

Building High Quality Career and Technical Education Programs

**A Guide for School Systems and Career and
Technical Education Leaders to Elevate
High Quality Programming**

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Introduction

Career and Technical Education (CTE) leaders should thoroughly assess their current CTE programs, identifying opportunities for foundational reinforcement, realignment, and/or expansion. Ahead of undertaking this task, it is imperative that CTE leaders understand:

1. actual and perceived barriers to program growth;
2. the role K-12 education plays in the economic prosperity of each community and our state; and
3. the revised accountability system and its student-centric flexibility.

High quality CTE programs are best when alignment exists between business, industry, and local school systems. By aligning goals and resources with workforce needs, school systems can build and expand programs that create rich, thriving economies both locally and statewide while providing students with the skills and knowledge necessary to succeed.

This document provides school systems with detailed steps to support the build-out and enhancement of exceptional CTE programs. Each section is designed to equip system leaders with the insights and tools necessary to address their communities workforce and industry needs.

Step 1. Research Employer Demand

Objective: Understand workforce demands by gaining insights from industry leaders.

- Form a firm understanding of in-demand industries and occupations in the community with support from business and economic development leaders.
 - **Why?** Analyzing projected industry and occupational trends over the next five to ten years helps in determining how educational programs need to be designed and adapted to meet future workforce demands. School systems must have a strong foundational understanding of the workforce opportunities and needs in the community.
 - **How?** Utilize labor market information systems and state workforce data to understand employment demand in your region.
 - Evaluate [regional labor market data](#) to understand current job opportunities, skill shortages, and emerging trends within the local economy. This can include leveraging activities included in the [Perkins Comprehensive Local Needs Assessment](#).
 - Engage with business and industry representatives to discuss their projections for the next five years and identify the barriers to acquiring skilled labor.
 - Engage directly with Regional Economic Development Offices to discuss workforce trends.
 - Research the highly valued skills and qualifications required for new hires.
 - Assess industry based certifications that employers require to ensure that education and training programs can align to the standards.
 - Identify specific businesses in the community and region that have a long term or short term demand for talent.

Step 2. Engage with Business and Industry

Objective: Build partnerships between businesses and schools that enhance student workforce readiness, align education with industry needs, and support professional development.

- Identify and pursue opportunities for business and industry to share their mission, services/products and impact they have on the community, as well as their employment needs and specific highly valued skills they seek in potential employees.
 - **Why?** Engaging with business and industry leaders helps to generate interest in collaboration, support student development, and build shared understanding of workforce and community needs.
 - **How?** Leveraging community roundtables, local chambers of commerce, local or regional economic development partners, post-secondary or third party training partners, industry advisory panels, or other events focused on business and industry sharing workforce needs.
- Invite business and industry to your school system to highlight strengths, values, and programming offered.
 - **Why?** To identify opportunities within current programming, and encourage business and industry partners to determine where gaps exist.
 - **How?** Opportunities for employers to engage with school systems should be relevant to the businesses and industries being engaged with.
 - Discuss what is currently being offered on high school campuses concerning CTE programs, internships and registered apprenticeships.

- Systems starting from the ground up should highlight high need areas that are relevant to the businesses and industries and present collaborative opportunities where all stakeholders can play a part in the solution.
 - Discuss with business and industry potential areas of refinement required to meet the needs of employers. Note areas of refinement that, with the right partnerships, could become successful.
 - Discuss the impact of successes and refinements on your community, as business and industry partners are also invested in the success of your community.
- Identify the highly valued skills sets identified by the employer or technical skill sets in the IBC identified by the employer. Identify underlying mathematical, language, or other skills from other academic subjects.
- **Why?** Determining the highly valued skills embedded within an IBC prior to implementation allows systems to align skill sets to industry, identify gaps in academic backgrounds, and implement needed supports.
 - **How?** Collaborate with industry partners as well as the system’s instructional supports team to do the following:
 - Work with business and industry to identify the highly valued skills for in-demand occupations.
 - Work with business and industry to identify the academic skills necessary to achieve success for in-demand occupations.
 - Work with business and industry and school system leaders to define the logical sequence for the highly valued skills to be developed and refined.
 - Work with school system CTE and academic leaders to design a system for students to receive real-time academic support to prepare them for mastering the highly valued skills.

Step 3. Align Programs to Need

Objective: Enhance CTE programs by integrating industry input through partnerships, needs assessments, standards alignment, real-world experiences, feedback, and regular updates.

- Map the current course progressions offered in the school system CTE programs.
- **Why?** Evaluating the size, scope, and quality of the programs is crucial in identifying the current capacity of CTE programs because it assesses whether the program meets the needs of students and alignment to industry demands; allows CTE programs to allocate resources effectively; enhances the refining of curriculum offerings; and creates a clear understanding of program scope and ensures successful student navigation in their educational pathway.
 - **How?** Analyze current programs to better align local and regional market job trends and future projections. This can include leveraging Part B-2 activities included in the [Perkins comprehensive local needs assessment](#).
 - Review data on local and regional job markets, including job openings, industry growth, projected trends, and emerging sectors.
 - Review highly valued skill requirements, certifications, and qualifications identified by employers.
 - Assess current educational and training programs to determine alignment with identified highly valued skills. Highlight areas of alignment and gaps in skills or program offerings.
 - Prepare a report detailing areas of alignment and identifying the specific gaps.

- Engage with college partners offering both 2 and 4 year programs, Registered Apprenticeships, or SCA providers aligned to the course progression.
 - **Why?** Understanding existing course progressions is essential for ensuring that students have a clear pathway toward educational and career goals and creates a better understanding of core requirements, course progressions, and credit hours. Systems having a better understanding of this will allow you to communicate opportunities effectively.
 - **How?** Identifying how high school progression can provide multiple entry points into college along with opportunities for Dual Enrollment (DE) and leveraging Prior Learning Credit (PLC) is essential for creating flexible pathways for students.
 - Identify how the high school progression lends itself to multiple entry points in college.
 - Identify where DE or programming from training providers can be embedded.
 - Identify where PLC can be leveraged.
- Using the highly valued skills mapping and offerings available through partners, develop new course progressions with multiple entry and exit points.
 - **Why?** Developing new course progressions with multiple entry and exit points based on highly valued skills enhances the rigor and relevance of educational programs. It helps meet the needs of students and strengthens the connection between education and employment, which creates a more skilled workforce.
 - **How?** Use a structured approach to identify the necessary courses, academic skills, and potential program pairings to support students in developing highly valued skills within CTE programs.
 - Establish a clear progression of skills development from foundation to advanced competencies.
 - Identify the academic skills necessary for success such as reading comprehension, mathematics, and specialized technology skills.
 - Include supports to address academic gaps that are needed to be successful in CTE programs.
 - Identify academic and CTE programs that could be paired to support accelerated learning in each.
 - Comparing new course progression with current state, identify courses that have diminished value in contributing to highly valued skills development and could be restructured or replaced.
 - Identify courses for skills development that may include foundational, intermediate, and advanced skills or opportunities for work-based learning.
 - Identify the courses required to ensure the student has time and support to fully develop and practice the highly valued skills.
- Once a new course progression has been completed begin assessing the gaps.

Step 4. Assess Human and Physical Capital Needs

Objective: Evaluate and optimize the effectiveness of resources, including faculty expertise and facilities, to ensure they meet educational goals, industry standards, and student needs.

- Review the qualifications, certifications, and industry experience of all faculty in the school system to understand the scope of staff talent relative to the newly developed course progressions.

- **Why?** Industries are constantly evolving, so faculty and staff will likely require additional and on-going support. Providing regular training, upskilling, and industry certification workshops to staff will keep highly valued skills current and relevant and allow for career enhancement as well as strengthened collaboration.
 - **How?** Partner with businesses and/or post-secondary partners to help fill gaps or train current faculty.
 - Establish partnerships with business and industry to identify specific skills that are in demand.
 - Invite business and industry to conduct workshops.
 - Create mentorship opportunities where faculty can be paired with industry.
 - Discuss creative opportunities regarding retired, part-time, or adjunct faculty as well as non-traditional scheduling opportunities.
- Conduct a thorough inventory of the current equipment, tools, and technology available in the CTE program and identify areas in which resources should be redirected.
- **Why?** Soliciting input from industry partners regarding the adequacy of the program's resources and facilities and using this feedback will allow you to pinpoint areas for improvement to better align with educational and industry needs.
 - Industry partners can provide current trends and demands.
 - Input allows programs to better equip students with skills and knowledge needed to succeed in a specific career.
 - Including feedback in your partnership creates accountability, trust, and improvement.
 - **How?** Compare the program's resources and facilities with those of leading industry standards and best practices.
 - Create a set of criteria based on industry standards including technology, equipment, and lab facilities.
 - Visit leading programs or industrial facilities to observe their resources and practices.
 - Create an action plan outlining improvements and a timeline for implementation.
 - Consider creative partnerships with postsecondary partners or neighboring districts to create shared spaces or facilities
- Connect postsecondary and training partners to identify areas in which each partner can support program buildout or support instruction on their campus. This collaboration may include developing specialized curriculum components or providing supplemental hands-on training opportunities for students at their facilities. By leveraging each partner's resources and expertise, the overall program can enhance both relevance and scope.

Step 5. Schedule Ongoing Engagement with Business and Industry

Objective: Foster sustained and impactful partnerships with business and industry to enhance and support students' career readiness.

- Engagement with industry does not end when the program starts. At this point, the relationship must evolve to include continued and meaningful engagement with industry partners.
- **Why?** By prioritizing ongoing engagement with business and industry, schools can create a more dynamic, relevant, and supportive educational environment that better prepares students for the workforce.
 - **How?** Scheduling ongoing engagement with business and industry and industry advisory councils:

- In the elementary grades, business and industry partners can introduce students to a variety of careers in their local community, fostering early awareness and interest in local job opportunities.
 - In the middle grades, business and industry partners can play a crucial role in raising awareness about the local job market while helping students develop essential skills. By conducting interactive workshops, mentorship programs, and hands-on classroom activities, these business partners can focus on key areas such as communication, teamwork, and problem-solving. This approach not only provides students with practical insights and experiences but also better prepares them for the transition to high school. Incorporating this type of engagement allows middle schoolers to explore career opportunities early on and actively participate in required career exploration activities.
 - In high school, business and industry can expand on future employee career readiness through instructor mentoring, offering compensated internship opportunities, sponsoring internships, and industry-specific project-based learning opportunities where students tackle real business problems. Additionally, business and industry can identify key employees available to provide just-in-time support for both students and instructors to help navigate challenging concepts.
- Continue engagement with business and industry after the course has culminated to evaluate program effectiveness. This includes forming advisory boards to provide regular feedback on curriculum and training methods, conducting needs assessments to identify gaps between industry demands and current technical skills training offerings, and organizing focus groups with industry representatives for detailed insights. Implement their feedback to refine programs, facilitate professional development for educators through industry-led workshops, and pilot new initiatives.

Step 6. Ongoing Communication Between Students and Counselors

Objective: Assist students with choosing a career path, and identifying the course/steps needed to reach their goals.

- Provide CTE exposure and options to students while allowing time for students to review, ask questions, and provide feedback on offerings. This should also include opportunities for students to engage with industry professionals, allowing those inside the field to answer questions and build their own capacity for engaging with students.
- **Why?** By prioritizing CTE exposure, options, and professional engagement, systems can create high-value programs that prepare students for successful futures while fostering a collaborative environment that creates a feedback loop, allowing every stakeholder involved to benefit.
 - **How?** Implement strategies that ensure alignment between student goals, academic progress, and career opportunities:
 - Integrate career exposure in the middle grades.
 - Conduct a thorough review of any interest inventories taken and analyze the results. Specific questions should be asked to determine what each student truly wants to do with their lives post-graduation, what they know about their chosen career paths, and/or what they know about the business and industry partners.
 - High school transcripts should be reviewed by counselors with individual students, allowing for a full picture of the student's remaining time, and how selections would fit into their schedule, ensuring on-time graduation.

- Regular and timely check-ins should be scheduled to ensure the fit of the opportunity. This can occur in the IGP meetings and should include parental involvement.
- Review of post-completion internship or CTE experience, allowing students to provide feedback. Sufficient notes should be taken during the conversation, compiled and shared with the industry partner. Student feedback is also critical to consider when identifying other students who could be matched to the same business.

Step 7. Celebrate Success in Community with Business and Industry

Objective: Foster a sense of accomplishment for students, the community, and business and industry partners.

- Prioritize regular recognition and celebration of successes. Celebrating the success of CTE programs that partner with business and industry is crucial in highlighting the importance of CTE programs that prepare students for successful careers.
 - **Why?** By embracing student achievements, systems can showcase the transformative power of CTE and inspire a new generation of skilled professionals.
 - **How?** To develop a rich, intentional celebration of success, collaborators should:
 - Determine what you want to achieve with the celebration and establish how student success will be measured.
 - Plan regular events that meet the needs of your community, school, and partners. This can be an awards ceremony celebrating IBCs earned or internships completed, a scholarship program funded by business and industry, a Hall of Fame recognizing top performing students and/or partners, a signing day celebrating students who have secured employment with a partner, etc. Planning events inviting and exposing elementary and middle school students is also an excellent way to expose them to career opportunities while also allowing high school interns to demonstrate their knowledge or speak to their internship experiences.
 - Create an awards ceremony to recognize student achievement of certifications, job placement, etc.
 - Create a School to Work signing day where students enter the workforce upon graduation.