Perkins V

2022 Comprehensive Local Needs Assessment





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Perkins V

"Strengthening Career and Technical Education for the 21st Century Act" (Perkins V, Public Law 115-224)

COMPREHENSIVE LOCAL NEEDS ASSESSMENT (CLNA) EVALUATION OF CAREER AND TECHNICAL EDUCATION PROGRAMS 2020-2032

#FUTUREREADYCTE STRATEGIC PLANNING

South Carolina is positioned to strengthen the alignment of high-quality education and workforce development programs and activities that prepare current and future job seekers for high-demand, high-wage careers. The state's focus on partnership and collaboration will lead to a greater alignment of programs and resources that will bring us closer to achieving our vision for South Carolina.

VISION STATEMENT:

All students graduate prepared for success in college, careers, and citizenship.

MISSION FOR PERKINS V:

To cultivate the development of a skilled workforce and a responsive workforce system that meets the needs of business and industry-leading to sustainable growth, economic prosperity, and global competitiveness for South Carolina.

STRATEGIC PLAN FOR CAREER AND TECHNICAL EDUCATION (CTE): EIGHT VISION THEMES

1. Performance and Accountability

To meet specific measures of performance at all levels

2. Business and Industry Alignment

To develop a network of business relationships that promote career awareness and marketable skills

3. Career Clusters, Pathways, and Programs

To develop and implement a relative curriculum that uses current technical and instructional strategies

4. Career Guidance and Awareness

To create awareness and promote the value of career and technical education

5. Equity and Innovation

To develop a responsive system of effective opportunities leading to student success

6. Teacher Recruitment, Development, and Retention

To develop and implement a system for recruitment and retaining quality educators and students

7. CTE Leadership Development

To provide an effective leadership program for career and technical education

8. Quality

To acquire the funds essential to achieve the vision

Purpose of the Comprehensive Local Needs Assessment

The Comprehensive Local Needs Assessment (CLNA) is a vital part of the Strengthening Career and Technical Education for the 21st Century Act which amended the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) was signed into law on July 31, 2018. The CLNA provides a process designed to help identify where local CTE programs may need improvements and where exceptional CTE programs and activities exist. The application of the CLNA also helps to ensure accountability for the use of state and federal funds to improve CTE programs and CTE student performance.

Purpose

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

- Explaining the purpose of the needs assessment
- Outlining the required components of the assessment
- Providing tools for identifying needs
- By conducting a needs assessment, the Team will:
 - Use evidence-based strategies to recognize the needs of the industry
 - Identify strengths and weaknesses of secondary and postsecondary CTE programs
 - Perform root-cause analysis of gaps
 - Make progress toward student success and employment

What is a comprehensive local needs assessment?

A <u>needs assessment</u> is a systematic set of procedures used to determine needs and 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 needs assessment consists of the following steps:

- 1. Identify participants on the 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 local needs assessment?

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

- Evaluation of 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 local needs assessment needed?

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

Who should participate in the comprehensive local needs assessment process?

Local recipients are required to engage a diverse body of participants who will plan and implement the needs assessment. The 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 atrisk, homeless and out-of-school youth

Process

- Establish a Local 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 Local Needs Assessment Team.
- 2. Assign three co-coordinators for the Local Team one from secondary education, one from a postsecondary institution, and one business partner
- 3. Gather, review and analyze data (state staff will provide required data sources and a list of optional resources).
- 4. Convene the 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 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 r needs assessment questions

STEP 2: Analysis of Student Performance (including Special Populations defined by Perkins V)

STEP 3: Analysis of Programs (including Special Populations defined by Perkins V)

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

Stakeholder Team

Perkins Law – Sec. 134 (d) - Required CLNA Stakeholder Consultation

- (d) CONSULTATION.—In conducting the comprehensive needs assessment under subsection (c), and developing the local application described in subsection(b), an eligible recipient shall involve a diverse body of stakeholders, including, at a minimum—
- (1) representatives of career and technical education programs in a local educational agency or educational service agency, including teachers, career guidance and academic counselors, principals and other school leaders, administrators, and specialized instructional support personnel and paraprofessionals;
- (2) representatives of career and technical education programs at postsecondary educational institutions, including faculty and administrators;
- (3) representatives of the State board or local workforce development boards and a range of local or regional businesses or industries;
- (4) parents and students;
- (5) representatives of special populations;
- (6) representatives of regional or local agencies serving out-of-school youth, homeless children and youth, and at-risk youth (as defined in section 1432 of the Elementary and Secondary Education Act of 1965);*
- (7) representatives of Indian Tribes and Tribal organizations in the State, where applicable; and
- (8) any other stakeholders that the eligible agency may require the eligible recipient to consult.

^{*}Section 1432 of the Elementary and Secondary Education Act of 1965: "(2) AT-RISK- The term at-risk, when used with respect to a child, youth, or student, means a school-aged individual who is at-risk of academic failure, has a drug or alcohol problem, is pregnant or is a parent, has come into contact with the juvenile justice system in the past, is at least 1 year behind the expected grade level for the age of the individual, has limited English proficiency, is a gang member, has dropped out of school in the past, or has a high absenteeism rate at school."

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COMPREHENSIVE LOCAL NEEDS ASSESSMENT (CLNA) TEMPLATE EVALUATION OF CAREER AND TECHNICAL EDUCATION PROGRAMS 2020-2032 #FUTUREREADYCTE STRATEGIC PLANNING

Use of Perkins V funding is based on the results of the comprehensive 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 <u>every two years</u> with a review of progress in the interim. The assessment must be completed <u>prior</u> to the completion of the grant application. Local applications will not be accepted without the corresponding needs assessment.

Team Name: Lower Savannah CLNA Team	
Date: 11/3/2021	
Needs Assessment Lead Co-Coordinators: C	ontact Information:
Secondary: David Augustine, Barnwell County Career Center (BCCC)	daugustine@bccc80.com
Postsecondary: Bruce McCord, Aiken Technical College (ATC)	mccordb@atc.edu
Business Partner: Joni McDaniel, SC Department of Commerce (SCDOC)	jmcdaniel@sccommerce.com

Repre	sentative	Name	Institution and Position	Responsibility
		Bruce McCord	ATC – Director of Institutional Effectiveness, Teaching and Technology (IETT)	Co-Coordinator/Writing
Co-Coordinators	Postsecondary Perkins Grant Coordinators	Leah Jones	Orangeburg Calhoun Technical College (OCTC) – Director of Accreditation and Accountability	Writing
S		Tammy Washington	Denmark Technical College	Writing
	Secondary Perkins Grant Coordinator	Phyllis Overstreet	Bamberg County SD	Special Populations
Teache	er(s) - Secondary	Lisa Nelson 230 Secondary	Barnwell 19 SD Lower Savannah Region	Business/Educator Survey Instructor Survey
		Educators Surveyed	Lower Savannan Region	Participants
Faculty	v - Postsecondary	 Keith Cusey Brian Logan Mike Morris Stephanie Phillips Steve Simmons 	 ATC Chair of Nuclear and Welding Programs ATC Dean of Health Sciences OCTC MTT Program Coordinator OCTC Dean of Engineering & Adv Manufacturing ATC Dean of Technical Education & Continuing Education 	CTE Educational Guidance
Second	lary Administration	 Kenneth Lott Mona Lisa Anderson David Augustine Jessica Brabham- James Cynthia Walden Phyllis Overstreet Cinthia Wolfe Kelvin Lemon Johnny Murdaugh Rick Leonard Steve Wilson 	1) Aiken County Career Center 2) Allendale County Schools 3) Barnwell County CC 4) Barnwell 45 SD 5) Barnwell 29 6) Bamberg 1 & 2 SD 7) Calhoun County SD 8) Orangeburg County SD 9) Lake Marion TC/OCSD 10) Cope Career Center/OCSD 11) The Technology Center/OCSD	 Writing team Student/parent survey Co-Coordinator/Writing Data Collection Special Populations Data Collection MS CTE/Career Exploration Student/Parent survey LMI Student/Parent survey
Postsed	condary Administration	Dr. Donna Elmore Dr. Richard Murphy Dr. Tia Wright- Richards	ATC – Interim VP for Academic & Student Affairs	1) CTE Coordination 2) CTE Coordination 3) CTE Coordination 4) CTE Coordination

Representative	Name	Institution and Position	Responsibility
	4) Dr. Willette Waring- Berry	 2) OCTC – Associate VP for Academic Affairs 3) DTC – VP for Academic Affairs 4) OCTC – VP for Academic Affairs 	
Specialized instructional support and paraprofessional(s)	Dena Hartzog	Bamberg 1 – Transition Coordinator	Special Populations
Representative(s) of Special Populations	Dena Hartzog	Bamberg 1 – Transition Coordinator	Special populations
Career Guidance and Academic Counselor(s)	Jean Rickenbaker,	LS Regional Career Specialist	MS/Career Exploration
Student(s)	1,449 Secondary Students	Lower Savannah Secondary Institutions – Student Population (1449)	Student Survey Participants
Community	 Melissa Bowman Chris Ray Carolyn Sue-Ling 	1) Former HS Teacher – Engineering Graphics Retiree 2) Clemson Edisto Research & Education Center – Director 3) USCA Nursing Dept. – R.N., Ph.D.	CTE Workplace Needs and Opportunities Input; CTE Educational Guidance (SWOT Analysis Focus Groups)
Business & Industry	1) Deb Bennett 2) James Blankenship 3) Gary Brantley 4) Kim Bundrick 5) Sylvia Dantzler 6) C. Deloach 7) Melanie Houston 8) Kevin Hyman 9) Melissa Kizer 10) Todd Mankin 11) Marisol Martinez 12) B.J. Meetze 13) Tim Moore 14) Angie Phelps 15) Bobby Simmons 16) Gary Toole 17) Brian Wintrode + 33 Surveyed Business and Industry Leaders	1) Wireless Infrastructure	CTE Workplace Needs and Opportunities Input (SWOT Analysis Focus Groups)

Representative	Name	Institution and Position	Responsibility
		12) Calhoun Co EMS 13) Calhoun Co EMS - Director 14) The Orangeburg- Calhoun Regional Medical Center - LPN 15) SRS - Cybersecurity Administrator 16) BAE Systems - Engineering 17) Halocarbon - Engineering and Maintenance Director	
Workforce Development	Joni McDaniel	SC Dept of Commerce	
Parent(s)	246 Surveyed Parents	Lower Savannah Region	Parent Survey Participants
Other (Data Support, Admin Assistant, HR, Business Office, etc.)	Bolivar Cardenas Chavarria Jill Golden	ATC – Contracted Statistician ATC – Admin. Assistant	Data and Administrative Support

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 information to assess the labor market in the region

- Secondary Pathways
- Postsecondary Programs
- Additional Optional Data Resources
- 1. South Carolina Department of Labor data and program data sources provided in Appendix A must be used in the assessment.
- 2. Teams can use additional sources if they wish to supplement the labor data or provide additional evidence of needs.

Part 2: Use additional approved sources of data sources provided in Appendix A

Part 3: Bring the 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 needs assessment questions

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

STEP 1: Analysis of Labor Market Information

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

Strengths

Secondary Pathway: Manufacturing

Post-Secondary Programs: Electronics
Engineering Technology, Electro-mechanical
Engineering Technology, Engineering Design
Technology, Industrial Electronics, Industrial
Maintenance Technology, Machine Tool
Technology, Mechatronics, Nuclear Fundamentals,
and Welding. Pre-Engineering (PLTW) and
Welding are offered for dual credit.

The SC Department of Employment and Workforce Community Profile for the Lower Savannah region indicates that Manufacturing is the area with the highest regional employment at 17,278 (SCWCP, p. 15). Of the twenty largest employers in the Lower Savannah Region, six are Manufacturing industries, while three others are related to the Savannah River Site and nuclear fields. In Q3 2020 Manufacturing industry regional hires increased by 1,384 and the average annual wage is strong at \$62,816 (SCWCP, p. 18 & 20). Industrial Machinery Mechanic (Mechatronics, Industrial Maintenance Technology, etc.) and Electricians were specifically noted as current DEW "Hot Jobs" in the region with 20.9% and 20% growth rates respectively (link below).

Manufacturing was the second most popular high school cluster in 2020-21, with 99 graduates, 94 of whom completed within four years (94.9%). In 2021 reporting 48/51 (94.1%) successfully placed post-program across the Lower Savannah Region.

Overall, Manufacturing programs had 85% college graduate placement in 2021 reporting. The various Electronics Engineering/Electromechanical Engineering Technology pathways had 100% placement rates as did Industrial Maintenance Technology and Nuclear

Gaps

Turnover in Manufacturing is currently relatively low at 5% for the Lower Savannah region. However, 27% of Manufacturing workers are over the age of 55, indicating increased workforce demand within the next five to ten years, even if—as indicated by DEW data—overall Manufacturing employment does not significantly increase (SCWCP p. 21-22). This will result in increased demand for skilled graduates. EMSI data indicates a continued 10% increase in IMT positions over the next five years.

Surprisingly, Welding has not been as successful as the other areas regarding post-program placement at only 58.1%, with 20% placement at DTC. Additional student support is required at DTC concerning career preparation and job placement. Mechatronics placement, at 81%, could similarly be enhanced. For the various Electrical and IMT pathways, enrollment, retention, and completion rates must be improved in order to meet extremely high regional demand. Additional pathways at the secondary level could increase enrollment. OCtech has developed an Early College pathway for Mechatronics.

There is a disconnect between the regional opportunities and relatively lucrative pay and parent/student perceptions. Only 2% of 243 surveyed parents selected Manufacturing as their top field of choice for their children, and only 1.4% of 1,438 surveyed students selected it as their top career pathway of interest.

As a result of focus group discussions, a specific lack of employees with pipe-fitting (non-water piping requiring specific welding/joining skills) was noted in the region by the ATC Department Chair of Nuclear and Welding Programs.

Strengths

Fundamentals, while Mechatronics was at 81%. Surveyed employers indicated an overwhelming need for workers with manufacturing skills, with 53.5% indicating an alignment with their industry/professional needs.

Gaps

Representatives from Halocarbon indicated the need for operators with hands on experience and OSHA/Lock-Out Tag-Out/PPE training. A oneyear Operator Certification and Process Technician Certificate was requested. The increasing importance of English as a Second Language training was also noted for the region, particularly concerning Manufacturing jobs. Industry leaders in the Lower Savannah requested support concerning apprenticeship opportunities and completing related OSHA paperwork. The need for earlier exposure to CTE pathways for students and enhanced publicschool counseling concerning two-year versus four-year career pathways was also noted by representatives from Kimberly Clark. Manu-First software was also noted as a means of helping to bring HS seniors and/or those unable to complete apprenticeships up to speed with basic manufacturing skills.

Secondary Pathway: Health Science

Post-Secondary Programs: Associate Degree Nursing, Certified Nursing Assistant, Emergency Medical Technician, Expanded Duty Dental Assistant, Medical Assistant, Patient Care Technician (CNA, Electrocardiography, Dialysis Technician, Phlebotomy), Pharmacy Technician, Physical Therapy Assistant, and Radiologic Technology

Health care accounts for 12,167 positions in the Lower Savannah region (SCWCP, p. 15). Aiken Regional Medical Center and the Regional Medical Center of Orangeburg are two of the top twenty employers in the region. Registered Nurse is the leading "Hot Job" in the Lower Savannah region with a growth rate of 36.77% and a 2020 average wage of \$41.41 per hour (DEW "Hot Jobs" link). As of March 2022, there were 293 Registered Nurse positions open in the area and 85 Licensed Practical and Vocational Nurses (SCWCP, p. 17). Overall, positions in Health Care are expected to

Overall, there is a very strong alignment between the regional labor demand and available Health Science programs. Additionally, both students and parents view Health Care as the overall most attractive career path (at 16.6% and 21.8% respectively). However, current capacity to meet the current and projected growth in Health Care positions is lacking. For nursing alone, there is a current regional deficiency resulting in 293 available positions (SCWCP, p. 17).

During a CLNA focus group session, the Director of Aiken County EMS noted a 30% shortage of technicians. The Director of Aiken's Aurora Pavilion meanwhile noted a similar shortage of Mental Health Technicians. The need for the expansion of Physical Therapy programs in the region was also raised by ATC's Dean of Health Sciences. DTC's CLNA representative noted the development of a system-wide Mental Health initiative, based on professional requests to the

S, as well as DTC's ongoing desire to expand EMT offerings.
regions' academic programs and pathways digned with demand. As of February 2022, were a record 1,121 vacant public-school ner positions in the state (Cerra, Supply & and Update, Feb 2022). Additionally, the ram enrollment and therefore employment is largely gender-biased, with a strong skew ords female students/educators. Efforts to urage male engagement in Early Childhood ation, such as the "Call Me MISTER" ram—which seeks to encourage minority is presences as positive role models—have with limited success, though additional tives are underway to meet the demand at tate level. enrollment and transfer options are able in Education, but not widely offered. In the analyst of the strong to moderate, and 4.2% respectively.
ith Manufacturing, parent and student ey responses indicated a limited interest in

Strengths

Post-Secondary Programs: Building Construction, Computer-Aided Design, Plumbing

Construction provides 6,578 positions to the Lower Savannah region (SCWCP, p.15). It is also a graying workforce, with 29.9% of the workforce at the age of 55 or older as of Q3 2020 (SCWCP, p.21). At that time, there were 961 new hires in the area (SCWCP, p. 18). Labor market projections indicate an 18.36% increase in new positions between 2018 and 2028 (SCWorks Analyzer – Lower Savannah Construction). Wages are high, averaging \$70,668 a year (SCWCP, p. 20).

Gaps

interest as a primary career pathway. However, while construction ranked number 11 of 16 in career cluster graduate numbers for 2020-21, placement was high for prior-year high school completers at 100% (30/30).

Overall, Architecture and Construction educational offerings in the area are limited and demonstrate potential for expansion. However, OCTC's Computer-Aided Design programs only had 7 graduates in 2020 and a placement rate of 71.4% in 2021 reporting, despite demand. DTC offers a Building Construction program that aligns with secondary CTE offerings.

Focus group participants in construction noted the lack of new employee familiarity with basic tools such as calipers or concepts such as metric measurement. While the demand is there, more must be done to encourage students to pursue this career pathway, given labor market projections and wages.

Secondary CTE offerings in Aiken include Architectural Design, Electricity, and Mechanical Design. The Orangeburg County Technology Center also offers Building Construction.

Secondary Pathways: Government and Public Administration; Business, Management & Administration; Finance; Marketing

Post-Secondary Programs: Business Administration: Enterprise Management, Accounting Administrative Office Technology, Business Management, Administrative Support, Entrepreneurship/Small Business Management, and International Business.

In the Lower Savannah Region, Public Administration accounts for 5,500 jobs (SCWCP, p. 15). The County of Aiken and County of Orangeburg are two of the top twenty employers in the region (SCWCP, p. 14), while all employers Among students surveyed, Business,
Management, and Administration ranked second
in career pathway interest, though significantly
below Health Sciences (9.8% vs 16.6%). For
parents it ranked fourth after Health Sciences;
Arts, AV & Communications, and Education.
Among high school career clusters, Business was
the fifth most popular with 83 total graduates.
Post-high school placement was also strong at
93.8%. Marketing placement post-high school
program was also strong at 93.8% overall and
average regional salaries for Marketing Analysts
and Specialists at \$70.801.

Two-year college placement is also very strong at 94% overall for Management. This indicates that

Strengths

in the Lower Savannah region require some degree of administrative or managerial training. Various administrative/ managerial positions rank among the top occupational openings in the region and Management of Companies and Enterprises accounts for 126 regional positions (SCWCP, p. 15). Business and Financial Operations occupations were expected to grow by 10.75% between 2016 and 2016 (SCWCP, p. 23). During the same time period, Medical and Health Services Manager positions are expected to grow by 20% (SCWCP, p. 24).

One of the top twenty employers in the region is a major accounting/financial advising firm (SCWCP, p. 14). Finance and Insurance positions were expected to grow by 1% per year through 2026, while Financial Management positions were expected to grow by 22% between 2016 and 2026. (SCWCP, p. 22 & 24). Business and Financial Operations occupations were expected to grow by 10.75% between 2016 and 2016 (SCWCP, p. 23). During the same time period, Financial Manager positions are expected to grow by 22% (SCWCP, p. 24).

Secondary Pathway: Transportation, Distribution, and Logistics

Post-Secondary Programs: Automotive Technology, Basic Diesel Maintenance, Logistics, and Truck Driving.

These fields account for 4,795 jobs in the Lower Savannah and one of the top twenty employers in the region is a major national shipping company, while another is a major distributor of retail and food supplies (SCWCP, p. 14-15). As of March 2022, there were 127 Heavy and Tractor-Trailer Truck Driver positions available in the Lower Savannah (SCWCP, p. 17). Of the leading industry labor market projections, transportation and warehousing was expected to have the highest

Gaps

though the programs are closely aligned with regional demands, there is a need to expand program enrollment and improve retention efforts to meet community needs.

Accounting graduate job placement was 80% in the 2021 reporting year, with 1.1% of students surveyed indicating an interest in Finance. Public Administration and Finance scored on the opposite end of the spectrum concerning student interest, tied as the pathways of least appeal to students in Lower Savannah region surveys. Additionally, there was not a single Government and Public Administration cluster high school graduate in the Lower Savannah in 2020-21, making it 16th of 16 pathways and only six finance graduates, placing that cluster in the 15th position. However, it should be noted that the prior-year high school graduates--though small in number in Finance at seven—had 100% placement. Given the abundance of available positions, potential for future growth, and average salaries in the upper forties to midfifties, this is an area that would benefit from early career pathway counseling, particularly among students with strong Mathematics skills.

OCTC offers dual enrollment opportunities in Logistics, Automotive/Diesel, and Truck Driving. Despite regional demand, OCTC's Truck Driver Training Job Placement rate was at 70% with only 16 of 23 finding employment in field in 2020-21. This was likely due to shipping/logistic disruptions caused by COVID-19 and will be monitored for action in 2022 reporting.

Note that despite strong demand and average salaries of \$51,226 (SCWCP, p. 2), Transportation was the least popular career field with high school parents at only 0.4% and third from the bottom with students at 1.1% (with only 16 votes out of 1,438, a mere one vote above both Finance and Public Administration). Interestingly, however, high school post program placement

Strengths Gaps

rate of growth in the region between 2016 and 2026 at 22.8% (SCDEWCP, p. 22). The S.C. DEW 2021 S.C. Economic Analysis Report (p. 40) projected that Transportation and Material Moving Occupations I in the Lower Savannah Region would see 14.4% growth between 2018 and 2028.

was high at (92.3%) and, despite parent and student apathy in CLNA surveys, Transportation, Distribution, and Logistics was the high school cluster with the highest number of graduates at 96, behind only Health Care and Manufacturing. This indicates a need for career counseling information.

OCTC also offers a dual enrollment program for Truck Driving at the Cope Area Career Center. ATC is meanwhile exploring the possibility of a Commercial Driver's License program.

Secondary Pathways: Information Technology; Arts, A/V Technology & Communications

Post-Secondary Programs: Computer Technology, Computer Technology: Network Security and Information Assurance, Computer Technology: Computer Programming/Coding, Cybersecurity Networking

According to the SC 2021 Economic Analysis Report, Computer and Mathematical Occupations account for 270 positions and positions in the field were expected to increase by 22.1% over the period from 2018 to 2028 (p. 36 & 38). Computer User Support Specialist was also one of the top ten in-demand occupations (p. 37). More broadly speaking, "Information" was credited with 583 positions in the SCDEWCP (p. 15), with average wages of \$58,500.

In the Student Survey of the region, fourteen students listed computer science/technology classes as a type of course that was not offered at their district school, which they would like to take. However, Information Technology only gained 2.3% of the student vote concerning career of interest, with parents demonstrating similar lower-moderate interest at 2.5%. However, post-program high school IT placement is 100%, and a solid 85% overall for technical college graduates in the region. Arts, A/V Technology and Communications was also strong with 93.3% high school post-program placement.

Secondary Pathway: Law, Public Safety, Corrections, & Security

Post-Secondary Programs: Criminal Justice, Forensics, Paralegal, Security

The Counties of Aiken and Orangeburg are two of the top twenty employers in our region (SCWCP, p. 15). The S.C. 2021 Economic Analysis Report (p. 40) found that Protective Service Occupations account for 990 positions in the Lower Savannah Region and predicted a 4.3% increase in Lower

While only 2.5% of parents indicated interest is their child in pursuing a career in Law, Public Safety, Corrections, and Security, students were far more receptive with a 6.9% indicator of primary career interest. This made the field the fifth most popular pathway among students of the 16 listed. While enrollment and placement are high at OCTC, ATC's program has not seen the same level of demand. Cross-institutional collaboration is needed to meet the rising demand for CRJ completers.

Strengths	Gaps
Savannah Protective Service positions between 2018 and 2028 (p. 36 & 40). The mean wage for these workers is \$17.95 per hour (SC 2021 EAR, p. 36). The Statewide median salary for Security Guard positions is \$26,620, with growth potential of 11.14% (Lifeboat Jobs – Security Guards). Postprogram placement is high at 90.2%.	
Secondary Pathway: Agriculture, Food, and Natural Resources Post-Secondary Programs: Agribusiness / Sustainable Agriculture According to the South Carolina Department of Agriculture, there are approximately 25,000 farms with 246,957 workers in South Carolina, making Agribusiness (Agriculture + Forestry) S.C.'s largest industry. DEW agricultural projections in the Lower Savannah are mixed, however, the data is noticeably limited, potentially due to the number of small/independent farms. While Agriculture, Forestry, Fishing, and Hunting were expected to hold roughly steady at -0.11% growth per year according to the current SCWorks Analyzer Industry Projections, support activities for Agriculture and Forestry (Agribusiness) positions were expected to grow by 0.42% per year.	Current labor supply appears closely aligned with local demand. Post-program placement at the high school level is 91.9% in the Lower Savannah region. Agriculture was the sixth most popular career path among students, just behind Criminal Justice, and seventh-most popular among parents (of 16). Clemson University's Agribusiness transfer program provides students in the Lower Savannah region with a wide variety of options.
Secondary Pathway: Human Services Post-Secondary Programs: Cosmetology, Barbering, Nail Technician SCWorks Analyzer indicates that entry-level wages for Hairdressers, Hairstylists, ad Cosmetologists in South Carolina have an average entry wage of \$18,890 per year and a median overall annual wage of \$25,285. The estimated number of workers in these professions was 8,917 in 2018,	Denmark Technical College currently has a 67% Placement Rate. However, given this is a field of high customer interaction, 2019-20 graduate placement was atypical. While this field is not expected to undergo an explosive growth rate, there is a steady demand for qualified applicants and it is an excellent gateway position, providing funding for additional educational growth. It should also be noted that high school post-program placement was 100% in 2021 reporting.

with a projected need for 9,696 by 2028, with an

annual average growth rate of 0.95%.

Strengths Gaps

Secondary Pathway: Hospitality and Tourism

Post-Secondary Programs: Culinary Arts, Hospitality Management Transfer: Accommodations and Food Services provide 9,454 jobs to the region and are expected to experience 14.68% growth between 2016 and 2026 (SCDEWCP, p. 15 & 22). However, these tend to lower wage positions, with industry salaries averaging \$17, 784 per year (SCDEWCP, p. 20). Aiken has a MOU with Hems College (Johnson and Wales Transfer Agreement). OCTC has a MOU with USC Beaufort in Hospitality.

High school post-program placement is high at 97.4%. However, only 3.3% of students indicated an interest in Hospitality and Tourism pathways, while their parents rated it lower at 2.1%. Additionally, COVID-19 has had a significant impact on short-term employment opportunities in the region, with only 33% of DTC graduates placing in their career field. Hospitality fields might well be impacted long term by the affect of the pandemic.

Secondary Pathway: Science, Technology, Engineering, and Mathematics

Post-Secondary Programs: Radiation Protection Technology; Nuclear Fundamentals.

Of the twenty largest employers in the Lower Savannah Region, three are related to the Savannah River Site and nuclear fields. Radiation Protection Technology and Nuclear Fundamentals had a 100% placement rate in 2021 reporting. According to EMSI data, national growth rates are in decline for Nuclear Technicians, however, regionally jobs are expected to remain level through 2027. The average hourly wage is \$47.95.

Many students struggle with science and mathematical concepts. However, regarding high school career clusters, graduation rates were strong. The high school STEM cluster was 7th of 16 in total number of graduates, with 96.6% successfully placing post-program. Concerning ATC 2021 data for 2019-20 graduates, 100% of Nuclear Fundamentals and Radiation Protection Technology graduates successfully found employment or continued with their education, indicating strong local demand.

https://dew.sc.gov/data-and-statistics/labor-market-information/community-profiles

https://lmi.dew.sc.gov/lmi%20site/Documents/HotJobs/LowerSavannah HotJobs.pdf

https://lmi.dew.sc.gov/lmi%20site/Documents/Economic Publications/SC 2021 Economic Analysis Report.pdf

https://jobs.scworks.org/vosnet/analyzer/resultsNew.aspx?session=indproj&plang=E

https://lmi.dew.sc.gov/lmi%20site/Documents/Economic_Publications/Lifeboat_Jobs.pdf

https://agriculture.sc.gov/about/

https://www.cerra.org/uploads/1/7/6/8/17684955/february2022_supply_demand_update__1 .pdf

STEP 1: Analysis of Labor Market Information

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

Program	Evidence from South Carolina Labor Market Data	Evidence from Sources
Technical College Program: Heating, Ventilation, and Air Conditioning (HVAC) Orangeburg-Calhoun Technical College, Denmark Technical College	The SCWorks Dashboard indicates 805 projected annual openings statewide with an average annual wage of \$55,000. These positions account for 7% of total Installation, Maintenance and Repair occupations.	A request from the President's Manufacturing Council initiated the plan for the program. DTC will begin offering a certificate program in Fall 2023, while OCTC's plan is still in development.
Technical College Program: Emergency Medical Technician/Paramedic (expanded EMT offerings) Orangeburg-Calhoun Technical College	The SCWorks Dashboard indicates 100 current openings statewide with 8 openings in the Lower Savannah Region. The average annual wage is \$37,346.	Requests from students and the local hospital initiated the plan for the new program. The College will begin offering Advanced EMT certificate in Fall 2022. A degree prospectus is currently being developed.
Technical College Program: Health Sciences Certificate — Mental Health Technician Certificate Aiken Technical College, Denmark Technical College, Orangeburg- Calhoun Technical College	SCDEW SCWorkforce.com indicates that Psychiatric Technicians and Aides have a median salary of \$30,250 and current job growth of 7.14%.	The SC Hospital Association (SCHA) reached out to the SCTCS in Spring 2022 indicating an employer need for trained mental and behavioral health technicians across the state. An Allied Health Deans Peer Group has been established to develop a set of competencies and curriculum in conjunction with regional employers
Technical College Program: Ophthalmology Technician Certificate Aiken Technical College	The SCWorks Dashboard indicates 85 projected annual openings with an average annual wage of \$39,174.	ATC is in discussion with Augusta University to establish an Ophthalmology Technician Certificate in preparation for Certified Ophthalmic Assistant credentialing.
Technical College Program: Electrical Line Worker Certificate Denmark Technical College	The SC Works Dashboard indicates Electrical Powerline Installer and Repairer positions in South Carolina are expected to grow by 1.43% each year, with a total growth of 15.22% between 2018 and 2028. There are on average 339 openings across the state.	Requested by Duke Energy, Dominion Energy and Santee Cooper (primary partner) Championed by James Bowden and Representative Gilda Cobb- Hunter. The program will transition from Continuing Education to credit beginning in Fall 2023.

Program	Evidence from South Carolina Labor Market Data	Evidence from Sources
Technical College Program: Nuclear Fundamentals Denmark Technical College	The SC Works Dashboard indicates Nuclear Technician positions are expected to hold relatively steady in the state at 0.12% growth per year. The average hourly wage is \$47.95.	The program was requested by SRS and SNRS and will be established as part of the apprenticeship program for Nuclear Operators. The Denmark program mirrors the current program at Aiken Technical College. They anticipate hiring an additional 200 operators over the next 2 years. The program will begin in Fall 2023.
Technical College Program: Truck Driving (CDL) Certificate Denmark Technical College	The SC Works Dashboard indicates Heavy and Tractor-Trailer Truck Driver positions in the state are expected to increase by 1.24% per year, with a total of 13.09% growth between 2018 and 2028.	The SC Trucking Association requested all technical colleges to add CDL programs. Local industry partners encouraged Denmark to add the program, as well in order to meet new federal requirements. The CDL program complements the Electrical Line program as well, since these workers are required to have a CDL. The certificate program will be offered as a credit program beginning in Fall 2022.
Technical College Program: Industrial Manufacturing Technician Certificate Denmark Technical College	SC Department of Employment and Workforce Community Profile for the Lower Savannah region indicates that Manufacturing is the area with the highest regional employment at 17,278 (SCWCP, p. 15). Of the twenty largest employers in the Lower Savannah Region, six are Manufacturing industries, while three others are related to the Savannah River Site and nuclear fields. In Q3 2020 Manufacturing industry regional hires increased by 1,384 and the average annual wage is strong at \$62,816 (SCWCP, p. 18 & 20).	The SC Manufacturing Association and industry group developed the program as part of an economic development project in the state. The SC Technical College System encouraged all colleges to add this certificate. Denmark expand ed the College's Continuing Education offering into a credit program to support local industry needs in Fall 2021.

STEP 1: Analysis of Labor Market Information

What Programs/Pathways are offered, but are not supported with the local labor data?

Program/Pathway	Reason for offering these Programs/Pathways	South Carolina Labor Market Data or Local Labor Data Source
N/A		

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.**

**2022 CLNA Steps 2 and 3 include an evaluation of performance for each subgroup and each special population for both secondary and postsecondary institutions.

Perkins V Sec. 2(48) Special Populations, as Defined by Perkins V

- Individuals with disabilities;
- Individuals from economically disadvantaged families, including lowincome youth and adults;
- Individuals preparing for non-traditional fields;
- Single parents, including single pregnant women;
- Out-of-workforce individuals;
- English learners;

- Homeless individuals as described in section 725 of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11434a);
- Youth who are in, or have aged out of, the foster care system; and
- Youth with a parent who is a member of the armed forces and is on active duty (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.

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 Needs Assessment Team must meet and evaluate the student performance strengths, gaps, and goals for improvement based on the data **for the entire region.**

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.

4S1 – Nontraditional Program Concentration

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

5S1 – Program Quality – Attained Recognized Postsecondary Credential

The percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential.

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.

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

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.

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

** Include an evaluation of performance for each subgroup and each special population for both secondary and postsecondary institutions.

Strengths	How are these strengths being sustained in the region?	Local Example
1P1 Post-Secondary	ATC, DTC, and OCTC utilize a variety	ATC's Perkins-funded DACUM
Retention and Placement:	of strategies to increase retention	processes and participant support
SCTCS Goal = 74.5% (90% Threshold = 67.05%)	and placement. Perkins funds are used to support a wide variety of	stipends ensure that ATC programs are aligned with local employer
1111e31101d = 07.03/0j	student support programs and	needs. Perkins-funded CTE
2020-21 Results:	technology tools including software	equipment provides students with
SCTCS Average – 86.31%	remediation, online tutoring, lecture-	the real-world experience requested
ATC – 89.25%	capture, student success coaching,	by employers.
DTC - 76.12%	professional development training	
OCTC – 89.57%	for special populations, and licensure	ATC and OCTC emphasized
	exam preparation and practice to	professional development in
Overall goals and all	ensure that all students have the	instructional strategies for their CTE
subgroup goals were met for	opportunity to earn a credential and	faculty. ATC provided funding for
the three colleges, with the	be placed in employment.	Nursing faculty to participate in NLN
following exception: Aiken	Articulation pathways to 4-year	Certified Nurse Educators Prep
Technical College (ATC) failed	institutions guide students who seek	Course and Intensive Online Course,
to meet the adjusted state	a bachelor's degree and beyond.	while OCTC utilized Perkins funds to
performance threshold of		promote non-traditional student
67.05% among one special		retention, as well as instructional
population sub-category,		transition training for educators

Strengths	How are these strengths being sustained in the region?	Local Example
Individuals with Disabilities. ATC missed this benchmark by 8.72% with 7/12 (58.3%) completing and finding employment in the field or continuing their educations		who were shifting from business/industry to academia. OCTC also provided mentoring services for CTE apprentices. DTC's living learning communities incorporates best practices in student services and retention strategies to provide students one-on-one and group contact with mentors on campus to promote mental health, overall well-being, and targeted interventions. This includes structured academic supports, extended access to technology, and high-speed internet.
2P1 – Earned Recognized Postsecondary Credential SCTCS Goal = 92.5% (90% Threshold = 83.25%) ATC, DTC, and OCTC have all achieved 100% on this metric for the past four years.	A holistic approach to student completion includes career-pathway testing, tutoring, coaching, and advising targeting CTE students. The wide variety of industry-recognized certifications offered at the region's technical colleges also support student credential attainment.	ATC and OCTC provide CTE counseling services and tutoring services (synchronous and asynchronous) to support students' successful progression through their programs. ATC also provides WorkKeys assessments to ensure students are on the proper career path, while OCTC provides licensure testing for economically disadvantaged students in its CTE programs. OCTC also provides apprentice mentoring. OCTC has also installed twelve 360-degree OWL cameras in its off-campus dual enrollment locations to provide synchronous online instruction for its CTE courses, in order to better serve its student population during the COVID-19 pandemic and beyond. DTC's academic programs have aligned in sequences of stacking industry-recognized credentials, many of which can be achieved through on-campus or live-remote third-party testing. Students are

Strengths	How are these strengths being sustained in the region?	Local Example
		these credentials through career coaching, resume building classes, mock interviews, and career fairs. Industry partnerships and recruiting are enhanced through apprenticeship and work-based learning embedded in each degree program.
3P1 – Nontraditional Participation SCTCS Goal = 7% (90% Threshold = 6.3%) 2020-21 Results: SCTCS Average – 10.46% ATC – 9.66% DTC – 6.57% OCTC – 11.02% ATC, DTC, and OCTC have met this metric for all subgroups and special populations.	Marketing strategies have helped promote non-traditional enrollment, as well as activities like open houses and career fairs. In addition, dual enrollment pathways have increased non-traditional participation in highwage, high-demand programs.	ATC's CTE Transfer Opportunities Initiative promotes various CTE career pathways, while the Early Start CTE Marketing campaign targets potential dual enrollment students, increasing awareness of lucrative career pathways and promoting academic retention. ATC's Early Childhood Education program also participates in the Call Me MISTER program. OCTC utilized Perkins funds to promote professional development for faculty focused on recruiting and retaining non-traditional students. The utilization of CompactLogix PLC platforms at OCTC will also allow non-traditional students opportunities for the visualization of and practice of processes prior to real world implementation, allowing increased comfort with unfamiliar processes.
1\$1 – Four-year Graduation Cohort - Goal: 91% (90% = 81.9%) 2020-21 Results: <u>SC Performance – 97.6%</u> Aiken – 98.8% Allendale – 93.1% Bamberg 1 – 98.3% Bamberg 2 - 100% Barnwell 19 - 80% Barnwell 29 - 98% Barnwell 45 – 97.5% Calhoun - 95%	All but one district in the region exceeded the state performance goal and Barnwell 19 was only 1.9% below the (90% SDPL) threshold of 81.9%. While Black Males faced difficulty achieving the graduation rate benchmark at Barnwell 19, and ESL students failed to meet it in the Orangeburg district, results were overall very positive. CTE student support and relationships with faculty are valuable for student completion. Industry certifications and workforce experiences also	Calhoun County High School administration and school counselors take on a caseload to meet with at-risk students on a weekly basis to ensure they are successful and are provided with support structures.

Strengths	How are these strengths being sustained in the region?	Local Example
Orangeburg – 95.1% Disabled students failed to meet the benchmark in five of the districts. However, there was concern that this might be a reporting/data issue resulting from their five-year graduation plans, as discussed in the next section.	support student graduation. Mentorship programs are used at schools across the region to foster student success.	
2S1 – Academic Proficiency in Reading/Language Arts - Goal: 67.5% (90% = 60.8%) 2020-21 Results: SC Performance – 87.9% Aiken – 88.2% Allendale – 64.9% Bamberg 1 – 81.6% Bamberg 2 – 87.5% Barnwell 19 – 33.3% Barnwell 29 – 62.5% Barnwell 45 – 75.3% Calhoun – 89.2% Orangeburg – 81.8% Reading/Writing outcomes for certain subgroups and special populations were mixed, through again disabled students were a category that consistently struggled. These results are detailed in the section below.	All but one of the districts in the region exceeded the (90% SDPL) threshold of 60.8% Districts in the region provide services including tutoring sessions, remediation sessions, and other practices vital to improving student achievement. The expansion of these services is an important factor in improving this performance indicator. School-wide goals for academics also help guide the administration in choosing appropriate student support services.	All local districts have incorporated MTSS Multi-Tiered Systems of Support improve student performance through the provision of group instruction, small group targeted instruction, and additional one-on-one interventions based on on-going student needs.
2S2 – Academic Proficiency in Mathematics: 73% (65.7%) 2020-21 Results: SC Performance – 75.6% Aiken - 78.1% Allendale – 38.6% Bamberg 1 – 79.6% Bamberg 2 – 45.8% Barnwell 19 – 50% Barnwell 29 – 66.7% Barnwell 45 – 74%	Four of the nine districts under this criterion failed to meet the (90% SDPL) threshold of 65.7%. Districts in the region provide services including tutoring sessions, remediation sessions, and other practices vital to improving student achievement. School-wide goals for academics also help guide the administration in choosing appropriate student support services.	Bamberg 1 and 2 are targeting professional development focused on standards and use of instructional resources, such as graphing calculators, providing classroom instructional supplies such as graphing calculators, developing integrated systems of student data analysis benchmark assessments to drive instruction with a focus on underperforming

Strengths	How are these strengths being sustained in the region?	Local Example
Calhoun – 68.4% Orangeburg – 59.2%		subgroups, and implementing multi- tiered support systems.
Mathematics and Science provided challenges for all student subgroups and special populations. Mentoring and active tutoring approaches were recommended, as noted in the next section.		The Orangeburg County School District provides tutoring and remediation sessions.
2S3 – Academic Proficiency in Science: 71.3% (64.2%) 2020-21 Results: SC Performance – 73.4 Aiken – 78.9% Allendale – 49.1% Bamberg 1 – 73.5% Bamberg 2 – 43.5% Barnwell 19 – 27.8% Barnwell 29 – 55.6% Barnwell 45 – 67.1% Calhoun – 47.4% Orangeburg – 50% Mathematics and Science provided challenges for all student subgroups and special populations. Mentoring and active tutoring approaches were recommended, as noted in the next section.	Six of the nine districts failed to meet the (90% SDPL) threshold of 64.2% for this new criterion. Area districts support student proficiency in science through tutoring sessions, remediation sessions, and other district-wide practices are vital for student achievement.	Calhoun is providing after-school science tutoring and enhancing hands-on real-life examples in science lessons to increase relevance and student understanding. Bamberg 1 and 2 are targeting professional development focused on standards and use of instructional resources, implementing an integrated system of student data analysis benchmark assessments to drive instruction with a focus on underperforming subgroups, and implementing a multi-tiered support system. Barnwell's 9th grade Jumpstart program helps introduce students to the school and CTE programs, including science. Barnwell 19 faculty provide weekly assessments on science course materials to support student success in science courses. The Orangeburg County School District has had improvement through the implementation of tutoring and remediation sessions. Special attention is given to preparation for high school testing subjects, especially biology.

Strengths	How are these strengths being sustained in the region?	Local Example
3S1 – Post-Program Placement: 93.5% (84.2%) 2020-21 Results: SC Performance – 96.8% Aiken – 94.7% Allendale - 100% Bamberg 1 - 100% Barnwell 19 - 90% Barnwell 29 – 92.3% Barnwell 45 - 100% Barnwell 80 (CC) – 93.6% Calhoun - 100% Orangeburg 80 – 95.1% Orangeburg – 99.2% Results for subgroups and special populations were generally strong. Issues seemed to arise from small sample sizes, but potential approaches are discussed in the next section, such as CTE career software, mentoring, and alignment of program with industry needs.	State performance goals were met for all districts and career centers during 2020-21. District administration works with technical college partners to strengthen pathways. Designated Programs of Study provide clearly articulated pathways for students.	The Project Lead the Way (PLTW) Program of Study between Cope Area Career Center and OCTC continues to grow. Students enrolled in dual enrollment courses can easily move into EET or Mechatronics with opportunities for internships, apprenticeships, and co-ops. OCTC will add an Introduction to Engineering Technology certificate in Fall 2022. DTC also maintains a PLTW program of study to ensure a pathway for students in their service area an easy transition into their Electro- mechanical Engineering program and other Advanced Manufacturing offerings. The Pre-Engineering Program of Study between Aiken County Schools and ATC allows CTE students interested in engineering to transition to three degree programs, three certificates, and two diploma programs at the College.
4S1 – Nontraditional Program Concentration: 12.1% (10.9%) 2020-21 Results: SC Performance – 20.4% Aiken – 16.5% Allendale - 25% Bamberg 1 – 28.6% Bamberg 2 - 0.0 % Barnwell 19 – 15.8% Barnwell 29 – 0.0% Barnwell 45 – 0.0% Barnwell 80 (CC) – 23.3% Calhoun - 50% Orangeburg 80 (CC) – 14.5% Orangeburg – 15.1% Non-traditional program concentration is an issue	Six school districts and the career centers met this criterion's (90% SDPF) threshold of 10.9%. Districts incorporate summer camps and other activities to increase in program enrollment, including non-traditional.	Bamberg 2 is implementing marketing of nontraditional programs at the middle school level, providing marketing/informational materials regarding nontraditional programs, and ensuring student participation data in non-traditional programs is accurate. The Orangeburg County School District provides summer camps and activities. Aiken also provides a CTE summer camp for non-traditional students. However, this was temporarily suspended due to COVID.

Strengths	How are these strengths being sustained in the region?	Local Example
across most student populations. Marketing approaches and virtual instruction technologies to familiarize non-traditional students with industry procedures are discussed in the next section.		
5S1 – Program Quality – Attained Recognized Postsecondary Credential: 35.5% (32%)	Five districts and the career centers met this (90% SDPL) threshold of 32%. CTE faculty ensure that students understand the value of industry certifications. In addition,	CTE programs in the region offer a wide variety of credentials for students across numerous pathways including OSHA10; NCCER; Certified Nursing Assistant (NACES);
2020-21 Results: <u>SC Performance – 58.2%</u> Aiken - 72.5% Allendale – 42.6% Bamberg 1 - 25%	administration is committed to having high school locations certified as testing sites at high school and career center locations so that students with transportation issues	Microburst Soft Skills; ProStart (Culinary); Food Handler (ServeSafe and Manager); MOUS certification, Precision Exams; Career Safe; American Welding Society;
Bamberg 2 – 26.1% Barnwell 19 – No Data Barnwell 29 – 65.6% Barnwell 45 - 25% Barnwell 80 (CC) – 73.5% Calhoun – 68.8%	in rural areas have access to testing. Bamberg 1 and 2 are improving data tracking focusing on subgroups who underperformed; tracking student who do not achieve Silver/Gold	Automotive Service Excellence and Diesel; WINS certification and other Information Technology credentials including A+, NET +, and Security +; CareerSafe (HS & Cosmo); and TestOut Security+.
Orangeburg 80 (CC) – 48.1% Orangeburg – 39% As with Mathematics, Science, and Nontraditional Fields above, there are broad-based concerns with Attainment of a Recognized Postsecondary Credential that cut across multiple student populations thereby requiring a broad-based approach. Support Services to promote credential	status on state workforce credential in 11 th grade assessment and encouraging them to take the assessment at each opportunity to ensure every pathway is providing opportunities to obtain a related postsecondary credential.	Bamberg 1 and 2 are improving data tracking, focusing on subgroups who underperformed, tracking students who do not achieve Silver/Gold status on state workforce credentials in 11 th grade assessment and encouraging them to retake the assessment repeatedly. They are also ensuring every pathway provides opportunities to obtain a postsecondary credential related to the pathway.

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 2: Analysis of Student Performance

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

The local needs assessment shall include...

21) for all subgroups and special populations – No Gap

(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.

Based on available data, what are the student performance gaps in the region? Use the Analysis tools provided in Appendix B to determine root cause.

** ** Include an evaluation of performance for each subgroup and each special population for both secondary and postsecondary institutions.

Root Cause Gap **Postsecondary Results and Analysis** Disabilities are self-reported at the community/technical college level, 1P1 - Post-Secondary Retention and Placement making tracking difficult and often **SCTCS Goal – 74.5% (90% Threshold – 67.05%)** resulting in small subgroup populations. As a result, small variations can greatly For 1P1, Aiken Technical College (ATC) failed to meet the impact performance results, as in the adjusted state performance threshold of 67.05% among case for ATC. Limited placement might one special population sub-category, Individuals with Disabilities. ATC missed this benchmark by 8.72% with 7/12 have been the result of medical issues (58.3%) completing and finding employment in the field or arising from their disability or COVID-19, continuing their educations (2 students short of meeting lack of opportunities in field, and/or the the threshold). OCTC and DTC met targets of performance need for greater career guidance and for all populations. support. To improve future special populations placement, ATC has invested **2P1 – Earned Recognized Postsecondary Credential** in the software Focus 2 Career, which allows the Career Services staff to ATC, DTC, and OCTC all achieved 100% on this metric in FY21 provide targeted career guidance and (2020-21) - No Gap coaching to CTE students, with the intent 3P1 - Nontraditional Participation of improving placement across the **SCTCS Goal – 7% (90% Threshold – 6.3%)** campus community. This tool will be utilized by ATC's Disabilities Counselor to ATC, DTC, and OCTC all achieved this metric in FY21 (2020provide additional support for this

population.

Gap

Secondary Results and Analysis

1S1 – Four-year Graduation Cohort Rate Gaps: 81.9%

Allendale - Disabled (50%)

Bamberg 1 – Disabled (75%)

Barnwell 19 - Overall (80%), Male (71.4%), Black (73.3%)

Barnwell 45 – Disabled (66.7%)

Calhoun – Disabled (50%)

Orangeburg (Consolidated) –Disabled (69.2%), ESL (78.6%)

2S1 – Academic Proficiency in Reading/Language Arts: 60.8%

Aiken – Disabled (46.2%),

Allendale – Male (55.6%), Disabled (0%), Non-Traditional (44.4%)

Bamberg 1 – Disabled (0%)

Bamberg 2 - Disabled (0%)

Barnwell 19 – Overall (33.3%), Male (23.1), Female (60%), Black (42.9%), White (0%), Disabled (0%), Economically Disadvantaged (35.3%), Non-Traditional (0%)

Barnwell 29 – Male (59.1%), Black (50%), Disabled (0%), Economically Disadvantaged (52.9%)

Barnwell 45 – Hispanic (40%), Multi (0%), Disabled (33.3%), ESL (20%)

Calhoun – Disabled (0%)

Orangeburg (Consolidated) – Hispanic (77.8%), Disabled (23.1%)

2S2 - Academic Proficiency in Mathematics: 65.7%

Aiken – Disabled (7.7%)

Allendale – Overall (38.6%), Male (21.4%), Disabled (0%), Economically Disadvantaged (38.5%), Non-Traditional (22.2%), ESL (50%)

Bamberg 1 – Black (64%), Disabled (0%)

Bamberg 2 – Overall (45.8%), Male (45.5%), Female (46.2%), Black (45.5%), Hispanic (0%), Disabled (0%), Economically Disadvantaged (42.1%), ESL (50%), Migrant Students (0%)

Barnwell 19 – Overall (50%), Male (38.5%), Black (50%), White (50%), Disabled (0%), Economically Disadvantaged (52.9%)

Barnwell 29 – Male (54.6%), Black (65.4%), Hispanic (33.3%), Disabled (37.5%), Economically Disadvantaged (61.8%), ESL (33.3%), Homeless (0%)

Barnwell 45 – Hispanic (60%), Multi (0%), Disabilities (50%), Economically Disadvantaged (61.2%), ESL (40%)

Root Cause

Traditionally, these special populations groups have struggled academically. However, it should be noted that in the 2020 CLNA data, all institutions under review easily met the contemporary performance indicators at that time. Performance for these populations and sub-groups was clearly impacted during the pandemic. This is in part due to the lack of face-to-face, hands-on activities, and labs. In some cases, as in Health/EMT pathways, labs and clinicals were unavailable to students, significantly affecting or delaying their successful completion of their coursework and program/pathway.

During the pandemic, student performance was deeply impacted the lack of technology and internet connectivity in our rural service areas. Tutoring and remediation activities have been added through ESSER funds to provide learning activities to support gaps that expanded during COVID. However, students in Reading/Language Arts, Mathematics, and STEM programs/clusters are those who are most likely to need and seek out counseling and tutoring support. The disruptions caused by the onset of COVID-19 in Spring 2020 initially made it far more difficult to provide needed support services to students.

Additionally, with the stresses revolving around the pandemic, students were less motivated to seek out support. This required more aggressive tutoring strategies (in some cases requiring tutoring of developmental/gateway students) or remote engagement systems, as with online/asynchronous tutoring. These issues cut across our

Gap

Calhoun – Male (56.3%), Hispanic (50%), Disabled (0%), Economically Disadvantaged (65.4%), ESL (50%)
Orangeburg (Consolidated) – Overall (59.2%), Disabled (15.4%), Economically Disadvantaged (53%), Non-Traditional (55.6%), ESL (63.6%), Active Military Parents (33.3%)

2S3 - Academic Proficiency in Science: 64.2%

Aiken – Disabled (7.7%), Active Military Parent (50%), Allendale – Overall (49.1%), Male (51.9%), Female (46.7%), Black (45.3%), Disabled (50%), Economically Disadvantaged (48.1%), Non-Traditional (55.6%)

Bamberg 1 – Black (52%), Disabled (0%), Economically Disadvantaged (57.7%)

Bamberg 2 – Overall (43.5%), Male (50%), Female (38.5%), Black (38.1%), Disabled (0%), Economically Disadvantaged (33.3%)

Barnwell 19 – Overall (27.8%), Male (16.7%), Female (50%), Black (38.5%), White (0%), Multi (0%), Disabled (0%), Economically Disadvantaged (29.4%), Non-Traditional (0%)

Barnwell 29 – Overall (55.6%), Male (42.9%), Black (33.3%), Disabled (0%), Economically Disadvantaged (41.9%)

Barnwell 45 – Hispanic (60%), Disabled (50%), Economically Disadvantaged (59.2%), Non-Traditional (45.5%), ESL (40%)

Calhoun – Overall (47.4%), Disabled (0%), Economically Disadvantaged (46.2%), Non-Traditional (57.1%), ESL (25%)

Orangeburg (Consolidated) – Disabled (7.7%), Economically Disadvantaged (45.3%), Non-Traditional (57.9%), ESL (54.6), Active Military Parents (33.3%)

3S1 - Post-Program Placement: 84.2%

Aiken – Disabled (72.7%)
Barnwell 19 – Male (75%)
Barnwell 29 – Non-Traditional (66.7%)

4S1 - Nontraditional Program Concentration: 10.9%

Aiken – Males (1.4%), Single Parents (0%), Active Military Parents (0%)

Allendale – Asian (0%), Hispanic (0%), Multi (0%), ESL (0%)

Bamberg 1 – Males (0%), White (0%)

Bamberg 2 – Overall (0%), Male (0%), Economically Disadvantaged (0%)

Root Cause

student communities, but had a significant impact on the most vulnerable populations.

Some institutions are using Perkins funding to more aggressively seek out and enroll non-traditional students—particularly females—as our populations tend to skew female and their careers are frequently derailed by family and healthcare issues. One of our technical colleges has begun CTE apprenticeship mentoring and non-traditional professional development for faculty with the goal of promoting and providing support to retain non-traditional students.

Based on prior years of data, Black male students have frequently struggled academically due to a variety of factors. The schools are constantly trying various interventions to improve their overall academic performance, such as implementation of the Call Me MISTER program to encourage minority students through academic support and positive role-modeling.

Black male students tend to perform lower than other groups. The schools are constantly trying various interventions to improve their overall academic performance, such as implementation of the Call Me MISTER program to encourage minority students through academic support and positive rolemodeling. The "Mentors Instructing Students Toward Effective Role Models" program, which promotes the enrollment and employment of Black males into the teaching profession, has been recently reinvigorated. Over the next two years, up to 60 additional future educators will

Gap **Root Cause** Barnwell 19 - Male (6.3%), Disabled (0%) receive academic funding in exchange for Barnwell 29 - Overall (0%), Males (0%), Black (0%), White a minimum of one year of teaching in (0%), Economically Disadvantaged (0%) South Carolina for each year they receive Barnwell 45 – Overall (0%), Males (0%), Asian (0%), Black the ESSER Call Me MISTER funds. (0%), White (0%), Economically Disadvantaged (0%) Barnwell 80 (Career Center) – Male (0%), Hispanic (0%), A potential data reporting issue was also Disabled (0%), ESL (0%) noted by the Career Center Calhoun – Hispanic (0%), White (0%), Disabled (0%), ESL representatives. Their students typically (0%)become concentrators and completers at Orangeburg (Consolidated) – Disabled (5.9%), ESL (0%), the same time, normally the end of their Active Military Parents (0%) Orangeburg 80 – Economically Disadvantaged (11.1%), second year. There were concerns that Active Military Parents (0%) the data might not be accurately reported, as, for example, Barnwell 80 5S1 - Program Quality - Attained Recognized had several successful male completers in **Postsecondary Credential: 32%** Health Sciences who did not show up as Non-Traditional completers (4S1). In Allendale – Hispanic (0%), Non-Traditional (20%) addition, most disabled students' IEPs Bamberg 1 – Overall (16.7%), Male (16.7%), Black (25%), indicate a five-year plan, which might White (25%), Disabled (0%), Economically Disadvantaged explain the four-year cohort performance (25%), Non-Traditional (0%) gap, if this is not being accounted for, as Bamberg 2 – Overall (26.1%), Male (0%), Black (19.1%), they were the single sub-category failing Disabled (0%), Economically Disadvantaged (22.2%) Barnwell 19 - No Data to meet four-year completion standards. Barnwell 29 – American Indian/Native Alaskan (0%) Barnwell 45 – Overall (25%), Female (0%), Black (0%), White (20%), Economically Disadvantaged (20%) Calhoun – Multi (0%)

Optional Questions for Discussion:

Parents (0%)

How are students performing in your CTE programs?

Orangeburg (Consolidated) -Disabled (30%), Active Military

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

South Carolina is focused on ensuring all programs are of sufficient size, scope, and quality to meet the needs of all students served by the eligible recipient and are meeting labor market needs. The fiscal and programmatic support will be used to inextricably link the federal and state workforce to programs of such size, scope, and quality as to bring about improvement in the quality of career and technical education as identified in Section 134 and Section 135 of the legislation. For purposes of Perkins V, the SCDE will define "size, scope, and quality" for eligible recipients through the following mechanism:

<u>Size</u>: eligible programs must include a sequence of no less than two courses. Eligible recipients will provide the quantifiable evidence, to include sufficient capacity to accommodate student enrollment, to include appropriate workstations, floor space, etc. In addition, an appropriate level of instructional supplies and materials, such as computers, software, and tools, should be available to accomplish course objectives. The staffing must be adequate to serve a reasonable student – teacher ratio that accounts for quality instruction and a safe learning environment.

Scope: a Perkins-funded CTE program may include providing for students opportunities for dual credit, articulation credits, online CTE courses, or national certification opportunities. Perkins-funded programs must be aligned with business and industry as validated by a local business advisory committee. Eligible programs must have a developed curriculum aligned with state and/or industry standards. As mentioned above, programs must include a minimum of two sequenced courses. Furthermore, at least one state-recognized Program of Study containing a coherent sequence of courses must be offered in alignment with the secondary and postsecondary partners to demonstrate student progression. Qualifiers include course content, range of offerings within each sequence, ability to fully simulate the appropriate workplace environment, the number of work skills and competencies taught, etc.

Quality: determination based on how successfully each program is able to provide all enrolled students with the opportunity to participate in a CTE program that provides the workplace standards, competencies, and skills necessary for them to practice careers within their chosen field and succeed in postsecondary education, while at the same time supporting a high level of student achievement in core academics. In addition, the quality program should provide the opportunity to earn an industry certification and/or licensure approved by the state, while at the same time supporting a high level of student performance in core academic areas and skills. Mechanisms are in place to ensure high quality programs align with current workplace standards, practices and competencies.

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

Question	Answer	Areas for Improvement
Are of sufficient size	District administration must consider budget, space, and capacity to provide adequate enrollment opportunities while ensuring an equitable faculty to student ratio. Dual enrollment pathways provide expanded and affordable options for secondary schools and districts.	Small, rural districts can have difficulty locating qualified faculty. This can also be a concern for the technical colleges, particularly adjuncts in specialized fields.
Relate to the real-world work environment (Scope)	District and technical college employees strive to offer hands-on experience to students. Perkins funding provides access to workplace equipment that the institutions could otherwise not afford. Apprenticeships, clinicals, and on-site tours can also provide students with real-world insights into their chosen professions.	Keeping pace with workplace technology can be challenging. This was one reason ATC had to shut down its automotive technology program several years ago. The ever-changing pace of technological advancement, combined with increasing costs, make it particularly difficult for programs in rural areas to keep pace.
Help students advance to future education (Scope)	Dual Enrollment opportunities provide students with streamlined pathways into lucrative CTE career pathways. Marketing efforts by the technical colleges help to provide students with relevant academic and financial aid information to help them make informed decisions concerning their educational futures. Secondary career and guidance counselors provide students with educational and occupational guidance promoting awareness of educational pathways and funding.	Current high wages in relatively low-level occupations, with even some major fast food chains offering signing bonuses and financial incentives, have led students to forego long-term academic and career gains for short-term advancement. This is indicated by declining college enrollment across the country, particularly declining enrollment of males. The impact of COVID has also been felt, as some students have been forced to halt their academic pursuits due to health concerns or care-giving issues.

Question	Answer	Areas for Improvement
Are of high quality	Secondary: CTE programs are created/designed based on survey data to ensure that program offerings are of interest to students and parents. Schools provide pathways based on the needs of local business and industry. District, school, and career personnel work to educate students and parents concerning CTE career pathways and related offerings to attain high-wage positions in high-demand fields. A state-wide teacher evaluation system ensures quality instruction, while QRM supports quality instruction and program review. A standardized WBL process (Career Readiness Qualification – 40 hours) includes an agreement, evaluation, and teacher observations. Some programs require additional measures, such as job shadowing. Post-Secondary: New technical and community college programs undergo an extensive development process guided by SCTCS procedures. As part of SACSCOC reaffirmation programs are required to undergo review at least twice within a given ten-year period. As a result, all technical college programs are required to ensure employer relevancy through processes such as DACUMs, employer surveys, regular documented program reviews with established benchmarks, and regular advisory committee consultations. Faculty also undergo regular professional development and are expected to remain current in their chosen field, ensuring instructional alignment with professional needs. All faculty undergo annual evaluation and are provided opportunities for improvement.	As noted above, locating high-quality instructors can be difficult, particularly in rural areas. Similarly, maintaining technological parity with the workplace can be burdensome, particularly given limited funding from traditional sources.

Question	Answer	Areas for Improvement
Should be offered in the region	As noted above for both public schools and technical colleges, programs are developed and reviewed via ongoing interactions with business and industry representatives in their region. This occurs through a variety of means, such as DACUMs, surveys, advisory committees, and local partnerships. Among the post-secondary institutions, programs that do not meet state minimums for graduation rates go through a probationary and, if there is no improvement, a cancellation process. Meanwhile, state funding is often tied to program placement, providing an incentive to modify or eliminate programs that do not meet the needs of the community.	Both secondary and post-secondary schools can continue to expand current partnerships with local industry to add new internships, apprenticeships, and other work-based learning activities. The pandemic had a negative affect on these types of activities. In addition, institutions should work to expand participation in advisory boards to ensure CTE offerings are meeting industry needs.

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 does the law say? The needs assessment will include an evaluation of progress toward the implementation of CTE programs and programs of study. What does the law mean? 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, nonduplicative 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.

STEP 3: Analysis of Programs

Part 2: Progress toward Implementing Programs of Study

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

Implementation Process	Strengths	Needs/Gaps
Secondary Process: A needs assessment is used to identify high-wage, high-demand occupations available in the region. Surveys are used to gauge student and parent interest, including analysis of IGP data. A curriculum is developed in conjunction with local industry and post-secondary to include dual enrollment opportunities and/or TAP agreements.	Good relationships and communication between district personnel and the technical college ensure success. The Lower Savannah region's school districts and technical colleges strive to support each other so that student offerings are of appropriate scope and quality. HERRF funds provided additional technology that helped make CTE offerings more accessible to special population students. Counselors provide support for special population groups.	Industry relationships may not be available in the area due to the rural nature of the region. More detail on the OCTE/OSES topics concerning IGP and IEP Alignment, as well as CTE and IEPs would be beneficial.
Post-Secondary Process: The process begins with a local needs assessment which includes both short-range and long-range demand and wage opportunities. Approvals for new programs involve review by college curriculum committees, Advisory Committees, and Area Commissions. Approvals must be finally secured from SBTCE, CHE, and SACSCOC/US Dept. of Education to ensure adequate	Full stakeholder involvement is necessary to ensure that new programs are sustainable and align with the mission of the colleges regarding economic development improvement for the region. Programs are reviewed to ensure they are eligible for financial aid, opening them to low-SES students. When applicable, faculty are also provided guidance concerning the introduction of open educational resources. Courses/programs are monitored for any special	There is limited funding for new programs. For the most part, unless funding is available through Perkins, there is no money to supplement the development phase of a new program, including faculty or equipment. In some cases, space limitations are considerations for meeting the facility needs of a program. For college-aged special population groups, it is often difficult to provide support, as

Implementation Process	Strengths	Needs/Gaps
need and resources for implementation. processes.	populations needs, such as captioning. Both ATC and OCTC's Foundations provide need-based grants to assist students in emergency situations. Much of the hands-on equipment for our programs are purchased utilizing Perkins funds. OCT has focused on virtual technologies to promote industrial process familiarity among non-traditional students.	they must self-identify. The colleges are consulting with their respective Enrollment offices for potential pathways forward.
Implementation: The implementation process includes curriculum development with input from area industry and experts, including the use of Developing a Curriculum (DACUM) panels. Programs that involve certification or licensure are developed around requirements for industry certifications, licensure testing, and current industry and accreditation standards.	Programs of Study are revisited each year in a continuous improvement cycle (some schools fund the CTE program and industry alignment process utilizing Perkins funds). Ongoing special population professional development helps to prepare new program faculty to support special population student retention and graduation.	N/A

Evaluation of Middle Grades CTE and Career Exploration Programs

The 2018 reauthorization of Perkins V gives states clear permission to include the middle school in their Perkins-supported talent development pipelines. Congress intentionally aligned Perkins V with the Every Student Succeeds Act, which defines the middle grades as any grades 5-8. South Carolina defines middle grades as grades 6-8. The law requires that states provide career exploration and career development activities through an organized, systematic framework designed to aid students, including in the middle grades, before enrolling and while participating in a career and technical education program, in making informed plans and decisions about future education and career opportunities and programs of study.

Complete the table below. Add rows as needed.

Ask yourself: What's your strategy for middle school programs and what's your vision for how middle school fits into your entire CTE and talent development system?

Describe CTE programs and career exploration programs offered in middle grades.

Describe implementation plans for future CTE programs and career exploration programs to be offered in middle schools (starting AY 2022)

CTE programs offered in grades 6-8 Career exploration programs for Implementation plans grades 6-8 for future CTE programs and career exploration programs Local initiatives vary from district to **Courses:** Examples: district. However, the Regional Career Aiken County Public **Computer Science Discoveries** Development Facilitator provides Job Schools are preparing to (Orangeburg - William J Clark) Shadowing Week activities throughout implement CTE Career the Lower Savannah region, including exploration programs in **Discovering Computer Science** workshops at various sites such as the middle schools, (Orangeburg - Hunter-Kinard-Tyler) OCTC. which include offering CTSO opportunities for **Digital Literacy** (Allendale-Fairfax): This Aiken County School District provides a middle school students. number of opportunities for career course is designed to equip students with Project Lead the Way digital and computer literacy skills required exploration through career specialist Gateway to Technology to create, find, and evaluate data and courses are expected to activities such as: information. Students are exposed to a -Career Assessments for 6th-8th grade continue to be offered broad range of computer technology, students (YouScience and SCOIS) at Allendale Fairfax hardware, software, and their application. Middle School, with the -Face to Face and virtual Lunch and permission of the Learn events for students to listen to a Principal. Post Fundamentals of Computing (Aiken guest speaker in a career area of their County - AL Corbit, Jackson, Kennedy, consolidation, Bamberg interest. Langley-Bath-Clearwater, Jackson, County plans to add -8th graders toured the Aiken County Kennedy, Leavelle-McCampbell, New Fundamentals of Career and Technology Center this Ellenton, North Augusta, Paul Knox, Ridge Computing to the spring Spring-Monetta; Calhoun County - Sandy middle-school level, as -Some middle schools hosted the Be Run K-8, St. Matthews K-8; Orangeburg is currently the practice Proud Be Pro truck Carver-Edisto, Hunter-Kinard-Tyler, North, in Aiken. -Students participated in the NSA Robert E Howard, William J Clark): As with Cyber Challenge the courses above, this course provides a firm foundation in digital and computer -Students participated in Junior literacy skills, preparing students for future Achievement CPT pathways. -Paul Knox Middle students participated in Junior Advisory with the **Fundamentals of Science and Technology** North Augusta Chamber of Commerce (Calhoun County – St. Matthews K8; -Career and Leadership Fair and hosted Orangeburg - Hunter-Kinard-Tyler): This businesses and colleges on their course provides science, technology, campus to expose students to engineering, and math fundamentals. opportunities in our region. **Gateway to Technology – Project Lead the** Bamberg 1 and 2's career exploration Way (Allendale-Fairfax; Calhoun County is conducted with students at the Sandy Run K-8, St. Matthews K-8; middle grades by guidance counselors Orangeburg - Holly Hill Roberts): PLTW in whole group settings and is GTT courses feature a project-based

curriculum which allows student to design

ad test projects with modeling software used by companies such as Lockheed-Martin, Intel, and Sprint. This provides a incorporated into the Individual

Graduation Plan process.

CTE programs offered in grades 6-8	Career exploration programs for grades 6-8	Implementation plans for future CTE programs and career exploration programs
firm foundation for future STEM coursework in high school and beyond. Medical Detective (Allendale-Fairfax): This course provides students the opportunity to analyze genetic testing results, diagnose disease, and explore laboratory science through an engaging crime scene investigation technique. In hands-on projects and labs, students interpret vital signs and learn how the systems of the human body interact. STEM (Barnwell 45) Provide(s) science, technology, engineering, and math fundamentals.	Barnwell 29's Middle School Career Specialist provides career education sessions focusing on the 16 career clusters. The Specialist offers career assessments with all students utilizing the SCOIS website, as well as Career Lunch-n-Learn sessions with all grade levels. Field trip to the Barnwell County Career Center and Aiken Technical College were also provided, as well as a Junior Achievement virtual career fair. The Calhoun District has one counselor with Global Career Development Certification at each middle school	

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 below. Add rows as needed.

STEP 3: Analysis of Programs

Part 3: Recruitment, Retention and Training of CTE Educators

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

How do schools and colleges plan to incorporate the OCTE/OSES training modules and other strategies to facilitate the success of Special Populations students in CTE through collaboration among CTE, Special Populations administrators, and School Counselors?

Process	Strengths	Needs/Gaps
Recruitment efforts are expanded upon under strengths, but applicants typically apply via contracted hiring portals such as TalentED or local website application systems. Regarding professional development, districts are required to schedule	Signing bonuses offered by some districts are available to recruit teachers in rural, critical needs districts. Support from the SCDE in program areas has been valuable to ensure that teachers have sufficient professional development opportunities. Two million in federal Elementary	Regional salaries are highly competitive in many fields, particularly as a result of the impact of COVID-19's dislocation of the workforce. State employers are hard pressed to keep pace with inflation and the signing bonuses being offered even by fast food franchises. According to the Center for
professional development days in their calendars, and teachers and administrators are in regular need of accruing renewal credit hours. The OCTE/OSES modules will provide CTE directors and principals with professional development that is targeted to specific needs with an intentional scope and sequence. Information regarding the OCTE/OSES modules will be made available to all pertinent	and Secondary School Emergency Relief (ESSER) funding has also been utilized to recruit new educators via the new TEACH South Carolina initiative, as well as the expansion of the Center for Educator Recruitment, Retention, and Advancement's Teaching Fellows program. The Teaching Fellows program is designed to recruit high school seniors for careers in education and to promote their leadership skills. Each year the program	Educator Recruitment, Retention, and Advancement, by the midpoint of the 2021-22 academic year, 977 South Carolina teachers had left their positions, worsening the dire educator employment gap in South Carolina. As of February 2022, there were a record 1,121 vacant public-school teacher positions in the state (Cerra, Supply & Demand Update, Feb 2022).
staff when the modules 'go live' the Fall of 2022. Districts with indicated Special Populations gaps on their Perkins Performance Indicator Report will incorporate these modules as appropriate as systematic professional development within the CTE department as well as related departments and administrators, such as Special Education and Guidance. These	provides up to 200 education-track fellowships to qualified high school seniors. In addition, S.C. is continuing to expand the "Call Me MISTER (Mentors Instructing Students Toward Effective Role Models)" program, which promotes the enrollment and employment of Black males into the teaching profession. Over the next two	SCDE assistance is needed to review teacher credentials in order to transfer more experiences into pay levels, especially for high-level teacher and industry credentials. Thereby, district and career center personnel will be able to more closely match pay that a professional would earn in the industrial sector.

Process	Strengths	Needs/Gaps
modules include a variety of topics such as IGP and IEP Alignment and topics targeting multilanguage learners, and promoting a wide variety of teaching strategies for students with disabilities.	years, up to 60 additional future educators will receive academic funding in exchange for a minimum of one year of teaching in South Carolina for each year they receive the Call Me MISTER funds.	Areas of special need concerning special populations training, as based upon Perkins Performance Funding Indicator data, are Mathematics, Sciences, the promotion of Non-Traditional Program Enrollment, and efforts to build pathways to successful Recognized Postsecondary Credential Completion.
Post-Secondary: The South Carolina Technical College System's application process runs via SC's NEOGOV system, allowing supervisors to post specific positions or maintain an ongoing pool of potential part-time employees. Full-time faculty undergo a multi- stage process of application review, search committee panel interview led by their immediate supervisor, a teaching demonstration, and finally an interview with their next level supervisor. New adjuncts are provided new hire orientation, while full-time faculty undergo a more extensive onboarding process. Any online faculty are also required to undergo LMS training. All faculty are required to attend mandatory training sessions as well as a select number of optional training sessions per year. Starting in Fall 2022 OCTE/OSES training modules concerning instructional strategies focused on supporting students with disabilities can be incorporated into the onboarding	Opportunities for professional development and leadership activities are available, including offering tuition assistance for terminal degrees. Strong community contacts are an excellent avenue to recruit new faculty and help technical college recruit high-level talent. In addition, strong partnerships with local industry have served as an excellent tool to recruit faculty. The nature of the work provides faculty who are committed to their profession through the production of quality professionals in their field.	In many areas, industry pay is much higher than government agency salary levels, making it difficult to recruit program leadership with the expertise needed to both develop curriculum and demonstrate knowledge of the high-tech equipment required in college pathways. In recent years, as K-12 salaries have been increased, it has also become difficult to match the nine-month salaries of K-12 partners.

https://www.cerra.org/uploads/1/7/6/8/17684955/february2022_supply_demand_update__1_.pdf

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.

STEP 3: Analysis of Programs

Part 4: Progress toward Improving Access and Equity

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

** Looking at your Special Populations enrollment data, evaluate enrollment specific to clusters. Explain the strengths and gaps among clusters. Include strategies for improvement.

Include an evaluation of collaboration and communication among CTE, Special Populations administrators, and School Counselors as related to student placement in CTE programs.

Strengths

Secondary CTE programs use regular assessments to identify gaps and weaknesses. Student support services including tutoring, counseling and advising, ensure that student needs are addressed and met. Wrap-around services available include test preparation, special services for students with disabilities (captioning, ASL, etc.), academic advising, counseling, technology services, library, and media center support, student organizations and activities, career services, and job placement.

At the post-secondarylevel the Lower Savannah region colleges provide a variety of services for **Special Population** students. These services encompass CTE tutoring; counseling (both general support and career); financial support via Pell, other need-based grants and scholarships (frequently the college's Foundation), low and no cost open educational resources (including items such as loaner laptops), and food pantries to assist low-SES students; for students with disabilities, the colleges provide a variety of services, including captioning/transcripts of

audio-visual materials,

Gaps

students.

Gaps and challenges include:
-Students have to self-identify as a special population.

- -There is a stigma attached to seeking assistance.
- -The rural nature of the service area increases problems caused by the digital divide with internet access being more problematic.
 -The high poverty of the region also presents challenges in meeting the digital needs of
- -Students may not attend technical college orientation sessions (currently optional) and may not be aware of support services available to them.

At the secondary level, most applicable clusters experienced issues with a failure to cross over non-traditional boundaries (Ex. Architecture/Construction, Education, Human Services, Manufacturing, and Transportation). For smaller rural districts, attainment of a postsecondary credential also proved difficult. There were few clear patterns regarding clusterrelated success barriers, so group discussions tended to focus on what could be done to support students in overall areas (Math, Science, Non-Traditional Fields, and—to a lesser degree--Attainment of Recognized Postsecondary Credential). This was in part due to irregular performance patterns and in part to the population size of some of the clusters (ex. 1 student in Business in Allendale as an example).

At the post-secondary level, it is difficult to track the special

Strategies for Improvement

In the Secondary System, schools are implementing a variety of strategies to combat cross-cluster/crosspopulation deficiencies in Math and Science. These include professional development on instructional strategies and utilization of available instructional resources, such as graphing calculators, as well as providing enhanced tutoring and other support services. The schools intend to promote similar practices in the sciences, with an emphasis on providing real-world examples, which will indicate to students the applicability of scientific knowledge and skills in daily life.

To promote nontraditional program concentration, which was an issue across almost all applicable clusters, several schools will be aggressively marketing nontraditional programs at the middle-school level. Several of the districts provide summer programs, such as Orangeburg's Rosie's Girls, which specifically promote non-traditional enrollment.

CTE programs in the region offer a wide variety of credentials for students across a number of pathways, including OSHA10, NCCER, Certified Nursing Assistant (NACES), Microburst Soft Skills, ProStart (for Culinary), Food Handler (ServeSafe and Manager), MOUS certification, Precision Exams; Career Safe; American Welding Society; Automotive Service Excellence and Diesel; WINS certification and other Information Technology credentials including A+, NET +, and Security +; CareerSafe (HS & Cosmo); and TestOut Security+.

Additional post-secondary strategies include intrusive advising, mandatory

Strengths

text-to-speech support, motion-sensitive entryways and devices across the campuses, and home accessibility via online options. Non-traditional fields are promoted to students via college marketing campaigns, and though dual enrollment pathways exposure. Technical college partnerships with Vocational Rehabilitation, SCWorks/OneStop, and Adult Education are valuable to reach special populations of students and overcome significant barriers that may limit a student's access or provide adaptive technology or techniques.

Gaps

population status of adult learners, due to self-reporting issues and the perceived stigma of asking for help. Beyond non-traditional fields, low socioeconomic status (as indicated by Pell status), and selfreported instances of disability status, it is difficult to identify special population groups. Regarding non-traditional fields, the colleges tend to see females underrepresented in Technical Education fields, while men tend to be underrepresented in Health and Education. Interestingly, low socioeconomic background students were prevalent in Health and Public Safety fields, indicating a need for great financial support in those areas. Overall, disabled student performance was not markedly different from typical populations. However, there were issues with post-program placement at one of the institutions, indicating a need for greater career guidance and job placement support.

Strategies for Improvement

tutoring (or even co-requisite labs for developmental support), supplemental instruction, flexible scheduling and hybrid options for working students, and course redesign (including co-requisite labs) for developmental courses, thereby promoting enrollment, retention, and completion. Programs such as "Call Me Mister" in Education, broadbased marketing campaigns targeting potential non-traditional and low-SES students, and enhanced dual enrollment opportunities would increase student awareness of and participation in various CTE programs. To improve future special populations placement, ATC has invested in the software Focus 2 Career, which allows the Career Services staff to provide targeted career guidance and coaching to CTE students, with the intent of improving placement across the campus community. Meanwhile, OCTC is researching strategies to provide expanded technology and internet access.

Perkins V

"Strengthening Career and Technical Education for the 21st Century Act" (Perkins V, Public Law 115-224)

Consortium Coordination Strategy

Use the following questions to develop an ongoing strategy, process, or mechanism to ensure this needs assessment is used, with fidelity, to inform consortium planning and decision-making.

What went well in your CLNA process? Having a number of experienced developers and writers from the first cycle of CLNA reporting was helpful. We also received very strong focus group participation.

What could have been done differently to achieve better results? In the future, surveys should be completed in the Fall, allowing additional time for writing in the Spring. CLNA writing assignments should be specifically assigned to various team members with clear guidelines concerning the best sources of information for the section and deadlines for early submission in the early to mid-Spring. COVID-19 and issues beyond the Team's control resulted in fewer face-to-face meetings than are needed for such a project. It would be good to have each team report out regularly on the progress of their section. More information on OCTE/OSES is needed. Some sections of the form, particularly in regard to special populations data, seemed redundant.

What individuals or groups were invited but did not participate? Why did they not participate? What future steps will you take to engage them?

All participated, though some less regularly and thoroughly than others, particularly via email or virtual meetings. In the future, we recommend regular meetings in which each sub-group is required to report out on the progress of their section and to provide the overarching team with a hard or e-copy of their current work for review. If a member misses about a set number of meetings—without sending a proxy or update on their work—their institution should be contacted for an update.

What other initiatives can be leveraged and aligned across sectors to make this work successful? More detail is needed from the SCDE concerning the OCTE/OSES training modules. Most institutions were unclear on what resources and training would be available to them in Fall 2022. This report dovetailed nicely with a Department of Labor grant that was being developed for our region, so greater input from the various institutions' grant writers would be helpful. Additional SCDE/DEW contact and training is appreciated as many members were unfamiliar with the available resources.

How will you build connections to and through those other initiatives?

Via requests to SCDE/DEW and our fellow institutions.

On what established schedule will you continue to meet and work together?

A minimum of one meeting per semester (Fall/Spring/Summer) in preparation for the start of the 2024 cycle.

How will you demonstrate collective commitment to on-going engagement in this work?

By regularly reporting out to our fellow institutions concerning our progress in strengthening ties with middle school populations, enhancing the performance of special population groups at our institutions, and the success of the various initiatives listed in the CLNA.

Consortium Review of Comprehensive Local Needs Assessment

knowledge, that it is complete and meets the requirements set forth in the Strengthening Career and Technical Education for the 21st Century Act (Perkins V).				
Secondary Partner:	Date			
Postsecondary Partner:	Date			
Business Partner:	Date			

I have reviewed this comprehensive local needs assessment document and confirm, to the best of my

APPENDIX A:		

Data & Statistics Resources

SC Department of Employment and Workforce Business Intelligence Department resources:

The following resources to analyze and disseminate current and historical employment statistics, job forecasts, wages, demographics, and other labor market information for the state to help better understand today's complex labor force.

• SC Workforce Dashboard:

A Customizable dashboard to help prioritize information that is relevant to your needs.

• Community profile for your region:

Create a pdf specific for your county and region that you can share with your team.

Additional Resources for your local needs assessment analysis:

Bureau of Economic Analysis (U.S. Department of Commerce)

Provides data on national accounts, as well as state & local area personal income, GDP for states & metropolitan areas, & a link to the Survey of Current Business

• Bureau of Labor Statistics

The principal Federal agency is responsible for measuring labor market activity, working conditions, & price changes in the economy. Its mission is to collect, analyze, & disseminate essential economic information to support public & private decision-making.

• South Carolina Statistics Links

Compiled by SciWay, "South Carolina's Information Highway"

• State Data Center Network

The State Data Center Program makes data available locally to the public through a network of state agencies, universities, libraries, & regional & local governments

Digest of Education Statistics

A compilation of statistical information covering the broad field of American education from prekindergarten through graduate school. The Digest includes a selection of data from many sources, both government & private, & draws especially on the results of surveys & activities carried out by the National Center for Education Statistics (NCES).

• Public School District Profiles

Compiled by the Institute of Education Sciences at the National Center for Education Statistics.

• Integrated Postsecondary Education Data System

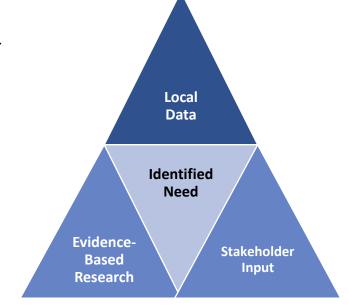
The primary source for data on colleges, universities, & technical & vocational post-secondary institutions in the United States. Find & compare institutions side-by-side. Data Center allows you to compare institutional data, create reports, download data files & more. Visit the Tables Library to view & download national & state-level data tables on enrollments, graduation rates, institutional prices, student financial aid, faculty & staff, etc.

Root Cause Tool Kit

Analyze the data

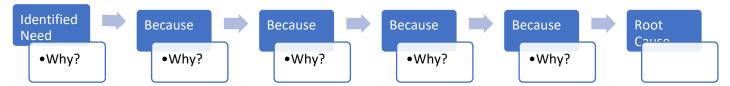
This is one of the most difficult and easily neglected steps within a needs assessment process. At its most basic level, it is determining cause and effect. The data and input you will be gathering will be the effects of some underlying cause and it is your task to determine what these causes are. To use an analogy from health sciences, you will be like a doctor looking at symptoms and searching for a diagnosis. To get to an accurate diagnosis:

- Process the data transparently to allow for others to double-check and verify your results.
- Display the data to facilitate interpretation.
 Tables, graphs, charts, word clouds, and any other means you can think of to see patterns within the data will be highly beneficial.
- Verify findings through corroboration/triangulation. Be skeptical.
 Particularly for small data sets, surprising results, or other unexpected outcomes, make sure to use multiple means of verifying patterns, such as additional data sources, stakeholder input, and evidence-based research.



Perform root cause analysis. There are a number of techniques that can be used to go from
the needs identified to discovering root causes. One technique is to ask and answer 'why' five
times (example below). Focused interviews, consulting experts, fishbone analysis, and
reviewing evidence-based literature on the topic are additional and powerful means of
discovering root causes.

Asking 'Why?' Five Times to Determine a Root Cause:



For instance, if you discover a gap in performance between two population groups asking why five times may reveal underlying factors having to do with curriculum, supports, student background, teacher training, instructional practices, materials, barriers, and any number of other contributing factors. Focus on identifying the factors most within your ability to influence.

Fishbone/Cause-and-Effect/Ishikawa Analysis to Determine Root Cause

The diagram below illustrates one method for brainstorming causal factors that contribute to an identified need (such as a performance gap). This method contrasts with the "Five Why" method listed above in that it recognizes that in many contexts it is best to look at the multiplicity of contributing factors rather than narrowing the focus to a single, primary root cause. The categories in which to brainstorm causes will vary by need context, but examples for non-traditional career preparation can be viewed at napequity.org/root.

