PATHWAYS TO PROSPERITY: SOUTHERN STATES' EFFORTS TO PREPARE A 21ST CENTURY WORKFORCE
ALABAMA WORKFORCE DEVELOPMENT

STATE REPRESENTATIVE
MAC BUTTRAM (R-CULLMAN)
ALABAMA’S ECONOMIC DEVELOPMENT SUCCESS

• Ranked as one of the top five states in the nation in which to do business for each of the past four years.
  • #1 in competitive labor costs
  • #3 in labor climate
  • #4 in workforce development efforts
• Successful economic development efforts have led to the creation of over 40,000 new jobs and the recruitment and expansion of major companies and industries.
CHANGING THE DYNAMIC

• Companies relocating to Alabama attribute a large part of their decision making to our robust workforce development efforts.

• Alabama’s success in these efforts is thanks to changing the dynamic on who has input into workforce training decisions.

• *Accelerate Alabama* (our strategic plan for economic development) identified a major gap in the alignment between the offerings of our Career Technical Education (CTE) programs in our public schools and the needs of existing industry.

• Education interests used to dictate training priorities with absolutely no input from industry.

• Business is the number one consumer of the products of our school system, they have to be a part of the discussion.
OVERVIEW

• Allows the Alabama Public School and College Authority to issue up to $50 million in bonds so that local school boards can purchase equipment for CTE programs in order to bring those programs up to industry standards.

• School systems must use an industry developed equipment list to ensure the updates ensured a students’ experience truly matched that of business and industry.
21ST CENTURY WORKFORCE ACT

HOW IT WORKS

• The bond proceeds can be distributed in three ways:
  • $10 million to each school system, pro rata, based on the number of CTE programs in existence in the 2012-2013 school year.
  • $20 million to each school system, pro rata, based on the number of students who were enrolled in CTE during the 2012-2013 school year.
  • $20 million to the 21st Century Workforce Fund which are allocated by the 21st Century Workforce Grant Committee and will be distributed only to reimburse CTE programs for expenses related to purchasing equipment necessary to meet industry standards.
ALABAMA FUTURE WORKFORCE INITIATIVE

OVERVIEW
• Creates a $10 million scholarship program for students to participate in CTE dual enrollment programs.
• The program is open to 10th, 11th, or 12th grade high school students with an overall 3.0 GPA or a 2.5 GPA in technical programs.

HOW IT WORKS
• Individuals and businesses that donate to the scholarship will receive a state income tax credit of up to 50% of their total contribution.
• Up to 80% of any contribution can be directed by the donor to a specific CTE dual enrollment program or course at any two-year institution.
• This ensures that an employer can help fund the training for specific skilled workers they need to hire locally.
ALABAMA FUTURE WORKFORCE INITIATIVE

• Only 2,100 students out of an eligible 31,000 were participating in dual enrollment programs prior to the program.

• The Alabama Future Workforce Initiative will provide 9,500 additional students dual enrollment opportunities.

• Dual enrollment will also aid our continuing efforts to lower Alabama’s high school dropout rate and help develop our students’ potential.
In 2014, the legislature also prioritized an additional $5M in our education budget to fund dual enrollment programs. That means in the past two years, we’ve committed $65 million to fund career tech and workforce development advancements in the state.

Investing in workforce development is the key to our continued success in economic development.

QUESTIONS?

Southern Legislative Conference
July 10, 2014
Toyota Across the United States

- **Sienna** since 1997 (in IN since 2003)
- **Sequoia** since 2000
- **Highlander** since 2009 (Highlander Hybrid in IN since 2013)
- **Camry** since 2007
- **Avalon** since 1994 (Avalon Hybrid in KY since 2012)
- **Venza** since 2008

**Key Statistics**
- **365,000 Jobs** created in the U.S.
- **$1 Million** spent every hour on R&D
- **$27.5 Billion** parts and materials purchased
- **9 Models** built in the U.S. and exported to 23 countries
- **Nearly $700 Million** in philanthropic contributions
- **14 Hybrids** available in the U.S.
- **1,500 Dealers** Toyota, Scion, and Lexus
- **2,082,504** vehicles sold
- **1,257,028** vehicles produced
- **2,000 New Jobs** created at our Mississippi plant
- **$19.5 Billion** direct investment in the U.S.
- **56 Years** operating in the U.S.
Toyota’s Bodine Aluminum Tennessee

- Established in 2003
- 310 Team Members
- $268 mil. Investment
- Annual capacity – over 2 million parts
- 3 shift rotation (8 hr. 5 day)
- 450,000 sq. ft. manufacturing facility
- 4-cylinder, V6, V8 & AT Case production
# Bodine Jackson Products

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>Models</th>
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<tbody>
<tr>
<td>4 cyl.</td>
<td>CAMRY, COROLLA, HIGHLANDER, MATRIX, VENZA</td>
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<tr>
<td>V6</td>
<td>AVALON, CAMRY, HIGHLANDER, SIENNA, VENZA</td>
</tr>
<tr>
<td>V8</td>
<td>SEQUOIA, TUNDRA</td>
</tr>
<tr>
<td>Auto. Trans. Case</td>
<td>AVALON, CAMRY, LEXUS RX 350, SIENNA, VENZA</td>
</tr>
</tbody>
</table>
Toyota Suppliers in Tennessee

- Total annual spending with TN suppliers: $2.8 billion
- Jobs dedicated to Toyota business: 5,400+
- Number of Suppliers: 50

### Key Suppliers

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Commodity</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAHLE Engine Components USA, Inc.</td>
<td>Pistons</td>
<td>Morristown</td>
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<tr>
<td>Denso Manufacturing Tennessee, Inc.</td>
<td>Alternator, Starter</td>
<td>Maryville</td>
</tr>
<tr>
<td>Akebono Brake Clarksville</td>
<td>Rotor/Drum</td>
<td>Clarksville</td>
</tr>
<tr>
<td>TRW Fuji Valve, Inc.</td>
<td>Engine Valves</td>
<td>Sevierville</td>
</tr>
<tr>
<td>JTEKT Automotive Tennessee - Vonore</td>
<td>Power Steering Components</td>
<td>Vonore</td>
</tr>
<tr>
<td>UGN, Inc.</td>
<td>Dash and Hood Insulators, Silencers &amp; Butyl</td>
<td>Jackson</td>
</tr>
</tbody>
</table>
Manufacturing in Tennessee

- Total Manufacturing Output: $41.4 billion (2012)
- Share of Gross State Product: 14.9% (2012)
- Manufacturing Establishments: 6,322 (2012)
- Manufacturing Employment: 319,000 (2013)
Problems for Manufacturing

The Skilled Resource Pipeline

There are not enough sufficiently skilled workers in the U.S. hiring pool (NAM Study)

700,000
Unfilled skilled positions in the U.S.

The No. 1 unfilled job openings during the Great Recession?
Skilled Technicians

Skilled Labor Gap

Growth of Technology & Need for Skilled Technicians
Skilled Technician Pool
Problems for Manufacturing

THE SKILL RESOURCE PIPELINE QUALITY
Those in the pool are insufficiently skilled

TOYOTA SELECTION PROCESS
100% of Applicants
5% of Applicants Qualified for Hire

Most are Single Skilled
The need is multiskilled

Electrician or Mechanic or Welder or Fluid Power or Programmer
All of That

Many have basic education deficiencies
35% of 12th Graders

Proficient in Reading

TECH MANUAL
35% of 12th Graders Proficient in Reading

All of That

Maintenance
Electrician or Mechanic or Welder or Fluid Power or Programmer

Most are Single Skilled
The need is multiskilled

Many have basic education deficiencies
35% of 12th Graders

Proficient in Reading
Problems for Manufacturing

THE SKILL RESOURCE PIPELINE QUALITY

Most Community Colleges and Trade Schools do not provide fully prepared graduates

Community College & Tech Schools
Complete courses → get degree - ✓
Attendance building/reporting - X
Safety culture - X
Workplace org. knowledge & skills - X
Lean manufacturing concepts - X
Problem Solving - X
Problems for Manufacturing

THE MANUFACTURING PERCEPTION PROBLEM

Manufacturing as a preferred career has declined

False perception that manufacturing is an unrewarding job

“It’s hard to get good people.”

“It’s hard to get good people, and even harder to keep them.”
State of Tennessee Assistance

• DRIVE to 55
  – Increase the percentage of Tennesseans with college degrees or certifications to 55% by the year 2025

• Labor Education Alignment Program (LEAP)
  – Align graduates with industry needs
  – Enables occupational training to count toward college credit
  – Does not punish students who receive compensation in co-op programs from receiving state educational aid

• Tennessee Promise
  – Beginning in Fall 2015, provide TN HS students last dollar scholarships to attend Community College or TCAT

• Equipment and Program Grants
  – $10 million in state funds to invest in new equipment and programs that will help fill demonstrated workforce skills gaps
Education Partnering

• Identify community college and tech school partners
  – JSCC very open to new way of teaching and training

• Recognize that the workforce is like any other input; if we constantly received bad quality from a supplier we would assist the supplier with their quality issues; Why not the schools which supply us our skilled workforce input?
Industry Partnering

• Industry must work together to help solve the problem

• Recognize the need to increase the size of the overall “workforce pie” vs. just your own piece
  • No more stealing talent from each other

• Participate in “Marketing” manufacturing to schools, teachers, students, and parents
  – School tours, Classroom Presentations, etc.

• Look for more ways to partner in workforce development
  – Tool and Die skills
The Solution
Totally Redesign The Community College Program

Next Generation Technical Degree
Advanced Manufacturing Technician Program
Associate Degree in Applied Science

Selection Process
Target Criteria:
- High School Graduates
- Math Ranking > 1/3
- PLTW Participant

General Education
1st Semester: Math
2nd Semester: Writing
3rd Semester: Science
4th Semester: Social Science
5th Semester: Public Speaking

Technical Core Areas
1st Semester: Intro to Electricity
2nd Semester: Fluid Power
3rd Semester: Motors
4th Semester: Mechanics
5th Semester: Controls

Manufacturing Floor Experience
1st Semester: Production Experience
2nd Semester: Maintenance Introduction
3rd Semester: Maintenance Foundation
4th Semester: Priority 1 Mastery

Safety Culture
- Continue Practicing Activity

Workplace Organization
- Continue Practicing Activity

Lean Manufacturing
- Coach
- Continue Practicing Activity

Problem Solving
- Coach
- Continue Practicing Activity

Maintenance Reliability
- Continue Practice

Characteristics When Hired
- Communication and critical thinking skills
- Multiskilled Technical Foundation
- Floor experience and hands-on skill
- Good safety practice on hire
- 5S understanding and practice on hire
- Lean mfg thinking and practice on hire
- Problem solving thinking and use on hire
- Understanding of maintenance practice on hire
- Excellent worker behavior on hire

Personal Behaviors
- Attendance – Communication – Diligence – Teamwork – Interpersonal Relations - Initiative

Weekly Schedule
- M T W Th F
- WORK WORK School WORK WORK
- 8+ Hrs / Day
- 40+ Hrs / Week
- 5 Straight Semesters

Work Schedule
- 8+ Hrs / Day
- 40+ Hrs / Week

Next Generation Technical Degree
5 Straight Semesters

Schedule
- WORK WORK School
- 8+ Hrs / Day
- 40+ Hrs / Week

Teacher: Y. Noguchi
The Solution
Totally Redesign the Learning Environment

The New Model School
For Manufacturing

Make the Place of Learning look and feel like the Place of Work

JSCC recently awarded $440K Governor’s Grant to assist in the redesign
The Solution
Make Every Development Minute Count

40+ Hours Per Week
5 Straight Semesters

<table>
<thead>
<tr>
<th>1 - Week</th>
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<tr>
<td>M</td>
</tr>
<tr>
<td>WORK</td>
</tr>
</tbody>
</table>

Program Work (1-2 hrs)

HOMEWORK & STUDY
8-10 hrs

2-4 hrs

1st Fall Semester
16 weeks
Work Start (July 26, 2010)

1st Spring Semester
16 weeks
Holiday Break

1st Summer Semester
8 weeks
Semester Break

2nd Fall Semester
16 weeks

2nd Spring Semester
16 weeks
Holiday Break

GRADUATION
**Final Product**

**NEXT GENERATION**

**Skilled Team Member**

- **Totally Multiskilled**
  Electrical / Fluid Power / Mechanics / Fabricator

- **Strong Math Capability**
  Upper 1/3 Nationally

- **Strong Reading Capability**
  Minimum 12th Grade Equivalent

- **Fast Technical Learner**
  Can learn, apply, improve, learn again quickly

- **Uses & Learns with Digital Media**
  Digital media is the preferred method

- **Strong Problem Solver**
  Can fully explain problem solving and methods

- **Effective Verbal & Written Communicator**
  Group & 1-on-1, develops high quality written material

- **Effective Interpersonal Skills**
  A conflict resolver

- **Natural Team worker**
  Prefers working as part of a team

- **Qualified for the Next Level**
  Has Associate Degree / All required company training complete

**TARGET: 100% of Maintenance Force**
The Solution
Work HARD to Change the Perception and Value of Manufacturing

Dream It! Do It!
Campaign to Encourage Careers in Manufacturing

Campaign begins October 2014
The Benefits

• High quality, good paying jobs
  – Manufacturing Pay Premium: $26,556 (2012)
  – Plant Top Five Skilled Wage Earners (2012)
    • $78,645
    • $79,459
    • $81,224
    • $96,726
    • $99,500

• High valued skill = Employment Security

• Increased pool of educated citizens
  – Improves community economic viability
  – Improves overall quality of life
Jackson/Madison County Solutions

- **DONE:** Partnership between local industry and Jackson State Community College to improve curriculum
- **DONE:** Industry Consortium working together to provide co-op experiences for JSCC students
- **DONE:** State government providing legislation and grant monies to make it financially possible
- **DONE:** State & Local marketing initiative to promote the value of manufacturing as a career
- **NEEDED:** Local education leaders to help supply the pipeline with engaged, energetic, and qualified students
Future Education Partnering

• Current High School CTE programs do not have the students with the academic credentials for the new technology

• Must drill down the pipeline to push more STEM education in middle and high school
QUESTIONS?
Spartanburg Community College
Technical Scholars Program

Jay Coffer, Department Chair, Advanced Manufacturing Technologies
Jennifer Little, Director, Career Services
What is the Technical Scholars Program?

- Partnership between Spartanburg Community College and local employers
- Students are enrolled in an Associates Degree program full time and work for the employer part-time
- Employer provides tuition assistance for the student
- Program began in 1982
  - Michelin was one of the original companies to hire scholars
  - BMW started with 6 scholars from SCC three years ago and now has 32 SCC students in their scholar program.
Participating Companies

- BMW - 32 students
- Michelin - 6 students
- Circor - 3 students
- Erhardt + Leimer - 2 students
- Schaeffler Group - 1 student
- WSPA - 1 student
- A Berger - 1 student
- SealedAir - Hiring their first three students this Fall
Student Requirements

- Each company identifies specific qualifications, but general requirements are:
  - High School Diploma or GED
  - At least 18 years old
  - Enrolled full time in an appropriate Associate Degree program
  - Have and maintain a 2.5 GPA (or higher if designated by company)

“In the BMW scholars program I get to take what I learn at SCC and put it to work at the areas top manufacturing company. BMW and SCC have created a great program putting education first and creating endless opportunities for the future. I am very proud to be a part of this program.”

- Dale Phillips BMW Scholar
Hiring Process

- Employer announces opportunity
- SCC Career Services office collects Technical Scholars Applications and verifies eligibility according to company/program requirements
  - BMW - Students apply to BMW Scholar opportunity through BMW website
  - Michelin - Students take math and mechanical aptitude tests on campus (SCC coordinates a pre-test math review session)
- Employer selects students to interview on-campus or on-site
- Employer hires Technical Scholars
- After student completes degree, companies have the opportunity to offer a full time position
Benefits to the Student

- Apply real-world skills and experiences to classroom instruction
- Work part-time and earn wages at one of the area’s leading companies/healthcare facilities
- Receive support for educational expenses
- Considered for full-time employment

“Being a BMW Scholar has helped me gain hands-on experiences in the industry that could take years to grasp.”

- Chee Kue, BMW Scholar
Benefits to the Sponsoring Company

- Simultaneous on the job training and academic coursework allow employers to “grow their own” workforce.
- Cost-effective recruitment and training of potential career employees
- Access to motivated students who possess a wide range of skills
- On-site evaluation of candidates for permanent employment
- An opportunity to participate in and influence the educational process
Benefits to the College:

- Increases community support
- Keeps education current with employer needs
- Assists with the placement of graduates
- Provides insight into the future direction of industry
- Supports the future demand for highly skilled technicians.
Scholar Success

- SCC graduated 16 Technical Scholars this May.
- BMW graduated their largest class of Scholars thus far this summer.
- 9 SCC Technical Scholars start as full time BMW employees by August 25.
- A Berger hired their first Technical Scholar this May.
- SealedAir is in the process of hiring their first three scholars.
Lessons learned along the way

- Constant communication with Industry to:
  - Review training needs
  - Changes in technology
  - Meet demand for skilled workforce
  - Establish lasting partnerships

- Facilitate student, industry and community growth

“Such a wonderful opportunity to help accelerate your career and learning experience! The Technical Scholars program has provided me with a valuable chance to have a successful life. A true "once in a lifetime" window of opportunity!”

- Dustin Reid, BMW Scholar and 2014 SCC Graduate
Questions?

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