Addressing the Skills Gap

Pipeline Transformation

SPRINGDALE™
Chamber of Commerce

A Report for the Springdale Chamber of Commerce
October 2018

ECONOMIC LEADERSHIP

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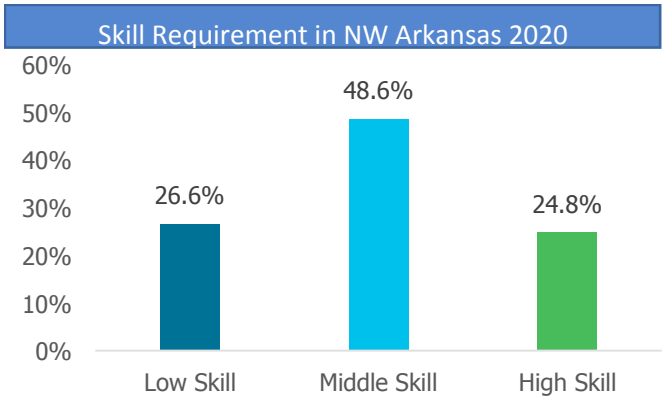
Executive Summary

What is a workforce pipeline? The workforce pipeline is the cumulative influence of family, community, educational and skill training organizations, and of employers, on the skill development of citizens to meet both their needs for livelihood and local employers' needs for appropriately skilled workers. We face a talent crisis, nationwide and in Springdale. As we reach full employment, the struggle to find qualified workers intensifies. Today, local employers cannot find enough employees with the skills needed to meet their needs.

Projections shows that middle skills employment will be a crucial part of future employment in Northwest Arkansas with about 49 percent of all jobs in 2020 requiring middle skills. Annual openings in Springdale and the surrounding region for auto, diesel and HVAC mechanics, truck drivers, nursing care, electricians and computer support will far exceed current training pipelines and current training capacity.



Across the country competition is increasing and places are prioritizing talent with specific actions that can be categorized in seven distinct focus areas: (1) developing clear career pathways, (2) upskilling and reskilling existing workers, (3) increasing apprenticeships and other work experiences for students and young workers, (4) increasing business involvement and program support, (5) developing more responsive industry sector strategies, (6) aggressively increasing career awareness for students, parents and educators and (7) new programs and incentives for talent attraction.

In recent years, the Springdale Chamber made workforce a top priority and has positioned itself as a conduit and catalyst for change between its members and regional education assets by developing programming and events to engage stakeholders. The Northwest Arkansas Workforce Summit is the only workforce dedicated summit in the region that brings the three key players to the same table (industry, policy makers, and educators). The three-day Academy for Career Educators in Springdale (ACES) brings in CTE educators and acts as a continuing education effort with talks from thought leaders, industry speakers, and site visits. The *AIM* workforce magazine helps spread information about the demand and opportunity for middle-skill careers to the community. The magazine has features on all the major employers in the area and their greatest employment needs. In the magazine's first year it was distributed to over 10,000 students in 16 school districts across Northwest Arkansas.

Springdale has several technical educational training assets including the Don Tyson School of Innovation (DTSOI), Northwest Arkansas Community College and Northwest Arkansas Technical Institute.

Despite these efforts and assets, the problem persists and more must be done. The Springdale Chamber's efforts over the past decade have focused heavily on three of the seven national focus areas: clear career pathways, business involvement and support, and increased career awareness. These are vital to future success and the chamber should continue their current efforts and look for additional ways to engage businesses and increase awareness. Industry sector strategies and talent attraction are best addressed at the broader, regional level, but the Chamber should remain an active and aggressive stakeholder in those efforts.

The highest-impact new activities that the Springdale Chamber can focus on are: (1) improving the area's capacity to upskill the existing workforce by advocating for targeted state funding; (2) improving the quality and capacity of existing skill development facilities; and (3) creating more local work experience opportunities for high school students.

Recommendations:

- **Work with the State Legislature to increase discretionary funding for the upskilling of existing workers -** By increasing the availability of funding for existing businesses and their workforce partners to upskill and retrain their existing workers, the state can ensure greater community and family stability, save transitional support costs and strengthen business competitiveness. The Springdale Chamber should champion a new existing worker training allocation from the legislature.

- **Create a WIOA Funded Workforce Center in Springdale -** All the state's comparison communities had their own one-stop shop workforce center and while there are some in the region, there is currently not one in Springdale. These centers have the funding and training to better reach marginalized communities and retrain workers displaced due to automation.

- **Improve the physical capacity and quality, private sector engagement and leadership, and public image of NWTI -** A world-class NWTI would transform workforce delivery training in Northwest Arkansas through increasing overall training capacity for in-demand occupations, improving the image of middle skill occupations among parents, students, educators and workers that need additional training, and engaging current business leaders in a facility that reflects their aspirations for the region's future. While this is a difficult goal, it is one that would yield the greatest short and long-term impacts.

- **Increase work experience opportunities for local school students** through development of a year-round and summer work experience effort.

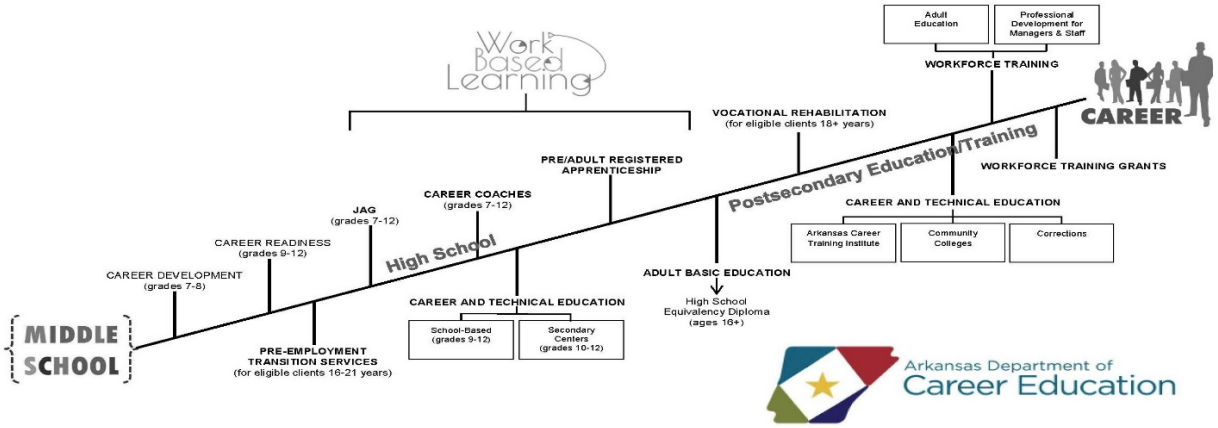
- **Create a new Youth Leadership Program** focused on educating students on future careers using business leader discussions and site visits.

- **Explore development of a student engaged Makerspace in Springdale that** creates a fun and exciting introduction to STEM skills and careers.

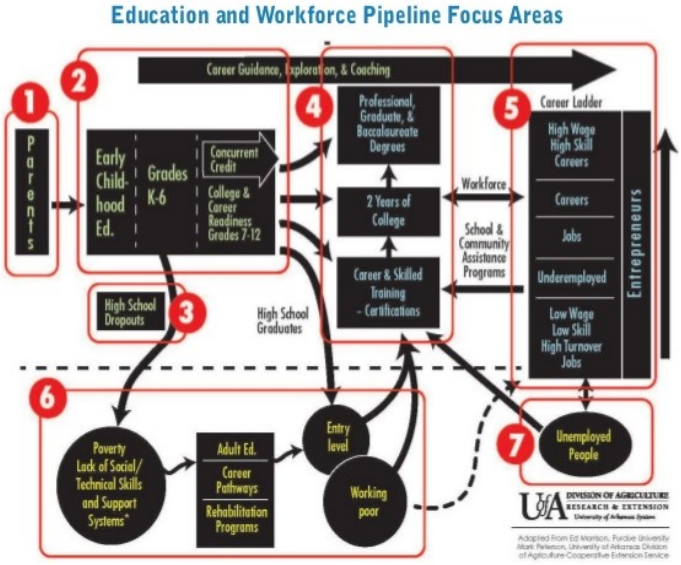
- **Expand Project Lead the Way** to better prep students for technical careers and spans the time from elementary school through high school graduation to develop student skill sets.

Springdale Workforce Pipeline Transformation Report

What is a workforce pipeline? The Arkansas Department of Career Education has mapped their pipeline from middle school to career, incorporating work-based learning in grades 7-12 and Career and Technical Education for grades 9-12. This approach is important and reflects the role and resources of the K-12 system. But it does not address the whole pipeline.



The University of Arkansas Division of Agriculture builds on Pipeline research from Ed Morrison of Purdue University and describes the pipeline as "the different elements of education and workforce preparation in your community, county, region or state." Most of the research today, including the work from University of Arkansas, recognizes that to fully understand the workforce pipeline, you start with parental roles at birth, or even pre-natal nutrition, and end with lifelong learning and retraining. The workforce pipeline is the result of the actions of many systems and actors that influence the education and skill training of an individual throughout their life. Important elements might be as diverse as early life caregivers, preschool teachers, grandparents, or in midcareer, an influential manager or mentor.



We will use the following definition: the workforce pipeline is the cumulative influence of family, community, educational and skill training organizations, and of employers, on the skill development of citizens to meet both their needs for livelihood and local employers' needs for appropriately skilled workers. **For this report, meeting the current and future needs of employers in Springdale,**

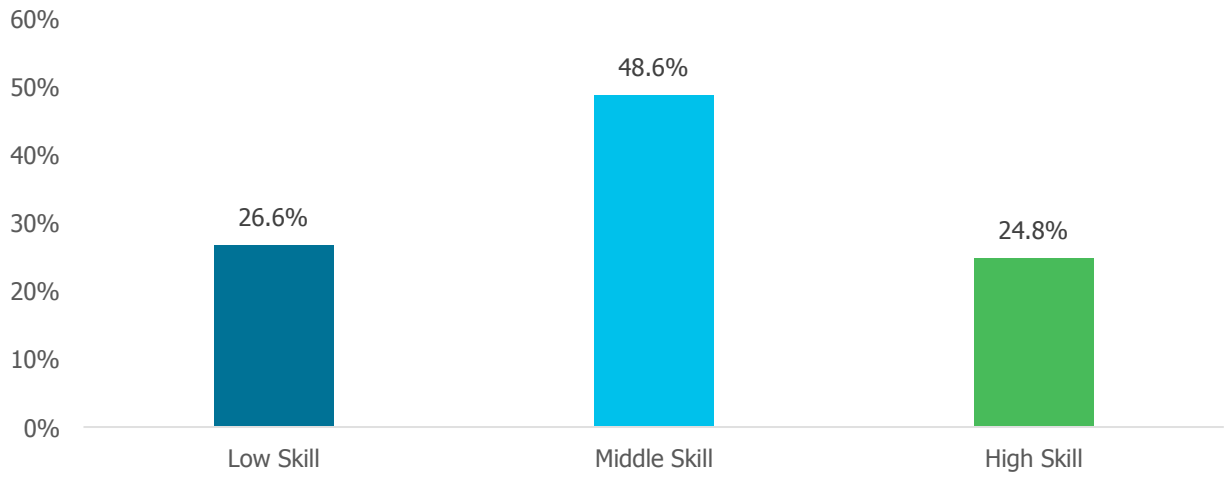
Arkansas and the Northwest Arkansas region is the focus. What can be done to significantly improve the workforce pipeline to better meet regional business needs is the question.

Introduction

We face a nationwide talent crisis. As the country reaches full employment, the struggle to find qualified workers intensifies. An increasing number of well-paying jobs go unfilled. Productivity is suffering. While the overall quantity of available workers is a real and growing problem, the quality, or the skills mismatch between the skills available workers have and the needs of employers, has reached the critical stage. In a study completed last month by Gartner, businesses reported that "70 percent of employees have not mastered the skills they need for their jobs and 80 percent of employees do not have the skills needed for their current and future roles." These dire declarations are being repeated in business surveys across the country.

Graduation rates have steadily increased, and more young people are attending and graduating from college than ever before. However, our talent development outcomes have not kept up with the advanced skills needed, especially in manufacturing, health care and other "middle skill occupations", which need more than a high school degree and less than a four-year degree. Interest from students for middle-skill occupational training is muted due to a lack of understanding of in-demand career pathways and a persistent belief that a bachelor's or advanced university degree is the sole track to meaningful work and a livable wage. The data shows that middle skills employment will be a crucial part of future employment in Northwest Arkansas with about 49 percent of all jobs in 2020 requiring middle skills.

Skill Requirements of Jobs in 2020 for Northwest Arkansas



Source: EL calculations based on ESMI 2018.2

Across Arkansas frustration exists from many stakeholders. Fitting the puzzle pieces to make improvements is a top priority of the business community and elected officials, but identifying simple solutions are difficult. The Legislative Task Force on Workforce Education Excellence recently published the results of their 2017 study. It shows that the lack of preparation for middle skills does not stem from a lack of programs. Their seven-page summary concludes that over 100,000 students in grades 9-12 are enrolled in Career and Technical Education programs

each year, that 89 programs provide education and structured, on-the-job training to almost 4,000 apprentices, and that thousands of Arkansans are served through the Workforce Innovation and Opportunity Act, Trade Adjustment Act, Transition Employment Assistance and dozens of other programs.

If the issue is not the lack of available programs, improvements need to focus on bettering to the delivery system itself. For employers, the best training delivery systems are demand driven, with adequate facilities, informed private sector governance and are attractive to and meet the needs of prospective students. For Springdale, transforming the local skills pipeline into a nationally recognized best practice is the goal.

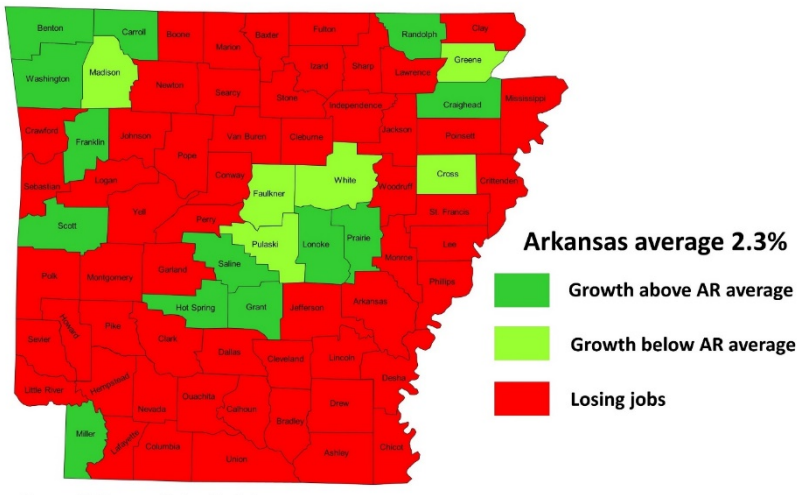
The Chamber leadership understands the complexity of the challenge, its role to represent employers' needs, to connect elements of the pipeline and to be catalyst for continuous improvement. They are committed to being a national leader in business engagement to improve workforce development outcomes. This report examines demand expectations for the near future, local training capacity and best practices in Arkansas and around the country. It focuses on the pipeline from high school through retraining adults. It concludes with recommendations for improvement. It starts with data analysis.

Job and Industry Trends in Northwest Arkansas

A data-driven assessment of high demand occupations and industries can form the basis for better workforce training decisions. In this report, data on employment growth, concentration, and wages was compiled for industries and occupations, and used to determine those with the highest expected future demand. Data was collected from Economic Modeling Specialists International (EMSI) for the four-county region that includes and surrounds Springdale (Benton, Washington, Carroll, and Madison counties). This report will refer to this four-county region as Northwest Arkansas. Employment change was evaluated for the past ten years and projected for the next ten years based on ESMI predictive modeling.

Economic performance in the Northwest Arkansas region has been among the national leaders in recent years. The unemployment rate for July 2018 was 2.8 percent, well below what economists classify as full employment. Real gross regional product growth for the metropolitan area has averaged an annual rate of four percent for the last five years, compared to the national rate of 1.7 percent. In a recent report from the U.S. Conference of Mayors,

Arkansas Change in Jobs 2007-2017



Source: US Bureau of Labor Statistics

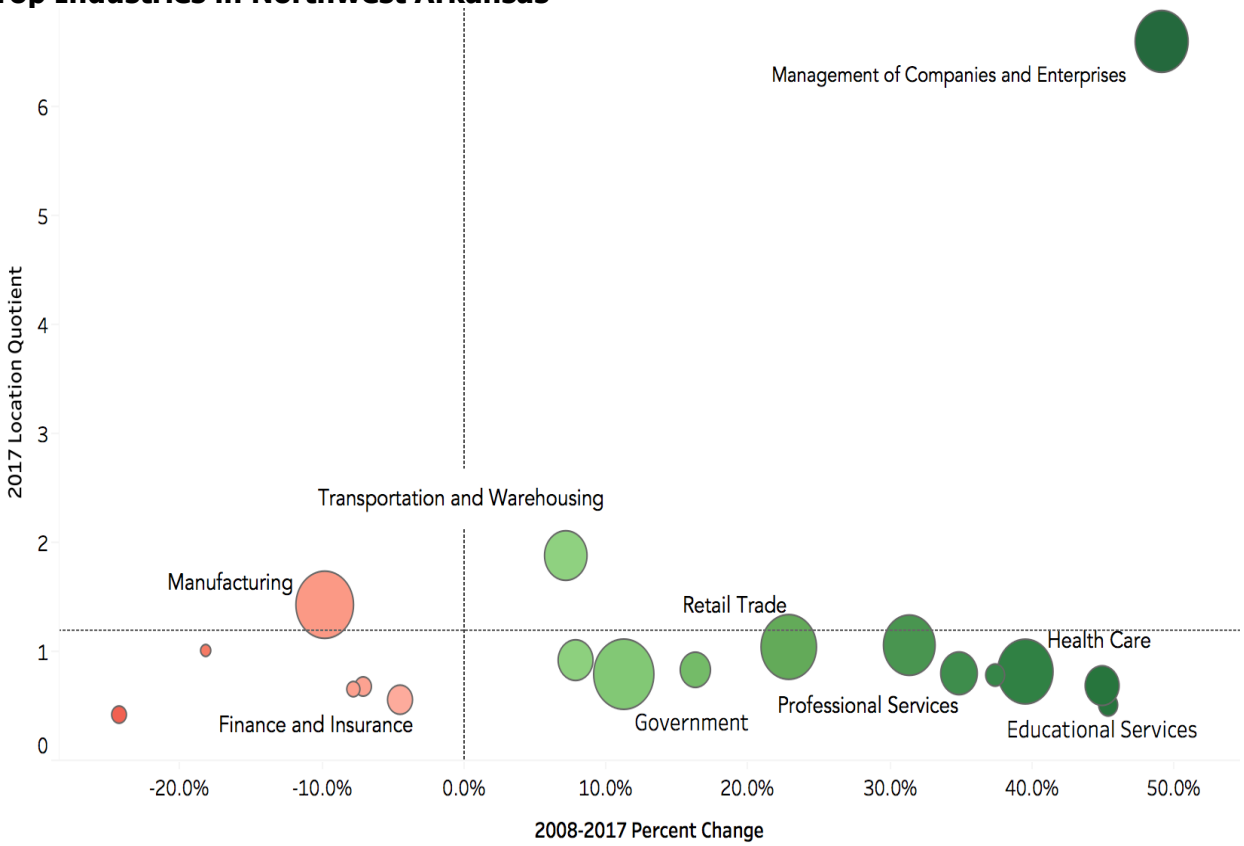
projected economic growth for the region for 2016-2022 is the fourth highest among the nation's 381 metros.

Even as the region has grown, some parts of the state have continued to lose jobs, reflecting a national trend toward urbanization.

Northwest Arkansas has been one of the bright spots for the Arkansas economy over the past decade, but the lack of skilled labor is becoming a throttle that will limit opportunities unless actions are taken to expand the skilled labor availability.

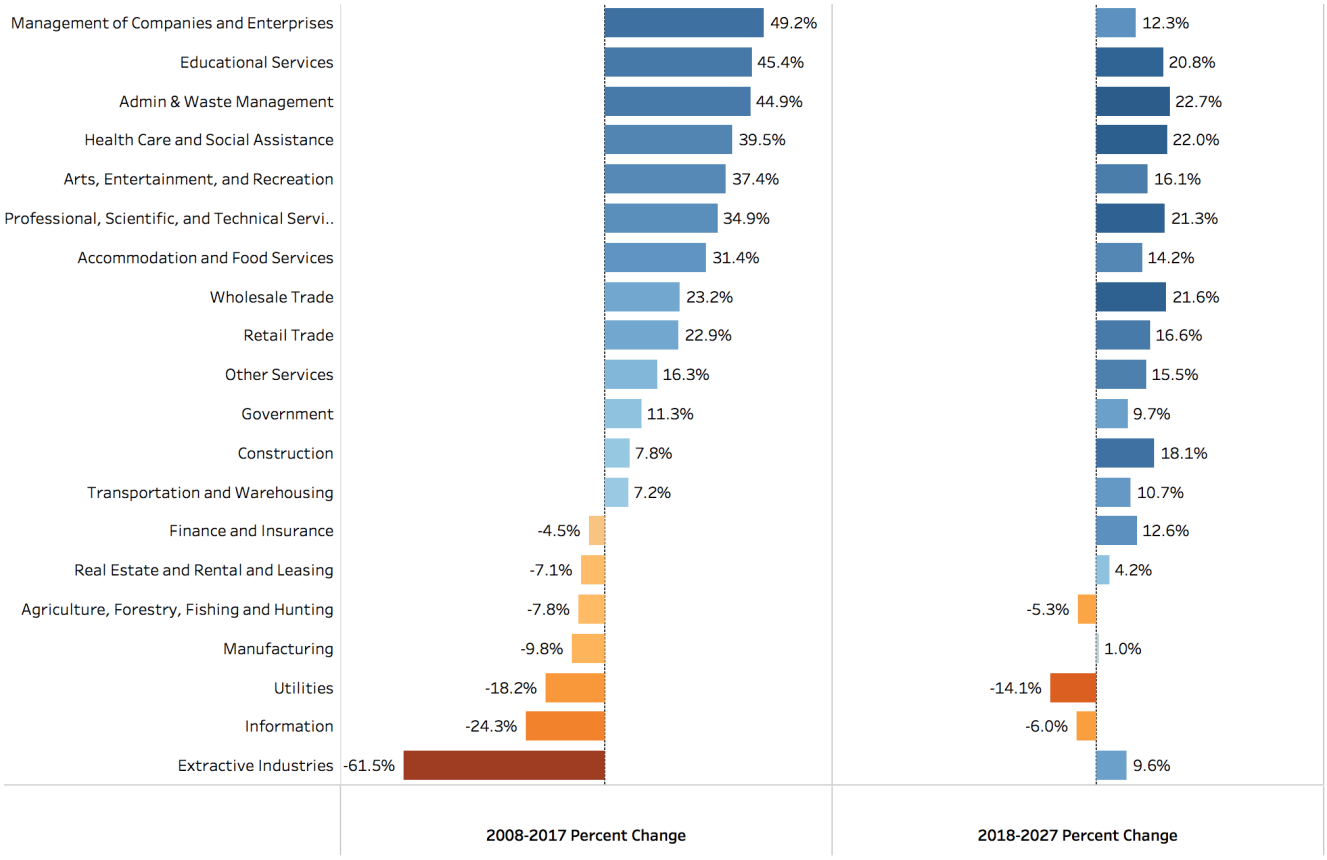
The region benefits greatly from the "Big 3" Fortune 500 companies of Wal-Mart, Tyson Foods, and J.B. Hunt Transport. The number of management professionals is six times more concentrated in Northwest Arkansas than levels for the nation. Management was also the fastest growing industry group (2-digit NAICS code) from 2008 to 2017. The region also has strong location quotients (LQ), a measure of concentration compared to national levels, for the transportation & warehousing and manufacturing sectors. Despite strong concentrations, these sectors were not among the top growing industry sectors in the past ten years. Manufacturing saw an employment decline. This reflects a long-term national trend in increased manufacturing output and reduced manufacturing employment. The industries that experienced the greatest growth were health care, educational services and professional services.

Top Industries in Northwest Arkansas



Source: EMSI 2018.2

Industry Growth Rates from Past Ten Years and Projected for the Next Ten Years



Source: EMSI 2018.2

Methodology for In-Demand Occupations

To best understand the workforce needs of the future, an analysis of the most in-demand occupations in the region was conducted. The analysis evaluated occupations across a variety of factors, including real time job postings and projected annual openings, and created an index to rank occupations against each other. The full methodology and detailed results are in the Appendix at the end of this report.

High Demand Occupation Index

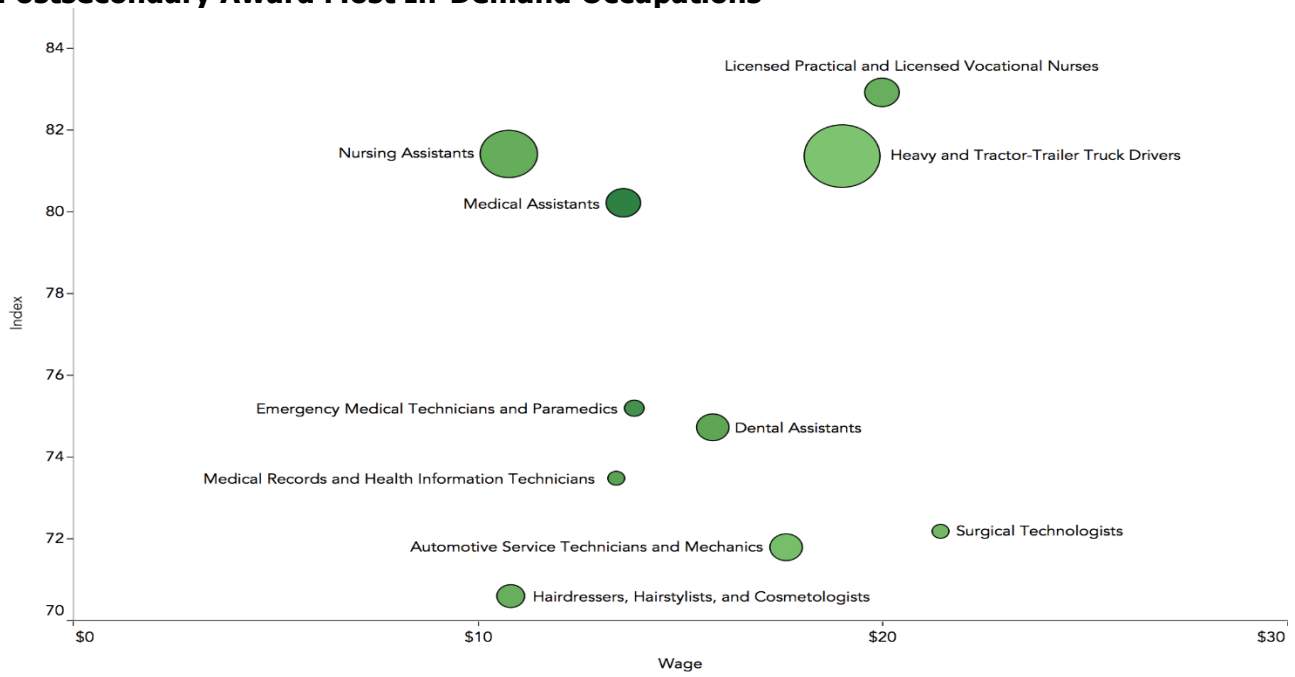
The analysis of performance data for each occupation, detailed in the Appendix, resulted in an index value of 0 to 100. Occupations with a value close to 100 indicate that the occupation is predicted to be in high demand in the region, while a value closer to 0 would show that the occupation is not expected to be in high-demand. The list of occupations was ranked based on their index value. For example, web developers had an index value of 77.7, this was the 23rd most in-demand occupation in the region. The middle-skill occupations were then categorized by their education requirements to demonstrate the highest demand occupations at each middle skill level.

The following charts map the highest demand occupations by education level. On the vertical axis occupations are plotted based on their index value (0 to 100) and on the horizontal axis by their median hourly wage. The size of each bubble indicates the number of annual openings for each occupation. The color of each bubble indicates the level of employment growth in the occupation, the darker the green of the bubble the higher the employment growth.

Associate Degree Most In-Demand Occupations

Source: EL calculations based on EMSI 2018.2

Postsecondary Award Most In-Demand Occupations

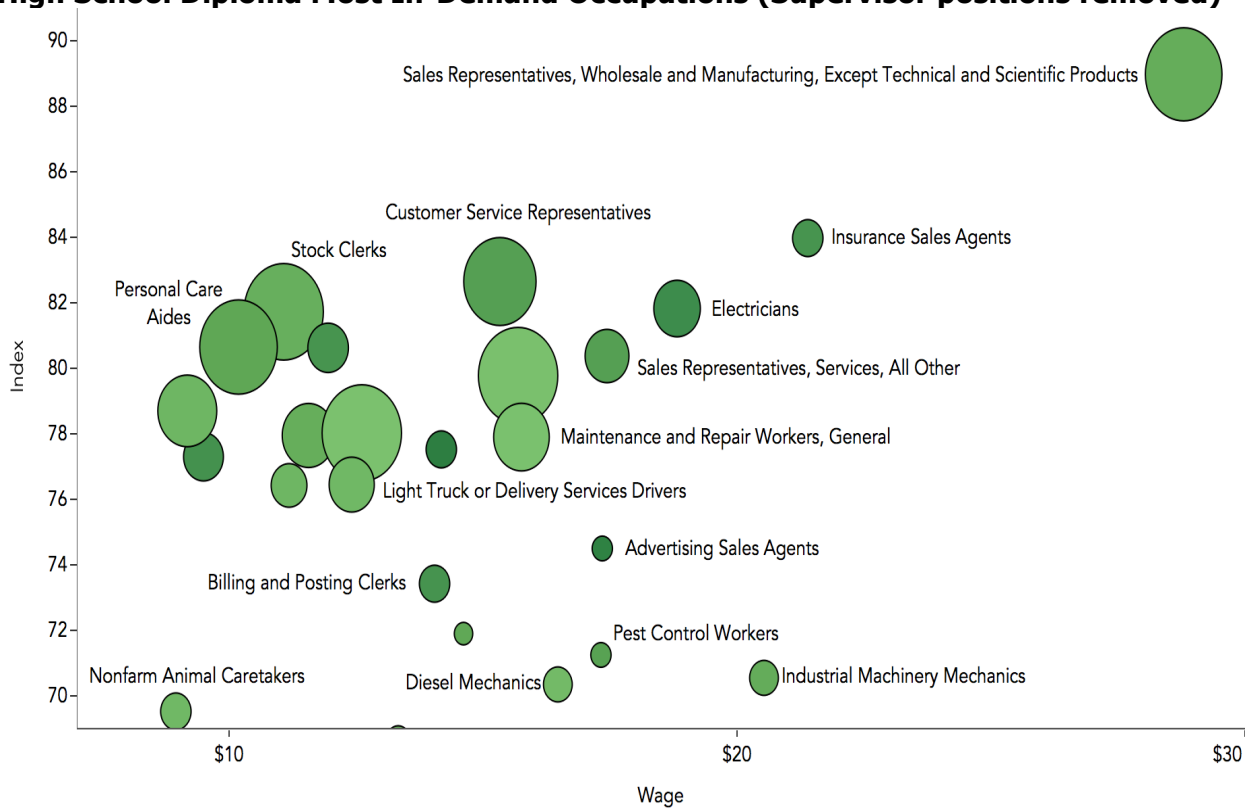


Source: EL calculations based on EMSI 2018.2

Some College, No Degree Most In-Demand Occupations

Source: EL calculations based on EMSI 2018.2

High School Diploma Most In-Demand Occupations (Supervisor positions removed)



Source: EL calculations based on EMSI 2018.2

Top In-Demand Middle Skill Occupations by Occupational Grouping

Business and Financial Operations

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Claims Adjusters, Examiners, and Investigators	115	52.8	17	High School Diploma

Architecture and Engineering

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Architectural and Civil Drafters	138	48.6	19	Associate's Degree
Electrical and Electronics Engineering Technicians	166	42.0	7	Associate's Degree

Computer and Mathematical

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Computer User Support Specialists	5	83.4	103	Some College, No Degree
Web Developers	23	77.7	21	Associate's Degree
Computer Network Support	91	58.7	29	Associate's Degree

Specialists				

Life, Physical, and Social Science

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Chemical Technicians	95	58.0	27	Associate's Degree
Agricultural and Food Science Technicians	121	51.3	33	Associate's Degree

Legal

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Paralegals and Legal Assistants	49	70.6	59	Associate's Degree

Education, Training, and Library

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Preschool Teachers, Except Special Education	31	75.0	101	Associate's Degree
Teacher Assistants	39	73.2	253	Some College, No Degree
Self-Enrichment Education Teachers	79	61.9	47	High School Diploma

Arts, Entertainment, Recreation, and Sports

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Merchandise Displayers and Window Trimmers	44	71.9	26	High School Diploma
Audio and Video Equipment Technicians	108	54.5	12	Postsecondary Award

Healthcare

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Licensed Practical and Licensed Vocational Nurses	7	82.9	104	Postsecondary Award
Nursing Assistants	11	81.4	286	Postsecondary Award
Medical Assistants	17	80.2	104	Postsecondary Award
Pharmacy Technicians	25	77.5	66	High School Diploma
Home Health Aides	26	77.3	123	High School Diploma
Emergency Medical Technicians and Paramedics	30	75.2	36	Postsecondary Award

Dental Assistants	33	74.7	92	Postsecondary Award
Radiologic Technologists	40	73.1	27	Associate's Degree
Surgical Technologists	42	72.2	25	Postsecondary Award
Physical Therapy Assistants	47	71.1	26	Associate's Degree

Protective Services

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Security Guards	15	80.6	136	High School Diploma
Police and Sheriff's Patrol Officers	64	66.9	73	High School Diploma
Firefighters	93	58.5	39	Postsecondary Award

Sales

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1	89.0	466	High School Diploma
Insurance Sales Agents	4	84.0	73	High School Diploma
Sales Representatives, Services, All Other	16	80.4	153	High School Diploma
Advertising Sales Agents	34	74.5	35	High School Diploma
Real Estate Sales Agents	80	61.7	35	High School Diploma

Office and Administrative Services

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Customer Service Representatives	8	82.7	415	High School Diploma
Stock Clerks	10	81.7	509	High School Diploma
Secretaries and Administrative Assistants	18	79.8	541	High School Diploma
Office Clerks	20	78.0	749	High School Diploma
Receptionists and Information Clerks	21	78.0	226	High School Diploma

Construction and Extraction

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Electricians	9	81.8	172	High School Diploma
Carpenters	54	69.8	108	High School Diploma
Plumbers, Pipefitters, and Steamfitters	70	64.1	76	High School Diploma
Operating Engineers and Other Construction Equipment Operators	71	64.0	83	High School Diploma

Installation, Maintenance, and Repair

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Maintenance and Repair Workers, General	9	77.9	245	High School Diploma
Automotive Service Technicians and Mechanics	45	71.8	93	Postsecondary Award
Industrial Machinery Mechanics	51	70.6	67	High School Diploma
Bus and Truck Mechanics and Diesel Engine Specialists	52	70.4	66	High School Diploma
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	58	68.3	67	Postsecondary Award
Automotive Body and Related Repairers	69	65.0	37	High School Diploma

Production

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Helpers--Production Workers	76	62.9	276	High School Diploma
Production Workers, All Other	82	61.2	63	High School Diploma
Water and Wastewater Treatment Plant and System Operators	83	61.0	30	High School Diploma
Inspectors, Testers, Sorters, Samplers, and Weighers	99	57.0	137	High School Diploma
Welders, Cutters, Solderers, and Brazers	109	54.1	56	High School Diploma
Packaging and Filling Machine Operators and Tenders	112	53.7	126	High School Diploma

Transportation

Occupation	Rank	Index Value	Annual Openings	Education Requirement
Heavy and Tractor-Trailer Truck Drivers	12	81.4	1,195	Postsecondary Award
Light Truck or Delivery Services Drivers	27	76.5	162	High School Diploma
Driver/Sales Workers	28	76.4	101	High School Diploma
Bus Drivers, School or Special Client	67	66.4	111	High School Diploma
Bus Drivers, Transit and Intercity	97	57.7	14	High School Diploma

Several occupations emerge as clear "high-demand" opportunities for training. Some would benefit from Career and Technical Education (CTE) courses in high school, others from post high school credentials or an associate degree. Although broad opportunities exist, some of the occupations that deserve increased educational focus include:

Mechanics and Repairs

- -Automotive
- -Diesel
- -Industrial Machinery
- -Refrigeration
- -HVAC

Healthcare Assistants

- -Nursing
- -Medical
- Dental
- Home Health

Electricians
Truck Drivers
Computer User Support
Sales with Focus on Wholesale Trade

Reviewing current data on CTE enrollment can provide context for how current efforts match the data analysis. The following table shows the most popular CTE courses in the state based on the number of students who enrolled in 2016-17. The most popular CTE course was Computerized Business Applications, which was taught to nearly 16,000 students in 270 schools. Food, family, and agriculture-based classes dominate the other top CTE classes in the state.

2016-17 Course	# of Students	# of Schools
Computerized Business Applications	15,947	270
Family & Consumer Sciences	13,300	258
Food & Nutrition	8,683	214
Survey of Agriculture Systems	8,168	221
Child Development	7,370	219

Parenting	6,685	203
Financial Literacy	5,096	158
Digital Communications I-Digital Layout and Design	4,578	186

Source: *Career and Technical Education in Arkansas's K-12 Schools.* January 23, 2018

Data on Springdale CTE Completions

Looking at the statewide CTE programs of study there is some mismatch with demand. In the state there is no electrician CTE program. For automotive service technology there are 104 schools (40 percent) offering a program in the state. There are 37 accounting programs in the state (14 percent). The medical professions track is the most represented category from the in-demand jobs list with 65 percent of schools offering the CTE program. For repair and machinery jobs outside of general automotive repair, there are fewer programs across the state. About eight percent of all schools in the state offer an industrial equipment maintenance program, six percent of schools offer a diesel technician program, and five percent offer a Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) track.

Students who take multiple classes within a specific program of study in career and technical education are granted what is termed a CTE Completion. The chart below shows the CTE completions for the 2017-2018 school year by program of study. Currently, Springdale and Har-Ber High Schools are producing CTE completions. The Medical Professions track was the most popular CTE program with 99 completions last school year. This is encouraging as health care positions are in high demand. Although it would be helpful to get completions in other programs up to the levels seen for Medical Professions.

Number of CTE Completions Per Program of Study, 2017-2018

The number one in-demand job in Northwest Arkansas is sales representatives for wholesale and manufacturing companies. This occupation has a predicted need for 466 new workers each year. This job only requires a high school diploma and the median wage is over $28 per hour. The most comparable CTE program, marketing, had just seven completions in the last school year. Three different sales occupations ranked in the top 20 of the occupational demand index, but there is not a direct link from CTE training to local job.

Construction technology had 15 completions last year. Electricians, carpenters, plumbers, and construction equipment operators were all top 100 in demand jobs for Northwest Arkansas. These occupations, in total, will need 439 workers per year to keep pace with retirement and growing demand. Even though there is a CTE program that can train and certify students, these programs are currently underutilized.

Comparing the data from occupational demand and local CTE programs demonstrate an opportunity to better align local opportunities with local programming. In addition, enrollment in existing programs needs to be increased. The chamber and the school system should coordinate this CTE data with a follow-up assessment to determine outcomes for students with CTE completions. Knowing how many students secured jobs in their CTE field can be helpful information for promoting more utilization by students.

Comparing Springdale Workforce Efforts with Other Communities Across Arkansas

To ensure the Springdale Chamber of Commerce is maximizing its workforce efforts, and to identify areas where statewide improvements could be recommended, Springdale's efforts were compared with other large cities in the state. This review guided a list of best practices for local chamber efforts in middle-skill workforce development. We then looked for opportunities for Springdale to align with these best practices.

First, the current workforce development activities were reviewed for the Springdale Chamber.

Springdale, AR
Regional WIOA Workforce Center: No

Key Assets:
- -Northwest Technical Institute
- -Northwest Arkansas Community College
- -Don Tyson School of Innovation

Chamber Efforts:
- -Regional Workforce Summit
- -Employer Survey
- -Academy for Career Educators in Springdale (ACES)
- -*AIM* Career Guide for Students
- -Business & Industry speakers in schools

Assets
Springdale benefits from several workforce training assets in the community. The commitment to reaching a younger generation for training for technical job skills is evident in the effort to create the Don Tyson School of Innovation (DTSOI). The charter school operates within the public-school system and opened in the fall of 2014 with a class of 8th graders. Now the school has over 800 students enrolled and is expanding to a grade 6 through 12 offering. The school offers an accelerated high school experience, so students can pursue advanced learning in academia or industry.

The impact of the school will become clearer over time as its graduates head into the workforce or higher education, but the effort shows the community is committed to training students for readiness in career and college. Students at other high schools also can train for careers through Career and Technical Education (CTE) classes and partnerships with postsecondary schools in the region. The Northwest Technical Institute (NWTI) and Northwest Arkansas Community College (NWACC) offer programs for high school students to take courses for free or reduced fees as well as traditional in-school CTE programming.

Student Certifications

As part of CTE programming, students can earn certain industry certifications that can demonstrate proficiency to potential employers. Employers can benefit by knowing that a potential candidate already has a baseline understanding of their field. In the 2017-2018 school year, students in the Springdale School District earned 352 certifications. The majority of the certifications come from training on Microsoft Office software. In terms of matching up with the in-demand occupations determined earlier in this report, healthcare certifications are popular, especially at the DTSOI. 47 Springdale students received NCCER certifications, a certification for the construction industry. Another 58 certifications were granted for OSHA's 10-hour training course which focuses on workplace safety and reducing jobsite hazards.

Springdale District Student Certifications Earned 2017-2018

Certification	SHS	Har-Ber	DTSOI	TOTAL
Autodesk Certified User - Inventor	4	4		8
Autodesk Certified User - Revit	5	2		7
Child Care Assistant	8			8
Child Care Teacher	7			7
CPR	9		29	38
DCCECE Child Care Orientation Training	15			15
DCCECE Child Development: 3-5	5			5
EverFi Financial Literacy	11			11

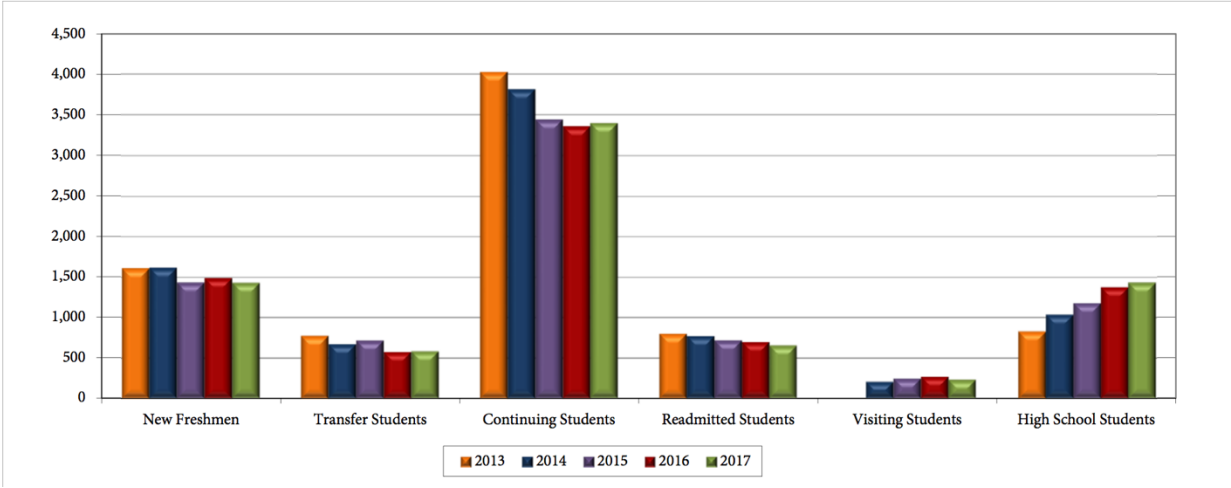
First Aid			29	29
HIPPA			24	24
MOS 2013 Access	19	4		23
MOS 2013 Excel	11	10		21
MOS 2013 Outlook	1			1
MOS 2013 PowerPoint	12	41		53
MOS 2013 Word	8	30		38
MOS 2013 Word Expert Pt 1				0
MOS 2013 Word Expert Pt 2				0
NCCER		21		21
OSHA 10		43		43
TOTAL	115	155	82	**352**

Certifications represent an opportunity to coordinate with the business community to make sure local companies are aware that students can get certified in certain skills before they reach the employer. The ability to certify students before they even apply to a local company can be a great asset for local businesses as it represents less training having to be conducted after hire. Employers should be sharing information on specific certifications with the school district that would benefit the students the most. There are more certifications that could be added that are more in line with future occupational demand.

Partnership with Community and Technical Colleges

The data shows that an increasing number of high school students are taking advantage of CTE programs that combine instruction with nearby community and technical colleges. While use of these assets by high school students is on the rise, overall utilization could be much higher. The graph below displays the populations that make up the enrollment at NWACC over the past five years. While the number of new freshman and continuing students has slowly been falling in recent years, (a common experience for community colleges in good economic times) the number of high schoolers attending classes has risen.

Northwest Arkansas Community College (NWACC) Enrollment by Student Type, 2013-2017



Source: NWACC

In the Fall of 2017, almost 825 high school students from Benton and Washington counties were enrolled at NWACC. This accounted for 15.3 percent of the all the public high school students in these counties. Springdale High Schools (Har-Ber and Springdale High) had the highest rates of NWACC utilization in Washington County with 15.9 and 18.9 percent respectively. These levels were lower than Benton County schools, likely due to proximity to NWACC.

Postsecondary Education

Education at the local community college beyond high school is still focused on obtaining associate degrees that assist with transferring to four-year universities. NWACC awarded 753 associate degrees in 2016-2017, almost 500 of these were transfer degrees. The average number of NWACC students that go on to four-year colleges is 550 students annually.

The following chart shows the degree and certificates awarded by NWTI and NWACC in 2016. Liberal arts represent the largest number of program completions in 2016, followed by medical/clinical assistant and cosmetology. The difference in completions compared to the annual openings calculated in the earlier part of this report show serious gaps. Consider licensed practical nurses as an example. The in-demand analysis determined that there would be on average 104 openings for this position annually. The postsecondary schools in the region trained only 44 workers for these positions. The region is expected to need 172 electricians annually but only 13 students completed training in 2016 and that number has been trending down.

Top Program Completions of Associates Degree or Lower in Northwest Arkansas, 2016

Description	2016 Completions	Percent Change (2011-2016)
Liberal Arts and Sciences/Liberal Studies	413	6%
Medical/Clinical Assistant	164	413%
Cosmetology/Cosmetologist, General	162	-30%
Registered Nursing/Registered Nurse	84	5%
Business Administration and Management, General	73	97%
Business/Commerce, General	69	3%
Emergency Medical Technology/Technician (EMT Paramedic)	63	-17%
Licensed Practical/Vocational Nurse Training	44	5%
Aesthetician/Esthetician and Skin Care Specialist	43	72%
Massage Therapy/Therapeutic Massage	37	-35%
General Studies	35	75%
Computer and Information Sciences, General	33	-48%
Culinary Arts/Chef Training	29	867%
Health Information/Medical Records Technology/Technician	26	--
Nail Technician/Specialist and Manicurist	18	64%
Health Services/Allied Health/Health Sciences, General	16	--
Automobile/Automotive Mechanics Technology/Technician	15	-17%
Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	14	17%
Electrical, Electronic and Communications Engineering Technology/Technician	13	-32%

Legal Assistant/Paralegal	13	-19%
Commercial and Advertising Art	13	-38%
Physical Therapy Technician/Assistant	13	8%
Dental Assisting/Assistant	12	71%
Early Childhood Education and Teaching	11	120%
Criminal Justice/Law Enforcement Administration	11	--
Criminal Justice/Safety Studies	11	10%
Diesel Mechanics Technology/Technician	11	-8%
Industrial Mechanics and Maintenance Technology	10	-17%
Respiratory Care Therapy/Therapist	10	-33%
Surgical Technology/Technologist	10	-9%

Source: EMSI 2018.2

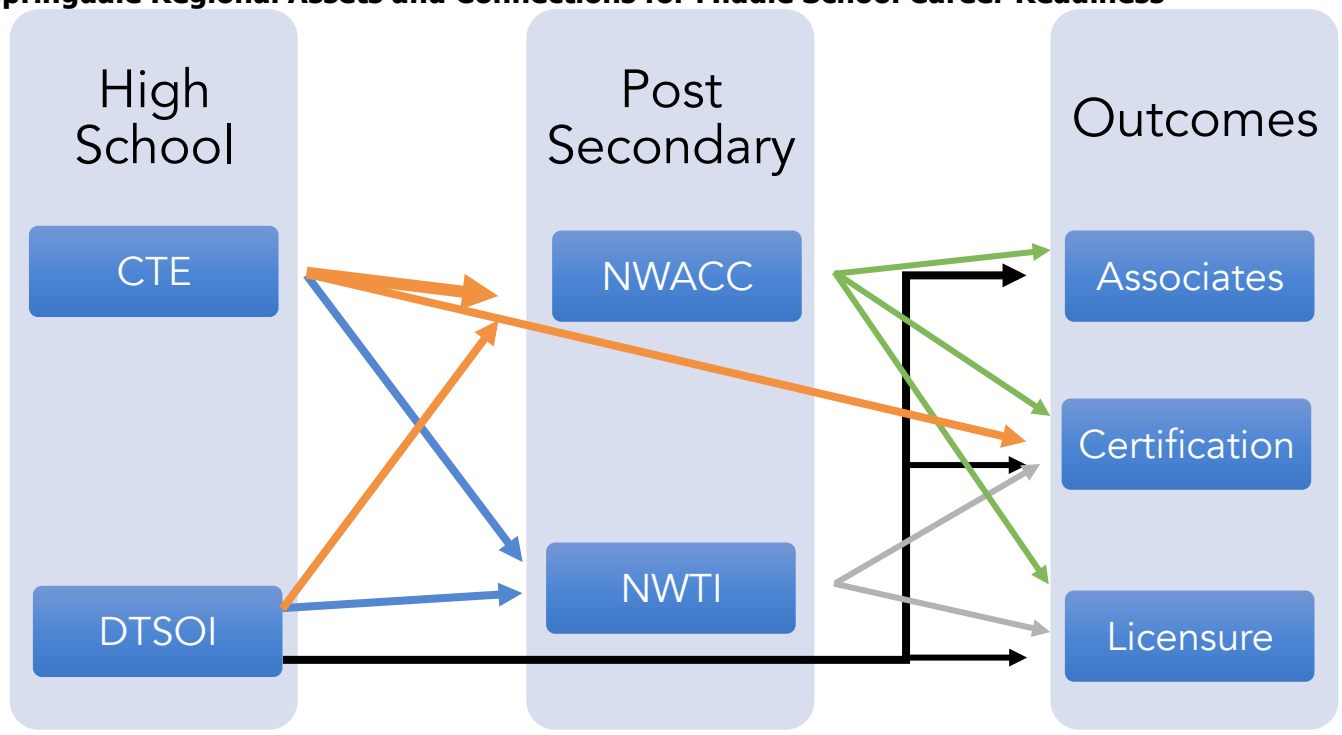
NWACC has a higher percentage of students that go on to transfer than the average of Arkansas' two-year colleges. About 16 percent of incoming freshman, on average, graduate with a degree in three years.

Average Success Rates for NWACC and Arkansas 2-Year Colleges, 2011-2013

	Grad Rate	Transfer Rate	Success Rate
NWACC	15.7%	19.6%	35.2%
Arkansas 2-Year Colleges	24.2%	12.9%	37.1%

Source: NWACC

Springdale Regional Assets and Connections for Middle School Career Readiness



The Springdale District has many assets in workforce training including high school CTE certification, DTSOI's accelerated program offering free postsecondary classes, and two

postsecondary institutions nearby. However, the data from these assets compared with the data from the in-demand occupations analysis show a need to further align the efforts between the school district, postsecondary institutions, and local business to improve the match between the programs and certifications are being offered and the job opportunities for graduates.

Workforce Development Efforts

The Springdale Chamber positions itself as a conduit and catalyst for change between its many industrial members and the regional education assets. Their primary method of making these connections has been to host events. The Northwest Arkansas Workforce Summit is the only workforce dedicated summit in the region that brings the three key players to the same table (industry, policy makers, and educators). The event also includes a career expo that brings in high school students to meet with local employers. The event shows Springdale as a regional leader in addressing the workforce issue. It also helps keep the region at the forefront of workforce ideas by bringing in thought leaders in the field.

A similar 'conduit' event is the Academy for Career Educators in Springdale (ACES). The three-day event started by the chamber a few years ago brings in CTE educators and acts as a continuing education effort. The event includes talks from thought leaders, industry speakers, and site visits. The event helps attending educators stay up-to-date with the needs of the industry and take these lessons back to their students. This type of effort is considered a best practice nationally. Interviews with industry representatives often suggest that they feel that teachers are out of the loop on the current technology and skills used on the job. Events like this are sponsored by local industry. Last year, ACES was sponsored by three major local employers.

The *AIM* workforce magazine produced by the chamber is a recent effort to help spread information about the demand and opportunity for middle-skill careers to the community. The magazine has features on all the major employers in the area and their greatest employment needs. Each feature also highlights local companies' willingness to pay for training and advanced education for its committed employees. In the magazine's first year it was distributed to over 10,000 students in 16 school districts across Northwest Arkansas. Many believe a key to addressing the middle-skills gap is changing the narrative about technical trades. The *AIM* magazine is a direct effort to address this disconnect in the community.

The chamber also surveys its top employers. The goal is to generate real time information to better understand what issues are driving workforce shortages in their company and get actual data on which certifications are required for employment. The survey will impact what occupations and training programs the chamber focuses its efforts on for the future.

Future Opportunities

Springdale has several technical educational training assets and is consistently working to build more partnerships between industry and education. The types of training offered, and certifications pursued, may need adjustment based on input from the in-demand occupation analysis and future business discussion. However, the region seems to suffer from lack of student enthusiasm more than problems with programming. At this point, efforts to change the narrative and demand for training by exposing students at younger ages to pursue these types of careers might be more important than creating additional training programs. Efforts to

provide consistent data regarding job demand to the community, particularly to parents, are needed to help shift the rhetoric and help fill these existing programs.

Program Completions Data for Springdale Education Assets, 2016

Institution	Year to Year Growth	All completions	Distance Programs Offered
Northwest Arkansas Community College	(10.6%)	939	504
Northwest Technical Institute	6.7%	160	0
Total		**1,099**	**504**

Source: EMSI 2018.2

Facilities are a concern and a limiting factor for training in Springdale. NWTI is severely limited by classroom space and is forced to spread out its high school programs across seven sites. NWTI graduated 160 students in 2016. When compared with the annual new local worker demands, the difference is startling. The NWTI campus is outdated and projects an image of middle-skill occupations that harkens to the past rather than the future. A recent audit by the Arkansas Trucking Association found that the diesel technology facilities at NWTI were cramped and outdated. When chronicling best practice facilities for middle skill jobs, most are modern campus-like facilities, with attractive new buildings and equipment.

NWACC only has a few satellite locations in Washington County and those only offer certain classes. The full programming occurs at the Bentonville location, although construction recently began on a new campus in Springdale.

One additional concern emerged. Lack of graduates may also be impacted by the lack of soft skills in applicants. According to Carl Desen, diesel technology teacher at NWTI, "Last January there were 16 applicants for our diesel program of whom we selected 12. Before the semester started four had dropped out and only five students made it through the first semester."

To determine best practices and provide context for workforce activities in Springdale, we evaluated other Arkansas cities to see how they were addressing workforce development.

Comparison Methods

To gather a list of comparable cities in Arkansas, city populations were evaluated and a population range between 50,000 and 100,000 was deemed to be comparable to Springdale with its population of about 82,000. The table below identifies the top population centers in the state. Little Rock has too large a population to be reasonably comparable as it is likely to have greater access to resources than Springdale. Fayetteville and Rogers have similar populations but given their close proximity to Springdale it was determined that assets and efforts would be similar to Springdale's. Therefore, Fort Smith, Jonesboro, North Little Rock, and Conway were reviewed for their workforce development activities for state best practices.

Top Cities in Arkansas by Population

Arkansas Cities by Population Rank	City	Population
1	Little Rock	198,594
2	*Fort Smith*	*88,028*
3	Fayetteville	85,258
4	**Springdale**	**82,397**
5	*Jonesboro*	*75,867*
6	*North Little Rock*	*65,920*
7	*Conway*	*65,790*
8	Rogers	66,432

Source: US Census Bureau ACS 2017 (1 Year)

Fort Smith, Arkansas

Regional WIOA Workforce Center: Yes

Key Assets:

-Go Ye Employment Services
-Regional Workforce Grants at University of Arkansas at Fort Smith

Chamber Efforts:

-Junior Leadership Academy
-Millage increase approved for Career and Technical High School

Fort Smith Assets

The Fort Smith region does not have a local community college, resulting in very different development assets than Springdale. The Western Arkansas Planning & Development District (WAPDD) works to train and retrain the area's residents and has a Workforce Innovation and Opportunity Act (WIOA) funded workforce center in Fort Smith. These one-stop centers help employers and job seekers with all the information and resource connections they need. WAPDD has board members who have conducted research and chosen the top industries on which to focus workforce development efforts.

For the Fort Smith region, the three clusters were food manufacturing, food services, and administration services. These WIOA job centers are equipped to focus on underrepresented and marginalized communities. One of the board members of the WAPDD is the CEO of Go Ye Employment Services which is a private entity that works to pair trained employees with local industry. Go Ye Employment also works to promote information about workforce in the region by producing a podcast.

Another resource for Fort Smith is the University of Arkansas at Fort Smith which became a part of the University of Arkansas system in 2002. The university is a four-year degree provider but has embraced efforts to help train the regional workforce for middle skills and reach a younger population. The Regional Workforce Grant is a partnership between the university, K-12 schools, and industry. Industry serves in the capacity of mentors to student participants and advisors to the faculty. The grants support training the advanced manufacturing skills of cyber systems and robot automation. University faculty teaches the classes at a high school location during the school day, eliminating the need for student transportation or schedule disruption.

Fort Smith Chamber Efforts

Recently the community has recognized a need to build training facilities for career readiness. Building a high school focused on career and technical education became a focused effort for the chamber and the community. In spring 2018 the voters approved a millage increase that would fund the career and technical center (CTC) by a surprising and overwhelming majority. The millage increase allocated about $13 million for the new CTC for a focus on three high demand sectors: IT, healthcare, and advanced manufacturing. These additional resources will help to create a career ready contingent of graduates for local industries. The chamber promoted the mileage increase and encouraged the community to invest in its workforce development through the K-12 system.

The chamber focuses its efforts on communicating local opportunities to students through its Junior Leadership Academy. The academy is for juniors in high school to participate in eight events throughout the school year including a retreat and a commencement. The students meet with community leaders from government, industry, and civic organizations. The students join the program to develop leadership skills. From the chamber perspective, it is an opportunity to educate young people about the features of the community. Young people may not know all the assets of the community and may think their best opportunities exist outside the region. One participant stated in a video, "Before I started the program, I thought Fort Smith didn't have a lot to offer. I thought it was pretty boring." After completing the academy, the student found there to be several businesses unique to Fort Smith that they were unaware of before. These students can then become ambassadors for local career opportunities to their peers.

Local leadership, coordinated by the Chamber of Commerce has recently completed a study to improve public schools and UAFS efforts to address specific needs in the high-demand areas of manufacturing, IT and medical.

Jonesboro, Arkansas

Regional WIOA Workforce Center: Yes

Key Assets:

-Arkansas State University – Newport
-Northeast Arkansas Career & Tech Center
-Workforce Training Consortium

Chamber Efforts:

-Myjonesborojobs.com
-Junior Leadership

-Arkansas Scholars
-Tek Starz Summer Manufacturing Camp
-ACT Work Ready Community

Jonesboro Assets
Jonesboro is the economic hub of Northeast Arkansas. To train workers, the region has several assets. As a part of the Northeast Arkansas Workforce Development Area (NEAWDA), Jonesboro is home to one of three regional American Job Centers funded by WIOA. The job center provides specialized services for veterans, people with disabilities, and other marginalized communities. Services include job search assistance, resume assistance, aptitude testing, career counseling, child care referrals, and access to job fairs. While Arkansas State University offers job training for the high-skill careers that require a bachelor's degree, there is a three site, two-year technical college called Arkansas State University – Newport (ASUN). One of the sites of ASUN is in Jonesboro.

ASUN partnered with industry to create specialized workforce training for regional employers. The result is a non-profit, membership-based organization called the Workforce Training Consortium (WTC) that is located across the street from ASUN's Jonesboro campus in the Jonesboro Industrial Park. Local companies join the organization as members. Members then impact the classes that are provided and the curriculum of classes. The members then receive customized training for their employees at reduced costs. The WTC also assists member companies in applying for training grants. The cost of an annual WTC membership is $500. Current courses offered at the WTC include industrial technology, electronics, welding, mechatronics, computer literacy, lean 101, first aid, supply chain management, and professional development.

At the high school level, technical and trade education is concentrated at the Northeast Arkansas Career & Tech Center. The center is located on the Jonesboro High School campus but also serves students from the four surrounding counties, which includes 13 school districts. The center is administrated as part of the Jonesboro Public School District. The building was funded by state and federal grants and a local district bond. Operations funding comes from several different sources. Each participating school provides training fees to the center. Federal and state funding also supports the operation budget of the center. Enrollment in the center's programs has increased over the years as school cooperation has improved. Partner schools bring their students to the center for tours to expose students to the center's opportunities. Partner schools also allow center faculty to speak to students at assemblies about their courses and recruit students.

Jonesboro Chamber Efforts
The main workforce efforts of the Jonesboro Regional Chamber of Commerce focus on K-12 students. The programs are directed by the chamber's workforce development committee. The programs include a junior leadership program, student recognition awards, and Arkansas Scholars. The junior leadership program is an offering for high school juniors to learn more about the Jonesboro community. Students accepted into the program go on an overnight retreat in August to a local state park. A local consultant leads the students through a personality profile exercise. The subjects addressed in later events include city/county government, community service, local industry, economic development, Arkansas State University, and healthcare. The leadership program focuses on community building and civic

participation, the junior leadership program does offer some exposure to local employment and workforce training opportunities.

The chamber also tries to strengthen connections between businesses and students through the Arkansas Scholars program. The program is supported by the Arkansas Business & Education Alliance. Business leaders go to 8th and 10th grade classrooms and discuss the importance of education to achieving long-term success. The presentation also includes a breakdown of a real-world adult budget living on $1,800 per month. This exercise stresses the importance of acquiring additional education or attaining marketable skills. The program also recognizes high school seniors who maintain a certain grade point average and attendance record with an Arkansas Scholar designation and certificate. Local employers have agreed to recognize the achievement as a factor in employment decisions. The local chamber provides all the coordination for the program.

In recent years, the chamber has increased its efforts at exposing students to middle-skill and technological careers through a summer camp. Tek Starz takes 7th and 8th graders and creates games that teach students about manufacturing processes. The camp also educates students about the local industrial community and careers offered in Jonesboro. The Tek Starz camp is hosted at the WTC located in the middle of the Jonesboro Industrial Park.

The chamber was responsible for calling for the community to become ACT Work Ready Community certified. This aligns Jonesboro with a nationally recognized workforce initiative that helps measure and close skill gaps. The distinction requires that a certain number of workers must be ACT National Career Readiness certified and this certification must be recognized by a certain number of local businesses. Over 10,000 businesses recognize the ACT program across the country.

North Little Rock, Arkansas

Regional WIOA Workforce Center: Yes

Key Assets:

-Pulaski Tech College
-Project Lead the Way in Public Schools
-Innovation Center and Maker's Space

Chamber Efforts:

-Identified 5 cluster pathways for workforce pipeline
-Education Committee meeting monthly
-Arkansas Scholars
-Leadership Renaissance

North Little Rock Assets

A key asset in workforce development is Pulaski Technical College, a two-year institution that is part of the University of Arkansas system. The college offers students Associate of Applied Science degrees, technical certificates, and certificates of proficiency for several middle-skill occupations. Technical science education tracks include automated manufacturing systems, aviation, power sports, military technology, CNC machining, welding, and construction management.

Pulaski Tech features a Business and Industry Center. This center is home to industrial labs, classrooms, computers, seminar rooms, and conference rooms. The center provides training specialists who can train local workers, or the space is available for rent to local businesses who want to conduct their own training. The industrial lab is well stocked with vision, robotic, and other automated manufacturing systems. The center offers six specific advanced industrial training courses with this equipment. The center also offers courses in professional development and computer applications. The professional development catalog focuses on soft skills and management skills. Many employers today say that there is a soft skills gap alongside the middle-skills gap.

In the K-12 school system in North Little Rock, they are heavily focused on using the national Project Lead the Way (PLTW) curriculum. PLTW is a non-profit that creates a series of modules to expose students to real-world STEM applications. The curriculum is also based on developing problem solving and creative thinking skills in students. There is a program for elementary schools called PLTW Launch and for middle schools called PLTW Gateway. Then in high school the curriculum is split into three different tracks (computer science, engineering, and biomedical science). Each program has several modules, with each module accounting for 10 hours of classroom time. PLTW provides professional development training for teachers, live classroom support, and other services. The Gateway and Launch program each cost $750 annually. Operating all three of the high school PLTW programs costs $5,000 annually. Pulaski Tech offers a PLTW summer enrichment camp in June every year for middle schoolers. The camp includes designing, building, and launching a rocket as well as a visit to a science museum. The camp is provided free by Pulaski Tech's STEM Success program which focuses on recruiting underrepresented students into STEM fields.

North Little Rock also is the site of a workforce job center as part of the Central Arkansas Workforce Development Area (CAPDD). The board adopted a document in 2016 called LEVERAGE, which used employment data to determine the top seven in-demand industry sectors for the workforce centers to channel their efforts.

A unique and newer asset in workforce development for the North Little Rock community is The Innovation Center. The center is both a co-working space for remote workers and entrepreneurs, but also includes a makerspace and a design studio. The makerspace includes advanced manufacturing equipment, a carpentry shop, electronics and prototyping equipment, and a metal shop with plasma cutters and welding equipment. The design studio features a digital design studio, ceramics shop, screen printing equipment, and art studio. While the center offers classes to the entire community, there is a strong commitment to bringing in young students and displaying new trades and skills.

The Innovation Center hosts field trips that cost $6 per student, an after-school program, and various summer camps. The CEO is a former MIT graduate, person of color, and grew up in the area. The CEO is committed to bringing STEAM exposure to young underrepresented communities. For those who cannot make it to the physical space, the center now has a traveling "STEAM roller" that can conduct exhibitions in any space. It cost $2.5 million to renovate a former lumber company headquarters into The Innovation Center. Half of this was funded through public sources, including a $1 million U.S. Economic Development Administration grant.

North Little Rock Chamber Efforts
The chamber of commerce in North Little Rock filters its workforce development efforts through its Education and Workforce committee. The committee meets monthly at the chamber. The chamber coordinates and supports the Arkansas Scholars program that was detailed in the Jonesboro section. In North Little Rock, about 300 students, parents, and business leaders attend the final ceremony where seniors who complete the program are given their certification. At the banquet, students are put in a drawing to win scholarships.

The other major effort taken by the chamber to connect business with future workers is coordinating the Leadership Renaissance program. Open to high school juniors the program offers professional and leadership development training that includes financial literacy, personal branding, and team building. Student also attend sessions that discuss aspects of the community including economic development, education, government, and law. Business leaders participate by speaking or hosting site visits and students are encouraged to make connections to future employment opportunities. The cost for the student is $50 with some scholarships available. Students are also responsible for their transportation to each event.

Conway, Arkansas

Regional WIOA Workforce Center: Yes

Key Assets:

-Workforce Training Center at UACCM new LEED constructed facility
-Workforce Approved Training Programs at University of Central Arkansas

Chamber Efforts:

-Outlook Conway
-Conway 2025 Strategic Plan
-Teacher Fair

Conway Assets
Like all the other case study areas, Conway is host to a WIOA-funded workforce center that assists adults, dislocated workers, and youth with their employment needs. The CAPDD also has a business services project coordinator that helps local industries with finding skilled workers and accessing federal grants and tax credits. CAPPD also provides regular data reports for each county in its region on their employment, workforce, commuting patterns, and in-demand industries.

Conway is home to three four-year universities. Two of these are private institutions. The local public institution, University of Central Arkansas, has created a Workforce Approved Program that offers career training certificates. These programs are approved for WIOA. The programs include certification in coding, Lean Six Sigma, web development, and computer administration.

The closest two-year post-secondary institution is in nearby Morrilton. The University of Arkansas Community College at Morrilton (UACCM) recently finished construction on a 53,000-square foot Workforce Training Center (WTC). The facility will be LEED certified and state of the art, including the largest welding training facility in the state. Other laboratories the WTC will host are HVAC, automotive, and industrial mechanic and maintenance. The new facility allows UACCM to double its student enrollment. The facility was funded by support from federal and

state grants, community supporters, industry partners, and UACCM employees. Federal money included a $1.1 million from a U.S. Economic Development Administration grant. The center will allow businesses to train their current employees, as well as creating a pipeline of future employees.

Conway Chamber Efforts

The most unique feature of the Conway Chamber of Commerce's effort is their commitment to their strategic plan. The community came together in 2010 and created the Conway 2025 plan. The plan defined 132 goals to be achieved in the next fifteen years. At Economic Leadership, we have seen such an approach popular among regional economic development groups but less so at the local level. Nonetheless, the plan coordinates all the chamber's activities toward seven key goals. "Keep Conway Learning" and "Keep Conway Working" are two of the key pillars of Conway 2025. The strategic plan also informs the curriculum for the Conway Area Leadership Institute. This program takes emerging adult community leaders through the strategic plan initiatives and encourages civic engagement.

The chamber focuses much of its education efforts currently on preschool development. The chamber helped create a nonprofit called Arkansas Preschool Plus. They ensure that area preschools have the best trained workers and curriculum. Arkansas Preschool Plus offers regular family nights to engage parents.

The chamber has been hosting an annual event called Outlook Conway that brings together the businesses, educators, and policy makers to discuss the greatest needs for continuing economic development. The chamber is using the event to give businesses the opportunity to communicate that young people can achieve high-paying jobs through career training without a four-year degree. The chamber also hosts a Teacher Fair that brings local industry and educators together to educate teachers on local career opportunities that exist for students.

National Best Practices in Workforce Development

As stated in the introduction, across Arkansas and the United States, "the universal problem" for businesses is an inadequate pipeline of skilled workers that constricts companies' ability to grow or even survive. In April 2018, Arkansas State Chamber President & CEO Randy Zook used the phrase "universal problem" to describe this most pressing issue.[i] Jason Green, Vice President of Human Resources at Swiss manufacturer ABB in Fort Smith, says "what we don't have is a pipeline of talent to fill the jobs we already have open," adding that their most experienced (older) workers "are going to be fishing soon."[ii] Springdale businesses joined the chorus in recent interviews.

Businesses and workforce experts see a tight labor market now, and one that may continue to inhibit business and economic growth over the next ten years unless the workforce pipeline is

improved. With aging baby boomers, declining birth and labor force participation rates, all indications are that the current situation may get much worse.

A national review of what communities are doing reveals a rapidly evolving, aggressive and multifaceted approach that addresses many different points in the pipeline. To transform workforce development, stakeholders in cities, regions, and states are innovating along these seven themes:

1) **Clear Career Pathways**
2) **Upskilling and Reskilling of Existing Workers**
3) **Apprenticeships and other Work Experiences**
4) **Business Involvement and Program Support**
5) **Industry Sector Strategies**
6) **Increased Career Awareness**
7) **Talent Attraction**

Following are examples of best practices from across the nation in each of these seven areas, with an emphasis on award-winning programs that could offer ideas for Springdale.

1) Clear Career Pathways

The term Career Pathways refers to a workforce development strategy used to support workers' transitions from education into and through their time in the workforce. Career pathway programs are usually a group of aligned programs and services that develop a student's academic, technical and job skills with the goal of preparing them for specific high-demand, high-opportunity jobs. A career pathways initiative often consists of a partnership among K-12 school systems, community colleges, workforce and economic development agencies, local and regional employers, and social service providers. The key to career pathway program success is consistent input from regional industries, with the education and training offerings aligned from K-12 schools through community colleges and four-year universities.

National Best Practices:

Florida Advanced Technological Education Center (FLATE) Engineering Technology Degree Program – FLATE's Engineering Technology program is a 2015 National Career Pathway Network (NCPN) award winner. The curriculum was created in conjunction with the state's manufacturing firms and the Florida Department of Education. Designed to improve the state's advanced manufacturing workforce, it integrates the national Manufacturing Skill Standards Council (MSSC) certification. Nineteen of Florida's 28 community and state colleges have now adopted the Engineering Technology degree program.

Secondary students who complete the MSSC certificate curriculum earn 15 college credit hours toward the Engineering Technology major. There are multiple entry points for students, including opportunities for adult learners and veterans returning to the civilian labor force. FLATE's "Made in Florida" tours bring students to over 100 manufacturing sites. In addition, teacher professional development experiences are offered during the school year and in the summer.

Ranken Technical College (Missouri) Certified Dealership Technician Program – A NCPN Excellence Award co-winner in 2017, Ranken Tech's program in St. Louis partners with Ford, General Motors, Toyota, Honda, Audi, and Chrysler to provide state-of-the art facilities and training for the automotive technician pipeline. Students alternate between eight weeks of on-campus classes and eight weeks of paid, work-based learning. Over the past four years, full-time students graduating from the program have a 100 percent initial job placement rate with sponsoring dealerships.

In addition to hands-on STEM activities for middle and high-school students, career exploration events are offered for high school teachers and counselors. Teachers receive a stipend to participate in 40 hours of STEM career exposure programming.

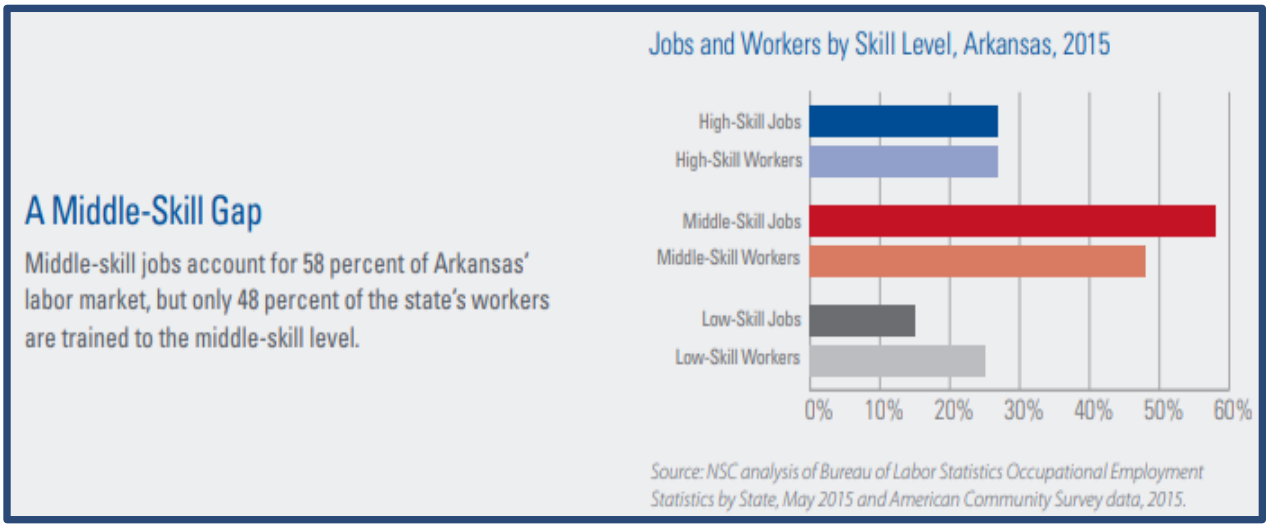
Delaware Technical Community College, Advanced Manufacturing Pathways Program – Delaware Tech's AMPP was a 2016 National Council for Workforce Education (NCWE) Exemplary Program. AMPP is a dual enrollment initiative for high school juniors and seniors to obtain the skills and certifications needed to start a career immediately upon graduation. The first student cohort graduated in 2016.Students receive over 600 hours of instruction and hands-on experience at Delaware Tech's Innovation Technology Centers around the state and complete a 200-hour paid "craftsmanship" after their first year of instruction. This emphasis on paid work experience sets the program apart from some other dual enrollment efforts. AMPP credits "broad and deep partnerships" with local manufacturers, as well as with the state departments for education and labor, for a strong program design.[iii] Industry craftsmanship partners include AstraZeneca, Dupont, and Perdue Foods.

Ceres High School's MPGT Academy (California) – Another NCPN Excellence Award co-winner in 2017, Ceres High School's Manufacturing, Production and Green Technology Academy offers a four-year career and technical education pathway for manufacturing. A partnership with the local community college provides concurrent credits for students in grades 10-12. Manufacturing business partners include E. & J. Gallo Winery, Frito-Lay, Parker Hannifin Racor, and many others. Gallo provides paid internships. A team of over 50 mentors from 15 area businesses meets with students monthly, hosts mock interviews, and facilitates a ten-week Gateway-to-Industry boot camp.

2) Upskilling and Reskilling Existing Workers

In workplaces that increasingly call for technical knowledge and abilities, a pressing need is for existing adult workers to gain additional skills. This is often termed "upskilling" or "reskilling." Helping existing employees improve their skills buttresses them against rapid advancement in robotics and automation. Eight-two percent of company executives say that the skills gap in America will impact their firms' ability to meet customer demand.[iv]

This is an important issue in Arkansas where the educational attainment of nearly half of the adult population (976,000 people) is a high school diploma or less, and another 446,000 adults (23 percent of the population) have some college but no degree.[v] The skills gap is significant for middle-skill occupations, which the National Skills Coalition estimates account for 58 percent of all jobs in Arkansas, but only 48 percent of the workforce has middle-level skills.[vi]



Upskilling can also impact labor force participation among groups that are underemployed. This includes unskilled adult workers, disconnected youth who are neither in school nor working, and ex-offenders re-entering the labor market. Also, military veterans can face underemployment when transitioning to civilian life, needing assistance to translate their work skills and experience.

Nationally, focal points for upskilling include more concentrated, short-term training with flexible schedules for adults to obtain specific industry credentials, and targeted efforts to improve outcomes for underemployed groups.

National Best Practices:

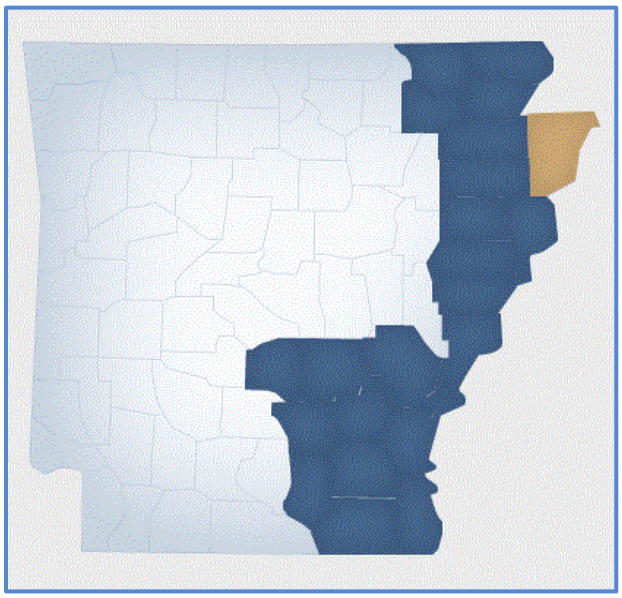
San Diego Workforce Partnership – The Partnership is a 2018 National Association of Workforce Boards (NAWB) award winner for its emphasis on forming a broad-based coalition to improve employment among targeted groups. SDWP "targets its efforts in the growing space between economic development and workforce equity," seeking to increase labor force participation for disconnected youth and ex-offenders.[vii]

SDWP's CONNECT2Careers provides employment training to young people ages 16 to 24 and links them with job opportunities via 100 participating local businesses in the One San Diego One Hundred coalition. It also provides a peer job coach for each participant. The organization's Reentry Works program, funded by a U.S. Department of Labor grant, aims to reduce San Diego County's 72 percent ex-offender recidivism rate by offering comprehensive career services pre-release and post-release.

Arapahoe/Douglas Works! (Colorado) Workforce Center – Arapahoe/Douglas Works! (ADW!) won a 2017 National Association of State Workforce Agencies (NAWSA) award for exceptional service to veterans. ADW! formed a partnership with the Aurora Veterans Forum and partners providing assistance with healthcare, employment, financial, legal, education, and other community support services. ADW!'s workforce development board also created a Veterans Task Force which has improved job information sessions, networking events, and hiring opportunities for veterans.

Arapahoe/Douglas Works! received a Veterans-Service-to-Career Pilot Grant from the state to tailor workforce services to the needs and talents of military veterans. The grant helped ADW! to improve employment-related support such as transportation and housing assistance.

District of Columbia's Project Empowerment - Another 2017 NAWSA award winner is Project Empowerment, an initiative of the District of Columbia's Department of Employment Services. The program has a 15-year track record of assisting ex-offenders with multiple barriers to employment. These barriers often include homelessness and substance abuse in addition to criminal records.



Project Empowerment starts with an intensive three-week course on life skills and the building blocks of successful employment. The program then works with local employers to place participants in up to six months of subsidized work experience, with wrap-around support services provided. In 2016, after the subsidized work period 421 participants obtained unsubsidized employment with wages averaging $4.00 per hour above DC's minimum wage.

ACT Work Ready Communities – A national leader in the effort to certify individuals' work skills, ACT offers the National Career Readiness Certificate (NCRC), a portable credential that identifies skills in workplace documents, applied math, and graphic literacy. ACT believes that these skills are required in 77 percent of jobs, according to its national jobs database.

More than 4,200,000 people nationwide have received the NCRC and 385 counties are active participants. As employers seek to quantify the credentials of workers in communities where they are considering additional investment, Work Ready Community designation can be a valuable tool. In Arkansas 72,400 individuals have obtained the certificate, but less than 30 percent of counties are participating. Benton and Washington counties are not official participants in the program.

ACT® Work Ready Communities

ACT Work Ready Communities in Arkansas -
Participating counties in dark blue; Certified county in tan.
Source: ACT Work Ready Communities website, accessed April 2018

Hampton Roads (Virginia) Marine Skilled Trades - This 2015 NCWE Exemplary Program was started in 2012 after a Skills to Succeed Inventory was conducted by Thomas Nelson Community College and the Peninsula Council for Workforce Development. The study showed a critical need for entry-level marine skilled tradesmen. The resulting Marine Skills Trades Training Collaborative developed and delivered four new, short-term courses for unskilled area workers. The program placed 363 previously unskilled workers in permanent jobs after 80 to 120 hours of intensive training. The turnover rate for new hires was reduced by 70 percent. After a primary company's hiring needs were met, the curriculum, program, and materials were provided to the Virginia Ship Repair Association and its more than 70-member companies.

3) Apprenticeships and Other Hands-On Work Experience

The apprenticeship model of worker training has been common at least since the Middle Ages,

when craft guilds in western Europe developed around specific occupations. Apprenticeships are growing in importance in the United States, along with a variety of other on-the-job training and hands-on work experience models. Increasingly these training models offer paid work experience. As one workforce think tank official recently noted, companies are increasingly asking themselves, "Have we been hiring BA's out of habit or necessity?"[viii] Direct investments in paid work experience can be more expensive initially, but also lead to more work-ready permanent employees and reduced turnover.

National Best Practices:

Ivy Tech (Indiana) Advanced Automation and Robotics Technology (AART) – Indiana's statewide Ivy Tech Community College won a NCWE 2017 Exemplary Program award for this program delivering hands-on training in automation and robotics for manufacturing. Designed with strong input from Indiana manufacturers and piloted at Ivy Tech Northeast in Fort Wayne in 2014, the program incorporates several nationally-recognized certifications from MSSC, Siemens, FANUC, and others. Students can obtain a Mechatronics Certificate, Technical Certificate, and ultimately an Associate of Applied Science degree. The curriculum includes workplace skill topics such as teamwork and collaboration, critical thinking, and problem-solving.

Part-time and full-time students access the program, with full-time students taking all classes on Mondays, Tuesdays, and Wednesdays, and working at industry-paid internships on Thursdays and Fridays. An increasing number of firms also pay the students for in-class studies. Among the initial cohort of graduates, 92 percent are employed in their field.

Apprenticeship Catawba (North Carolina) – Winning a 2016 Governor's NCWorks award for Outstanding Innovative Partnership, Apprenticeship Catawba was launched in 2013 by advanced manufacturing firms, two county school systems, and the community college in the Hickory, NC area. The goal is to offer high school juniors and seniors the opportunity to earn a college degree in a high-tech field, with no college tuition debt and with guaranteed employment. Industry participants include GKN Driveline, ZF Chassis Components and new partner Corning. Apprenticeship Catawba had 31 apprentices during its third year of implementation.

Apprenticeship Catawba's coordinator credits the German-based firm Sarstedt for initiating business participation in apprenticeships. The firm's U.S. president was well-acquainted with the practice and its return on investment. U.S.-based firms took longer to bring on board.
K-12 schools have also been enthusiastic, though rural areas have participated more readily. Some parents are hesitant but selling the lack of college debt makes a real impact. For students, the biggest issue is often driving home the need for reliability and accountability.

RAMTEC (Ohio) Training Centers – RAMTEC is the Robotics and Advanced Manufacturing Technology Education Collaborative. Led by Tri-Rivers Career Center and Marion Technical College, RAMTEC was born in 2012 with donated robotics equipment from Ohio State-Marion. FANUC Robotics was the original partner; others now include Parker Hydraulics, Mitsubishi Electronics, and Whirlpool. Some industrial partners offer apprenticeships to program graduates.

RAMTEC provides industrial robotics and advanced manufacturing, welding, and advanced machining skills training for both high school and adult students. Attracting $20 million in grants, it has quickly expanded to be offered at 22 career centers across Ohio.

Central Florida Regional Transportation Training Hub – Hillsborough Community College's Ybor City (Tampa) campus received a 2017 NCWE Exemplary Program award for development of the Regional Transportation Training Hub. Over 1,000 students annually prepare for work in auto repair, automotive service, welding, law enforcement, firefighting and other fields using high-tech simulators, hands-on training, and computerized instruction. A notable accomplishment of the program is a student population that increasingly mirrors the racial and ethnic demographics of the Tampa Bay region, and improved program completion rates for women – rising from 25 percent to 80 percent to 100 percent completion over the first three cohorts. Reasons for the improved performance include incorporating basic and employability skills training, better access to study skills and adult life skills, disability accommodations, and other student support services.

Iowa Registered Apprenticeships – The State of Iowa is seeking to ramp up the number of apprentices in the state, promoting the more than 125 occupations offering federally-registered apprenticeships. The initiative is part of the Future Ready Iowa goal to have 70 percent of the workforce with education or training beyond a high school diploma by 2025.

In 2018 the state launched the new www.earnandlearniowa.gov website dedicated to registered apprenticeship opportunities. Late in 2017, the Iowa Business Council also pledged to create 30,000 intern, extern, and apprenticeship opportunities by 2025 to improve the state's workforce pipeline.

4) Business Involvement & Program Support

Regular collaboration between businesses, workforce service providers, and educators remains elusive in many regions of the country. Business engagement needs to be deeper than one workforce or community college advisory committee meeting per year.

To spur broad-based discussion and involvement, more states are hosting annual workforce summits similar to the Springdale Chamber's event in Northwest Arkansas. These range from long-time leaders Texas (its 22nd year in 2018) and Kansas (17th year) to Indiana, whose initial summit is this year. Where states have not taken the lead, the Kentucky Chamber of Commerce, Virginia Chamber of Commerce, and Ohio Manufacturers Association have stepped up. Other ideas for improving communication between the workforce system and businesses include:

- Conducting thorough, annual business community surveys.

- Establishing a dedicated workforce website for a state or region, featuring a workforce data dashboard and clear information for how businesses can access workforce resources.
- Appointing a business concierge in each workforce development region.

National Best Practices:

Partners for a Competitive Workforce (Ohio) – Cincinnati-based PCW has become a national model, attracting business participation by focusing on return on investment and cost savings. The organization worked with regional manufacturers to develop a return on investment calculator to quantify the impact of partnering for employee sourcing and training. PCW also found typical workforce development program data insufficient for funders from the business community and engaged funders in developing a new set of performance metrics. A tri-state effort encompassing Ohio, Kentucky, and Indiana, PCW is managed by United Way and has a stable of supporters that includes Procter & Gamble, U.S. Bank Foundation, Macy's, and Chase.

Partners for a Competitive Workforce's former executive director believes that there are two keys to PCW's success:

1. "Employer leadership in most, if not all, of our work."
2. Being operated by United Way, "we are seen as a neutral body – not beholden to anyone, especially ourselves. That gives us the latitude to push and negotiate…"

Nate Waters Physical Therapy Clinic (Oklahoma) – Tulsa Community College (TCC) won a 2016 NCWE Exemplary Program award for creation of the new Nate Waters Physical Therapy Clinic, supporting expansion of the college's Physical Therapist Assistant Program. Sixty percent of the clinic's $2,000,000 project cost was paid by private donations from the Tulsa community, led by healthcare companies and private foundations. A senior TCC official credits the fundraising success to existing relationships between the TCC Foundation and local donors, as well as the perceived benefits to area hospitals: a supply of better-trained new employees, and a quality place to refer patients when their insurance benefits have ended.

The new clinic more than triples the program's space. This allows greater efficiency, which has reduced the time to complete clinical externships by 120 hours per student. Student outcomes have not changed, with the program boasting a 98 percent licensure pass rate and a 97 percent employment rate.

McCain Foods USA (Idaho) – Canada-based McCain won the 2017 NAWSA National Business of the Year award for its work in Idaho, where it purchased an existing potato processing plant and invested $200 million to expand the facility. McCain Foods partnered with Idaho's Department of Labor to recruit 180 additional workers, targeting areas with high unemployment

and concentrations of manufacturing workers. Automated line workers at the plant now average wages of $20 per hour.

The company joined with two high schools to develop a basic industrial mechanics course. Fifteen students graduated in the first year, and all found employment. Also, McCain and the College of Southern Idaho developed a four-year maintenance apprenticeship program, with participants doing paid work during the day and taking evening classes. The company received praise for working with other firms to pool money and equipment, develop curriculum, and loan human resources staff to aid student instruction. Lastly, McCain's Idaho plant manager was credited as a strong advocate for workforce training funds as an appointee to the Idaho Workforce Development Council.

AlabamaWorks – An example of new, more business-oriented workforce solutions websites, AlabamaWorks was launched in 2016. The site offers businesses easier access to training resources and specific regional team contacts for each of the state's seven workforce development regions.

Kentucky Manufacturing Career Center – Louisville's regional workforce board KentuckianaWorks began the KMCC in 2013 as its first career center dedicated to the local manufacturing industry's workforce pipeline. Key business partners include GE Appliances, Ford, and Brown-Forman, and KMCC's Employer Advisory Group meets monthly. Program offerings include Certified Production Technician credential courses and short-term manufacturing readiness training. In four years, KMCC has awarded over 3,000 credentials and certificates, and placed 1,000 individuals in manufacturing jobs. In 2016 – 2017, the average hourly wage of workers placed was $14.11.

5) Industry Sector Strategies

Industry sector strategies, also called sector partnerships, are defined by the National Skills Coalition (NSC) as activities that "bring together multiple employers within an industry to collaborate with colleges, schools, labor, workforce agencies, community organizations and other community stakeholders to align training with the skills needed for that industry to grow and compete."[ix] The national Workforce Innovation and Opportunity Act (WIOA) requires sector strategies as a local activity, to be supported at the state level. The NSC notes that since adoption of the WIOA, the number of states with official policies supporting sector partnerships has mushroomed – from 11 states in 2015 to 32 states in 2017. The National Skills Coalition recognizes Massachusetts, Pennsylvania, and Washington as the earliest implementers of these strategies. The NSC's most recent state scorecard lists Arkansas as one of 18 states lacking official sector strategy support policies.

National Best Practices:

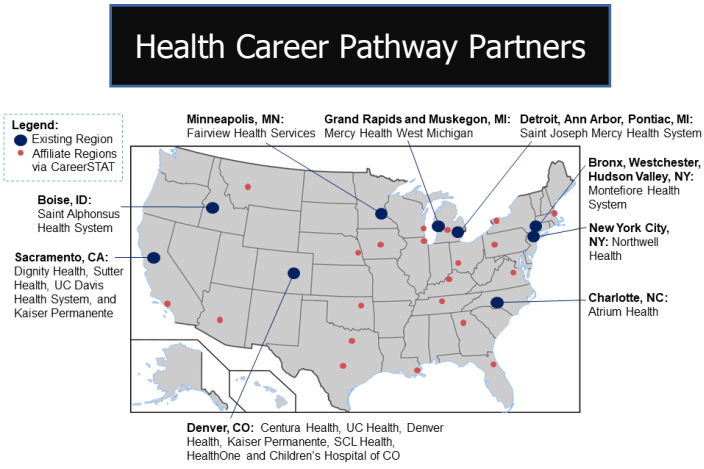
Texoma Regional Consortium – The Texoma region spanning northern Texas and southern Oklahoma was a 2017 Texas Economic Development Council Workforce Excellence award winner. After a 2015 regional study identifying worrying trends in talent pipelines for manufacturing and healthcare occupations, the Texoma Manufacturing Steering Committee was formed with 30 representatives from advanced manufacturers, educators, and workforce development organizations. At the outset, the committee noted that "none of our school districts offered courses supporting the manufacturing career cluster."[x]

The Texoma Manufacturing Steering Committee developed three primary objectives:
1. Change old perceptions of middle-skill jobs and promote technical career opportunities to students, parents, and teachers.
2. Design an industry-driven curriculum addressing technical skills common in multiple manufacturing environments.
3. Promote an Advanced Manufacturing Technician Career Pathway.

The group believes that any region can replicate its success "as long as they have a shared common vision on what the outcome should be."[xi]

McDowell County (North Carolina) Workforce Pipeline Committee for Innovative Partnership was a 2017 Governor's NCWorks award winner due to the "high level of collaboration among the private sector and the public entities."[xii] Because of an aging workforce and the increasing technical requirements of manufacturing jobs, industry representatives and all local workforce stakeholders came together to create and support a workforce pipeline. As of 2017, the sector strategy had produced 165 Manufacturing Certification graduates - 137 of whom were currently employed, and 25 of whom were no longer homeless.

Health Career Pathways Network – After a 2016 summit at the White House on the need for 3.7 million new healthcare workers by 2026, the Hope Street Group worked with the White House to pilot a national sector strategy around healthcare. The Health Career Pathways Network (HCPN) aims to improve the sourcing, hiring, and advancement of healthcare talent to achieve four key objectives:
1. Reducing healthcare job vacancies.
2. Increasing the diversity of the workforce.
3. Decreasing first-year turnover.
4. Increasing the number of entry-level employees who advance to higher-level occupations in healthcare.



The HCPN now has health industry partners at nine locations in seven states around the nation.[xiii]

6) Increased Career Awareness

Interest in manufacturing and other technical careers among students has waned over the

years, and awareness of career opportunities in these fields is low among parents, teachers, and counselors. Surveys by Deloitte and the Manufacturing Institute revealed that only 37 percent of parents would encourage their children to pursue a manufacturing career, and Generation Y respondents ranked it last as a career option.[xiv]

A number of studies call on industry to communicate the possibilities for interesting, well-paying technical careers, with work atmospheres that are usually far from the dirty, unpleasant stereotype. Students and parents need useful data on in-demand jobs, wages, and the skills and training needed. Teachers and counselors need exposure to the world of technical and manufacturing work, and simple ways to bring this knowledge alive for students.

National Best Practices:

Manufacturing Connect (Chicago, IL) – Selected in 2017 for an NCPN award honorable mention, Manufacturing Connect has brought more than 100 manufacturing partners together to provide Chicago public school students with job shadowing opportunities, workplace field trips, and paid internships. Since 2007 215 students have completed the program, with 60 participants placed in full-time manufacturing jobs.

Center for Advanced Professional Studies (CAPS) Network Schools – The CAPS Network is a national high school model in which business, community, and public education partners produce "personalized learning experiences that educate the workforce of tomorrow, especially in high skill, high demand jobs."[xv] The five guiding principles of CAPS schools are:

1. Profession-based learning.
2. Responsiveness – altering curriculum as dictated by local industry and community needs.
3. Student self-discovery and exploration.
4. Professional skills development.
5. Entrepreneurial mindset.

CAPS Network Schools begin in the Blue Valley schools outside Kansas City and are now found in 12 states, with Arkansas locations in Bentonville and Little Rock.

Springfield (Missouri) Build My Future Collaborative - A 2018 NAWB national award winner, the Build My Future Collaborative creates programming to prepare young people for

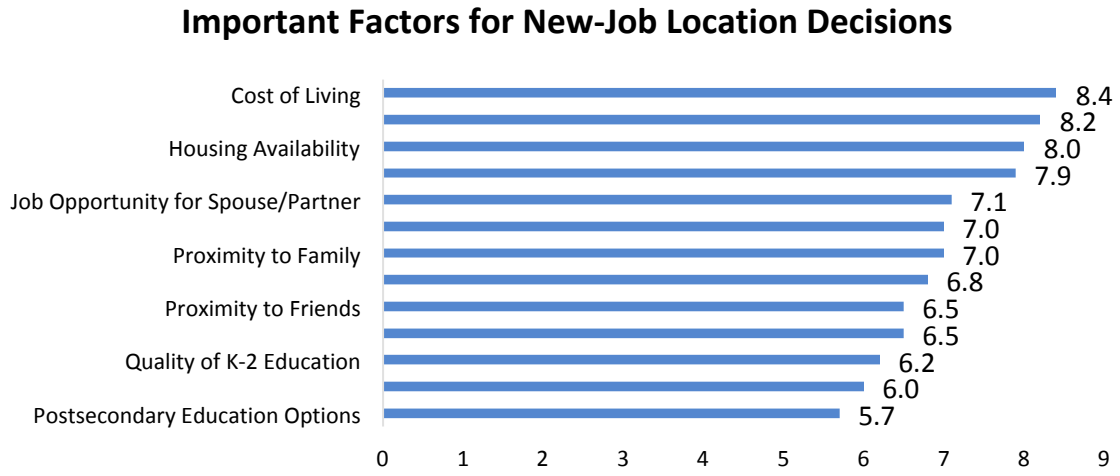
jobs in the skilled trades. The Collaborative includes the local workforce board and chamber of commerce, local contractors' association, the home builders' association, and other employers. Activities include an annual Build My Future construction showcase and career day, Pre-Apprenticeship Academies, and other work exposure events.

Get on the Grid (Mississippi) – A website created by the Mississippi Energy Institute with partnership from the state's Mississippi Works initiative, Get on the Grid promotes careers in energy and advanced manufacturing. The no-nonsense content showcases high demand for these jobs, pay potential two to three times greater than Mississippi's private sector average, and the ability to begin working without college debt.

7) Talent Attraction

Educating and training existing area residents for the workforce is often insufficient to meet employer needs, especially when filling highly-skilled positions. Increasingly, cities, regions, and states are implementing talent attraction programs to import top talent. In a time when a higher percentage of knowledge workers are concentrating in a small number of major metro areas, this topic takes on great importance for smaller cities and regions.

Development Counsellors International (DCI) released its *Talent Wars* report in 2017, summarizing surveys of more than 1,000 working adults about what drives their job and location decisions. DCI's research found that those considering relocating for a new job are focused on very practical concerns: the cost of living, cost of housing, and healthcare. Top-ranked factors (on a scale of 1 to 10) were:



Source: DCI's *Talent Wars: What People Look for in Jobs and Locations*, 2017

When considering talent attraction initiatives, communities should remember that their local businesses will be the main point of contact with potential new residents. These businesses thus need good data and honest community information to provide to prospective employees. In Northwest Arkansas, the recently completed regional strategy for the Northwest Arkansas Council focuses on this issue and includes the goal; **"Expanding economic, educational, civic, and cultural opportunities will help retain local talent and attract talent from across the globe to Northwest Arkansas."**

National Best Practices:

Talent Attraction Campaigns – Metropolitan areas such as Raleigh and Atlanta are making concerted efforts to attract young professionals and other talent. Raleigh's Work in the Triangle website and related recruitment efforts began in 2011, with the Metro Atlanta Chamber's ChooseATL initiative launching in 2015 and expanding in 2018. At the state level, Wisconsin is beginning a $1 million campaign in 2018, using social media exclusively to target millennials in the Chicago area. Selling young professionals in Chicago on career opportunities and lifestyle advantages in nearby Wisconsin, the campaign aims to drive traffic to the new In Wisconsin website.

Financial Incentives for Talent – In 2009, Oklahoma unveiled the Aerospace Industry Engineer Workforce Tax Credit to support the state's burgeoning aerospace sector. The tax credits accrue to both aerospace companies that hire engineers and the employees who are hired, for up to five years. A review two years ago found that the program had contributed to the hiring of 4,200 workers with an average wage of about $80,000.

Colorado's Talent Dashboard – A team of state agencies has developed the Colorado Talent Dashboard with content in these four areas:

A. Educating all Coloradans.
B. Partnering with Business – focused on sector partnerships and work-based learning opportunities.
C. Connecting Talent with Opportunity.
D. Supply and Demand – workforce data and analysis, talent pipeline reports, and innovation ecosystem information.

Recommendations for Improvement

The Springdale Chamber has already initiated several programs that should produce increased impacts over the coming years, but more action needs to be taken to provide enough workers to keep the economy growing and keep local businesses content. Without improvement in workforce training, the gaps in workforce could lead employers to "automate and relocate." To frame recommendations, we review Springdale's performance on the seven workforce best practices detailed earlier in this report:

1) Clear Career Pathways
2) Upskilling and Reskilling
3) Apprenticeships and other Work Experiences
4) Business Involvement and Program Support
5) Industry Sector Strategies
6) Increased Career Awareness
7) Talent Attraction

The Springdale Chamber's efforts over the past decade have focused heavily on three of the seven areas: clear career pathways, business involvement and support, and increased career awareness. Industry sector strategies and talent attraction are best addressed at the broader, regional level, but the Chamber should remain an active and aggressive stakeholder in those efforts.

The highest-impact new activities on which the Springdale Chamber should focus are: (1) improving the area's capacity to upskill the existing workforce by advocating for state funding; (2) improving the quality and capacity of existing skill development facilities; and (3) creating more local work experience opportunities for high school students.

Specifically, we recommend the following:

To improve the skills of existing workers

Work with the State Legislature to increase discretionary funding for the upskilling of existing workers

Most public funding for workforce has its origin in a supply-side approach to help the unemployed become more employable. Existing funds are largely designed for college degree programs rather than shorter-term skill training for incumbent workers. But two current trends call for a new emphasis. The first is that Northwest Arkansas has reached near full employment and the second is the acceleration of technological change that demands ever more sophisticated skills. Many of the skills employers need today did not exist 5-10 years ago. With the rapid acceleration of skill needs, training needs to be available instantaneously for many workers. It is most likely that this training will be conducted on-site by the employer. Increased funding for training the existing workforce is good public policy and in line with future trends.

By increasing the availability of funding for existing businesses and their workforce partners to upskill and retrain their existing workers, the state can ensure greater community and family stability, save transitional support costs and strengthen business competitiveness. The Springdale Chamber should champion a new existing worker training allocation from the legislature. A successful example nationally is Wisconsin Fast Forward, which provides grants to businesses for customized, shorter-term training when firms collaborate with their regional economic and workforce development partners. Wisconsin Fast Forward has made 235 training grants to Wisconsin companies over the program's first six years.

To improve the skills of existing workers

Create a WIOA Funded Workforce Center in Springdale

All the comparison communities had their own one-stop shop workforce center. Springdale currently does not have a job center although there are three located within the region in Fayetteville, Rogers, and Siloam Springs. With unemployment rates low, efforts to boost the labor force participation rate are needed to boost the total number of workers. These centers have the funding and training to better reach marginalized communities and retrain workers displaced due to automation.

The Springdale Chamber should work with The Northwest Arkansas Economic Development District (NWAEDD) and share some of the best practices from other regions. One example would be research to focus workforce efforts on the greatest industry needs in the community. A strong NWAEDD is needed as part of the talent development ecosystem. (The NWAEDD's

website is also outdated and has three news updates for the last three years.) A better coordination of NWAEDD and a workforce center in Springdale could benefit workforce development.

To improve the skills of existing workers and future workers

Improve the physical capacity and quality, private sector engagement and leadership, and public image of NWTI

While we believe the current staff is committed to delivering quality training for their students, the physical limitations and the image projected by the assortment of small older buildings at NWTI and the lack of a unified site development strategy is not acceptable for a region aspiring to be world class.

Beginning with commitment by a strong business-led board, we recommend that NWTI be reimagined as a state-of-the art, world class middle-skill campus that can produce significantly more top-quality regional workers. A reinvented NWTI would help to brand the region as the best place for middle-skill training in the heartland. To achieve this goal collaboration between the public sector, private sector, and philanthropy will be needed for strategy, execution, and funding.

A world-class NWTI would transform workforce delivery training in Northwest Arkansas through these improvements:

Capacity – Not enough workers are being trained through NWTI's current capacity. Projections for future worker demand in the region clearly show a wide gap between what will be needed and the number of potential trainees at the current NWTI facilities. Currently 19 students are graduating from NWTI with an award in diesel mechanic technology, but on average there are 66 openings each year for diesel mechanics. For HVACR, annual demand is about 67 workers, NWTI produced 17 HVACR graduates in 2016. Current facilities cannot accommodate the future needs.

Image – Not enough students are showing interest in technical careers and program enrollment has suffered. A tour of a sleek modern facility with high-tech equipment to every Springdale District student could be a draw, and if the Springdale experience is like other best practice facilities across the country, would increase student interest and enrollment. Offering tours to parents to show what a modern workplace looks like for middle skill jobs would contradict the current "dirty, dull, and dangerous" image of these types of careers.

Private Sector Engagement and Leadership – The Springdale Chamber could model a private sector and philanthropy engagement effort on Tulsa Community College's fundraising for its new physical therapy clinic, which raised 60 percent of the project cost from business partners and area foundations. The business community will need to be convinced of a positive return on investment in terms of an improved workforce pipeline, better-trained employees, and reduced turnover. Philanthropies typically respond to increased career opportunities for local residents, the prospect of higher wages and improved quality of life.

To improve work experience for students

Increase work experience opportunities for local school students

Expanding work experiences for Springdale-area K-12 students will provide numerous benefits: greater student and parent engagement with the region's business community; better understanding of local occupation and career opportunities; and the potential for businesses to obtain more work-ready new employees. The Chamber should develop both a year-round and summer program to expand student options.

To improve work experience for students

Create a new Youth Leadership Program

Several chambers that were studied had a youth leadership program for high school students. Some programs were focused on individual leadership skills and civic engagement of local students. The Fort Smith Junior Leadership Academy focused on showing students the local business and industry assets of the community. The program strives to increase students' awareness of the career opportunities available to them in their own community. Such a program in Springdale, one focused on educating students using business leader discussions and site visits could be an effective workforce development technique. The program could include students who may not be the top tier performers at their school but are looking for skill and career development. Exposure to technical careers needs to start earlier than high school, initiating efforts before the junior year of high school may be more beneficial. Educating a group of students annually could help change the conversation among students.

To improve work experience for students

Explore Development of a Student engaged Makerspace in Springdale

The makerspace in North Little Rock exposes students to new equipment, trades, and career options. Creating a fun and exciting introduction to STEM skills and career skills is a promising way to get parents and students on board. Field trips and summer camps can also improve awareness among younger students and pique their interests before they enter career pathways in high school. There is also the crucial benefit of entrepreneurial and startup support that such a space provides adults in the area. There are startup incubators in Fayetteville, but a makerspace with a focus on younger people could generate enthusiasm for technical careers in Springdale.

To improve work experience for students

Expand Project Lead the Way[xvi]

The Springdale Chamber could also work to increase PLTW curriculum adoption in the region's schools. The DTSOI includes some of the PLTW modules, but data on other PLTW adoption in Springdale was unclear. Gathering resources and increasing commitment to such a program

that preps students for technical careers could be a successful workforce development and education effort for the Springdale Chamber. The PTLW model that spans from elementary school through high school graduation goes beyond short-term exposure to STEM and develops student skill sets.

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[i] "Arkansas' workforce skills gap a 'brutal hard fact' that needs to be addressed." Arkansas State Chamber news release, April 2018. https://www.arkansasstatechamber.com/news-publications/news-releases/

[ii] Ibid.

[iii] The National Council for Workforce Education, 2016 Exemplary Program Award summaries. http://www.ncwe.org/?page=2016_exemp_awards

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[viii] Caroline Preston. "Apprenticeships could provide a path to the middle class for millions of workers, new study says." The Hechinger Report. November 29, 2017.

[ix] National Skills Coalition website, State Policy on Sector Partnerships. Accessed April 2018. https://www.nationalskillscoalition.org/state-policy/sector-partnerships

[x] Texas Economic Development Council 2017 Workforce Excellence Award Nomination for Texoma Regional Consortium. https://texasedc.org/sites/default/files/files/Awards/WEA/Texoma%20Regional-Denison.pdf

[xi] Ibid.

[xii] McDowell News. "Innovation, achievement: McDowell takes 3 of 6 Governor's NCWorks Awards." October 16, 2017. http://www.mcdowellnews.com/news/innovation-achievement-mcdowell-takes-of-governor-s-ncworks-awards/article_2b0491f8-b2b4-11e7-b020-a38e671fda29.html

[xiii] Hope Street Group, Healthcare Career Pathways Network website. Accessed April 2018. https://hopestreetgroup.org/syncoursignals/health/

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[xv] CAPS Network website. Accessed April 2018. https://yourcapsnetwork.org/

APPENDIX

Methodology for In-Demand Industries

To develop the best understanding of future demand in industries, a deeper examination was completed by 6-digit NAICS codes. The analysis evaluated industries across a variety of factors and created an index to rank industries against each other. Employment and earnings data was collected for all 6-digit NAICS codes. Industries with zero employees from 2008-2017 or those with fewer than 10 employees were removed from the analysis. The 451 remaining industries were ranked in eight categories and then an index was created based on these rankings with the following weights:

- 2017 Employment (20%)
- Average Earnings Per Worker (10%)
- Location Quotient (10%)
- Competitive Effect (10%)
- 2008-2017 Employment Change (10%)
- 2008-2017 Percent Change (10%)
- 2018-2027 Employment Change (10%)
- 2018-2027 Percent Change (20%)

The results provide an index rating between 0 and 100, with extra weight applied to industries with higher levels of current employment and those expecting strong growth in the coming years. We included the competitive effect, a measure of employment growth that can be attributable to the competitiveness of a region. It is calculated by measuring employment growth, then determining the levels of growth that are due to national and industrial trends. The remaining growth is then attributed to the competitive effect of the region. If an industry has a higher competitive effect than the total increase in jobs during a specified time period, this shows that the growth would have been less if not for the competitive performance of the region.

The top industry in the index calculation was wholesale trade agents and brokers with an index score of 94.2 out of 100. The industry exhibited high performance in every one of the metrics. Earnings, a measure of salary and benefits, for the average worker in this industry was over $134,000 per year. Two computer related industries ranked in the top 15 because of their high wages and high levels of growth. From a middle-skill perspective, electrical contractors and tortilla manufacturing ranked in the top 15 with high location quotients and strong growth levels, despite lower wages.

Top 15 Industries in Index Rankings

Industry Group	2017 Jobs	Avg. Earnings Per Job	2-017 LQ	Comp Effect	2008-2017 Change	2008-2017 % Change	2018-2027 Change	2018-2027 % Change	Index
Wholesale Trade Agents and Brokers	3,500	$135,000	2.48	2,430	1,250	56%	1,530	40%	94.2
Other Services Related to Advertising	1,460	$52,000	8.94	2,110	1,410	3,000 %	570	36%	91.6
Office Administrative Services	1,110	$54,000	1.34	1,350	810	265%	540	44%	90.2
Other Computer Related Services	340	$82,000	1.83	620	310	1,194 %	240	61%	90.0
Marketing Consulting	650	$100,000	1.71	300	320	98%	250	36%	89.2

Services									
Psychiatric and Substance Abuse Hospitals	500	$55,000	2.60	650	410	428%	240	43%	88.9
Custom Computer Programming Services	1,040	$101,000	0.72	980	690	200%	430	38%	88.6
Offices of Physicians (except Mental Health Specialists)	4,490	$101,000	1.09	1,680	1,270	40%	1,290	27%	88.2
Corporate, Subsidiary, and Regional Managing Offices	24,400	$151,000	6.82	6,650	8,030	49%	3,080	12%	87.0
Electrical Contractors and Other Wiring Installation Contractors	2,170	$60,000	1.46	1,120	510	31%	660	29%	85.7
Museums	380	$39,000	2.46	570	360	1,264 %	170	41%	84.5
Admin Management and General Management Consulting Services	610	$67,000	0.63	440	360	145%	280	41%	84.4
New Car Dealers	2,100	$65,000	1.14	990	650	45%	490	22%	84.3
Tortilla Manufacturing	960	$57,000	30.68	590	430	83%	160	16%	82.7
Employment Placement Agencies	470	$29,000	1.12	630	330	244%	240	47%	82.4

Source: EL calculations based on EMSI 2018

Top Industries and their Index Score Ranking:

Construction
Electrical Contractors and Other Wiring Installation Contractors (10)
Other Building Equipment Contractors (26)
New Single-Family Housing Construction (38)
Roofing Contractors (40)

Manufacturing
Tortilla Manufacturing (14)
Sanitary Paper Product Manufacturing (20)
Other Metal Valve and Pipe Fitting Manufacturing (22)
Commercial Bakeries (23)
Prefabricated Metal Building and Component Manufacturing (30)
Dog and Cat Food Manufacturing (36)
Commercial Screen Printing (49)

Wholesale Trade
Wholesale Trade Agents and Brokers (1)
Other Miscellaneous Nondurable Good Merchant Wholesalers (28)
Men's and Boys' Clothing and Furnishings Merchant Wholesalers (32)
Industrial and Personal Service Paper Merchant Wholesalers (37)

Transportation and Warehousing
Long-Distance General Freight Trucking (25)
Local, Specialized Freight (50)
Refrigerated Warehousing and Storage (78)

Information
Data Processing, Hosting, and Related Services (34)

Finance and Insurance
Insurance Agencies and Brokerages (18)

Professional, Scientific, and Technical Services
Marketing Consulting Services (5)
Custom Computer Programming Services (7)

Management of Companies and Enterprises
Corporate, Subsidiary, and Regional Managing Offices (9)
Offices of Other Holding Companies (29)

Health Care
Psychiatric and Substance Abuse Hospitals (6)
Offices of Physicians (8)
Offices of Dentists (19)
Offices of Physical, Occupational and Speech Therapists, and Audiologists (39)
Assisted Living Facilities for the Elderly (44)
General Medical and Surgical Hospitals (46)
Freestanding Ambulatory Surgical and Emergency Centers (48)

Arts, Entertainment, and Recreation
Museums (11)

Other Services
Commercial and Industrial Machinery and Equipment Repair and Maintenance (31)
Consumer Electronics Repair and Maintenance (45)

Methodology for Occupation Performance Index
An understanding of growth industries is important, but most workforce training is conducted with a specific job title in mind. Therefore, a thorough review of occupation data was conducted using similar methodology. Employment and wage data was collected for all 5-digit SOC codes. Occupations with no workers from 2008-2017 or with fewer than 10 workers were removed. These 598 occupation groups were than ranked across nine indicators and weighted as follows:

- 2017 Employment (10%)
- Median Hourly Earnings (10%)
- Annual Openings (10%)
- Location Quotient (10%)
- Competitive Effect (10%)
- 2008-2017 Employment Change (10%)
- 2008-2017 Percent Change (10%)
- 2018-2027 Employment Change (10%)
- 2018-2027 Percent Change (20%)

The results provide an index rating between 0 and 100. Specific to the occupation analysis was the ability to include annual job openings. This data considers the employment trends of the occupation as well as the retirement rate of current employees, providing an indicator of annual demand for these workers. With nine indicators, the index gave equal weight on eight measures and additional weight to future percentage growth. After the index was calculated, jobs that required a bachelor's degree or higher for entry-level employment were excluded to be most in line with the Chamber's efforts to address middle-skill gaps.

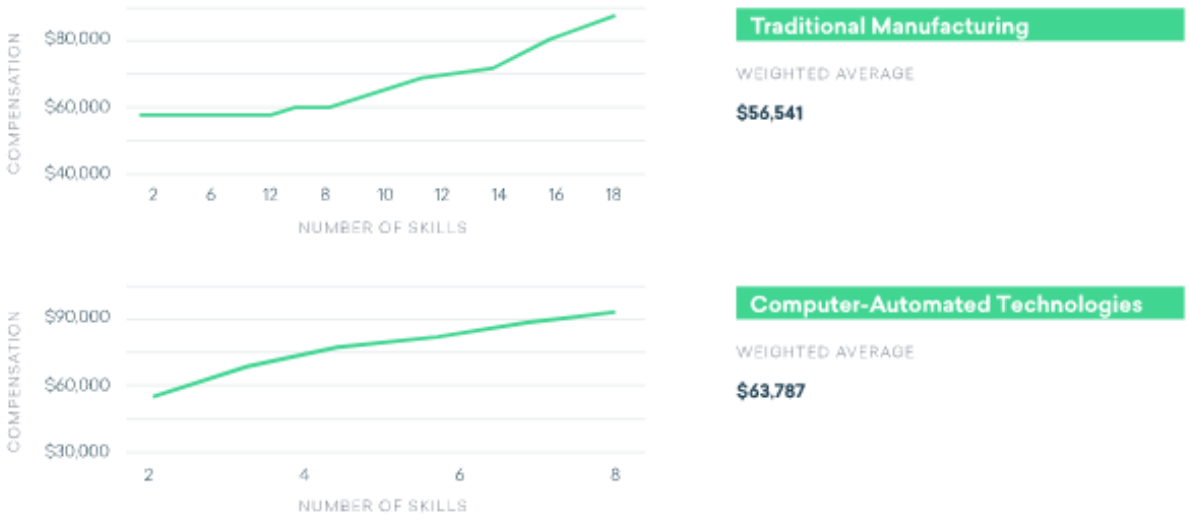
Jobs that required no formal education were also removed. The majority of these occupations only required a high school diploma. It is important to note that this data focuses on entry level requirements. It is possible to receive training beyond high school to become a diesel mechanic, but it also possible to just be hired with no experience and trained on the job. This lack of requirement for employment places diesel mechanics in the high school diploma grouping. An emergency medical technician (EMT) however is unable to be employed without passing of a state mandated exam, this then places the EMT profession in the postsecondary award category.

Caveat for Technical, Mechanical, and Production Careers

We need to state upfront that some occupations in this report may underreport their wages. The government sources used in this report, while convenient and standardized, also tends to skew wage data for certain jobs. Several economists and data scientist have noticed that government data on wages has been reporting lower wages of manufacturing, maintenance, and technical occupations, than may be accurate for fully trained employees. According to an EMSI report that looked at manufacturing wage data: *"The low hourly wage is likely weighed down by the large number of workers engaged in on-the-job training (OJT), during which they're paid less. If employees leave the company without completing the training, they never reach a higher wage tier. The company must then hire replacements at the same OJT level, and so on. Government data cannot capture this nuance, so we see perpetually low average wages."*

To counteract this phenomenon, EMSI conducted an assessment at the national level of wage data based on the number of skills acquired by the worker. The more skills acquired by the worker the higher the compensation. When the average wage was adjusted by number of skills, the wage data was more reflective of interview data showing that these careers can and often do earn workers $50,000 annually and above.

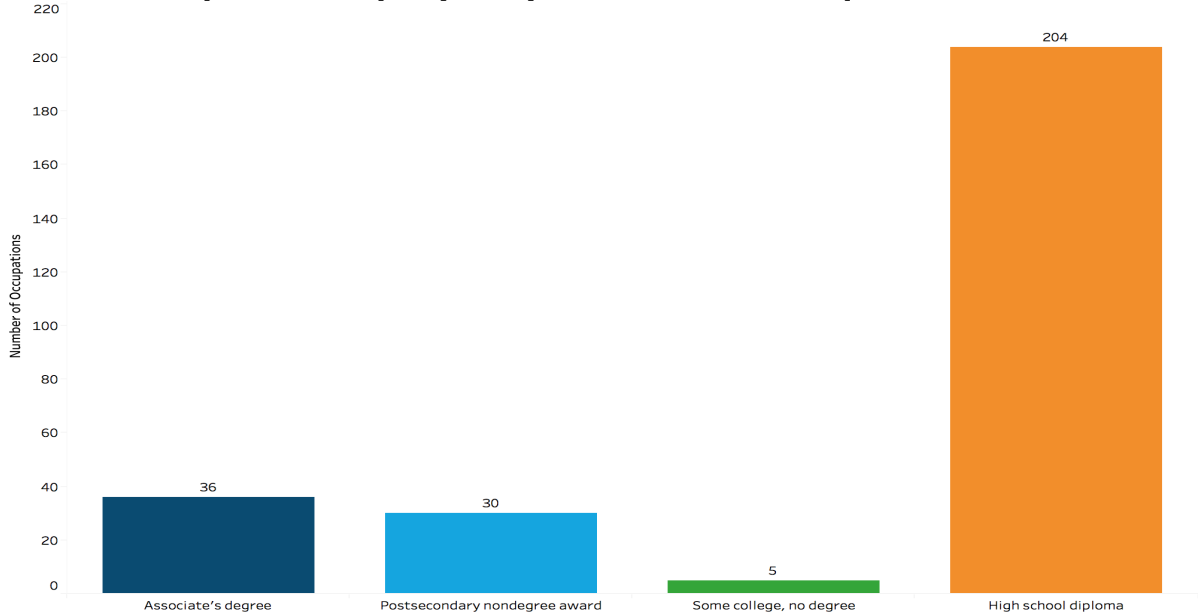
Weighted Average Compensation by Skill Level



Source: EMSI "Manufacturing Is Not Dead"

While economic data scientists are trying to account for the low-wage reporting of these occupations, the methods to correct this are new and are not yet scaled to local levels. Therefore, in our analysis of in-demand occupations median wage was a component of our rankings and those technical, mechanical, and production careers where on-the-job training is prevalent may be ranked lower due to this problem government data.

Count of Occupation Groups by Entry-Level Education Requirement



Source: EMSI 2018.2

Sales representatives in wholesale trade for non-scientific products ranked number one in the occupation index. Supervisors of low-skill workers, such as retail and administration, are scored in the top of the rankings. Formal training is not a requirement for basic employment in retail or administration, but a high school diploma is often required for managers. Health care assistants account for four of the spots in the top 15. This is not surprising as growth rates across the health care field have been among the highest in Northwest Arkansas.

Top 15 Occupations in Index Rankings

Occupation Group	2017 Jobs	Median Hourly Wage	2017 Location Quotient	Entry-Level Education	2008-2017 Percent Change	2018-2027 Percent Change	Index
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	3,700	$28.80	1.59	High school diploma	27%	18%	87.0
Electricians	1,160	$18.80	1.11	High school diploma	24%	29%	84.9
Insurance Sales Agents	550	$21.40	0.68	High school diploma	66%	26%	81.3
First-Line Supervisors of Office and Admin Support Workers	2,720	$22.60	1.11	High school diploma	23%	16%	80.2
Dental Assistants	680	$15.80	1.22	Postsecondary award	38%	20%	79.7
First-Line Supervisors of Food Preparation and Serving Workers	1,730	$13.10	1.13	High school diploma	41%	18%	79.5
Computer User Support Specialists	1,040	$18.10	0.93	Some college	30%	19%	79.5
Personal Care Aides	2,690	$10.20	0.85	High school diploma	89%	20%	79.2
First-Line Supervisors of Non-Retail Sales Workers	670	$39.50	1.58	High school diploma	29%	13%	78.7
Medical Assistants	720	$13.60	0.67	Postsecondary award	32%	33%	78.3
First-Line Supervisors of Retail Sales Workers	2,280	$17.00	1.17	High school diploma	21%	16%	78.0
Licensed Practical and Licensed Vocational Nurses	1,090	$20.00	0.92	Postsecondary award	29%	17%	77.9
Web Developers	190	$32.20	0.84	Associate's Degree	50%	33%	77.7
Pest Control Workers	210	$17.30	1.69	High school diploma	85%	22%	77.7
Pharmacy Technicians	610	$12.50	0.92	High school diploma	37%	22%	76.3

Source: EL calculations based on EMSI 2018.2

Occupation Job Posting Index

For occupation data, there is another resource beyond the government-based reports on jobs and wages. Job posting analytics can provide another aspect of demand in a region. If the job posting data shows companies have been posting frequently for the same position this can indicate difficulty in filling the position. Job posting data from September 2016 to April 2018 in Northwest Arkansas was examined across all 5-digit SOC codes. A job posting scoring index was developed based on the rankings for the following metrics.

- Total Unique Postings (60%)
- Frequency of Job Posting (10%)
- 2017 Average Monthly Hires (30%)

The top-ranking occupations look slightly different when evaluated on job postings. Many of the same occupations from the occupational performance index are present but the ordering differs. The frequency data can provide insight into the difficulty of filling certain positions. On average the same nursing assistant position was posted about 11.5 times. Other high frequency postings were for security guards and bookkeeping, accounting, and auditing clerks.

Top Occupations from Job Posting Index

Occupation Group	Total Postings	Unique Positions	Posting Frequency	Avg. Monthly Hires	Entry Level Education Requirement	Index
Customer Service Representatives	36,300	5,300	6.8	129	High school diploma	95.8
First-Line Supervisors of Office and Administrative Support Workers	24,000	3,600	6.6	122	High school diploma	94.9
Maintenance and Repair Workers, General	21,100	3,000	7.1	127	High school diploma	94.5
Nursing Assistants	18,900	1,600	11.5	168	Postsecondary award	93.9
Heavy and Tractor-Trailer Truck Drivers	175,100	60,500	2.9	682	Postsecondary award	92.8
First-Line Supervisors of Retail Sales Workers	33,800	8,800	3.8	170	High school diploma	92.7
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	15,300	3,000	5.1	153	High school diploma	92.7
First-Line Supervisors of Food Preparation and Serving Workers	16,300	4,000	4.1	206	High school diploma	92.5
Stock Clerks and Order Fillers	11,000	2,200	5.0	209	High school diploma	92.3
First-Line Supervisors of Production and Operating Workers	15,800	2,100	7.7	63	High school diploma	92.3
Licensed Practical and Licensed Vocational Nurses	13,200	1,700	7.6	79	Postsecondary award	92.2
Secretaries and Admin	9,800	1,500	6.4	242	High school diploma	92.1

Assistants, Except Legal, Medical, and Executive						
Sales Representatives, Services, All Other	16,900	2,800	5.9	65	High school diploma	91.7
Security Guards	15,300	1,700	8.8	58	High school diploma	91.3
Light Truck or Delivery Services Drivers	18,100	4,300	4.2	82	High school diploma	91.3
Bookkeeping, Accounting, and Auditing Clerks	9,900	1,200	8.6	118	Some college, no degree	91.0
Computer User Support Specialists	16,200	2,500	6.4	47	Some college, no degree	90.8

Source: EL calculations based on EMSI 2018.2

High Demand Occupation Index

Using the indexes for in-demand industries, occupational performance, and occupation job postings, a 0 to 100 index value was designed to determine the final list of high demand occupations. Job posting data is valuable, but more weight was given to occupation groups that scored well in terms of employment, wages, and growth.

- Occupation Performance Index (65%)
- Occupation Job Posting Index (35%)

The top performing occupations were then mapped out by their educational requirements. The following charts also represent the number of annual openings by the size of each occupation's circle. Predicted ten-year growth is also indicated by the coloring of the circle. The darker the shade of green, the more growth is predicted in the occupation. Later in this section, the top occupations are listed out by occupation category.

Occupations that require an associate degree for entry level employment offered consistently higher wages than the other educational requirement groupings in this report. Web developers and dental hygienists can earn over $30 per hour. Preschool teachers offered the highest number of annual openings in this grouping. Overall, jobs that require an associate degree do not offer as many annual openings compared to the other education groupings. This is indicated by the smaller sized circles in the associate degree chart. Only seven occupations scored an index ranking higher than 66 for this education category.

Postsecondary awards required for entry-level employment occupations offered a higher number of jobs that scored high index values. Ten occupations in this education category scored an index value greater than 70. Truck drivers and nursing assistants offered each over 500 annual job openings. Healthcare support staff accounted for most of the top occupations that required a postsecondary award. Fewer occupations require some college (no degree) and only three occupations scored above a 70. Computer user support staff has seen strong growth levels in recent years and the bookkeeping, accounting, auditing clerk jobs ranked in the top of the job postings index with high levels of posting frequency.

When looking at jobs that only require a high school diploma or equivalent, sales representative positions offer the best opportunity to earn higher wages. Maintenance and mechanical jobs also scored well and offered the wages on the higher end of those available at the high school education level.

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