COMPREHENSIVE REGIONAL NEEDS ASSESSMENT

Carl D. Perkins V – Strengthening Career and Technical Education for the 21st Century Act

Due Date: February 1, 2020

Regional Team Coordinators:

	Name	Institution/School	Phone	Email
USD(s)	David M. Cooper	USD 305		david.cooper@usd305.com
Postsecondary Institution(s)	James Knapp	Salina Area Technical College		james.knapp@salinatech.edu

Date Feb. 1, 2020 Regional Team Salina

Secondary and postsecondary institutions shall not contract out the process of conducting the needs assessment.

Purpose

The purpose of this document is to provide a template to prepare the content of the regional needs assessment by:

- Explaining the purpose of the regional needs assessment
- Outlining the required components of the assessment
- Providing tools for identifying regional needs

By conducting regional needs assessment, the Regional Team will:

- Use evidence-based strategies to recognize needs of the regional industry
- Identify strengths and weaknesses of secondary and postsecondary CTE programs in the region
- Perform a root-cause analysis of gaps
- Make progress toward student success and employment

What is a comprehensive regional needs assessment?

A **needs assessment** is a systematic set of procedures used to determine needs, examine their nature and causes. A needs assessment is conducted to determine the needs of people – i.e., recipients of the services provided by an organization. In education, the recipients are students, parents and future employers. A comprehensive regional needs assessment consists of the following steps:

1. Identify participants on the Regional Needs Assessment Team (stakeholders)
2. Identify data sources to be analyzed. A list of required and allowable data sources is provided by the state.
3. Engage stakeholders in a review of focused data and analyze the data
4. Identify areas of growth and strengths (what is working)
5. Identify areas of opportunity (what is not working)

Why complete a comprehensive regional needs assessment?

The reauthorization of the Perkins Act through Perkins V requires that eligible recipients complete a regional needs assessment that must be included in the Perkins application. There are six components of the comprehensive regional needs assessment:

1. Evaluation of Regional Labor Market Data
2. Evaluation of student performance
3. Description of the CTE programs offered (size, scope, quality and aligned to in-demand industry sectors)
4. Evaluation of the progress toward implementing CTE programs and programs of study
5. Description of recruitment, retention and training for CTE educators.
6. Description of progress toward implementing equal access to CTE for all students, including special populations.

How often is a comprehensive regional needs assessment needed?

The needs assessment must be completed **every two years**, with a review of progress in the interim. The assessment must be **completed prior** to the completion of the grant application and submitted with the application. The regional needs assessment should be part of an on-going performance management cycle.

Who should participate in the comprehensive regional needs assessment process?

Local recipients are required to engage a diverse body of participants who will plan and implement the regional needs assessment. The Regional Needs Assessment Team is comprised of local stakeholders who will develop, review and analyze assessment results to support cross-sector coordination. Perkins V requires, at a minimum, the following participants to engage in the initial needs assessment, local application development and on-going consultation [Sec.134 (d) and (e)]:

1. CTE program representatives at the secondary and postsecondary levels
   - Teachers
   - Faculty
   - Administrators
   - Career guidance counselors and advocates
   - Advisement professionals
   - Specialized instructional support specialists and paraprofessionals
2. State or local workforce development board representatives
3. Representatives from a range of local businesses and industries
4. Parents and students
5. Representatives of special populations
6. Representatives from agencies serving at-risk, homeless and out-of-school youth.

Process:

1. Establish a Regional Needs Assessment Team
   Perkins V requires the needs assessment to be completed in consultation with specific stakeholders. Page 4 of this document lists all required stakeholders. **All groups listed on page 4 must be a part of the Regional Needs Assessment Team.**
2. Assign two co-coordinators for the Regional Team – one from secondary education and one from a postsecondary institution (Page 3 and 4)
3. Gather, review and analyze data (state staff will provide required data sources and a list of optional resources).
4. Convene the Regional Team to write the needs assessment (Each Team must **meet at least once** throughout this process).
5. Complete the needs assessment Template
   i. All steps and all parts are required
   ii. Incomplete assessments will not be approved
   iii. Add rows to tables as needed
   iv. Include the data analysis documents (required)

Template:

The needs assessment Template outlines all of the required steps:

STEP 1: Analysis of Labor Market Information
- **Part 1**: Utilize the Labor Market Analysis Tool (Excel)
- **Part 2**: Use additional approved sources of data and compare the data to Part 1 findings.
- **Part 3**: Bring the Regional Team together to discuss the findings from Parts 1 & 2
- **Part 4**: Based on the input from local stakeholders, use this template to provide answers to the regional needs assessment questions

STEP 2: Analysis of Student Performance

STEP 3: Analysis of Programs
- **Part 1**: Size, Scope and Quality
- **Part 2**: Progress Toward Implementing Programs of Study
- **Part 3**: Recruitment, Retention and Training of CTE Educators
- **Part 4**: Progress toward Improving Access and Equity

Career and Technical Education (CTE) Program Comprehensive Regional Needs Assessment Tool

Use of Perkins V funding is based on the results of the comprehensive regional needs assessment. **Activities and expenditures** should not be included in a grant application if the eligible recipient **cannot** demonstrate a need based on the assessment.
The needs assessment must be completed every two years with a review of progress in the interim. The assessment must be completed prior to completion of the grant application. Local applications will not be accepted without the corresponding regional needs assessment.

Regional Team Name: Salina Region CTE Needs Assessment Taskforce **Date:** Feb. 1, 2020	
Needs Assessment Lead Co-Coordinators:	**Contact Information:**
Secondary: David M. Cooper	**USD 305: David.Cooper@usd305.com**
Postsecondary: James Knapp	**SATC: James.Knapp@salinatech.edu**

Comprehensive Regional Needs Assessment Team

Representative		Name	Institution and Position	Responsibility
Co-Coordinators	Postsecondary Perkins Grant Coordinator	James Knapp	Salina Area Technical College, math instructor	Coordinate meetings, organize and present data to the team, facilitate communication among team members, organize sub-committee meetings for specific sections of the Regional Needs Assessment, and assist with writing of the Regional Needs Assessment, particularly the incorporation of member input and suggested revisions into successive-to-final drafts
	Secondary Perkins Grant Coordinator	David M. Cooper	USD 305, Perkins Grant Writer	
Teacher(s) - Secondary		JD Garber	Central High School (USD 305), Digital Media/Journalism teacher	Offer perspective of high school CTE educators and suggest strategies to improve the CTE experience, increase numbers of concentrators and completers, improve student mastery of technical skills, increase certifications earned, increase real-world relevance of CTE activities, increase non-traditional student participations, and other indicators of high-quality CTE
		Linda Edson	South High School (USD 305), Culinary Arts teacher	
		Gary Seibel	South High School (USD 305), Construction teacher	
		Mike Kilgore	Central High School (USD 305), Welding/Construction teacher	
		Zoey Patrick	Central High School (USD 305), FCCS teacher	
		Karl Dawn Stover	Ellsworth High School (USD 327), Ag teacher	
		Zach Cooper	Abilene High School (USD 435), Ag/Welding teacher	
		Deb Farr	Abilene High School (USD 435), FCCS teacher	
Faculty - Postsecondary		Dr. Kristy Rodriguez	Kansas Wesleyan University, Director of Teacher Education	Offer perspective of post-secondary CTE faculty and suggest strategies to improve CTE experience, increase enrollment and completion in high-demand fields, increase certifications earned, place more graduates in high-demand and

			high-wage careers, and other indicators of high-quality CTE
Secondary Administration	Curtis Stevens	South High School (USD 305), Principal	Offer high school administration perspective on strategies and challenges for CTE improvement, particularly for students without definite post-graduation goals for education or employment
	Pam Kraus	Smoky Hill Education Service Center, CTE Coordinator	
	Kelly Peak	Greenbush Education Service Center, Director of Development & Special Projects	
	Linn Exline	USD 305, Superintendent	
Postsecondary Administration	Brian Blackwood	Salina Area Technical College, member of Board of Trustees	Offer postsecondary administration perspective on strategies and challenges for CTE improvement, particularly for incoming freshmen
	Jerri Zweygardt	Kansas Wesleyan University, Nursing Success Coordinator,	
	Jennifer Callis	Salina Area Technical College, Vice President of Student Services,	
	Greg Nichols	Salina Area Technical College, President	
Specialized instructional support and paraprofessional(s)	Lindsey Sellers	South High School (USD 305), Counselor/Director of Performance-Based Diploma Lab	Offer perspective on how support services are provided for special populations CTE students, make recommendations for increasing student mastery of academic and technical skills needed to succeed
Representative(s) of Special Populations	Rex Boley	South High School, former principal of Salina West alternative school	Provide input on improving services for special populations CTE students, as well as strategies to ensure access and equity for all students
Career Guidance and Academic Counselor(s)	Deb Kohn	South High School (USD 305), School To Career Coordinator	Provide information on how Individual Plans of Study at the secondary level are coordinated, and input on improving IPS in order to increase CTE enrollment, completion rate, and post-graduation placement in appropriate careers or post-secondary training
	Cindy Roets	Central High School (USD 305), School To Career Coordinator	

Student(s)	Student Participant	Central High School (USD 305), Digital Media/Health Science concentrator	Offer student perspective on quality of high school CTE and make recommendations for improvement in terms of instruction, real-world experience, exposure to the workplace, *etc.*
	Student Participant	Salina Area Technical College, Student Body President	
Community	Amanda Michaelis	Salina Area United Way, Executive Director	Provide input on how CTE can coordinate with community agencies to support students transitioning from high school to work and/or postsecondary training, including services for special populations
Business & Industry	Brian Blackwood	Airgas, Salina Area Sales Vice President	Provide input on needs of employers in the Salina region, particularly input regarding employee skills, attitudes, expectations, and awareness of how to achieve upward mobility within their career fields
	Steve Dunning	Salina Planing Mill, Product Manager	
	James Bowden	The Land Institute, Research Technician (Ecology)	
	Pat Mahoney	Coperion K-Tron, Global Systems Manager	
	Chris West	West Country Mart in Abilene, owner; and local school board member	
	David Chavarria	MIS/Public Information Office for USD 305, Web Administrator	
Workforce Development	Kendra McAlister	KS WorkforceONE, Special Projects Manager	Assist with labor market data analysis, provide additional data or input on regional CTE needs
Parent(s)	Anita Worth	Former primary school teacher with students who attended Salina Area Technical College	Offer parent perspective into role of parents in students' CTE decisions and information that parents need to support their students
Other (Data Support, Admin Assistant, HR, Business Office, etc.)	Dr. Tiffany Snyder	USD 305, Director of School Improvement & Assessment	Provide technical support on data analysis and potential sources of information on instructional best practices

STEP 1: Analysis of Labor Market Information

Perkins V Section 134(c)(2)(B)(ii)
The local needs assessment shall include…

(B) A description of how career and technical education programs offered by the eligible recipient are—

(ii) (I) aligned to State, regional, Tribal, or local in-demand industry sectors or occupations identified by the State workforce development board described in section 101 of the Workforce Innovation and Opportunity Act (29 U.S.C.3111) (referred to in this section as the 'State board') or local workforce development board, including career pathways, where appropriate; or

(II) designed to meet local education or economic needs not identified by State boards or local workforce development boards.

What Information Should Locals Collect: Labor Market Alignment	
What does the law say? The needs assessment will include a description of how CTE programs offered by the eligible recipient align to state, regional, Tribal, or local in-demand industry sectors or occupations identified by the state workforce development board or local workforce development board, including career pathways, where appropriate. The needs assessment may also identify programs designed to meet local education or economic needs not identified by state boards or local workforce development boards.	**What does the law mean?** The law requires an analysis of how CTE programs are meeting workforce needs and provides eligible recipients with multiple ways to demonstrate labor market demand, from a combination of state and local sources.

Part 1: Utilize the Labor Market Analysis Tool (Excel) provided by the state to assess the labor market in the region. The Excel Spreadsheet contains data for:

- Secondary Pathways
- Postsecondary Programs
- Additional Optional Data Resources

1. Kansas Department of Labor data and program data provided by the state must be used in the assessment.
2. Regional Teams can use additional sources if they wish to supplement the labor data or provide additional evidence of regional needs.
3. As each Team populates the fields in the spreadsheet, Excel will create a bubble chart which visually represents each one of the institution's programs or industry demand for programs. *Please do not delete, rename or add columns in the spreadsheets, as all the data is necessary for the creation of the chart.*

Part 2: Use additional approved sources of data
Part 3: Bring the Regional Team together to discuss the findings from Parts 1 and 2
Part 4: Based on the input from local stakeholders, use this template to provide answers to the regional needs assessment questions

Based on the information determined in the abovementioned process, describe the strengths and needs for the region in the following pages. Add rows as needed.

What programs and pathways in the region align with the labor market needs?

Strengths	Gaps
Restaurant & Event Management: pathway is among Top 5 highest demand in the Salina region, with concentrators-to-annual openings ratio approximately 1:6.	Marketing: pathway is the highest demand in the Salina region, but concentrator numbers are low. This may be because Marketing pathways are focusing on entrepreneurship, small business ownership and management, and other skills more appropriate to the Business Management & Administration cluster.
Health Science: pathway is among Top 5 highest demand in the Salina region, with concentrators-to-annual openings ratio approximately 1:20. This seems low but the local percentages of concentrators that do complete the pathway, and earn industry certification that makes them employable immediately, is higher than other pathways.	Manufacturing: pathway is among Top 5 highest demand in the Salina region, but concentrators-to-annual opening ratio is only 1:179. However, it should be noted that many students in Power, Structural, & Technical Systems are able to transfer welding skills to Production Welding programs and/or industry.
Nursing Aide Program: possible related to Health Science enrollment, concentrators in this postsecondary program are high compared to demand, with concentrator-to-annual openings ratio of approximately 1:1.75. The presence of Salina Regional Health Center, and partnerships between SRHC and SATC and USD 305, has helped maintain high numbers of students earning CNA and CMA certifications.	Nursing (ADN), Health Aide, Home Health Aide, and other medical-related postsecondary programs: no concentrators in these programs with relatively high demand (projected annual openings of 150 or more), though many students with interest in the field divert to Nursing Aide, EMT, and Medication Aide programs. Employability of these program concentrators across multiple medical-related occupations has not been determined.
Teaching/Training: pathway is among Top 5 highest demand in the Salina region, with concentrators-to-annual openings ratio approximately 1:19. This is lower than desired but has steadily increased over the past 5 years.	Business Finance: pathway projects over 500 openings each year but concentrator numbers are low because few schools in the region provide this pathway.
Construction & Design: pathways is just below the Top 5 highest demand in the Salina region, with concentrators-to-annual openings ratio approximately 1:27. This ratio is expected to increase over the next 5 years, especially in USD 305 with the addition of residential construction coursework.	Travel & Tourism: pathway projects over 400 openings each year but is not currently implemented at secondary level within this region. More focus has been placed on Restaurant & Event Management, as entry level jobs in this pathway align closer to what many students are already doing in OJT or outside of school.
Power, Structural, & Technical Systems: concentrator numbers exceed annual openings by approximately 150% but many students transition to Manufacturing/Production Welding at the postsecondary level, where regional demand is higher.	FCCS: pathway projects over 400 openings each year but concentrator numbers are low, possibly because potential concentrators are diverting to pathways such as Restaurant & Event Management, Teaching/Training, Business Finance, and Health Science: pathways that frequently attract students who enjoy working face to face with others, have strong

Strengths	Gaps
	communication and "people" skills, and prefer working "face to face" with clients and co-workers.
Welding Program: possibly related to Power, Structural, & Technical Systems enrollment, concentrators in this postsecondary program are relatively high compared to demand, with concentrator-to-annual openings ratio of approximately 1:2. Salina Area Technical College has expanded facilities in recent years in order to accommodate higher enrollment and address the needs of local industry.	Electrical Technology Program: demand is comparable to Welding Program but concentrator numbers are about half of that program, partly due to turnover of qualified instructors.
Plant Systems: pathway is the highest demand within the Agriculture cluster for this region (see appendix for economic data supporting continuation of Ag pathways in Kansas), with concentrator-to-annual openings ratio approximately 1:7.8.	Business Entrepreneurship & Management: pathway projects approximately 400 openings each year but concentrator numbers are low because relatively few schools in this region implement the pathway. Some schools emphasize Marketing over Business Entrepreneurship & Management, although the career goals and skills of those students may be better aligned to Business.
Animal Science: pathway is the second most in-demand within the Agriculture cluster; the pathway was newly implemented in 2018 in USD 305, so total concentrator numbers were low; they are steadily increasing as the pathway builds momentum.	Early Childhood Development & Services: labor market demand is significant (over 200 projected annual openings) but student participation is decreasing, in part because of low wages and the fact that many districts are shifting away from using this pathway as a *de facto* intervention for pregnant and parenting students, and therefore losing enrollment.

According to the data analysis, what programs/pathways (if any) are not offered but are needed in the region?

Program	Evidence from Kansas Labor Market Data	Evidence from Regional Sources
Marketing NOTE: This was not offered in the Salina region when concentrator data provided by the Kansas State Department of Education was collected, but it is now an approved pathway in at least one district (USD 305).	These two pathways are among the top 10 in-demand pathways in the Salina region based on Kansas Labor Projections (2016-2026) data provided by the Kansas Board of Regents.	No additional sources used in this analysis.
Travel & Tourism NOTE: There was discussion about this pathway as well as the Marketing pathway, related to the fact that most of the anticipated job openings are relatively low-wage, low-skill, or require little or no postsecondary education, training, or certification. The taskforce chose to prioritize high-demand occupations that require more training and provide long-term economic security to workers and their families.		
Corrections, Security, Law, & Law Enforcement Services NOTE: This is currently not a pathway approved for Perkins funding but USD 305, in partnership with the City of Salina and Salina Area Technical College, recently implemented a Police Science Program (as well as a Fire Science Program) to address this need in the region.	These two pathways have projected total annual openings of 200 or more in the Salina region based on Kansas Labor Projections (2016-2026) data provided by the Kansas Board of Regents.	

Program	Evidence from Kansas Labor Market Data	Evidence from Regional Sources
Mobile Equipment Maintenance		
Information Support & Services	This pathway has projected total annual openings or 100 or more in the Salina region based on Kansas Labor Projections (2016-2026) data provided by the Kansas Board of Regents.	
Energy	This pathway has relatively lower projected annual openings in the Salina region; however, the taskforce did note that skills and knowledge in this pathway are highly transferrable across the state, the U.S., and the world. It was also noted by the taskforce that there is some overlap in content with Engineering, especially in the area of alternative fuel sources (wind, solar).	Taskforce members reviewed relevant research on energy consumption and career growth, particularly two reports: *Energy Employment by State—2019*, a joint project of NASEO (National Association of State Energy Officials) and EFI (Energy Futures Initiative); and *Advanced Energy Now 2019 Market Report* prepared by Navigant Research for AEE (Advanced Energy Economy).

What programs/Pathways are offered in the region, but are not supported with the local labor data?

Program/Pathway	Reason for offering these Programs/Pathways	Kansas Labor Market Data or Local Labor Data Source
Web & Digital Communications	The Web & Digital pathway includes coursework, skills, and content common across the Information Technology cluster, and most occupations in this cluster exceed the growth rate (4.3%) for all occupations in Kansas; three occupations in the IT cluster are in the top 5 fastest growing jobs in Kansas, exceeding 25% growth by 2026.	Kansas Labor Projections (2016-2026) provides information on growth rate for all occupations, which can be aggregated by pathway and cluster using their SOC codes.
Graphic Design	Student interest in the Web & Digital, Graphic Design, and Digital Media pathways is very high across the region and corresponds to high annual enrollment in multiple pathway courses. Many high schools include a technology literacy requirement for graduation that can be met through coursework in these pathways, which encourages more students to explore them. Many students are also interested in technology related to video production, webpage design, and development and distribution of social media content. These interests and skills are not exclusive to these career pathways but support a general need for increased technology literacy across a wide range of career fields.	Career interest inventories and historical enrollment numbers have indicated strong student interest in Web & Digital, Graphic Design, and Digital Media. For labor data we have relied on 2016 O*NET data provided by KSDE. Specifically, the 2012-22 projections indicated Kansas job growth ranging from 7-28% for most occupations in Web & Digital, the outlier being Multimedia Artist & Animator, decreasing at -1%. In the former A/V Communications pathway that encompasses what are now Graphic Design and Digital Media, Kansas job growth ranged from 6-12%. In addition, national job growth in Web & Digital occupations (2014-2024) ranged from 3-27%, and national job growth for A/V Communications occupations (2014-2024) ranged from 1-18%.
Digital Media		

Program/Pathway	Reason for offering these Programs/Pathways	Kansas Labor Market Data or Local Labor Data Source
Comprehensive Agriculture	Comprehensive Ag includes coursework, skills, and content common across the Agriculture, Food, & Natural Resources cluster, which is among the top 10 in-demand clusters in the Salina region, with over 496 projected annual job openings. In addition, the occupations of farmers, ranchers, and other agricultural managers combined are among the top 10 in-demand high-wage occupations in Local Area 1 – West, which includes all 7 counties of the Salina region. Other Ag pathways such as Animal Science and Power, Structural, & Technical Systems, which are offered by some districts in the region, have higher demand.	Data for Salina region provided by KBOR for Ag cluster, because much of the pathway data is confidential and therefore accurate numbers are not available. Data on high-demand high-wage occupations in Local Area 1 – West comes from Kansas Career Navigator. Current data for occupation grouping of "Farmers, ranchers, and other agricultural managers" (which aligns with the Comprehensive Ag pathway): ranked #6 in the region for in-demand high-wage occupations, with 499 openings expected over the next 2 years and additional 247 over the next 10. The taskforce also looked at overall economic impact of agriculture and related occupations for the state of Kansas, not just this region.
Engineering & Applied Mathematics (note: USD 305 now supports this pathway; it was approved by the state in 2018-19 so no 2018 concentrator data was available)	STEM was identified as a pathway of strong demand by the Salina Career Pathway Advisory Committee formed in fall 2009. The committee included representatives from USD 305, CTE students, local industries, city offices, and administrators from KSU-Salina (now K-State Polytechnic), Kansas Wesleyan University, Cloud County Community College, and Salina Regional Health Center. The purpose of this committee was to analyze industry needs and occupational trends, identify gaps in secondary CTE services, and recommend new pathways for future development. STEM was the #1 priority for implementation, and a STEM Advisory Committee was formed in 2010 to research implementation, particularly costs of resources, equipment, and training that would be needed.	The Salina Career Pathway Advisory Committee identified pathways that were not offered in USD 305 (in 2009) but should be created in order to address employment trends and industry needs. Committee members made their recommendations based on labor market data from O*NET and the Kansas Department of Labor, as well as projections from industry publications and professional organizations (*e.g.*, American Society of Engineering Education), and personal experience and observation within the industry. The focus was not exclusively on local need but statewide, national, and global needs.

STEP 2: Analysis of Student Performance

Perkins V Section 134(c)(2)(A)
The local needs assessment shall include…

*(A) An evaluation of the performance of the students served by the eligible recipient with respect to State determined and local levels of performance established pursuant to section 113, including an evaluation of performance for special populations** and each subgroup described in section 1111(h)(1)(C)(ii) of the Elementary and Secondary Education Act of 1965.*

What Information Should Locals Collect: Student Performance Data	
What does the law say? The needs assessment will include an evaluation of the performance of the students served by the local eligible recipient with respect to state-determined and local performance levels, including an evaluation of performance for special populations.**	**What does the law mean?** The needs assessment must contain an evaluation of CTE concentrators' performance on the core performance indicators. While eligible recipients already are required to do this as part of their local plans under Perkins IV, the evaluation now includes special populations.**

** Because the disaggregated data on special population subgroups is not available at this time, the needs assessment's student performance analysis will be based on the overall performance of secondary students and program-level performance of postsecondary students. Each subsequent assessment (every two years) will include an evaluation of performance for each subgroup and each special population for both secondary and postsecondary institutions.

Each secondary and postsecondary institution will receive their student performance data based on the data submitted to the state. Program-level data is only available for postsecondary institutions. Secondary schools can pull Pathway-specific data from Pathways system for their assessment. The Regional Needs Assessment Team must meet and evaluate the student performance strengths, gaps, and goals for improvement based on the data **for the entire region.**

Postsecondary Performance

1P1 – Postsecondary Retention and Placement
The percentage of CTE concentrators who, during the second quarter after program completion, remain enrolled in postsecondary education, are in advanced training, military service, or a service program that receives assistance under title I of the National and Community Service Act of 1990 (42 U.S.C. 12511 et seq.), are volunteers as described in section 5(a) of the Peace Corps Act (22 U.S.C. 2504(a)), or are placed or retained in employment.

2P1 – Earned Recognized Postsecondary Credential
The percentage of CTE concentrators who receive a recognized postsecondary credential during participation in or within 1 year of program completion.

3P1 – Nontraditional Participation
The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.

Secondary Performance

1S1 – Four-year Graduation Cohort Rate
The percentage of CTE concentrators who graduate high school, as measured by the four-year adjusted cohort graduation rate (defined in section 8101 of the Elementary and Secondary Education Act of 1965).

2S1 – Academic Proficiency in Reading/Language Arts
CTE concentrator proficiency in the challenging state academic standards adopted by the state under section1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in reading/language arts as described in section 1111(b)(2) of such Act.

2S2 – Academic Proficiency in Mathematics
CTE concentrator proficiency in the challenging state academic standards adopted by the state under section1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in mathematics as described in section 1111(b)(2) of such Act.

2S3 – Academic Proficiency in Science
CTE concentrator proficiency in the challenging state academic standards adopted by the state under section1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in science as described in section 1111(b)(2) of such Act.

3S1 – Post-Program Placement
The percentage of CTE concentrators who, in the second quarter after exiting from secondary education, are in postsecondary education or advanced training, military service or a service program that receives assistance under title I of the National and Community Service Act of 1990 (42 U.S.C. 12511 et seq.), are volunteers as described in section 5(a) of the Peace Corps Act (22 U.S.C. 2504(a)), or are employed.

4S2 – Program Quality – Attained Postsecondary Credits
The percentage of CTE concentrators graduating from high school having attained postsecondary credits in the relevant career and technical education program or program of study earned through a dual or concurrent enrollment or another credit transfer agreement.

5S1 – Nontraditional Program Concentration
The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.

Complete the tables on the following pages. Add rows as needed.

Based on the secondary and postsecondary performance data, what are the region's strengths in student performance?

Strengths	How are these strengths being sustained in the region?	Local Example
Secondary Core Indicator 1S1 (Four Year Graduation Rate): Has exceeded 97% the past 3 years.	Overall focus on increasing graduation rates (all students, not just CTE concentrators) has encouraged districts to implement supplemental programs or services, within or outside of school hours, that help students remediate core academic credits. Schools also work to ensure that CTE concentrators have equitable access to such services, addressing potential barriers such as CTSO activities occurring when credit remediation programs are offered.	Most high schools and districts in this region offer some form of academic credit recovery, during or after school, or both. As one example, USD 305 offers a Performance-Based Diploma lab, a school-within-a-school program in which at-risk students (CTE or non-CTE) can earn academic credits through computer-based, self-paced instruction with teacher oversight and counseling services. This allows students to earn credits during school hours.
Secondary Core Indicator 2S3 (Academic Proficiency in Science): Made significant increase in 2018 and working to maintain that upward trend.	Science proficiency has been raised significantly through increased integration of science content in non-science electives, including CTE courses, which includes explicit connection between the science content and the skills or competencies being taught. Strengthening this connection has helped students understand the "real world" relevance of science within a variety of industries and workplaces; and improved retention of science principles through increased observation of these principles in action.	Finding ways to integrate science content into every pathway can be challenging, and specific principles such as Bernoulli's Law don't fit naturally into every course. But all pathways can support science by promoting *scientific thinking*. This encompasses skills that transfers across many disciplines, including human services and the arts. For example, scientific thinking encourages students to become aware of their own biases and recognize the difference between fact and opinion. This helps develop a foundation to master science content even in "non-science" related classes.
Secondary Core Indicator 3S1 (Placement of Concentrators Who Exited): Has exceeded 96% the past 3 years.	Elementary schools began to integrate career awareness activities into the classroom, and extensive career exploration (*i.e.*, individually driven and supported by the students themselves) generally starts in middle school rather than high school in this region. This provides an additional year or two for students to research their own	Many districts in this region provide a mandatory career exploration course or rotation of career pathway introductory sessions at the secondary level, often in middle school. In USD 305, for example, Career & Life Planning is mandatory for all 8th graders and this class helps students initiate their electronic portfolio for career materials

Strengths	How are these strengths being sustained in the region?	Local Example
	interests, abilities, and personal life goals prior to transitioning to 9th grade.	(résumé, post-secondary options, awards, records of volunteer service) as well as their IPS.
Post-Secondary Core Indicator 1P1 (Placement): Has exceeded 92% the past 3 years.	Salina Area Technical College (SATC) has cultivated for every program a high-quality advisory council including individuals with strong industry experience, current knowledge of local employment needs, and extensive networks of regional contacts that work with the school to connect with SATC students preparing to enter the workforce, promoting their companies and encouraging future graduates to apply for employment with them. A contributing strength of Saline County is that there is a diverse "market" for skilled trades professionals in multiple pathways: Health Science, Construction, Manufacturing, Marketing, Information Technology, *etc*., There are many job placements available for SATC graduates around Salina.	SATC engages their advisory boards to help the college connect students to available placements in local industry. Advisors actively promote among industry contacts the exceptional skills, dedication, and *work ethic* of SATC graduates. This has helped make "Salina Area Technical College graduate" a recognized stamp of quality for graduates as they apply for jobs in the area. This indicator has steadily improved in districts such as USD 305 where a high percentage of graduates leave the community. In the past, it's been difficult to locate or get in touch with these graduates, and therefore no placement data was available. With the prevalence of social media, regaining contact with former students has been much easier, so more post-secondary data in now available.
Post-Secondary Core Indicator 2P1 (Certification): Has exceeded average % of state of Kansas 2 years prior to 2018 (no data yet available for 2018).	SATC has worked with USD 305 to offer more post-secondary coursework opportunities, and while these courses don't always result in industry certification when students are in high school (see Secondary Core Indicator 4S2 under "Gaps"), they provide an introduction to SATC that encourages many to finish these programs after graduating high school; this early introduction also gives students more confidence and foundational skills to earn certifications while in college. In addition, SATC works to ensure relatively low class size in order to offer more	SATC in partnership with USD 305 and the City of Salina has recently initiated Fire Science and Police Science programs for USD 305 students. The courses are offered at Salina High School South and primarily taught by city employees. These programs should increase certifications in EMT, Fire Fighter Level I, First Aid/CPR, and possibly 911 Dispatching (APCO).

Strengths	How are these strengths being sustained in the region?	Local Example
	one-on-one instruction and training, and this helps both high school and post-secondary students succeed in terms of earning industry certifications.	

Optional Questions for Discussion:

- How are students performing in your CTE programs?
- What is the variation in performance among students in different programs?
- How are your schools and colleges performing compared to the state overall performance?

Based on available data, what are the student performance gaps in the region?

Gap	Root Cause
Secondary Core Indicator 2S1 (Academic Proficiency in Reading): Has been above the Kansas average the past 2 years (no data for 2016) but decreased by 7 percentile points in 2018 and was below the 2020 goal.	Although all high schools in this region strive to integrate reading and math skills across all CTE curricula, reading remains stronger in technical and application classes than introductory classes. When CTE concentrators take the Kansas State Assessment in Reading toward the end of their sophomore year in high school, most have taken only one technical level course. Introductory courses need to increase reading practice in order to help build proficiency earlier. Reading skills are deteriorating among both CTE and non-CTE. The increasing use of electronic media (e-mails, texts, instant-messaging) has changed how younger generations commonly communicate; and how they perceive communication in general. Students are reading and writing a lot of text that doesn't reinforce, model, encourage, or demonstrate technical proficiency (grammar, spelling, vocabulary, *etc*.). CTE courses need to increase use of higher-level reading materials (*e.g*., technical manuals, instructions, research articles) without reducing time needed for hands-on practice of technical skills. Reading needs to fit naturally into the CTE curriculum.
Secondary Core Indicator 4S2 (Post-Secondary Credits): Above the 2020 goal but declined significantly from 2017 to 2018, suggesting a possible downward trend that needs to be addressed. Dual credit opportunities through Salina Area Technical College are increasing, but the decline in program *completion* is a concern.	Cost may be a factor, especially for students in low-income households. Even with tuition paid through Excel in CTE, students may be discouraged from enrolling because of class fees and costs of travel (or lack of transportation for those outside Salina). As suggested in Post-Secondary Core Indicator 2P1 under "Strengths," many high school students enroll in post-secondary coursework but not finish these programs, and therefore not earn dual credit—but return to SATC to finish after graduating high school. Another factor may be related to CTE completion in general: students are struggling to complete core academic requirements and have limited time for electives, including CTE. Scheduling flexibility is an issue particularly with smaller high schools.

Gap	Root Cause
Secondary Core Indicator 5S1 (Non-Traditional for Concentrators): Gradually increasing the past 3 years and reached the 2020 goal in 2018, but has consistently been below Kansas average and historically (past 20 years) has been cyclical, meaning that upward trends have "peaked" and then declined as one cohort group of students graduated and incoming freshmen had lower percentages of students interested in non-traditional pathways.	Lack of non-traditional role models in the local communities, workplaces, and schools (high schools and college) limit students' perception of what they can do and where they can work. Role models in popular media are not sufficient. Students in both high school and college need non-traditional teachers, employer-mentors, peers, and peer organizations; not only for students with interest and aptitude for non-traditional employment, but for students who are not "non-traditional" but may support unconscious bias because of their beliefs and perceptions. However, it is also not enough just to support and encourage the students identified as non-traditional for their career goals, though this is essential. In fact, we tend to focus more on the non-traditional individuals than on the culture as a whole. We need a wider effort to transform the culture of the classroom, school, workplace, and community so that every teacher, staff person, student, employer, mentor, *et al*. is supportive of non-traditional participation and not only welcomes but *expects* their school or work environment to be diverse and inclusive. We will be successful when preconceived ideas of "traditional" and "non-traditional" disappear entirely.
Post-Secondary Core Indicator 3P1 (Non-Traditional for Concentrators): Has been below Kansas average the past 3 years and on slightly downward trend.	

Optional Questions for Discussion:

- How are students performing in your CTE programs?
- What is the variation in performance among students in different programs?
- How are your schools and colleges performing compared to the state overall performance?

STEP 3: Analysis of Programs

Part 1: Size, Scope and Quality

Perkins V Section 134(c)(2)(B)(i)

The local needs assessment shall include

(B) A description of how career and technical education programs offered by the eligible recipient are—

(i) sufficient in size, scope and quality to meet the needs of all students served by the eligible recipient; and…

What Information Should Locals Collect: Size, Scope & Quality	
What does the law say? The needs assessment will include a description of how CTE programs offered by the local eligible recipient are sufficient in size, scope, and quality to meet the needs of all students served by the eligible recipient.	**What does the law mean?** The provision maintains the size, scope and quality requirements in Perkins IV, but instead requires that this description be addressed through the needs assessment (which is part of the local application in Perkins V) instead of in the local plan in Perkins IV. The state has the responsibility to establish the definition of these three requirements.

State Definitions:

Size:

Program size reflects an appropriate number of students in order to be effective and meet local business and industry demand as determined by the regional needs assessment. The program size will account for physical parameters and limitations of the program.

Scope:

As specified in K.S.A. 71-1802, CTE programs must:

- be designed to prepare individuals for gainful employment in current or emerging technical occupations requiring other than a baccalaureate or advanced degree
- lead to technical skill proficiency, an industry-recognized credential, a certificate or an associate degree
- be delivered by an eligible institution

In addition, CTE state-approved programs of study/Pathways relate to high-skill, high-wage, or in-demand careers aligned with the economic and workforce development needs in the state or region by:

- Linking programs across learning levels through articulation agreements, dual credit opportunities, aligned curriculum, etc.
- Aligning programs with business and industry needs and local economic indicators
- Providing multiple entry and exit points to programs of study
- Emphasizing development of essential workplace skills through applied academics
- Providing workplace learning opportunities to all students, including special populations

Definitions Continued:

Quality:
Program quality is the measure of how successfully each program addresses academic performance, workplace standards, competencies, and skills necessary for success within their program of study.

The Kansas State Department of Education has established the following secondary quality measures for CTE programs:

- Eligible recipients reach local targets based on state and federal Core Indicators of Performance.
- Local recipients use local labor market data to identify CTE Pathways' alignment to projected employment demand.
- Professional development is provided to faculty and staff to enhance student learning and ensure the implementation of high-quality CTE Pathways.
- CTE Pathways are reviewed based on advisory council's input and local business and industry projections.
- CTE Pathways include at least one articulation agreement and industry credentialing, where appropriate.
- All students are provided with equitable access to CTE programs of study via Individual Plans of Study (IPS) implementation.
- Equipment and technology encourage student attainment of relevant, rigorous technical skills.

The Kansas Board of Regents has established the following postsecondary quality measures for CTE programs:

- Eligible recipients negotiate local targets based on state and federal Core Indicators of Performance.
- Local recipients demonstrate the need for CTE programs by presenting labor market data and economic development projections that indicate current or projected employment demand.
- Professional development is provided to faculty and staff to enhance student learning and ensure the implementation of high-quality CTE programs.
- CTE programs of study are systematically reviewed based on advisory council's input and local business and industry projections.
- CTE programs participate in program alignment and provide industry credentialing.
- All students are provided with equitable access to CTE programs of study.

Complete the table on the following pages. Add rows as needed.

How do schools and colleges in the region determine that programs…

Question	Answer	Areas for Improvement
Are of sufficient size	SATC uses local industry input from its advisory councils to determine how large or small each program needs to be, regardless of what enrollment might look like. High schools in this region also rely heavily on input from their local Advisory Councils but also look at student interest based on Career Cruising/Xello data and enrollment trends. Pathway sizes often increase to accommodate greater numbers of students becoming pathway concentrators, or increasing numbers of middle school students expressing their intention to concentrate in a specific pathway.	Increasing student interest in jobs available in the local area requires not just promoting wages, benefits, opportunities for advancement, and "traditional" lures. For high school students, we need to develop strategies that also identify and address what students consider important at that age, while also helping guide them toward a long-term vision of where they want to be late in adulthood. Strategies (counseling, CTE classroom support, leadership opportunities, work-based learning) need to reconcile the gap between what students want and expect from a career, with the actual workforce needs of the region. Traditionally, we've gathered data on what students are interested in, and what pathways they pursue, but not much research into *why* they're interested in these areas or how they perceive these career fields that makes them interested. In summary, high school students have a conception of "work" that needs to be reconciled with the reality of the workplace—including what might surprise students in a positive way, and excite interest in careers they hadn't considered.
Relate to real-world work environment (Scope)	High schools in the region attempt to integrate work-based learning experiences into their application level courses, especially through local internships. When internships are not possible due to lack of available placements, mentors, safety or privacy issues, or other concerns, the capstone classes engage students in "real world" projects that simulate the actual scope of industry as much as possible. In-house businesses (school stores or coffee shops, catering services, poster or T-shirt design/print shops, *etc*.) are supported in many regional high schools to give students experience	There is a significant need for resources, facilities, expertise, and mentors to prepare students for different workplaces, especially for pathways where internships and work-based learning experiences are not available or are limited by issues of safety, access, client confidentiality and privacy, *etc*. When work-based learning is scarce, workplace simulations can fill the gap. But these simulations require a lot of material support. Most commonly needed workplace simulations and related projects are in the engineering, manufacturing, construction,

Question	Answer	Areas for Improvement
	with real-world decision-making, planning, organization, and client service, where such experiences are not available in the community.	finance, comprehensive agriculture, and animal science pathways. Professional development, especially training that helps connect teachers to other educators, can help give districts ideas about what resources that can simulate actual workplace tasks or the decision-making opportunities found more often in the workplace.
Help students advance to future education (Scope)	High schools work with SATC to offer dual credit courses that can transfer to SATC or other technical college programs after graduation, providing support as needed (transportation, fee scholarships, flexible scheduling) to allow students to participate in these opportunities.	Many districts in the region feel more collaboration time for CTE teachers, counselors, and support staff would help with seamless and efficient transition to postsecondary education, training, or work. CTE teachers could use this time to develop cross-curricular projects; develop accommodations or instructional support for special populations students; and brainstorm and pilot strategies to create a more inclusive and welcoming environment for special populations and non-traditional students. Across multiple pathways there are certain needs common to CTE students: limited financial resources at home, overall disengagement with school, inexperience or lack of knowledge about postsecondary education, limited career and college goals because of social, family, and peer influences, *etc*. CTE students need more opportunities to visit college campuses and local industries with their peers and CTE teachers, in order to gain familiarity and level of comfort in these environments—which because of family circumstances or disadvantages many do not have.
Are of high quality	Regional high schools support the seven KSDE-established measures of secondary CTE quality by: • Reviewing local targets based on state and federal Core Indicators of Performance at one or more Advisory Council meetings for each pathway. • Using local labor market data provided by industry members of the Advisory Councils to ensure that pathways are meeting projected employment demand.	CTE programs across the region need to provide more instruction or content that focuses on helping and encouraging students to "move up the ladder" within a chosen career, so that they think about how to move toward the management/ownership level rather than remain in entry level positions. Much of this is provided only in the capstone courses or the very first career introductory class at the 9th grade or middle school level; there is less content in courses at the technical level, when concentrators are at the critical

Question	Answer	Areas for Improvement
	• Helping CTE teachers and support staff locate and participate in appropriate professional development opportunities that improve instruction and increase student learning. • Maintaining advisory councils for each pathway and meeting twice each year in part to review the needs of local employers. • Maintaining at least one articulation agreement per pathway and updating pathways and courses to qualify for additional articulation agreements. • Creating for every student, beginning in middle school, an Individual Plan of Study which is updated every year in high school. • Acquiring and updating equipment and technology to maintain alignment with current workplace standards. SATC supports the six KBOR-established measures of postsecondary CTE quality by: • Reviewing progress toward local targets and if necessary negotiating local targets based on state and federal Core Indicators of Performance. • Using labor market data and economic development projections provided by industry members of Advisory Councils to ensure that programs are meeting projected employment demand. • Helping CTE faculty and support staff locate and participate in appropriate professional development opportunities that improve instruction and increase student learning. • Maintaining advisory councils for each pathway which review CTE programs of study to determine if they are meeting the needs of local employers. • Providing appropriate industry credentials and certifications in every CTE program.	junction where they could go on to complete the pathway—or leave it unfinished. This ought to occur at the curricular level, with explicit content on instructional activities, projects, and work-based learning experiences that help students strengthen the skills needed to move up in a company or organization: independent thinking, creativity, decision-making ability, leadership, teamwork, and ambition or "vision." Currently this kind of content varies from individual teacher to teacher, and often when an experienced veteran CTE teacher leaves, a new teacher doesn't have any structures in place to continue offering this content. Teachers new to the community itself are even more at a disadvantage. A recommended strategy related to the above is for each school and each pathway to maintain and continuously update a local industry contact list that includes not just advisory council members and internship mentors, but professionals in the field who regularly contribute to CTE in other ways: presenting in the classroom, mentoring individual students, sharing informational literature, donating materials or resources, hosting field trips or job shadowings, *etc*. New CTE teachers could forge professional relationships with local industry contacts if they had such information immediately available.

Question	Answer	Areas for Improvement
	Eliminating all barriers to equitable access for students pursuing any program of study.	
Should be offered in the region	High schools and SATC identify potential new programs to offer based on advisory council recommendations. Although advisory councils serve existing pathways, industry members have provided input on employer needs for related pathways (*e.g.*, Manufacturing Production recommended because of high need for welders, which came from Power, Structural, & Technical Systems Advisory Council members). USD 305 created a short-term Career Pathway Advisory Committee in 2009 to review (at the time) current local CTE and recommend new pathways based on labor demand and local need. This committee included district administrators and staff, and representatives of local industries, SATC, Kansas Wesleyan University, KSU-Polytechnic, Salina Regional Health Center, the city of Salina, and the Salina Chamber of Commerce. STEM was the top priority identified by this committee and the STEM Advisory Committee was formed the following year to develop a formal plan for implementation. Other recommendations, such as Law, Public Safety, Corrections, and Security pathways, were eventually created as well when resources, funding, and qualified instructors became available.	In general, secondary and postsecondary institutes must consider the fact that many occupational areas within their region don't necessarily have "hard" data on employment outlook or labor market demand. Agriculture is an example. Much numerical data about agricultural jobs is not available, not reported, or underreported. It's important to respect the qualitative recommendations of advisory council members who know what their labor needs are, based on their actual experience, and are sharing these needs with districts. Self-employed workers and people who work "freelance," including consultants, are difficult to quantify in terms of demand and need. However, many of the new jobs being created in technology-related fields—particularly web and digital communications and digital media—support many of these types of careers. The IT and Arts, A/V Technology, & Communication clusters are producing workers who don't work exclusively for one employer but contract their services and expertise for many clients. This requires a level of entrepreneurial skill that students in these pathways may not be currently receiving, which suggests that more cross-curricular projects should be developed that connect these clusters with the marketing pathway. Currently, for example, marketing classes are not addressing the increasing use of social media and how this impacts promotion and sales; conversely, students in IT and AAVTC clusters are learning about social media but necessarily as a marketing tool, which limits their awareness of the careers available in this single area.

STEP 3: Analysis of Programs

Part 2: Progress toward Implementing Programs of Study

Perkins V Section 134(c)(2)(C)

The local needs assessment shall include

(C) An evaluation of progress toward the implementation of career and technical education programs and programs of study.

What Information Should Locals Collect: Progress towards Implementing CTE Programs/Programs of Study	
What does the law say?	**What does the law mean?**
The needs assessment will include an evaluation of progress toward the implementation of CTE programs and programs of study.	This evaluation should be both a backward and forward-looking review of the programs and programs of study offered. In addition to meeting the size, scope and quality, this requirement addresses current and future plans to support the implementation of programs and programs of study.

Federal Definition:

Perkins V Sec. 2(41)

Program Of Study:

The term 'program of study' means a coordinated, non-duplicative sequence of academic and technical content at the secondary and postsecondary level that—

(A) incorporates challenging state academic standards, including those adopted by a State under section 1111(b)(1) of the Elementary and Secondary Education Act of 1965;

(B) addresses both academic and technical knowledge and skills, including employability skills;

(C) is aligned with the needs of industries in the economy of the State, region, Tribal community, or local area;

(D) progresses in specificity (beginning with all aspects of an industry or career cluster and leading to more occupation-specific instruction);

(E) has multiple entry and exit points that incorporate credentialing; and

(F) culminates in the attainment of a recognized postsecondary credential.

Complete the table on the next page. Add rows as needed.

How do schools and colleges in the region implement programs of study?

Implementation Process	Strengths	Needs/Gaps
High schools in the region meet all requirements for KSDE approval when implementing a new pathway, including: • Formation and biannual meeting of a pathway advisory council with industry representation and including to the greatest extent possible CTE students, parents, community leaders, and postsecondary faculty. • Development and annual updating of SMART goals for partnerships, professional development, physical environment, and instruction over the next 3 years. • Coursework required for the sequence of the pathway, including introductory, technical, and application level classes, all aligned to state competencies. • Appropriate licensure and certification of all CTE teachers, including those transitioning from industry. • Opportunities for all CTE teachers and support staff, especially counselors, to participate in CTE-specific professional development and educator networks within the career field. • Provision of work-based learning experiences and/or "real world" tasks for students completing the pathway. • Opportunities for CTE student leadership, primarily through CTSO membership but also through volunteer service embedded	Most of our school districts provide some form of academic credit recovery program, during school or after school, to help students remain in school and graduate on time with their peers. In our region, there is a high number of students involved in a CTSO or participating in CTE-related competitions even if they are not in a CTSO (for example, marketing and business students might participate in a local Youth Entrepreneurship Challenge event even if they are not members of DECA, BPA, or FBLA). High schools are beginning to use at least one seminar period a week (or every two weeks) to focus exclusively on employability skills and "soft" skills, regardless of whether or not they are CTE concentrators.	Funding for CTE activities, particularly CTSO activities, is limited in larger districts where several student organizations are competing for opportunities to raise funds through the same events (*e.g.*, working concessions at a home sporting event); and in smaller districts where a large number of students are involved in multiple organizations and other extracurricular activities that take a great deal of their time. CTE pathways have other options such as generating revenue through a school-based business, student volunteer service, or sales of student-produced work. More needs to be done in this area. CTSOs need dedicated, experienced, energetic, enthusiastic, and knowledgeable teacher-sponsors; when there is high turnover in CTE, the CTSOs tend to suffer, especially when new teachers take over the organization and don't maintain it at the same high level that students and families might be expecting. Financial and other inducements for CTSO sponsorship might encourage more CTE teachers to start new chapters or take over current chapters. Another support could be flexible scheduling so that CTSO activities can be integrated into CTE classes and/or utilize seminar periods where sponsors are allowed to meet at least once a week exclusively with CTSO member students.

Implementation Process	Strengths	Needs/Gaps
in the pathway (*e.g.*, Marketing students designing promotions for their school or a community agency).		One of the noted challenges related to this issue is that CTE teachers who might be interested in sponsoring a CTSO are often already busy with coaching, working in after-school programs, or sponsoring non-CTSO clubs. Fewer CTSO meetings outside of regular school hours can help alleviate the time conflicts (for students as well as teachers, as many of those interested in joining a CTSO may already be involved in many extracurricular activities).
SATC meets all requirements for KBOR approval of new programs, including: • Evidence of labor market or local employer need for the program. • Assurance of non-duplication with programs offered at other colleges in close proximity. • Faculty with appropriate credentials and strong experience in an industry encompassed by this program. • Prepare promotional materials or update information provided to potential students, including those in area high schools.	Flexibility is a strength. SATC works very closely with its advisory councils to respond quickly to changing employment needs of the area. A recent example is the development, through partnership with the City of Salina and USD 305, Fire Science and Police Science programs. Another example is the recent expansion of the SATC welding program to accommodate the increased short-term demand in the area. Industry partners of SATC have strongly supported the college by providing donations, resources, and expertise. Recently for example, Airgas hosted a summer welding camp to train teachers and faculty from across the area.	A major concern is turnover of instructors in high-demand areas. Most recently there was a need for Diesel Technology and Electrical Technology instructors. SATC has attempted to fill these positions but in this, and in other cases in the past, the only available instructors don't live in Salina or are still employed in industry and can only teach part-time.

STEP 3: Analysis of Programs

Part 3: Recruitment, Retention and Training of CTE Educators

Perkins V Section 134(c)(2)(D)

The local needs assessment shall include…

(D) A description of how the eligible recipient will improve recruitment, retention, and training of career and technical education teachers, faculty, specialized instructional support personnel, paraprofessionals, and career guidance and academic counselors, including individuals in groups underrepresented in such professions.

What Information Should Locals Collect: Recruitment, Retention and Training of Faculty and Staff	
What does the law say? The needs assessment will include a description of how the eligible recipient will improve recruitment, retention, and training of CTE teachers, faculty, specialized instructional support personnel, paraprofessionals, and career guidance and academic counselors, including individuals in groups underrepresented in such professions.	**What does the law mean?** Eligible recipients must evaluate their current and future recruitment, retention and professional development needs. This may require analysis of teacher or other professional shortage.

Complete the table on the next page. Add rows as needed.

How do schools and colleges in the region recruit, retain and train CTE educators?

Process	Strengths	Needs/Gaps
SATC and public school districts in this region seek and recruit new CTE teachers using the same strategies as non-CTE teachers (*e.g.*, advertising in physical and electronic media, HR representatives attending teacher career fairs and visiting teacher preparation programs to connect with future graduates, networking with other districts, and so on). The major difference in recruitment of CTE teachers and non-CTE teachers is that an increasing number of new CTE teachers and college faculty are coming directly from industry. SATC reaches out to potential educators through professional networks (and recommendations) of the industry representatives on each program advisory council. High schools also depend a great deal on personal contacts and professional networks of the industry representatives on their pathway advisory councils.	As per Higher Learning Commission standards, SATC seeks instructors who have attained certification or degree above what their program offers: for programs offering a certification but no degree, instructors need to have an Associate's degree; for programs that lead to an Associate's degree, instructors need a Bachelor's. This requirement can be waived if the instructor has a significant amount of documented work experience in the program area. Though recruiting CTE educators is an ongoing challenge, SATC has had success in attracting alumni to return as instructors. This is easier when the former students have not advanced to a point in their post-completion jobs where an instructor's wage is not competitive; and it is often beneficial to have younger instructors with a positive personal connection to SATC.	For SATC, Practical Nursing and Electrical Technology instructors have been the most difficult educators to recruit. For high schools, teachers with FCCS or industrial arts endorsements have been most difficult to find. Construction and Ag are the pathways that rely heaviest on new teachers transitioning from industry or industry workers with restricted licensure. Recruiting teachers from industry is a challenge in and of itself. Some of the local data in this region indicates that among high school CTE teachers, those in Construction and Ag pathways are either among the longest-tenured instructors in the school or (especially if they transitioned from industry) very short-tenured. This creates a situation where highly-experienced veterans retire, leaving gaps for new, far less classroom-experienced teachers, and this transitional period can affect student and family perceptions of the program and their sense of engagement with it.
Some high schools that recruit CTE teachers from industry try to help ease the transition to teaching (and retain these individuals) by providing services as: • Support from the Human Resources office to ensure teachers are on track to finish coursework needed for full licensure: may include additional leave to take college	High schools in this region have generally done well in connecting CTE teachers, particularly beginning teachers and those transitioning from industry, to professional development opportunities that help them learn more about CTE and network with other CTE educators from outside their community. Such training not only helps teachers improve	High schools face the same barrier as SATC trying to get CTE educators from industry: they can't provide a competitive wage for many industries. The teachers who transition from industry usually do so because they have a strong personal desire to share their knowledge and skills with younger generations; are "burned out" in their current

Process	Strengths	Needs/Gaps
classes, referrals to online coursework so teachers don't need to travel as much, monitoring by HR to make sure coursework targets are being met, and school-based opportunities for leadership projects related to coursework. • Veteran teachers can offer mentoring in a formal or informal process. They may provide classroom observation and feedback, co-participation in trainings, and advice on pedagogy, school protocols, and other procedures. • Flexibly scheduled, district-hosted staff development sessions for new teachers. These might focus on district-wide initiatives (Kagan Cooperative Learning, Reading First, MTSS, Understanding by Design, *etc*.) or help new teachers master specific resources (Canvas, Skyward, Xello, Chromebooks, Promethean boards). • Perkins-funded professional development for all CTE teachers and support staff (not just those transitioning from industry) that focus on Perkins and CTE initiatives, such as the KSDE Annual CTE Conference, K-ACTE Summer Conference, and workshops on specific topics like pathway maintenance, data collection, equity in CTE, strategies to support non-traditional student success, *etc*.	curriculum, instruction, and content, but provides assurance that CTE is extremely important to this region and not an "adjunct" to academic coursework.	field and looking for a change; or have physical issues that limit their ability to work in industry but don't exclude them from teaching. Locating industry employees or former industry employees who meet one or more of those criteria depends largely on personal and professional networks of advisory council members, so expanding those networks could help future searches for CTE educators. Staff development is essential for all teachers but especially new teachers, but many new CTE teachers can get overwhelmed by the scope and number of trainings. Many teacher transitioning from industry would prefer stronger focus on the "nuts and bolts" of how to teach (classroom management, grading, using classroom technology) rather than broader issues like CTE. For teachers transitioning from industry, even if they are working with a restricted license, connecting them with a veteran teacher during their first year would help encourage them to stay in the profession. It would also provide support for developing skills in pedagogy, RTI (Response To Intervention), brain-based learning, and other content that teacher directly from industry don't necessarily have.

STEP 3: Analysis of Programs

Part 4: Progress toward Improving Access and Equity

Perkins Section 134(c)(2)(E)

The local needs assessment shall include…

(E) A description of progress toward implementation of equal access to high-quality career and technical education courses and programs of study for all students, including—

(i) strategies to overcome barriers that result in lower rates of access to, or performance gaps in, the courses and programs for special populations;

(ii) providing programs that are designed to enable special populations to meet the local levels of performance; and

(iii) providing activities to prepare special populations for high-skill, high-wage, or in-demand industry sectors or occupations in competitive, integrated settings that will lead to self-sufficiency.

What Information Should Locals Collect: Progress Towards Improving Access & Equity	
What does the law say? The needs assessment shall include a description of: • Progress toward implementation of equal access to high-quality CTE courses and programs of study, for all students including strategies to overcome barriers that result in lower rates of access to, or performance gaps in, the courses and programs for special populations; • How they are providing programs that are designed to enable special populations to meet the local levels of performance; and • How they are providing activities to prepare special populations for high-skill, high-wage, or in-demand industry sectors or occupations in competitive, integrated settings that will lead to self-sufficiency.	**What does the law mean?** This requirement is focused on supports for special populations. States assist locals in directing resources or supports to close performance gaps and remove barriers and to provide supports necessary to address different barriers and different populations.

Perkins V Sec. 2(48)

SPECIAL POPULATIONS.-- The term "special populations" means--

(A) individuals with disabilities;
(B) individuals from economically disadvantaged families, including low-income youth and adults;
(C) individuals preparing for non-traditional fields;
(D) single parents, including single pregnant women;
(E) out-of-workforce individuals;
(F) English learners;
(G) homeless individuals described in section 725 of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11434a);
(H) youth who are in, or have aged out of, the foster care system; and
(I) youth with a parent who—
(i) is a member of the armed forces (as such term is defined in section 101(a)(4) of title 10, United States Code); and
(ii) is on active duty (as such term is defined in section 101(d)(1) of such title.

Complete the table on the following page. Add rows as needed.

How do schools and colleges ensure access and equity for all students, especially special populations?

Strengths	Gaps	Strategies for Improvement
For students from low SES households or facing economic barriers to CTE access: • SATC employs a part-time (75% FTE) Foundation Director to reach out to local industries to create scholarship funds and other kinds of funds for students who may face economic or other barriers to enrollment or completion. • SATC maintains an Emergency Fund through staff donations and revenue raised by student government to pay expenses for students in sudden financial need. These could include car repairs, gas, bus passes, utility bills, medicine, uniforms, and other costs that a student might not be able to meet because of an unexpected hardship. • Some high schools in this region also have emergency funds or special needs funds for students potentially limited in their CTE participation by economic hardship. Funds may cover college course fees, CTSO participation costs, uniforms, travel, tools, *etc*., provided without identifying the students receiving this assistance. • Some of our high schools also provide free transportation to and from SATC and/or work-based learning experiences.	Students with economic or financial concerns frequently tell their counselors and CTE teachers that they need full-time, entry-level employment immediately after they graduate (or drop out of school), and how strongly they believe this is a critical need often dictates their choice of pathway, regardless of what their actual interests and skills might be. More specifically, if many low-SES students believe that certain pathways require more post-secondary education than they can afford after high school—even if much of the coursework can be completed through dual credit with no tuition costs—these students will avoid those pathways and pursue pathways they feel they can complete more quickly, at least in terms of base level skills and knowledge needed for entry level (and usually low-paying) jobs. These students cannot or will not enroll in any postsecondary education after high school, and this limits interest in pathways that can't be completed entirely in high school, such as engineering and any IT pathways. What these students don't necessarily understand or believe is that some postsecondary education can provide significant long-term benefit through greater overall earning power, ability to advance, transferability of skills, *etc*. Changing that mindset is a challenge.	As mentioned in other parts of this report, exposure to postsecondary education is key, particularly for students from low SES households who may have limited experience or knowledge about college based on what they've assimilated from their own families, friends, and acquaintances. Post-secondary exposure needs to occur early (elementary or middle school), more frequently, and in contexts that build positive attitudes toward college—not an attitude that college is absolutely necessary but an understanding of what postsecondary education can and cannot offer in terms of career development. All high school students have preconceptions about what college is like, and different ideas about what they'll get from the experience. So connecting CTE students to postsecondary education needs to focus on what college can realistically do for them—especially economically and financially. At the postsecondary level, there has been discussion about developing shortened CTE programs at lower tuition, but focusing on industry skills in high demand at specific worksites (*e.g*., an abbreviated Welding Technology program that focuses on MIG welding). A potential benefit of such programs is that they can attract students with financial barriers, who want to be employable in shorter time.

Strengths	Gaps	Strategies for Improvement
For students with IEP or 504 plans, who require accommodations or services to participate fully in CTE: • High schools include CTE coursework in all special education accommodations, including classroom support from paras or interpreters. • SATC does not have the staff to provide extensive medical or counseling/therapy services, but the college does maintain partnerships with agencies in Salina that do provide these services, and will help students that SATC refers to them. OCCK, Inc., for example, is an agency that assists many people with physical needs.	Across our region, the numbers/percentages of CTE students with needs covered by an IEP or 504 plan vary widely from school to school, and from pathway to pathway within the same school. All districts regardless of numbers/ percentages make accommodations as needed in CTE classrooms. The Central Kansas Cooperative in Education (CKCIE) coordinates special education services for 11 of the 13 school districts in this region. In terms of CTE, sensory issues can be difficult to accommodate in some pathways, particularly hearing impairment or deafness, especially if an ASL interpreter is required. This is a specialized support service that in the past has been contracted from outside the region (*e.g.*, a recent case at SATC which required two full-time interpreters from a company based in Wichita). Students with Autism Spectrum Disorder, Emotional Disturbance, and/or Intellectual Disability can also be challenging to support adequately, particularly when providing equitable access to group project work where communication and teamwork are important. In these instances, we not only need to focus on the special education student but making sure the learning environment is supportive, encouraging, and inclusive. Regarding equitable access to CTE programs, special education students face a significant barrier in scheduling flexibility. Priority for students with severe impairments is	Special education staff provide the expertise in classroom accommodations and resources, but more emphasis in the CTE classroom needs to be placed on transforming the learning environment—not just with ASD, ED, and ID students as mentioned but with all special populations, especially those with physical or cognitive challenges that affect their contribution to group projects and team work. Teachers need more resources to help them teach all students how to support their peers and identify in themselves biases and prejudices that may be unconscious; and teachers and support staff, of course, need more such training as well. Creating schedules for special education students is challenging for providing full inclusion in elective coursework, including CTE classes. Some improvement in this area is possible with administrative oversight of scheduling, so that counselors alone are not negotiating schedules with individual teachers. In the long term, however, improved scheduling will require the availability of more special education teachers and support staff to allow some flexibility in the modified and CWC course scheduling.

Strengths	Gaps	Strategies for Improvement
	enrollment in modified academic coursework and CWC (class within a class) courses. Scheduling these is less flexible due to limited numbers of special education teachers and paras, but these classes take precedence over electives, including CTE courses.	
For students at risk of academic failure, dropping out of high school or college, or non-completion of CTE program: • SATC utilizes an "Early Alert for Academic Risk" system in which teachers will identify students who may be at risk due to a change in their behavior, attendance, hygiene, demeanor, performance, *etc*. These students can be referred to help through online tutoring or community services from agencies such as the Central Kansas Mental Health Center. • SATC also partners with Salina Adult Education Center (SAEC) to help interested SAEC students enroll in SATC after they earn their GED. While in the SAEC program, adult learners can participate in college counseling sessions to learn how to apply for financial aid, seek scholarships, develop a plan of study, *etc*.—skills especially needed by people from families where no one has graduated or attended college.	Despite an increasing number of academic interventions across this region that help CTE and non-CTE students recover academic credits, many students still end up curtailing their career pathway in 12th grade in order to focus on the minimal requirements for graduation.	CTE courses can better support academic proficiency by integrating higher-level math and reading skills across the curriculum. This occurs more frequently in the capstone classes where students are engaged in work-based learning or real-world projects, but it also needs to happen in the introductory and technical levels. The challenge is integrating reading and math in ways that are "natural" to the technical skills that students also need to master. Assignments like research reports do help strengthen reading skills but such tasks are not always relevant to the technical content, nor do they align well with the actual workplace. One suggested strategy for better academic and technical integration is for CTE and core academic teachers to collaborate on CTE curriculum revision, when it's updated to align with state competency profiles. This would require more collaboration time for both CTE and academic teachers.

Strengths	Gaps	Strategies for Improvement
At the secondary level, career guidance is provided through the Individual Plan of Study. This is beneficial for all students but especially for those with limited knowledge of the occupations (local or otherwise) aligned with their interests and skills. An example: students interested in the culinary arts may think only of cooks and chefs, unaware that this pathway includes jobs like restaurant or catering business owners, institutional kitchen managers, dieticians and nutritionists, event planners, and many others. Most secondary schools in this region use Career Cruising/Xello to create an IPS for every student beginning in either 7th or 8th grade. In many of our districts, middle schools offer a career exploration class or rotation of introductory sessions (3-9 weeks) that provide some preparation on pathways offered at the high school. Often these are mandatory classes that also introduce students to a form of electronic career development portfolio which they will subsequently review and update with their counselors each year in high school. Many if not most counselors continually update their knowledge of local pathways as well as the resources and services that support them: statewide articulation agreements, postsecondary programs of study, locally available certifications, financial aid, and opportunities outside of	Need more certification opportunities, and more sources of funding to cover costs of taking certification tests. At the same time there needs to be more education underlining the importance of these certifications and what they allow employees to do in terms of choosing where they work, finding work, and getting opportunities to advance at work. An IPS means little if a student drops out of school or discontinues a career pathway and plans for postsecondary education or training. Many students fail to complete a pathway they start because they don't see the long-term impact of developing a "plan" to get them to the best possible career (and more optimal income level). Some students focus on full-time, low-wage employment while in high school because of financial concerns and the short-term gains of earning income immediately. Redirecting students toward a more expansive, ambitious vision of where they could be in 5, 10, 20 or more years is difficult; many of these students have a strongly ingrained learned helplessness, a belief imposed by family, peers, teachers, media, other adults, popular culture, and themselves) that they cannot change their situation for the better.	Schools can redirect some of the revenue generated by CTE initiatives (*i.e.*, school stores, fundraisers, product sales) toward "scholarships" for students interested in higher-level (but often expensive) certification tests, as well as costs of helping these students take the tests (*e.g.*, transportation to certification sites outside of the community, test prep materials, *etc.*). Students need to connect with adults in the local community who actually model how economic advancement has worked for them. Students (and their families) need to hear the stories of these individuals and develop the belief that a high-skill, high-wage, and personally fulfilling career is not only a possibility but something that should be expected.

Strengths	Gaps	Strategies for Improvement
school to enhance career knowledge and experience (*e.g.*, local Explorers programs, volunteer opportunities in related workplaces, potential internships or industries to visit, community scholarships in specific career fields, and so on).		

Appendix: Market Data

Regional Labor

The Salina Region CTE Needs Assessment Taskforce reviewed multiple data sources for occupational demand. Primary source was 2016-2026 Kansas Department of Labor Long-Term Occupational Projection Data disaggregated for the Salina Workforce Region by the Kansas Board of Regents. Summaries of this data are provided on this and the next five pages.

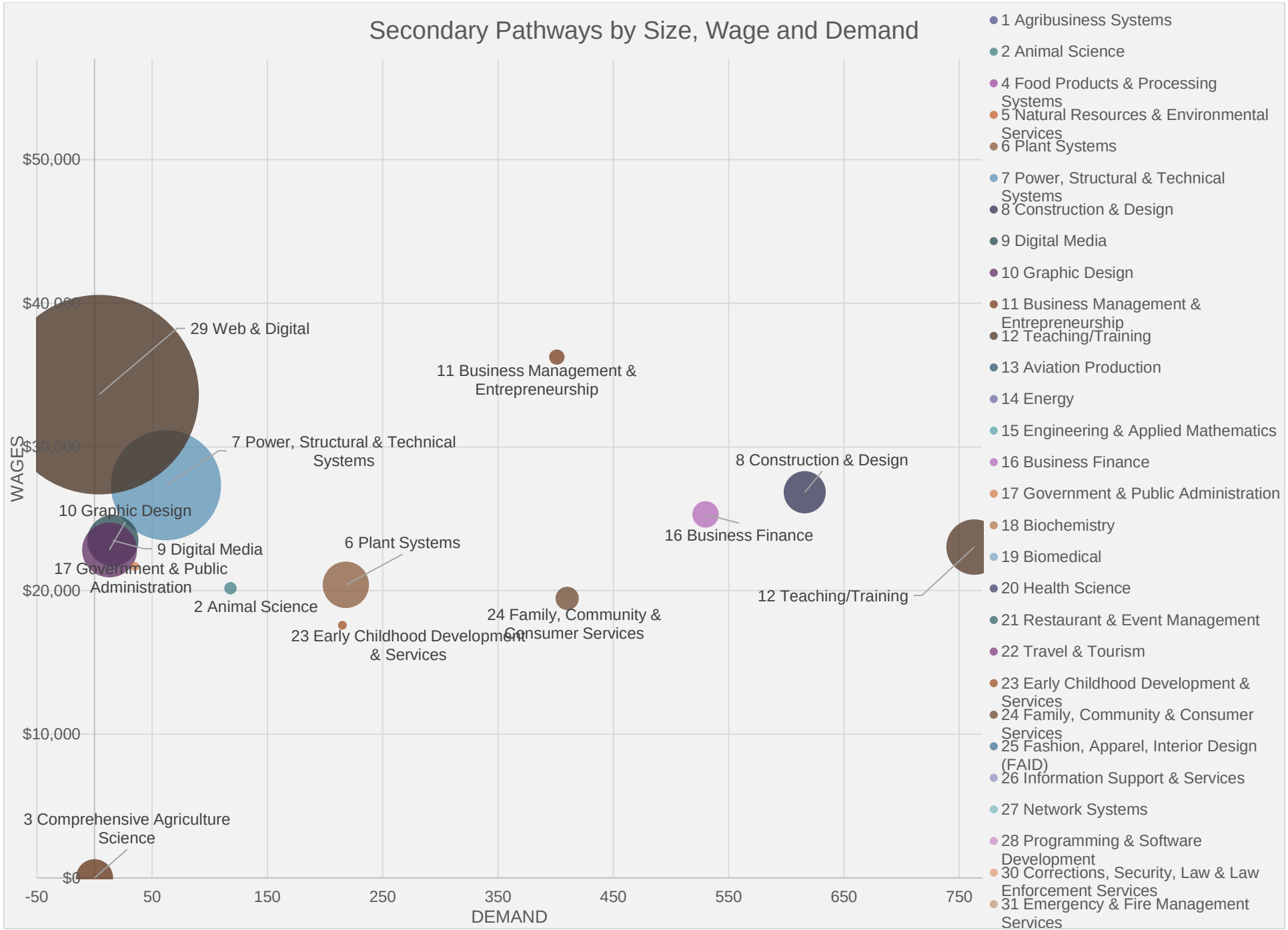
Secondary Level: Salina Workforce Center

#	Pathway Name	Pathway Size	Demand	Wage
		2018 Concentrator Count	Total Annual Openings	Entry-level Annual Wage
1	Agribusiness Systems	Less than 5	60	$56,149
2	Animal Science	Less than 5	118	$20,163
3	Comprehensive Agriculture Science	Less than 5	0	$0
4	Food Products & Processing Systems	Less than 5	13	$36,581
5	Natural Resources & Environmental Services	Less than 5	25	$27,478
6	Plant Systems	28	218	$20,397
7	Power, Structural & Technical Systems	157	62	$27,333
8	Construction & Design	23	616	$26,844
9	Digital Media	34	16	$23,486
10	Graphic Design	39	13	$22,833
11	Business Management & Entrepreneurship	Less than 5	401	$36,252
12	Teaching/Training	40	763	$23,027
13	Aviation Production	NEW	6	$36,833
14	Energy	Less than 5	33	$46,699
15	Engineering & Applied Mathematics	Less than 5	35	$50,879
16	Business Finance	9	530	$25,304
17	Government & Public Administration	Less than 5	35	$21,690

18	Biochemistry	Less than 5	3	$58,301
19	Biomedical	Less than 5	3	$0
20	Health Science	44	898	$24,662
21	Restaurant & Event Management	280	1,692	$17,389
22	Travel & Tourism	Less than 5	448	$18,172
23	Early Childhood Development & Services	Less than 5	215	$17,590
24	Family, Community & Consumer Services	7	410	$19,456
25	Fashion, Apparel, Interior Design (FAID)	NEW	21	$19,797
26	Information Support & Services	Less than 5	149	$18,525
27	Network Systems	Less than 5	30	$50,419
28	Programming & Software Development	Less than 5	19	$46,772
29	Web & Digital	516	4	$33,648
30	Corrections, Security, Law & Law Enforcement Services	Less than 5	229	$27,906
31	Emergency & Fire Management Services	Less than 5	51	$24,988
32	Manufacturing	6	1,069	$27,728
33	Marketing	Less than 5	1,716	$18,962
34	Aviation Maintenance	NEW	1	$40,288
35	Mobile Equipment Maintenance	Less than 5	241	$22,881

Notes for secondary and postsecondary data:

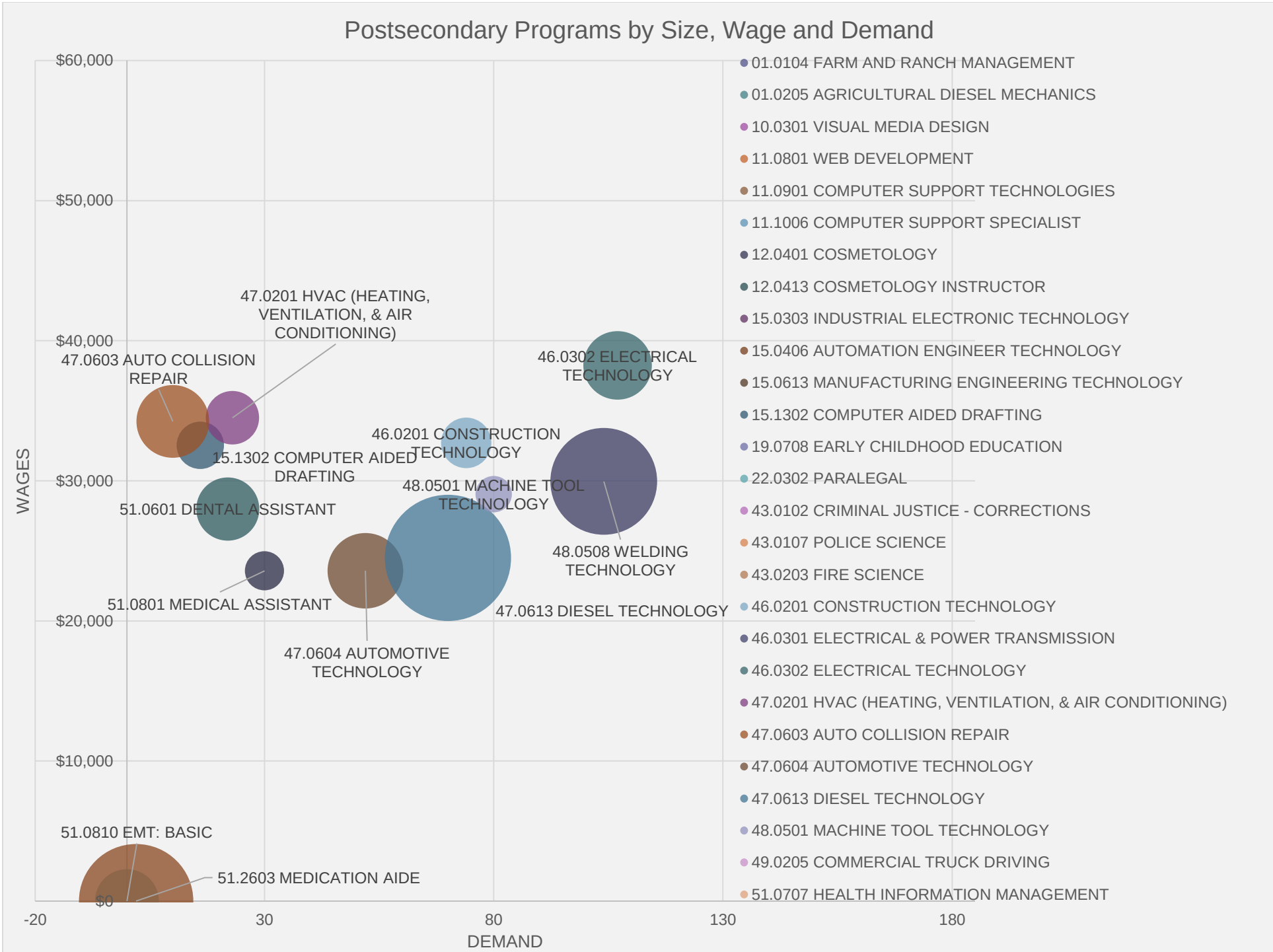
Concentrator data is based on school year 2018.			
Pathway Name, Wage and Demand data fields are locked for editing.			
Pathways with extraordinarily large numbers of total job openings (noted in yellow) were excluded from the graphic representation to allow for other Pathways to be visible. Please make sure to discuss these Pathways' data with your Regional team of stakeholders.			
"0" or Blank in Wages column means that no data was available from the Kansas Department of Labor			
"0" or Blank in Demand column means that no data was available from the Kansas Department of Labor			
"0" or Blank in Pathway Size column means that no concentrators were reported in school year 2018 for the region.			
"NEW" in the Pathway size column indicates new Pathways for which no concentrator data is available for 2018			


Secondary Pathways by Size, Wage and Demand
WAGES
DEMAND
$50,000
$40,000
$30,000
$20,000
$10,000
$0
-50
50
150
250
350
450
550
650
750
29 Web & Digital
11 Business Management & Entrepreneurship
7 Power, Structural & Technical Systems
8 Construction & Design
10 Graphic Design
9 Digital Media
16 Business Finance
6 Plant Systems
17 Government & Public Administration
12 Teaching/Training
2 Animal Science
24 Family, Community & Consumer Services
23 Early Childhood Development & Services
3 Comprehensive Agriculture Science
1 Agribusiness Systems
2 Animal Science
4 Food Products & Processing Systems
5 Natural Resources & Environmental Services
6 Plant Systems
7 Power, Structural & Technical Systems
8 Construction & Design
9 Digital Media
10 Graphic Design
11 Business Management & Entrepreneurship
12 Teaching/Training
13 Aviation Production
14 Energy
15 Engineering & Applied Mathematics
16 Business Finance
17 Government & Public Administration
18 Biochemistry
19 Biomedical
20 Health Science
21 Restaurant & Event Management
22 Travel & Tourism
23 Early Childhood Development & Services
24 Family, Community & Consumer Services
25 Fashion, Apparel, Interior Design (FAID)
26 Information Support & Services
27 Network Systems
28 Programming & Software Development
30 Corrections, Security, Law & Law Enforcement Services
31 Emergency & Fire Management Services

Postsecondary Level: Salina Area Technical College

#	Program Name	Program Size	Demand	Wage
CIP		2-year Average Concentrator Count	Total Annual Openings	Entry-level Annual Wage
01.0104	FARM AND RANCH MANAGEMENT	Less than 5	66	$43,077
01.0205	AGRICULTURAL DIESEL MECHANICS	Less than 5	29	$31,826
10.0202	MEDIA COMMUNICATION AND PRODUCTION	Less than 5	0	$0
10.0301	VISUAL MEDIA DESIGN	Less than 5	2	$17,701
11.0801	WEB DEVELOPMENT	Less than 5	17	$24,302
11.0901	COMPUTER SUPPORT TECHNOLOGIES	Less than 5	12	$40,594
11.1006	COMPUTER SUPPORT SPECIALIST	Less than 5	30	$30,611
12.0401	COSMETOLOGY	Less than 5	45	$17,349
12.0413	COSMETOLOGY INSTRUCTOR	Less than 5	43	$17,326
15.0303	INDUSTRIAL ELECTRONIC TECHNOLOGY	Less than 5	3	$0
15.0406	AUTOMATION ENGINEER TECHNOLOGY	Less than 5	0	$0
15.0613	MANUFACTURING ENGINEERING TECHNOLOGY	Less than 5	3	$35,307
15.1302	COMPUTER AIDED DRAFTING	11	16	$32,531
19.0708	EARLY CHILDHOOD EDUCATION	Less than 5	13	$17,851
22.0302	PARALEGAL	Less than 5	14	$27,997
43.0102	CRIMINAL JUSTICE - CORRECTIONS	Less than 5	58	$30,697
43.0107	POLICE SCIENCE	Less than 5	30	$33,599
43.0203	FIRE SCIENCE	Less than 5	14	$28,882
46.0201	CONSTRUCTION TECHNOLOGY	13	74	$32,714
46.0301	ELECTRICAL & POWER TRANSMISSION	Less than 5	60	$37,695
46.0302	ELECTRICAL TECHNOLOGY	23	107	$38,238
47.0201	HVAC (HEATING, VENTILATION, & AIR CONDITIONING)	14	23	$34,505
47.0603	AUTO COLLISION REPAIR	26	10	$34,242
47.0604	AUTOMOTIVE TECHNOLOGY	28	52	$23,581
47.0613	DIESEL TECHNOLOGY	78	70	$24,497
48.0501	MACHINE TOOL TECHNOLOGY	7	80	$29,053
48.0508	WELDING TECHNOLOGY	56	104	$29,962

49.0205	COMMERCIAL TRUCK DRIVING	15	332	$24,237
51.0601	DENTAL ASSISTANT	20	22	$27,987
51.0707	HEALTH INFORMATION MANAGEMENT	Less than 5	15	$26,949
51.0709	IT IN HEALTHCARE	Less than 5	29	$30,985
51.0713	HEALTHCARE CODING	Less than 5	45	$25,253
51.0801	MEDICAL ASSISTANT	8	30	$23,576
51.0805	PHARMACY TECHNICIAN	Less than 5	18	$24,726
51.0806	PHYSICAL THERAPIST ASSISTANT	Less than 5	15	$46,406
51.0810	EMT: BASIC	20	0	$0
51.0904	EMERGENCY MEDICAL SCIENCES - PARAMEDIC	Less than 5	21	$21,872
51.0907	RADIOLOGIC TECHNOLOGY	Less than 5	11	$41,553
51.0908	RESPIRATORY THERAPIST	Less than 5	6	$42,406
51.0909	SURGICAL TECHNOLOGY	Less than 5	4	$29,482
51.0911	RADIOLOGIC TECHNOLOGY	Less than 5	11	$40,758
51.1009	PHLEBOTOMY	Less than 5	8	$22,627
51.2601	HEALTH AIDE	Less than 5	196	$20,996
51.2602	HOME HEALTH AIDE	Less than 5	310	$17,610
51.2603	MEDICATION AIDE	64	2	$0
51.2604	RESTORATIVE AIDE	Less than 5	8	$18,010
51.3801	NURSING (ADN)	Less than 5	154	$44,936
51.3901	PRACTICAL NURSING	Less than 5	69	$34,880
51.3902	NURSING AIDE	174	305	$22,224
51.2601	HEALTH OCCUPATIONS TECHNOLOGY	Less than 5	307	$22,022
52.0203	MODERN DISTRIBUTION SALES & MANAGEMENT	Less than 5	17	$58,259
52.0210	TECHNOLOGY AND LEADERSHIP	Less than 5	24	$43,773
52.0302	BUSINESS ADMINISTRATIVE TECHNOLOGY--ACCOUNTING SERVICES	Less than 5	180	$22,051
52.0401	BUSINESS ADMINISTRATIVE TECHNOLOGY	19	308	$23,735
52.1801	BUSINESS MANAGEMENT AND ENTREPRENEURSHIP--SALES ASSOCIATE	Less than 5	136	$35,860
52.1803	BUSINESS MANAGEMENT AND ENTREPRENEURSHIP--SUPERVISION	Less than 5	194	$24,557


Postsecondary Programs by Size, Wage and Demand
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
WAGES
-20
30
80
130
180
DEMAND
47.0201 HVAC (HEATING, VENTILATION, & AIR CONDITIONING)
47.0603 AUTO COLLISION REPAIR
46.0302 ELECTRICAL TECHNOLOGY
46.0201 CONSTRUCTION TECHNOLOGY
15.1302 COMPUTER AIDED DRAFTING
48.0501 MACHINE TOOL TECHNOLOGY
51.0601 DENTAL ASSISTANT
48.0508 WELDING TECHNOLOGY
51.0801 MEDICAL ASSISTANT
47.0613 DIESEL TECHNOLOGY
47.0604 AUTOMOTIVE TECHNOLOGY
51.0810 EMT: BASIC
51.2603 MEDICATION AIDE
01.0104 FARM AND RANCH MANAGEMENT
01.0205 AGRICULTURAL DIESEL MECHANICS
10.0301 VISUAL MEDIA DESIGN
11.0801 WEB DEVELOPMENT
11.0901 COMPUTER SUPPORT TECHNOLOGIES
11.1006 COMPUTER SUPPORT SPECIALIST
12.0401 COSMETOLOGY
12.0413 COSMETOLOGY INSTRUCTOR
15.0303 INDUSTRIAL ELECTRONIC TECHNOLOGY
15.0406 AUTOMATION ENGINEER TECHNOLOGY
15.0613 MANUFACTURING ENGINEERING TECHNOLOGY
15.1302 COMPUTER AIDED DRAFTING
19.0708 EARLY CHILDHOOD EDUCATION
22.0302 PARALEGAL
43.0102 CRIMINAL JUSTICE - CORRECTIONS
43.0107 POLICE SCIENCE
43.0203 FIRE SCIENCE
46.0201 CONSTRUCTION TECHNOLOGY
46.0301 ELECTRICAL & POWER TRANSMISSION
46.0302 ELECTRICAL TECHNOLOGY
47.0201 HVAC (HEATING, VENTILATION, & AIR CONDITIONING)
47.0603 AUTO COLLISION REPAIR
47.0604 AUTOMOTIVE TECHNOLOGY
47.0613 DIESEL TECHNOLOGY
48.0501 MACHINE TOOL TECHNOLOGY
49.0205 COMMERCIAL TRUCK DRIVING
51.0707 HEALTH INFORMATION MANAGEMENT

Other Labor Market Sources Used

The taskforce also reviewed specific data points from the 2016-2026 Kansas Department of Labor Long-Term Occupational Projection Data for the North Central Region, of which our geographic area is a part.

The taskforce was interested not only in demand based on total projected job openings by 2026 but openings due specifically to growth in these industries. It was noted that many occupations have extremely high total openings due to significant turnover (*e.g.*, cashiers and sales clerks within the Marketing pathway). The following table identifies occupations and pathways with growth of at least 5 positions by 2026.

Occupational Code	Occupational Title	Career Pathway	Openings Due to Numerical Change: Annual	Total Openings: Annual
39-9021	Personal Care Aides	Family, Community & Consumer Services	51	260
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	Restaurant & Event Management	34	521
29-1141	Registered Nurses	Health Science	24	154
31-1014	Nursing Assistants	Health Science	12	305
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	Travel & Tourism (not offered in the region)	11	283
39-9011	Childcare Workers	Early Childhood Development & Services	10	212
25-9041	Teacher Assistants	Teaching/Training	10	189
37-3011	Landscaping and Groundskeeping Workers	Plant Systems	8	119
51-4121	Welders, Cutters, Solderers, and Brazers	Manufacturing	8	98
47-2152	Plumbers, Pipefitters, and Steamfitters	Construction & Design	8	93
31-1011	Home Health Aides	Health Science	8	50
11-1021	General and Operations Managers	Business Management & Entrepreneurship	7	131
25-3098	Substitute Teachers	Teaching/Training	7	106
13-2011	Accountants and Auditors	Business Finance	7	84
35-3031	Waiters and Waitresses	Restaurant & Event Management	6	281
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	Restaurant & Event Management	6	151
25-2021	Elementary School Teachers, Except Special Education	Teaching/Training	6	89
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	Teaching/Training	6	81
35-2014	Cooks, Restaurant	Restaurant & Event Management	5	98
13-1161	Market Research Analysts and Marketing Specialists	Marketing	5	30
11-3031	Financial Managers	Business Finance	5	25

The taskforce was also interested in high-demand occupations and pathways that also provided a living wage (and generally required some post-secondary education, training, and/or certification). Jobs with median salary below the living wage required less training and therefore, the need for extensive secondary (not to mention postsecondary) preparation, was considered negligible. In other words, many high-demand jobs don't require the focused preparation that a state-approved pathway or college program typically provides. High schools can help connect students with such jobs if absolutely necessary for the student and the student's family, but the consensus was that CTE services should prioritize preparation for occupations that provide a living wage and thus reduce long-term economic and social services burden upon the individuals and the community.

Living Wage Calculator Data was provided through
https://livingwage.mit.edu/states/20/locations

For 1 adult with no children, these were the hourly wages considered to be a "living wage" for each county within our region:

Saline County	$10.89/hour	4 school districts
Dickinson County	$10.32/hour	5 school districts
Ottawa County	$10.79/hour	2 school districts
Lincoln County	$10.73/hour	2 school districts
Russell County	$10.78/hour	1 school district
Ellsworth County	$10.73/hour	1 school district
Morris County	$10.73/hour	2 school districts
Range for the region:	$10.32-$10.89/hour	

Median living wage in this region is $10.73/hour

Annual living wage, calculated at 40 hrs/week @ $10.73/hour x 52 wks = **$22,318.40**

Using this figure, the taskforce looked at occupations and pathways in high demand that also provided a living wage.

Occupational Code	Occupational Title	Career Pathway	Total Openings: Annual	Annual Median Wages	Typical Education Needed for Entry
31-1014	Nursing Assistants	Health Science	305	$24,410	Postsecondary non-degree award
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	Travel & Tourism (not offered in the region)	283	$23,890	No formal educational credential
25-9041	Teacher Assistants	Teaching/Training	189	$23,120	Some college, no degree
43-4051	Customer Service Representatives	Marketing	176	$27,190	High school diploma or equivalent
29-1141	Registered Nurses	Health Science	154	$53,700	Bachelor's degree
41-1011	First-Line Supervisors of Retail Sales Workers	Marketing	153	$30,480	High school diploma or equivalent
43-3031	Bookkeeping, Accounting, and Auditing Clerks	Business Finance	152	$32,970	Some college, no degree

35-1012	First-Line Supervisors of Food Preparation and Serving Workers	Restaurant & Event Management	151	$26,770	High school diploma or equivalent
51-2092	Team Assemblers	Manufacturing	146	$32,400	High school diploma or equivalent
49-9071	Maintenance and Repair Workers, General	Manufacturing	133	$34,060	High school diploma or equivalent
11-1021	General and Operations Managers	Business Management & Entrepreneurship	131	$77,410	Bachelor's degree
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	Marketing	113	$49,650	High school diploma or equivalent
43-4171	Receptionists and Information Clerks	Information Support & Services (not offered in the region)	113	$23,740	High school diploma or equivalent
25-3098	Substitute Teachers	Teaching/Training	106	$23,640	Bachelor's degree
51-4121	Welders, Cutters, Solderers, and Brazers	Manufacturing	98	$39,150	High school diploma or equivalent
47-2152	Plumbers, Pipefitters, and Steamfitters	Construction & Design	93	$39,910	High school diploma or equivalent
25-2021	Elementary School Teachers, Except Special Education	Teaching/Training	89	$44,970	Bachelor's degree
35-2012	Cooks, Institution and Cafeteria	Restaurant & Event Management	88	$22,810	No formal educational credential
13-2011	Accountants and Auditors	Business Finance	84	$58,740	Bachelor's degree
43-1011	First-Line Supervisors of Office and Administrative Support Workers	Business Management & Entrepreneurship	82	$43,840	High school diploma or equivalent
47-2073	Operating Engineers and Other Construction Equipment Operators	Construction & Design	82	$32,710	High school diploma or equivalent
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	Teaching/Training	81	$46,350	Bachelor's degree
47-2061	Construction Laborers	Construction & Design	80	$29,290	No formal educational credential
43-3071	Tellers	Business Finance	77	$27,510	High school diploma or equivalent
29-2061	Licensed Practical and Licensed Vocational Nurses	Health Science	69	$38,440	Postsecondary non-degree award
51-1011	First-Line Supervisors of Production and Operating Workers	Manufacturing	57	$50,600	High school diploma or equivalent
47-2111	Electricians	Construction & Design	57	$48,230	High school diploma or equivalent
49-3023	Automotive Service Technicians and Mechanics	Mobile Equipment Maintenance (not offered in the region)	51	$34,490	Postsecondary non-degree award
21-1093	Social and Human Service Assistants	Family, Community & Consumer Services	50	$32,550	High school diploma or equivalent

Other Labor Market Sources Used

O*NET Data for Digital Media (formerly A/V Communications) and Web & Digital Communications: 2012-2022 projections

A/V Communication Pathway

Kansas State Department of Education

DEGREE/TRAINING REQUIRED Standard Occupational System (SOC) Code	OCCUPATION	KS Median Wage[i]	EMPLOYMENT PROSPECTS			
			KANSAS 2012-2022[ii]		USA 2014-2024[iii]	
			Participants	growth %	Participants	growth %
- On /Job Training, Certifications, Registered Apprenticeship, Associate Degree, Certifications or 2 Yr. Comm/Technical Colleges						
27-4011	Audio and Video Equipment Technicians: Audio-Visual Production Specialist, Event Av Operator, Event Crew Technician, Multimedia Production Assistant	**$35,780**	**180-210**	+12%	70,900-79,400	+15%
27-4014	Sound Engineering Technicians: Audio Systems Technician	**42,190**	40-40	+6%	16,100- 17,400	+8
Bachelor's Degrees Colleges / Universities						
27-1014	Multi-Media Artists and Animators: Video Graphics, Special Effects, and Animation State, Film, Video, DVD	$47,950	260-280	+10%	64,400-68,300	+6%
27-1024	Graphic Designers: Audio-Video Designer / Audio-Video Engineer	$40,090	2,750-2,980	+9%	261,600-265,200	+1%
27-3022	Reporters and Correspndents	$28,690	480-380	N/A	49,300-45,100	N/A
27-3031	Public Relations Specialist	47,730	2,470-2,740	+11%	240,700-255,600	+6%
27-4031	Camera Operators, Television, Video, and Motion Picture	$33,860	110-120	+8%	25,400-25,900	+2
27- 4032	Film and Video Editors: Assistant Film Editor, News Editor, Online Editor	$32,990	100-110	+7%	33.500-39,400	+18%

N/A = Data Not Available

National Center for O*NET Development. 27-1014.00. *O*NET OnLine*. Retrieved July 28, 2016, fromhttp://www.onetonline.org/link/summary/27-1014.00

Web & Digital Communication Pathway Kansas State Department of Education

DEGREE/TRAINING REQUIRED Standard Occupational System (SOC) Code	OCCUPATION	KS Median Wage[i]	EMPLOYMENT PROSPECTS			
			KANSAS 2012-2022		USA 2014-2024	
			Participants	growth %	Participants	growth %
- On /Job Training, Certifications, Registered Apprenticeship, Associate Degree, Certifications or 2 Yr. Comm/Technical Colleges						
15-1150	Computer Suport Specialist: Network Technician, PC Support Specialist, Systems support	$42,800	5,750-7,050	+25%	585,900-661,000	+13%
27-1014 15-1134	Multimedia Artist and Animator Web Developer	$47,950 $52,710	300-290 1,300-1,580	-1% +22%	64,4000-68,300 148,500-188,00	16% +27%
Bachelor's Degrees Colleges / Universities						
27-3031	Public Relations Specialists	$47,730	2,510-2,680	+7%	240,700-255,600	+6%
25-9031	Instructional Designer and Technologist	$53,720	870-960	+9%	151,000-161,600	+7%
15-1199 15-1121	Marketing Strategist Computer Systems Analyst, Network Support	$67,920 $75,650	1,480-1,600 2,970-3,790	+9% +28%	233,000-240,800 567,800-686,300	+3% +21%
15-1141	Database Administrator	$74,750	990-1,130	+17%	120,000-133,400	+11%

N/A = Data Not Available

Learning that works for Kansas CTE™

National Center for O*NET Development. 25-2032.00. *O*NET OnLine*.
Retrieved July 28, 2016, fromhttp://www.onetonline.org/link/summary/25-2032.00

Other Labor Market Sources Used

Kansas Career Navigator (Local Area 1-West) for Comprehensive Agriculture and Ag-related careers

Current Top 10 Jobs by Area

https://kscareernav.gov/

Local Area 1 - West includes all 7 counties encompassed by the Salina Region:

Saline
- USD 305 (Salina)
- USD 306 (Southeast of Saline-Gypsum)
- USD 307 (Ell-Saline-Brookville)
- USD 393 (Solomon)

Dickinson
- USD 435 (Abilene)
- USD 473 (Chapman)
- USD 481 (Rural Vista-Hope)
- USD 487 (Herington)
- USD 393 (Solomon)

Ottawa
- USD 239 (North Ottawa County-Minneapolis)
- USD 240 (Twin Valley-Bennington, Tescott)

Lincoln
- USD 298 (Lincoln)
- USD 299 (Sylvan Grove)

Russell
- USD 299 (Sylvan Grove-Lucas)

Ellsworth
- USD 327 (Ellsworth)

Morris
- USD 481 (Rural Vista-White City)
- USD 487 (Herington)

Top 10 Local High Demand High Wage Occupations for Local Area 1 - West

1. Registered Nurses
2. Secondary School Teachers, Except Special and Career/Technical Education
3. Elementary School Teachers, Except Special Education
4. Accountants and Auditors
5. General and Operations Managers
6. Farmers, Ranchers, and Other Agricultural Managers
7. Financial Managers
8. Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
9. Industrial Machinery Mechanics
10. Education Administrators, Elementary and Secondary School

#6 aligns to the Comprehensive Agriculture pathway. Specific data: 499 openings expected over next 2 years, 247 expected over next 10.

Other Labor Market Sources Used

Data on Overall Impact of Agriculture on the Economy of Kansas (not specifically our region)

From Kansas Agriculture's Economic Contribution: Estimated Economic Contribution of Agriculture and Agriculture Related Sectors, published June 7, 2019, by the Kansas Department of Agriculture

Using the most recent IMPLAN data available (2017) adjusted for 2019, 68 agriculture and agriculture related sectors were analyzed to determine their overall contribution to the Kansas economy.[1]

These 68 sectors have a total direct output of approximately **$ 46.9 billion** and support **134,057 jobs** in Kansas.

Running the model for all 68 sectors simultaneously produces the following results: **2019 Adjusted Agriculture, Food, and Food Processing Sector Contribution to Overall Kansas Economy**					
Contribution Type[2]	Employment	% Employment	Total Value Added[3]	% of Gross Regional Product[4]	Output[5]
Direct Effect	134,057	7.0%	11,460,174,958	7.1%	46,384,549,519
Indirect Effect	56,598	2.9%	6,098,781,727	3.8%	12,080,816,993
Induced Effect	54,884	2.8%	4,221,207,037	2.6%	7,266,713,167
Total Effect	**245,539**	**12.7%**	**21,780,163,722**	**13.4%**	**65,732,079,679**

As shown in the above table, agriculture and agriculture related industries support **245,539 jobs, or 12.7%** of the entire workforce in the state. The total final sales of all products in these sectors is approximately **$ 65.7 billion.**

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 68 sectors is approximately **$ 21.8 billion, or 13.4% of the GRP**.

[1] Article on building a contribution analysis in IMPLAN that avoids double counting: https://implanhelp.zendesk.com/hc/en-us/articles/115002801513-Considerations-of-Contribution-Analysis

[2] Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

[3] Value added = labor income + indirect business taxes + other property type income

[4] GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales

[5] Output = intermediate inputs + value added

The following tables document top industries affected by employment and output, as well as a listing of all industries that were analyzed.

In the top ten by employment, Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming is the top employer in the agriculture industry with 42,801 employees. This table also shows the amount of jobs that are created by the agriculture industry in Kansas.

Description	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	42,801.6	8,281,329,288.4
Wholesale trade	11,413.2	2,604,521,402.0
Animal, except poultry, slaughtering	11,151.7	7,832,767,277.6
Landscape and horticultural services	10,974.1	712,975,467.4
Grain farming	9,041.7	4,202,572,254.9
Support activities for agriculture and forestry	8,863.6	489,190,182.1
Truck transportation	7,707.9	1,287,383,768.6
Meat processed from carcasses	6,900.4	3,611,849,226.7
Real estate	6,611.4	1,189,425,039.3
Farm machinery and equipment manufacturing	4,431.3	1,753,688,715.1

The Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming industry directly contributes approximately $ 8.3 billion to the Kansas economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Description	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	42,801.6	8,281,329,288.4
Animal, except poultry, slaughtering	11,151.7	7,832,767,277.6
Grain farming	9,041.7	4,202,572,254.9
Meat processed from carcasses	6,900.4	3,611,849,226.7
Dog and cat food manufacturing	2,443.9	3,419,976,618.5
Wholesale trade	11,413.2	2,604,521,402.0
Other animal food manufacturing	1,363.7	1,799,894,926.9
Farm machinery and equipment manufacturing	4,431.3	1,753,688,715.1
Oilseed farming	1,796.4	1,713,614,375.5
Flavoring syrup and concentrate manufacturing	490.2	1,424,062,987.8

Below is a summary of all sectors included in this analysis with employment levels and output level. These values can tell how many jobs are represented by each sector and the amount of final sales they contributed to the Kansas economy.

Description	Employment	Output
Oilseed farming	1,834.99	1,713,614,379.88
Grain farming	9,236.06	4,202,572,265.63
Vegetable and melon farming	112.31	19,204,000.47
Fruit farming	152.94	10,361,904.14
Tree nut farming	61.40	8,789,097.79
Greenhouse, nursery, and floriculture production	618.32	73,087,585.45
Cotton farming	323.27	68,689,002.99
All other crop farming	3,826.49	280,982,055.66

Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	43,843.96	8,281,329,101.56
Dairy cattle and milk production	1,441.68	590,823,974.61
Poultry and egg production	104.89	73,559,524.54
Animal production, except cattle and poultry and eggs	4,474.00	610,004,089.36
Commercial logging	236.59	6,735,587.60
Commercial hunting and trapping	387.56	4,571,575.64
Support activities for agriculture and forestry	8,954.38	489,190,185.55
Dog and cat food manufacturing	2,548.84	3,419,976,562.50
Other animal food manufacturing	1,422.32	1,799,894,897.46
Flour milling	953.34	1,172,115,234.38
Wet corn milling	30.01	56,026,794.43
Soybean and other oilseed processing	194.75	899,698,730.47
Fats and oils refining and blending	319.22	488,700,500.49
Breakfast cereal manufacturing	123.49	97,269,454.96
Non-chocolate confectionery manufacturing	73.97	29,882,860.18
Chocolate and confectionery manufacturing from cacao beans	163.33	110,634,918.21
Confectionery manufacturing from purchased chocolate	1,381.32	470,717,956.54
Frozen fruits, juices and vegetables manufacturing	61.59	25,983,922.96
Frozen specialties manufacturing	1,218.45	445,477,203.37
Canned fruits and vegetables manufacturing	185.49	86,402,442.93
Dehydrated food products manufacturing	67.85	28,862,894.06
Fluid milk manufacturing	302.80	220,740,875.24
Dry, condensed, and evaporated dairy product manufacturing	370.39	518,272,583.01
Animal, except poultry, slaughtering	11,399.42	7,832,767,578.13
Meat processed from carcasses	7,053.66	3,611,849,365.23
Rendering and meat byproduct processing	124.83	59,668,003.08
Poultry processing	29.76	8,403,494.83
Bread and bakery product, except frozen, manufacturing	3,425.92	456,826,721.19
Frozen cakes and other pastries manufacturing	117.31	18,853,767.40
Cookie and cracker manufacturing	417.42	156,085,586.55
Dry pasta, mixes, and dough manufacturing	252.55	159,828,475.95
Tortilla manufacturing	154.49	31,854,000.09
Roasted nuts and peanut butter manufacturing	50.82	31,153,623.58
Other snack food manufacturing	783.51	407,030,303.96

All 105 counties in Kansas have IMPLAN models and an agricultural contribution summary report. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of the contribution of production agriculture and processing to Kansas, the retail sector was omitted. Furthermore, animal health pharmaceuticals were not included in the model due to the lack of availability of data.

Other Labor Market Sources Used

Data on Energy Pathway Labor Market Outlook and Growth of Alternative Fuel Industry

From Energy Employment by State—2019 (NASEO & EFI)

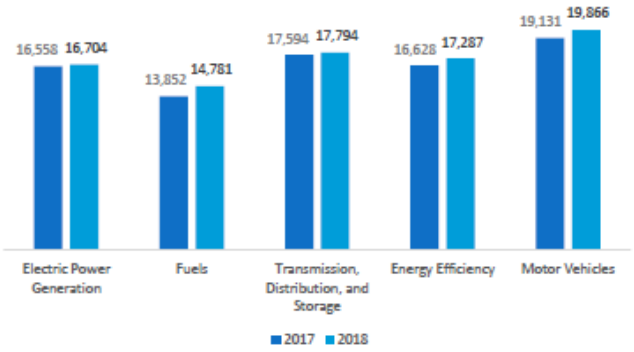
Kansas

ENERGY AND EMPLOYMENT — 2019

Overview

Kansas has a high concentration of energy employment, with 49,279 Traditional Energy workers statewide (representing 1.5 percent of all U.S. Traditional Energy jobs). Of these Traditional Energy workers, 16,704 are in Electric Power Generation, 14,781 are in Fuels, and 17,794 are in Transmission, Distribution, and Storage. The Traditional Energy sector in Kansas is 3.5 percent of total state employment (compared to 2.3 percent of national employment). Kansas has an additional 17,287 jobs in Energy Efficiency (0.7 percent of all U.S. Energy Efficiency jobs) and 19,866 jobs in Motor Vehicles (0.8 percent of all U.S. Motor Vehicle jobs).

Figure KS-1.
Employment by Major Energy Technology Application



Overall, Traditional Energy jobs grew by 2.7 percent since the 2018 report, increasing by 1,275 jobs over the period. Energy Efficiency jobs added 659 jobs (4.0 percent) and motor vehicles added 735 jobs (3.8 percent).

U.S. ENERGY AND EMPLOYMENT REPORT 2019

Hiring Difficulty

Over the last year, 45.5 percent of energy-related employers in Kansas hired new employees. These employers reported the greatest overall difficulty in hiring workers for jobs in Energy Efficiency.

Table KS-2
Hiring Difficulty by Major Technology Application

Technology	Very Difficult (%)		Somewhat Difficult (%)	
	State	National	State	National
Electric Power Generation	--	20.7	100.0	54.8
Electric Power Transmission, Distribution and Storage	--	21.9	77.8	46.1
Energy Efficiency	50.0	21.3	50.0	48.1
Fuels	--	37.9	50.0	43.0
Motor Vehicles	--	30.0	100.0	46.4

Employers in Kansas gave the following as the top three reasons for their reported difficulty:

1. Lack of experience, training, or technical skills
2. Insufficient non-technical skills (work ethic, dependability, critical thinking)
3. Location

Employers reported the following as the three most difficult occupations to hire for:

1. Electrician/construction laborers – $23.51 median hourly wage
2. Technician or mechnical support – $22.39 median hourly wage
3. Sales, marketing, or customer service – $31.59 median hourly wage

From Advanced Energy Now 2019 Market Report

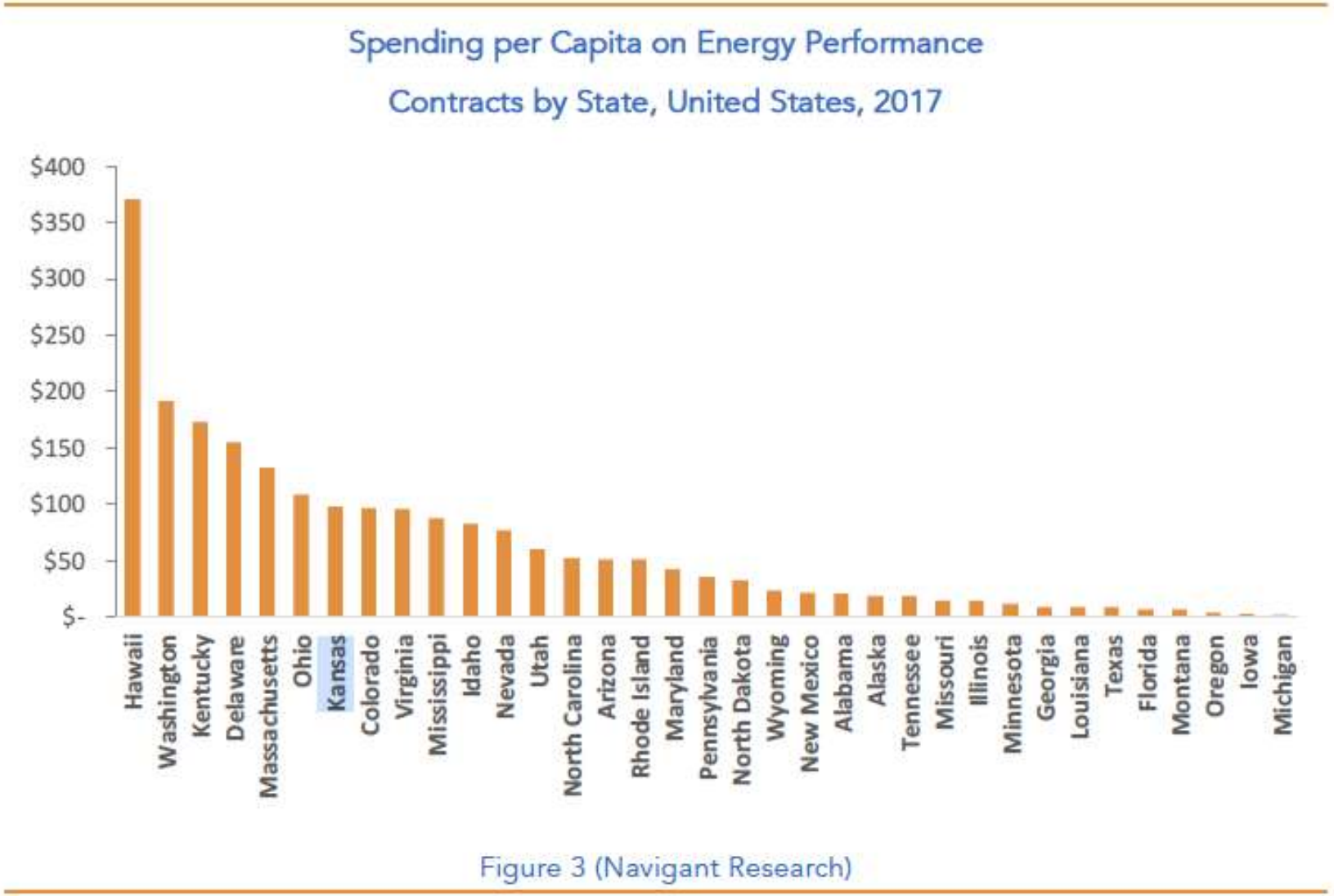


Figure 3 (Navigant Research)

Kansas is #7 highest per capita spending on energy performance, which includes building efficiency (HVAC, water heating, lighting, appliances), transportation (propulsion systems, vehicle design), and advanced industry (manufacturing machinery, manufacturing processes, combined heat & power).