



Career and Technical Education: Comprehensive Local Needs Assessment

A Systemic Review Guidebook for Secondary Schools

MARYLAND STATE DEPARTMENT OF EDUCATION

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DOCUMENT HISTORY

Document Version	Date	Summary of Change
1.0	February 2024	Initial Document
2.0	March 2024	Modified: Formatting for accessibility Added: State Level Performance Data Added: Appendices with Strategies and Resources to Consider

Purpose

The federal Strengthening Career and Technical Education for the 21st Century Act (Perkins V), provides funding to support educators in developing the technical and employability skills and academic knowledge of secondary and postsecondary education students enrolling in career and technical education (CTE) programming.

Perkins V requires that grant recipients complete a Comprehensive Local Needs Assessment (CLNA) every other year to identify needs or gaps that should be addressed to strengthen the delivery of high-quality CTE programming.

The Maryland State Department of Education (MSDE) has created this document to assist LEA in conducting your CLNA. Information contained within it will assist local education agencies to align improvement efforts with the College and Career Readiness Pillar contained in the Blueprint for Maryland's Future. Key action steps include assessing the alignment of CTE programs of study (POS) to labor market needs; reviewing student participation and performance in CTE coursework; evaluating site progress in making CTE offerings accessible to students; and considering efforts to recruit, train, and retain CTE instructors.

Results from this CLNA should be incorporated into the LEAs Perkins V Local Application, which details how you plan to use federal funds to improve CTE instruction and expand equitable student access to quality programs.

The CLNA and the Local Application will be reviewed and approved on a rolling basis, and must be fully completed by the LEA, negotiated (LEA and MSDE), and approved by the State Director of Career and Technical Education or their designee prior to July 1st of each year.

If you have questions about how to use this guide, please contact your designated Secondary Program Coordinator in the Office of College and Career Pathways.

Instructions

Conducting this needs assessment could take several months to complete and must precede the creation of your Perkins V Local Application.

This guide provides a framework to help you investigate the status of your CTE programming and identify areas for improvement. It is organized into six sections:

- Guiding Principles
- Assembling a Stakeholder Team
- Component A: Labor Market Alignment
- Component B: Student Participation and Persistence
- Component C: Program Performance
- Component D: Professional Development

While you may choose to cover topics in any order, you should begin by assembling a stakeholder team to inform your effort. This group must include representatives from the stakeholder groups that are identified in the Perkins V legislation.

You may complete this document online or electronically by typing directly into the provided fillable fields. Alternatively, you may print out a copy of this form and enter information by hand. Do not alter or remove sections. Those choosing to complete the document offline should upload a completed copy using SharePoint.

Guiding Principles and Logic Model

OVERVIEW

MSDE has identified a set of guiding principles to inform the creation of CTE programming. It includes the expectation that all learners should have access to high-quality CTE coursework that:

- aligns to high-skill, high-wage, in-demand careers,
- leads to industry-recognized and/or postsecondary credentials that supports entrance or advancement in a specific career cluster, and
- offers career-based learning experiences (e.g., work-based learning, apprenticeship) that require the application of academic and technical knowledge and skills in a work setting.

LOGIC MODEL

Despite the growing emphasis on CTE as a pivotal pathway for students in Maryland, there is a significant gap in the systematic evaluation of current CTE programs. Maryland's dedication to aligning educational experiences with the demands of the real-world labor market faces challenges:

1. **Lack of Comprehensive Oversight:** There isn't a unified method to holistically assess the state's CTE programming capacity. This absence has led to disparities among various student groups across CTE clusters, hindering equitable access to quality education.
2. **Inefficient Funding Application Process:** Potential CTE grantees in Maryland lack a structured Local Application process for Perkins V grant funds, affecting their ability to optimally leverage these resources for student outcomes.

The combined effect of these challenges puts Maryland's CTE programs at risk of not fully aligning with the Perkins V requirements and, more importantly, not meeting the evolving needs of students and the labor market. Consequently, there is an urgent need for a systematic approach to bridge these gaps, ensuring the delivery of equitable, high-quality career and technical training that truly mirrors labor market demands.

LOGIC MODEL CHART

	Strategies	Outputs	Short-Term Outcomes	Long-Term Outcomes	Impacts
Tangible: Funding from Perkins V	Develop a CLNA	Comprehensive report detailing current state of CTE programs	Identification of gaps and disparities in CTE programs	Enhanced quality and inclusivity of CTE programs	A workforce better prepared for Maryland's labor market demands
Tangible: Labor Market Information (LMI) Data	Analyze LMI to align CTE programs with labor market demands	List of high-demand sectors and occupations in Maryland	CTE curriculum adjustments based on labor market needs	Improved alignment of CTE tracks with workforce demands	Higher employment rates for CTE program graduates
Tangible: Interview and Focus Group	Conduct interviews and focus groups with stakeholders	Collection of feedback and insights from stakeholder groups	Immediate feedback loop established with stakeholders	Strengthened collaboration and partnerships	Enhanced stakeholder trust and investment in CTE programs
Intangible: Expertise in CTE Programming	Design a structured Local Application process for Perkins V funding	Guideline document for potential CTE grantees	Streamlined application process for Perkins V funding	Increased number of high-quality grant applications, earlier in the process	Optimal leverage of grant funds for improved student outcomes
Intangible: Stakeholder Relationships	Engage regularly with stakeholders for continuous feedback	Periodic stakeholder engagement sessions	Fostered sense of community ownership and involvement	Stronger community ties and support for CTE programs	CTE programs that resonate more deeply with community needs

	Strategies	Outputs	Short-Term Outcomes	Long-Term Outcomes	Impacts
Intangible: Knowledge of federal and state education guidelines	Ensure CTE programs align with Perkins V, the Blueprint for Maryland's Future, and other relevant guidelines	Regular compliance checks and reports	Immediate course correction when misalignments are found	Consistent alignment with state and federal guidelines	Sustained funding and support for CTE programs due to compliance

INTERPRETATION

3. **IF** we intentionally and strategically allocate Perkins funding in the planning process, **THEN** we can develop a CLNA leading to a comprehensive report that identifies gaps in the CTE programs, ultimately enhancing the quality and inclusivity of CTE programs and preparing the workforce better for Maryland's labor market demands.
4. **IF** we utilize LMI data, **THEN** we can better align CTE programs with current labor market demands, leading to adjustments in the CTE curriculum, improving the alignment of CTE tracks with workforce demands, and resulting in higher employment rates for CTE program graduates.
5. **IF** we employ interview and focus groups effectively, **THEN** we can gather valuable feedback from stakeholders, establishing an immediate feedback loop, strengthening collaboration, and enhancing stakeholder trust and investment in CTE programs.
6. **IF** we leverage our expertise in CTE programming, **THEN** we can design a structured Local Application process for Perkins V funding, streamlining the application process, increasing the number of successful grant applications, and optimizing the use of grant funds for improved student outcomes.
7. **IF** we nurture and maintain stakeholder relationships, **THEN** we can engage more deeply and regularly for feedback, fostering a sense of community ownership, strengthening community ties, and creating CTE programs that resonate more deeply with community needs.
8. **IF** we stay updated on federal and state education guidelines, **THEN** we can ensure consistent alignment of CTE programs with these guidelines, leading to immediate course corrections when needed, sustained alignment, and thereby securing sustained funding and support for CTE programs

PROGRAM DESIGN

All CTE programming in Maryland must be delivered through Programs of Study (POS) developed by the state or a local school system. To be considered “state approved,” each program of study must meet these criteria:

- Strengthens the academic, career, and technical skills of students to prepare them for careers and further education.
- Incorporates input from diverse stakeholder groups, including industry and postsecondary partners
- Fits within one of 10 state-recognized career clusters that help students learn about their work options so that they may make informed career decisions.
- Includes opportunities for students to earn industry or postsecondary credentials and participate in career-based learning experiences.
- Prepares students for both college and careers through the completion of a planned sequence of coursework that blends academic, technical, and workplace skills.
- Incorporates a coherent set of academic, employability, and technical skills based on national and state standards that offer students a competitive advantage in the workplace.
- Offers multiple options to prepare students for entry into careers and further education through articulation agreements, supervised career-based learning experiences (e.g., work-based learning, internship, apprenticeship, etc.), and/or industry-mentored or capstone projects.
- Is based on enrollment and outcome data to inform program improvement and increase student performance.

Refer to these criteria as you conduct your CLNA to ensure your programming is rigorous and of uniformly high quality.

STUDENT ENGAGEMENT

A CTE POS includes a course sequence from grades nine through 12 and two or more years of postsecondary education courses. A student may meet the following thresholds of engagement:

Participant — Student completing not less than one credit in a MSDE approved CTE POS.

Concentrator — Student completing at least two courses in a single MSDE approved CTE POS.

Completer — Student who meets all requirements in a state approved CTE POS.

PROGRAM DELIVERY

Local school systems must meet **Size, Scope, and Quality** criteria to qualify for federal funding. Detailed information on these and additional expectations relating to CTE programming can be found in Maryland's [Policies & Procedures for the Development & Continuous Improvement of Career and Technical Education Programs of Study](#).

Any program that fails to meet all the following criteria will need to be brought into compliance or removed from your program approval request, invalidating it for Perkins V funding. While you are not

expected to develop plans to address deficiencies as part of the CLNA process, you are encouraged to assess each CTE POS against these criteria to help prepare for developing your local application.

SIZE
At least two state-approved CTE POSs are offered in recognized clusters.
Each POS consists of a coordinated, non-duplicative sequence of academic and technical coursework comprising at least 3 credits.
Each CTE concentrator-level course (typically the 3rd in a program) has a minimum of 10 concentrators over a 4-year period. If not, evidence must be offered of continued progress toward meeting this requirement.
Each POS has the required number of staff, availability of equipment, and student access to facilities.

SCOPE
Curricula are aligned to state-approved industry standards that allow students to earn recognized credentials, certifications, licenses, college credit, or degrees
Curricula offer a progression from secondary to postsecondary education and/or employment (including attainment of an industry-recognized credential or apprenticeship), and from community college to bachelor's degree programs
Curricula allow students to learn and demonstrate academic, technical, and employability skills
Curricula include differentiated supports and modifications to meet the needs of diverse learners
Each CTE student has a written career and academic plan in place that includes the: <ul style="list-style-type: none"> • required courses to complete a POS and graduate • required assessments to earn a certification, license, credential, or degree • required academic assessments to graduate • timeline to take courses, assessments, and complete career-based learning experiences.
All students, regardless of race, color, national origin, sex, or disability, have equitable access to high-quality CTE programs as required by Code of Maryland Regulation 13A.04.02.04
Approved POSs are guided by Local Advisory Councils and Program Advisory Committees according to the CTE Local Advisory Council and Program Advisory Committee Policies and Procedures (COMAR EA Title 21. Sec.101)
All CTE POS adhere to CTE Development Standards, which are required by Code of Maryland Regulations 13A.04.02.03
All programs meet the definitions for high-skill, high-wage, in-demand occupations

QUALITY
The site achieves or consistently makes progress towards local targets established for state and federal core indicators of performance
POS are delivered by teachers who meet state requirements to teach content at the secondary level
CTE POS are delivered by teachers who earned a minimum of effective on their teacher evaluation as defined by Code of Maryland Regulation 13A.07.09 within three years
Each CTE POS meets all the requirements of the MSDE evaluation criteria found in the Policies and Procedures for the Development and Continuous Improvement of CTE Programs of Study (page 45).

QUALITY
All students, including students in special populations, are offered the opportunity to: <ul style="list-style-type: none">• Participate in at least one career-based learning experience (e.g., work-based learning, internship, apprenticeship, etc.)• Earn college credit and/or industry credentials• Participate in CTSOs
Professional learning opportunities, informed by data, are provided for administrators, teachers, faculty, counselors and support personnel to improve student learning outcomes. All secondary professional learning must be guided by the Maryland-endorsed National Learning Standards
Local and state annual data-reporting requirements are met, and reviews conducted of all annual Program Quality Index reports to inform improvement
Human resources are included in the recruitment process to ensure a diverse CTE teacher and faculty member candidate pool
Metrics are used to ensure that CTE teacher and faculty member recruitment strategies are successful
Teacher retention rates are reviewed annually, for the most recent 3 years, with data used to identify the top three contributing factors to CTE teacher and faculty member turnover

Assembling a Stakeholder Team

Assemble a diverse stakeholder team to assist you in conducting your CLNA. Representation in the listed categories is required by federal statute, except where indicated. While Perkins V requires more than one representative for each group (with an exception for CTE coordinators and data analysts), it is permissible for one person to fulfill up to two roles.

STAKEHOLDER TEAM COORDINATOR

[This is the individual responsible for planning and holding stakeholder meetings and completing CLNA]

Name	Dr. Jean-Paul Cadet
Organization	Prince George's County Public Schools
Title	Director
Email	jeanpaul.cadet@pgcps.org

STAKEHOLDER TEAM MEMBERS

When Selecting Stakeholders, consider:

- Recruit individuals who are knowledgeable about CTE at your site and influential in the field.
- Ensure that members understand the time commitment and can attend all scheduled meetings.
- Perkins V requires *more than one representative for each group* (with an exception for the coordinators and data analyst). Members may not represent more than two stakeholder groups.
- If you are unable to recruit a member to fulfill a required role you should keep a record of your outreach efforts to demonstrate you acted in good faith.

Stakeholder Team Responsibilities

- Review Maryland Department of Labor employment and projections data, district student participation and performance data, and educator support efforts to identify priority areas for improvement.
- Ensure that program offerings are aligned to local, regional, and/or state employment priorities.
- Help to communicate the importance of delivering high-quality CTE POS in your site and champion local efforts to achieve improvement goals.
- Meet on a quarterly basis to track your progress in improving CTE programming and make annual updates to this needs assessment.

Note that stakeholder team meetings may be held in person, virtually, or using a hybrid approach. If scheduling conflicts make holding a full team meeting impractical, stakeholders may meet in

subgroups to review data and consider strategies to strengthen programming. Ultimately, all stakeholders should contribute to identifying challenges and formulating solutions, and publicly support your findings.

Stakeholder Team Roster

SECONDARY

Role	Name	Title	Affiliation
Administration (e.g., principal, assistant principal)	Dr. Michael Gilchrist	School Principal	PGCPS
	Dr. Denice Nabinett	Assistant Principal	PGCPS
Professional career or academic counselor	Karla Laney	Career Support Coordinator	PGCPS
	Doreen Hogans	Supervisor - Professional School Counseling	PGCPS
Teachers	Neyla Rivera	ECE/CDA Instructor	PGCPS
	Dr. Marilyn Fitzpatrick	IT/CS Instructor	PGCPS
	Kenneth Stewart	Teacher HVAC	PGCPS
Instructional Support and Paraprofessionals	Regina Spruill	Instructional Specialist	PGCPS
	Danielle Carter	Instructional Specialist	PGCPS

(Psychologists, Social Workers, etc.)	Linda Sue Johnson	Paraprofessional	PGCPS

POSTSECONDARY

Role	Name	Title	Affiliation
Administration (e.g., dean, division chair)	Adrienne Washington	Perkins Administrator	PGCC
	Dr. LaLinda Street	Professor of Criminal Justice & Law; Faculty Success Coach	PGCC
	Clayton Railey	Provost	PGCC
Faculty	Lundi Carter	Academic Advisor	PGCC
	Nicole Stubbs	Associate VP for Teaching Learning & Student Success	PGCC

WORKFORCE

Role	Name	Title	Affiliation
Local Workforce Development board member	Walter Simmons	President & CEO	Employ Prince George's
	Shauna Davis	Director, Board Administration	Employ Prince George's
*Regional Economic Development organization member	Pending	Pending	Pending
Local business & industry representative	Brian Smith	Executive Director	EduSerc
	Chris Biondi	JATC Director	Plumbers, Local 5

OTHER

Role	Name	Title	Affiliation
Parent or caretaker	September Smith	Parent	PGCPS
Student	Stori Green	Student	PGCPS
Representative of Special Populations	Doralie Palamos	Assistant Supervisor, Secondary Transition Office	PGCPS
Out-of-School youth / unhoused youth / corrections	Tisa Holley	Director of Student Services	PGCPS

* Not required under Perkins V but recommended to include.

Component A: Labor Market Alignment

OVERVIEW

Career programming in Maryland must address the economic and workforce development needs of the state and align to high-skill, high-wage, and/or in-demand (HS/HW/ID) careers. These are defined as:

High-Skill — Careers that: (1) require previous work-related skills, knowledge, or experience of one or more years; (2) have a Specific Vocational Preparation (SVP) rating of at least six as defined by [O*Net](#); (3) require state or federal licensing or industry-recognized certification; or (4). require a recognized postsecondary credential or degree.

High-Wage — Careers that exceed the state average annual wage of \$69,750 in 2022.

In-Demand — Careers with a growth rate over ten years of at least 7% or a two-year occupational projected growth of 2.5%.

The Division of Career and College Readiness has evaluated all secondary and postsecondary State and Local approved POS against these HS/HW/ID criteria. Ideally, your CTE POS will meet all three of the criteria, or at least one to qualify for funding. You may access additional information on these programs at the [Maryland CTE Data website](#). The Maryland Department of Labor has also developed [Long Term Occupational Projections](#) thru 2030, which can help you to identify high demand careers and the education and job training necessary to secure them.

ACTIVITY A.1 : TAKING STOCK

The following table details the CTE POS offered at your district in the 2022-23 school year, their alignment with high-skill, high-wage, and in-demand careers, and the relative proportion of students concentrating in each area. Although it is not *required* that each POS meet the criteria for high-skill, high-wage, *and* in-demand, it should be the goal of each POS to do so.

Note: Prior to sharing this table with your stakeholder team, you will need to suppress numbers and percentages in cell that do not include the minimum number of students required to protect student confidentiality. Maryland state policy is to suppress data for cells or percentages that are based on fewer than 35 students. Please consult your district policies to determine which data cells should be suppressed and how this information should be communicated (e.g., by entering 'LOW N' or '<35

Program	Alignment to current statewide industries (enter ✓)			Number of CTE participants 2022-23	Percent of all CTE Participants 2022-23
	HS	HW	ID		
Example				###	100%
ACADEMY OF FINANCE	✓	✓	✓	214	3.05%
ACCOUNTING	✓	✓	✓	21	0.30%
ANIMAL SCIENCE	✓	✓	✓	52	0.74%
AUTO BODY REPAIR	✓	✓		7	0.10%
AUTO MECHANIC/TECH	✓	✓	✓	24	0.34%
CULINARY ARTS - BAKING		✓	✓	60	0.82%
BARBERING		✓	✓	29	0.41%
BUSINESS ADMINISTRATIVE SERVICES	✓	✓		187	2.67%

BUSINESS MANAGEMENT	✓	✓	✓	243	3.47%
BUSINESS MARKETING (3DE)	✓	✓	✓	251	3.58%
CARPENTRY	✓	✓		31	0.44%
COMPUTER NETWORKING-CISCO	✓	✓	✓	153	2.18%
COMPUTER SCIENCE - INFORMATION SYSTEMS	✓	✓	✓	232	3.31%
CONSTRUCTION DESIGN AND MANAGEMENT	✓	✓	✓	48	0.69%
CONSTRUCTION MAINTENANCE - HVAC		✓	✓	17	0.24%
COSMETOLOGY		✓	✓	153	2.18%
CRIMINAL JUSTICE AND LAW ENFORCEMENT	✓	✓	✓	385	5.50%
CULINARY ARTS - COOKING		✓	✓	109	1.56%
EARLY CHILDHOOD EDUCATION/CDA	✓	✓	✓	186	2.66%
EARLY CHILDHOOD EDUCATION/CHILD CARE			✓	125	1.78%
ELECTRICIAN	✓	✓	✓	45	0.64%

FIRE SCIENCE		✓	✓	37	0.53%
FOOD & BEVERAGE MANAGEMENT	✓	✓	✓	258	3.68%
HEALTH PROFESSIONS - MEDICAL ASSISTANT		✓	✓	126	1.80%
HEALTH PROFESSIONS - NURSING ASSISTANT		✓	✓	100	1.43%
HEALTH PROFESSIONS - PHARMACY TECHNICIAN		✓	✓	56	0.80%
HOMELAND SECURITY AND EMERGENCY PREPAREDNESS	✓	✓	✓	274	3.91%
INTECS - INTEGRATING TECHNOLOGY, ENGINEERING, AND COMPUTER SCIENCE (new SY22)	✓	✓	✓	32	0.46%
INTERACTIVE MEDIA PRODUCTION (new SY22)	✓	✓	✓	85	1.21%
JUNIOR RESERVE OFFICERS' TRAINING CORPS - AIR FORCE		✓		1550	22.13%
JUNIOR RESERVE OFFICERS' TRAINING CORPS - ARMY		✓		465	6.64%
JUNIOR RESERVE OFFICERS' TRAINING CORPS - NAVY		✓		531	7.58%
MASONRY	✓	✓	✓	9	0.13%
NATURAL RESOURCES	✓	✓	✓	125	1.78%

ORACLE ACADEMY - DATABASE	✓	✓	✓	62	0.89%
ORACLE ACADEMY - JAVA	✓	✓	✓	132	1.88%
PLUMBING	✓	✓	✓	0	0.00%
PROJECT LEAD THE WAY - BIOMEDICAL SCIENCES	✓	✓	✓	146	2.08%
PROJECT LEAD THE WAY - ENGINEERING	✓	✓	✓	366	5.22%
PUBLIC SAFETY ACADEMY		✓	✓	21	0.30%
TEACHER ACADEMY OF MARYLAND	✓	✓	✓	118	1.68%

Are you planning on adding any new or phasing out any existing POS in the upcoming year? If so, which CTE POS(s) are you considering and why?

Program/CIP Code	Adding or deleting	Rationale for change
Homeland Security and Preparedness (Criminal Justice and Law Enforcement) CIP 430350	Deleting- Laurel HS	Chronic low enrollment and lack of student interest at Laurel HS
Food and Beverage Management CIP 520955	Deleting - Parkdale HS	Chronic low enrollment and lack of student interest at Parkdale HS
200201 - Early Childhood Education /	Deleting - Friendly HS, Henry. A. Wise, Jr. HS	No certified teacher for three years at Friendly HS, replacing Childcare with CDA at Wise HS.

Childcare		

ACTIVITY A.2: ASSESSING PROGRAM ALIGNMENT TO LABOR MARKET AND INDUSTRY NEEDS

Based on a review of the CTE POS data for high-skill, high-demand, and in-demand standards, rate each statement as a strength or area for improvement. Provide an explanation for any answer with which you identify as an 'area for improvement.'

	Meets	Area for Improvement	Explanation
Our CTE stakeholders review workforce and economic data to assess current and anticipate future local employment needs in HS/HW/ID industries.	✓		Each program and cluster has a PAC that reviews the information and provides input for program improvement and advancement.
Processes are in place to identify and expand high school level registered apprenticeship opportunities.	✓		While the LEA has processes in place, and DoL does as well, employers are not offering opportunities.
Processes are in place to update or phase out CTE POS that do not align with HS/HW/ID industries.		✓	We are currently working on our 5-Year Plan that will evaluate HS/HW/ID POS that do not align and will phase out those programs and/or replace/add TSAs that align to IRCs required under Blueprint to increase the rigor needed to meet the HS/HW/ID criteria.
A majority of our students are concentrating in POS aligned to HS/HW/ID industries.	✓		Twenty-four of the forty programs are all HS/HW/ID aligned. Thirteen of the forty are at least two of the three requirements. Overall, 93% of all programs meet at least two criteria.
Processes are in place to recruit business and industry stakeholders to participate on Program Advisory Committees.	✓		Plans are in place for our Business Liaison to recruit business entities for collaboration and partnership.

ACTIVITY A.3: REFLECTION

Based on your responses in this component of the needs assessment guide, consider the following questions:

1. What is your rationale for offering programming that is not fully aligned with high wage, high skill, and in-demand criteria you rated in Activity 1.1)?

When considering the rationale for offering programming that may not be fully aligned with high-wage, high-skill, and in-demand criteria, it's crucial to recognize that Career and Technical Education (CTE) encompasses a broad spectrum of career pathways to cater to diverse student interests and aptitudes. While prioritizing alignment with high-wage, high-skill, and in-demand sectors is paramount for preparing students for successful careers, it's also essential to acknowledge the multifaceted needs, goals, and interests of students within our educational community.

Holistic Student Development: CTE programs aim to foster holistic student development by providing opportunities for exploration and skill development across various industries. While some programs may not directly align with high-wage sectors, they offer valuable learning experiences, including essential technical skills, problem-solving abilities, teamwork, and communication skills, which are transferable across different career pathways.

Meeting Local Needs: Local workforce needs and economic priorities and levels of engagement also drive the decisions for diverse programming. While certain industries may not be in demand at a state level, locally they are. The characterization of high-wage can also vary by micro-economy. Offering a range of programs ensures that students have access to education and training that align with both local and national workforce needs.

Student Interest and Engagement: CTE programs should cater to student interests and passions to maximize engagement and retention. While certain industries may not offer high-wage opportunities, they may align with student interests or career aspirations. Providing a variety of programs allows students to explore different career pathways, discover their interests, and make informed decisions about their future careers.

Building a Diverse Workforce: A comprehensive CTE program promotes diversity and inclusivity in the workforce by offering pathways that appeal to students from diverse backgrounds and interests. By providing opportunities in various fields, including those that may not be traditionally viewed as high-wage, we contribute to building a workforce that reflects the diversity of our communities and addresses skill gaps across different sectors.

Pathways to Advanced Education: CTE programs serve as pathways to both immediate employment and further education. Even if certain programs do not directly align with high-wage sectors, they may provide foundational skills and knowledge that enable students to pursue advanced education and training in related fields, eventually leading to high-wage career opportunities.

While alignment with high-wage, high-skill, and in-demand sectors is a crucial consideration in CTE program development, offering a diverse range of programming ensures that we meet the diverse needs and aspirations of our students, support local workforce development efforts, foster student engagement, and contribute to building a skilled and inclusive workforce for the future.

2. What are the top five priorities you will address in the coming year to update or phase out misaligned CTE programs and/or expand student participation in CTE programming aligned with HW/HS/ID careers?

In the upcoming year, our focus at Prince George's County Public Schools will be on strategic initiatives aimed at updating or phasing out misaligned Career and Technical Education (CTE) programs while simultaneously expanding student participation in CTE programming aligned with High-Wage, High-Skill, and In-Demand (HW/HS/ID) careers. Our priorities include:

Goal 1 Revolutionary and Evolutionary Programming: Having conducted a comprehensive assessment of existing CTE programs to evaluate their alignment with HW/HS/ID career sectors identified within our local workforce and in accordance with legislative mandates, such as the Maryland Blueprint, we will begin our phase out/updating/maintaining plan for all CTE programs of study. As required in Perkins legislation, our plans will emphasize increasing equity and access to all students, thereby ensuring engagement in rigorous CTE pathways and meaningful career outcomes. One focus will be on providing equitable access to programs that offer Industry-Recognized Credentials (IRCs) and pathways to high-demand careers and apprenticeship opportunities.

Goal 2 CTE Staffing Realignment: As part of our efforts to ensure the effectiveness and efficiency of our CTE programs, we will also explore staffing realignment strategies. This may involve reallocating FTEs to support areas of high demand or restructuring staffing models to better align with programmatic needs. By optimizing our staffing resources, we can enhance the quality of instruction, support student success, and promote the sustainability of our CTE initiatives.

Goal 3 Professional Development for Educators: We recognize the importance of equipping educators with the knowledge and skills necessary to deliver high-quality CTE instruction. Therefore, we will continue to invest in professional development initiatives focused on industry relevancy, instructional best practices, and technology integration, ensuring that educators are prepared to effectively deliver rigorous and relevant instruction aligned with HW/HS/ID criteria. By providing educators with ongoing support and training, we promote equity and excellence in CTE programming, ensuring that all students have access to high-quality educational experiences.

Goal 4 Student Recruitment and Outreach: To further expand student participation in aligned CTE programs, we will continue implementation of targeted recruitment and outreach efforts to raise awareness of available opportunities. By actively engaging students and families through career exploration events and partnerships with feeder schools, we will ensure that all students have access to pathways that lead to rewarding and sustainable careers. These efforts are essential for promoting equity and access in CTE programming, ensuring that every student has the opportunity to pursue their interests and achieve their career goals.

Goal 5 Fiduciary Responsibility: In line with our commitment to fiduciary responsibility, we will maintain thorough inventory processes and clear procedures that align with programmatic needs. This includes ensuring that resources are allocated efficiently and effectively to support the introduction of new pathways aligned with HW/HS/ID industries. By carefully managing our resources, we can maximize opportunities for student success and ensure that our CTE programs remain responsive to workforce demands and Blueprint mandates..

By prioritizing these initiatives and leveraging the data provided, we are confident that we can effectively update our CTE offerings, phase out misaligned programs, and expand student participation in programs aligned with HW/HS/ID careers, ultimately supporting the success and prosperity of our students in the workforce and beyond, in alignment with the goals of the Maryland Blueprint Law.

Component B: Student Participation and Persistence

OVERVIEW

To ensure that all students have equitable access to CTE programming, MSDE encourages districts to assess rates of student participation and persistence in CTE overall, as well as within each POS offered for the state approved Career Clusters. Enrollments also should be tracked using the disaggregates for student gender, race-ethnicity, and special population status detailed in Perkins V.

ACTIVITY B.1: TAKING STOCK

The following table asks you to enter the number and percentage of 2023 high school graduates statewide and in your district who participated in CTE coursework and persisted to achieve concentrator status in CTE programming, disaggregated by selected student demographics.

Please use the 2023 statewide graduate data and district heat maps, which will be provided by MSDE, to complete the requested information. If you have any questions regarding the data entry, please contact MSDE staff.

Once you have entered the data, review the information to determine whether there are any concerning gaps in student participation and/or persistence. Note that small numbers of students may have large impacts on your participation and concentrator status rates; consequently, use care when interpreting data with cell sizes of less than 10 students.

Note: Prior to sharing this table with your stakeholder team, you will need to suppress numbers and percentages in cell that do not include the minimum number of students required to protect student confidentiality. Maryland state policy is to suppress data for cells or percentages that are based on fewer than 35 students. Please consult your district policies to determine which data cells should be suppressed and how this information should be communicated (e.g., by entering 'LOW N' or '<35 students' in effected cells.

Student Group	2022 Graduates Statewide				2023 Graduates in Your District			
	Number	Percent	Percent participating in CTE	Percent of participants who achieved concentrator status	Number	Percent	Percent participating in CTE	Percent of participants who achieved concentrator status
All 2022(MSDE) or 2023 (PGCPS) Graduates	59,490		44.6%	29.81%	8070	84.9%	49.9%	20.36%
Gender								
Male	30,010	50.44%	53.15%	55.6%	3950	41.56%	24.21%	9.9%
Female	29,479	50.56%	46.85%	44.36%	4118	43.32%	25.69%	10.46%
Race-ethnicity								
American Indian	111	.18%	.18%	.16%	410	4.31%	2.4%	.84%
Asian	4,455	7.4%	7.4%	8.03%	236	2.48%	1.15%	.32%
Black	18,783	31.5%	34.47%	29.32%	4934	51.91%	30.63%	13.66%
Hispanic	9,270	15.58%	15.26%	12.77%	2613	27.49%	16.61%	5.58%
Multi-race	2,487	4.2%	4.1%	4.3%	228	2.4%	1.41%	.63%
White	22,685	38.13%	39.48%	45.34%	2061	21.68%	12.91%	4.37%
Special Populations								
Economically disadvantaged	N/A	N/A	34.9%	32.47%	4840	50.92%	31.43%	12.15%
English learners	N/A	N/A	4.3%	2.5%	782	8.23%	4.19%	.76%
Individuals with disabilities	N/A	N/A	11.3%	10.24%	785	8.26%	4.35%	1.80%
Nontraditional fields	N/A	N/A	29.9%	15.18%	N/A	N/A	N/A	N/A
Single parents	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Out of workforce	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unhoused Individuals	N/A	N/A	N/A	N/A	40	.42%	.26%	.12%
Youth in foster care	N/A	N/A	N/A	N/A	13	.14%	.06%	.02%
Youth with parent in military	N/A	N/A	N/A	N/A	18	.19%	.09%	.03%
Migrant students	N/A	N/A	N/A	N/A	0	0%	0%	0%

Note that since special population status is not mutually exclusive (i.e., a student may belong to more than one category), these data may not sum to 100%.

ACTIVITY B.2: ASSESSING YOUR PROGRAM

Based on a review of the overall CTE program data—relative to the state and across student groups—rate each statement as a strength or area for improvement. Provide an explanation for any answer with which you identify as an ‘area for improvement.’

	Meets	Area for Improvement	Explanation
Our district ensures all students—irrespective of gender, race, or special population status—are provided unbiased, inclusive, and non-discriminatory information about CTE courses and POS.	✓		
Our district has processes in place to recruit students traditionally underrepresented in CTE to improve diversity in CTE POS	✓		
Processes are in place to ensure that students traditionally underrepresented in CTE have options to <u>enroll</u> in CTE POS.	✓		
Processes are in place to ensure that students traditionally underrepresented in CTE <u>persist</u> in CTE POS once enrolled.		✓	We are committed to enhancing our processes to ensure that students who have been traditionally underrepresented in Career and Technical Education (CTE) programs not only enroll but also persist and succeed in their chosen CTE Programs of Study (POS). Our goal is to create a supportive and inclusive environment that promotes the retention and completion of these students in CTE pathways.
Processes are in place to ensure that all eligible students have equitable access to career-based learning experiences.	✓		
Career guidance and advisement services are	✓		

	Meets	Area for Improvement	Explanation
provided to student prior to enrolling in a CTE POS.			
All students have access to career planning and support services to help them successfully transition to advanced education and/or the workforce	✓		

ACTIVITY B.3: REFLECTION

Based on your review of your data and responses in Activity B.2, consider the following questions:

- Are there any student groups in your district that have concerning gaps in their CTE participation or persistence rates? If so, which groups are underperforming?

While Individuals with Disabilities (-59%) and English Learners (-83%) represent a very small portion of the overall CTE student population, these demographics experienced the greatest decline from participant to concentrator. Additionally, students in the Hispanic (-67%), Economically Disadvantaged (-62%) and Black (-57%) demographics experienced a similar decline.

- What are the top five priorities you will address in the coming year to expand student participation in CTE programming and reduce participation and/or persistence gaps among students? [Note: At least one priority area you identify should address the needs of gender, race-ethnicity, or special population groups.]
 - Priority #1: Integrate CTE and Academic Curricula to reinforce skills and strategies taught in core content areas within the context of the CTE classroom***
 - Priority #2: Increase teacher proficiency through professional development opportunities in literacy and numeracy***
 - Priority #3: Increase enrollment and retention of Students with Disabilities through targeted recruitment and provision of tailored supports and accommodations.***
 - Priority #4: Improve participant persistence by providing additional support for Economically Disadvantaged students and other special populations through the expansion of Career and Technical Student Organizations as an additional layer of support.***
 - Priority #5: Improve performance on Technical Skills Assessments by ensuring that all students have access to necessary supports (i.e., targeted tutoring, tutor mentors, etc.) and addressing any other barriers that may prevent persistence from marginalized groups.***

ACTIVITY B.4: CAREER CLUSTER PARTICIPATION AND PERSISTENCE

Student participation and persistence rates may differ across Career Clusters. The following table asks you to enter the number and percentage of 2023 high school graduates in your district who participated in CTE coursework and persisted to achieve concentrator status in a given Career Cluster,

disaggregated by selected student demographics. Create a separate table for each CTE Career Cluster offered.

Work with your district data team to find the requested information. You may contact staff at MSDE if you have questions about the data to be entered.

Note: Prior to sharing this table with your stakeholder team, you will need to suppress numbers and percentages in cell that do not include the minimum number of students required to protect student confidentiality. Maryland state policy is to suppress data for cells or percentages that are based on fewer than 35 students. Please consult your district policies to determine which data cells should be suppressed and how this information should be communicated (e.g., by entering 'LOW N' or '<35

Career Cluster Name: Construction and Development

PROGRAMS OF STUDY WITHIN CLUSTER: ELECTRICAL, CARPENTRY, HEATING, VENTILATION AND AIR CONDITIONING, MASONRY, PLUMBING, CONSTRUCTION DESIGN MANAGEMENT

Name	Number Program Graduates 2023
ELECTRICAL	15
CARPENTRY	16
HEATING, VENTILATION AND AIR CONDITIONING	5
MASONRY	2
PLUMBING	0
CONSTRUCTION DESIGN MANAGEMENT	10
TOTAL	48

Career Cluster Name: Business Management and Finance

PROGRAMS OF STUDY WITHIN CLUSTER: ACCOUNTING, BUSINESS ADMINISTRATIVE SERVICES, BUSINESS MANAGEMENT, ACADEMY OF FINANCE, BUSINESS MARKETING

ACCOUNTING	10
BUSINESS ADMINISTRATIVE SERVICES	70
BUSINESS MANAGEMENT	101
ACADEMY OF FINANCE	80
TOTAL	261

Career Cluster Name: Consumer Sciences, Hospitality, and Tourism

PROGRAMS OF STUDY WITHIN CLUSTER: BARBERING, COSMETOLOGY, CULINARY ARTS, FOOD AND BEVERAGES MANAGEMENT (PROSTART)

BARBERING	9
COSMETOLOGY	58
CULINARY ARTS	101
FOOD AND BEVERAGES MANAGEMENT (PROSTART)	111
TOTAL	279

Career Cluster Name: Manufacturing, Engineering, and Technology

PROGRAMS OF STUDY WITHIN CLUSTER: PRE-ENGINEERING

PRE-ENGINEERING	62
<u>TOTAL</u>	62

Career Cluster Name: Environmental, Agriculture, and Natural Resources**PROGRAMS OF STUDY WITHIN CLUSTER: ANIMAL SCIENCE, NATURAL RESOURCES, INTERACTIVE MEDIA**

ANIMAL SCIENCE	26
NATURAL RESOURCES	35
<u>TOTAL</u>	61

Career Cluster Name: Arts, Media, and Communication**PROGRAMS OF STUDY WITHIN CLUSTER: INTERACTIVE MEDIA PRODUCTIONS**

INTERACTIVE MEDIA PRODUCTIONS	10
<u>TOTAL</u>	5

Career Cluster Name: Health and Biosciences

PROGRAMS OF STUDY WITHIN CLUSTER: BIOMEDICAL SCIENCE/PLTW, HEALTH PROFESSION (CNA), HEALTH PROFESSION (CCMA), HEALTH PROFESSION (PHARM TECH)

BIOMEDICAL SCIENCE/PLTW	46
HEALTH PROFESSIONS (CNA)	49
HEALTH PROFESSIONS (CCMA)	30
HEALTH PROFESSIONS (PHARM TECH)	17
<u>TOTAL</u>	142

Career Cluster Name: Transportation Technologies**PROGRAMS OF STUDY WITHIN CLUSTER: AUTO BODY, AUTOMOTIVE TECHNICIAN**

AUTO BODY	7
AUTOMOTIVE TECHNICIAN	16
<u>TOTAL</u>	23

Career Cluster Name: Information Technologies**PROGRAMS OF STUDY WITHIN CLUSTER: IT NETWORKING ACADEMY (CISCO), COMPUTER INFORMATION SYSTEMS, MOBILE APPLICATIONS AND SOFTWARE DEVELOPMENT, ORACLE ACADEMY (JAVA), ORACLE ACADEMY (DATABASE)**

IT NETWORKING ACADEMY (CISCO)	117
COMPUTER INFORMATION SYSTEMS	70
MOBILE APPLICATIONS AND SOFTWARE DEVELOPMENT	20
ORACLE ACADEMY (JAVA)	55
ORACLE ACADEMY (DATABASE)	35
<u>TOTAL</u>	297

Career Cluster Name: Human Resources Services

PROGRAMS OF STUDY WITHIN CLUSTER: EARLY CHILDHOOD EDUCATION, TEACHER ACADEMY, FIREFIGHTER NAD EMS, HOMELAND SECURITY SCIENCES, CRIMINAL JUSTICE AND LAW ENFORCEMENT, JROTC -ARMY JROTC NAVY, JROTC - AIR FORCE

EARLY CHILDHOOD EDUCATION	51
TEACHER ACADEMY	15
FIREFIGHTER AND EMS	19
HOMELAND SECURITY SCIENCES	48
CRIMINAL JUSTICE AND LAW ENFORCEMENT	42
<u>JROTC</u>	324
	499

CLUSTER-LEVEL DATA - CONDEV- CONST AND DEV CLUST

Student Group	Participation Rate			Persistence Rate
	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	48		100%
Gender				
Male	48.94%	43.80%	5.14%	
Female	51.02%	56.20%	-5.18%	
Race-ethnicity				
American Indian	5%	2%	3%	
Asian	3%	2%	1%	
Black	61.14%	59.37%	1.77%	
Hispanic	32.37%	36.31%	-3.94%	
Multi-race	3%	2%	1%	
White	25.54%	34.87%	-9.33%	
Special Populations				
Economically disadvantaged	59.98%	54.47%	5.51%	
English learners	9.6%	9%	.6%	
Individuals with disabilities	9.7%	5%	4.2%	
Nontraditional fields	N/A	12.39%	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	.4%	.5%	-.1%	
Youth in foster care	.1%	.2%	-.1%	
Youth with parent in military	.2%	1.7%	1.5%	
Migrant students	0%	0%	0%	

CLUSTER-LEVEL DATA - TRTECH- TRANSPORT TECH CLUST

Student Group	Participation Rate		Persistence Rate
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	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	23		
Gender				
Male	48.94%	90.19%	-41.25%	
Female	51.02%	9.8%	41.40%	
Race-ethnicity				
American Indian	5%	3.92%	1.08%	
Asian	3%	3.92%	-.92%	
Black	61.14%	45.09%	16.05%	
Hispanic	32.37%	50.98%	-18.61%	
Multi-race	3%	0.00	3%	
White	25.54%	45.09%	-19.55%	
Special Populations				
Economically disadvantaged	59.98%	64.7%	-4.72%	
English learners	9.6%	11.76%	-2.16%	
Individuals with disabilities	9.7%	9.8%	-0.1%	
Nontraditional fields	N/A	N/A	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	.4%	11.76%	-11.36%	
Youth in foster care	.1%	0%	-.1%	
Youth with parent in military	.2%	0%	-.2%	
Migrant students	0%	0%	0	

CLUSTER-LEVEL DATA - BUSFIN- BUS & FIN CLUST

Student Group	Participation Rate			Persistence Rate
	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	261		
Gender				
Male	48.94%	49.38%	-0.44%	
Female	51.02%	50.53%	.49%	
Race-ethnicity				
American Indian	5%	1.46%	3.54%	
Asian	3%	1.30%	1.70%	
Black	61.14%	74.85%	-13.71%	
Hispanic	32.37%	22.2%	10.17%	
Multi-race	3%	.734%	2.26%	
White	25.54%	20.81%	4.72%	
Special Populations				
Economically disadvantaged	59.98%	58.85%	1.13%	
English learners	9.6%	5.3%	4.3%	
Individuals with disabilities	9.7%	9.5%	.2%	
Nontraditional fields	N/A	N/A	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	.4%	6.2%	-5.8%	
Youth in foster care	.1%	.163%	-.162%	
Youth with parent in military	.2%	.734%	-.732%	
Migrant students	0%	0%	0%	

CLUSTER-LEVEL DATA - COSEHT- CSHT CLUST

Student Group	Participation Rate			Persistence Rate
	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	279		
Gender				
Male	48.94%	28.81%	20.13%	
Female	51.02%	71.18%	-20.16%	
Race-ethnicity				
American Indian	5%	.924%	4.07%	
Asian	3%	1.84%	1.16%	
Black	61.14%	69%	-7.86%	
Hispanic	32.37%	26.96%	5.41%	
Multi-race	3%	1.54%	1.46%	
White	25.54%	26.34%	-.8%	
Special Populations				
Economically disadvantaged	59.98%	54.85%	5.13%	
English learners	9.6%	4.62%	5%	
Individuals with disabilities	9.8%	4.46%	4.34%	
Nontraditional fields	N/A	N/A	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	.4%	4.31%	-4.306%	
Youth in foster care	.1%	.154%	-.153%	

Youth with parent in military	.2%	.924%	-.922%	
Migrant students	0%	0%	0%	

CLUSTER-LEVEL DATA - ENGSCI- MET CLUST

Student Group	Participation Rate			Persistence Rate
	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	62		
Gender				
Male	48.94%	54.95%	-6.01%	
Female	51.02%	45%	6.01%	
Race-ethnicity				
American Indian	5%	1.5%	3.5%	
Asian	3%	2.7%	.3%	
Black	61.14%	63.36%	-2.22%	
Hispanic	32.37%	30.33%	2.04%	
Multi-race	3%	1.5%	1.5%	
White	25.54%	30.93%	-5.39%	
Special Populations				
Economically disadvantaged	59.98%	59.15%	.84%	
English learners	9.6%	4.5%	5.1%	
Individuals with disabilities	9.8%	9%	.8%	
Nontraditional fields	N/A	N/A	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	

Unhoused Individuals	.4%	3.6%	-3.596%	
Youth in foster care	.1%	0%	0%	
Youth with parent in military	.2%	6%	-5.98%	
Migrant students	0%	0%	0%	

CLUSTER-LEVEL DATA - ENAGNR- EANR CLUST

Student Group	Participation Rate			Persistence Rate
	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	61		
Gender				
Male	48.94%	37.69%	11.25%	
Female	51.02%	62.3%	-11.28%	
Race-ethnicity				
American Indian	5%	1.53%	3.47%	
Asian	3%	4.61%	-4.58%	
Black	61.14%	56.15%	4.99%	
Hispanic	32.37%	39.23%	-6.86%	
Multi-race	3%	.769%	2.231%	
White	25.54%	36.92%	-11.38%	
Special Populations				
Economically disadvantaged	59.98%	60%	.02%	
English learners	9.6%	10%	-.4%	
Individuals with disabilities	9.8%	4.61%	5.19%	

Nontraditional fields	N/A	N/A	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	.4%	3.07%	-3.066%	
Youth in foster care	.1%	0.00	0%	
Youth with parent in military	.2%	.769%	-.569%	
Migrant students	0%	0%	0%	

CLUSTER-LEVEL DATA - ARMECO- AMC CLUST

Student Group	Participation Rate			Persistence Rate
	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	5		
Gender				
Male	48.94%	56.8%	-7.86%	
Female	51.02%	43.11%	7.91%	
Race-ethnicity				
American Indian	5%	0.00%	5%	
Asian	3%	2.7%	.3%	
Black	61.14%	63.3%	-2.16%	
Hispanic	32.37%	33.94%	-1.57%	
Multi-race	3%	0.00%	3%	
White	25.54%	33.02%	-7.48%	
Special Populations				
Economically	59.98%	55.96%	4.02%	

disadvantaged				
English learners	9.6%	5.5%	4.1%	
Individuals with disabilities	9.8%	3.6%	6.2%	
Nontraditional fields	N/A	N/A	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	.4%	3.6%	-3.2%	
Youth in foster care	.1%	0%	0%	
Youth with parent in military	.2%	0%	0%	
Migrant students	0%	0%	0%	

CLUSTER-LEVEL DATA - HEABIO- HEALTH & BIO CLUST

Student Group	Participation Rate			Persistence Rate
	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	142		
Gender				
Male	48.94%	13.19%	35.79%	
Female	51.02%	86.8%	-35.78%	
Race-ethnicity				
American Indian	5%	3.51%	1.49%	
Asian	3%	1.17%	1.83%	
Black	61.14%	62.17%	-1.03%	
Hispanic	32.37%	34.8%	-2.43%	
Multi-race	3%	.87%	2.13%	

White	25.54%	31.6%	-6.06%	
Special Populations				
Economically disadvantaged	59.98%	54.8%	5.18%	
English learners	9.6%	6.4%	3.2%	
Individuals with disabilities	9.8%	3.2%	6.6%	
Nontraditional fields	N/A	N/A	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	.4%	2.3%	-2.296%	
Youth in foster care	.1%	0.00	.1%	
Youth with parent in military	.2%	1.7%	-1.5%	
Migrant students	0%	0%	0	

CLUSTER-LEVEL DATA - INFOTC- IT CLUST

Student Group	Participation Rate			Persistence Rate
	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	297	7773	
Gender				
Male	48.94%	64.68%	-15.74%	
Female	51.02%	35.31%	15.71%	
Race-ethnicity				
American Indian	5%	.6%	4.4%	
Asian	3%	2.2%	.8%	

Black	61.14%	82.7%	-21.56%	
Hispanic	32.37%	12.5%	19.87	
Multi-race	3%	.6%	2.4%	
White	25.54%	13.1%	12.44%	
Special Populations				
Economically disadvantaged	59.98%	50.3%	9.68%	
English learners	9.6%	3.9%	5.7%	
Individuals with disabilities	9.8%	3.4%	6.4%	
Nontraditional fields	N/A	N/A	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	.4%	3.6%	3.2%	
Youth in foster care	.1%	0%	.9%	
Youth with parent in military	.2%	.4%	-.2%	
Migrant students	0%	0%	0%	

CLUSTER-LEVEL DATA -HURESE- HU RES SERV CLUST

Student Group	Participation Rate			Persistence Rate
	Percentage of 2023 District Graduates (A)	Percentage of 2023 District graduates participating in this cluster (B)	Percent difference (A-B)	2023 District graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	8,070	563	7571	
Gender				
Male	48.94%	51.85%	-2.91%	
Female	51.02%	48.15%	2.87%	

Race-ethnicity				
American Indian	5%	2.05%	2.95%	
Asian	3%	2.86%	.04%	
Black	61.14%	56.85%	4.29%	
Hispanic	32.37%	36.52%	-4.15%	
Multi-race	3%	1.8%	1.2%	
White	25.54%	35.63%	-10.09%	
Special Populations				
Economically disadvantaged	59.98%	62.06%	-2.08%	
English learners	9.6%	16.11%	-7.51%	
Individuals with disabilities	9.8%	9.2%	-9.1%	
Nontraditional fields	N/A	N/A	N/A	
Single parents	N/A	N/A	N/A	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	.4%	4.3%	-3.9%	
Youth in foster care	.1%	1.7%	-1.6%	
Youth with parent in military	.2%	6.3%	-6.1%	
Migrant students	0%	0%	0%	

Review your cluster-level data and consider the following questions:

1. In which clusters does it appear that students in your district are not participating at rates equivalent to their representation in the population? What factors might be affecting their decisions?

Gender and non-traditional participation rates for the CSHT, Transportation, EANR, Health & Biosciences, IT, and TAM clusters are lower than the district rate. Factors that might affect student decisions to enroll might include gender stereotypes about gender roles, family and peer influences, the need for early exposure to a wide range of career options. Additionally,

perception of fit into a particular career can make an impact on a student's decision regarding career choices.

Race and ethnicity participation rates for the TAM cluster are lower than the district rate. Factors that might affect student decisions to enroll might include that teaching salaries have been historically lower compared to other professions requiring similar levels of education. This can be a deterrent for many people of color who may need to support extended family.

2. In which clusters does it appear that all students participating are not persisting at equivalent rates? What factors might be affecting their decisions?

All students listed are concentrators and persisting at 100%.

3. How might student participation and persistence differ by program of study or cluster? Which programs of study or career clusters are under or over-performing?

The PGCPs CTE participation and persistence rate are the same because all of the CTE graduates earned their CTE completers.

4. What are the top five priorities you will address in the coming year to expand student participation in CTE programming and reduce participation and/or persistence gaps among students? *[Note: At least one priority area you identify should address the needs of gender, race-ethnicity, or special population groups.]*

Based on the provided data and the identified areas of underperformance, the top five priorities to address in the coming year to improve student performance outcomes are as follows:

Apprenticeship

Priority: Expand apprenticeship opportunities to increase student participation in CTE programming.

Action Plan: Develop partnerships with local businesses to create new apprenticeship positions, integrate apprenticeship programs into the curriculum, and promote these opportunities to students.

Supporting Students with Disabilities

Priority: Enhance support for students with disabilities to reduce participation and persistence gaps.

Action Plan: Implement individualized education plans (IEPs) for CTE students, provide additional resources and support staff, and offer professional development for teachers on inclusive teaching practices.

Career and Technical Student Organizations (CTSOs)

Priority: Increase involvement in CTSOs to promote leadership and technical skills among students.

Action Plan: Facilitate student access to CTSOs, provide funding for participation in competitions and events, and integrate CTSO activities into the CTE curriculum.

Improving Academic Proficiency in Reading/Language Arts

Priority: Enhance reading and language arts skills among CTE students.

Action Plan: Offer additional tutoring and literacy programs, integrate reading and writing components into CTE courses, and provide professional development for teachers on literacy instruction

Improving Academic Proficiency in Mathematics

Priority: Strengthen math skills among CTE students.

Action Plan: Implement targeted math intervention programs, provide after-school math support, and offer professional development for teachers on effective math instruction strategies.

These priorities will be pursued through a combination of targeted interventions, enhanced support services, professional development for educators, and strengthened partnerships with industry and community organizations to ensure all students have the opportunity to succeed and excel in their chosen career paths.

Component C: Program Performance

Federal law requires that you collect data on the performance of CTE concentrators. The accountability indicators cover a range of outcomes to help you assess whether students are making educational progress, graduating, and making successful transitions into advanced postsecondary education and training or employment. These include:

1S1: Four-year graduation rate: The percentage of CTE concentrators who graduate high school, as measured by the four-year adjusted cohort graduation rate used in ESSA

2S1: Academic proficiency in reading/language arts: The percentage of CTE concentrators achieving proficiency on the Districtwide high school reading/language arts assessment

2S1: Academic proficiency in mathematics: The percentage of CTE concentrators achieving proficiency on the Districtwide high school mathematics assessment

2S1: Academic proficiency in science: The percentage of CTE concentrators achieving proficiency on the Districtwide high school science assessment

3S1: Post-program placement: The percentage of CTE concentrators who are in postsecondary education or advanced training, military service, a national community service program, or employed in the second quarter after exiting from secondary education¹

4S1: Nontraditional program concentration: The percentage of CTE concentrators in CTE programs of study that lead to non-traditional fields

5S1: Attained Recognized Postsecondary credential: The percentage of CTE concentrators graduating from high school who met or exceeded proficiency on industry standards to attain a recognized postsecondary credential

5S4a: Technical Skill Attainment: The percentage of CTE concentrators graduating from high school who met state recognized CTE standards, including earning and industry-recognized credentials.

5S4b: Apprenticeship: The percentage of CTE concentrators graduating from high school who participated in an apprenticeship.

To establish performance expectations, MSDE has set performance targets for each indicator based on an analysis of statewide data. All providers are expected to achieve the performance targets established for each indicator. Moreover, to ensure that all students make progress, you are expected to monitor performance on an annual basis.

In the following table, use your District's heatmap to fill in your District's performance on the federal measures. On the heatmap, cells highlighted in green indicate your district met or exceeded the statewide performance level; yellow indicates your district performance did not meet the performance level but was within 90% of the target; and red indicates that your district did not meet the

¹ Note: this is a lagged indicator, meaning that data should be reported on graduates for the previous academic year. For example, you should report placement data for 2022 graduates in 2023 (i.e., outcomes achieved between October-December 2022).

performance level and was less than 90% of the target. Districts failing to achieve the state performance level are expected to develop a program improvement plan to bring them into compliance.

DISTRICT PERFORMANCE BY STUDENT GROUP

	Federal Accountability Indicator 2023 Graduates								
	1S1	2S1	2S2	2S3	3S1*	4S1	5S1	5S4a	5S4b
State Performance Target	89.97 %	52.3 %	48.00 %	0.00 %	76.50 %	28.72 %	78.41 %	78.41 %	0.00 %
District Performance	88%	44%	17%	9%	71%	39%	50.7%	50.7%	.71%
Gender									
Males	-3%	-3%	-1%	-1%	-2%	-20%	N/A	N/A	80%
Females	4%	3%	1%	1%	2%	18%	N/A	N/A	20%
Race-ethnicity									
American Indian	-18%	-19%	17%	-9%	-71%	-39%	N/A	N/A	10%
Asian	9%	21%	29%	24%	-3%	-10%	N/A	N/A	0%
Black	1%	0%	-3%	-1%	1%	2%	N/A	N/A	40%
Hispanic	-3%	-2%	2%	3%	0%	-4%	N/A	N/A	0%
Multi-race	-2%	4%	1%	-9%	-71%	3%	N/A	N/A	0%
White	4%	10%	12%	-9%	-71%	3%	N/A	N/A	50%

SPECIAL POPULATIONS

	Federal Accountability Indicator 2023 Graduates								
	1S1	2S1	2S2	2S3	3S1*	4S1	5S1	5S4a	5S4b
State Performance Target	89.97 %	52.3%	48.00 %	0.00%	76.50 %	28.72 %	78.41 %	78.41 %	0.00%
District Performance	88%	44%	17%	9%	71%	39%	50.7%	50.7%	.71%
Economically disadvantaged	-1%	-3%	-1%	0%	-2%	1%	N/A	N/A	N/A
English learners	-12%	-31%	-17%	-9%	-14%	-5%	N/A	N/A	0%
Individuals with disabilities	-9%	-33%	-17%	-9%	-20%	-3%	N/A	N/A	20%
Nontraditional fields	6%	10%	9%	18%	7%	61%	N/A	N/A	N/A
Single parents	-21%	-44%	-17%	-9%	-71%	61%	N/A	N/A	N/A
Out of workforce	-88%	-44%	-17%	-9%	-71%	-39%	N/A	N/A	N/A
Homeless individuals	-9%	1%	-2%	-9%	-71%	11%	N/A	N/A	0%
Youth in foster care	-38%	-44%	-17%	-9%	-71%	-39%	N/A	N/A	N/A
Youth with a parent in active military	-21%	6%	-17%	-9%	-71%	-39%	N/A	N/A	10%
Migrant students	0%	0%	0%	0%	0%	0%	N/A	N/A	0%

* Data for the 3S1 indicator reflect outcomes for 2022 graduates 6-months following their graduation.

ACTIVITY C.1: ASSESSING PROGRAM PERFORMANCE

	List
Looking at <i>overall performance</i> , on which indicators are you <u>substantially underperforming</u> * the district performance target?	2S1: Academic proficiency in mathematics; 5S1: Attained Recognized Postsecondary credential; 5S4a: Technical Skill Attainment
Looking at <i>overall performance</i> , on which indicators are you <u>substantially exceeding</u> the district performance target?	4S1: Nontraditional program concentration

* Substantially underperforming is defined as achieving an outcome that is less than 90% of the district performance target, and substantially over-performing is achieving an outcome that is more than 110% of the district performance target.

ACTIVITY C.2: DETERMINING ROOT CAUSES

9. For each indicator for which you are substantially underperforming the district performance target, identify the key factors that might affect student performance, including any disparities or gaps in performance by program. Ideally, these factors should be the primary drivers of the results that you see.
 - **2S1 (Academic proficiency in mathematics):** Resources and People - a portion of our CTE and core content teachers have a difficult time seeing how their curricula support one another.
 - **5S1 (Attained Recognized Postsecondary credential):** Policies, Procedures, and People - Through this process, it has been brought to our attention that there are internal issues with our data reporting systems. Additionally, CTE instructors and central office staff don't use practice and pre-tests effectively as part of their regular standards-based instructional practice
 - **5S4a (Technical Skill Attainment):** Policies, Procedures, and People - Through this process, it has been brought to our attention that there are internal issues with our data reporting systems. Additionally, CTE instructors and central office staff don't use practice and pre-tests effectively as part of their regular standards-based instructional practice.
10. The data provided reflect the performance of all students within your district. Remember that aggregate data can hide considerable variation. As you think about strategies to improve performance, consider how program performance might differ within programs of study. *Might some programs be performing above or below the site average?*
 - **Programs Performing Above Site Average:** Project Lead the Way: Pre-Engineering (84%), Culinary (78%), and Automotive Technology (90%)
 - **Programs Performing Below Site Average:** Accounting (0%), Business Management (20%), Environmental Agriculture Natural Resources-CASE (5.7%)

11. Resource constraints may affect the activities you might undertake. What might be the most efficient and effective approach to making change (e.g., taking into consideration the relative size of your program enrollments)?

- **The most efficient and effective approach to making change is to leverage existing systems and structures (i.e., observation/feedback system, content specific academic language, mentor teachers, etc.) within the district to develop and improve instructional practices of CTE teachers. This would help to ensure that CTE teachers are receiving embedded professional development and feedback on instruction and pacing as they work towards preparing students for Technical Skill Attainment.**

12. What are the top five priorities you will address in the coming year to improve student performance outcomes on indicators on which you are substantially underperforming? *[Note: At least one priority area you identify should address the needs of gender, race-ethnicity, or special population groups.]*

Based on the provided data and the identified areas of underperformance, the top five priorities to address in the coming year to improve student performance outcomes are as follows:

1. Improving Academic Proficiency in Reading/Language Arts (Indicator 2S1):

- **Priority: Enhance support systems and targeted interventions for students, particularly focusing on English learners and students with disabilities, who are significantly underperforming.**
- **Action Plan: Implement additional tutoring sessions, integrate literacy coaches, and provide professional development for teachers on differentiated instruction techniques.**

2. Boosting Academic Proficiency in Mathematics (Indicator 2S2):

- **Priority: Develop and implement targeted math intervention programs to support students, with a particular emphasis on economically disadvantaged students and English learners.**
- **Action Plan: Introduce after-school math support programs, utilize data-driven instruction, and provide teachers with specialized training on effective math teaching strategies.**

3. Enhancing Post-Program Placement Rates (Indicator 3S1):

- **Priority: Strengthen career counseling and job placement services, focusing on improving outcomes for economically disadvantaged students and individuals with disabilities.**
- **Action Plan: Partner with local businesses and community organizations to create internship and apprenticeship opportunities, increase career fairs and job shadowing programs, and provide one-on-one career counseling sessions.**

4. Increasing Technical Skill Attainment (Indicator 5S4a):

- **Priority:** Ensure that more students meet state-recognized CTE standards, with a focus on underrepresented racial/ethnic groups and gender-specific support where disparities exist.
- **Action Plan:** Expand access to industry-recognized credential programs, provide hands-on training opportunities, and offer professional development for teachers to stay updated with industry standards.

5. Addressing Nontraditional Program Concentration (Indicator 4S1):

- **Priority:** Encourage and support students, especially females and minority groups, to enroll in and complete nontraditional CTE programs.
- **Action Plan:** Develop outreach programs to raise awareness about nontraditional career paths, provide mentorship programs connecting students with industry professionals, and offer incentives and scholarships for students pursuing nontraditional fields.

These priorities will be pursued through a combination of targeted interventions, enhanced support services, professional development for educators, and strengthened partnerships with industry and community organizations to ensure all students have the opportunity to succeed and excel in their chosen career paths.

Component D: Recruiting, Developing, and Retraining CTE Educators

The quality of your CTE programming depends upon the skills of your workforce. This extends to all members of your educational team, including secondary teachers, support staff, paraeducators, guidance counselors, and more. Ideally, staff should also be representative of the populations served and retained over time to promote program sustainability.

ACTIVITY D.1: REVIEW DATA ON CURRENT STAFF

Reviewing current staff demographics is critical to understanding where there are opportunities to strengthen staff skills and diversify your workforce. Create a separate table for each CTE Career Cluster or program of study offered

NAME OF CAREER CLUSTER OR CTE POS: ARMECO					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/paraprofessionals	Guidance Counselors
N	3	111			
Gender					
Male	0%	56.8%	N/A	N/A	N/A
Female	100%	43.2%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	0.00%	N/A	N/A	N/A
Asian	0%	2.7%	N/A	N/A	N/A
Black	66%	63.3%	N/A	N/A	N/A
Hispanic	0%	33.94%	N/A	N/A	N/A
Multi-race	0%	0.00%	N/A	N/A	N/A
White	34%	33.02%	N/A	N/A	N/A
Credential					
Properly Licensed	34%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	66%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: BUSFIN					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/ paraprofessionals	Guidance Counselors
Gender	29	1228			
Male	44.82%	49.38%	N/A	N/A	N/A
Female	55.18%	50.53%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	1.46%	N/A	N/A	N/A
Asian	0%	1.30%	N/A	N/A	N/A
Black	97%	74.85%	N/A	N/A	N/A
Hispanic	3%	22.2%	N/A	N/A	N/A
Multi-race	0%	.734%	N/A	N/A	N/A
White	0%	20.81%	N/A	N/A	N/A
Credential					
Properly Licensed	62.06%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	37.94%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: CONDEV					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/paraprofessionals	Guidance Counselors
Gender	10	179			
Male	100%	43.80%	N/A	N/A	N/A
Female	0%	56.20%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	2%	N/A	N/A	N/A
Asian	10%	2%	N/A	N/A	N/A
Black	60%	59.37%	N/A	N/A	N/A
Hispanic	0%	36.31%	N/A	N/A	N/A
Multi-race	10%	2%	N/A	N/A	N/A
White	10%	34.87%	N/A	N/A	N/A
Credential					
Properly Licensed	90%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	10%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: COSEHT					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/paraprofessionals	Guidance Counselors
Gender	28	660			
Male	39.29%	28.81%	N/A	N/A	N/A
Female	60.71%	71.18%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	.924%	N/A	N/A	N/A
Asian	0%	1.84%	N/A	N/A	N/A
Black	82.15%	69%	N/A	N/A	N/A
Hispanic	0%	26.96%	N/A	N/A	N/A
Multi-race	0%	1.54%	N/A	N/A	N/A
White	17.85%	26.34%	N/A	N/A	N/A
Credential					
Properly Licensed	78.58%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	21.42%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: ENAGNR					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/paraprofessionals	Guidance Counselors
Gender	6	132			
Male	33%	37.69%	N/A	N/A	N/A
Female	67%	62.3%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	1.53%	N/A	N/A	N/A
Asian	33%	4.61%	N/A	N/A	N/A
Black	33%	56.15%	N/A	N/A	N/A
Hispanic	16%	39.23%	N/A	N/A	N/A
Multi-race	0%	.769%	N/A	N/A	N/A
White	16%	36.92%	N/A	N/A	N/A
Credential					
Properly Licensed	100%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	0%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: HEABIO					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/paraprofessionals	Guidance Counselors
Gender	12	349			
Male	6%	13.19%	N/A	N/A	N/A
Female	94%	86.8%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	3.51%	N/A	N/A	N/A
Asian	18%	1.17%	N/A	N/A	N/A
Black	64%	62.17%	N/A	N/A	N/A
Hispanic	0%	34.8%	N/A	N/A	N/A
Multi-race	0%	.87%	N/A	N/A	N/A
White	18%	31.6%	N/A	N/A	N/A
Credential					
Properly Licensed	88%	N/A	N/A	N/A	N/A

Granted Temporary Waiver	12%	N/A	N/A	N/A	N/A
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NAME OF CAREER CLUSTER OR CTE POS: HURESE					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/paraprofessionals	Guidance Counselors
Gender	52	3,346			
Male	57.69%	51.85%	N/A	N/A	N/A
Female	42.31%	48.15%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	2.05%	N/A	N/A	N/A
Asian	0%	2.86%	N/A	N/A	N/A
Black	86.57%	56.85%	N/A	N/A	N/A
Hispanic	1.9%	36.52%	N/A	N/A	N/A
Multi-race	0%	1.8%	N/A	N/A	N/A

White	11.53%	35.63%	N/A	N/A	N/A
Credential					
Properly Licensed	84.62%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	15.38%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: INFOTC					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/ paraprofessionals	Guidance Counselors
Gender	15	565			
Male	30%	64.68%	N/A	N/A	N/A
Female	70%	35.31%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	.6%	N/A	N/A	N/A
Asian	0%	2.2%	N/A	N/A	N/A
Black	87%	82.7%	N/A	N/A	N/A
Hispanic	0%	12.5%	N/A	N/A	N/A
Multi-race	0%	.6%	N/A	N/A	N/A
White	13%	13.1%	N/A	N/A	N/A
Credential					
Properly Licensed	60%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	40%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: ENGSCI					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/paraprofessionals	Guidance Counselors
Gender	9	374			
Male	82%	37.69%	N/A	N/A	N/A
Female	18%	62.3%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	1.53%	N/A	N/A	N/A
Asian	10%	4.61%	N/A	N/A	N/A
Black	60%	56.15%	N/A	N/A	N/A
Hispanic	0%	39.23%	N/A	N/A	N/A
Multi-race	10%	.769%	N/A	N/A	N/A
White	20%	36.92%	N/A	N/A	N/A
Credential					
Properly Licensed	100%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	0%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: TRTECH					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/paraprofessionals	Guidance Counselors
Gender	5	63			
Male	100%	90.19%	N/A	N/A	N/A
Female	0%	9.8%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	3.92%	N/A	N/A	N/A
Asian	0%	3.92%	N/A	N/A	N/A
Black	60%	45.09%	N/A	N/A	N/A
Hispanic	0%	50.98%	N/A	N/A	N/A
Multi-race	0%	0.00	N/A	N/A	N/A
White	40%	45.09%	N/A	N/A	N/A
Credential					
Properly Licensed	60%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	40%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: WOBAL					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/ paraprofessionals	Guidance Counselors
Gender	33	1,182			
Male	39.40%	62.97%	N/A	N/A	N/A
Female	60.60%	37.03%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	2.7%	N/A	N/A	N/A
Asian	12.12%	2.4%	N/A	N/A	N/A
Black	72.73%	59.81%	N/A	N/A	N/A
Hispanic	0%	34.68%	N/A	N/A	N/A
Multi-race	0%	0.9%	N/A	N/A	N/A
White	15.15%	33.33%	N/A	N/A	N/A
Credential					
Properly Licensed	84.85%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	15.15%	N/A	N/A	N/A	N/A

NAME OF CAREER CLUSTER OR CTE POS: CTEPTK					
Staff demographic	Percentage of 2022-23 staff	Percentage of students participating in CTE programming 2022-23	5-year staff turnover rate (Percentage of staff who did not return for years 2018-19 thru 2022-23)		
			Teachers	Support staff/ paraprofessionals	Guidance Counselors
Gender	4	209			
Male	25%	55.21%	N/A	N/A	N/A
Female	75%	44.79%	N/A	N/A	N/A
Race-ethnicity					
American Indian	0%	0.9%	N/A	N/A	N/A
Asian	0%	1.3%	N/A	N/A	N/A
Black	75%	65.65%	N/A	N/A	N/A
Hispanic	0%	22.17%	N/A	N/A	N/A
Multi-race	0%	2.6%	N/A	N/A	N/A
White	25%	29.13%	N/A	N/A	N/A
Credential					
Properly Licensed	100%	N/A	N/A	N/A	N/A
Granted Temporary Waiver	0%	N/A	N/A	N/A	N/A

Activity D.2: assess educator support opportunities

It's critical to create consistent opportunities that allow your staff to maintain licensure and grow within this field. Professional development is a key strategy for retention and ensuring a high-quality workforce.

Based on your knowledge of professional licensure requirements and the availability of content-specific professional development opportunities across clusters, rate the extent to which you strongly agree or disagree with each statement. Where applicable, please add an explanation for your assessment with examples.

	Strength	Area for Improvement	Explanation
Staff acquire content-specific professional development required to maintain licensure.		✓	Due to the current teacher shortage that is impacting the United States, content-specific educators are in high demand. Our district has adopted a recruitment effort to hire additional qualified educators.
Staff are aware of the requirements to maintain endorsement.	✓		
Staff have equal access to content-specific professional development opportunities across industries.	✓		
Data is collected on the effectiveness of professional development to ensure it meets the needs of educators.	✓		

ACTIVITY 4.3: REFLECTION

Based on your responses in this section of the needs assessment guide, consider the following questions:

1. Does your staff demographic characteristics reflect the students they serve across programs of study?

The teaching staff within our CTE programs partially reflects the racial and gender demographics of our student population. Additionally, we are making concerted efforts to increase the number of Spanish-speaking staff to better serve and represent our Spanish-speaking students..

2. Are instructors adequately credentialed, including licenses, certifications, or endorsements for the courses they're teaching ? If not, what mechanisms can be put in place to get them endorsed, or what recruitment efforts are necessary to attract properly credentialed instructors?

Yes, our district is actively working to ensure that instructors are adequately credentialed, including possessing the necessary licenses, certifications, or endorsements for the courses they are teaching. However, due to the current teacher shortage impacting the United States, content-specific educators are in high demand.

To address this challenge, our district has implemented a robust recruitment effort aimed at attracting additional qualified educators. This includes:

Targeted Recruitment Campaigns: We are focusing on recruiting teachers with the specific credentials needed for our courses, both locally and nationally. This includes partnerships with universities and colleges, participation in job fairs, and leveraging online job platforms.

Incentives and Benefits: To attract top talent, we are offering competitive salaries and comprehensive benefits packages.

Professional Development and Support: For current instructors who may need additional endorsements or certifications, we offer professional development opportunities.

Alternative Certification Programs: We are collaborating with alternative certification programs that allow individuals with relevant industry experience to transition into teaching. This helps us tap into a wider pool of potential educators who bring valuable real-world knowledge to the classroom.

These mechanisms are part of our comprehensive strategy to ensure that all instructors are adequately credentialed and prepared to deliver high-quality education to our students.

3. To what extent does your school offer regular, substantive content-specific professional development opportunities? Do all staff members have equal awareness of, and opportunities to participate in content-specific professional development opportunities, necessary to maintain their industry credentials and endorsements?

We provide comprehensive professional development opportunities to all CTE teachers as part of our in-service training program. Throughout the year, CTE teachers have access to various professional development sessions. Additionally, every CTE teacher has been offered initial and ongoing professional development with iCEV, utilizing their learning management system to support curriculum across all CTE programs.

4. What barriers exist to offering and participating in content-specific professional development?

One of the barriers we face is the restriction on providing professional development opportunities for teachers during instructional hours. Previously, the CTE department funded substitute teachers to allow CTE teachers to participate in professional development during the school day. Although teachers are compensated for attending evening professional development sessions, attendance remains low after hours.

Additionally, the process for approving speaker and vendor contracts is time-consuming, which can deter speakers and vendors from agreeing to present.

5. What are the top five priorities you might wish to address in the coming year to recruit, develop, and retain CTE instructors and improve their professional skills?

Our top priorities to address the recruitment, development, and retention of CTE instructors, as well as the improvement of their professional skills, include the following initiatives:

- **Partnering with the Teacher Recruitment and Retention Office:** We will collaborate more closely with the Teacher Recruitment and Retention Office to ensure a strong focus on hiring qualified CTE teachers.
- **Increasing Recruitment of Certifiable Industry Professionals:** We aim to enhance our recruitment efforts to attract industry professionals, such as those from the armed forces and healthcare, and assist them in identifying teacher certification options.
- **Curriculum Enhancement Initiatives:** By implementing curriculum enhancement initiatives to keep content engaging, we aim to improve teacher retention.
- **Nominating Teachers for Industry Awards:** Recognizing and nominating teachers for industry awards and recognitions will help to acknowledge their achievements and encourage their professional growth.

- **Seeking Teacher Feedback: We will seek teacher feedback on their areas of need to tailor professional skills training to address specific requirements.**
- **These priorities are designed to build a robust, skilled, and motivated CTE teaching workforce.**

Next Steps

With the completion of the CLNA), you are now poised to embark on the crucial next phase of securing Perkins V funding. This stage involves translating the insights and findings from the CLNA into actionable and strategic plans.

UTILIZING CLNA ANALYSIS FOR LOCAL PERKINS APPLICATION S.M.A.R.T.I.E. GOAL SETTING

The first step for LEAs is to use their CLNA analysis to formulate S.M.A.R.T.I.E. goals. These goals should be Specific, Measurable, Achievable, Relevant, Time-bound, Inclusive, and Equitable. The essence of this process is to ensure that the goals set for CTE programs are not only aligned with the identified needs and opportunities but are also focused on inclusivity and equity.

LEAs should look at areas highlighted in the CLNA, such as skill gaps, program areas needing enhancement, and disparities in student participation and success rates. From here, specific goals can be set. For example, if the CLNA indicated a gap in technology-related skills among students, a S.M.A.R.T.I.E. goal could be to increase enrollment in technology-focused CTE programs by 15% within the next two years while ensuring equitable access for all student groups.

CONNECTING GOALS TO AN ANNUAL BUDGET FOR PERKINS FUNDING

Once S.M.A.R.T.I.E. goals are established, LEAs must then align these objectives with an annual budget for Perkins funding. This budgeting should be a reflective exercise, considering not just the cost of program enhancements but also the broader resources required to meet these goals. This includes faculty development, curriculum updates, equipment purchases, and any necessary infrastructure improvements.

For instance, if one of the goals is to enhance a manufacturing CTE program, the budget may include expenses for new machinery, professional development for educators to teach advanced manufacturing techniques, and outreach initiatives to increase program enrollment.

ENSURING ALIGNMENT WITH PERKINS REQUIREMENTS

Throughout this process, LEAs need to ensure that their plans align with the requirements of the Perkins V Act. This means that the goals, strategies, and budgeted activities should contribute to developing more effective and equitable CTE programs, as stipulated by Perkins V.

Appendix A: Sample Strategies for Component A: Labor Market Alignment

PROBLEM: EXISTING CTE PROGRAMS ARE NOT ALIGNED TO MARYLAND'S LABOR MARKET PROJECTIONS.

Root Cause	Strategy	Sample Activities	Resource	Description
The district maintains programs that have been historically offered but are no longer aligned to Maryland's labor market needs.	Sunset programs that are no longer preparing students for high-skill, high-wage in-demand careers	<ul style="list-style-type: none"> Analyze program enrollments, standards, postsecondary pathways, and employers to assess whether sunsetting is warranted. Develop strategy and timeline for sunsetting a program and internal and external communication plans to share information Explore alternative educational options for students currently enrolled that will allow them to transition to other programs Consult with the union and educators to arrange transition options, which may include reassignment or retraining Review state regulations and district policies to identify barriers to sunsetting programs 	How to sunset an educational program	This blog post describes considerations in sunsetting and educational programming, including warning signs of need, considerations before moving forward, and concrete steps to take when a decision to discontinue is made.
	Introduce new programs that are aligned to Maryland or regional employment projections	Review Maryland state and/or regional economic and workforce projections to assess current and future workforce needs	Maryland Occupational Projections 2020-2030	The State of Maryland publishes occupational projections that indicate changes in employment. Use this interactive website to identify careers anticipated to grow in the coming years.

		Recruit industry partners in high-wage, high skill, in-demand fields to offer guidance on new program design and adoption	Cheat Sheet: Opportunities for Employer Involvement in CTE	Use this factsheet developed by Advance CTE and ACTE to identify strategies for engaging employers in CTE programming.
		Support existing teachers in updating their certifications in new fields, hire new CTE teachers with requisite skills, and explore other hiring options	Maryland CTE Teacher Certification	Maryland has identified eight types of CTE certifications. Consult this document to see the expectations by CTE Program of Study.
		Review strategies developed by other states to align programs with labor market needs	Georgia Alignment Toolkit	Georgia has compiled a toolkit to help schools align programs to best serve students and local business. Includes a report and worksheets.
The cost of introducing new programs is prohibitive.	Identify new funding sources	Use Maryland's Perkins reserve grants to fund new programs	Maryland Grant Information Guide: Perkins Reserve Grant FY 2024	This document describes how Maryland is using its Perkins Reserve funds to support new programs. Consult it for ideas to pursue funding in future years.
		Seek to braid funding from other federal legislation (e.g., Adult Education, Workforce), federal grant programs (e.g., Institute of Education Sciences (IES) CTE grant competitions), and philanthropic organizations	IES Research Programs Maryland Foundation Grants	The federal government periodically offers funding to support research into CTE programs. Review the IES webpage to get an idea of the types of funding that exist and how you might apply. Foundation grants also may exist within Maryland. See the grants page maintained by the

				Governor's Grant Office for potential funders.
		Work with industry partners to obtain donations of materials and supplies	Employer Engagement in CTE	This report from Advance CTE profiles ways that employers may support educational programming.

PROBLEM: CTE PROGRAMS ARE NOT PREPARING STUDENTS FOR THE HIGH-SKILL, HIGH-WAGE, IN-DEMAND OCCUPATIONS IDENTIFIED IN STATE EMPLOYMENT PROJECTIONS.

Root Cause	Strategy	Sample Activities	Resource	Description
Instructional resources are outdated and do not prepare students to enter or retain employment in high-wage, high-skill, and/or in-demand fields	Update program standards, curriculum, assessments, certifications, and links to postsecondary programs	Review related program offerings in high-performing Maryland districts	Maryland CTE Performance Dashboard	Maryland has developed this interactive CTE dashboard that lists performance by cluster, program and student group. Use this resource to identify districts and colleges that are attaining high levels of performance.
		Create and use employer advisory boards to inform necessary updates	Strategies for Developing Employer Partnerships Michigan Program Advisory Toolkit	The CTE Technical Assistance Center of New York created a comprehensive website with resources to support educators in engaging with employers. Similarly, Michigan has created a toolkit with guidance and

				tools you may adapt for your own use.
		Review program resources in other states to identify potential instructional design resources	Texas CTE Administrative Code	Texas has specified the knowledge and skills to be taught in CTE programs. Use this website to find examples of required skills by cluster, programs, and course.
	Offer professional development to assist CTE educators in upgrading their curricular resources	Engage industry experts to review curriculum and offer recommendations to strengthen offerings	Increasing Access to Industry Experts in High Schools http://wbltoolkit.cte.nyc/workplace-tour/	This report by Advance CTE profiles state strategies to recruit industry experts. Consult it to gain insights on promising strategies that might be adapted for district or college use.
		Consult with local business to offer workplace tours or externships for instructors	Teacher Externship Industry Partner Planning Guide http://wbltoolkit.cte.nyc/workplace-tour/	South Dakota has developed this resource to support educators and employers in developing externship opportunities

Appendix B: Sample Strategies for Component B: Student Participation and Persistence

2024-2026

PROBLEM: STUDENTS ARE NOT PARTICIPATING IN CTE PROGRAMMING.

Root Cause	Strategy	Sample Activities	Resource	Description
Students lack awareness of CTE programming and the benefits of program participation	Implement awareness campaigns to inform students about program offerings and benefits	Offer career exploration activities in the middle grades to expose students to career options and the benefits that participation in CTE offers.	Middle School CTE design options and resources	ACTE has developed resources to support educators in expanding CTE options in the middle grades. Offerings include program design principles, a repository of state-level strategies, research studies, examples of ways to implement and improve programs, and podcasts and webinars.
		Schedule informational sessions for entering 9 th grade students to introduce them to school CTE offerings.	Freshman Cruise	Roseburg Public Schools (OR) takes all 9 th grade students on a 'cruise' of CTE offerings to allow students to meet teachers and learn about CTE studies that are available.
		Schedule career fairs and informational events to help students learn about	Career Fair Options	Gainesville High School (AL) offers students a career fair experience to introduce them to CTE

		CTE offerings.		options. See the video to learn about their approach
		Create online assets that support students in identifying the CTE opportunities at their school.	CTE Options at my School	Fairfax County Public Schools (VA) hosts a webpage that helps students learn about CTE programs offered in their school replete with videos and detailed program descriptions.
Families and educators do not appreciate CTE's benefit and discourage youth from enrolling	Improving messaging to families, community groups, and educators to help them understand the benefits CTE confers	Undertake a comprehensive marketing campaign to educate families about CTE	CTE Vision Toolkit CTE Marketing Best Practices & Campaigns	Advance CTE has created a 5-part series of issue briefs and posters detailing how CTE contributes to students' success and strengthens our nation's economy. Washington State has developed this playbook detailing strategies and providing resources to promote CTE programs to students, parents, and educators.
		Host CTE Signing Days to celebrate and publicize CTE students who demonstrate their intent to enter a postsecondary institution to continue	CTE Letter of Intent Signing Day: College CTE Signing Day: Employment	Linn Benton Community College (OR) publicly recognizes high school seniors who sign letters of intent to guarantee a spot in the coming semester.

		their studies or take a job with a community employer		Similarly, SkillsUSA holds a national signing day for students planning to enter employment, apprenticeship, or advanced technical training. Calvert Career and Technology Academy (MD) participated in such an event to honor its students.
Students are not provided career guidance that supports them in choosing CTE as an educational pathway.	Educate high school guidance counselors on the benefits that CTE offers and the advanced education and employment options that students may follow.	Develop and conduct professional development for school counselors aimed at increasing awareness and benefits of CTE programs.	<u>School Counselor Playbook: Unlocking Career Success</u>	Unlocking Career Success offers this playbook that includes practical tools, resources, and information to assist counselors in discussing college and career pathways with students.
		Design tools and resources for counselors to use in their career exploration activities with students, that highlight CTE offerings.	<u>ACTE High Quality CTE: Student Career Development</u>	ACTE offers webinars, online courses, toolkits, and more designed to support counselors and college/career navigators as they offer guidance to students.

PROBLEM: STUDENTS ARE NOT PERSISTING IN CTE PROGRAMS.

2024 - 2026

Root Cause	Strategy	Sample Activities	Resource	Description
Historically underrepresented students or those with special needs do not feel welcome in CTE programs.	Remove obstacles to success for students who may need additional supports to persist.	Implement evidence-based strategies to support special population students in succeeding in CTE programming.	Maximizing Access & Success for Special Population Students Strategies for Special Population Success Recruiting Special Populations into CTE: Toolkit	<p>Advance CTE and ACTE have partnered to offer a series of briefs offering definitions, strategies, and guiding questions to assist educators in supporting special population students.</p> <p>The National Alliance for Partnerships in Equity created this brief documenting the obstacles students with special needs face and tools CTE educators may apply to recruit and retain youth.</p> <p>The Ohio Department of Education has developed this toolkit to promote the recruitment of special population students into CTE programs. Use it to find ideas for using data and leveraging</p>
		Explore why students from some racial-ethnic groups face obstacles in	A Guide to Discussing Racial Equity	Review this guidebook to learn how to hold discussions around racial

		CTE programming and take steps to address them.		equity to identify.
		Conduct a curricular review to identify and remove unintentional gender bias.	Assessing the Enrollment and Retention of Nontraditional Learners	The Wisconsin Technical College System has developed a tool that educators can use to assess the adoption of promising practices to increasing enrollments and retention of nontraditional learners based on their gender.
Students do not understand the personal and economic benefits of completing advanced coursework and entering the field.	Offer students mentors and real-world workplace experiences to inform their career decisions.	Pair students with mentors who can offer them one-on-one guidance to encourage them to pursue a career.	Partnering Students with Industry Mentors	Parkways School District (MO) connects students with industry mentors who provide guidance, connections, expertise, and course supports intended to motivate youth to solve real-world problems.
		Place students in authentic work-based learning (WBL) experiences, including internships and apprenticeships, to help them learn about the benefits from obtaining advanced skills.	Work-based Learning Toolkit	The U.S. Department of Education created this resource to support state and local program administrators in learning about WBL, engaging employers, measuring outcomes, and scaling effective practices.

Appendix C: Sample Strategies for Component C: Program Performance 2024-2026

PROBLEM: CTE CONCENTRATORS ARE UNABLE TO ACHIEVE PROFICIENCY ON STATE ACADEMIC PERFORMANCE STANDARDS.

Root Cause	Strategy	Sample Activities	Resource	Description
Students are not provided with academic content as part of their CTE coursework	Integrate academic content into CTE programming offered at all levels.	Review current efforts to integrate academic and CTE instruction and take steps to address ineffective practices.	CTE and Academic Integration Self-Assessment Rubric	New York has developed a four-level rubric that educators can use to assess the status of district/college integration of academic skills in CTE programming.
		<p>Incorporate reading and writing activities, technical manuals, industry-related texts, and project-based assignments that require critical thinking and communication skills.</p> <p>Incorporate math skills into CTE classrooms.</p> <p>Encourage collaboration and co-teaching between CTE and academic teachers.</p>	ACTE Integration of Academics and CTE Section Math-in-CTE	<p>ACTE hosts a virtual collaboration to share ideas and effective practices. Visit the Resource Section to download tools to fuel your integration efforts.</p> <p>The Southern Regional Education Board has developed curricular tools that enhance the teaching of math that is already embedded in CTE programs.</p>
		Use results from academic assessments to target educational remediation	Rigorous K-12 Assessments Help Reduce Remediation	This brief form offers examples of how higher states are 11 th grade test

		so that high school students enter college ready to learn.		results as a college readiness signal and as a means of targeting services for at-risk youth.
Students face financial or geographical barriers that prevent them from pursuing an industry-recognized credential.	Identify obstacles to students earning an industry recognized credential and take steps to resolve them.	<p>Use Maryland's Perkins V basic grant to fund student attainment of an industry-recognized credential.</p> <p>Develop strategies to identify students who may face challenges in paying for exams and find ways of offsetting costs.</p> <p>Work with exam providers, employers, and community organizations to provide fee waivers or scholarships for certification exams, materials, and training courses.</p> <p>Work with credentialing vendors to expand testing sites and administer exams in convenient and accessible locations.</p>	<p>Maryland CTE Perkins Reserve Grant Information Guide</p> <p>Credential Currency: Promoting Credentials of Value</p> <p>Aligning State CTE Programs with Industry Needs and Priorities</p>	<p>Maryland offers a competitive grant program that includes options for using funding to strengthen the award of industry-recognized credentials in POS.</p> <p>This report offers strategies to expand student obtainment. While focused at the state level, some recommendations may be adapted for district/college use.</p> <p>ExcelinEd produced this toolkit to support states in aligning CTE programs with industry needs and priorities. While intended for state policymakers, some recommendations may be adapted for use at the district/college level.</p>

PROBLEM: STUDENTS ARE NOT EARNING INDUSTRY-RECOGNIZED CREDENTIALS.

2024 - 2026

Root Cause	Strategy	Sample Activities	Resource	Description
Students face financial or geographical barriers that prevent them from pursuing an industry-recognized credential.	Identify obstacles to students earning an industry recognized credential and take steps to resolve them.	<p>Use Maryland's Perkins V basic grant to fund student attainment of an industry-recognized credential.</p> <p>Develop strategies to identify students who may face challenges in paying for exams and find ways of offsetting costs.</p> <p>Work with exam providers, employers, and community organizations to provide fee waivers or scholarships for certification exams, materials, and training courses.</p> <p>Work with credentialing vendors to expand testing sites and administer exams in convenient and accessible locations.</p>	<p>Maryland CTE Perkins Reserve Grant Information Guide</p> <p>Credential Currency: Promoting Credentials of Value</p> <p>Aligning State CTE Programs with Industry Needs and Priorities</p>	<p>Maryland offers a competitive grant program that includes options for using funding to strengthen the award of industry-recognized credentials in POS.</p> <p>This report offers strategies to expand student obtainment. While focused at the state level, some recommendations may be adapted for district/college use.</p> <p>ExcelinEd produced this toolkit to support states in aligning CTE programs with industry needs and priorities. While intended for state policymakers, some recommendations may be adapted for use at the district/college level.</p>

PROBLEM: CTE CONCENTRATORS ARE NOT TRANSITIONING INTO ADVANCED TRAINING OR EMPLOYMENT FOLLOWING GRADUATION.

Root Cause	Strategy	Sample Activities	Resource	Description
Students do not understand the steps needed to pursue a career.	Offer workplace experiences and access to career planning tools to help students plan for labor market entry.	Develop in-school and worksite experiences that help students understand the world of work and how to prepare for the transition to employment following graduation.	Maryland's Work-based Learning Continuum	This resource describes the research, common practices to support students in learning about work, and tools to help in career seeking and advancement.

Appendix D: Sample Strategies for Component D: Recruiting, Developing, and Retaining CTE Educators

PROBLEM: IT'S DIFFICULT TO RECRUIT CTE EDUCATORS.

Root Cause	Strategy	Sample Activities	Resource	Description
Salaries in the private sectors are higher than for educators in the same field, making it difficult to attract educators.	Develop a range of teacher recruitment strategies that motivate individuals to pursue a CTE instructional career.	<p>Offer bonuses for specific fields or tuition reimbursement for teachers trying to get credentials.</p> <p>Consult with employer advisory groups for potential teacher candidates.</p> <p>Create a 'grow your own' initiative to recruit instructors.</p> <p>Hire a recruiter to identify potential applicants.</p> <p>Conduct outreach to entice retiring industry workers or those seeking a change to enter the field.</p>	36 CTE Teacher Recruitment Strategies	The Oklahoma Department of Career and Technology Education developed this list of CTE teacher recruitment strategies compiled from expert resources.
The pool of CTE educators is small, making it difficult to hire new instructors.	Identify non-traditional pathways for teachers to earn the necessary credentials to become a	Launch a targeted CTE teacher recruitment campaign to motivate educators and industry	Teach CTE Recruitment Toolkit Becoming a CTE Teacher	ACTE has created this toolkit to raise awareness of CTE teacher shortages and provide tools to build

	CTE educator.	<p>professionals to become teachers.</p> <p>Engage with local industry to pair experienced workers with current to support their development and ability to teach in new fields.</p> <p>Explore the multiple pathways to becoming a CTE teacher in Maryland.</p> <p>Develop alternative pathways to certification for individuals with industry experience who lack teaching credentials.</p>	in Maryland	<p>interest in the profession.</p> <p>The Maryland Division of Career and College Readiness has created this guidance document that summarizes teacher certification options for each CTE program of study offered in the state.</p>

PROBLEM: NEW CTE EDUCATORS LACK ACCESS TO PROFESSIONAL DEVELOPMENT SUPPORTS TO STRENGTHEN THEIR INSTRUCTION.

Root Cause	Strategy	Sample Activities	Resource	Description
Individuals transitioning from industry may lack the pedagogical skills to succeed in the classroom.	Offer targeted professional development to support new CTE instructors in strengthening their teaching skills.	Pair new first and second year CTE teachers with seasoned veterans who can serve as mentors and provide resources and guidance.	CTE TEACH Mentor Programs	The Colton-Redlands-Yucaipa Regional Occupational Program (CA) partners with the California Department of Education to offer

		Facilitate networking events, conferences, and workshops where CTE educators can connect with colleagues, share best practices, and collaborate on innovative teaching strategies.		mentorship supports and professional development for new CTE teachers.
CTE educators are unable to offer academic credit to students taking CTE coursework.	Create policy and practices to support CTE educators in offering academic credits.	Pair academic and CTE educators to design courses that allow students to earn academic and technical credit simultaneously.	Credit Quandaries: How CTE Instructors can Teach Academic Credit	This document from the Center on Great Teachers & Leaders explores strategies that states and districts are using to enable CTE teachers who lack the necessary credentials to award academic credit for their courses.

PROBLEM: THE TURNOVER RATE IS HIGHER FOR EDUCATORS WHO IDENTIFY AS PEOPLE OF COLOR.

Root Cause	Strategy	Sample Activities	Resource	Description
Educators who are nontraditional for their field are not recruited and those who begin are not offered supports to	Undertake targeted efforts to recruit individuals who are nontraditional for their	Promote CTE as a career choice by collaborating with professional organizations to promote CTE teaching careers and	State and Local Strategies for Diversifying the CTE Educator Workforce Diversifying the Teaching	This document identifies issues and offers solutions for diversifying the secondary CTE educator workforce. It includes

persist in the occupation.	field.	<p>develop pathways to teacher preparation programs.</p> <p>Offer professional development targeted to address the needs of nontraditional educators, which include creating inclusive workplaces and offering mentoring and professional learning communities.</p>	<u>Profession: How to Recruit and Retain Teachers of Color</u>	<p>suggested activities to both promote recruitment and retention of teachers.</p> <p>The Learning Policy Institute created this resource to support diversifying the teaching profession overall. Use it to find options that might apply to the CTE workforce.</p>

Appendix E: Additional Resources

While specific evidence-based resources may vary depending on the context and location, several organizations and research institutions focus on educational best practices, including those related to Career and Technical Education (CTE). Here are some resources and organizations that often provide evidence-based insights:

Advance CTE

The State CTE Directors association offers a wealth of resources in their learning center

Website: [Advance CTE](#)

American Institutes for Research (AIR) - Educator Quality:

AIR conducts research on various aspects of education, and their educator quality resources often include evidence-based strategies for teacher retention.

Website: [AIR Educator Quality](#)

Association for Career and Technical Education (ACTE):

ACTE provides resources and research related to CTE

Website: [Association for Career and Technical Education](#)

CTE Research Network

Federally funded website focused on strengthening CTE research

Website: [CTE Research Network](#)

Learning Policy Institute (LPI):

LPI conducts research on education policy and practice. Their reports and publications often include evidence-based recommendations.

Website: [Learning Policy Institute](#)

National Center for Education Statistics (NCES)

2024 - 2026

The NCES, part of the U.S. Department of Education, offers data and reports on various aspects of education. Their website is a valuable resource for accessing national education statistics.

Website: [National Center for Education Statistics](#)

National Comprehensive Center for Teacher Quality (TQ Center):

The TQ Center focuses on improving teacher quality and effectiveness. They offer resources and research on teacher recruitment and retention.

Website: [National Comprehensive Center for Teacher Quality](#)

RAND Corporation - Education Research:

RAND Corporation conducts research on various education-related topics, and their reports often include evidence-based insights.

Website: [RAND Education](#)

Regional Education Laboratories (RELs):

Funded by the U.S. Department of Education, the RELs conduct research and provide resources on various educational topics.

Website: [Regional Education Laboratories](#)

What Works Clearinghouse (WWC):

WWC reviews and assesses the quality of education research. While it covers various educational topics, it can be a valuable resource for finding evidence-based practices related to teacher retention.

Website: [What Works Clearinghouse](#)