

Leveraging Labor Market Information

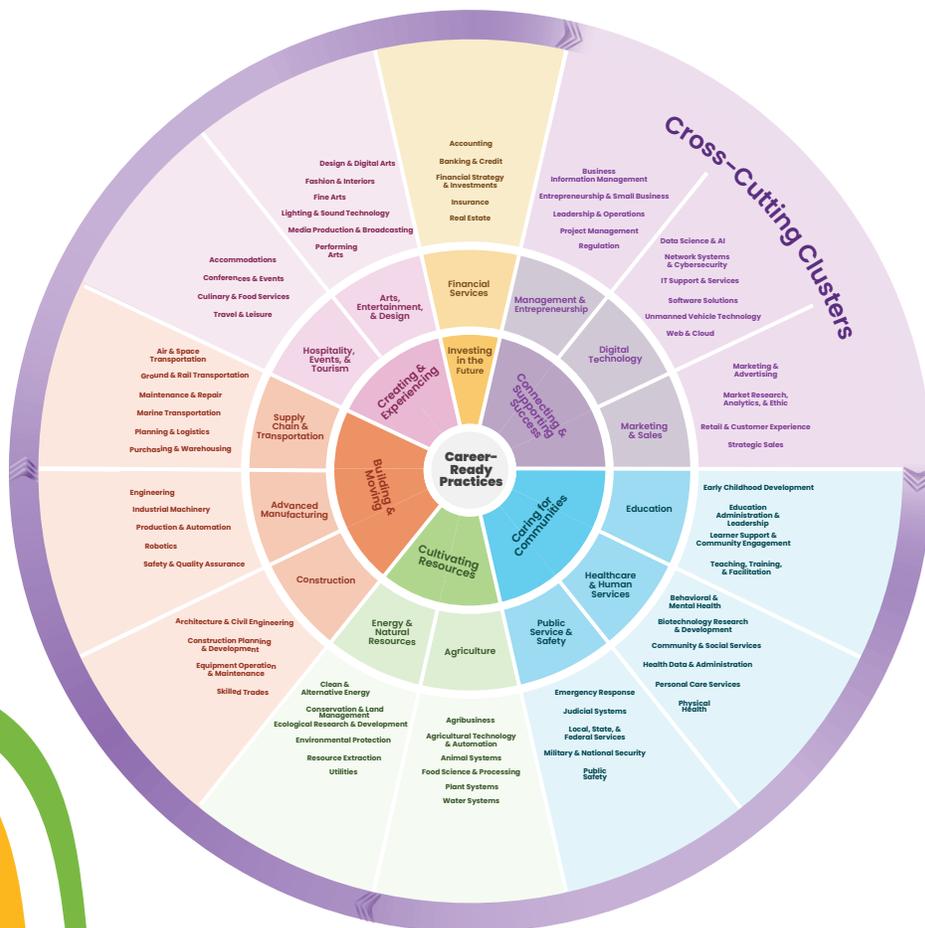
Through the National Career Clusters® Framework



Executive Summary

Advance CTE, as the steward of the National Career Clusters® Framework, recognizes the need for a limitless career preparation ecosystem, in which all learners can access and succeed in programs of their choosing. As the primary beneficiaries of the Framework, learners of all ages require a career preparation ecosystem that works for them, and industry requires learners equipped with the skills and competencies needed to succeed in ever-changing work environments. To meet these requirements, secondary and postsecondary policies and programs at the state and local levels must be flexible and responsive to the needs of learners, educators, advisors, administrators, and industry.

This document is one in a series of resources designed to help Career Technical Education (CTE) leaders consider policy opportunities facilitated by a modernized Framework. While this resource seeks to push state and local CTE systems forward, it is not comprehensive; many states may have other policy areas that need to be considered that are not discussed here.



One key policy area with opportunity for innovation through the Framework is the incorporation of labor market information (LMI) into CTE and career pathway systems, including data collection and reporting, funding, and key decisionmaking processes. Ensuring that the program structure and design are reflective of the employment opportunities that will exist upon a learner's exit from the education system is crucial to the economic success of both individuals and industry.



Overview



The **modernized Framework** consists of 14 Career Clusters and 72 Sub-Clusters, underpinned by six purpose-driven Cluster Groupings and foundational Career Ready Practices for all careers. LMI was the foundation of the process to update the modernized Framework. Advance CTE leveraged national LMI across industries to understand the landscape of current and future employment opportunities and validated that landscape with direct input from national Industry Advisory Groups. Industry experts were elevated during this process to understand the nuances for realigning the Clusters, interdisciplinary skills, and opportunities for integrating skills within the Cross-Cutting Clusters across multiple industry sectors.

State and local CTE leaders can use the updated, broader Cluster and Sub-Cluster organizations as a catalyst for systems-level change. Along with aligned Framework terminology, the use of LMI should reinforce alignment between secondary and postsecondary CTE program offerings and the needs of industry at the local, state, and national levels.¹ LMI should also be available in conjunction with CTE program and outcome information to efficiently facilitate decisionmaking by both administrators and learners. The updated Framework reflects the ever-changing world of work. Intentionality when incorporating elements of LMI into supported CTE policies and processes at both the state and local levels can help strengthen existing programs and establish high-quality learner-centered career pathways aligned with postsecondary opportunity and workforce need.

Real-time and traditional LMI should inform all facets of the state CTE policymaking process. Many states use a variety of LMI from multiple sources to determine programs of study and career pathways structure; across statewide reporting, however, these data are not always timely, consistent, or aligned with actual regional/local needs. When leaders reflect on and analyze the landscape of the labor market through enhanced data collection efforts and strategic employer partnerships, there is a clearer runway for states to update their Career Cluster alignments in ways that benefit both education and industry

Labor Market Information (LMI): Workforce information and LMI consist of the data and information used by businesses, workers, learners, job seekers, education and training providers, workforce development planners, policymakers, and others to make informed decisions in areas such as hiring and advancement, career choice, curriculum development, and investments in training.

Key Categories and Elements of LMI

	Traditional LMI	Real-Time LMI
Elements	<ul style="list-style-type: none"> ▶ Is collected, analyzed, and reported by government agencies ▶ Includes no cost to access data ▶ Covers a wide swath of labor market through multiple data collection processes ▶ Can be sorted by national, state, metropolitan statistical areas (MSAs), and other defined areas 	<ul style="list-style-type: none"> ▶ Is collected, organized, and hosted by private companies and state agencies across the country Usually requires a paid license or subscription to access private data ▶ Covers jobs advertised online through data scraping ▶ Can be sorted by state, region, MSA, or local area (may contain employer names and addresses)
Data Points	<p>Includes:</p> <ul style="list-style-type: none"> ▶ Employment rates ▶ Unemployment rates ▶ Industry and occupation trends ▶ Wage information ▶ Workforce demographics 	<p>Includes:</p> <ul style="list-style-type: none"> ▶ Employment rates ▶ Unemployment rates ▶ Industry and occupation trends ▶ Wage information ▶ Workforce demographics <p>Also Includes most requested employer requirements, such as:</p> <ul style="list-style-type: none"> ▶ Specialized skills ▶ Technologies ▶ Certifications
Reported Statistics	<ul style="list-style-type: none"> ▶ Does not contain details related to specialized skills and may not keep track of current employer needs and demands ▶ May be more precise due to official processes and data sources ▶ Is accessible by occupational or industry category and in some products or tools by job title, skill, or keyword search ▶ Varies in terms of timeliness of the data and includes a minimum one-month lag, but most often is reported quarterly 	<ul style="list-style-type: none"> ▶ Will generally contain additional details on in-demand skills or credentials needed in the workforce ▶ Can highlight new and emerging trends and needs ▶ Is accessible by searching job listings by job title, occupation, industry, keyword, skill, certification, or other attribute ▶ Is often updated daily or in real time to reflect immediate need(s) ▶ May be less accurate due to the wide array of data sources used to aggregate information



State Highlight: **Delaware** All in on Labor Market Information through Definition Alignment

In 2021, the Delaware Department of Education (DDOE) issued **policy guidance** for creating and reviewing CTE programs. This new process requires proposed CTE programs to be supported by an advisory committee and grounded in relevant state, local, and regional LMI to confirm economic demand. Existing programs are also reviewed every 5 years to ensure continued alignment with industry and employer needs.

The beginning of this 5-year review cycle aligned with the introduction of Delaware’s modernized CTE Framework in fall 2024—creating what State CTE Director Jon Wickert called the “perfect storm” for directing how LMI is defined, analyzed, and applied across state agencies. In early discussions, state officials discovered that LMI metrics and definitions differed across the state’s labor department, workforce development board, and economic development office. Key factors such as geographic regions, middle and high wages and skills, and in-demand occupations were also up for interpretation across data sets. To address these issues, DDOE brought the agencies together and began the process of standardizing how LMI is defined and used for program improvement purposes.

With these definitions and metrics in place, DDOE is actively aligning its existing CTE programs with the modernized Framework. Once complete, this process will reflect a succinct list of relevant occupational codes that reflect current LMI and industry needs. Standardizing the process across agencies provides Delaware districts and charter schools with clear, regionally relevant guidance on which industry sectors learners should prepare to enter—helping to ensure that CTE pathways lead to life-sustaining careers in Delaware and the broader mid-Atlantic region.



Optimal Conditions



Leveraging LMI to fully implement the National Career Clusters Framework statewide can open doors to data-driven programs and connections to statewide goals and collaboration that previously may have seemed too challenging to realize.

Imagine if...

- ▶ labor market and CTE program data were publicly available and organized by the 14 Clusters and industry-relevant Sub-Clusters to help advisors, learners, and families make informed educational and career decisions using available secondary and postsecondary career pathways.
- ▶ learners could personalize their CTE pathway within the 14 Clusters from a range of industry-aligned courses and programs of study, ensuring interconnectivity for job skills that are relevant across multiple career pathways (marketing, digital technology, management, etc.).
- ▶ labor market-related language and metrics were standardized and aligned across state agencies and industry partners and were used to elevate the programs and credentials most needed by businesses that also lead to family-sustaining wages for learners.
- ▶ CTE administrators and educators across all levels of education had an understanding of LMI and how it can be used to inform all aspects of CTE education and pathway development at the school and individual learner levels.

The modernized Framework provides a genuine opportunity to analyze and reflect on the labor market information being compiled for CTE and career pathways design and evaluation from state and local leaders down to individual learners.



Key Elements of this optimal state:



Alignment to the Career Clusters Framework:

The Framework can be used as a springboard to align language, policies, and processes across state, regional, and local education, industry, and workforce entities with data at the center. Review of state-level labor data through the Framework can be done through crosswalks to the Clusters, North American Industry Classification System (NAICS), Standard Occupational Classification System (SOC), Classification of Instructional Programs (CIP) codes, and other specific codes used in a state's labor data.² Customizing the Framework to reflect and grow with industry-identified needs can help CTE programs evolve more quickly as labor skills continue to advance.



Open access to LMI by all stakeholders:

All partners in an aligned career preparation ecosystem, including learners of all levels and their families, should have free and open access to a timely and consistent report of state LMI and how it connects to educational outcomes at the Cluster and program levels. Information should be presented in a digestible format that helps the learner or earner better understand their education options, required credentials, and employment outcomes, including potential future earnings. A public-facing, accessible website or dashboard that presents state, regional, and local employment and earnings potential across different in-demand occupations can help all seeking to become part of the workforce make informed decisions in their career planning.

Data should be paired in conjunction with related CTE program offerings and outcomes organized by Career Cluster to further help learners of all levels invest in themselves through education and skill-based training. Whether the learner is a junior in high school deciding their next credential, an apprentice finishing their registered apprenticeship, or an adult returning to the workforce, all users can have more agency in their ability to make informed decisions about their future with greater access to relevant LMI.

Additionally, resources should be maintained in collaboration with industries and other state-level agencies to further strengthen the education-to-workforce pipeline. Maintaining these resources will ensure that industries and employers are constantly supplied with high-skill, ready-to-work individuals.

Key Elements (continued)



New or existing cross-sector convening body to leverage data for decision making:

A body should exist to bring together relevant parties from across education, government, and industry to better inform CTE and career pathway opportunities for learners. Many states already incorporate a state, regional, or local advisory board model into their review of different aspects of the career preparation ecosystem, from gathering input for supported credentials of value to identifying relevant work-based learning opportunities.

Additionally, the policies and processes created to govern these boards should be built around common language, real-time LMI, and direct feedback from invested industry leaders and employers to create aligned and informed systems that lead to consistent and quality programs, procedures, and processes.

Use of LMI to create flexible and relevant CTE programs:



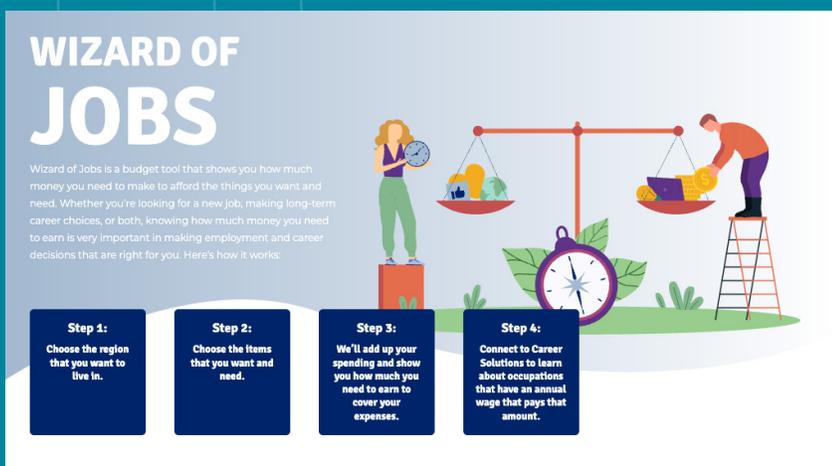
LMI analysis should be a factor in determining which courses and programs should be supported and offered at the state and local levels. Ensuring that the courses and skill sets being learned will be economically relevant once the learner completes a course and subsequent program is key to establishing a workforce that can meet the challenges of tomorrow. Comparing state-, regional-, and local-level LMI to the organization of the Framework can help states and districts see where gaps in programming exist and provide rationale for the creation of new programs. Employers advocating for the creation of new secondary or postsecondary programs should work in conjunction with education partners to build relevant and forward-looking programs. If a program is no longer relevant or aligned with industry or employer needs, LMI should be considered as a tool for deciding to replace, revise, or sunset that program.

With LMI and supportive policies, learners can have the ability to create their own pathway to an industry-aligned, in-demand career. Instead of prescribing a set course progression through a CTE program, state and local agencies can lean into the modernized Cross-Cutting Clusters to offer a range of interdisciplinary courses that can be used to satisfy different requirements based on a learner's individual career goals.³



State Highlight: Kansas's Impactful, Learner-Facing LMI Systems

In April 2025, the Kansas Department of Labor (KDOL) launched its newest learner-directed website, [Today's Occupations, Tomorrow's Opportunities](#) (T.O.T.O.), which examines and presents LMI and related CTE program opportunities to learners, CTE educators, and secondary career advisors. This first iteration of the site specifically targets learners in Grades 6-12 and provides them with interactive tools and resources to help map their career pathway based on Kansas-specific data. To get the word out about this new site, KDOL is partnering with the Kansas State Department of Education (KSDE) and other state agencies and in-state organizations to present and create support for the site and its capabilities.



The team can monitor the registration and usage reports for learners and CTE leaders who sign up for the individualized services available on the site. An additional piece that KDOL is finalizing will allow educators and partnering institutions to track their learners' progress through

T.O.T.O. and create customized reports. The team is working closely with KSDE to help the state adopt the modernized Career Clusters and then integrate them into the KDOL data presented at both the industry and education levels.



Key Questions for Consideration



How can your state create stronger linkages between CTE offerings and LMI?

- Implementation of the modernized Framework should be used as a starting point to reassess and standardize definitions of high-skill, high-wage, and in-demand occupations, as well as to reevaluate the LMI metrics being used to make programmatic decisions. The state should incorporate as much relevant, real-time LMI as possible into the policies and processes surrounding CTE program approval and review during and after alignment to the new Framework.
- There are many aspects and elements to consider when working to create a stronger link between educational offerings and actionable workforce outcomes. Does the agency incorporate state, regional, or local LMI into the CTE program creation process? How current are the data being analyzed, and who are the collaborators in the room interpreting the information?

How is LMI collected and used to verify program of study and credential of value offerings?

- Multitudes of LMI databases and metrics are available for review by anyone who is willing to go look (and in some cases pay) for them, but some data are more applicable than others in regards to CTE program and credential offerings. What data do the state seek out when looking at LMI? Are they real-time LMI that includes job postings and most requested skills, or are they more traditionally sourced and possibly out of date? Does the state have the capability to collect and review data on CTE completers and their post-education economic placement to inform future decisionmaking? Are employers and industry leaders being asked to review the data to ensure they accurately reflect what is taking place on the ground in the job market? Ensuring that the occupations and wages that are projected to grow are reflected in the CTE opportunities provided to learners in each state takes intentionality

Who needs to be at the table for LMI analysis as it relates to CTE offerings?

- Casting a wide net for collaborators to collect and analyze LMI can be the difference maker in how a learner progresses through their CTE training and ultimately becomes a part of the larger workforce. The state should ensure that established work groups or advisory boards contain an array of constituents related to the success of CTE across a state, region, or local area to better inform the hard data presented to those groups. What entities are represented in established advisory or workforce boards (education; government; state, regional, or local industry leaders; learners; employees of major industries; etc.)? What processes are in place to screen those invited to participate, and how can states ensure that participants understand the LMI that is presented to them?

What policy supports are needed to strengthen LMI use within CTE & Industry alignment?

- Policy is the backbone of progress when it comes to CTE offerings. It is critical to create policies and processes that ensure that quality, real-time LMI is consulted and related back to different aspects of CTE offerings in state and local settings. Incorporation of LMI into the Comprehensive Local Needs Assessment provides additional opportunities for local institutions to review LMI as it pertains to their offerings and learner participation in existing CTE programs. What data are specifically named, and to what degree is LMI embedded into the state's CTE policies and processes at the state, regional, and local levels?





State Highlight: Florida's Lasting State- Level Education and Industry Partnerships

As Florida's business footprint continues to grow, the [Florida Chamber Foundation](#), in partnership with the Florida Department of Education (FDOE) and [CareerSource Florida](#), recognizes the importance of promoting educational programs aligned to future workforce needs. The Future of Work Florida initiative, aims to create the nation's top workforce by 2030 by raising awareness of high-demand careers and career pathways to improve Florida's talent pipeline. The Florida Chamber Foundation has spent 3 years intentionally building relationships with companies representing the major industries within the state and the educational entities that offer CTE programming.

Leading the [Future of Work Florida](#) initiative, Rachel Ludwig, vice president of talent development for the Future of Work, serves as a bridge between industry and education to encourage and promote in-demand career pathways for those looking to enter the workforce, or upskill for a career change. With economists on staff, the Florida Chamber collects and analyzes LMI at the state, regional, and local levels to best decipher what occupations and industries will see growth and which need support through education and training programs. The Florida Chamber Foundation houses public-facing tools such as the Florida Scorecard; the Florida Gap Map; and the soon-to-be-launched Education Data Hub, which highlights state and county metrics aligned to the Florida 2030 Blueprint. The Florida Chamber Foundation team works closely with the FDOE on many efforts, including increasing work-based learning opportunities and aligning data and research to analyze current program offerings and individualize the new Framework to align with community needs.

Florida's [Master Credentials List \(MCL\)](#) is a key policy lever leveraged by the Chamber Foundation to align industry and education systems. A collaborative effort across multiple government agencies, and rooted in legislative policy, the MCL solidifies the high-value credentials available to learners across the state through a process that includes LMI-backed justification for inclusion. The Florida Chamber Foundation recently released an updated version of its [Top 30 High-Demand Careers](#) report that uses a variety of LMI sources to identify the top occupations through 2032 statewide and for each of the state's 21 workforce regions. These resources, along with intentional relationship building backed by multiagency support, have made the Future of Work Florida initiative thrive in the few short years since its inception.



Recommendations

Based on the questions outlined in the previous section, states may choose to implement some or all of the following recommendations to expand the use of LMI when determining economically relevant, high-quality CTE and career pathway offerings:

Ensure representation across all constituent groups

- Be intentional about who is selected to represent different interests in an advisory body or workforce board. Recruit participation from the state board of education, local education agencies, legislators, representatives from postsecondary programs, industry partners, employers and employees, learners, and other identified partners.
- Create space for all participants to represent their interest group while also using the meetings to review current CTE and career pathway offerings, gather feedback on implementation, and review the outcomes of CTE learners.
- Provide participants with an overview of the LMI related to their position and goals for the convening body, which allows the data to be framed in a digestible way for all collaborators

Expand LMI data collection and analysis efforts

- Create processes to track the earned wages of program completers and credential earners to determine actual value in supporting specific career pathways. Incorporate these data into outcome and program review processes to determine real-time employer needs and the long-term effects of program completion or credential attainment.
- Align reported measures across state agencies so the data that are communicated and used can be consistent. Work with all agencies to standardize data metrics; ensure understanding of LMI-related language; and widely disseminate any aligned processes, definitions, and metrics across relevant agencies and local education agencies.
- Review allowable uses of local, state, and federal funds to determine where additional funding can be braided to facilitate consistent data collection, reporting, and use

Ensure understanding of LMI

- Align common language (high-wage, high-skill, in-demand, etc.) across the state legislature and agencies as well as definitions related to high-quality CTE programming and the uses of LMI metrics in approval and review processes.
- Create an integrated dashboard, or related tools, that allows different groups to view local, regional, and state LMI; related occupations; and available CTE pathways.
- Conduct focus groups with learners of various ages and across different career pathways to understand how they use LMI, what reporting methods work best, and how to expand the use of LMI by other learner populations. Gather input from this group on the existing LMI systems to pinpoint opportunities for modernization and alignment across agencies.
- Offer professional development to CTE administrators, instructors, school counselors, and career advising professionals to ensure that LMI is aligned to program offerings and used effectively and appropriately to support learners.





Additional Resources to Explore

- [Browse Occupations by Career Cluster](#) (O*NET Online, 2025).
- [Lessons in Collaboration and Innovation: The Impact and Promise of the Comprehensive Local Needs Assessment](#). (ACTE, 2022).
- [From Labor Market Information to Pathways Design: Foundational Information for Intermediaries](#). (Advance CTE, 2021).
- [Aligning to Opportunity: State Approaches to Setting High Skill, High Wage and In Demand](#) (Advance CTE, 2020).



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Endnotes

¹For more information, see Advance CTE. (2025, July). Systems alignment through the Career Clusters. <https://careertech.org/resource/systems-alignment-national-career-clusters-framework>

²For the full crosswalk see Advance CTE. (2024, October). Framework Crosswalk: CIP, SOC, NAICS, Career Cluster, and Sub-Cluster. <https://careertech.org/resource/framework-crosswalk/>

³For more information, see Advance CTE. (2025, July). Flexible pathways through the Career Clusters. <https://careertech.org/resource/flexible-career-pathways-national-career-clusters-framework>