
## Talent Pipeline Management® (TPM)

# TPM RESOURCE GUIDE:

## A Compendium for High-Quality CTE


U.S. CHAMBER OF COMMERCE FOUNDATION

**U.S. CHAMBER OF COMMERCE FOUNDATION**

The U.S. Chamber of Commerce Foundation is dedicated to strengthening America's long-term competitiveness. We educate the public on the conditions necessary for business and communities to thrive, how business positively impacts communities, and emerging issues and creative solutions that will shape the future.

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# Introduction

Welcome to the Talent Pipeline Management® (TPM) Resource Guide for high-quality career and technical education (CTE). The intended audience of this resource is CTE system leaders and practitioners as well as their employer partners; though other stakeholders interested in TPM may also benefit from the resources contained herein.

The purpose of this guide is to build stronger partnerships between employers and the CTE community—bridging the communication divide by providing each with an orientation of the other. Another goal is to demonstrate how TPM can be used as a framework to improve employer-led partnerships with CTE system leaders and practitioners. It is our hope that this resource guide serves not only as an introduction to the TPM framework, but that more CTE systems and programs can begin leveraging and benefiting from this authentically employer-led movement.

## What is TPM

Led by the U.S. Chamber of Commerce Foundation, TPM is designed to be a scalable, authentically employer-led solution designed to close the skills gap in ways that generate a return on investment (ROI) for learners, education and workforce providers, employers, and the communities in which they reside. It is a systemic approach to unlocking employer leadership and engagement in a novel way by speaking the language of—and leveraging strategies and practices associated with—**supply chain management**. The TPM system is taught through the **TPM Academy®** and supported by the TPM Academy curriculum and web tools. It provides a structured process that facilitates employers engaging in collective action, producing primary source data about their workforce needs and challenges, and designing and implementing solutions that address their most pressing workforce **shared pain points**. TPM is built to generate **shared value** for all stakeholders. Launched in 2014, the growing TPM movement is now in 33 states, DC, and Canada, with hundreds of active **employer collaboratives** involving thousands of employers.

## What is CTE

CTE refers to programs of study offered mainly by secondary schools, regional technical centers, and community and technical colleges. These programs of study provide students with the academic, employability, and technical skills and credentials needed to prepare for further education and careers.

## Why a TPM Resource Guide for CTE

We are in an economy that competes on talent. Employers in a variety of industries are facing chronic skill shortages and are eagerly exploring new strategies to work with education partners to address their talent attraction, sourcing, retention, as well as diversity and equity needs.

Learners also must be effective in their pursuit of career awareness and exploration activities and in connecting their education, training, and credentialing to employment. Workers too must find, access, and complete **upskilling** opportunities to achieve upward economic mobility.

Moreover, state leadership, as well as high schools and colleges, are exploring new strategies for engaging employers in ways that improve their responsiveness to employer needs. Complementary to this objective is enhancing **career pathways** and programs of study, particularly if simultaneously addressing opportunity gaps for populations with barriers to education, employment, and career advancement.

Strengthening relationships between employers and CTE is more important now than ever before. However, while the need for stronger employer and CTE partnerships is self-evident and growing, there remains major systemic challenges when it comes to engaging employers and sustaining these partnerships at the scale needed for an economy that competes on talent.

TPM is a field-tested and proven solution that was built by the business community based on their own best practices for partner engagement; these resources include examples of how TPM has been implemented in communities large and small. To date, business associations and employers that have been trained on the TPM approach have applied their learnings to a wide variety of partnerships, including CTE. However, not until this point have we developed a set of resources and support materials that are specific to the CTE community.

TPM is a system and process that complements CTE and can be leveraged in ways that enhance the employer role in these systems by moving employers from an advisory capacity to an **end-customer** role. TPM can be used to strengthen CTE programs in two major ways:

- **The TPM Framework.** TPM provides a framework and shared language for improving understanding and communication between employers and their education and workforce partners.

- **TPM Strategies.** TPM provides a set of strategies, tools, and resources that can be used to improve how employers and education programs work together to develop and implement CTE to get better results for both learners and employers, as well as education and workforce providers.

This guide is meant to bridge the language gap between the CTE and employer communities. It is also a resource for understanding how CTE practitioners can leverage TPM to improve their programs in ways that better connect learners to employment. Whether you are a CTE practitioner or system leader, an employer looking into TPM and how to better partner with CTE programs in their community, or an existing member of the **TPM National Learning Network**—this resource is for you.

## What is Included in the Resource Guide

This guide provides a set of resources that can be used to explore how TPM can be leveraged as a framework as well as a set of strategies, to build stronger employer and CTE partnerships. Building successful partnerships requires employers and the CTE community to develop a mutual understanding of each other's worlds and the roles that different professionals and organizations play in making partnerships work. The guide is designed to both introduce newcomers to TPM as well as enhance the existing TPM movement. In addition to this introduction, the guide is composed of three core resources, identified and described below:

- **Resource 1: CTE Orientation to the Employer Community—**This resource is intended for the CTE community as an orientation to better understand the employer community and the professional roles therein.

- **Resource 2: Employer Orientation to the CTE Community—**This resource is intended for the employer community as an orientation to better understand the CTE community, the professional roles therein, and the policy landscape that undergirds CTE in the United States.

- **Resource 3: Improving Employer Engagement in CTE through TPM—**This resource describes how to use TPM to improve employer engagement in CTE. It (1) provides an orientation to TPM as a framework for organizing employers and talent supply chain partnerships that create shared value for learners, education and workforce providers, and employers; (2) explains how TPM can be used to improve communication and promote shared understanding between employers and the CTE community; and (3) describes how TPM can be leveraged as a transformative approach for engaging employers in CTE program design, delivery, and improvement, especially in ways that expand equity and diversity.

Each resource guide includes recommended actions with questions to consider.

## How to Use the Resource Guide

This guide is intended to be flexible in design to support a variety of uses. The resources can be used as standalone documents or bundled together depending on your needs, or the needs of your audience. The following are examples of how you can use the documents together or separately.

- **Getting the Word Out:** The resources can be distributed via email, embedded in a newsletter, or used as collateral at related events in order to help socialize TPM with potential employer partners or with state and local CTE leaders and practitioners.

- **Meetings/Presentations:** The resources can be used as pre-reading or as a resource to have on hand during one-on-one or group meetings, such as with chambers of commerce or with CTE advisory boards. They can also be highlighted in or used to inform a presentation on TPM, CTE, or employer engagement best practices.

- **Workshops/Orientations:** The resources can be used to structure a workshop with employers and CTE leaders and practitioners to explore best practices for employer engagement, or the TPM framework specifically. It can also be used or featured during an in-person or virtual TPM orientation.

- **TPM Academies:** Should you choose to participate in or design your own TPM Academy, these resources can be embedded in the instruction as well as the delivery of the TPM Academy curriculum. They can also be used to help recruit participants in a TPM Academy.

- **CTE Planning:** The resources can be used by state and local CTE leaders to inform their strategy for organizing sector-based or regional employer partnerships and can be included as part of the design of their **Comprehensive Local Needs Assessment (CLNA)**.

## Further Exploring TPM and CTE

As stated earlier, whether you are a CTE practitioner or system leader, an employer looking into TPM and how to better partner with CTE programs in their community, or an existing member of the TPM National Learning Network—this Resource Guide has something for you. Not all partners will start from scratch; TPM can be used to add value to existing collaborations between the employer and CTE communities to build stronger partnerships with an outcomes-focused approach. If this is your first exposure to TPM, we encourage you to follow up with the U.S. Chamber of Commerce Foundation team, our TPM Fellows, or any current or past **TPM practitioner** to learn more.

In addition to this resource, there is a growing body of work around TPM that is available and waiting for you. We encourage you to explore the TPM Academy curriculum to unpack and learn the many strategies that make up the TPM system and approach. We also encourage those of you that are interested to begin exploring how you can start or join a TPM Academy.

Advance CTE has a series of fact sheets that clarify the career and technical education (CTE) landscape, particularly the Carl D. Perkins Career and Technical Education Act, the federal education program that invests in secondary and postsecondary CTE programs. Here are some selected resources:

**Understanding the Strengthening Career and Technical Education for the 21st Century Act (Perkins V):** A primer on the purpose of Perkins, who benefits, who receives the funding, as well as how the funds are invested.

**How States Use Perkins—The Basics:** This overview includes key findings from state CTE directors on the implementation of Perkins, and how Perkins Basic State Grants are used.

**Getting to Know the State CTE Director Role:** An introduction to state CTE directors, who oversee the implementation of Perkins within their respective states, as well as all features of CTE.

**Career Technical Education Glossary:** A resource that includes specific CTE terms (in addition to the provided Terms and TPM Concepts glossary).

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# Resource 1:
# CTE Orientation to the Employer Community


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# Resource 1: Table of Contents

# Resource 1: CTE Orientation to the Employer Community

This resource provides an orientation of the employer community for CTE practitioners. It is part of a set of resources that, when combined with the Introduction, make up the *TPM Resource Guide: A Compendium for High-Quality CTE*. Building successful partnerships requires employers and the CTE community to develop a mutual understanding of each other's worlds and the roles that different professionals and organizations play in making partnerships work. This resource is intended for the CTE community to better understand the employer community and the professional roles therein.

## Orienting CTE to Employers, Employer Organizations, and Professional Roles

CTE partners seeking to engage the employer community in a partnership should start by understanding the employer ecosystem, how employers are organized and operate, and where and how to engage effectively with their professionals at every level.

**Employers are in both the public and private sectors.**

People think of employers as primarily private sector for-profit employers. However, an **employer** is any person or organization that employs people through a variety of employment relationships ranging from regular full-time employment to contractual employment. Employers can be in both the public and private sectors. They can be for-profit businesses, nonprofit organizations, and government organizations, including the military, as well as schools and colleges themselves. Private sector employers can be registered as United States companies or as companies from other countries with locations in the United States.

## Key Takeaways

Don't forget about employers in the public and nonprofit sectors. State and local agencies as well as schools and colleges are also employers that face their own workforce challenges.

**Employers in the private sector are usually classified by industry and size with one or more physical locations or establishments.**

Employers vary widely in their size and the types of economic activities that they carry out (e.g., manufacturing food products), the goods they produce, and services they provide—across one or more physical locations. These types of economic activities and goods and services produced are called **industries** (e.g., manufacturing, healthcare). Physical locations that carry out one or more economic activities are called employer **establishments** (e.g., store, factory). Small employers—which are the largest job producers in the United States—typically carry out one major economic activity (e.g., food service) at one establishment (e.g., restaurant) within one geographic area (e.g., county). However, larger employers in the private sector, sometimes called **business enterprises**, carry out multiple economic activities through multiple firms with many different establishments around the world and across states, counties, and cities.

In describing the private sector employer community, many refer to small, mid-sized, or large businesses based on the amount of sales and/or number of employees. There are no widely accepted definitions for the amount of sales or number of employees to be classified in each category for specific industries in the United States. The Small Business Administration (SBA) generally refers to small businesses as those with fewer than 500 employees but sets different employment levels for specific industries.[1] Employer size is frequently reported based on the number of employees at a specific business establishment.

The **North American Industry Classification System (NAICS)** is the coding system used by government statistical agencies in classifying business establishments according to their primary economic activity and goods and services they produce at that establishment. This system was developed for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. However, it is used for a variety of administrative purposes, including data collection for unemployment insurance and to produce **labor market information (LMI)** for employment trends and projections at the state and regional levels.

Employers use their own language when describing their industry or industry sector based on what they consider their primary economic activity or core competence. For example, some employers refer to themselves as “manufacturers” even though they have a variety of business establishments carrying out other primary economic activities, including transportation and distribution, information technology, and research and development. They may also have talent management professionals (e.g., human resources) focusing on different **business functions** tied to different economic activities that are relevant to them.

## Key Takeaways

The employer community is incredibly diverse and heterogeneous. When working with larger and more diversified businesses, it is important to understand who you are working with. This includes identifying the workforce needs tied to a primary economic activity (NAICS code), specific to a physical location (i.e., establishment), and within a geographic area (e.g., county). You also want to know the number of employees at these establishments (i.e., size) to better understand the potential scale of career opportunities provided by the employer.

[1] U.S. Small Business Administration Office of Advocacy. (June 2016). *Frequently Asked Questions*. https://www.sba.gov/sites/default/files/advocacy/SB-FAQ-2016_WEB.pdf

**Employers vary in how they organize work and how they define their critical jobs.**

Employers—even in the same industry and of the same size—differ in how they organize the work to be performed in carrying out their primary economic activities. These differences show up most often in how they divide this work between different jobs, job titles, and descriptions, with different levels of compensation. As a result, employers in the same industry vary significantly in how many positions (number of people employed and openings) they have for what types of jobs and with what range of compensation. For example, some healthcare providers have a coordinated care model with advanced practice nurses and registered nurses playing larger roles. This results in higher proportions of nurses relative to doctors and other allied health jobs compared to other hospitals. Another example is a manufacturer that chooses to automate their facilities, requiring higher concentrations of cross-functional maintenance technicians with higher skill requirements relative to production workers.

These differences are typically lost in the government LMI that education and workforce professionals use in determining employer workforce needs for a variety of reasons. First, government job projections use national or state averages in industry staffing patterns (mixture of jobs in an establishment) to calculate job projections. These staffing patterns also are historically-based and may not reflect recent changes in how employers organize work in response to economic, technological, and regulatory environment changes.

In addition, these staffing patterns and resulting government projections are based on government-defined occupations, which are groupings of similar jobs that further hide important differences between jobs. These government defined occupations are represented in the **Standard Occupational Classification (SOC)** system. These SOC codes are then crosswalked to related **Classification of Instructional Programs (CIP)** codes used by CTE professionals to classify their programs of study.

Finally, government job projections at the occupational level are based on government definitions of new and replacement job openings and government methods for estimating these openings. New job openings are those resulting from the creation of new positions due to employer growth or changes in how they organize work. Replacement openings are due to people leaving existing positions due to a variety of reasons, including retirement. Even employers who are similar in how they organize work, define jobs, determine staffing patterns/ratios, and estimate openings, may still differ in how they define their most critical business functions and jobs. **Critical jobs** are those that are most important to the competitiveness and performance of employers at the enterprise and establishment levels.

Employers also differ in how they define and prioritize their **shared pain points** for these critical jobs. Pain points refer to the different types of talent management challenges and priorities being addressed by employers such as unfilled job openings; onboarding, training, and upgrading costs; career advancement, turnover, and retention; and increasing the diversity of their workforce.

For example, two manufacturing businesses define their most critical business functions as engineering and machining with the most critical jobs identified as mechanical engineers and machining technicians, despite their largest number of jobs and job openings in warehouse and distribution operations. Although the two businesses agree on their critical jobs, they each rank them differently in terms of pain point priorities that must be addressed in pursuing workforce initiatives and partnerships. One business has more difficulty recruiting qualified applicants for unfilled job openings for machining technicians, whereas the other faces the most difficulty in increasing the diversity of their engineering workforce.

This important information is not captured in government LMI. As a result, education and workforce professionals often assume the most critical jobs and those with the highest priority pain points are those with the largest number of projected job openings. This is why it is always important for CTE professionals to work closely with employers in gathering information about their most critical workforce needs rather than rely solely on government LMI. While the government LMI can serve as a starting place, data derived directly from employers can fill in important information gaps.

## Key Takeaways

Defining a critical job and agreeing on a critical job are two distinct activities. Not all employers in the same industry organize and define their most critical jobs the same way, even when they use seemingly similar job titles. Always assume that how employers organize work and define jobs will change constantly in a dynamic economy and labor market. In addition, it is unlikely that employers in the same industry agree on which are their most critical jobs and pain points in pursuing workforce partnerships. Be sure to always supplement government LMI with direct and detailed information from your employer partners.

**Employers vary widely on how and where they recruit talent for their most critical jobs.**

Employers—especially larger employers with establishments in different states and countries—carry out talent sourcing at different levels of their organization across different geographic areas for different critical jobs. For example, larger companies use HR professionals and recruiters at the corporate level to hire executives and upper-level professionals based on a global or national search. In contrast, these same companies may decentralize the hiring of mid-level and front-line employees at their different establishments. This sourcing is overseen by HR professionals and recruiters working out of each business establishment who may recruit within more constrained geographic areas based on assumed commuting patterns or where their current employees live. For example, an employer with a manufacturing establishment located in an urban county recruits for the establishment's welders within that county whereas another employer in the same county adds the larger metropolitan area to its recruitment base. Another example is a hospital that recruits nurses exclusively within a metropolitan area, whereas another recruits on a state-wide or national basis.

These important differences in talent sourcing are oftentimes lost in the LMI that education and workforce professionals use in determining employer workforce needs. Government industry and occupational projections are developed for labor market areas based on average commuting patterns between home and work. They may not reflect the talent recruiting reach of some employers, especially for higher wage jobs or those with remote work. In addition, government statistics developed for specific service regions may not reflect the geographic areas employers use to recruit talent for jobs addressed by schools and colleges within these service regions.

## Key Takeaways

Not all employers with establishments located in your area recruit primarily from your area, no matter what is assumed in government LMI. And do not conclude that employers with establishments outside your area are not potential partners. Employer partnerships should be based on geographic areas defined in cooperation with employers based on where they recruit and source talent for their most critical jobs.

**Employers utilize professionals in multiple roles for recruiting and developing talent.**

Employers, especially large employers, generally utilize a variety of professionals playing different roles in addressing their workforce needs. These professional roles go by many job titles, but generally include:

- **Executive Leadership.** Chief executive officers and other upper management professionals are increasingly working with HR professionals to develop strategies and initiatives to recruit, develop, and retain the best talent for their most critical jobs. This executive leadership is critical in gaining the buy-in and resources needed to establish and sustain partnerships carried out by other lower-level professionals.

- **Government and Community Relations.** Professionals that take the lead roles in working with federal, state, and local governments as well as community leaders. They are typically the major points of contact for government and community initiatives, including those in workforce and education.

- **Corporate Social Responsibility (CSR).** Professionals that lead employer initiatives that are charitable or focus on community or social impact. In some companies the CSR role—sometimes referred to as a corporate citizenship role—encompasses or relates to education and workforce efforts that involve direct employer and/or employer foundation funding. These initiatives are mostly designed with a charitable purpose in mind and not for the direct benefit of the company itself.

- **Human Resource (HR) Professionals.** HR professionals are responsible for managing and coordinating core HR functions at the corporate and establishment levels, including recruitment, hiring, and onboarding new employees. They are also responsible for administering compensation and employee benefits, including employee tuition aid programs as well as training and professional development. HR professionals usually work directly with hiring managers to determine the company's workforce needs.

- **Recruitment and Screening.** Professionals responsible for supporting HR by marketing career opportunities, working with talent sourcing partners, identifying and recruiting applicants, and managing the application and applicant tracking and screening process for HR professionals and hiring managers. These professionals can work directly for an employer or with a recruiting company that is under contract with an employer.

- **Hiring Managers.** Those managers who have responsibility for determining the hiring needs and requirements for critical jobs they manage and supervise. Hiring managers typically make the final decision on hiring and career advancement.

- **Training and Development.** Professionals involved in the onboarding and development of new hires as well as the **upskilling** and career advancement of existing employees. This includes professionals who manage specific training programs, such as apprenticeship programs.

- **Other Subject Matter Experts (SMEs).** Employees who are considered experts in the performance of critical work tasks and in understanding the knowledge and skills required to perform these tasks at high levels of proficiency. These experts are usually the most experienced and highest performing workers employed in critical jobs and are consulted by hiring managers or HR professionals when setting hiring requirements.

- **Employee Support Professionals.** Professionals—either employed by the company or retained on contract—that provide a variety of support services to current employees to improve job performance, career advancement and retention, as well as employee satisfaction. They are sometimes employed by a third-party partner who works directly with employees on a confidential basis on matters such as housing, financial literacy, transportation, and childcare.

Many times, the varied categories of professionals are engaged with employer corporate responsibility and recruitment and hiring initiatives at different stages of the pipeline. For example, one professional team is involved with K–12 STEM education initiatives while other teams focus on working with high schools, colleges, and universities for addressing specific hiring needs, while still others work on career advancement for front-line personnel. It is common for these activities to be funded, supervised, and operated independent of one another.

In addition to people working in these professional roles, employers oftentimes encourage employees to engage in volunteer programs. Some employees volunteer to get involved in community initiatives that include education and workforce partnerships. Other opportunities include aiding career exploration activities, serving as mentors, or participating in advisory groups. Most of the time these volunteers are participating as community members or "alumni" of programs and are not operating in any official capacity on behalf of the employer.

Finally, it is important to understand how the size of a business (i.e., small, mid-sized, or large) impacts with which professional you are likely to engage with and the kinds of partnership that company can or will provide. Professionals in small and mid-sized companies play multiple roles and chiefly look to education partners to play critical training and development roles. In addition, top executives and managers are likely more directly involved in education partnerships. For larger employers, top executive and HR leadership buy-in is critical, but they may not get directly involved in partnerships. Also, top executive and HR leadership at the local establishment level (e.g., manufacturing plant managers, retail store managers) could have to get higher-level buy-in from their corporate headquarters to establish partnerships.

## Key Takeaways

Except for small employers, there is rarely a single point of contact inside a company that is capable of addressing and representing the full range of workforce needs a company may have. One must always make sure they are working with the right professionals—or team of professionals—when developing partnerships with employers, whether at the state or local level. Statewide partnerships typically require engagement with executive leadership supported by top HR, training and development, government relations, and CSR professionals. On the other hand, local partnerships typically need to have executive leadership buy-in with strong engagement of front-line HR professionals, hiring managers, trainers, and other subject matter experts. These partnerships may also involve employee support professionals for increasing the success of all learners and workers, especially those facing barriers to career success.

**Employers directly engage in workforce initiatives and partnerships as well as through trusted intermediaries, including business associations.**

Employers directly engage in national, state, and local initiatives and partnerships to address their workforce needs as well as through a variety of industry and professional organizations and other public and private intermediaries. Many of these organizations are based on a membership model where companies pay dues and expect value. Others have employers engaged as one of many partners or in an advisory capacity. Examples include:

- **National, state, regional, and local chambers of commerce.** Chambers are the most widespread business-led associations in the United States and the world, but they are also incredibly diverse. They are independent business entities, but some chambers belong as members to other chambers and form what is commonly referred to as a "federation." For example, the U.S. Chamber of Commerce has a federation of more than 1,500 state, regional, and local chambers as dues-paying members. Chambers are organized in many different ways and play many different roles. Their primary membership is the business community in their defined geographic footprint, but they can include other community partners and leaders as well (e.g., area schools and colleges). Their missions vary, but most typically focus on growing and improving their community, supporting pro-business policies, serving as the "voice" of the business community on issues of importance to companies, and networking.

- **Industry sector organizations.** Business associations that represent employers in specific industries or sectors. These associations can be national or regional (e.g., state-based) in scope. Some examples include the National Association of Manufacturers, the Illinois Manufacturers' Association, and the National Retail Federation.

- **Professional associations and unions.** Many times, employers and employer organizations partner with professional associations and unions to address workforce needs. These associations represent people working in specific trades and professions, such as human resource professionals, engineers, real estate agents, and electricians. An example is the Society of Human Resource Management (SHRM).

- **Special purpose employer organizations.** Organizations that employers join for specific purposes, such as veterans hiring initiatives or STEM education initiatives.

- **State, regional, and local economic development organizations.** Public and quasi-public organizations that promote economic development and work with employers to improve their competitiveness and growth, including improving the workforce.

- **Other intermediaries.** Other public and private intermediaries, such as workforce boards.

These organizations frequently serve as conveners or host events related to education and workforce topics (e.g., addressing a skills gap or closing an achievement gap). Their role is primarily to elevate awareness of an issue, but not necessarily be the lead organization when it comes to implementing a solution. The convener function is usually executed in ways that drive up business member interest and engagement in a new partnership or initiative that is led by others.

In addition to convening employer members, intermediaries also engage directly in original research (i.e., publishing reports with new data) or launch education and workforce initiatives. An example of the latter is when companies coalesce around sponsoring a STEM program in a high school, a robotics competition in a middle school, or a career awareness communications campaign to address misperceptions about or stigmas associated with opportunities in their industry.

It is common for these organizations to be recruited as members of advisory boards or to play a role in a statewide or local initiative tasked with engaging employers. These intermediaries typically are engaged in a similar fashion as employers but are presumed to speak on behalf of their membership and to be able to coordinate requests back to them (e.g., an increase in the number of internship offerings). Business associations are frequently asked to weigh in on industry workforce needs, skills and credentials requirements, labor market forecasting, etc., even if they are not themselves an employer engaged in the primary economic activity and work that is of interest to the advisory board or partnership.

It is important to note that while some business associations have an education or workforce mission and dedicated staff for education and workforce policy and programming, this is by no means the rule. Business associations vary in terms of their capacity and willingness to engage on these issues.

It is also important to note that employers are regularly asked by different state education and workforce agencies as well as different schools and colleges to participate in major initiatives (e.g., a STEM task force), sector partnerships, and advisory groups. This results in employers being pulled in many different directions without knowing how these different partners work together to address their needs. Business and industry associations can play a role in organizing and coordinating employer engagement in ways that can provide benefits to both employers and education.

## Key Takeaways

Many employers address their workforce needs by coordinating their efforts through a business association. These organizations vary, and some have an explicit education and workforce mission—with supporting staff—while others do not. When possible, one should engage them in a partnership, but be sure to identify what role they can play (e.g., convener versus implementer). Associations do not always have the ability to speak directly for their members when it comes to workforce issues. However, these organizations have the potential to be valuable partners for organizing employers in trusted and sustainable workforce partnerships and creating the scale needed (e.g., job openings) to establish and sustain CTE programs.

# Recommended Actions for CTE Programs and Professionals

CTE professionals should consider the following actions in working with employers:

1. **Gather Information about Employer Talent Sourcing Practices and Leverage Existing Employer-Led Initiatives.** Gain insight into how employers currently source talent for the jobs (i.e., local versus regional or national/global) that are most critical to their competitiveness. Conduct a review of existing employer-led initiatives (e.g., sector initiatives) at the state and local levels before engaging individual employers in partnerships.

**Questions to Consider:**

   a. What talent sourcing practices do employers in my area currently use?

   b. For which jobs do they source locally, and which are generally recruited from a larger geographic region?

   c. Which initiatives or partnerships are employers currently bought into that would be a good place to start, and are they using TPM as a framework?

2. **Explore Employer Association Partnerships.** Contact employer associations in your state and local area to identify existing employer-led initiatives. Explore their willingness and capacity to establish partnerships with multiple employers that are willing to work together to address shared needs.

**Questions to Consider:**

   a. Which employer associations (e.g., chambers of commerce, sector associations) have the credibility to organize multiple employers in a workforce partnership?

   b. Which employer associations, if any, have a history of organizing employers successfully or are currently organizing employers in this space?

   c. To what extent are these associations familiar with or are making use of the TPM framework?

3. **Engage the Right Employer Professionals.** When engaging employers, ask employer representatives about their role in their organizations and make sure you have the buy-in and support of higher-level executives and the right professionals at the table who have the decision-making responsibility necessary for effective partnerships. Also, establish who would be the major point of contact for partnerships and which professionals should be engaged when addressing specific issues or priorities.

**Questions to Consider:**

a. Have I secured the buy-in and support of senior leadership at one or more companies and how do I know?

b. For those employers where I have gained the buy-in and support of senior leadership, who is my point of contact and what professional role do they play in the company?

c. Does my point of contact have the support of a team inside the company, and if so, what are their respective professional roles? Are there any potential gaps that need to be addressed?

d. Can TPM provide a more streamlined approach for coordinating teams of professionals within multiple companies through a single point of contact at an association?

4. **Get the Facts Straight First: Gather Data Directly from Employers on Their Needs and Priorities.** Supplement government and other available LMI by working directly with employer association partners and the right employer professionals to identify the most critical jobs, pain points, and the scale of their needs (e.g., projected job openings). Determine whether the level of need and criticality of the openings warrant establishing or expanding a CTE program at a school or college.

**Questions to Consider:**

a. Am I using data to guide planning and decision making and what is the source and assumptions underlying that data?

b. What data, if any, is coming directly from the companies I plan to partner with (e.g., job projections, in-demand competencies and skills) and who is supplying that data within a company?

c. For the critical jobs that are of most interest to the companies I am partnering with, is there a sufficient and consistent enough level of need to warrant establishing or expanding a CTE program or partnership?

d. If there isn't sufficient level or need, what would need to change (e.g., increase in demand by adding more employers to the partnership, or changing the focus)?

e. If the employers and employer association(s) we are partnering with are not using TPM, can it be a useful framework to get clearer, more granular information about employer needs and priorities?

# Resource 2:
# Employer Orientation to the CTE Community

TPM® Academy

## Talent Pipeline Management® (TPM)

# TPM RESOURCE GUIDE:
## A Compendium for High-Quality CTE

U.S. CHAMBER OF COMMERCE FOUNDATION

# Resource 2: Table of Contents

# Resource 2: Employer Orientation to the CTE Community

This resource provides an orientation of the career and technical education (CTE) community for employers. It is part of a set of resources that, when combined with the Introduction, make up the *TPM Resource Guide: A Compendium for High-Quality CTE*. Building successful partnerships requires employers and the CTE community to develop a mutual understanding of each other's worlds and the roles that different professionals and organizations play in making partnerships work. This resource is intended for the employer community as an orientation to better understand the CTE community, the professional roles therein, and the policy landscape that undergirds CTE in the United States.

## Orienting Employers to CTE Systems and Professionals

Employers seeking to establish CTE partnerships should start by understanding CTE programs and how they are funded and administered at the state and local levels, as well as where and how to engage effectively with CTE professionals at each level.

**CTE prepares secondary and postsecondary learners for careers.**

CTE refers to programs of study offered mainly by secondary schools, regional technical centers, and community and technical colleges. These programs of study provide students with the academic, employability, and technical skills and credentials needed to prepare for further education and careers. They include course sequences as well as related **work-based learning** and career exploration opportunities. Credentials include education certificates and degrees, industry and professional certifications, and other types of **industry-recognized credentials**.

Historically, CTE programs have focused on in-demand jobs that require more education and training than a high school diploma, but less than a four-year degree. However, these programs are increasingly designed to provide learners with pathways to four-year college programs, more advanced industry-recognized credentials, and beyond.

States and their school and postsecondary partners offer students program options organized under broader career clusters or pathways, such as those found in the National Career Clusters® Framework (e.g., manufacturing, finance, information technology).[1] These program options are usually listed on school and college websites along with other program and course offerings.

CTE programs are mostly classified and categorized by government-defined coding systems including the **Classification of Instructional Programs (CIP)** which supports the accurate tracking and reporting of program enrollments and completions at the national, state, and local levels. These CIP codes are frequently crosswalked with government occupational coding systems such as the **Standard Occupational Classification (SOC)** system to show the types of jobs that students qualify for after completing programs of study. Both of these types of government classification systems may not fully reflect differences in jobs and programs and should always be used as a starting point when exploring potential employer and CTE partnerships.

CTE program offerings are based on local needs assessments. These needs assessments consider both employers' needs, learners' career interests, and capacity of schools and colleges to deliver different program options. As a result, schools and colleges across a state will offer different program options. For example, a regional technical center may offer an Information Technology program involving an introductory course as well as two advanced courses that prepare learners for related certificates and certifications that make learners ready for employment as well as provide pathways to further education, training, and credentialing.

Many times, these programs provide learners the option to engage in applied or work-based learning opportunities, such as internships, apprenticeships, and cooperative education. They also provide opportunities to participate in student organizations such as the National FFA Organization, HOSA-Future Health Professionals, and SkillsUSA through which they may engage in skills-based competitions at the local, and state, and national levels.

[1] Advance CTE. (n.d.). *National Career Clusters® Framework*. https://careertech.org/career-clusters

CTE also provides opportunities for middle school, secondary, and postsecondary learners to explore career options before enrolling in programs of study. These career exploration opportunities include career advising, career awareness events at schools and colleges, and company tours and job shadowing opportunities. In all, CTE provides a wide variety of career exploration, skills development, and credentialing opportunities that reach a large share of secondary and postsecondary learners. For example, some form of CTE offering is estimated to reach more than 90% of high school graduates.[2]

In the past, CTE was considered an alternative option for students who were considered non-college bound and needed preparation to directly enter the workforce. As a result, CTE enrolled a disproportionate share of learners from low-income and minority households and those historically marginalized populations facing multiple barriers to employment. Now, CTE is a preferred option for both the college and non-college bound and is seeking ways to reduce opportunity and achievement gaps for all students in pursuing further education and careers. As a result, CTE provides employers with opportunities to develop programs that can serve all students and provide career advancement opportunities for a wide variety of populations targeted in their workforce diversity initiatives.

## Key Takeaways

Employers should explore how to partner with schools and colleges to develop and deliver CTE programs of study that meet their needs. These CTE programs of study provide an important **career pathway** option in developing talent pipelines. However, employers must recognize that these programs can only be offered if learners have sufficient career interest to enroll in them and schools and colleges have the capacity and resources to deliver them.

[2] National Center for Education Statistics. (2011). *Postsecondary and Labor Force Transitions Among Public High School Career and Technical Education Participants*. http://nces.ed.gov/pubs2011/2011234.pdf.

**CTE programs have service areas.**

It is important to recognize that CTE programs offered by schools and colleges have defined geographic areas they serve, usually defined by school district and college district boundaries. They are likely involved in one or more regional partnerships that include area or regional technical centers and more than one college. Sometimes schools and colleges have partnerships that enable their programs to be offered outside their districts and regions. In parallel, employers may be involved with other workforce partners, such as local workforce investment boards, that often have different service areas.

Employers frequently recruit potential employees beyond the boundaries of one school or college district and may want to explore more regional partnerships involving cooperation between multiple schools and/or colleges. They may also want to include other education and workforce partnerships that have different service areas.

## Key Takeaways

Employers should explore how to establish partnerships with schools and colleges that have service areas within the regions from where they source talent, not just geographic areas defined by others.

**CTE programs are administered by and delivered mainly through school districts, regional centers, and community and technical colleges, involving a variety of professionals.**

**Secondary CTE Programs**. At the secondary level, CTE programs are usually administered by school districts at one or more high schools or through regional or area technical centers, which provide shared CTE courses for two or more school districts (and sometimes adult learners as well). School district professionals that are important in planning, funding, and managing CTE programs include both upper-level administrators that have responsibilities across the entire school system, and middle- and lower-level administrators focused more specifically on CTE program offerings. There are also instructors or faculty who develop and deliver the programs in classrooms and coordinate related activities, such as work-based learning, student organizations, student services, and advising. Finally, there are the academic and career counseling and student services professionals who guide and support learners.

Increasingly these secondary school professionals work with their counterparts in middle schools to provide career exploration and applied learning opportunities that can prepare middle school students to enroll in secondary CTE programs of study.

While these professional go by many occupational titles, the key professional roles include:

- **Superintendents and Associate/Assistant Superintendents.** Upper-level administrators that set the district-level strategic direction and resource allocations for academic and CTE programs and related student services, such as career counseling and advising. They also address how CTE programs are coordinated with academic and other career-related programs and strategic initiatives, such as STEM education.

- **High School Principals and Associate/Assistant Principals.** Administrators who oversee curriculum and instruction at the school level and who set the strategic direction and resource allocations for academic and CTE and related student services, such as academic and career counseling.

- **Regional Coordinators and Technical Center Administrators.** Administrators that plan and manage regional programs that serve learners from multiple school districts. These regional centers often have programs that involve specialized faculty and equipment that cannot be easily acquired and managed by just one school district or high school.

- **CTE Administrators and Department Chairs.** Administrators that manage CTE funding and work with faculty in planning, developing, and offering CTE programs. Many are also instructors themselves in one or more programs and play coordinating roles with key partners, such as employers.

- **CTE Program Faculty and Instructors.** Full-time and part-time instructors who teach one or more courses and coordinate work-based learning and student organization activities. These instructors usually have widely varying backgrounds with many part-time instructors having recent industry experience related to the courses they teach. Schools frequently have a difficult time in recruiting and retaining qualified faculty for programs in high-demand fields where industry can pay more than schools or where teacher licensure rules pose barriers to entry for existing professionals.

- **Counseling and Advising Professionals.** These professionals assist learners and their parents or guardians in planning their programs of study and enrolling in required and elective academic and CTE courses to meet graduation and credentialing requirements. They also provide assistance in exploring career opportunities and planning transitions to further education and employment. They play important roles in planning and coordinating career events and experiences, such as student field trips, job shadowing and mentoring programs, and career fairs.

- **Student Services Professionals.** These professionals provide and coordinate access to student services (e.g., counseling and social services) that are important for enrollment, program completion, and successful transitions. These services can be particularly important for opportunity populations that face one or several barriers to education and employment.

Another potential player in supporting CTE programs is an education service agency, which is a publicly funded, regional structure charged with developing, managing or providing services or supports to local school districts. These agencies, which go by a range of names depending on the state, may support CTE curriculum development, professional development, or technical assistance.

**Postsecondary CTE Programs.** At the postsecondary level, there are a set of parallel administrative, faculty, and student service roles. However, there is one important difference. Community and technical colleges offer CTE-related programs on a credit and non-credit basis, which involve different administrative and funding structures, as well as faculty. These programs provide different types of advantages and disadvantages in establishing employer and CTE partnerships. Many colleges use their non-credit options to respond more quickly to employer needs through customized training programs and targeted initiatives that then can be used to make improvements in regular for-credit CTE programs. It is important to note that when a non-credit option is used, they may not be aligned with for-credit programs that allow students to pursue career pathway opportunities through related programs of study at the college or university levels that result in a degree.

In addition, many colleges work directly with industry partners and employers to deliver joint programs, such as apprenticeships, where colleges deliver some or all of the classroom components.

While these professionals go by many occupational titles, the key professional roles in postsecondary CTE include:

- **Presidents and Provosts.** Upper-level administrators who set the strategic direction and resource allocations for academic and CTE programs as well as related student services. They also address how CTE programs are coordinated with academic and other career-related programs on both the credit and non-credit sides of the college.

- **College Deans and Department Chairs.** Deans directly manage budgets and faculty for large program areas, such as arts and sciences; science, technology, and engineering; and nursing and health sciences. Unlike high schools, colleges also have deans or other types of high-level administrators that manage non-credit programs as part of continuing education offerings. Department chairs manage budgets and faculty for more specific programs, such as nursing. Similar to the secondary level, deans and department chairs are also frequently instructors in one or more programs and play coordinating roles with key partners, such as employers.

- **CTE Program Faculty and Instructors.** Full-time and part-time instructors who teach one or more courses and coordinate work-based learning and other instructional related services. These instructors have varying backgrounds with many part-time instructors having recent industry experience related to the courses they teach. Like high schools, colleges often have a difficult time recruiting and retaining qualified faculty for programs in high-demand fields where industry can pay more than colleges.

- **Counseling and Advising Professionals.** These professionals assist students and their parents and guardians in planning their college programs of study and enrolling in required and elective academic and CTE courses to meet college completion and credential requirements. They also provide assistance in exploring career opportunities and planning transitions to further education and employment. They play important roles in planning and coordinating career events and experiences.

- **Student Services Professionals.** Similar to high schools, these professionals provide and coordinate access to student services (e.g., counseling and social services) that are important for many learners in enrolling and completing programs and making successful transitions. These services can be particularly essential for opportunity populations that face one or several barriers to education and employment.

**Cooperative Secondary and Postsecondary CTE Programs.** School districts and colleges generally partner together in developing more coordinated programs of study for learners based on articulation agreements that begin early in high school and continue into college. They are composed of jointly developed and delivered courses at high schools and colleges (e.g., dual enrollment or dual credit), and often result in learners attaining one or more credentials in an in-demand field. These cooperative programs of study routinely involve multiple school districts, regional centers, colleges, and universities.

## Key Takeaways

Similar to the employer community, the types of CTE offerings and the professionals involved in their delivery are as diverse as they are complex. Employers will need to engage school and college partners at all levels, including administrators, faculty/instructors, and support services, at the middle school, secondary school, and postsecondary levels. This is essential to ensure there is sufficient commitment and capacity to develop and maintain strong, comprehensive, and responsive career pathway partnerships.

**CTE professionals are members of professional associations.**

National and state CTE professional associations provide professional development opportunities and resources that are important in building partnerships between employers and CTE programs and practitioners. These associations include those for administrators, teachers and instructors, as well as advising and counseling professionals. Here are some of the major CTE associations and association types:

- **Advance CTE.** A national organization representing state CTE Directors and state leaders responsible for secondary, postsecondary, and adult career and technical education. Advance CTE provides its members a variety of advocacy, state policy support, and professional development services.
- **Association for Career & Technical Education (ACTE).** A national organization representing CTE professionals at the state and local levels. ACTE has affiliated state associations and divisions representing major key career areas (e.g., agricultural, business, engineering, and technology education), counseling and career development as well as services, such as work-based learning/youth apprenticeship programs and those supporting special populations.
- **Career Area Professional Organizations.** These organizations provide program resources and professional development services for faculty and instructors, such as the National Association of Agricultural Educators and the National Association of Industrial and Technical Teacher Educators.
- **Other Professional Organizations.** These organizations provide professional development opportunities for key school and college professional roles, such as the American School Counselor Association (ASCA).
- **National Initiatives and Networks.** These initiatives and networks provide program, curriculum, and professional development resources, such as High Schools That Work (HSTW) and Project Lead the Way (PLTW).
- **Student Organizations.** Student organizations that facilitate peer learning and networking, connect CTE professionals to CTE students through mentorships, and engage students in planning and managing competitions, such as those that are facilitated by the National FFA Organization, HOSA-Future Health Professionals, and SkillsUSA.

## Key Takeaways

In building CTE partnerships, employers should work with CTE professionals in schools and colleges to explore opportunities to leverage and support CTE professional organizations that can provide important resources and best practices in building strong CTE programs of study as part of talent pipelines.

**Employers have many options in engaging with CTE at the local level.**

There is a long history of employer engagement in CTE partnerships and well-documented best practices. Today, employers have many options when engaging with CTE, including traditional options, such as:

1. **Career Advising and Exploration.** Provide support to career counseling and exploration opportunities, including career advising materials, career day events, company tours and field trips, and career mentoring.

2. **Advisory Groups.** Participate in program advisory groups for developing and improving programs, curriculum, and credentials.

3. **Curriculum Development.** Provide resources and experts for developing curriculum, including learning and assessment materials, and aligning credentials.

4. **Classroom Instruction.** Provide guest speakers and team teachers for delivering classroom and lab instruction.

5. **Work-based Learning.** Provide work-based learning opportunities in the form of apprenticeships, internships, cooperative education, and/or student and student team projects.

6. **Student Organizations and Competitions.** Provide support for student organizations and coach and judge national, state, and local student competitions.

7. **Professional Development.** Conduct teacher outreach and provide externships and other professional development opportunities to school and college faculty and other professionals.

8. **Student Recruitment and Hiring.** Conduct job fairs and other recruitment and hiring activities in cooperation with schools and colleges.

9. **Funding, Equipment, and In-Kind Contributions.** Provide direct funding to schools and colleges for curriculum, up-to-date equipment currently used by employers (e.g., machinery and tools), and other purposes as well as provide in-kind contributions, such as access to company facilities and equipment.

Employers should also work with their school and college partners to explore additional non-traditional options. Also, employers should collaborate with their peers as well as schools and colleges to take a more comprehensive and coordinated approach that creates the most **shared value** for employers, education partners, and learners.

## Key Takeaways

To be successful, employers cannot choose to participate periodically in just one or a few CTE engagement opportunities in response to requests from schools or colleges. Rather, employers should work together to take a more proactive and comprehensive partnership approach that addresses the full spectrum of engagement opportunities, from career exploration to classroom instruction, student organizations and competitions, and work-based learning to employment and career advancement.

**CTE programs operate under complex federal and state funding and administrative structures as well as accreditation requirements that provide both incentives and constraints.**

CTE receives federal funding from the U.S. Department of Education through the Carl D. Perkins Career and Technical Education Act, otherwise referred to as "Perkins." The most recent Perkins legislation is the Strengthening Career and Technical Education for the 21st Century Act, otherwise known as Perkins V. This Perkins funding flows from designated state secondary and/or postsecondary education agencies such as state departments of education and community college boards to local schools and community colleges. In a few states, this funding is coordinated through regional delivery systems involving different school districts and colleges within a geographic area. States and their school and college partners may choose to deliver CTE programs through regional technical centers as well as school and community college partnerships.

This federal funding represents only about 10% (approximately $1.5 billion) of total CTE funding with the remaining funding from state and local sources. However, Perkins funding comes with significant federal requirements that are very influential in setting state and local priorities and funding levels. As a result, Perkins requirements provide a starting point for states in exploring more robust employer engagement in:

- State and local planning and needs assessments, including employer needs and priorities;
- Setting competency and skills standards and identifying industry-recognized credentials for students in different programs of study;
- State and local advisory groups, including advisory committees for specific CTE programs at schools and colleges;
- Work-based learning and professional development opportunities for CTE teachers, and other types of monetary or in-kind contributions needed for high-quality programs; and
- Performance goal setting on key metrics important to employers and other partners.

While Perkins is a useful starting place, it is important to keep in mind that state agencies provide the most guidance to schools and colleges offering CTE programs. State agencies establish policies for planning and approving programs and how these programs are funded. They also sponsor and promote national and state initiatives in addition to providing technical assistance and networking opportunities. State education agencies also further define teacher certification requirements at the secondary school level and how CTE programs address academic standards.

It is important to note that not all CTE programs are tied to Perkins. Many states operate career pathway initiatives and STEM programs that are driven by state investments and not directly tied to Perkins, though the processes they use to plan, implement, and improve them are more often than not similar to requirements established under Perkins.

In addition, states and local levels are often implementing Perkins and CTE in a complex environment where multiple legislative initiatives and administrative requirements converge. For example, the **Every Student Succeeds Act**—otherwise known as ESSA (its predecessor was No Child Left Behind)—defines the federal role in K–12 public education. It requires each state to implement a statewide plan that includes a wide variety of administrative procedures, goal setting, performance targets, and interventions, particularly for failing schools.

There is more than just Perkins and ESSA. State education and workforce agencies and schools and colleges are involved in coordinating a multitude of education and workforce-related funding streams that impose incentives and constraints on the ability of local programs to partner with and be responsive to employer needs. Some organizations, like the Bipartisan Policy Center, have counted as many as 47 different federal workforce programs that filter down into states and communities.[3]

[3] Douglas, J. (2013, September 9). *Workforce Laws Aren't Meeting the Needs of Workers*. Bipartisan Policy Center. https://bipartisanpolicy.org/blog/workforce-laws-arent-meeting-needs-workers/.

For example, the **Workforce Innovation and Opportunity Act (WIOA)** is overseen by the U.S. Department of Labor and has federal funding flow through states and to local workforce boards. Under WIOA states are required to have yet another plan and they are encouraged to work in coordination with those agencies and local partners that are involved in implementing related legislation, such as Perkins. WIOA is an entirely separate infrastructure from Perkins but can be inclusive of the CTE community with some CTE leaders serving on state and local workforce boards and some programs drawing resources from multiple funding streams overseen by different state and federal agencies.

In addition to federal and state funding streams and programs, schools and colleges must maintain accreditation by a wide variety of national accreditation organizations. Accreditation is partially determined by how schools and colleges maintain the quality of the programs they offer. There are also specialized accreditors for specific types of programs. These specialized accreditors may be associated with industry and professional certification organizations. These accreditation requirements provide important benefits in ensuring program quality, but they also may provide constraints for schools and colleges in working with employers and how quickly they can respond to changing employer needs. For example, faculty qualification requirements can restrict the ability of local schools to staff a classroom with qualified instructors that also have recent industry experience.

Given this complex environment, it is important for employers to recognize that schools and colleges will vary widely in the resources they have to engage in partnerships and respond quickly to employer needs. However, employers can play a major role in working with partners to align incentives and remove unnecessary constraints.

## Key Takeaways

Federal funding for CTE is relatively small but sets priorities and requirements that are important for employers to understand. CTE is mainly funded and administered at the state and local levels, which is why employers should start there when building CTE partnerships. Employers should always recognize that federal and state funding and accreditation requirements frequently provide constraints on how quickly schools and colleges can establish and make changes in their programs. One of the most common constraints is faculty/teacher qualification requirements, especially licensure and certification requirements at the secondary level. In addition, schools and colleges vary in the level of funding and other resources that affect their capacity to address employer needs.

Employers can play a major role in the planning and implementation of CTE systems and programs. They can help ensure the right incentives to partner are in place while at the same time navigating or removing constraints that may prevent schools and colleges from working with employers in the ways they want and need.

# Recommended Actions for Employers

Employers should consider the following actions in working with CTE:

1. **Compare Critical Job Needs to Existing CTE Programs of Study.** Identify your most critical jobs that can be addressed in CTE partnerships and conduct a review of existing CTE programs of study offered that have the potential and capacity to address your needs within the geographic area from where you hire workers.

**Questions to Consider:**

   a. Has your company—or collaborative that you are part of—identified the most critical jobs or business functions to focus on, and, if so, what are they?

   b. What CTE programs of study are currently available and is their focus consistent with the priority needs of your company or **employer collaborative**?

   c. If the focus is not consistent, is there willingness and capacity for those programs to change their focus or to stand up a new program?

   d. If the priorities are consistent, do they have sufficient scale to address your needs or will your company or collaborative require multiple CTE partnerships?

2. **Identify and Prioritize Opportunities for Partnerships.** Work with CTE professionals involved with the planning, management, and delivery of CTE programs of study to evaluate the degree of fit between employer needs and the willingness and capacity of these programs to address these needs. Identify and set priorities in where to start in establishing or improving partnerships.

**Questions to Consider:**

   a. Have you secured senior level buy-in and support from your CTE partners and how do you know?

   b. Have you been assigned a point of contact and, if so, what is their professional role?

   c. Is your point of contact supported by a team of professionals, and if so, what are their respective roles?

   d. Do you have and know the right points of contact for planning, managing, and delivering a talent pipeline solution and are there any gaps?

   e. Is there agreement on the priorities to be addressed in the partnership and is the data being used coming from the employers directly?

3. **Collaborate with Other Employers on How Best to Engage CTE in Your Talent Pipeline Solution.** Where possible, engage with employers that have similar needs when working with CTE providers. Collaborating with other companies has many advantages, including increasing the level of need which, in turn, increases the responsiveness and ability of a CTE partner to address that need. Employer associations that already organize employers and are expected to deliver value are a natural fit to coordinate multiple employers around a shared workforce solution.

**Questions to Consider:**

a. If you are not already, is there value in engaging with other employers around a shared workforce solution? Is there evidence to support there being a shared need and **pain point** where you are better off addressing it together rather than pursuing solutions separately?

b. Is there an employer-facing association that has the capacity and willingness to bring employers together in pursuit of a shared workforce solution, and would TPM provide a useful framework for organizing as an employer collaborative?

c. What are some advantages you see in engaging CTE as an employer collaborative rather than going it alone, and are there any disadvantages?

d. When combining your needs with other employers, is the level of demand sufficient enough to partner effectively with CTE partners, and if so, what evidence supports your conclusion?

# Resource 3:
# Improving Employer Engagement in CTE through TPM


## Talent Pipeline Management® (TPM)

# TPM RESOURCE GUIDE:
## A Compendium for High-Quality CTE


U.S. CHAMBER OF COMMERCE FOUNDATION

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# Resource 3: Improving Employer Engagement in CTE through TPM

This resource describes how to use TPM to improve employer engagement in CTE. It is part of a set of resources that, when combined with the Introduction, make up the *TPM Resource Guide: A Compendium for High-Quality CTE*. This resource (1) provides an orientation to TPM as a framework for organizing employers and talent supply chain partnerships that create **shared value** for learners, education and workforce providers, and employers; (2) explains how TPM can be used to improve communication and promote shared understanding between employers and the CTE community; and (3) describes how TPM can be leveraged as a transformative approach for engaging employers in CTE program design, delivery, and improvement, especially in ways that expand equity and diversity.

## TPM as a Transformative Approach to Organizing and Partnering with Employers

At its core, TPM is a systematic approach for getting employers to engage in collective action and it is a structured process of data collection and decision-making. The result is authentically employer-led education and workforce partnerships that are adaptive to changing needs, sustainable through activating an employer return on investment (ROI), and provide shared value creation for all stakeholders involved.

TPM is both a framework and a process. It is a framework in that it provides clear roles and direction for all stakeholders in the talent development ecosystem, with a particular emphasis on how employers need to get organized, at scale. TPM also provides a common language for employers and education partners to communicate. Finally, it provides a process for employers to repeatedly produce high-quality, primary source data about their workforce needs and challenges. TPM is the mechanism by which this information is shared with preferred and trusted partners, including CTE stakeholders, which results in co-designing a talent pipeline solution.

Individual employers, especially larger employers, may choose to implement TPM by themselves. However, there are many advantages for employers to work together including higher visibility, shared expertise and peer learning, streamlined solutions, and greater scale (e.g., number of job openings) and leverage when working with education partners. As a result, employers, especially small- to mid-sized employers, may voluntarily elect to be part of a collaborative of employers that is staffed by a **host organization** of their choice. Host organizations are typically—but not exclusively—a business association like a chamber of commerce, sector association (e.g., a manufacturing partnership), or economic development organization. In our experience even large firms see the benefits of working in collaboration with other employers rather than going it alone.

Once organized, employers are guided through a six-strategy process that, when combined, makes for a talent supply chain approach. The six strategies are:

- **Strategy 1: Organize Employer Collaboratives—** A group of employers form an **employer collaborative** around one or more **shared pain points** and determine the critical **business functions** and occupations they will work together to address. Shared pain points can include improving the qualifications of new job applicants, reducing onboarding and training costs, improving retention, and increasing workforce diversity. Business functions can include workforce roles such as nursing, machining, and software development, which allows employers to focus on the core work requirements without getting caught up in the semantic minutia of differing job titles.

- **Strategy 2: Engage in Demand Planning—**The employer collaborative produces data on projected new and replacement positions for the targeted jobs based on their workforce planning activities and business assumptions. This information is primary source data and is specific to the collaborative; as a result, it will often stand in contrast to data pulled from government occupational projections or data produced by analyzing job postings.

- **Strategy 3: Communicate Competency and Credential Requirements—**In addition to collecting data on new and replacement positions, the employer collaborative develops a shared language to describe required and preferred hiring requirements for their target business functions or occupations. As part of this process the

employers in the collaborative revisit their current hiring requirements and revise them to be more competency- and skills-based. They also make important decisions about proxies such as required or preferred credentials and experience that could be constraining their ability to tap into available talent pools.

- **Strategy 4: Analyze Talent Flows—**The last part of the collaborative's data collection efforts include analyzing their current talent sourcing patterns and where they could get talent from in the future. This strategy involves employers looking at the education, training, and credentialing source for those workers who either applied or were hired so they know where their current workers come from. It also involves analyzing the capacity of current talent sources in order to answer questions like, "Can my current talent sourcing partners meet our projected demand given our current utilization of those sources (i.e., the number or percentage hired by the collaborative from those sources)?"

- **Strategy 5: Build Talent Supply Chains—**Using the primary source data organized by the collaborative through Strategies 2–4—and the pain points arrived at in Strategy 1—the employers make decisions about the type of talent pipeline that is best suited to their needs (i.e., **upskill** existing workers, recruit and onboard external hires, or both) and who they will work with to co-design and implement their solution(s). This strategy begins the process of putting data into action and using it to co-design a talent pipeline that can meet the projected needs of employers while delivering a quality education and training experience to learners that results in employment. This part of the TPM system also allows for back-and-forth between the employer collaborative and their talent sourcing partners on things such as the required and preferred competencies and credential requirements and which partner—including the employer—is responsible for addressing them.

- **Strategy 6: Continuous Improvement—**After implementing a solution with preferred and trusted partners, the employer collaborative collects and uses agreed-upon performance data to identify **continuous improvement** opportunities. This includes reviewing both leading indicators, such as enrollment and completion data, but also lagging indicators that are important to employers, such as improving the yield rate of qualified job applicants and reducing turnover. Through TPM, both the employer collaborative and their talent pipeline partners are provided a process to analyze the data, identify root causes, test solutions, and scale what works, all with an eye toward improving the ROI for employers, learners, and providers.

## Key Takeaways

A key differentiator for TPM is that it encourages employers to work together to achieve the scale necessary for establishing effective employer and CTE partnerships. TPM also enables employers to get together to get the facts straight prior to engaging their talent sourcing partners. The ability to get organized around shared workforce needs, produce primary source data about those needs, and work through a trusted intermediary to design a solution to meet those needs, is what makes TPM a powerful value-add to any CTE partnership.

## TPM Improves Communication and Promotes Shared Understanding between Employers and CTE

TPM enables employers to get on the same page in terms of their most pressing needs and to take action in ways that result in an employer ROI as well as shared value for education partners and learners. It also is a useful framework for employers to develop a shared language and understanding as they collaborate as a team. What is more, TPM can help bridge the divide between employers and CTE by opening up new lines of communication with more consistent, higher quality data backed by stronger, more sustainable employer leadership. Below are just a few examples of how TPM, through improved communication, helps promote shared understanding between employers and CTE:

**TPM organizes employers around critical jobs in well-defined geographic areas using trusted employer associations or other intermediaries.**

TPM encourages employers to organize employer collaboratives when building a talent supply chain solution. TPM provides the collaborative with a structured process to clearly define their most pressing workforce pain points, their **critical jobs**, and the geographic areas they will start with when working alongside their education and workforce partners. TPM provides employer collaboratives an end-to-end process that engages the right professionals at the right time to clearly and consistently communicate their most critical needs and workforce priorities to their partners.

TPM encourages employers to use trusted employer associations, such as chambers of commerce, referred to in TPM as a host organization to implement the TPM process, aggregate their primary source data, facilitate decision-making among the collaborative members, and manage the resulting relationship with education and workforce partners. The host organization that is staffing the employer collaborative can serve as their spokesperson resulting in more consistent and higher quality communication from employers while also greatly reducing the time and cost associated with engaging employers in education and workforce partnerships.

**TPM helps develop the information CTE professionals need in order to start partnerships and develop programs, or improve on existing relationships and programs.**

TPM employer collaboratives do more than just identify their most critical jobs, they also provide critical information on projected job openings that can complement more traditional government **labor market information**. TPM also encourages employer collaboratives to use a shared language to describe similarities and differences in hiring requirements, including competency and credential requirements, which can be used as the starting point in building partnerships with schools and colleges or as an opportunity to improve on existing partnerships.

**TPM provides an employer-led process for engaging CTE partners in developing talent pipeline solutions that serve as high-performing career pathways for CTE programs of study.**

TPM provides guidance to employer collaboratives in how to develop a talent supply chain solution within and across companies. It also prepares them for how to work productively with their education and workforce partners to co-design talent pipelines with clearly defined roles at different stages of the pipeline and an agreed-upon set of performance metrics that communicate shared value creation.

TPM provides a comprehensive step-by-step process that employers can use in providing needed information to develop employer-led **career pathways** that include CTE programs of study. This process allows employers to be more proactive in working with schools and colleges to determine each other's respective roles. It also helps identify what employer roles or engagement opportunities are most important in producing results. In addition, TPM provides a framework for working with school and college administrators, state CTE agencies, and other partners to better align resources and incentives to improve the delivery and performance of career pathway systems and CTE programs of study.

## Key Takeaways

TPM can be a powerful tool to help bridge the communication divide between employers and the CTE community. It can also promote shared understanding between the two sides. When leveraged in the right ways, TPM can scale and sustain employer engagement with CTE programs as well as significantly improve both the quality and level of that engagement. The result is saved time and resources with improved outcomes for all stakeholders.

## Using TPM to Inform CTE Program Design, Delivery, and Improvement

As previously presented, TPM provides a framework and shared language for improving understanding and communication between employers and their education partners. In particular, TPM provides an important foundation for building employer and CTE partnerships, or improving upon existing partnerships. We now explore how specific TPM tools and resources can accomplish this at the state and local levels. We focus on three major CTE processes: (1) planning and needs assessment; (2) program development, approval, and funding; and (3) performance management and continuous improvement.

We also focus on how TPM can be used to promote equity in CTE programs. In particular, we explore how TPM can be used to establish or expand high-quality CTE programs that can close opportunity and achievement gaps for learner populations facing barriers to career and education advancement.

**State and local planning and needs assessment.**

Federal and state CTE policies place a strong emphasis on developing state and local CTE plans based on a comprehensive understanding of the needs of employers, students, and the communities served by CTE programs. In particular, the new **Comprehensive Local Needs Assessment (CLNA)** is one of the most significant federal legislative changes introduced in Perkins V. Many states are leveraging this new federal requirement to improve state and local planning processes.

One major aspect of state and local planning and needs assessment is making sure that CTE programs are aligned to local workforce needs and are addressing in-demand jobs. State agencies, schools, and colleges historically have used state government industry and occupational projections as the basis for talking with employers, employer associations, and local economic development organizations about local and regional needs. Government LMI is a good starting point but it does not always reflect the current and emerging needs of local and regional employers and what jobs are most critical for their continued success and the economic development of communities and regions where they are located.

Another major aspect of state and local planning is identifying existing CTE programs that may already address in-demand jobs and determine whether the level of demand (e.g., number of projected job openings) matches up with the supply of students coming from existing programs. This supply-demand analysis is usually based on crosswalks between government-defined job taxonomies—projected job openings by **Standard Occupational Classification (SOC)** codes—and program classifications—program enrollees and completers by **Classification Instructional Programs (CIP)** codes—and is not informed by how one or more specific employers actually define their jobs, their level of demand, or where they typically source their most qualified job applicants from.

State agencies, schools, and colleges also convene employer advisory groups, work groups, or task forces to identify their needs and priorities, but many times they are not successful in fully engaging employers in this process. The employers involved are often a small sample of the employer community and it can be unclear what role they play in the organization or how deep their knowledge is of their company's or **industry's** needs. It is common for employers in these roles to be put in a position to react to government LMI and other resources instead of them generating and sharing information themselves.

In addition, many states are surveying employers and talking to industry associations to identify **industry-recognized credentials**, including industry certifications that should be addressed in program development, funding, and related performance metrics and incentives. Many times, schools and colleges use needs assessments and program planning processes to develop similar information for their programs. States, schools, and colleges differ in how successful they are in engaging employers to identify these credentials. The result is often a static list of credentials that was produced in a moment of time with relatively few employers validating them.

TPM provides a powerful framework and set of tools for employers to play a more proactive role in using their own data to identify in-demand jobs and provide employment projections for their most critical jobs at the local and regional levels. It can also be used to identify competency and credential requirements for these jobs, including industry-recognized credentials that are required or preferred in the hiring process. This higher quality data can be leveraged by states, schools, and colleges.

In addition, TPM can be leveraged by states, schools, and colleges to perform a more accurate supply and demand analysis. The TPM approach conversely does not rely on assumptions in traditional supply-demand analysis based on government job and program classification systems. It encourages employers to identify the programs from where they currently get qualified applicants. As a result, TPM can be used to better determine whether employers with critical in-demand job openings are actually hiring students from existing CTE programs. It can also help determine how much of the available talent they are effectively acquiring as well as the available or potential capacity of these programs to meet projected future demand.

## Success Story: Employer-Driven Data Influences State Healthcare Investment

Due to critical healthcare skills shortages in the region, the Greater Phoenix Chamber Foundation organized the Hospital Workforce Collaborative using TPM. Traditional labor market data indicated that the lack of medical assistants was the hospitals' major pain point. However, data produced by the collaborative members themselves using the TPM framework revealed their greatest need was actually in developing and retaining nurses in six specialty practice areas; occupations that were not even reflected in traditional labor market information tools.

The collaborative of employers established a partnership with the Maricopa County Community College District (MCCCD). In addition to using the TPM framework to determine the focus of the collaborative, they used it to assess the facilities and resources needed to deliver specialty nursing training across the district's 10 community colleges. This planning process identified a need for additional simulation facilities and labs that can meet the needs of the employer collaborative and region.

Through coordination and support of the collaborative and business community, MCCCD was able to secure an appropriation of $5.8 million from the state legislature to develop a new clinical simulation facility. The leadership of the collaborative in the planning and need assessment process paid off.

The program boasts a potential for graduating up to 300 students by 2021, doubling the current number of nursing students in the region. Combined with an increase of at least five new programs and multiple tracts for upskilling existing working nurses, the potential for growth of the healthcare workforce in Arizona is extraordinary.

https://www.forwardontalent.org/stories/hospital-workforce-collaborative/

## Key Takeaways

TPM can strengthen the comprehensive local needs assessment (CLNA) by:

**Strategy 1:** Establishing employer collaboratives that can actively participate in the needs assessment process and identify the most critical in-demand jobs at the state and local levels.

**Strategy 2:** Providing more up-to-date and detailed information on projected job openings for these jobs and the lead times for filling them, that can be used in establishing local program of study priorities.

**Strategy 3:** Providing detailed information on hiring requirements, including competency and credential requirements that can be used to identify industry-recognized credentials and define the competencies and credentials addressed in CTE programs of study.

**Strategy 4:** Providing a new and more accurate approach to supply-demand analysis and determining which existing CTE programs are actually supplying qualified talent for in-demand jobs within their local areas and the capacity of these programs to meet projected future demand.

**Program design and implementation.**

Federal and state policies, including state and local needs assessments, also place a strong emphasis on developing and implementing CTE programs that address employer and other stakeholder needs. Oftentimes the local needs assessments are used when forming advisory groups as well as informing state policy such as program approval and renewal. They also put a strong emphasis on leveraging other public and private funding and support necessary for program success.

First, advisory groups are strongly encouraged or required by schools and colleges in order to initiate a new CTE program or renew an existing one. Many times, these advisory groups represent a variety of stakeholders in addition to employers, such as students, alumni, parents, faculty, administration, and representatives of other education organizations. How pronounced the employer role is and how influential they are in the decision-making process varies across advisory groups. These advisory groups engage employers and other stakeholders in:

- **Identifying Employer Needs.** Gathering and analyzing information on employer needs either directly from employer members or through industry, economic development, and workforce agencies and organizations. They address what jobs are in greatest demand and what are the competencies and credentials required.

- **Developing Curriculum and Supporting Professional Development.** Developing curriculum to address the most important competencies required by employers and improve learner success and providing the necessary professional development for faculty and instructors to deliver the curriculum.

- **Securing Program Funding and Resources.** Obtaining the necessary public and private funding and resources necessary for program success. This includes accessing direct funding and in-kind contributions from employers and other partners.

- **Organizing Work-based Learning Opportunities.** Gaining the commitment of employers to provide meaningful work-based learning opportunities (e.g., internships) to learners in the program.

- **Marketing Programs and Outreach to Learners.** Building program awareness among major stakeholders and recruiting learners to enroll in those opportunities. Advisory groups can help secure career awareness and career exploration commitments from employers and other stakeholders, such as company tours, mentorships, job shadowing etc.

Second, federal and state policy also emphasizes the need for a rigorous local and state process for reviewing, approving, and renewing programs for state and local funding. This process is designed to ensure that programs are able to meet both employer and learner needs and have the capacity and sufficient commitment from key stakeholders to be successful. Some state policies place a strong emphasis on whether there is sufficient employer engagement and commitment, including:

- **Labor Market Demand.** Is there sufficient labor market demand for the program, including the number of projected job openings validated by employers in the local area?

- **Employer Commitment and Support.** Is there sufficient employer commitment and support as evidenced in advisory group participation and resource commitments, such as funding and work-based learning opportunities?

TPM can play an important value-added role in making the CTE program design and implementation process more employer-led and built on higher quality data directly from employers themselves. State agencies, schools, and colleges vary in their success in engaging employers in program design and implementation as well as gaining sufficient employer commitments necessary for the long-term success of programs. These efforts are made more difficult by the same employers being asked to participate in multiple advisory groups addressing similar program needs. In addition, the very same employers may be asked to participate on advisory groups of other related education and workforce initiatives that frequently involve the same schools and colleges, including sector partnerships of local workforce boards.

Through this employer-centered approach, employers are organized into a collaborative—hosted by an organization of their choosing—that can serve as the employer committee for one or more advisory groups and sector partnerships that employer collaboratives choose to work with. TPM is

systematic in how it uses information to co-design talent pipelines that are consistent with career pathway models and provides the context for coordinating school and college programs and complementary initiatives.

TPM also provides systematic processes for gathering forecasting data for critical in-demand jobs and competency and credential requirements that are essential for designing programs. It establishes the role of employers at different stages of the pipeline and clarifies what the employer commitment is and the resources they bring to the partnership, which is often required in program approval and renewal processes (see Figure 1: Basic Value Stream Map).

TPM also provides an approach for co-designing programs of study in ways that engage employers more deeply in **competency and curriculum mapping** and clarify the roles of both employers and schools and colleges providing education and training and conducting assessments. These mapping processes go beyond traditional advisory group actions. They enable partners to better align learning outcomes—and their preferred demonstration—to employer hiring requirements and identify when those learning outcomes are addressed in the talent pipeline and by which partner (see Figure 2: External Pipeline Competency Mapping Tool Example).

**Figure 1: Basic Value Stream Map**

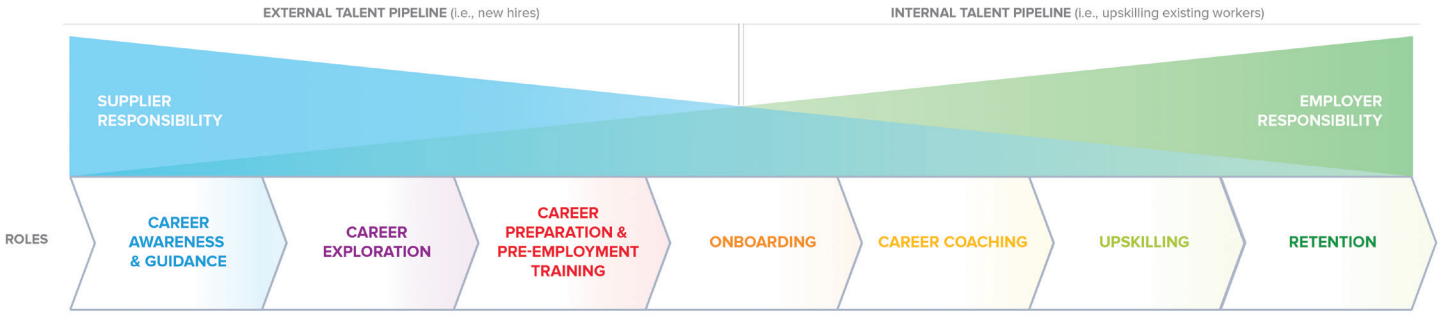




**Figure 2: External Pipeline Competency Mapping Tool Example**

| Competency Hiring Requirements (CHR) | Learning Outcomes (LO) | Tier 3 Providers | Tier 2 Providers | Tier 1 Providers | Collaborative Employers |
|---|---|---|---|---|---|
| CHR1 | LO1 | | x | | |
| CHR2 | LO2 | | x | | |
| CHR3 | LO3 | | | x | |
| | LO4 | | | x | |
| CHR4 | LO5 | | | | x |
| | LO6 | | | | x |
| | LO7 | | | x | |

## Success Story:
## A Community College Maximizes Industry Relevance

In Northern Kentucky, a manufacturing partnership used TPM to identify Gateway Community and Technical College as a preferred provider of machinist talent. The TPM framework enabled the employer collaborative to better organize and communicate their hiring requirement as part of the program design and implementation process. Equipped with this data, Gateway was able to transform a traditional machinist program into an employer-led enhanced operator program.

Using the competency and skill-based hiring requirements agreed to by the collaborative, the employer partners were able to engage in a competency and curriculum mapping process with Gateway. In addition to improving alignment, the partners were able to identify numerous areas of duplication where employers were better positioned to cover as part of their onboarding processes. The result: reduced time and cost in delivering the program. By employers using the TPM framework to define and prioritize the competencies needed to meet industry requirements, Gateway was able to target its coursework to give students the right level of information in the most efficient timeframe. From there, employers could provide more targeted onboarding processes to get employees to full productivity in an effective and efficient manner.

As a result, the newly minted operator program went from a one-year completion time to 14 weeks, and the cost was cut by close to half (from $5,000 to $2,588). With a focus on competency-based learning, program completers were able to finish the program well-equipped to meet the employers' needs. After several iterations of continuous improvement, one thing has not changed: employers drive the curriculum conversation from beginning to end to ensure Gateway provides students training for the most relevant industry skills.

https://www.forwardontalent.org/stories/scjohnson/

## Key Takeaways

TPM can strengthen CTE program design and implementation by:

**Strategy 1:** Establishing employer collaboratives that can serve as employer advisory groups or employer committees of larger advisory groups for multiple schools and colleges and related education and workforce initiatives, such as sector partnerships.

**Strategy 3:** Providing detailed information on hiring requirements, including competency and credential requirements that can be used to define those addressed in CTE programs of study.

**Strategy 5:** Providing a co-design process for developing programs of study that clarifies the roles and commitments of employers and CTE partners, including work-based learning.

**Performance management and continuous improvement.**

In more recent years, federal and state CTE policies have established performance metrics and incentives for schools and colleges to promote and reward successful performance. They have also worked with schools and colleges to set performance goals on these metrics as a foundation for continuous improvement.

Under Perkins V and related state policies, CTE programs are expected to show results for a variety of outcomes at the secondary and postsecondary levels. States have some flexibility in which measures to emphasize and whether to use additional measures to address their own priorities or requirements associated with other funding streams. In addition, several states are experimenting with financial incentives that provide funding to schools and colleges based on enrollments as well as performance (i.e., performance or evidence-based financing). For example, some states are exploring incentives for the attainment of industry-recognized credentials or for completion of work-based learning.

One major challenge in employer and CTE partnerships is how to use a balanced and aligned set of performance metrics that reflect the needs of all partners, including employers. Program performance and accountability metrics rarely factor in employer-facing metrics that address their key pain points. TPM provides a framework for establishing a balanced set of demand- and supply-side metrics. Through TPM, employers can work with CTE partners to co-design not only programs, but balanced scorecards that reflect metrics that are important to CTE programs and systems as well as employers (see Figure 3: Example Aggregate Performance Scorecard). These balanced scorecards are particularly useful in that they communicate value to the employer customer in ways that can sustain their engagement and commitment to the partnership. This moves the employer from an advisory role to a direct beneficiary with data and evidence to back it up.

**Figure 3: Example Aggregate Performance Scorecard**

| Shared Pain Point Measures | Performance | Relative to Expectations | Trend |
|---|---|---|---|
| Percentage of applicants from talent providers that meet requirements | 55% | ● | ↓ |
| Average number of days to fill open positions | 128 days | ● | ↓ |
| Percentage of hires retained in first year of employment | 75% | ● | ↑ |
| Percentage of recent hires from targeted, undersourced populations | 35% | ● | ↑ |
| Percentage of employees completing career advancement programs | 30% | ● | ↑ |
| **Driver/Transition Measures** | **Performance** | **Relative to Expectations** | **Trend** |
| Percentage of employees in entry-level jobs enrolling in career advancement programs | 50% | ● | ↑ |
| Number of learners who complete education and training programs | 75 | ● | – |
| Number of learners enrolled in education and training programs | 95 | ● | – |

TPM scorecards coupled with data produced through ongoing talent flow analysis can also provide important feedback on which CTE programs are serving as the actual supply of talent—not the theoretical supply—for employers in a collaborative and with what results.

In addition to keeping score, TPM provides a framework for using performance data to engage in continuous improvement (see Figure 4: Example Performance Scorecard for Tier 1 Training Providers). Data is not just useful for accountability purposes, but for ongoing conversations between partners on how to improve the relationship in ways that manifest themselves in better outcomes for employers, providers, and learners.

TPM scorecards allow employers and their CTE partners to avoid chasing solutions in search of a problem, but to instead focus their attention on key points in the talent pipeline that need to be investigated and improved on through a commonly used improvement model (see Figure 5: TPM Continuous Improvement Process). This also means employers in the collaborative may need to look more closely at themselves in order to identify a possible breakdown in the talent supply chain partnership. This includes revisiting their data and how they communicate that data to partners as well as their role in supporting learners and onboarding new workers. In TPM, continuous improvement opportunities can be found on both the supply side and the demand side.

**Figure 5: TPM Continuous Improvement Process**

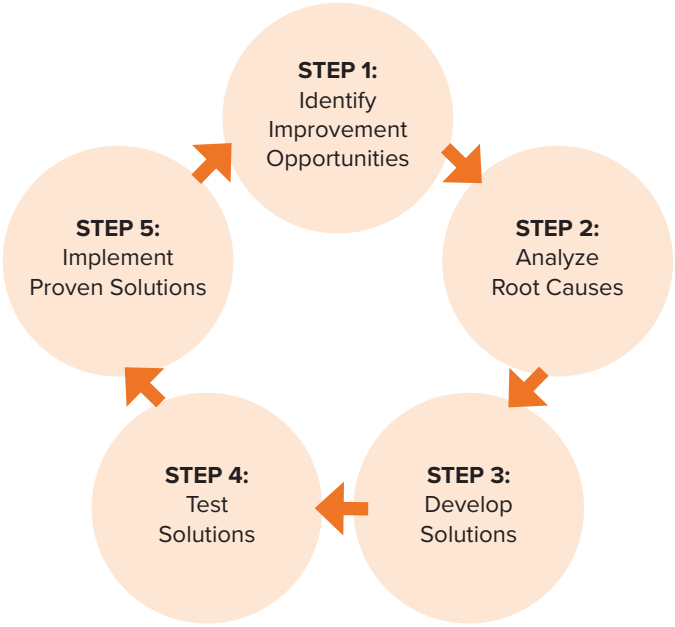




**Figure 4: Example Performance Scorecard for Tier 1 Training Providers**

| Tier 1 Provider | Measure | Level | Relative to Expectations | Trend |
|---|---|---|---|---|
| Community College A | Percentage of applicants from talent providers who meet the requirements | 85% | ● | ↑ |
| University B | Percentage of applicants from talent providers who meet the requirements | 60% | ● | ↓ |
| University C | Percentage of applicants from talent providers who meet the requirements | 40% | ● | ↓ |

TPM also provides a framework for aligning public and private incentives. In TPM, incentives come in many different forms and go beyond the usual funding incentives provided on the public side (e.g., competitive grants). Private sector incentives can include priority access to work-based learning opportunities, access to equipment and facilities, scholarships, and of course direct funding, just to name a few. As previously stated, these incentives can be powerful signals of employer commitment that can then be used to facilitate program approval and renewal.

Many of these incentives are controlled by the employers themselves and can be aggregated and coordinated by the host organizations and negotiated with CTE partners. What makes TPM different is that both employers and their partners are encouraged to tie incentives directly to their agreed-upon performance metrics. In other words, incentives drive performance. TPM provides a useful framework for employers to organize the right mix and level of incentives to offer, and for CTE practitioners to help identify which types of incentives are most in demand and result in improved performance on both supply and demand side metrics.

States also provide important incentives for schools and colleges, including funding. Many states have established performance-based incentives linked to specific Perkins-related performance measures. Some of these incentives are managed by state CTE agencies. In addition, states have key data systems that can support data collection of key employer-facing and school- and college-facing measures as well as the data for supporting evidence-based continuous improvement.

## Success Story: Saving Time, Saving Money, Getting Needed Talent

In a 2015 search to hire 100 electric line workers and gas line workers, Consumers Energy received 4,000 applications. After the screening process, just 50 applicants were deemed qualified for these available jobs. Consumers Energy determined that they needed to see a dramatic improvement in the performance of their talent sourcing process.

Working with the Michigan Energy Workforce Development Consortium, Consumers Energy identified early on what success would look like in terms of improved hiring and retention as well as reduced cost. They also used the TPM framework to successfully project demand, identify competencies, and map trusted sources of talent for these jobs.

Better armed with their own data on critical jobs, Consumers Energy identified three preferred providers of talent with whom to co-design talent supply chain solutions. With these providers as their sole source of entry-level talent for these critical jobs, Consumers Energy partnered to build more relevant training facilities, increase face time with students, and provide in-depth input on course curricula for those career paths—including identifying and eliminating outdated training practices. Based on this refocused engagement approach with preferred providers of talent, Consumers Energy has hired more than 100 employees from each of the three talent sources.

But was the partnership successful in improving performance and achieving an ROI for Consumers Energy? The answer is a resounding yes. After successfully implementing a talent supply chain solution, Consumers Energy boasted a 98% retention rate for hires brought in through their established talent pipelines. What is more, those new hires required minimal remediation or additional training resulting in a cost savings of $30,000 per hire. Beyond the metrics, Consumers Energy has the added comfort of knowing that, so long as the talent supply chain is continuously updated and maintained, they have access to a pipeline of talent to meet current and changing jobs projections and needs.

https://www.forwardontalent.org/stories/consumers-energy/

## Key Takeaways

TPM can strengthen CTE performance management and continuous improvement by:

**Strategy 5:** Providing a framework for aligning public and private performance measures and incentives, and demonstrating shared value creation for all partners.

**Strategy 6:** Providing a framework for using both public and private data to monitor performance and support evidence-based continuous improvement.

**Expanding equity and diversity.**

In addition to informing CTE program design, delivery, and improvement, federal and state policies are also used to promote equity and diversity in CTE. In particular, these policies promote high-quality CTE programs that can close opportunity and achievement gaps for student populations with barriers to education and career advancement. Employers can play a major role in helping schools and colleges establish high-quality CTE programs that are capable of achieving these results.

TPM enables employer and CTE partnerships to expand opportunity for a variety of student and worker populations, including CTE special populations. First, TPM encourages employer collaboratives to include workforce diversity as a major talent pipeline challenge with a focus on expanding career opportunities for targeted populations and demographics.

Second, TPM also encourages employer collaboratives to establish goals and performance metrics consistent with many CTE performance measures, such as percentage of hires from targeted populations and percentage of targeted populations enrolling in and completing programs. These metrics ensure that other performance measures and related incentives (e.g., preferred provider designation) do not have any unintended consequences for expanding opportunity and equity when implementing and managing talent pipeline partnerships.

Third, TPM encourages employer collaboratives to work with education partners to develop talent pipelines based on career pathways that can produce results based on these metrics, including the delivery of coaching and support services that contribute toward long-term success.

Finally, TPM promotes a continuous improvement process that can help identify root causes associated with persistent gaps in opportunity and success and can promote proven solutions to address them at every stage of the talent pipeline.

## Success Story: Building A Diverse Talent Pipeline

UpSkill Houston, an initiative of the Greater Houston Partnership, focuses on building the Houston region's talent pipeline for good jobs that require education and skills beyond a high school diploma and less than a four-year college degree. In the country's fourth most populated city—considered among the most racially and ethnically diverse—expanding the talent pipeline and attracting people to high-demand careers is critical for industries that drive the region's economy.

UpSkill Houston worked on various collaborations with community organizations, public workforce systems, and employers to attract and screen potential employees. Using the TPM framework, one company sought to increase its workforce diversity by developing an employer-led, Women in Construction program to provide on-the-job training for 20 women to become pipefitter helpers. This program graduated 80% of the women enrolled, and these graduates are still in the construction field today. Other companies have since replicated the program recognizing women are more likely to be retained with increased representation in the field.

https://www.forwardontalent.org/stories/greaterhoustonpartnership/

## Key Takeaways

TPM can promote equity and diversity in employer and CTE partnerships by:

**Strategy 1:** Establishing employer collaboratives that can focus on expanding diversity and equity in talent pipelines.

**Strategy 5:** Establishing balanced public and private metrics and incentives as well as a process for developing programs of study within talent pipelines, that achieve results.

**Strategy 6:** Using an evidence-based continuous improvement process that can be used to identify and address root causes of the opportunity and achievement gaps among learner populations facing barriers to career and education advancement.

# Recommended Actions in Using TPM to Improve CTE Systems and Processes

State and local CTE agencies and programs, and their employer partners, should take the following actions:

1. **Is TPM Right for You?** TPM is a useful framework to build mutual understanding and a shared language between CTE programs and their employer partners. It can be used to stand up new partnerships or to enhance existing ones (e.g., sector partnerships or advisory boards). It provides a structured process for getting employers organized and having them produce consistent and granular information about their workforce needs. It also provides them with tools to partner more effectively in designing, delivering, and improving a career pathway program.

   Work with business associations and economic and workforce development agencies to explore implementation of TPM within your region or throughout the state.

**Questions to Consider:**

   a. As a CTE practitioner, what is your current employer engagement strategy and, if it is an advisory board, what is the role employers are expected to play and what professional role do participants represent?

   b. As an employer, have you been or are you currently involved in a CTE program, and what was that experience like?

   c. Would TPM be a useful framework to promote mutual understanding and shared language between CTE partners and employers, and if so, in what ways?

   d. How, if at all, is TPM different from what strategies you may have used in the past, or are currently using?

   e. Can TPM be a useful organizing framework for CTE partnerships at the state, regional, and/or local level?

   f. Is TPM right for you?

   g. If so, what additional information do you need to start your TPM journey, and would you benefit from organizing a TPM Orientation or participating in a **TPM Academy**?

2. **Utilize TPM Best Practices and Tools.** Use TPM best practices and tools to improve CTE systems and processes to build or expand high-quality CTE programs of study that achieve an ROI for all stakeholders, including diversity and equity goals.

**Questions to Consider:**

a. When planning a CTE program, what is the source of information used to align with employer demand, and is it sufficient?

b. Would TPM be a useful framework in the CLNA process, and, specifically, what information could TPM provide that would be useful to you?

c. Can TPM be helpful in designing and implementing a CTE program? Which TPM strategies in particular would you wish to leverage during this process?

d. In what ways can TPM be used to improve curriculum, credential, and assessment alignment as well as the design and delivery of work-based learning and career counseling?

e. Does TPM offer anything new in terms of thinking about performance management, ROI, and continuous improvement, and is that useful or relevant to you and your organization?

f. Is diversity, equity, and inclusion a priority for your program or organization and in what ways can TPM be used to address that priority?

# Appendix:
# Terms and TPM Concepts


## Talent Pipeline Management® (TPM)

# TPM RESOURCE GUIDE:
## A Compendium for High-Quality CTE


U.S. CHAMBER OF COMMERCE FOUNDATION

# Terms and TPM Concepts

**Business Enterprises—**Large, private sector business organizations that carry out multiple economic activities through multiple firms with many different establishments around the world and across states, counties, and cities.

**Business Function—**The type of business or economic activity that is critical in making products or providing services at one or more establishments (see Establishment definition). It may or may not be defined as a primary activity for purposes of North American Industry Classification System (NAICS) coding of business establishments, and it may be carried out by one or more occupations. Examples include logistics planning, warehousing, machining, engineering, and nursing.

**Career Pathway—**A workforce development strategy that provides clearly communicated education and training steps between occupations in an industry sector, combined with support services, to enable individuals to enter and exit at various levels and to advance over time to higher skills, recognized credentials, and better jobs. Target jobs for career pathways are typically in industries of importance to local and regional economies and build strong relationships with employers.

**Classification of Instructional Programs (commonly referred to as CIP)—**A taxonomy that supports the accurate tracking and reporting of fields of study and program completions activity in higher education within the U.S.

**Competency mapping—**A process used to determine which learning outcomes relate to which competency hiring requirements, and which providers are responsible for them.

**Comprehensive Local Needs Assessment (CLNA)—**A required biennial assessment plan developed by every institution that receives a Perkins Basic grant allocation under the Perkins V Act. The assessment must identify the local community needs and resources to address how Perkins programming and funding will support CTE programs and assist special populations students.

**Continuous Improvement—**A structured method to improve a process over time. Continuous improvement processes in the business world include Lean Six Sigma and the five-step DMAIC (define, measure, analyze, improve, and control) process, which is used to optimize performance and eliminate waste.

**Curriculum mapping—**A process used to provide detailed information about how a learning outcome and/or competency ought to be delivered and assessed and could include examples of it done well.

**Critical Job—**A job that has been selected by the employer or employer collaborative to focus its attention on, whether an entry-level job or an advanced job for internal talent sourcing.

**Employer—**Any person or organization that employs people through a variety of employment relationships ranging from regular full-time employment to contractual employment.

**Employer collaborative—**A partnership organized by employers, for employers to collectively address shared workforce needs. The collaborative is bolstered by management support provided through a new or existing employer-led organization of the collaborative members' choice. Employer collaboratives are different from most public-private partnerships in that they are organized and managed to maximize responsiveness to employers as end-customers and to deliver an employer return on investment.

**End-customer—**Employers that are developing and implementing a talent supply chain to address a workforce need that results in a measurable return on investment.

**Establishments—**A single physical location (e.g., plant, office) of a company that may have multiple locations or facilities. Establishments carry out business or economic activities as typically defined under NAICS. More detailed examples of business or economic activities include industrial machinery manufacturing, computer systems design and related services, and specialty surgery and primary care.

**Every Student Succeeds Act (ESSA)—**Enacted in 2015, ESSA is the primary U.S. federal education law and funds K–12 education throughout the nation while emphasizing equitable access to education, high standards, and accountability.

**Host organization—**The organization that houses and provides the staff and management support for one or more employer collaboratives. Host organizations are different from traditional intermediaries in that they are business member organizations (e.g., chambers of commerce, industry sector-based associations) or economic development organizations dedicated to business growth and

competitiveness and are chosen or affirmed by the employer members to manage and staff employer collaboratives.

**Industry—**The type of primary business or economic activity carried out in a business establishment as typically defined under the North American Industry Classification System. Examples of major industry categories include manufacturing, healthcare, and information technology.

**Industry-recognized credential—**A credential that is sought or accepted by employers within the industry or sector involved as a recognized, preferred, or required credential for recruitment, screening, hiring, retention or advancement purposes and, where appropriate, is endorsed by a nationally recognized trade association or organization representing a significant part of the industry or sector.

**Labor Market Information—**Quantitative or qualitative data related to employment and workforce trends in national, state, regional, and local labor markets.

**North American Industry Classification System (NAICS)—**The standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

**Shared pain point—**A common area of need across employers that have come together to form an employer collaborative. Shared pain points should provide the starting point for defining the focus of an employer collaborative.

**Shared Value—**The value that is created for employers, education and training providers, and the learners they serve—as well as society in general—when employers play an expanded leadership role as end-customers of talent supply chains.

**Standard Occupational Classification (commonly referred to as SOC)—**A federal statistical standard used by federal agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data.

**Supply Chain Management—**Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, supply chain management integrates supply and demand management, of both the physical and information flow, within and across companies.

**TPM Academy®—**An in-person training for state and local chamber, business association, and economic development agency leaders, as well as employers, to learn to drive partnerships with their education and training providers based on industry need.

**TPM National Learning Network—**Those who participate in and complete the TPM Academy join the TPM National Learning Network, where best practices are shared to support and enhance TPM implementation in practitioners' communities.

**TPM Practitioner—**A person who has participated in and completed the TPM Academy training program.

**Upskilling—**Adding to the skills of current employees of collaborative members to prepare them for success in:

- New, Emerging, and Changing Job Roles due to changing technologies and changes in how work is organized and carried out within companies and across their industries. This may involve the retraining of workers who must transition to new jobs because their current jobs are transforming.

- Career Pathways providing career advancement opportunities within and outside their companies.

**Work-based Learning—**A component of career awareness and preparation that is often embedded as part of course concentrations in a career pathway or as part of CTE programs. In many cases, these experiences are place-based and include internships, cooperatives, and youth apprenticeships. However, they can also be project-based or simulated experiences that take place on the school premises.

**Workforce Innovation and Opportunity Act (WIOA)**—The primary U.S. federal workforce development legislation enacted in 2014 to strengthen and improve the public workforce system and help get Americans, including youth and those with significant barriers to employment, into high-quality jobs and careers and help employers hire and retain skilled workers.


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