STATE OF TENNESSEE
LEAD Conference
10/26/2016
MEASURING SUCCESS:
Long Term Objectives

55%
Goal: 55 Percent of Job Commitments Above County Median Wage by 2025
47.9% in 2016 YTD

Top 2
Per Capita Personal Income in the Southeast
#4 in Q1 2016 ($43,251)

#1
Goal: Highest Capital Investment per Capita in the Southeast
#4 in Q4 2015 ($1,087)

#1
Goal: Lowest Unemployment Rate in the Southeast
#3 Lowest in June 2016 (4.1%)

0
Goal: Zero Distressed Counties by 2025
21 Counties in FY16
17 Counties in FY17
BUSINESS DEVELOPMENT

New Industry Recruitment
- FastTrack Grant Program
- Select Tennessee
- Memphis Megasite

Existing Industry Expansion
- FastTrack Grant Program
- TNTrade
- Film, Entertainment & Music Commission

Entrepreneurship
- Business Enterprise Resource Office
- Launch Tennessee
REGIONAL JOB BASE CAMPS
## Tennessee’s Target Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Automotive</strong></td>
<td>#1 state in the Southeast for exports of motor vehicle parts ($2.9B in 2015)</td>
</tr>
<tr>
<td><strong>Aerospace &amp; Defense</strong></td>
<td>#2 for job growth in the aerospace products and parts industry (2010-2013)</td>
</tr>
<tr>
<td><strong>Business Services</strong></td>
<td>20 Fortune 1000 Companies</td>
</tr>
<tr>
<td><strong>Chemicals, Plastics &amp; Rubber</strong></td>
<td>133 foreign-based establishments in Tennessee’s sector</td>
</tr>
<tr>
<td><strong>Energy Technology</strong></td>
<td>#8 for public sector R&amp;D expenditures as a percentage of GDP</td>
</tr>
<tr>
<td><strong>Entertainment &amp; Media</strong></td>
<td>#1 state for employment in music publishing</td>
</tr>
<tr>
<td><strong>Food Manufacturing</strong></td>
<td>Top 5 markets for Tennessee exports of Food &amp; Agriculture: Canada, UK, France, Germany and Mexico</td>
</tr>
<tr>
<td><strong>Healthcare &amp; Medical Device</strong></td>
<td>335,100 Tennesseans employed in the health care and medical devices sector</td>
</tr>
<tr>
<td><strong>Transportation, Distribution &amp; Logistics</strong></td>
<td>#1 for overall infrastructure &amp; access</td>
</tr>
</tbody>
</table>
PROJECT MANAGEMENT TEAM

Alex Bertelli  Jamari Brown  Bryan Farlow  Cody Huddleston  Chassen Haynes  Victoria Hirschberg

Aerospace & Defense
Energy Tech.

Healthcare
Business
Services
Headquarters
Data Centers
Call Centers
Back Office

Advanced Manufacturing
Warehouse, Distribution & Logistics
Food & Agribusiness
Chemicals, Plastics & Rubber
Automotive
Automotive
# Rural Development and Education Alignment

<table>
<thead>
<tr>
<th>Rural Development</th>
<th>Education Alignment</th>
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<tbody>
<tr>
<td>ThreeStar</td>
<td>Tennessee Promise</td>
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<tr>
<td>Tennessee Main Street</td>
<td>Tennessee Reconnect</td>
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<tr>
<td>Tennessee Downtowns</td>
<td>Tennessee LEAP</td>
</tr>
<tr>
<td>Retire Tennessee</td>
<td>Workforce360°</td>
</tr>
<tr>
<td>National Flood Insurance Program</td>
<td>Community Development Block Grants</td>
</tr>
<tr>
<td></td>
<td>Delta Regional Authority Grants</td>
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<tr>
<td></td>
<td>Appalachian Regional Commission Grants</td>
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</tbody>
</table>
Community Development Block Grants

- Administer funding from the U.S. Department of Housing and Urban Development to promote economic and community development in small cities across the state
- Most common projects include sewer and water system improvements, community livability projects such as the purchase of fire trucks, drainage improvements, building community centers, and extending water and sewer lines
- Since 2011, more than $190 million in projects have been funded

Appalachian Regional Commission Grants

- Receive approximately $6 million per year for community and economic development projects in the 52 Middle and East Tennessee counties served by the ARC
- Focused on funding projects that have job creation associated with them

Delta Regional Authority Grants

- Receive approximately $1 million per year for community and economic development projects in the 21 West Tennessee counties served by the DRA
- Focused on projects that improve workforce development, improve health outcomes, and create jobs

Rural Development
FOREIGN DIRECT INVESTMENT

• There are 919 foreign-based establishments employ over 126,000 people in Tennessee.
• These establishments have committed $33.3 billion in capital investment.

EXPORTS IN TENNESSEE

• Tennessee exports totaled more than $32.4 billion in 2015
• Exports from the state have increased 25.0% since 2010
• Top export markets include: Canada, Mexico, China, Japan and Belgium
• Top export products include: Medical Equipment and Supplies; Motor Vehicle Parts; Motor Vehicles; Computer Equipment; and Navigational, Measuring, Medical and Control Instruments

Source: USATrade

<table>
<thead>
<tr>
<th>Parent Country</th>
<th>Capital Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>$17.7 B</td>
</tr>
<tr>
<td>Germany</td>
<td>$5.1 B</td>
</tr>
<tr>
<td>Canada</td>
<td>$2.5 B</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>$1.4 B</td>
</tr>
<tr>
<td>Korea</td>
<td>$993 M</td>
</tr>
</tbody>
</table>

Source: TNECD
BUSINESS CLIMATE
QUALITY OF LIFE

130+
State Parks and Natural Areas

2nd
Lowest cost of living of any state

30.3%
Below the national average of housing prices
# ACCLADES

First-ever back-to-back State of the Year winner for economic development 2013 and 2014

*Business Facilities*

<table>
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<tr>
<th>#4</th>
<th>#1</th>
<th>#1</th>
</tr>
</thead>
</table>
| State for jobs created through FDI in 2014 *IBM’s Global Location Trends Report* | Certified Sites and Shovel-Ready Programs *Area Development* | Education: Race to the Top Leaders *Business Facilities*

<table>
<thead>
<tr>
<th>#1</th>
<th>#1</th>
<th>#2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Infrastructure and Global Access <em>Area Development</em></td>
<td>Automotive Manufacturing Strength <em>Business Facilities</em></td>
<td>Best Business Climate <em>Business Facilities</em></td>
</tr>
</tbody>
</table>
CORPORATE HEADQUARTERS
IN TENNESSEE

Home to 11 Fortune 500 Companies
ANNOUNCEMENTS

2,000 Jobs  
$600mm  
Chattanooga

1,500 Jobs  
$102mm  
Mt. Juliet

300 Jobs  
$1.6B  
Clinton

1,800 Jobs  
$800mm  
Clarksville

4,332 Jobs  
$810.35mm  
Smyrna

125 Jobs  
$321mm  
Memphis

1,500 Jobs  
$66.15mm  
Nashville

1,164 Jobs  
$585mm  
Maryville

70 Jobs  
$600mm  
Clarksville

Sources: Volkswagen, Under Armour, Eastman, Hankook, Amazon, Nissan, International Paper, CHS, Denso, Google, Department of Economic & Community Development.
TENNESSEE INCENTIVES

State Incentives Include:
- Training grants
- Infrastructure grants
- Discretionary grants covering other expenses
- Tax credits and exemptions

Incentives are based on:
- Number of Jobs
- Quality of Jobs
- Capital Investment
- Location

In Tennessee, we're fostering economic growth with flexible incentives that reduce capital expenses, lower operating costs and minimize risk.
## ELIGIBLE INDUSTRIES

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headquarters</td>
<td>Administrative, research and development, planning, marketing, personnel, legal not manufacturing, distribution, wholesaling, or call centers</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Principle business is fabricating or processing of tangible property for resale</td>
</tr>
<tr>
<td>Data Centers</td>
<td>Building or buildings, either newly constructed or remodeled, housing high-tech computer systems and related equipment</td>
</tr>
<tr>
<td>Warehouse &amp; Distribution</td>
<td>Storage or distribution of finished tangible personal property. Does not include a location where tangible personal property is processed, manufactured, sold to customers or assembled</td>
</tr>
<tr>
<td>Call Centers</td>
<td>Uses telecommunications in customer service, soliciting sales, reactivating accounts, surveys or research, fundraising, collecting receivables, reservations, taking or receiving orders</td>
</tr>
</tbody>
</table>
10 Public Universities

27 Colleges of Applied Technology

13 Community Colleges

75 Tennessee Career Centers and affiliated sites

$20M In grants awarded to regional partnerships to fill skill gaps

35 Independent Colleges and Universities

411,749 People enrolled in college in 2013

63,911 Graduates with an Associates Degree or higher in 2013
One of Governor Bill Haslam’s key policy objectives is to ensure 55% of Tennesseans hold a post-secondary degree or certificate by 2025.

**Tennessee Promise**
Beginning in Fall 2015, high school graduates can attend a community college or college of applied technology absolutely free of tuition and fees

**Tennessee Reconnect**
Allows adults to complete their post-secondary credential by attending one of our 27 Tennessee Colleges of Applied Technology completely free of tuition and fees

**Tennessee LEAP**
Ensures our post-secondary institutions are producing the skills and credentials that Tennessee employers actually need by identifying and filling skill gaps across the state
Drive to 55

- Governor Haslam initiated the Drive to 55 programs with a mission of having 55.0% of Tennessee’s working age adult population equipped with a college degree or certificate by 2025.

<table>
<thead>
<tr>
<th>No. Tennesseans (Age 25-64) by Highest Credential</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>136,630</td>
<td>136,794</td>
<td>137,530</td>
<td>138,304</td>
</tr>
<tr>
<td>Associate’s</td>
<td>250,219</td>
<td>257,289</td>
<td>256,817</td>
<td>260,210</td>
</tr>
<tr>
<td>Bachelor’s</td>
<td>583,335</td>
<td>582,617</td>
<td>605,594</td>
<td>616,128</td>
</tr>
<tr>
<td>Graduate or professional</td>
<td>300,693</td>
<td>317,495</td>
<td>315,247</td>
<td>322,939</td>
</tr>
<tr>
<td>Total</td>
<td>1,272,877</td>
<td>1,294,249</td>
<td>1,315,188</td>
<td>1,377,581</td>
</tr>
<tr>
<td>% of population age 25-64 with a postsecondary credential</td>
<td>37.3%</td>
<td>37.8%</td>
<td>38.3%</td>
<td>38.7%</td>
</tr>
</tbody>
</table>
CENTER FOR ECONOMIC RESEARCH IN TENNESSEE
COUNTY PROFILE TOOL

- Location
- Population and Demographics
- Housing and Income
- Tax Structure
- Labor Force & Unemployment
- Industry Employment & Wages

- Top Employers
- Access to Airports, Rail, Road & Ports
- Education
- Health & Public Safety
- Climate
- Communities

www.tnecd.com/county-profiles/
**2.74% Private Sector Job Growth:** Tennessee’s private sector job growth (2.7%) in the last year (June ‘15 – June ‘16) ranked 4th in the Southeast and 14th in the nation.

**2.5 Million Private Sector Jobs:** Tennessee’s private sector jobs grew to 2,526,400 in February 2016.

**11,400 Net New Manufacturing Jobs:** Tennessee has added 11,400 net new manufacturing jobs in the last year (June ‘15 – June ‘16), ranking 1st in the nation.
HOME TO MORE THAN 900 AUTOMOTIVE SUPPLIERS, THREE OEMS, TWO ENGINE PLANTS AND THE LARGEST LITHIUM-ION BATTERY PLANT IN THE U.S.

MORE PEOPLE WORK IN THE AUTO SECTOR IN TENNESSEE THAN IN ANY OTHER STATE IN THE SOUTHEAST

$34 BILLION IN CAPITAL INVESTED BY AUTO SUPPLIERS

TENNESSEE’S 25.3% ANNUAL GROWTH RATE FOR CAR AND LIGHT TRUCK PRODUCTION IS TOP AMONG THE 13 MAJOR AUTO PRODUCING STATES

NISSAN’S SMYRNA, TN PLANT IS THE MOST PRODUCTIVE AUTO ASSEMBLY PLANT IN NORTH AMERICA, PRODUCING MORE THAN 648,000 VEHICLES IN 2014
Labor Force Estimates

- **Unemployment rate** of 4.1%, which is below the nation’s June unemployment rate (4.9%) and is the lowest in Tennessee since 2007.

- **Unemployment** has declined by 44,536 (25%) in the last 12 months (4th greatest decline in the nation)

- **Labor force** growth rate of 2.6% (+80,337) in the last 12 months ranks 7th highest in the nation

- **Labor force participation rate** has increased to 60.0%, though still below national average of 62.7%. Tennessee’s LFPR ranks 9th lowest in the nation.
AGE DEMOGRAPHICS

Dependency ratios were a second index component, reflecting the share of population age 15-64 relative to young & old dependents.

Retirements driven by the baby boomer cohort represent a disruptive trend for organizations. Businesses may have greater incentive to adopt technologies that automate workforce tasks. Education will need to rise to fill vacancies created as the baby boomer generation retires.

Pressure on the working age population will rise.
- Population under age 15 is projected to remain around 19% of the total population until 2064.
- Working age population will decline from 67% of population to 59% by 2032, where it will remain until 2064.
- The senior population (age 65+) will grow from 13% of the population to 22% by 2032, where it will remain until 2064.

Sources: CBER’s Population Projections; U.S. Census Bureau
• The number of individuals aged 85+ in Tennessee is expected to triple from 2010 to 2040.

• The working age population (15 to 64) is projected to grow at a slower rate than the total population - 14% from 2015 to 2040 and 39% from 2015 to 2064.

• The retirement age population (age 65 and older) is projected to grow at a much higher rate than the total population - 84% from 2015 to 2040 and 118% from 2015 to 2064.
2015 ANNUAL LEAP REPORT

Tennessee Labor Education Alignment Program (LEAP) is a $10M grant opportunity designed to ensure postsecondary institutions are producing the skills and credentials that Tennessee employers actually need through alignment of education and industry.

STEM and STEM-Related Occupations: Science, Technology, Engineering and Math (STEM) occupations in Tennessee are projected to have many openings and are high wage jobs.

IT (Computer) Occupations: Computer occupations are projected to grow rapidly and have high wages. These occupations include computer scientists, system analysts, software and web developers, etc.

Industry Concentration: Many of the occupations in the LEAP report have a high concentration of employment within the following industries:

- Health Care and Social Assistance
- Manufacturing
- Wholesale Trade
- Education Services
- Transportation and Warehousing
- Professional, Scientific and Technical Services
- Finance and Insurance
- Information
- Construction
- Retail Trade
Retirement Age Demographics: Retirements of the baby boomer generation have significant impacts on the workforce nationwide. Workers age 55 and older are nearing retirement age over the next decade, and it will be important that when these talented workers choose to retire the workforce is prepared to fill the gaps created.

Tennessee has a skills gap in several occupations that also have a relatively high share of workers age 55 and older:

- Tool and Die Makers
- Industrial Engineers
- Maintenance and Repair Workers, General
- Heavy and Tractor Trailer Truck Drivers
- Medical Equipment Repairers
- First-Line Supervisors of Mechanics, Installers and Repairers
- Production, Planning and Expediting Clerks
- Operations Research Analysts
- Information Security Analysts
- Medical and Clinical Laboratory Technologists
- Healthcare Social Workers
1.4 Million (50%) of Tennessee’s current jobs have a high probability of automation.

**Occupation groups with greatest share of vulnerable jobs:**
1) Food preparation and serving occupations—91.8% of TN jobs are vulnerable
2) Sales occupations—76.8%
3) Production occupations—76.3%
4) Transportation and material moving occupations—73.2%
5) Office and administrative support occupations—66.0%
6) Construction and extraction 62.9%

**Lower-wage occupations are more vulnerable to replacement by automation:**
The average hourly wage of jobs with a high probability (70 percent or higher) of automation is $14.56, five dollars lower than the average hourly wage for all jobs.
37% of the wages of Tennessee workers could be lost: If automation occurred in the occupations with a high probability of automation, 37 percent of the wages of workers in Tennessee could be lost.

The three counties with the highest percent of expected lost wages are Bedford—49%, Sevier—48%, and Henderson—47%.

Dependency Ratios: Accelerated rates of retirements currently driven by the baby boomer cohort represent a highly disruptive trend for organizations. Cumberland—78%, Clay—69% and Loudon—69% have the highest dependency ratios—the ratio of the dependent population to the working age population (age 15 to 64).

Educational Attainment: Educational attainment will improve or prevent the ability of a workforce to manage and align with automation. Lake—9%, Hardeman—13% and Morgan—14% have the lowest attainment of an Associate’s degree or higher for the population age 25 to 64.

Rural counties are more vulnerable to the disruptive effects of automation: Of Tennessee’s 17 urban counties, only three—Hamblen, Loudon, and Bradley—are ranked in the most vulnerable two-thirds of Tennessee counties.
Educational Attainment

Educational attainment was the third index component: the percent of population age 25-64 with an Associate’s degree or higher.

Educational attainment will improve a community’s ability to manage and align with automation; to complement and take advantage of automation.

**Automation will disrupt the workforce landscape – not replace it.**

- Greater demand for critical thinking, judgment, human perception, creativity, social intelligence
- Technology can complement labor, and boost productivity, incomes, leisure time

**Tennessee is on the right track.**

- Based on projections that 55% of future jobs will require postsecondary education, Tennessee’s Drive to 55 mission is to ensure 55% of our workforce holds a postsecondary credential by 2025.
- Tennessee has become the leading state in the nation for high school seniors completing the Free Application for Federal Student Aid (FAFSA), with 68% of the 2015 class submitting the form.
ECONOMIC BENEFITS OF POSTSECONDARY DEGREES

$9.3 Billion in Additional Income Annually to Tennessee’s Workforce: An estimated 528,630 additional certificate or degree holders will work in Tennessee upon achievement of 55 percent postsecondary attainment by 2025. These workers are projected to earn $9.3 billion more in additional income annually than that which would have been generated without a postsecondary credential.

Incremental Income Boost with Postsecondary Attainment: On average, a high school graduate in Tennessee could earn $5,941 more per year with a certificate or an associate’s degree, $18,860 more per year with a bachelor’s degree and $30,949 more per year with a graduate or professional degree in 2015.

<table>
<thead>
<tr>
<th>Level of Educational Attainment</th>
<th>Median Earnings (in 2015 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school graduate</td>
<td>$19,035</td>
</tr>
<tr>
<td>High school graduate (includes equivalency)</td>
<td>$26,365</td>
</tr>
<tr>
<td>Some college or associate’s degree</td>
<td>$32,306</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>$45,225</td>
</tr>
<tr>
<td>Graduate or professional degree</td>
<td>$57,314</td>
</tr>
</tbody>
</table>