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ABOUT THE AUTHORS

This report was authored by Ted Abernathy and Greg Payne, with contributions by Missouri Chamber of Commerce and Industry staff.

Ted Abernathy is the Managing Partner of Economic Leadership LLC, a Raleigh NC-based company that helps businesses, and places, increase their competitiveness. Ted has 38 years of experience directing economic development and workforce development programs. From 2008-2013, Ted was the Executive Director of the Southern Growth Policies Board, a 42-year old public policy think tank that provided research to states and communities across the South. Before Southern Growth, Ted was a practicing economic developer for 28 years, including 8 years as Executive Vice President/COO for the Research Triangle Regional Partnership. His latest research has focused on Re-Imagining Workforce Development, Making Manufacturing More Competitive, and analyzing 25 Years of Rural Economic Development Policy.

Ted received his bachelor’s degree from the University of North Carolina at Chapel Hill and his master’s from Johns Hopkins University. He is a graduate of the Economic Development Institute and is an Eisenhower Fellow for global economics.

Greg Payne joined Economic Leadership as Vice President following lengthy experience in commercial real estate, economic development, and land use planning. He worked for more than 13 years as a commercial and investment real estate broker in the Research Triangle region of North Carolina. Prior to that he assisted local governments in North Carolina with economic and business development efforts and did land-use planning in the Shenandoah Valley of Virginia. At Economic Leadership, Greg has lead efforts to develop economic strategies for county comprehensive plans, created regional workforce assessments, and analyzed national best practices in both economic development and workforce development.

Greg received his bachelor’s degree from Duke University, and his master’s in Urban and Environmental Planning from the University of Virginia. He is also a Certified Commercial Investment Member and graduate of the Economic Development Institute.
In today’s fierce competition for jobs, workforce has emerged as the most effective weapon. The countries, states and regions that recognize that fact and wisely invest in strategic workforce development and retention initiatives will win the jobs war. The rest likely will be left behind.

While predicting the economic future is difficult, one fact is certain: The most successful businesses that emerge over the coming decades will locate themselves where they have access to a top-quality workforce. We want to be sure Missouri is that place.

But first, Missouri must overcome several challenges: stagnant workforce growth, the impending retirement of older workers, a changing job landscape, a widening skills gap and a workforce development system in need of retooling, to name a few. However, we have great assets too. Missouri excels in many areas of the new economy. We’ve earned good marks in graduation rates. We have regions doing innovative work in many workforce areas. Leadership of Missouri’s workforce development arm is energized and capable of taking Missouri’s system to the next level.

Workforce 2030 was commissioned to identify Missouri’s workforce challenges and, most important, find innovative ways to address them and leverage our assets. This study is part of the Missouri Chamber’s overarching Missouri 2030 strategic plan to reposition Missouri as a global leader. Through research from Gallup, we know that the leading concern of Missouri employers is the availability of a qualified workforce. Gallup’s survey of 1,000 Missouri employers found that only 44 percent of business leaders are satisfied with the state’s availability of skilled workers. Only 15 percent agree that high schools are preparing students for the workforce, and only 30 percent agree that Missouri attracts or can retain top talent. One CEO summed up our challenge recently when he told us: “We cannot find enough workers with the right skills. There is a mismatch, and unless somebody does something soon, we won’t be able to grow in Missouri.”

In the process of producing this study, we collected quantitative labor market data. We also reached out to education and workforce leaders, policymakers, and many of our state’s employers to ask what we need to do. Education and workforce leaders talked about capacity, consistency, collaboration, better information and more private-sector engagement. Policymakers stressed alignment, return on investment and more public awareness. Employers expressed concerns about the quantity and quality of the available workforce, the mismatch between what is being taught and the skills they need, the overall lack of soft skills among young workers, and the rising costs of finding talent.

The task is daunting, but we can, and we must, do better. By listening to the state’s employers, we know students must be better educated and more work-ready. We know businesses must be more engaged in developing the education and training curriculum and in offering more work experience. We also know that unless we work together, share better information and take aggressive actions, Missouri will not win the jobs war.
Workforce 2030 was commissioned to identify challenges that Missouri must overcome and the assets our state can leverage to prepare our workforce for the future. The study is part of the Missouri Chamber’s overarching Missouri 2030 strategic plan to reposition our state as a global leader.

As with all of the research projects produced through Missouri 2030, we first reached out to our employers for input to guide our work. We also spoke with education and workforce leaders and policymakers. In addition, we explored best practices in Missouri and throughout the nation.

Through our strategic plan, Missouri 2030, we have made significant strides to improve the state's business climate. Our next challenge is to improve our workforce. To accomplish that goal, we recommend Missourians work together to:
**Executive Summary**

A. Maximize Business Engagement

Worker shortages and skills gaps are limiting businesses’ growth. Business leaders know what skills they need and are ready to engage. We should position the business community to lead the transition to a demand-driven workforce.

1) Use a public-private partnership to better inform businesses of available workforce development programs and opportunities by working through the more than 140 members of the Missouri Chamber Federation, a group of Missouri’s most influential local chambers of commerce, and elevate business champions for workforce partnerships in each region of Missouri.

2) Collaborate with the business community to conduct an annual review of the state’s anticipated workforce needs and the number of post-secondary credentials that are being issued, identifying workforce needs that may not be met by existing education and training programs.

3) Develop an annual business survey to identify and communicate skill and occupational needs and trends.

4) Establish regional workforce development resources with one point of contact in each region acting as a business concierge, with the sole purpose of connecting businesses to the correct agency for their specific needs.

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**B. Focus on Improving Worker Skills**

The imperative to “upskill” current workers and “right skill” those entering the workforce must be a top priority for education and workforce partners.

1) Align career pathway elements and services through education and training systems. The career-focused curricula and services offered by K-12 schools, community colleges, universities and job centers in Missouri should be coordinated with each other and with industry needs for in-demand jobs.

2) Integrate education and training by addressing basic skill needs (like spoken or written English) concurrently with targeted training for in-demand jobs.

3) Provide more opportunities for stackable credentials, using shorter-term training models and making education and skill attainment programs more accessible and affordable for adult workers, especially in high-demand fields.

4) Review Missouri’s financial aid delivery system and apply job-driven aid policies where possible.

5) Make Missouri a 100 percent-certified Work Ready Communities state by involving the 24 percent of counties not active in the program. Also make the WorkKeys assessment tests more accessible.

6) Implement a statewide program for all prison inmates to have a WorkKeys assessment, with most inmates getting the National Career Readiness Certificate and becoming job-ready by the time of their release.

7) Expand the Advanced Manufacturing Technician program, a pathway for students to earn an associate degree that leads to job placement.

8) Encourage employers to recognize the value of the newly developed Missouri Career and Technical Education (CTE) Certificate for high school students.

9) Significantly expand paid internship and apprenticeship programs.

10) Support expansion of adult high schools throughout the state.
Executive Summary

C. Prioritize Regional Sector Strategies

Missouri’s creation of regional, industry-focused sector strategies is off to a good start, but we must meet the challenge of implementation and scale best practices statewide to extend opportunity to all Missourians. Regions — especially those with smaller and more rural communities — need sufficient funding and increased technical assistance.

1) Use the model of Southwest Missouri’s SectorReady.org and scale it for all regions to develop a detailed sector strategy partnership, program and website.
2) Ensure that the Missouri Department of Workforce Development allocates enough resources for each region to successfully implement its sector strategy.
3) Provide increased technical assistance to Missouri’s smaller and more rural communities to implement sector strategies.
4) Incentivize collaboration within regions, between neighboring regions and even across state lines when labor markets warrant it.
5) Increase involvement by the Department of Elementary and Secondary Education to better incorporate educational alignment, and especially career pathway development, into sector strategy implementation.

D. Increase Career Awareness

There is a need for increased public awareness of skills gap issues and career opportunities, particularly for students, parents, teachers and counselors.

1) Create an awareness initiative promoting manufacturing, technical and health care careers targeted at middle school and high school students and parents and accompanied by straightforward content for teachers and counselors to use.
2) Provide better and more accessible career data — occupational demand, wages and education requirements — for use by students, parents, counselors and educators.
3) Improve career counseling and career support for students at Missouri community colleges and universities.
4) Increase workplace exposure opportunities for high school and middle school counselors and teachers.
5) Expand the Center for Advanced Professional Studies (CAPS) Network schools in Missouri.
E. Attract and Retain More Talent

Even if Missouri develops the best education and training models in America, we will still need to attract more people to Missouri to fill some high-demand jobs.

1) Develop a statewide public-private multimedia talent attraction program geared toward professionals in high-demand fields.

2) Develop and provide useful, honest quality-of-life and community amenities information for employers to use when communicating with prospective employees.

3) Develop a statewide campaign to encourage our U.S. Armed Forces veterans to locate in Missouri – providing services including skills certification, retraining and job matching.

4) Develop non-traditional recruitment strategies for attracting a quality workforce.

F. Improve Communications for All Stakeholders

To coalesce public and private urgency and resources around workforce issues, it is essential to provide clear information about current progress and future goals.

1) Create a “State of Missouri’s Workforce” annual event with equal participation by the public and private sectors. The event should be accompanied by wide distribution of a brief, easily understood data summary.

2) Create a public online dashboard to measure progress at the regional and state levels.

3) Develop the country’s best online information portal for available training and jobs targeted at two primary audiences: workers seeking jobs and training and employers ready to hire.
The State of Missouri’s Workforce

SLOW AND UNEVEN JOB GROWTH
After suffering job losses during the Great Recession and then a slow rebound, the Missouri economy has been steadily adding jobs over the past five years. But despite recent growth, we are still performing below national averages and below our potential. Missouri ranks 30th in job growth, and the recovery has been uneven, with many parts of the state, especially rural Missouri, yet to return to pre-recession job levels.

“There are just not enough bodies. We have trouble finding people with the right skills, but it is getting harder to find anybody willing to work.”

Employer Interview, December 2017
**FEWER WORKERS**

Missouri’s slow economic recovery is compounded by a narrowed pipeline providing new workers. In this respect, Missouri is not alone. Many factors have hindered growth of new workers in the U.S., and our nation’s workforce growth this decade is at its lowest percentage since World War II. A number of factors contribute to this problem in Missouri.

Missouri’s labor force growth rate has lagged the United States’ average over the past 40 years, and over the past 10 years has even experienced some negative-growth years.

**10-Year Change in Average Annual Jobs 2006-2016**

**MISSOURI GROWTH 2.1%**

**U.S. GROWTH 6%**

- Growth above U.S. average
- Growth above MO average
- Growth below MO average
- Losing jobs

Source: U.S. Bureau of Labor Statistics

**U.S. Annual Rate of Labor Force Growth 1950-2025**

Source: U.S. Bureau of Labor Statistics
BABY BOOMERS LEAVING LABOR FORCE

The aging cohort of 75 million Baby Boomers – with 10,000 reaching retirement age every day for the next 11 years - is another major cause for concern. The impending retirement of experienced workers is particularly alarming in the skilled trades, where 53 percent of existing workers are at least 45 years old. Between 1990 and 2016, Missouri’s population aged 45 and older grew by 52 percent. Over that same period, Missouri’s population younger than 45 grew by 2 percent. The chart on the next page illustrates this long-term disparity in growth between age groups.

Most workers aged 45 to 64 will retire over the next 20 years. In Missouri, that total is 1.6 million workers. They will be replaced by the 1.4 million people under age 18 - IF Missouri can keep those workers as they graduate from high school and college.
SLOW GROWTH AT YOUNGER END OF THE LABOR FORCE

On the other end of the spectrum, Missouri lags behind other states in the growth of a demographic critical to our workforce – 25 to 44-year-olds. The chart above shows that during the period from 1990 to 2016, Missouri actually lost population in this age group.

Looking ahead, the situation differs in various parts of the state, but overall, while the country is expecting modest young-worker growth of 4.4 percent over the next 10 years, Missouri is expecting only 2.5 percent growth of its young, 24 to 44-year-old population. More than 50 counties are expecting their population in this age group to shrink.
SHRINKING WORKFORCE PARTICIPATION

Missouri’s labor force participation rates over the past 40 years are shown above. Well above the national average 20 years ago, Missouri’s participation rate has decreased and is now close to the U.S. average. Numerous population sub-groups that can affect labor force participation, including ex-offenders, disconnected youth who are neither in school or working, and the disabled. The numbers of people involved can be substantial, as shown by the example of those on disability. According to the latest report from the Social Security Administration, disability beneficiaries totaled 235,205 in Missouri. This equals 6.4 percent of the resident population ages 18-64, more than one-third higher than the national average. Rates are significantly lower in some neighboring states: Illinois (4.0%), Nebraska (4.0 percent), Kansas (4.6 percent), Iowa (4.6 percent) and Oklahoma (5.7 percent). Two other neighboring states have among the highest percentage nationally - Arkansas at 8.3 percent and Kentucky at 8.0 percent.

For Missouri to positively impact labor force participation, it will need to implement strategies to connect more individuals in these groups with training, skills improvement, and work opportunities.

MISSOURI’S SKILLS GAP

Like most employers in America, Missouri businesses are concerned about the widening skills gap between the jobs that are available and the abilities of workers needed to fill them. During our employer interviews, Gallup reported that a common sentiment was “unless Missouri changes the way we are preparing people for the jobs of the future, the current mismatch between employer skill needs and the talents of the workforce will widen.”

Securing change in Missouri’s education system is a slow process. One employer interviewed described it as “trying to turn the Titanic
away from an iceberg.” Systemic education reform is needed but will take years. Therefore, initiatives that work with – or around - the current system must also be made available to help employers in the short term. A demand-driven approach is needed, one that responds to employers’ needs for skilled workers today while anticipating employment needs of the future.

The gap exists on several fronts. In some cases, it is a matter of students who are not leaving our education system with the skills they need to enter the workforce. Soft skills, basic knowledge and technology skills are often lacking.

In other cases, the problem is about adults who have lost their jobs because of factory closings or layoffs, and who now must adapt. Missouri has room for improvement among working-aged adults without post-secondary education or training, and this population could potentially be targeted for increasing skills. The chart below details the extent of limited education attainment among Missouri adults.

Missouri has more than 2,640,000 adults with no post-secondary degree, as detailed on the next page. Upskilling efforts targeted at these adults could have a significant positive impact on the quantity and quality of the state’s workforce.

But there is good news. There have been efforts over the last five years by Missouri’s K-12 and post-secondary sectors to reduce the high school remediation rates in English and Math course work for first-year students in college. As a result, remediation rates have dropped from 35.6 percent in 2013 to 22.8 percent in 2017, according to the Missouri Department of Higher Education / Coordinating Board of Higher Education 2018 board report.

<table>
<thead>
<tr>
<th>Education Attainment</th>
<th>ADULTS OVER 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missouri</td>
<td>United States</td>
</tr>
<tr>
<td>Less than high school</td>
<td>11.2%</td>
</tr>
<tr>
<td>High school diploma only</td>
<td>27.5%</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>22.5%</td>
</tr>
<tr>
<td>Associate degree</td>
<td>7.6%</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>17.2%</td>
</tr>
<tr>
<td>Graduate/Professional</td>
<td>10.4%</td>
</tr>
</tbody>
</table>
Missouri is also a leader in graduation rates, currently among the top 10 states. Although it’s difficult to fairly compare graduation rates because states set different standards for achieving a high school diploma, our ranking suggests that Missouri is doing a better job than most states in distilling basic knowledge to students. Life skills, work skills, job skills and future skills must also be integrated into the Missouri education experience.
**CHANGING JOB LANDSCAPE**

Whether workers are employed at Cerner in Kansas City or a small manufacturer in Osceola, the skills they need today are different from what was needed just a few years ago. Children who entered kindergarten in 2017 will begin their careers or start their first year of post-secondary education in 2030. They must be prepared for jobs that are yet to be imagined. The World Economic Forum projects that 65 percent of them will ultimately hold jobs that do not exist in 2018.

Here is the good news: amid all these changes and challenges, new opportunities are emerging for Missouri workers. From December 2016 through December 2017, Missouri grew its manufacturing, professional and technical services, financial, leisure and hospitality sectors faster than the national average.

Missouri is also growing jobs for the future. We have had significant growth in many of the advanced industries identified by the Brookings Institution as components of an emerging, knowledge-based sector. These include computer systems design, architecture and engineering, and aerospace.

Technological advances, changing consumer preferences, efficiencies, intense corporate competition and demographics have combined to change the state’s demand for specific occupations. Since 2006, over 50,000 new jobs have been created for personal care aides, food prep workers, registered nurses, nursing assistants and home health aides. During the same period, we experienced thousands of job losses among accountants, retail salespeople, assemblers, carpenters and construction laborers.

Each of the following charts demonstrate the impact of the changing jobs landscape. In the economy, change is inevitable, but these days, change is happening at an ever-increasing rate, putting a strain on the ability of workforce development efforts to keep pace.
The State of Missouri’s Workforce

Employment Gains and Losses by Sector

DECEMBER 2016 - DECEMBER 2017 FOR UNITED STATES AND MISSOURI

<table>
<thead>
<tr>
<th>Sector</th>
<th>United States</th>
<th>Missouri</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0.8%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Construction</td>
<td>-7.2%</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.8%</td>
<td></td>
<td>2.3%</td>
</tr>
<tr>
<td>Trade, Transportation &amp; Utilities</td>
<td></td>
<td>0.3%</td>
</tr>
<tr>
<td>Financial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>3.1%</td>
<td></td>
</tr>
<tr>
<td>Professional &amp; Technical Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional &amp; Technical Services</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>Trade, Transportation &amp; Utilities</td>
<td>-0.8%</td>
<td></td>
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<tr>
<td>Financial</td>
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<tr>
<td>Manufacturing</td>
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<tr>
<td>Financial</td>
<td>1.6%</td>
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</tr>
<tr>
<td>Trade, Transportation &amp; Utilities</td>
<td>-0.8%</td>
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<tr>
<td>Financial</td>
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<td></td>
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<tr>
<td>Manufacturing</td>
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<td></td>
</tr>
<tr>
<td>Financial</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Professional &amp; Technical Services</td>
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</tr>
<tr>
<td>Manufacturing</td>
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<tr>
<td>Financial</td>
<td>0.2%</td>
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<tr>
<td>Professional &amp; Technical Services</td>
<td></td>
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</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
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<tr>
<td>Financial</td>
<td>-0.6%</td>
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<tr>
<td>Professional &amp; Technical Services</td>
<td></td>
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<tr>
<td>Manufacturing</td>
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<td>Financial</td>
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</tr>
<tr>
<td>Professional &amp; Technical Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
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<td>Financial</td>
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<tr>
<td>Professional &amp; Technical Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
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</tr>
</tbody>
</table>

Source: U.S. Bureau of Labor Statistics
Missouri is also growing jobs for the future. We have had significant growth in many of the advanced industries identified by the Brookings Institution as components of an emerging, knowledge-based sector. These include computer systems design, architectural and engineering and aerospace.

### Top 10 Missouri Advanced Industries by Number of Jobs, 2016

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Systems Design and Related Services</td>
<td>21,777</td>
<td>38,132</td>
<td>16,355</td>
<td>75%</td>
</tr>
<tr>
<td>Architectural, Engineering and Related Services</td>
<td>21,098</td>
<td>23,037</td>
<td>1,939</td>
<td>9%</td>
</tr>
<tr>
<td>Wired and Wireless Telecommunications Carriers</td>
<td>21,784</td>
<td>18,156</td>
<td>-3,628</td>
<td>-17%</td>
</tr>
<tr>
<td>Management, Scientific and Technical Consulting Services</td>
<td>9,612</td>
<td>17,133</td>
<td>7,521</td>
<td>78%</td>
</tr>
<tr>
<td>Aerospace Product and Parts Manufacturing</td>
<td>15,306</td>
<td>16,044</td>
<td>738</td>
<td>5%</td>
</tr>
<tr>
<td>Motor Vehicle Manufacturing</td>
<td>12,891</td>
<td>12,849</td>
<td>-42</td>
<td>0%</td>
</tr>
<tr>
<td>Motor Vehicle Parts Manufacturing</td>
<td>15,210</td>
<td>10,383</td>
<td>-4,827</td>
<td>-32%</td>
</tr>
<tr>
<td>Data Processing, Hosting and Related Services</td>
<td>11,512</td>
<td>9,724</td>
<td>-1,788</td>
<td>-16%</td>
</tr>
<tr>
<td>Scientific Research and Development Services</td>
<td>9,323</td>
<td>8,486</td>
<td>-837</td>
<td>-9%</td>
</tr>
<tr>
<td>Electric Power Generation, Transmission and Distribution</td>
<td>7,945</td>
<td>8,015</td>
<td>70</td>
<td>1%</td>
</tr>
</tbody>
</table>

*Source: EMSI*

### Top 10 Missouri Advanced Industries by Gross Regional Product, 2016

<table>
<thead>
<tr>
<th>Industry</th>
<th>2016 GRP</th>
<th>GRP % Change 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Vehicle Manufacturing</td>
<td>$8,748,249,259</td>
<td>-7.6%</td>
</tr>
<tr>
<td>Computer Systems Design and Related Services</td>
<td>$4,277,215,117</td>
<td>4.1%</td>
</tr>
<tr>
<td>Aerospace Product and Parts Manufacturing</td>
<td>$3,578,103,685</td>
<td>-8.6%</td>
</tr>
<tr>
<td>Electric Power Generation, Transmission and Distribution</td>
<td>$3,412,855,923</td>
<td>1.0%</td>
</tr>
<tr>
<td>Architectural, Engineering and Related Services</td>
<td>$2,528,774,463</td>
<td>0.5%</td>
</tr>
<tr>
<td>Pharmaceutical and Medicine Manufacturing</td>
<td>$2,108,514,047</td>
<td>6.6%</td>
</tr>
<tr>
<td>Management, Scientific and Technical Consulting Services</td>
<td>$2,069,943,915</td>
<td>8.3%</td>
</tr>
<tr>
<td>Data Processing, Hosting and Related Services</td>
<td>$1,947,667,253</td>
<td>1.4%</td>
</tr>
<tr>
<td>Wireless Telecommunications Carriers (except Satellite)</td>
<td>$1,827,877,196</td>
<td>-11.4%</td>
</tr>
<tr>
<td>Scientific Research and Development Services</td>
<td>$1,019,093,474</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

*Source: EMSI*
The Brookings Institution has developed a definition of advanced industries. These are designated when an industry’s research and development spending per worker falls in the 80th percentile of industries or higher, and the share of workers requiring a high degree of Science, Technology, Engineering and Math (STEM) knowledge is above the national average.

Technological advances, changing consumer preferences, efficiencies, intense corporate competition and demographics have all combined to change the state’s demand for specific occupations. Since 2006, over 50,000 new jobs were created for personal care aides, food prep workers, registered nurses, nursing assistants, and home health aides. During the same period, we experienced thousands of job losses among accountants, retail salespeople, assemblers, carpenters and construction laborers.
### Bottom 25 Shrinking Occupations 2006-2016

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail Salespersons</td>
<td>87,209</td>
<td>80,157</td>
<td>-7,052</td>
<td>-8%</td>
</tr>
<tr>
<td>Team Assemblers</td>
<td>27,705</td>
<td>23,181</td>
<td>-4,524</td>
<td>-16%</td>
</tr>
<tr>
<td>Carpenters</td>
<td>17,433</td>
<td>13,093</td>
<td>-4,340</td>
<td>-25%</td>
</tr>
<tr>
<td>Construction Laborers</td>
<td>22,525</td>
<td>19,165</td>
<td>-3,360</td>
<td>-15%</td>
</tr>
<tr>
<td>Bookkeeping, Accounting and Auditors</td>
<td>35,681</td>
<td>32,860</td>
<td>-2,821</td>
<td>-8%</td>
</tr>
<tr>
<td>Military Occupations</td>
<td>38,069</td>
<td>35,704</td>
<td>-2,365</td>
<td>-6%</td>
</tr>
<tr>
<td>Heavy and Tractor-Trailer Truck Drivers</td>
<td>44,387</td>
<td>42,047</td>
<td>-2,340</td>
<td>-5%</td>
</tr>
<tr>
<td>First-Line Supervisors of Construction Trades and Extraction Workers</td>
<td>9,254</td>
<td>7,369</td>
<td>-1,885</td>
<td>-20%</td>
</tr>
<tr>
<td>First-Line Supervisors of Production and Operating Workers</td>
<td>14,247</td>
<td>12,582</td>
<td>-1,665</td>
<td>-12%</td>
</tr>
<tr>
<td>Postal Service Mail Carriers</td>
<td>8,794</td>
<td>7,167</td>
<td>-1,627</td>
<td>-19%</td>
</tr>
<tr>
<td>Office Clerks, General</td>
<td>55,366</td>
<td>53,740</td>
<td>-1,626</td>
<td>-3%</td>
</tr>
<tr>
<td>Childcare Workers</td>
<td>17,349</td>
<td>15,728</td>
<td>-1,621</td>
<td>-9%</td>
</tr>
<tr>
<td>Printing Press Operators</td>
<td>7,040</td>
<td>5,525</td>
<td>-1,515</td>
<td>-22%</td>
</tr>
<tr>
<td>Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products</td>
<td>25,762</td>
<td>24,301</td>
<td>-1,461</td>
<td>-6%</td>
</tr>
<tr>
<td>Shipping, Receiving and Traffic Clerks</td>
<td>11,744</td>
<td>10,302</td>
<td>-1,442</td>
<td>-12%</td>
</tr>
<tr>
<td>Painters, Construction and Maintenance</td>
<td>5,380</td>
<td>4,004</td>
<td>-1,376</td>
<td>-26%</td>
</tr>
<tr>
<td>Cutting, Punching and Press Machine Setters, Operators and Tenders, Metal and Plastic</td>
<td>4,307</td>
<td>3,068</td>
<td>-1,239</td>
<td>-29%</td>
</tr>
<tr>
<td>Sewing Machine Operators</td>
<td>3,238</td>
<td>2,039</td>
<td>-1,199</td>
<td>-37%</td>
</tr>
<tr>
<td>Post-secondary Teachers</td>
<td>27,532</td>
<td>26,378</td>
<td>-1,154</td>
<td>-4%</td>
</tr>
<tr>
<td>Counter and Rental Clerks</td>
<td>5,759</td>
<td>4,663</td>
<td>-1,096</td>
<td>-19%</td>
</tr>
<tr>
<td>Laborers and Freight, Stock and Material Movers, Hand</td>
<td>48,305</td>
<td>47,252</td>
<td>-1,053</td>
<td>-2%</td>
</tr>
<tr>
<td>Editors</td>
<td>2,113</td>
<td>1,068</td>
<td>-1,045</td>
<td>-49%</td>
</tr>
<tr>
<td>Operating Engineers and Other Construction Equipment Operators</td>
<td>7,543</td>
<td>6,516</td>
<td>-1,027</td>
<td>-14%</td>
</tr>
<tr>
<td>Cement Masons and Concrete Finishers</td>
<td>5,623</td>
<td>4,602</td>
<td>-1,021</td>
<td>-18%</td>
</tr>
<tr>
<td>Construction Managers</td>
<td>4,618</td>
<td>3,640</td>
<td>-978</td>
<td>-21%</td>
</tr>
</tbody>
</table>

*Source: EMSI*

Each of these charts demonstrates the impact of the changing jobs landscape. In the economy, change is inevitable, but these days, change is happening at an ever-increasing rate, putting a strain on the ability of workforce development efforts to keep pace.
No analysis of Missouri’s workforce system is complete without a discussion of our largest single workforce development engine, funded almost entirely by Missouri taxpayers.

All educational institutions play a critical role in skills development.

A thorough examination of K-12 schools and post-secondary institutions as engines of workforce pipeline development is warranted. This report, however, is a broader look at all training systems including those outside of education institutions. Therefore, it is important to spend time discussing Missouri’s Division of Workforce Development (DWD) and some of its topline initiatives.

DWD, within the Department of Economic Development, has the daunting task of coordinating a complex web of workforce improvement activities including administering Missouri’s Workforce Innovation and Opportunity Act (WIOA) plan along with other federal workforce and training programs. At the substate level, Missouri is divided into 14 workforce development regions, and there are 31 full-service job centers across the state and online.
DWD MISSION
DWD’s mission is to improve both the supply side and the demand side of Missouri’s workforce by helping job-seekers find gainful employment with family-sustaining wages and providing businesses with a skilled, trained workforce to successfully compete in the global economy.

WORKFORCE INNOVATION AND OPPORTUNITY ACT
The relatively new Workforce Innovation and Opportunity Act is the primary federal workforce development legislation. The state’s WIOA plan, drafted in 2015 and approved by federal agencies in October 2016, has a vision to build an integrated, demand-driven workforce system that leads to self-sufficiency. The goals of the WIOA plan include:

A. Overcoming employment barriers.
B. Maximizing efficiency and access to services.
C. Developing career pathways.
D. Placing a strong emphasis on employment retention.
E. Engaging employers to meet their needs.

SECTOR STRATEGIES
For implementation of Missouri’s WIOA plan, a centerpiece of the DWD’s activities is the creation of sector strategies. These are regional, industry-focused approaches to building skilled workforces by aligning public and private resources to address the talent needs of employers. The DWD designed Missouri’s plan in order to change what services are delivered and how Missouri’s job centers deliver them.

A summary of each region’s efforts to develop a sector strategy is provided in the August 2016 report by consulting firm Maher & Maher. The report details successes such as deepened relationships among regional partners, better use of regional data and more sustained engagement with multiple employers in some regions. It also describes progress toward goals, including better-defined career pathways or ladders, use of stackable credentials, multiple training entry and exit points for workers, and more work-based learning opportunities.

SKILLED WORKFORCE MISSOURI PROGRAM
The state’s “Skilled Workforce Missouri,” announced in 2017, is designed to provide a higher level of service for new or expanding businesses that are creating jobs. The goal is to create a single point of access, a one-stop shop within the Department of Economic Development, with a team of project managers to handle business clients’ workforce needs. The initiative will include a new statewide customer service platform to streamline services among various agencies (including job centers and community colleges across Missouri). The platform is intended to allow state and local economic developers and workforce partners to better target, analyze, serve and track expanding businesses.

Skilled Workforce Missouri will target new and expanding businesses in industry types such as manufacturing, bioscience, distribution, technology and financial services as well as headquarters operations, with new jobs paying wages equal to or higher than the state average.
Skilled Workforce Missouri’s customized training approach is similar to Georgia’s long-standing Quick Start program. The process starts with an individual company analysis to understand the firm’s needs. This is followed by helping the company recruit talent and train employees with ongoing support as needed. A primary challenge for the initiative is having a sufficient number of project managers trained properly and able to coordinate with all workforce partners in various parts of Missouri to deliver seamless services.

WORKFORCE DEVELOPMENT NETWORK
Another major workforce initiative announced in 2017 is the community college system’s Workforce Development Network, established to help Missouri businesses by sharing training resources, expertise and personnel as needed across all community colleges. In particular, this might help rural areas that have a smaller array of resources to offer businesses.
Missouri’s Workforce System

NATIONAL CAREER READINESS CERTIFICATE

Missouri is a national leader in efforts to improve and certify worker skills by having more of its workforce obtain the National Career Readiness Certificate (NCRC) established by the nonprofit organization ACT. This leads to having counties certified as Work Ready Communities. Jasper County was the nation’s first Certified Work Ready Community. To date, 76 percent of Missouri counties are participating in the program, and 56 Missouri counties (48 percent) are certified. Almost 100,000 Missouri workers have obtained their NCRC, and 4,000 employers in the state recognize the credential.

CHALLENGES FACING THE WORKFORCE DEVELOPMENT SYSTEM

Missouri’s publicly funded workforce development system is a multimillion-dollar entity with thousands of employees. Many of the systems and programs operate as they have for decades. The sheer size of the operation makes change difficult, but we are encouraged by the energy emerging from the Department of Economic Development leadership and the new approaches and ideas being implemented.

Reprioritizing of the various departments and programs, including the area of workforce development, could make more effective use of limited funds and have a significant impact.

Across the United States, workforce development agencies have shifted from a supply focus, viewing job seekers as “the client,” to a dual mandate of serving both job seekers and employer businesses. Missouri must keep pace. Until recently, Missouri businesses were typically engaged with workforce partners on a project-by-project basis to fill specific job vacancies. This is changing, but communication between workforce partners and local or regional employers is still not frequent enough. Relationships must become more meaningful and more consistent.
V. The Path Forward: A Call to Action

A. Maximize Business Engagement

CURRENT SITUATION/CHALLENGES: Worker shortages and skills gaps are so common that more and more companies are willing to invest time and money to improve workforce preparation. This presents a great opportunity to bring the business community into leadership roles and create a cutting-edge, demand-driven workforce system.

As evidenced by the process to create sector strategies in all regions of Missouri, there are varying levels of employer engagement and uneven involvement of workforce partners including local K-12 system leaders. Creating strong business “champions” for workforce development across the state is a proven way to strengthen workforce partnerships.

Missouri must maintain positive momentum for workforce improvements — especially by keeping employers engaged. Too many business leaders are still unaware of how and where to get involved and what the value proposition is for their businesses. Education and workforce leaders need more, and better, information about the knowledge and skills that businesses need.

We know there is no “silver bullet” that can easily solve all of Missouri’s workforce challenges, but certain actions can improve our competitive position, better meet the needs of our state’s employers and create more opportunity. We recommend six strategies and 31 specific actions.
**RECOMMENDATIONS:**
1) Use a public-private partnership to better inform businesses of available workforce development programs and opportunities by working through the more than 140 members of the Missouri Chamber Federation, a group of Missouri’s most influential local chambers of commerce, and elevate business champions for workforce partnerships in each region of Missouri.
2) Collaborate with the business community to conduct an annual review of the state’s anticipated workforce needs and the number of post-secondary credentials that are being issued, identifying workforce needs that may not be met by existing education and training programs.
3) Develop an annual business survey to identify and communicate skill and occupational needs and trends.
4) Establish regional workforce development resources with one point of contact in each region acting as a business concierge, with the sole purpose of connecting businesses to the correct agency for their specific workforce needs. A business engagement effort must simplify the entry points for businesses, demonstrate the value of participation to employers, amplify information about available services and champion the participation of the private sector.

**BEST PRACTICES:**

**Business-Oriented Workforce Solutions Website.**
Maher & Maher’s sector strategies report for Missouri recommends that the state consider the creation of a freestanding workforce solutions website aimed at channeling information to the business community. The report points to the Kentucky Skills Network site as a good example.

**Partners for a Competitive Workforce (PCW).**
In the Cincinnati metro area, Partners for a Competitive Workforce attracts business participation by focusing on cost savings and return on investment. PCW found that businesses and other program funders often want different data than what is usually collected in workforce development programs. It engaged funders in developing a new set of performance metrics.

**Jewish Vocational Service (JVS).**
Working in the San Francisco Bay Area since 1973, Jewish Vocational Service has consistently improved its approach to business engagement in order to train and place local workers. JVS has developed a sophisticated model to move employer engagement from “transactional relationships” to “strategic partnerships,” particularly by creating sector advisory committees and learning from employers to modify programs and curriculum development.

“A tristate effort encompassing Ohio, Kentucky and Indiana, PCW is managed by United Way and has a stable of funders that include Procter & Gamble, U.S. Bank Foundation, Macy’s and Chase.

“**It’s real. If you don’t believe the skills gap is real, all you have to do is sit in my chair for a week. You would never doubt it again.**”

*HR Director, Employer Interview December 2017*
B. Focus on Improving Worker Skills

CURRENT SITUATION/CHALLENGES:
A significant gap between occupational demands and workers’ skill sets is nearly universal in Missouri and throughout the United States. The problem exists on many fronts impacting workers in every level of our workplaces. Much research has been done in this area, and one of the leading resources is the National Skills Coalition. The coalition recommends integrated education and training, stackable credentials, job-driven financial aid, and better alignment of career pathway elements and services. We support these recommendations to drive skills improvement.

The skills gap is particularly noticeable in mid-skill jobs requiring more than a high school diploma but less than a four-year degree. Data show that 53 percent of Missouri jobs fall into the mid-skill category but that only 46 percent of Missouri workers possess the needed skills. Many mid-skill positions are available in fast-growing, high-demand fields. One of the key reasons for this shortage is the fact that these positions are not promoted to students, teachers or parents.

Employers are also concerned about the lack of employee soft skills, meaning that employees fail to understand or meet workplace expectations regarding dependability, honesty, professional behavior and communication.

In addition to employees acquiring the right skills, more opportunities for work-based learning are needed. One employer interviewed expressed his opinion that the “best way to learn about work is by working,” and that sentiment underscores a nationwide push to implement more experiential learning opportunities for our emerging workforce, such as internships, apprenticeships and educator externships.

Apprenticeships are a proven way to introduce students to work and career opportunities and prepare them with the skills needed to be successful in their first jobs. A 2017 study by Harvard Business School and Burning Glass Technologies suggests that with proper support, the number of jobs filled through apprenticeships could grow to eight times higher than current levels, to a total of 3.3 million positions filled. The National Skills Coalition cites Urban Institute research that 80 percent of companies with apprentices say apprenticeships are an effective way to meet their skilled labor needs.

With the expectation of a continued tight labor market, Missouri should extend efforts to reach the underemployed and unemployed, including ex-offenders, disconnected youth and adults without a high school diploma.

“The issue (skill mismatch) is complex — there is a communication gap between educational institutions and employers. Our difficulty is designing a program generic enough for the broad skills and that also teaches the specific skills and being able to change as fast as businesses do.”

Education Leader Interview November 2017
RECOMMENDATIONS:

1) Align career pathway elements and services through education and training systems. This means that the career-related curricula and services offered by K-12 schools, community colleges, and job centers in Missouri are coordinated with each other and with industry needs for in-demand jobs.

2) Integrate education and training by addressing basic skill needs (verbal or written communication) concurrently with targeted training for in-demand jobs.

3) Provide more opportunities for stackable credentials, using shorter-term training models and making education and skill attainment programs more accessible and affordable for adult workers, especially in high-demand fields.

4) Review Missouri’s financial aid delivery system and apply job-driven aid policies where possible.

5) Make Missouri a 100 percent-certified Work Ready Communities state by involving the 24 percent of counties not active in the program. Also make the WorkKeys assessment tests more accessible. Missouri is already a national leader in the ACT Work Ready Communities program, but full participation would result in increased workforce readiness and elevate Missouri’s status nationally.

6) Implement a statewide program for all prison inmates to have a WorkKeys assessment, with most ex-offenders getting the NCRC and becoming job-ready by time of release.

7) Encourage employers to recognize the value of newly developed Missouri Career and Technical Education (CTE) Certificate for high school students.

8) Expand the Advanced Manufacturing Technician program, a pathway for students to earn an associate degree and job placement at the plant.

9) Significantly expand paid internship and apprenticeship programs.

10) Support expansion of adult high schools throughout the state.

United States

Source: National Skills Coalition, 2015
The Path Forward

**BEST PRACTICES:**

**Indiana Manufacturers Skills Academy (IMSA).**

The innovative IMSA upskilling program was started in 2013 by Ivy Tech Corporate College and the Indiana Manufacturers Association. Twenty-five percent of Indiana’s economic output is manufacturing-based, and the state has the second-largest automotive industry in the nation.

The prime offering of the Indiana Manufacturers Skills Academy is online employee assessment and training tools. Online assessments are available in 165 different technical areas, with each taking about 45 minutes to complete. Training modules (averaging two to three hours) are segmented so that workers can spend time learning only the highest-priority skills for their development. Modules are self-paced and can be used individually, in a classroom setting or in a blended learning approach. Pricing for the tools is calculated per employee, per year, and costs are moderate.

**CareerWise Colorado.**

An ambitious expansion of apprenticeship, career exploration and skill-building programs is taking place in Colorado, where partners have committed $11 million to CareerWise Colorado and Denver Public Schools’ CareerConnect.

As of the fall of 2017, high school juniors and seniors are able to participate in CareerWise Colorado, which places them in apprenticeships with firms along pathways for advanced manufacturing, business operations, financial services, health care and information technology. Students will spend up to half of their time at employer worksites while getting their high school diploma and earning credits toward a two-year college degree. An additional apprenticeship year after graduation will further prepare students for the workforce. Apprentices will be paid a training wage while at work. Officials hope that within 10 years, 10 percent of high school students in the state, about 20,000 students total, will participate.

**Iowa Apprenticeships.**

In December 2017, the Iowa Business Council (IBC) and Iowa’s elected leaders announced that IBC members have pledged to hire 30,000 apprentices, interns and externs by 2025. This effort dovetails with the state’s Future Ready Iowa initiative, which aims to have 70 percent of Iowa adults achieve education or training beyond high school by 2025.

**New Virginia Economy Workforce Initiative.**

Virginia’s Establishing the New Virginia Economy Workforce

“Our industry (medical) is growing quickly, and we can’t find workers to fill all the jobs. We need to begin exposing kids to the opportunities in middle school.”

*Hospital Employer Interview December 2017*
The Path Forward

The Path Forward Initiative is designed to create 50,000 workforce credentials that are aligned with high-paying jobs in science, technology, engineering, math, and health care (STEM-H). These credentials include associate degrees, certificate programs, apprenticeships, certifications, licenses and industry credentials. State funding for post-secondary workforce training was increased through the New Economy Workforce Credential Grant Program, a performance-based program that reduces the cost of high-demand credentials by up to two-thirds.

Missouri: Reaching Hard-to-Serve Populations.

- Crawford County’s “Rehabilitation Through Innovation” initiative targets inmates in the local jail for upskilling and WorkKeys testing. The five-week program includes content to improve the women’s ability to find employment, housing and transportation once released. The inmates’ successes put Crawford County over the top to become a Certified Work Ready Community.
- In Cole County, WorkKeys assessments are given to inmates at Algoa Correctional Center. In the first 18 months of the program, 219 out of 235 offenders earned the NCRC, and 84 percent of certificate holders obtained employment after release.
- Workforce partners are developing a new food production program at the Southeast Correctional Center in Charleston. The prison has a large gardening operation, and the Workforce Investment Board and other partners are designing a related agriculture business curriculum. Before offenders are released, they will be evaluated with WorkKeys assessments and receive life coaching. The goal will be to place ex-offenders at food-related regional employers such as Tyson, Breyers and Gilster-Mary Lee.

Missouri: Motivating Rural County Participation.

Missouri workforce regions catalyze rural county participation as Certified Work Ready Communities by:

- Hosting CWRC summits focused on the specific industry and job profile needs of the region.
- Elevating one or two business “champions” in each rural county that will promote Work Ready Communities.
- Providing plentiful CWRC content on social media and websites.

Advanced Manufacturing Career Pathways (AMCP).

As highlighted in the Hope Street Group’s Making Makers report on manufacturing skills, the AMCP program is active in eight states at 21 colleges and universities. The five-semester associate degree program typically attracts top high school students and provides them with a path to graduate debt-free while gaining more than 1,200 hours of work experience per year. Toyota, GE, 3M and Bosch are some of the 150 affiliated employers. Seventy percent of new candidates graduate; 95 percent of graduates are offered an internship or directly hired by a sponsoring company; and 100 percent of graduates in a recent five-year period were hired after completion of the program.

Toyota’s Advanced Manufacturing Technician (AMT) program in Troy and St. Charles, Missouri is a successful example of this model working in our state. The program is in partnership with the State Technical College of Missouri and local area manufacturers. Students work three days a week in an approved manufacturing partner facility and attend college course work two days a week. Students complete the program in two years, exit debt free and are typically employed by the manufacturer.
C. Prioritize Regional Sector Strategies

CURRENT SITUATION/CHALLENGES:
A sector approach, especially one focusing on opportunity sectors where there is strong demand for employees, is one of the best ways to meet employer demands and prepare our residents for future jobs. Missouri is well on its way to implementing its Regional Sector Strategies system.

But there are continuing challenges to successful implementation of sector strategies. Sector strategies are new for some regions, and it is not yet clear whether this approach is seen by workforce partners as a true culture and systems change or “just another project” to complete. There must be increased buy-in, reduced turf battles and sustained funding to successfully implement this approach.

Sector strategy success and improved business customer service require committed funding and support from multiple partners and at various levels throughout Missouri. Some states’ funding to implement sector strategies has been much more robust than Missouri’s.

Missouri is a diverse state with differing resources and capabilities. Some of the state’s smaller and more rural regions need additional technical assistance and state-level support.

Labor sheds refer to the geographic areas from which businesses draw employees. Typically, labor sheds reach across city, county, workforce board and community college boundaries. Although government agencies are keenly aware of these boundaries, neither employers nor workers pay much attention to them. As a result, there is still a need for counties and regions to work more closely with neighboring regions. Local leaders too often think of their main competition as an adjoining county or region. This does not reflect realities of how businesses and workers make location decisions today.

Implementing and executing each regional plan involves coordination among many agencies to create industry-specific business services teams and to prevent duplication of efforts. It also requires better collaboration with the state Department of Elementary and Secondary Education to develop career pathways.

RECOMMENDATIONS:
1) Use the model of Southwest Missouri’s SectorReady.org and scale it for all regions to develop a detailed sector strategy partnership, program and website.
2) Ensure that Missouri DWD allocates enough resources for each region to successfully implement its sector strategy.
3) Provide increased technical assistance to Missouri’s smaller and more rural communities.
4) Financially incentivize collaboration within regions, between neighboring regions and even across state lines when labor markets warrant it.
5) Increase involvement by the Department of Elementary and Secondary Education to better incorporate educational alignment, and especially career pathway development, into sector strategy implementation.

“People have told everyone for years that there will be no manufacturing jobs. Well, there are thousands of manufacturing jobs, paying good wages and nobody is ready to work.”

Employer Interview December 2017
**BEST PRACTICES:**

**Health Career Pathways Network.**
A promising sector model is Hope Street Group’s work to create a Health Career Pathways Network. In the spring of 2016, a meeting of health care and workforce leaders was convened at the White House. Subsequently, the Health Career Pathways Network (HCPN) began in seven founding regions in six states. The goal is to create a more demand-driven and competency-based career pathway approach in health care. HCPN participants strive to increase the quality of new hires, decrease first-year turnover and increase advancement of employees from entry-level to middle-skill positions and beyond.

**Greater Metro Denver Healthcare Partnership.**
With the Aurora Chamber of Commerce as a key partner, the Greater Metro Denver Healthcare Partnership involves more than 125 hospitals, clinics and other health care facilities; 80,000 employees; and 10,000 physicians. The partnership is described as a truly industry-led sector solution to build, develop and manage a health care talent pipeline. During the program’s first three years, 90 percent of participants who were enrolled in one of three training tracks obtained employment shortly after completing the program.

**GO Virginia.**
Virginia is incentivizing regional collaboration through the GO Virginia initiative creating nine economic development regions across the state. GO Virginia provides funding only for projects that demonstrate multicounty collaboration. To date, the greatest focus is on improving regional workforces.

**Missouri: SectorReady.org.**
An innovative example of embracing sector strategies comes from the Southwest Missouri Workforce Investment Board (WIB), which has developed the robust and informative SectorReady.org website. Southwest Missouri’s WIB covers seven counties and through a partnership called Heartland 411 joins forces with neighboring workforce boards in Southeast Kansas, Northeast Oklahoma and Northwest Arkansas to improve the “Four-State Area” labor market. The WIB’s mission is also aligned with that of the Joplin Regional Partnership for economic development.

**BEST PRACTICES:**

**Southwest Missouri’s WIB covers seven counties and through a partnership called Heartland 411 joins forces with neighboring workforce boards in Southeast Kansas, Northeast Oklahoma and Northwest Arkansas to improve the “Four-State Area” labor market. The WIB’s mission is also aligned with that of the Joplin Regional Partnership for economic development.**

**SectorReady.org is a partnership of employers, community leaders, educators, and economic and workforce development stakeholders. Career pathways are defined for manufacturing; transportation, distribution and logistics; health sciences and services; information technology; and construction. SectorReady.org and the Southwest Missouri WIB also heavily promote the Certified Work Ready Communities program and the NCRC. The SectorReady.org website features tangible testimonials from Joplin-area businesses on the usefulness of assessing candidates through the NCRC program.**
D. Increase Career Awareness

CURRENT SITUATION/CHALLENGES:
Businesses and workforce partners are assigning a higher priority to the need for increased public awareness and understanding of skills gap issues and opportunities. Most efforts are focused on reaching students, parents, counselors and teachers. Messaging usually includes some combination of information on:

- The availability of good jobs for those with less than a four-year degree.
- Career potential in manufacturing, health care and technology fields.
- Modern work atmospheres that do not match old workplace stereotypes.
- Specific skills gaps within a region.
- Job supply and demand and wage information in key regional industries.

Surveys show that students and parents have little awareness of career opportunities within their region — particularly in manufacturing and technology career paths requiring less than a four-year college degree. Educators and counselors also have little exposure to or knowledge of career opportunities outside of those requiring a four-year degree. This leaves significant shortages in areas of advanced manufacturing, health care and many technology positions.

Hope Street Group’s Missing Makers report features a section on career exploration related to advanced manufacturing. It found that with the decline of career and technical education courses and infrequent interaction with manufacturing workers, many students have little understanding of manufacturing jobs and pay.

*Missing Makers* suggests early outreach to youth. The research found that students are highly influenced by early personal exposure to jobs. In today’s economy, they’re likely to have personal interaction with nurses, teachers and lawyers but less likely to encounter those in manufacturing and other technical fields.

The report also recommends outreach to educators and counselors, with information and tools that are easy to integrate into daily activities. The report cites a survey in which only 8 percent of high school counselors saw their primary role as “helping students plan and prepare for their work role after high school.” Fifty-one percent of counselors ranked this as their lowest-priority role. Both teachers and counselors need clear, simple information, as teachers must juggle their existing educational demands and many counselors feel uncomfortable advising students about requirements of technical careers.

RECOMMENDATIONS:
1) Create an awareness initiative promoting manufacturing, technical and health care careers targeted at middle school and high school students and parents and accompanied by straightforward content for teachers and counselors to use.
2) Provide better and more accessible career data — occupational demand, wages and education requirements — for use by students and parents.
3) Improve career counseling and career support for students at Missouri community colleges and universities.
4) Increase workplace exposure opportunities for high school and middle school counselors and teachers.
5) Expand the Center for Advanced Professional Studies (CAPS) Network schools in Missouri.
BEST PRACTICES:

Be Pro Be Proud.
This is an in-person and online campaign by the Associated Industries of Arkansas to promote technical careers across the state. The Be Pro Be Proud website proclaims that its highlighted jobs pay $16,000 more than the state average and that there are openings at more than 82 percent of Arkansas manufacturers. The initiative brings workforce workshops to schools across the state, recruits ambassadors, and provides details about specific jobs and training.

Memphis Works.
An initiative of the Greater Memphis Alliance for a Competitive Workforce (the Greater Memphis Chamber of Commerce is a key partner), the Memphis Works app features 200 “job card” videos in which local workers talk about what they do and how they got there.

Missouri: Manufacturing Day Events.
Using a national model developed by the National Association of Manufacturers (NAM) and led in Missouri by the Missouri Chamber of Commerce and Industry, a statewide structure has been established to promote open house events to bring students into manufacturing sites to learn about the opportunities these careers provide. At these events, employers bring interactive displays and hands-on demonstrations.

Missouri: Northwest Missouri State University Career Services.
The institution’s focus on profession-based learning, industry-based partnerships and student success, including career preparation and placement, is often cited as a best practice in higher education. Web-based career services target students’ post-education opportunities.

Missouri: CAPS Network.
The CAPS program started in 2009 in the Blue Valley (Kansas) School District near Kansas City. The CAPS Network brings project-based learning geared toward high-skill, high-demand careers. High school juniors and seniors are able to earn college credit while exploring potential professions and developing important professional skills (such as time management). The CAPS Network now operates in 69 school districts in 11 states, with Missouri claiming the largest number of sites.

“We started working in the high schools. Students need work-based learning to develop their soft skills, and they are critical to their future employability. They have to have teamwork skills and be willing to be personally accountable.”

Employer Interview, December 2017
E. Attract and Retain More Talent

CURRENT SITUATION/CHALLENGES:
Talent attraction is an important component of meeting employer needs, yet Missouri may be missing the mark. When asked by Gallup whether Missouri attracted top talent, only 30 percent of employers surveyed said yes.

Job growth and population are increasingly concentrated in a small number of major metropolitan areas in the United States. Other parts of the country are struggling as a result. Nations, states, metro areas and cities are increasingly competing to attract talented individuals, particularly young professionals, to fill high-skill, high-demand jobs.

Even if Missouri develops the best education and training models in America, we will still need to attract more people, especially skilled young professionals, to fill high-demand jobs. Missouri’s population growth in recent years has not been among the national leaders, and as the map in Section III showed, many parts of the state are projected to experience workforce losses in the next decade.

A 2017 report, Talent Wars: What People Look for in Jobs and Locations, by Development Counsellors International (DCI), examined the factors that impact a person’s relocation decision. While everyone would like to have a great job in a great place, with unlimited free amenities, job decisions ultimately come down to a series of trade-offs. DCI’s survey revealed the most important decision factors for individuals (ranked on a 1 to 10 scale) as shown in the chart below.

Although competition among states is great, data and surveys indicate that most relocation decisions are

<table>
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<tr>
<th>Important Factors for New-Job Location Decisions</th>
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<tbody>
<tr>
<td>Cost of Living</td>
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<td>Housing Costs</td>
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<td>Housing Availability</td>
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<td>Health Care</td>
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<td>Job Opportunity for Spouse/Partner</td>
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<td>Climate</td>
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<td>Proximity to Family</td>
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<td>Alternative Job Opportunities</td>
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<td>Proximity to Friends</td>
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<td>Outdoor Recreational Amenities</td>
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<td>Quality of K-12 Education</td>
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<td>Arts/Cultural Amenities</td>
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<td>Post-secondary ED options</td>
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Source: DCI’s Talent Wars: What People Look for in Jobs and Locations, 2017
driven by job availability, cost of living, housing costs and availability, and health care. With those priorities in mind, Missouri has a lot to offer but must be more aggressive in telling its story. Missouri cannot afford to be solely branded by the national media.

Because employers — not government agencies or visitors bureaus — are the main point of contact for prospective hires, the private sector must be involved in any talent attraction effort.

**RECOMMENDATIONS:**

1. Develop a statewide public-private multimedia talent attraction program geared toward professionals in high-demand fields.
2. Develop and provide useful, honest quality-of-life and community amenities information for employers to use when communicating with prospective employees.
3. Develop a statewide campaign to encourage our U.S. Armed Forces veterans to locate in Missouri — providing services including skills certification, retraining, and job matching. With approximately 8,000 Missouri residents departing the military each year, a campaign to have them return to their home state would increase the pool of experienced, skilled workers.
4. Develop non-traditional recruitment strategies for attracting a quality workforce.

**BEST PRACTICES:**

**Talent Attraction Campaigns:**
- Wisconsin recently announced a new $1 million talent attraction campaign, using only social media, designed to persuade millennials to live and work in Wisconsin. The campaign targets people ages 21 to 35 in the greater Chicago area, aiming to sell them on Wisconsin’s career and lifestyle advantages. The state has a separate $6.8 million national talent campaign that focuses on transitioning veterans.
- Talent attraction marketing is also popular among metropolitan regions. Three years ago, the Metro Atlanta Chamber began to invest heavily in a talent attraction and retention initiative. Raleigh, North Carolina’s Work in the Triangle web portal and aggressive worker recruitment strategies began in 2011.

**Financial Incentives for Talent Attraction.**
States, regions and cities now even offer direct financial incentives to lure talented professionals:
- To support Oklahoma’s strong aerospace industry, the state began an Aerospace Industry Engineer Workforce Tax Credit program in 2009. Tax credits benefit both aerospace companies that hire engineers and the employees who are hired for up to five years. A 2016 review found that the program had contributed to the hiring of 4,200 workers with an average wage of about $80,000.
- Chattanooga, Tennessee’s “Geek Move” initiative in 2011 sought to lure high-tech professionals with $11,250 in incentives toward the purchase of a home.
- Financial incentives for doctors, nurses and other health care professionals to relocate to hard-to-staff areas are common throughout the United States, particularly in rural areas. A recent review showed 36 programs offering to repay student loans and another 11 programs offering cash scholarships.

“As an employer, I know what I need, but as a parent, there is so much data, but it is overwhelming. What does it mean? Where will the jobs be? What do my kids need to know?”

*Employer Interview, December 2017*
F. Improve Communications for All Stakeholders

CURRENT SITUATION/CHALLENGES:
Business leaders generally agree that workforce quality and availability are currently the No. 1 business concern in America. To coalesce public, private and legislative urgency and resources around this issue, it is critical to provide clear information about current progress and future goals to everyone. This includes workforce system users — both job seekers and employers — as well as workforce partners, elected officials, parents, students, teachers and the public at large.

The Missouri Division of Workforce Development’s 2015 annual report states that 66 percent of employers responding to a survey were “very satisfied” with DWD services but notes that the data were gathered from “very few responding employers.” Similarly, the DWD annual report also concludes that survey responses from job seekers using state services were mostly positive but notes that the response rate was below 1 percent. An opportunity exists for DWD to evaluate and align its services based on better, more extensive input from clients on both sides.

Despite having many programs carried out by experienced partners, workforce programs and their impacts remain confusing and often difficult to access. The Missouri Economic Research and Information Center (MERIC) is considered by many to be one of the best such organizations in the country. Yet despite the availability of data, decision makers struggle to convert it into actionable information. Missouri also needs to communicate workforce data and program availability and results to the public and all system users (including both job seekers and businesses).

RECOMMENDATIONS:
1) Create a “State of Missouri’s Workforce” annual event with equal participation by the public and private sectors. The event should be accompanied by wide distribution of a brief, easily understood data summary.
2) Create a public online dashboard to measure progress at the regional and state levels.
3) Develop the country’s best online information portal for available training and jobs targeted at two primary audiences: workers seeking jobs and training and employers ready to hire.

“I know there must be lots of workforce programs, but we have never used them. Nobody has the time to figure them all out. I wouldn’t even know where to start.”

-Employer Interview, December 2017
**BEST PRACTICES:**

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<tr>
<th>State Online Workforce Dashboards:</th>
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<tbody>
<tr>
<td>• <strong>Colorado’s Talent Dashboard</strong> is organized around educating, partnering, connecting, and supply and demand. <a href="https://www.coloradotalentdashboard.com">https://www.coloradotalentdashboard.com</a></td>
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<td>• <strong>Ohio’s Workforce Success Measures Dashboard</strong> was recently updated after receiving a grant and technical assistance from the National Skills Coalition’s State Workforce and Education Alignment Project (SWEAP). <a href="https://workforcesuccess.chrr.ohio-state.edu/home">https://workforcesuccess.chrr.ohio-state.edu/home</a></td>
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<th>Online Job and Training Information Portals:</th>
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<tr>
<td>• <strong>Alabama Works</strong> links employers looking for skilled workers with residents looking for work or training. The program and web portal <a href="https://www.alabamaworks.com">AlabamaWorks.com</a> was developed through a public-private partnership and was designed to also create a statewide brand that could lead people to available services.</td>
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<td>• The U.S. Department of Labor’s well-regarded <strong>O*NET</strong> portal provides information on more than 900 occupations, including skill requirements and descriptions of daily work activities. Search options include sorting occupations by rapid growth, by career cluster and within the green economy sector. Employers can also use O*NET to quickly develop job descriptions and detail training requirements.</td>
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