,000.
  - Maintained high service levels
  - Surpassed the “China” savings on a piece price basis.

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### The Effect of Reshoring on Inventory Levels

**Changing Sourcing: from China to Mississippi**

- **Mississippi Sourced**
- **China Sourced**

**Monthly Usage**
Remained Stable During this Period

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### Monthly Usage

- **X=411**
- **UCL=1339**
- Data range: Sep-11 to Aug-13