

Expanding Capacity to Meet **California's** **One Million** **'Middle-Skilled'** **Workforce** Challenge by 2025



COMMUNITY COLLEGE ETP COLLABORATIVE

The Community College ETP Collaborative represents 28 California Community Colleges Workforce Training & Development Centers (WTDC) receiving support from Employment Training Panel to conduct employer-driven Upskill Training.

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California Community College Contract Education Collaborative (CCCCEC) Strategic Plan

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Introduction

California Community Colleges' Workforce Training & Development Centers (WTDCs)

The purpose of this report is to highlight an existing not-for-credit program within the Community Colleges, partnered with the state's Employment Training Panel, addressing California's industry challenge to meet workforce demands. The program could be scaled throughout California to meet increasing demands regionally as a workforce and economic development tool.



California is challenged in meeting the projected industry demand of **Two Million associate degreed and credentialed, new and incumbent, workers by 2025**¹ and **One Million middle-skilled workers**.² The California Community Colleges Workforce Training & Development Centers (WTDCs)³ are leading providers of workforce training, uniquely positioned to help close this gap for California with trained and upskilled workers, resulting in an efficient, productive and competitive workforce.

WTDCs' focus on workforce, economic development and industry, gives them the ability to connect the needs of students, workers and employers, as well as align with academic units with the Community College. WTDCs directly respond to industry demands with customized "upskill" training. These customized trainings provide trainees the ability to gain skills while continuing to earn a paycheck. These trainings also create for the trainees new skill sets

1 Back to College, Part One; California Competes.

2 2019 Roadmap to Shared Prosperity, California Forward. One Million Middle-Skilled Workers is the focus of this paper.

3 California Community College Workforce Training & Development Centers (WTDC) aka Centers for Workforce and Economic Development, Corporate and/or Business Training Centers, Business-Engagement Centers, Contract Education Centers, Advanced Customized Training Centers, Apprenticeship Training and Skills Development Centers.

which increase their opportunity for higher wages. There is also a higher probability, when trainees are exposed to upskill training, for them to return to college for a degree. These upskill trainings, also called lifelong learning, contribute to the social and economic mobility for Californians from all backgrounds and help close the workforce gap.

To provide these industry-demand services, many WTDCs have Multiple Employer Contracts (MEC) with the state's Employment Training Panel (ETP)⁴ to provide direct employer-employee services, such as consulting and "not-for-credit" upskill training leading to certificates and a rapid response to employers' specific work needs.

WTDCs with ETP-MEC contracts formed the Community College Employment Training Panel Collaborative (CCETPC) to share curriculum, instructors, resources and best practices to enhance business and employment engagement capabilities through upskill training.

Given an increasing demand for these services by employers to improve local talent pools, CCETPC created a comprehensive data tracking system to collect all data and outcomes from these direct employer-employee contracts provided by WTDCs (which are reported and referenced in this report).

The CCETPC data clearly reports the effectiveness of upskilling and not-for-credit trainings for employers and targeted populations. The data further identifies the potential of maximizing this existing mechanism to aggressively meet the skill shortages in California. This requires integration of the not-for-credit program, as part of an overall strategy consisting of credit, non-credit and not-for-credit program(s) offered through the Community Colleges that collectively address the projected gap of One Million middle-skilled workers.

Vision & Expectation of K-12 and Community College Education

Society embraces the idea that every young adult should attend college, obtain a certificate or degree, and start work in a promising career which leads to a livable wage. The value of education is deeply rooted and woven into the fabric of our American education programs, from kindergarten through college, and remains a funding priority for policymakers, federal and state legislators, educators and business.

⁴ Employment Training Panel (ETP) provides funding to employers to assist in upgrading the skills of their workers through training that leads to good paying long-term jobs.

Given this vision and premise, a significant increase in legislative accountability has been placed on K-12 and community colleges to demonstrate performance outcomes, primarily through traditional academic programs. As noted below, because of global and economic circumstances, California faces a major gap in meeting the demands of industry to maintain the robust economy California enjoys. This changes the education paradigm to expand programs and funding of the WTDC nontraditional 30-year career adult. This report indicates upskilling the 20.6 million through the WTDC model is a viable, cost effective solution in addressing the One Million middle-skilled worker shortage.

Workforce Challenge

In October 2018, California Competes prepared a report, *Back to College, Part One: California's Imperative to Re-Engage Adults*, funded by James Irvine, Bill and Melinda Gates, Lumina and College Futures foundations.⁵

Two key points of the report highlight the workforce challenge in California:

- 1) A looming **deficit of more than Two Million workers** with degrees or certificates by 2025 threatens California's ability to meet its economic needs. As California attempts to close this projected gap, policymakers must consider adults and existing workers to be a critical part of the solution. Four million adults between the ages of 25 and 64 in California left college without a degree, representing a key opportunity for closing the attainment gap.
- 2) A staggering 20.6 million Californians have no college degree, have a high school diploma but no college degree, or have some college credits but no degree and are not currently enrolled in school (Figure 1, next page).

Note: It is interesting to note that of the 172,115 clients the CCETPC has served in upskilling trainees for industry, 51% of them fell into the Back to School category, "4 million with degrees and some college." Further, seven percent (7%) were less than 25 years old, which the report does not track. As a result, it is unknown whether the report's 18-24 years old cohort is attending college.

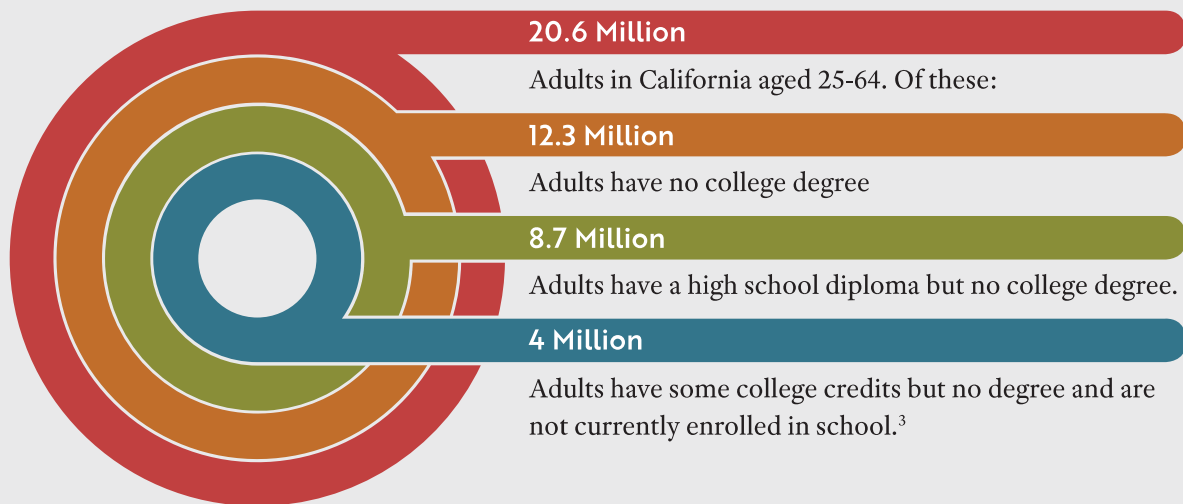
One of the *California Competes, Back to College, Part Two's* policy recommendations references Employment Training Panel as a potential connecting point for upskill training that could lead to postsecondary degrees. The WTDCs have been executing this recommendation with great success.

⁵ Back to College Part One: California's Imperative to Re-Engage Adults, funded by James Irvine, Bill & Melinda Gates, Lumina and College Futures foundations. October 2018, <http://californiacompetes.org/about/mission>

From an education standpoint, the pressure for performance outcomes historically has been on people obtaining a degree prior to entering the workforce versus achieving the same career goal by taking a non-traditional route that could involve employer-paid development (i.e., ETP-MEC). The non-traditional route resides within the shadows of the community college system (WTDCs), which offers the lesser-known options of not-for-credit, work-based and professional certifications, apprenticeship programs and certificates of training.

A total of 20.6 million adults in California aged 25-64 can or have benefited through participating in not-for-credit professional training while earning living wages. The WTDC has been the most effective in serving this population. The employees are achieving professional certifications training integrated into their work schedule. As of January 2020, this population receives training without accumulating student debt that has already exceeded 1.6 trillion dollars according to the credit reporting agency Experian.

FIGURE 1 | CALIFORNIA'S IMPERATIVE TO RE-ENGAGE ADULTS



Source: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data and the National Student Clearinghouse

Lifelong Learning Findings

Lifelong learning initiatives are suggested by California Forward and others, including Milken Institute's recently released *California Future of Work*⁶ for the Governor's Future of Work Commission. These initiatives have robust *upskilling* components to help fill the growing demand for "middle-skilled" positions – those that require more than a high school diploma but not necessarily a degree to create career opportunities for individuals. *Upskilling* can focus on meeting a portion of the 2025 projected demand by industry.

Lifelong Learning Definition:⁷ Education is no longer just a linear process with the endpoint of a single diploma, but a continuous and fluid process helping individuals adapt to changing technological, economic, and social conditions.

Upskilling Definition:⁸ The process of teaching employees new skills to meet specialized skillsets with a specific focus on frontline, entry-level, and low- and middle-skilled workers, whose jobs are at risk of being disrupted, and in which skills are continuously updated during the working life to match changing skills needs.

The world of work is undergoing a massive shift.

Entire occupations and industries are expanding and contracting at an alarming pace, and the skills needed to keep up in almost any job are churning at a faster rate.

[FORBES, 2019]

The following **excerpts** are from the research on why both lifelong learning and upskilling have become an imperative to addressing the skills shortages (see *Appendix D: Cited Works Bibliography*).

- "By 2022, no less than 54% of all employees will require significant re- and upskilling." (World Economic Forum, *Future of Jobs*.)
- ...2.4 million positions will go unfilled, 2018-2028, causing a \$2.5 trillion economic loss. (Deloitte)
- Recent advances have created a plethora of new jobs and **repurposed** traditional roles to such an extent that they require a completely different mix of competencies. (Adecco)

6 Preparing California for the Future of Work Creating Equity by Addressing the Access Gap, Milken Institute, January 22, 2020

7 Future of Work, Luminary Labs, updated version used by those addressing Future of Work (the standard definition is reported in Wikipedia).

8 For purposes of this report Upskilling, a sub-term of Lifelong Learning, is used to focus discussion of skills training to address the rapid pace of artificial intelligence and automation impacting nearly all industries.

- “Fourth Industrial Revolution shifting from information age to the collaboration age.” (*Forbes*)
- **Lifelong learning** isn’t a new idea. What is different this time is the extensive nature of the skill shifts, affecting so many sectors and occupations, at a pace we have not yet seen. (*McKinsey & Company*)
- Upskilling and reskilling will be key to evolving employee competencies that **complement technological innovation**. (*2020 Talent Trends*)
- ...87% of workers believe it will be essential to get training and develop new skills throughout their work life in order to keep up with changes in the workplace. (*Pew Research*)
- In an era of increasing automation and changing business priorities, upskilling is taking on new urgency. (*RH Business*)
- If artificial intelligence (AI) and automation are the new offshoring, we need to prepare students of today for the jobs of tomorrow while also helping today’s workforce reskill and upskill to meet changing requirements. (*Sara Holubek, CEO, Luminary Labs, Future of Work*)

The performance results of WTDC-ETP MEC should be a successful model and framework in meeting California’s overall workforce challenges, lifelong learning and upskilling to increase the skilled talent pool, close the gap with adults and assist California employers to remain competitive in a global market.

“In 2018, ETP’s four offices and 100 staff members processed a total of 450 contracts, which represents a decrease from 515 contracts in 2017. This accomplishment of efficiency was achieved, in part, through ETP’s partnerships of the CCETPC.”

STEWART KNOX, UNDERSECRETARY,
CALIFORNIA LABOR & WORKFORCE DEVELOPMENT AGENCY,
FORMERLY EXECUTIVE DIRECTOR, EMPLOYMENT TRAINING PANEL

Opportunity to Change and Increase Performance Outcomes while Creating Economic Benefit

Although the WTDCs are part of the Community College System, their direct employer-employee not-for-credit⁹ upskilling programs are funded through external sources such as ETP-MEC contracts, Workforce Development Departments, or employer-paid contracts. The lack of system-wide funding has made it difficult to respond consistently to the needs of the regional community and industry given the fluctuation in external dollars; e.g., ETP contract limits or priorities not in alignment with a regional economy. The framework WTDCs have developed is a successful model of direct employer engagement which has resulted in thousands of employers assisted and over 45,654 trainees receiving upskill training over the past eight years.

Institutionalizing funding would ensure the existing WTDC services that are listed below could be enhanced and expanded as part of a workforce challenge solution, specifically:

- Engaging direct daily engagement with CEOs, Vice Presidents of Operations, Human Resource Executives, and Operational Supervisors.
- Providing upskilling and skills enhancement through an individual's entire 30-year career span (lifelong learning); e.g., apprenticeships, on-the-job training, professional certifications through a variety of sources, skill centers, etc.
- Providing business and industry Just-in-Time (JIT) solutions, e.g.:
 - Access to industry trends and research
 - Consulting services
 - Training analysis
 - Development of a customized training program with precise classes leading to greater operational efficiencies and productivity
 - Measuring return on investment, and more
- Connecting employers with other resources, e.g.:
 - University research applications
 - Interns, graduates, faculty, and more
 - Apprenticeship opportunities
 - Funding and participation in grant projects

⁹ Note: Employers also pay their employees while attending trainings.

- Working directly with underemployed, under-skilled, low-wage workers and partnering with local workforce development departments.
- Driving the needs of industry to the academic units for inclusion in credit/non-credit education.

Not-for-credit programs have proven to be relevant and preferred by the business community for three key reasons:

- 1) They are more flexible than credit programs.
- 2) The curriculum content can be customized to the individual needs of business and industry.
- 3) Adults are attracted to short-term programs that are linked to specific jobs. In most cases, the employee/student is paid their salary while attending class.

"A pathway to a degree could give these adults a boost to their individual and familial prosperity, sustain the state's innovation economy by meeting workforce demands, and form civically engaged, cohesive communities."

BACK TO COLLEGE, PART ONE: CALIFORNIA'S IMPERATIVE TO RE-ENGAGE ADULTS

Recognizing and seizing the opportunity to increase not-for-credit programs, particularly in the workplace, will allow the Community College system to serve the 20.6 million Californians who have no college degree by providing them with certificates and skills that promote career development with no student debt.

A successful strategy and effective solution to meeting the challenge identified in Back to College, Part One (and other reports) for creating a competitive and skilled workforce already

exists with the Community Colleges alignment of for-credit, non-credit, and not-for-credit programs. Dedicating a funding source for expanding the not-for-credit delivery is needed to provide students and not enrolled adults, with opportunities for immediate and long-range skill development.

Return on Mission

Over time, the WTDCs have expanded their service and responsiveness consistent with the ever-changing complexity of the workforce and the needs of industry throughout the state. Recognizing that the state has multiple priority sectors, and sometimes overarching skill needs, a nimble and responsive mechanism becomes critical. This has become increasingly vital in the current age of rapid technological change where skills, knowledge and evolving competencies are essential to ensure competitiveness.

The Workforce Training & Development Centers will remain interconnected with the Community College System, and key state agencies such as the state Labor and Workforce Development Agency and Governor's Office of Business and Economic Development (GO-Biz). The goal will be to align goals to retain and attract businesses and jobs by upskilling the state's workforce. This will result in significant increases to California's competitiveness through employer-driven career pathways across the state.

Performance-Based Conclusion

The goal of this evidence-based data analysis is to demonstrate how each Community College Workforce Training & Development Center brings value in resolving California's overall skills gaps and skills shortages through performance outcomes.

ETP MEC college data and outcomes are performance-based. Data is collected and tracked by WTDCs based on standard performance criteria for each training used in direct ETP-MEC training classes. The data is highly accurate, creditable (employer-verified) and subject to ETP audits.

This data is clear evidence that not-for-credit programs help businesses remain competitive, contribute to the state's tax base, offer expanded employment opportunities for recent and future college graduates as well as company employees, degreed and non-degreed, through upskilling. It also demonstrates a model that could be scaled as part of the solutions to the One Million middle-skilled workers gap.

The quote on the next page from the New Jersey Workforce Development Partnership highlights how other states use not-for-credit employer-direct training as an economic development and competitiveness tool for boosting production and trade.



“Such programs help businesses remain competitive, contribute to the state’s tax base and offer expanded employment opportunities for firm employees. As governments and private companies throughout the world search for the most effective ways to encourage economic growth, state-subsidized, firm-based training programs can form an important element of successful strategies for human and economic development.”

CARL E. VAN HORN AND AARON R. FICHTNER,
“AN EVALUATION OF STATE SUBSIDIZED, FIRM-BASED TRAINING –
THE WORKFORCE DEVELOPMENT PARTNERSHIP PROGRAM.”
NEW JERSEY WORKFORCE DEVELOPMENT PARTNERSHIP

CHAPTER 1

Background and Evolution of the Community College ETP Collaborative

Included in this chapter are:

- 1) Historical Evolution—Bibliography and Definitions
- 2) Performance and Value Proposition Reports
- 3) Current Workforce Training & Development Centers

The desired results of the CCETPC are to create a skilled workforce at the local level and within the State's key industry sectors.



The success of ETP MEC Colleges within the Community College Employment Training Panel Collaborative (CCETPC) and the focus on high-performance Workforce Training & Development Centers is critical to advancing new opportunities that use a proven model of direct business engagement and employee upskilling that achieves results for employers, employees, and California.

1.1 Historical Evolution

Community College Contract Education and the **California State Employment Training Panel (ETP)** have been serving business since their formation in the 1980s.

Over time most colleges have transitioned from being called Contract Education to Workforce Development and Workforce Training & Development Center(s) to better describe their services.

- ◎ **CONTRACT EDUCATION** is a non-funded, not-for-credit Community College program.
- ◎ Funding for contract education services is self-generated through contracts with employers, ETP and other grants.
- ◎ **ETP** is a state program funded through a special payroll tax.

Through the WTDCs, California Community Colleges have established a long and successful relationship with the California State Employment Training Panel (ETP) that includes funding for businesses to offset the cost of contract employee training (see Chapter 2: CCETPC's Data Evidence Findings). Many have become experts at managing ETP contracts, which takes the administrative burden off employers and leverages state funding.

The Historical Path (Figure 2) chronicles the timeline and evolution of this progression and is followed by more in-depth descriptions of mission, purpose, actions and operations at each stage.

1.2 Bibliography, Background and Definitions

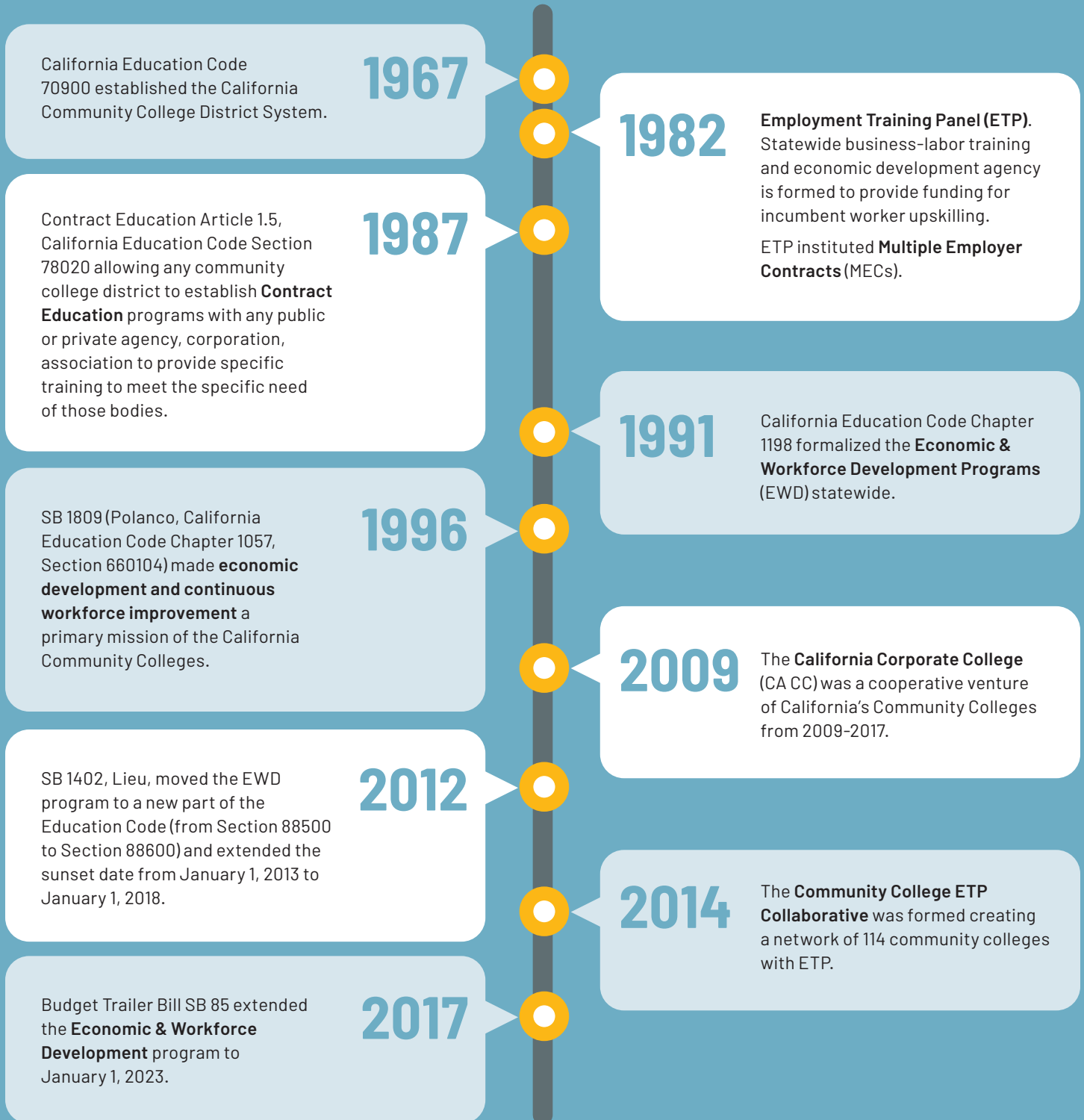
Employment Training Panel (ETP) est. 1982-current

Employment Training Panel (ETP) is a statewide business-labor training and economic development agency that provides funding for employee upskilling through training that leads to good paying, long-term jobs. The ETP program helps to ensure that California businesses will have the skilled workers they need to remain competitive.

“We are very experienced at securing Employment Training Panel funding on behalf of businesses and managing those contracts. We know which industries and types of training qualify for funding. Our staff is well versed in the entire ETP administrative process, including the initial application, contracts, program monitoring and reimbursement of funds. Because of those capabilities, we are able to handle for our clients the extensive administrative work that comes with ETP contracts.”

ELDON DAVIDSON, DIRECTOR, CENTER OF CUSTOMIZED EDUCATION, EL CAMINO COLLEGE

**FIGURE 2 | HISTORICAL PATH: CONTRACT EDUCATION TO
COMMUNITY COLLEGE ETP COLLABORATIVE**



EMPLOYMENT TRAINING PANEL (CONTINUED)

- ETP's *core program funding* is primarily focused on retraining employed (incumbent) workers, targeting those threatened by out-of-state competition, and placing special emphasis on training for California small businesses; those with fewer than 100 employees. The employer determines the training courses, trainers, and types of training that best meet their needs.
- ETP programs are funded by a special **Employment Training Tax** paid by California employers, and only employers that pay this tax directly can benefit from the program.
- The funding provided by ETP is not a grant; it is a **performance-based** contract by which training funds must be earned.
- **ETP Multiple Employer Contractors (ETP-MECs)** are entities that hold multiple employer contracts with ETP.

Such entities are typically chambers of commerce, workforce development boards, professional associations (e.g. California Manufacturers Association), and educational institutions like the California Community College system.

ETP instituted MECs to create system efficiencies that reduce the overall number of individual contracts ETP processes and create higher efficiencies and economies of scale for employers. MECs help ETP streamline the contract administration process, which enables ETP to better serve businesses.



Contract Education est. 1987

Contract Education, in accordance with California Education Code Section 78020, is defined as *those situations in which a community college district contracts with a public or private entity for the purposes of providing instruction, services, or both by the community college*. Key aspects of Contract Education are:

- Programs and services include not-for-credit, credit and noncredit
- Self-funded, listed as *a cost-recovery, non-funded Community College initiative*
- Performance-based

Several California Community Colleges entered ETP-MECs during the early establishment of ETP in 1982 (Glendale, El Camino, and Santa Rosa). During the 1990s and early 2000s additional colleges became involved (San Bernardino, Chaffey, College of the Canyons) as a way to better deliver training services to employers and leverage both the employers' and state ETP's dollar investment. Today there are 10 ETP-MEC prime contracts, and 18 subcontract colleges, 22% of the total California campuses.

Contract Education in more recent years is referred to as ***Workforce Training & Development Centers***.

California Community College Chancellor's Office (CCCCO) Economic and Workforce Development (EWD) Program, codified 1991

The EWD program formalized earlier efforts to coordinate statewide technical training and programs for small businesses and economic development.



MISSION:

"To advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement."

Economic and Workforce Development (EWD), codified 1996

SB 1809, Polanco, Chapter 1057, Section 66010.4, further clarified the legislative intent of the EWD, defined regional planning, priority setting and coordination and added accountability and audit requirements, as well as made economic development and continuous workforce improvement a **primary mission of the California Community Colleges**.

California Corporate College, 2009–2017

The California Corporate College (CA CC) was a cooperative venture of California's Community Colleges created in 2009, with a mission to provide a single point of contact for business, governmental agencies, and associations to access training and workforce development services throughout California. The high points of the California Corporate College include:

- A 2015 rapid response contract with Richard Heath & Associates, \$4,062,530, involving 35 colleges and delivering "Covered California Grantee & Assister Training."
- A 2013 multi-year, \$3 million contract with the California Department of Corrections and Rehabilitation to deliver motivational interview training to correctional counselors and other staff at facilities statewide.

Economic and Workforce Development (EWD), codified 2012

SB 1402, Lieu, moved the EWD program to a new part of the Education Code (from Section 88500 to 88600) and extended the sunset date from January 1, 2013 to January 1, 2018. It also updated the general provisions and definitions, added new requirements, and updated the mission statement to read as follows:

- 1) *To advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement.*
- 2) *To advance California's economic and jobs recovery and sustain economic growth through labor market-aligned education workforce training services, and sector strategies focusing on continuous workforce improvement, technology deployment, and business development, to meet the needs of California's competitive and emerging industry sectors and industry clusters.*

- 3) *To use labor market information to advise the Chancellor's Office and regional community college bodies on the workforce needs of California's competitive and emerging industry sectors and industry clusters, in accordance with both of the following:*
 - 1) *To the extent possible, the economic and workforce development program shall work with, share information with, and consider the labor market analyses produced by the Employment Development Department's Labor Market Information Division and the California Workforce Development Board.*
 - 2) *The economic and workforce development program may also use its own resources to bolster and refine these labor market and industry sector and industry cluster analyses to fulfill its mission.*
- 4) *To provide technical assistance and logistical, technical, and communications infrastructure support that engenders alignment between the career technical education programs of the community college system and the needs of California's competitive and emerging industry sectors and industry clusters.*
- 5) *To collaborate and coordinate investment with other state, regional, or local agencies involved in education and workforce training in California, including, but not necessarily limited to, the California Workforce Development Board, local workforce investment boards, the Employment Training Panel, the State Department of Education, and the Employment Development Department.*
- 6) *To identify, acquire, and leverage community college and other financial and in-kind public and private resources to support economic and workforce development and the career technical education programs of the state's community colleges.*
- 7) *To work with representatives of business, labor, and professional trade associations to explore and develop alternatives for assisting incumbent workers in the state's competitive and emerging industry sectors. A key objective is to enable incumbent workers to become more competitive in their region's labor market, increase competency, and identify career pathways to economic self-sufficiency, economic security, and lifelong access to good paying jobs.*



BUDGET ITEM

Prior to 2013, EWD funded two statewide positions: Contract Education Director North and South. This was the only funding provided by the CCCCCO, as Contract Education is considered an "unfunded initiative."


A core component of SB 1402 was the delivery of direct services to businesses, which includes performance improvement training, EWD statewide directors, north and south, and partnerships with many of the Contract Education programs around the state to coordinate business engagement.

In 2013 under the “Doing What Matters” framework, those roles were eliminated, and a Technical Assistance Provider-Statewide Contract Education position was created.

Community College ETP Collaborative (CCETPC) formed 2014

The Community College ETP Collaborative (CCETPC) was established to enhance the statewide network, 114 community colleges, to more efficiently and responsively deliver strategic workforce development programs and employee training solutions to business and industry.

Members of the CCETPC are community colleges holding direct MEC contracts with ETP.



“The Community College ETP Collaborative was formed to educate ETP executives, the Chancellor’s Office, and other key constituents about the value the WTDCs bring to California’s employers and to the state’s economy. Through collaboration, CCETPC can help those community colleges that do not have the resources or expertise to secure and administer ETP contracts on behalf of their business clients. In this way, we can expand the reach of the WTDCs to a much larger geographic base of employers.”

ELDON DAVIDSON, DIRECTOR,
CENTER OF CUSTOMIZED EDUCATION, EL CAMINO COLLEGE

In the early formation of CCETPC, the group realized that the majority of MECs were in Los Angeles County, Orange County and the Inland Empire. To increase services to businesses and industry, it was imperative that statewide collaboration expand. As the colleges began to share best practices, performance as a group increased and rapid growth followed soon after it was formed. Today, representing 22% of the Community College system, 10 MEC college contractors and 18 subcontracted colleges are serving businesses across the state.

Economic and Workforce Development (EWD), Budget Trailer 2017

SB 85, Chapter 23, committee on Budget and Fiscal Review, a trailer bill extended the EWD program to January 1, 2023.

\$

BUDGET ITEM

The current budget line item funding is \$23 million, which primarily funds the Statewide Sector Directors, previously known as *Sector Navigators*, and Regional Directors, formerly known as *Deputy Sector Navigators*, of the EWD programs. Contract Education/WTDCs remain unfunded.

1.3 Performance and Value Proposition Reports

The following studies were conducted to measure the performance and cost effectiveness of the program as a not-for-credit, unfunded initiative:

Time Structure, Inc., 2010. A one-time *return-on-investment* report of the CCCC's EWD program found that from 2002-2009, 41,000 businesses were assisted, 107,000 students and trainees, and 4,300 individuals were placed in jobs. Average cost per employee trained in a highly concentrated one-time course was \$589. Findings also noted each newly trained worker earned a higher wage, subsequently paying an additional \$450 in state/local taxes over the next three years, and the workers' higher tax payments returned almost 80% of the state's costs for the training. The return on investment — ***for every state dollar spent on business training, two dollars in state-local revenues were generated over next two years*** — more than covered program costs.

ETP-MEC Performance Report, 2014. The report was presented to the ETP Panel representing performance data collected from seven colleges holding multiple employer contracts (MEC): Butte College, Chaffey College, College of the Canyons, El Camino Community College District, Glendale Community College, Kern Community College District, and San Bernardino Community College District. The report effectively demonstrated to the ETP Panel:

- MEC Community Colleges consistently had the highest performance rate in delivering regional and statewide training at the lowest cost than any other ETP provider.
- The intrinsic value brought by the Community Colleges.
- Trainees are paid full wages while attending training, an estimated average of \$2.3 million per year.

The presentation of the report's findings resulted in funding increases to the MEC Community Colleges over the following four to five years. Additionally, ETP recognized the community colleges as making major contributions to the delivery of statewide workforce development programs that improved the competitiveness of businesses.

Dunn & Bradstreet Report-Evaluating ETP Success, 2018. An ETP sponsored Dunn & Bradstreet report conducted in 2018 showed clear evidence that the customized training programs delivered through MECs played a significant role in moving businesses considered "High Risk" to "Medium Risk" or "Low Risk" status, indicating that these organizations improved their financial stress condition.

"ETP's long-standing partnerships with community colleges across the state are critical to reaching employers and providing quality job training."

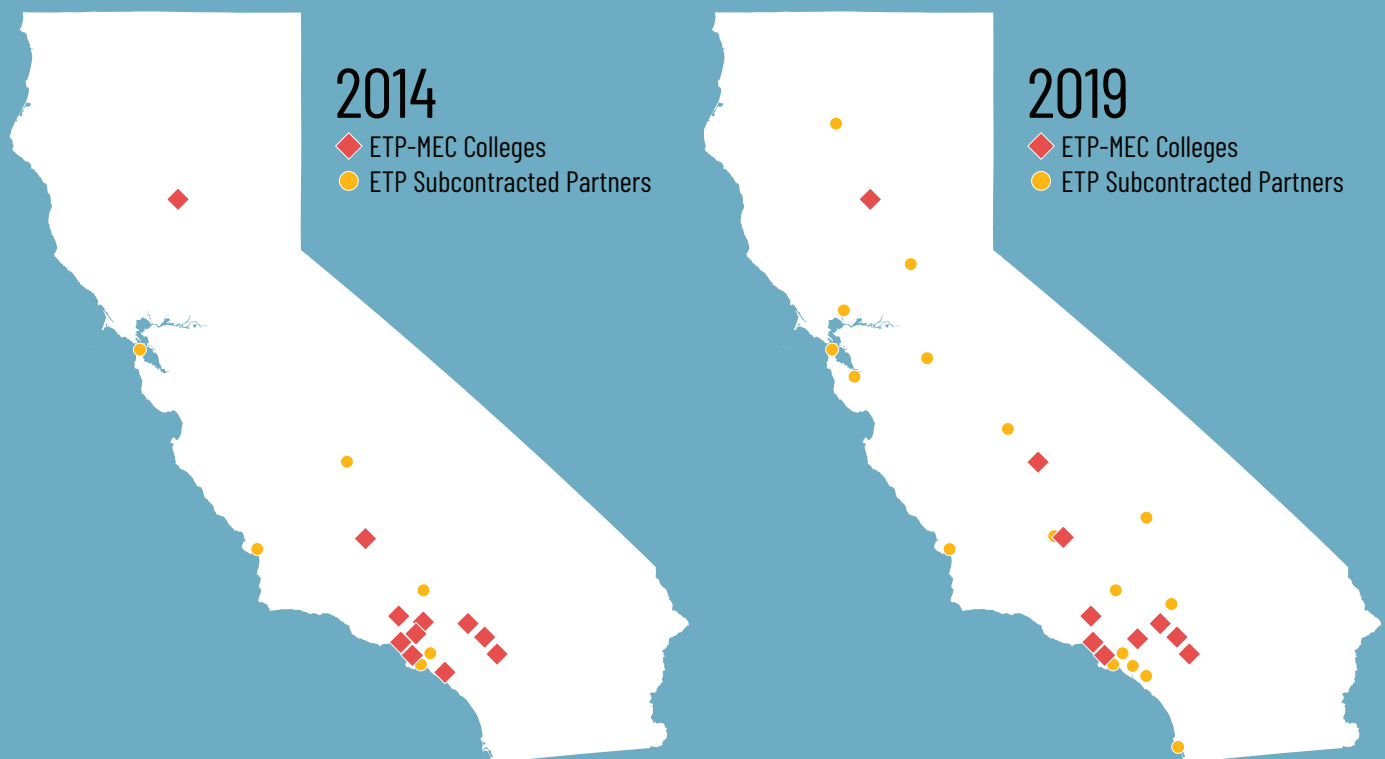
STEWART KNOX, UNDERSECRETARY,
CALIFORNIA LABOR & WORKFORCE DEVELOPMENT AGENCY,
FORMERLY EXECUTIVE DIRECTOR, EMPLOYMENT TRAINING PANEL

1.4 Expanding Statewide Coverage, 2014-2019

The maps and participant table (Figure 3 and Table 1) highlight the five-year growth and expansion of the ETP college network and training contracts.

Data collected from the ETP-MEC Colleges demonstrates the capability of the CCETPC to reach out to other colleges who do not have ETP relationships or contracts to serve their local businesses. Data also reflects the ability for moving/sharing funding and resources with other colleges around the state. A MEC college can also be a “Receiving College” for funding when they are in between contracts with ETP. Table 1 defines participating colleges either directly (10) or indirectly (18) with MEC contracts.

FIGURE 3 | GROWTH OF CALIFORNIA’S COMMUNITY COLLEGE MEC AND PARTNERING COLLEGES



Participating colleges are named in Table 1 (pg. 22) and Figure 6 (pg. 41).

TABLE 1 | CCETPC DIRECT ETP MEC CONTRACTS AND SUBCONTRACTS

ETP MEC COLLEGES	SUBCONTRACTED COLLEGES
Butte-Glenn Community College District	Napa Valley College* San Jose Evergreen College Shasta College Sierra College
Chaffey College	Saddleback College Victor Valley College
College of the Canyons	Ventura Community College District
College of the Sequoias	Fresno City College*
El Camino Community College District	Antelope Valley College Butte Glenn Community College District* Cerritos College* Chaffey College* City College of San Francisco Long Beach City College Rio Hondo Community College Riverside Community College Saddleback Community College
Kern Community College District	Antelope Valley College College of the Sequoias* Cuesta College
Mt. San Antonio Community College	
Riverside Community College District	Cerritos College*
San Bernardino Community College District	Butte-Glenn Community College District* Cerritos College* Fresno City College* Napa Valley College* Modesto Junior College Rancho Santiago Community College District Riverside Community College District* San Diego Community College District San Mateo Community College District Saddleback College Victor Valley Community College District
Santa Monica College	

COLUMN 1: ETP-MEC Colleges, Primes. **COLUMN 2:** Colleges that have Inter-MEC subcontracts with Primes.

* Reference multiple interagency agreements to fund delivery of rapid response programs and services. Primes hold multiple agreements to fund projects between ETP contract agreements and collaborate on projects such as the Certified Nursing Assistant as reported on page 23.

Clean Energy / Alternative Fuel

Challenge: Meeting regularly with industry executives, Contract Education became aware of employee skills gaps as organizations transitioned from diesel to electric and hybrid vehicles.

Solution: The Advanced Transportation and Alternative Energy (ATRE) centers in four locations collaborated to deliver customized workplace training statewide. ATRE programs focused on alternative fuel and vehicle training in a variety of clean air technologies for light- and heavy-duty vehicles.

STATS

Started: **2011**

4 Colleges

57 public employers, regional transits, cities, municipalities and businesses benefited

1,213 trained, including
890 mechanics and
323 firefighters and police officers

Full details can be found in Appendix B.

Certified Nursing Assistants (CNAs)

Challenge: Skilled nursing facilities needed more certified nursing assistants (CNAs), starting in Spring 2018, due to a change in state-required staffing ratios.

Solution: Working in concert with skilled nursing facilities, Workforce Training and Development Centers determined that many facilities had training programs in place but needed help with training costs. Six participating colleges pooled their ETP funding to reimburse employers who trained new hires.

STATS

Started: **2018**

11 Cities

6 Colleges

238 trained (2018)

95% passed training, became certified, and met 90-day retention requirement at Windsor Chico Care Center

Full details can be found in Appendix B.

1.5 Current Workforce Training & Development Centers

Today all the California Community Colleges share an explicit economic and workforce development mission, which is to *impact the state's economic growth and competitiveness through industry-specific education and training that helps create a highly skilled workforce* (Section 66010.4, 1996).

The community colleges fulfill the mission by:

- 1) Graduating students with the academic education and skills that meet the workforce needs of business.

And the WTDCs fulfill the mission by:

- 2) Helping meet businesses' needs by providing not-for-credit, intensive, workforce training through **Workforce Training & Development Centers**. This training helps increase productivity and closes the skills gap within the employer's organization.

Workforce Training & Development Centers are self-funded, entrepreneurial units within a community college that deliver responsive, customized employee training and workplace education solutions that help organizations meet their strategic goals. Through regional and statewide collaboration among colleges, a vast network of resources and subject matter experts are leveraged to deliver employee training programs and customized training onsite at the employer's facilities, or on the college campus.

Workforce Training & Development Centers serve California businesses, government agencies, and not-for-profit organizations. Customized training has been delivered to employees working in nearly every major industry sector that fuels the California economy—from manufacturing and aerospace to agriculture and healthcare. Those employees benefitting from customized training include college graduates, employees with some college, and non-degreed individuals who obtained their skills and experience through alternative pathways such as apprenticeships, on-the-job training, and attainment of professional certifications.

FIGURE 4 | WDTC UPSKILLING CYCLE



WDTC = California Community Colleges **Workforce Training & Development Centers**

1.6 Community College ETP Collaborative Model

The CCETPC formed in 2014 has become a proven performance-based model for delivery of direct employer-driven training:

- Whether an employer's training needs are regional or statewide, the CCETPC makes the delivery of employee training programs to multiple locations throughout California a smooth, efficient experience. To accomplish this, the CCETPC can act as a single point of contact to coordinate and manage resources and expertise of several community colleges into a consistent, seamless solution for employers.
- Companies and agencies utilizing customized training programs to help keep employees' skills current with the latest industry, technical, and business practices is evidenced by the growth of community college engagement and increase in ETP-MEC contracts throughout the state.
- With the community colleges backbone, 114 physical campuses, a college MEC can leverage a vast and rich inventory of curriculum and network of highly competent subject matter experts to deliver training programs to businesses anywhere in the state. Community college MECs can shift resources (curriculum, subject matter experts and funding dollars) among colleges to better serve businesses.
- The track record of delivering high-quality employee training and consulting has resulted in a lower cost than other ETP training providers.
- Workers receive direct benefit from higher employment and wages generated by skills upgrading.
- Community businesses and residents benefit from the spending of additional income earned by program enrollees.
- There is also substantial evidence showing that after receiving non-credit training some employees with no college degree become motivated to enroll in college for-credit programs.

As a result of the CCETPC model, ETP has shown great interest in leveraging CCETPC's reach and access to businesses by building and strengthening capacity for training through more partner colleges.

CHAPTER 2

CCETPC's Data Evidence Findings

"We must ensure we educate and train workers for the jobs of the future"

"...the Commission's primary mission shall be to study, understand, analyze, and make recommendations regarding...the best way to preserve good jobs, ready the workforce for the jobs of the future through lifelong learning, and ensure shared prosperity for all."

CALIFORNIA GOVERNOR, GAVIN NEWSOM, AUGUST 30, 2019



California's challenge was highlighted in the California Competes *Back to College, Part 1* study identifying the need for Two Million degree or certified workers by 2025.

More recently **California Forward**¹⁰ and the **California Stewardship Network**, bipartisan government reform to improve economic vitality, are participating with Governor Newsom on his Regions Rising Initiative, for a shared agenda to improve regional competitiveness. Governor Newsom has been promoting a policy agenda focused on creating a *California for All* and has established a Future of Work Commission¹¹ to be guided by Secretary of Labor, Julie Su and Chief Business Advisor, Lenny Mendonca, Governor's Office of Business & Economic Development.

10 California Economic Summit 2019, <https://caeconomy.org/>

11 California Future of Work Commission and Institute for the Future, <http://www.iftf.org/home/>

California Forward, endorsed by the governor, identified in 2018 the **One Million Skilled Workers Challenge** to help fill the growing demand for “middle-skill” positions that require more than a high school diploma but not necessarily a degree to create career opportunities for individuals. Both initiatives and plans are focused on meeting the 2025 projected demand by industry for skilled employees.

California Forward • Priority Actions in 2019

FORMALIZE STRATEGY IN STATE POLICY:

Work with the Governor and Legislature to formalize in state policy a plan for developing and advancing a regions-based state strategy for inclusive and sustainable growth.

This formal **state policy will be predicated on strong analytics to inform decision-making at community, regional, and state levels**—and it should encourage proactive coordination among state agencies and in partnership with regions to drive shared goals.

PROMOTE LIFELONG LEARNING:

Amplify the need for investment in **“upskilling” infrastructure** and identify and support real solutions.

The following outlines evidence-based data on the CCETPC program and delivery outcomes as well as alignment with state policy and goals to meet “all” the workforce needs of Californians.

2.1 Quantifiable Data Analytics and Impact

California Forward’s 2019 priority actions are predicated on strong analytics to inform decision-making — *CCEPTC has one of the only “working” bodies of data of a tested model aligned with Lifelong Learning.*

For purposes of strong analytics for decision-making, CCEPTC’s tracking data and outside assessments provide an excellent data sampling of 17.21% of the One Million Skilled Worker

Challenge.¹² Table 2 (next page) summarizes and highlights the data tracking of all employer-based training since 2010. The data is verified by ETP training audits. Appendix A provides charts and data notes that further detail the clientele participating in the trainings, age and education cohorts and trainings.

Key Data Findings

- Training demand occurs at the greatest rate upon career entry but continues throughout the career cycle, 30-40 years, supporting the Lifelong Learning challenge and need for upskilling infrastructure.
- Training demand is equally distributed between non-degreed and degreed trainees, and between the ages of 25-54, highlighting the need for continuous improvement due to technologies and system advancements in the workplace.
- Industry with largest demand is advanced technology and manufacturing, those businesses boosting California's trade.
- Of those upskilling, 49.4% have some college or are college graduates, 38.2% are high school graduates, validating industry's request for qualified employees and closing of the skills gap.
- Industry is seeking certifications for specific job skills throughout the career lifecycle.
- Career wage gains after upskill training averaged 20%, with average hourly wage for a trainee starting at \$24.85; nearly 30% higher than the reported \$19.04 average California wage.
- Hispanics and Asians account for more than half of the training hours completed and the number of enrollees, evidence of the diverse and inclusive employment base.
- Wage gains for those with some college and upskill training/certificates was consistent with wage gains of those individuals with degrees.
- Employers that participated in these initiatives showed significant improvement in financial stability over organizations that did not.

¹² CCETPC 172,115 clients tracked.

TABLE 2 | CCETPC TRAINING TRACKING SUMMARY 2010-2018

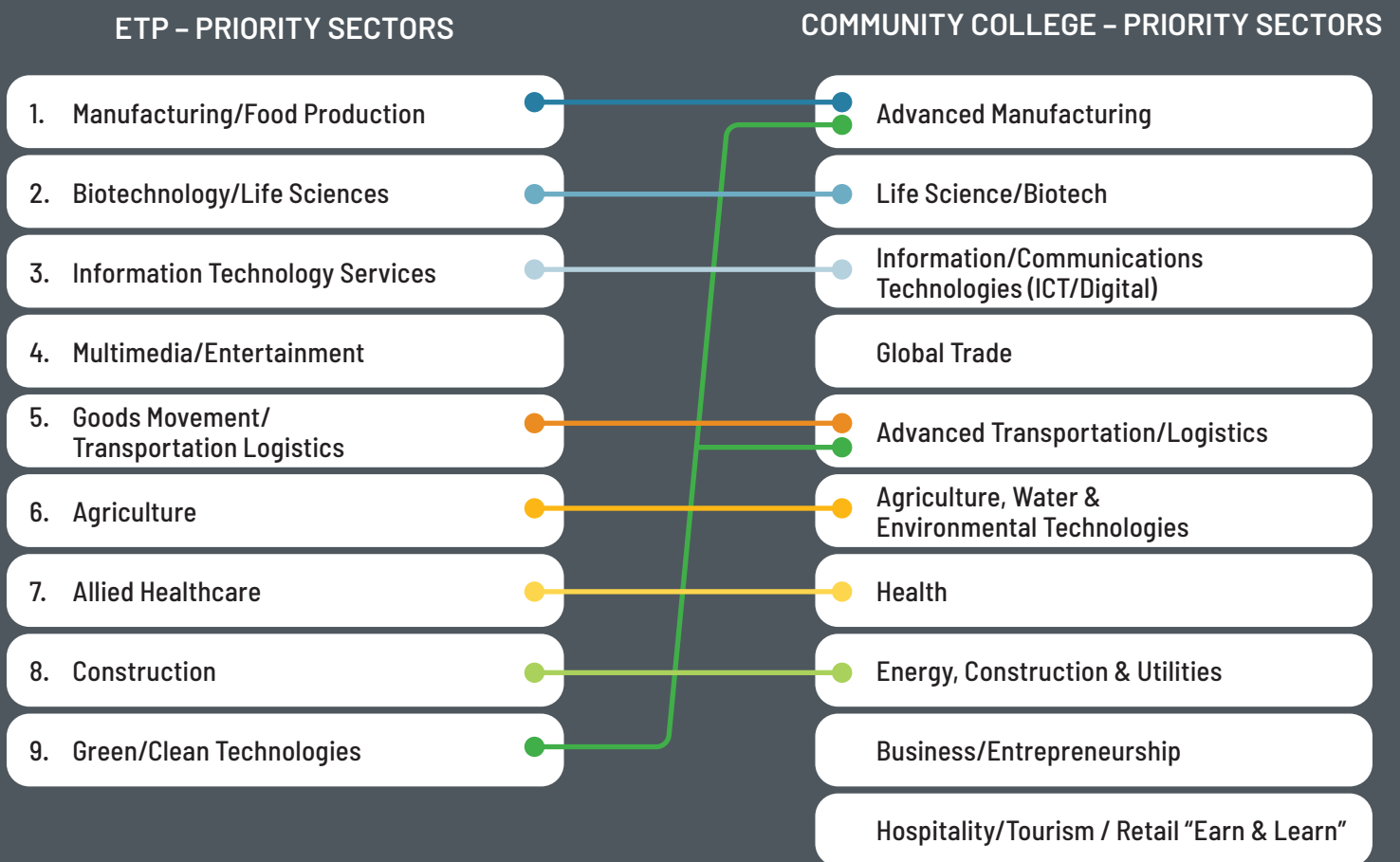
PARTICIPANTS							
Employers Served	3,044		340 per year, annually increases due to demand				
Trainings	45,654		Participating trainees (Source: ETP Annual Report)				
	743,904		Training hours conducted				
	<25	25-34	35-44	45-54	55-64	65>	
Trainees by Age Group	6.7%	29.96%	26.9%	23.25%	11.62%	1.49%	
Training Hours	6.52%	30.37%	26.29%	23.30%	11.96%	1.54%	
	<8th Grade	Some HS	GED	HS Grad	Some College	College Grad	Post College
Trainees by Education	3.0%	3.25%	4.66%	38.2%	26.43%	22.97%	4.46%
Training Hours	3.40%	3.23%	4.62%	33.01%	28.21%	23.47%	4.06%
	Hispanic	White	Asian	Black	Other		
Ethnic Distribution	48%	31%	9%	4%	8%		
TRAINING							
	Manufacturing		Wholesale Trade		Transportation		Agriculture
Industry Training	51.53%		19.76%		7.75%		5.70%
	Continuous Improvement		Business Skills		Manufacturing Skills		Advanced Technology
Specific Curriculum	39.95%		19.86%		13.75%		4.32%
WAGES							
Wage Ranges	\$19.01 to \$40.73		Wage ranges are dependent on industry, specific occupation and skill levels.				
Average Hourly Wage of Trainee	\$24.85		Post-retention wages; a 20% wage increase.				
INVESTMENT							
Public-Private Investment	1:1 Ratio		100% match of private employer investment to ETP investment. The employer is required to pay employee wages during training.				
	\$18.5MM		Employers paid employees while attending upskill training.				
	\$728		Average state cost per trainee (ETP 2017-18 Report). Range \$728 to \$2,493.				
	\$450		Average additional taxes each newly trained worker contributes annually (first three years after training).				
	80%		Of the state’s investment in training is returned through the economic impact of higher skilled/paid employees.				
	97%		Student retention rate.				

2.2 California's Priority Industry Sectors

A guiding principle for CCETPC is to focus training delivery to California priority sectors providing industry-specific training for upskilling incumbent workers and providing pathways for new entrants to priority sector careers.

California's priority sectors are identified by both ETP and California Community Colleges, informed by economic and employment data. These are the industries that drive the economy, having higher than averages wages, representing California's global competitiveness and emerging innovation and technology.

FIGURE 5 | ALIGNMENT OF PRIORITY SECTORS – ETP AND COMMUNITY COLLEGES



To address the needs of the priority industry sectors, specialized courses are offered falling into eight basic skills categories, which have multiple courses related to the skills set. The specific courses utilize a base curriculum and then customized to the needs of the employer. This method results in continuous creation of a diverse range of training options for employers/employees. Customizing allows the incorporation of new technology, equipment and efficiency tools for the industry.

Table 3 highlights the diversity of courses conducted. Note: communication skills is a high demand course for all industries and across the board for age and ethnicity. Communication and the ability to work in teams is a critical need for all industries, not one that can easily be taught in the classroom.

COLLABORATIVE IN ACTION

Manufacturing

Challenge: *Impresa Aerospace operates on tight margins as part of the supply chain to major companies such as Boeing. It's a build-to-print aerospace sheet metal shop where there's a small pool of highly skilled operators. Training is essential to avoid costly errors and retain talent, but the cost is prohibitive.*

Solution: *El Camino College offers dual advantages:*

*1) Expertise in facilitating the ETP application process, and
2) delivery of training customized to the company's specific requirements and employee skill set. In fact, one instructor incorporates employee drawings into the coursework, allowing employees to learn by critiquing real work scenarios. Every hour an employee spends in class is a lost hour of production; this training ensures that every minute counts.*

STATS

Started: **2013**

1 City

1 College

15-20 employees per class

40 hours of instruction
over 10 weeks (600-800
manufacturing hours)

*Full details can be found in
Appendix B.*

TABLE 3 | PRIORITY SECTOR TRAINING COURSES



ADVANCED TECHNOLOGY

- ASE Certification Alternative Fuels (F1)
- ASE Certification Electrical, Emissions - A6, H6, S6, T6
- Codes & Standards Covering CNG Cylinders
- Cummins CNG engine/fuel systems
- Electrical - Voltmeter, Schematics, Electrical Principles
- Hybrid Vehicle Maintenance & Diagnostics
- Sustainability for Management Systems



BUSINESS SKILLS

- Business Grammar and Writing Skills
- Communication Skills
- Customer Service
- Performance Management Skills
- Presentation
- Project Management



COMMERCIAL SKILLS

- Preventative Maintenance Inspection
- Schematic Reading-Electrical Troubleshooting and Repair



COMPUTER SKILLS

- CAD Cam Engineering Software Training
- Computer Skills for Production & Inventory
- Microsoft Office Advanced



CONTINUOUS IMPROVEMENT

- APICS
- Frontline Leadership
- Hazardous Materials
- ISO (International Organization for Standardization)
- Lean Manufacturing
- Problem Solving
- Quality
- Root Cause Analysis
- Six Sigma



LITERACY SKILLS

- Vocational English as a Second Language



MANAGEMENT SKILLS

- Leadership
- Supervisory Skills



MANUFACTURING SKILLS

- Blueprint Reading
- Electrical Fundamentals
- Geometric Dimension & Tolerances
- Industrial Maintenance
- Inventory Management
- Manufacturing & Assembly
- Pneumatics

2.3 Lifelong Learning Imperative

California's unemployment rate is very low (4.1%, July 2019) with US unemployment 3.75% for the same period. Employers are having a harder time filling blue-collar positions than professional positions. This environment is creating a competitive job market for employee recruitment and retention and contributing to the demand for One Million middle-skill workers.

In addition to the CCETPC evidence-based data, current research¹³ finds the current global work environment requires most employees to be trained in higher skills beyond high school, a fundamental shift called the "middle-skills pathway." This is also driving the Lifelong Learning and Upskilling Imperative where skills and knowledge must keep pace with industry changes to remain competitive.

Most of the growth in good jobs has been in these middle-skills jobs. Some of those include blue-collar jobs as well as middle-skills technical jobs. The continuous middle-skills jobs training has created a needed increase in services for apprenticeships, certifications, on-the-job training, associate degrees, Career and Technical Education and Lifelong Learning.

Upskilling is now a mainstay for industry. Rapidly changing technology and competition has created an environment of upskilling throughout an individual's career (30-40 years) Employers have had to keep up with the latest deeper and broader competencies required in today's technical work environment and provide training for employees on a regular

¹³ Carnevale, A. P., Strohl, J., Ridley, N., & Gulish, A. (2018). Three educational pathways to good jobs: High school, middle skills, and bachelor's degree.



A Case for Lifelong Learning & Upskilling

By Adecco Group & Boston Consulting on Future of Work

Technology is transforming how we live, think and work.

Recent advances have created a plethora of new jobs and repurposed traditional roles to such an extent that they require a completely different mix of competencies. Businesses understand that they will not thrive – and may disappear altogether – if they do not adjust their strategies to seize the advantages afforded by digital technologies. In preparation, firms are reorganizing their teams for a digital future, implementing automation and hiring specialist employees.

As this reorganization continues, *the trend is for relatively few legacy workers to be kept in place and upskilled*. In turn, the newly unemployed must look for work in a job market that has moved on without them. And, as a result, we see **growing structural unemployment** – the mismatch between the skills that businesses are looking for, and the skills that workers in the economy can offer.

When companies face critical skill shortages, as they increasingly do, it is a worrying sign for economic growth and productivity.

A workforce that is aging and marked by the growth in untraditional “gig economy” jobs – which place the responsibility for training upon the individual – exacerbates the challenge. *Would this situation be improved if there was a focus on re-/upskilling the existing workforce?*

A shift in focus is needed. “First is a shift in mindset, we need a more flexible approach, setting a path to re-/upskilling that can be adapted to changing circumstances.”

Both workers and employers acknowledge the need for new skills, but no system is in place now to provide those skills.

“In terms of coping with the transformation of the world of work, reskilling and life-long learning are essential,” said Alain Dehaze, CEO of The Adecco Group. “It’s absolutely critical, because we lose workers, we lose the knowledge, productivity falls, revenue drops, and that can halt business.”

basis. Younger workers, with and without degrees, are increasingly joining the middle skill workforce. Older workers need the Lifelong Learning infrastructure to stay competitive in the market. These two factors drive the need for lifelong skill training within industry.

2.4 California Community Colleges – Meeting California’s Needs

“We have initiated innovative, and, some would say, disruptive changes that re focused on achieving these goals....”

“The Vision for Success guides interrelated reforms that will make higher education more accessible and equitable for millions of Californians at a time when the state needs it most.”

**BOARD OF GOVERNORS,
CALIFORNIA COMMUNITY COLLEGES
BUDGET & LEGISLATIVE
REQUEST FOR 2020-21**

SEPT 17, 2019

In 2017 the California Community Colleges released Vision for Success, Strengthening the California Community Colleges to Meet California’s Needs.¹⁴ Goal 1 is to **increase by at least 20 percent the number of California Community College students annually who acquire associate degrees, credentials, certificates, or specific skill sets that prepare them for an in-demand job.** This increase is needed to meet future workforce demand in California, as analyzed by the Centers of Excellence for Labor Market Research. This goal is consistent with the recommendations of the California Strategic Workforce Development Plan.¹⁵

Equally important to the number of students served will be the type of education they receive through programs, awards, and course sequences needed to match the needs of regional economies and employers.

The California Workforce Strategic Workforce Development Plan is also a key aligning policy to meeting “all” workforce needs of Californians where CCETPC has strong integrated services, specifically in the following policies:

- 1) **Sector Strategies:** Policy initiatives designed to promote the economic growth and development of a state’s competitive industries using strategic workforce investments to boost labor productivity.

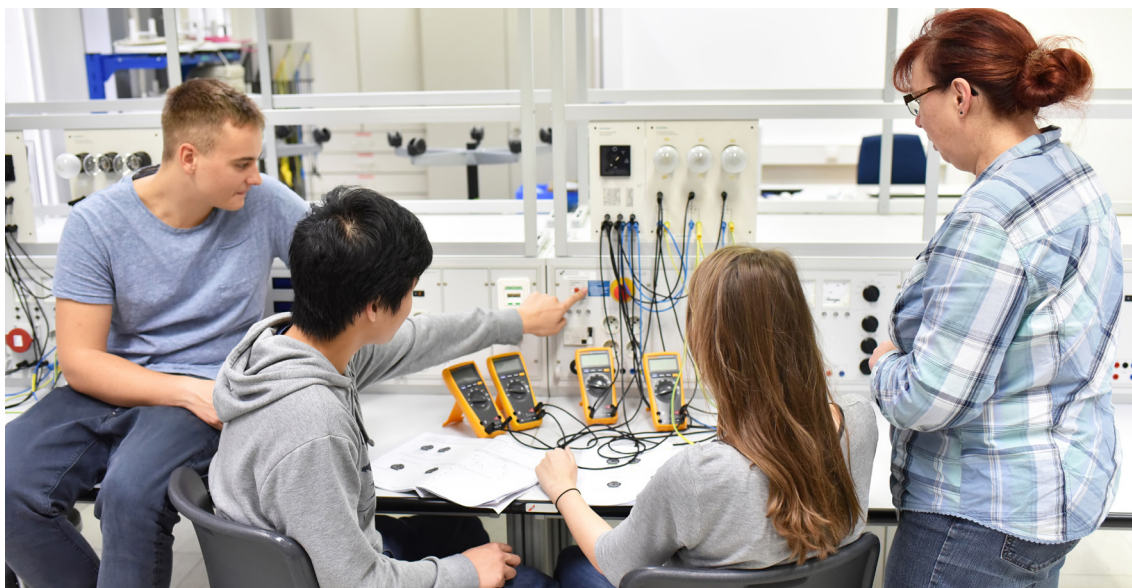
¹⁴ California Community Colleges, Vision for Success, Strengthening the California Community Colleges to Meet California’s Needs, <https://vision.foundationccc.org/>

¹⁵ California’s Unified Strategic Workforce Development Plan, www.cwdb.ca.gov

- 2) **Earn and Learn:** Policy designed to facilitate skills attainment while also providing some form of compensated work experience, allowing “earning” income while “learning” to do a job. Many have barriers to employment and cannot afford to attend an education or training program full time. “Earn and Learn” opportunities are an important strategy for success.
- 3) **Organizing Regionally:** Labor markets and industry are both organized regionally. Organizing workforce and education programs regionally increases the likelihood that workforce and education programs can be aligned to serve the needs of labor markets.
- 4) **Integrating Services and Braiding Resources:** Integrating service delivery and braiding resources are ways that workforce and education programs can achieve program alignment and assure access to the broad array of services funded across the state’s workforce and education programs.

The CCETPC, although an unfunded, not-for-credit program within the California Community College system, is positioned to play a significant role in meeting the goals of the California Community Colleges and integrating with the California Workforce Development Boards regionally with the employer-valued skills training conducted directly with employers addressing regional economies.

The WTDCs, as part of the system, collaborate with academic programs, credit and non-credit. Often the development of new academic programs, meeting industry standards and needs, has been initiated by the WTDCs as not-for-credit offerings that have subsequently become part of credit programs bringing adults into community colleges for higher levels of education.



2.5 Upskill Training as a Business Retention & Expansion Tool

The CCETPC training programs being implemented with industry in many parts of California is one of the best programs to retain and expand existing businesses in California.

According to employer feedback, these trainings 1) serve the population with the greatest skills gap, 2) address critical skills needed in operations, 3) reduce turnover rate, and 4) create higher levels of teamwork, communications, safety and productivity. These trainings also assist the business in reducing turnover rate which reduces cost — a *2018 LinkedIn Workforce Learning Report*¹⁶ stated *93% of employees said they would stay in their current job if their employer offered training and supported their career growth*. The data findings also identified, in addition to skills upgrades, improvement and efficiency in business operations.

Many businesses look to the state or region for incentives to help them be competitive against out-of-state businesses. Qualified, skilled and productive employees, that are consistently upgrading their skills and knowledge provide California businesses a competitive edge.

These trainings should be a key **Business Retention & Expansion Tool** in each region of California. Not only as a business retention/expansion tool but also an attraction value proposition — labor quality, talent and skills are often the number one decision factor for new businesses locating in the state. *Adding these programs as part of a recruitment package will add a competitive advantage for California.*

¹⁶ LinkedIn Learning, 2018 Workplace Learning Report (PDF), <https://www.cornerstoneondemand.com/sites/default/files/partner/asset/files/linkedin-learning-workplace-learning-report-2018.pdf>

CHAPTER 3

Institutionalizing CCETPC Funding

California employers are challenged with labor shortages, continuous innovative and technology changes in the workplace, and production inefficiencies. At the speed these challenges are happening, the ability to rapidly respond to an industry's immediate need is critical in keeping the employer competitive in the global market as well as keeping a labor force highly productive with transfer skills.



Guiding documents from *California Community Colleges, Vision*; *California Strategic Workforce Development Plan*; *California Competes, Part One & Two*; and *California Forward 2019 Roadmap to Prosperity* share the same goal for California to remain competitive in the global market. We must meet the challenge to provide industry with both degreed and middle-skilled training — **One Million Middle-Skilled Workers by 2025**.

3.1 CCETPC Model, Part of the Solution

The CCETPC is poised to expand its local, regional and national leadership role. The CCETPC model is a proven, evidence-based model:¹⁷

¹⁷ Appendix, Success Stories

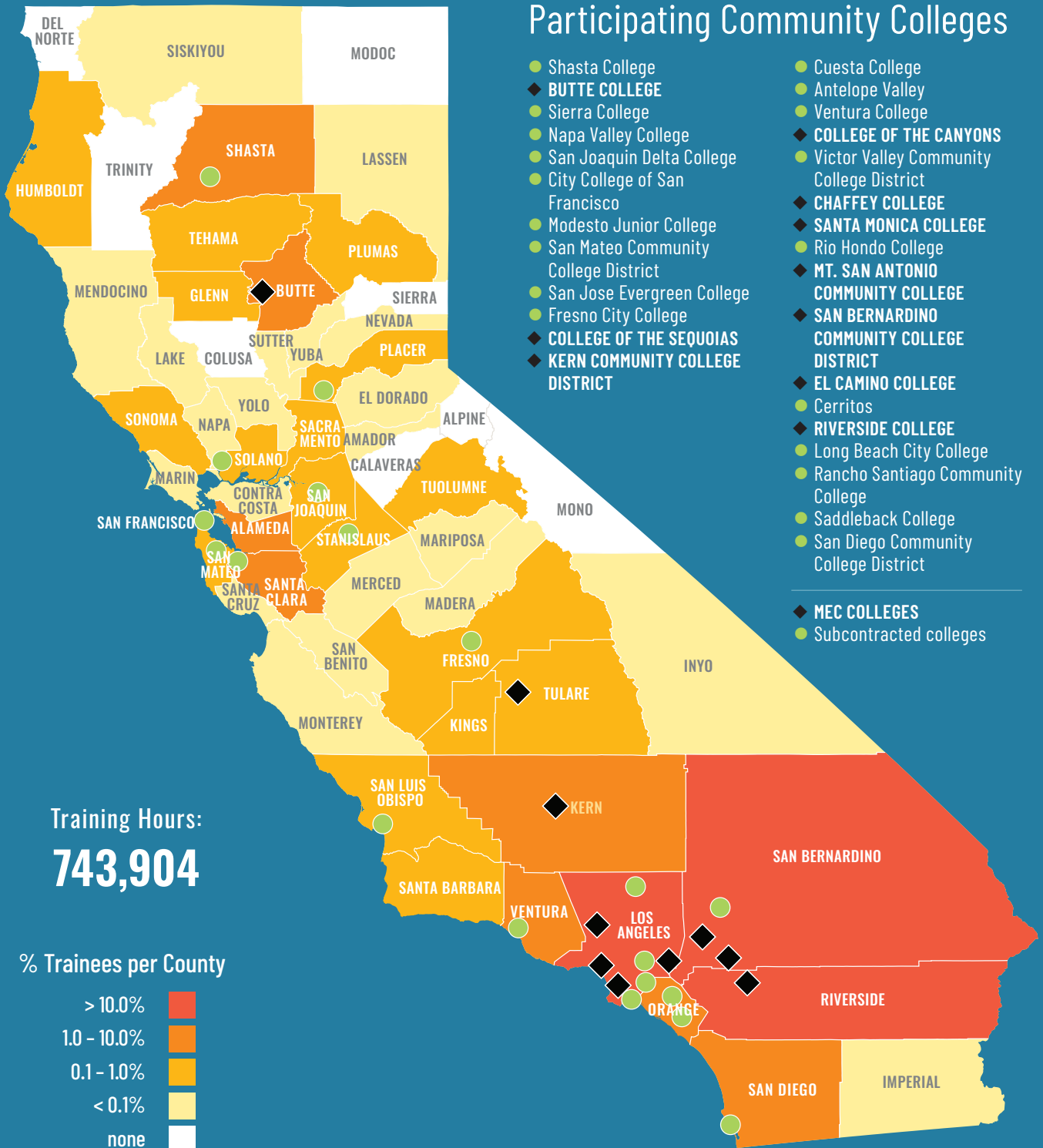
CCETPC MODEL (CONTINUED)

- Aligns with current industry needs for upskilling employees in order to retain valuable employees.
- Provides the necessary training for career advancement or returning to school for a degree.
- Inclusive of all population groups – ethnicity, age, education and gender.
- Engages with California priority sectors to ensure it is an accepted model by industry.
- Customizes training to specific industry or innovation operation.
- Provides measurable return on investment to State of California.
- Provides a footprint and distribution network to cover all regions of California via Community College campuses (114).
- Quickly incorporates needed changes in for-credit curriculum and career pathways to WTDC's direct industry knowledge of changing workplace requirements, thus continuing to drive state-of-industry education and future work.

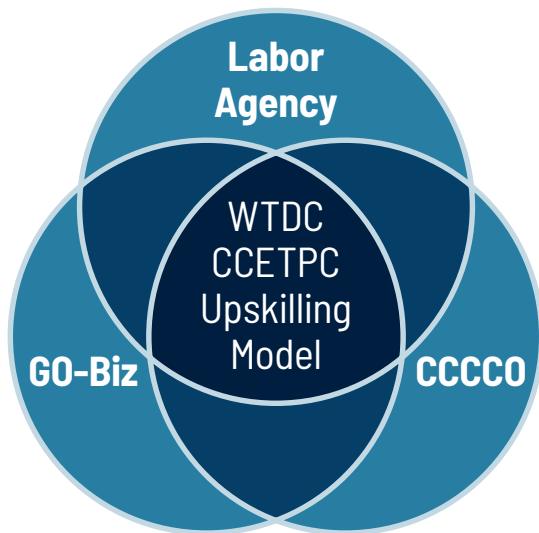
Skills, knowledge and competencies are increasingly becoming important factors for credit, non-credit and not-for-credit programs. Recording of competencies, through direct employer engagement, will aid in responding quickly to the needs and changing requirements of industry and incorporating those competencies into education and workforce training.

As demonstrated by CCETPC statewide and performance results this should easily be a successful model and framework in meeting California's overall workforce challenges to increase the skilled talent pool, close the gap with adults and assist California employers to remain competitive in a global market.

FIGURE 6
2010-2018 CCETPC Counties Served



3.2 Connecting the CCETPC Model



The One Million Middle-Skilled Worker goal by 2025, supported by Governor Newsom,¹⁸ is embedded in the policies and operations of three key state agencies: the Chancellor's Office, Labor Agency, and Governor's Office of Business & Economic Development (GO-Biz).

The CCETPC model provides clear advantages and opportunities for agencies to meet the shared goals of achieving solutions to workforce challenges and supporting strategic internal operating policies:

Governor's Office of Business & Economic Development – For new and existing business, labor force (talent) is the key decision for expanding or locating in California. Business needs to know they have a candidate pool that is either trained or can be trained in their specific industry before they will make an investment.

CONNECTING POINT: Structure the CCETPC Model as a business retention & attraction tool; link locally in regions with state offices and local economic development offices.

California Labor & Workforce Development Agency – Labor Agency is responsible for coordinating workforce programs and ensuring access to employment and training programs, specifically Employment Training Panel, Workforce Development Board(s) and Employment Development Department.

CONNECTING POINT: The CCETPC model is already closely connected with the agency, has a working partnership with ETP and is integrated with the local Workforce Development Boards.

CONNECTING POINT: CCETPC could further integrate and expand joint efforts that meet the policies of the Strategic Workforce Development Plan, such as sector strategies, *earn & learn*, *organize regionally*, *integrating services* and *braiding resources*.

¹⁸ California Forward: Roadmap to Prosperity

CONNECTING POINT: Full integration could be accomplished with WTDCs hosting (co-location) of local America's Job Center of California (AJCC). AJCC are designed to be one-stop shop for workforce services, providing a comprehensive range of no-cost employment and training services for employers and job seekers.

CONNECTING POINT: Given WTDCs direct work with business in designing curriculum and training in different industry and economic regions, WTDCs are uniquely positioned to enhance and create new business-informed apprenticeship models to meet industry needs.

California Community Colleges Chancellor's Office – CCCC's EWD mission is to advance California's economic growth and global competitiveness through education, training and services that contribute to continuous workforce improvement.

CONNECTING POINT: The CCETPC model can directly deliver outcome to the CCC's Vision for Success: *Increase by at least 20 percent the number of California Community College students annually who acquire associate degrees, credentials, certificates, or specific skill sets that prepare them for an in-demand job.* This increase is needed to meet future workforce demand in California.

The CCETPC Model, Middle-Skills Training, with funding would connect goals, policies, resources and deliver outcomes to the Chancellor's Office, Labor Agency and GO-Biz creating a program that leverages resources and maximizes outcomes for businesses and California.

3.3 Scaling the CCETPC Model

This CCETPC model has the opportunity to scale throughout California serving all regions. WTDCs are the answer to immediately **addressing the One Million Middle-Skilled workforce challenge**. The WTDCs, with a consistent funding infusion for five years, can double their current output to achieving the California Community College’s **Vision** in “meeting all of the workforce needs of Californians.”

Constraints:

Currently the WTDCs are an unfunded program of the CCCCCO. Only 22% of the community colleges are actively participating in this industry-direct training due to **funding**. Additionally, the current funding source for WTDC’s upskill training is the ETP-MECs. The ETP program regulations have a maximum contract of \$750,000 the first year and declining scale of annual funding for “renewal” years for each contract. An increased and more sustainable funding source is required to address the need.

Scaling Solution:

The CCETPC is prepared to build WTDC’s capacity in underserved regions or expand programs in high concentrated areas of priority sectors. The direct business engagement to develop customized upskilling creates a strong public-private partnership with a built-in feedback loop that will help to inform regional collaborators in the workforce and education space. The ETP-MEC is a proven, successful model and was suggested as a solution by California Competes, Back to College, Part Two.¹⁹

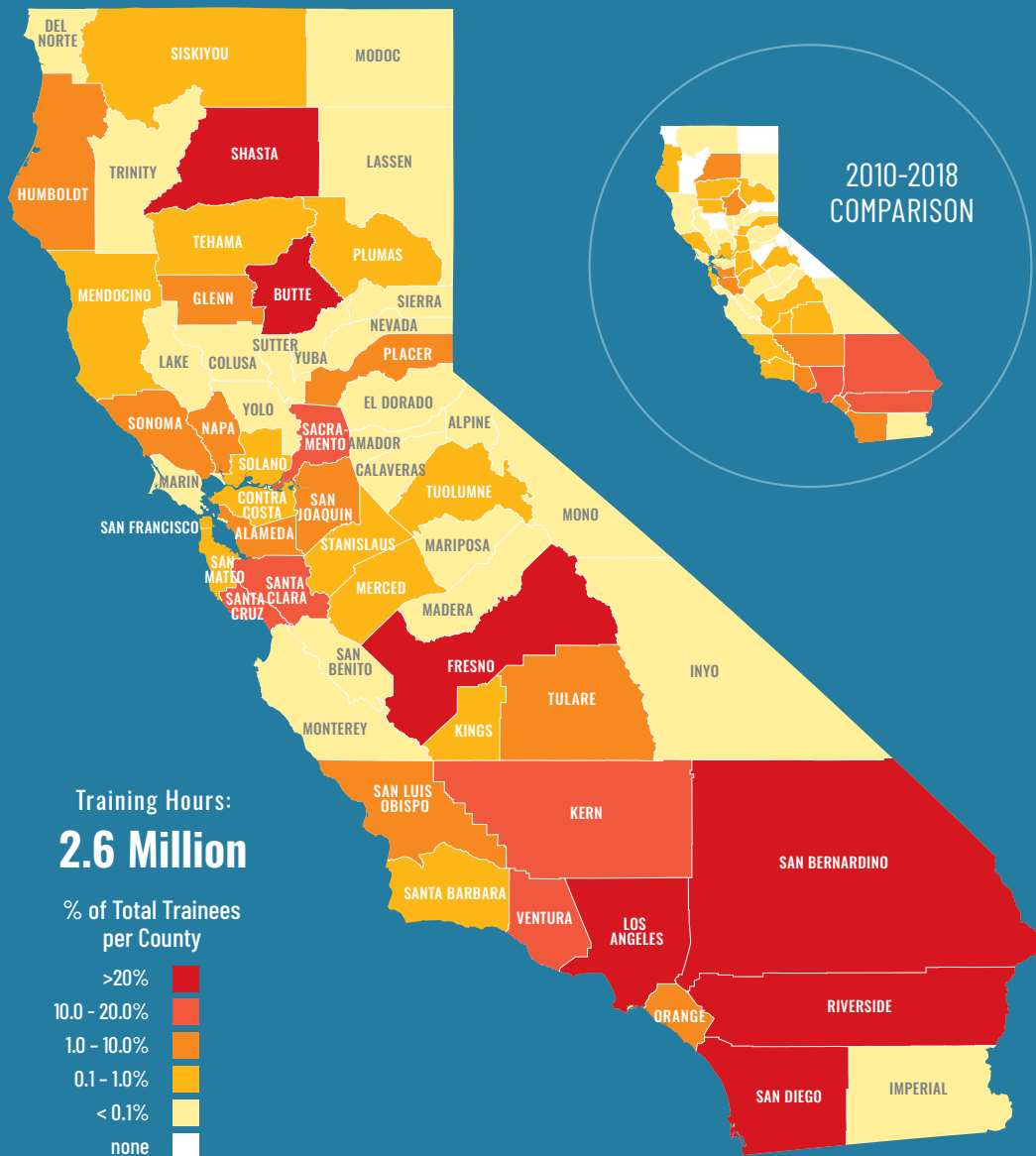
An unexpected benefit to directly being one part of the solution in closing the One Million Middle-Skilled Worker gap, from an economic development standpoint, is that the WTDC upskilling training can be one of California’s best tools/incentives for business retention and expansion.

¹⁹ In 2018 California Competes, Back to College, Part 2, #2 Policy Recommendation suggested the state should pilot a short-term award program through ETP that funds upskilling, especially for adults with some college but no degree, through trainings that explicitly connect to high-demand, high-wage fields. This was already in place through the CCETPC (shown in this report). The report further recommends leveraging existing initiative which is the focus of this paper for scaling the CCETPC model. ETP funding is competitive application based, averaging \$5.2MM investment for the CCETPC model training. Other sources of funding must be obtained to scale the recommended and existing program delivery. <http://californiacompetes.org>

FIGURE 7

2020-2025 Projected Counties Served

14 additional colleges participating • 42 WTDC colleges total



Governor Gavin Newsom Outlined a Vision of a Modern Social Compact for a Changing Workforce

In his 2019 State of the State address, California Governor Newsom outlined the need for a comprehensive strategy to upskill California's workforce to ensure that workers are prepared for a changing economy. Governor Newsom also called for the development of a modern social compact for California and spoke about the state's new Commission on California's Workforce & Future of Work.

Reported by Aspen Institute, States Leading the Future of Work, Upskill America

CALL TO ACTION

Funding needed to scale Upskill Training throughout California

1. \$10 million per year, 5-years, \$50 million total to CCETPC, an *Upskilling* line item budget.
2. Administering agencies could be ETP, GO-Biz or Chancellor's office as model, program services and outcomes align with all three agencies.
3. Continue ETP Multiple Employer Contracts (MEC) Community College competitive application funding.
4. Double program size by expanding Participating Colleges from 28 to 42 WTDCs.

Why CCETPC Upskilling should be expanded?

1. National and international research conducted in the last two years confirm a paradigm shift of work globally and the economic consequences if not addressed. *Upskilling* has been identified as becoming an imperative as part of the solution.²⁰
2. Industry and employer demand for Upskill Training is 2.5 times more than funding and resources available.
3. Potential to increase trainees by 190% reaching thousands of vulnerable and disadvantaged populations while creating opportunity to increase their wages by 25%.
4. Serve over 40,000 businesses in 5-years increasing productivity by an average of 8.6% generating new local and state tax contribution estimated at \$112.9 million.
5. LAO Final Evaluation, Community College Bachelor's Degree Pilot, Jan 24, 2020, recommends "Legislature likely has more effective ways of meeting its overarching objectives of addressing workforce needs." "...the Legislature could consider instead of continuing the pilot – encouraging the development of shorter training programs lined with industry needs...."

20 Appendix D, Cited Works Bibliography, special emphasis on Jan 2020 Milken Institute report, *Preparing California for the Future of Work*

TABLE 4 | SCALING THE CCETPC MODEL

What Outcomes are Expected with a \$50 Million Investment: 2020-2025

With an annual allocation of \$10 Million per year added to the current funding of ETP-MEC contracts, over the next five years WTDCs can scale and immediately deploy Upskill Training creating Impressive results for employers, employees, local and State economies.

2010-2018 Program Results		2020-2025 Projected Results	% Increase
Participating Community Colleges WTDCs			
10	Number of Participating Community Colleges (ETP-MEC Funded Contracts)	13	
18	Subcontracting Colleges (Inter-MEC Contracts)	29	
28	Total Community College WTDC Participating	42	50%
Trainings Conducted			
45,654	Trainees participating in Upskill Trainings <i>Source: ETP Annual Reports 2010-2018</i>	132,800	190%
743,904	Total Training Hours attended by Trainees <i>Source: ETP Annual Reports 2010-18</i>	2,656,000	257%
\$728.00	Cost Per Training Per Trainee	\$ 696.00	-4.4%
3,044	Number of Businesses Served	40,000	1,214%
Impact of Upskill Trainings			
4.6%	Upskilled Trainees as a % of towards the One Million Middle-Skill Worker Challenge	13.3%	8.7%
20%	Average Increase of Trainee's Hourly Wages	25%	5%
\$41.0 Million	Local & State Tax contribution due to increase in wages (average \$450 increase per year for 3 years after training)	\$112.9 Million	175.3%
\$5.6 Million	Upskilling increases productivity up to 8.6% increasing output result in a California GDP value	\$15.6 Million	178.5%
4.98%	State of California Return on Investment (ROI) ²¹	18.09%	13.1%
Funding Investment			
\$ 39,018,383	ETP-MEC Application Funding. Continue Application Submittal & Funding Awards 2020-2025	\$42,500,000	
0	Receive New Upskilling Funding Allocation, \$10 Million Per Year for 5-Years	\$50,000,000	
\$ 39,018,383	Total Investment in Upskill Training	\$92,500,000	137.7%

²¹ ROI Methodology, New Local & State Tax Contributions less Training Funding, divided by new Local & State Tax Contributions



“To maintain and grow California’s Gross Domestic Product among the top five in the world, we must meet demands of employers to continually increase worker productivity and efficiency through increasing skills of our existing and coming workforce. This burden is a partnership of government, education and employers if we are to stay globally competitive. Such a partnership links workforce development and economic development together into a virtuous cycle of career and skills choice for California residents as they shape and change job.”

ROBERT EYLER, PHD., DEAN, SCHOOL OF EXTENDED AND INTERNATIONAL EDUCATION
PROFESSOR, ECONOMICS, SONOMA STATE UNIVERSITY

Appendix

- A.** CCETPC Evidence-Based Data Findings
- B.** Case Studies
- C.** Links to Additional Data and Literature Resources
- D.** Lifelong Learning & Upskilling Cited Works Bibliography

APPENDIX A

Community College Employment Training Panel
Collaborative (CCETPC)

Evidence-Based
Data



APPENDIX A – CCCETPC EVIDENCE BASED DATA

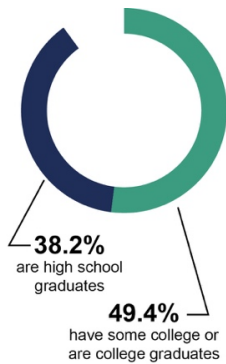
The following charts are taken from the extensive tracking data maintained by each MEC college in the CCETPC. The data and graphic highlight the extent of data captured to report on outcomes for ETP as well as trends that validate the lifelong learning imperative in today's workplace.



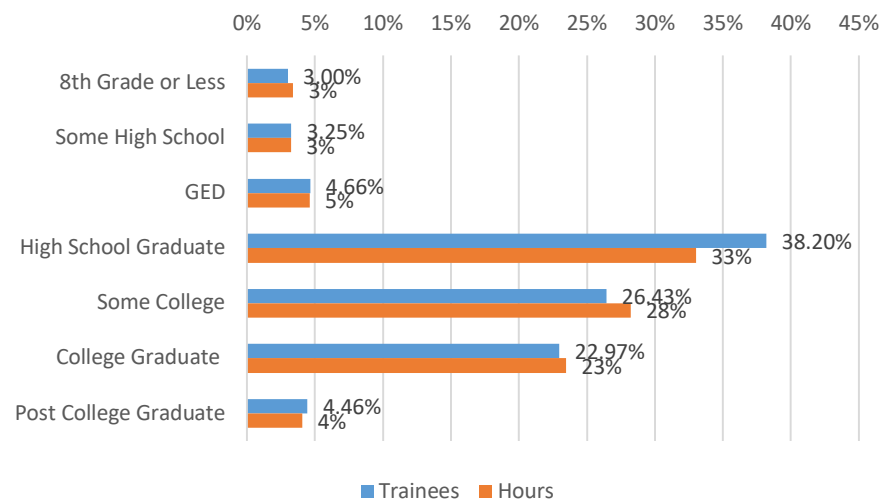
30-40 years

Lifelong Learning – 30-40 Year Career Span

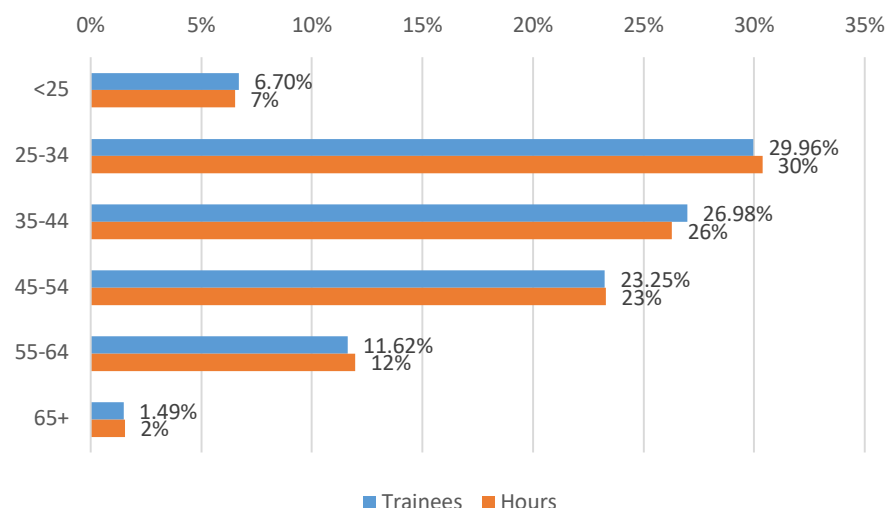
The education and age charts are clear indicators that there is a continuing cycle of upskilling throughout a career. This component is being served by the CCETPC and is offered to degreed and non-degreed individuals. A 30-40 year career span is covered as shown by the data below, as the age groups served are equally distributed between the ages of 25-65. This might be compared to post-high school (12 years of prior learning), or post-college only (16 years of learning). The priority in funding is currently geared for first time post-secondary learners.



% by Education



% by Age Group

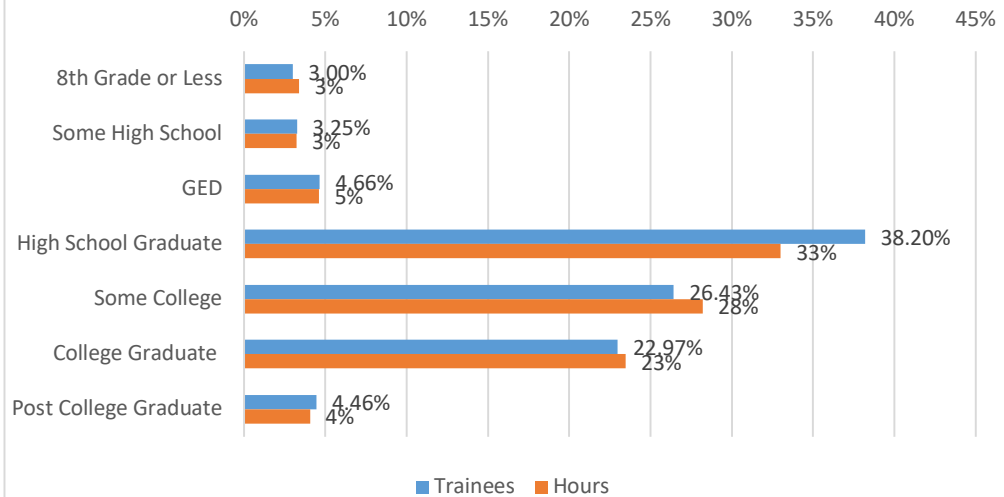


TRAINEES & TRAINING HOURS BY EDUCATION LEVEL

The education chart below reflects trainees and training hours by level of education. 6.25% with less than high school degree, 4.7% with a GED, 38.2% represent trainees with a high school degree, 26.4% with some college, and 26.43% college degrees indicate people from varied education levels are being served with lifelong learning skill sets.



% by Education



TOPICS, TRAINEES, TRAINING HOURS AND HOURLY WAGE

This chart shows the industry-specific training conducted. Continuous Improvement 39.95% trainees earn an average of \$26.79 per hour. Business Skills 20.14% trainees earn an average of \$24.53 per hour. Less than one percent of the trainee's hourly wages were below \$20 per hour and only one group of Literacy Skills trainees were below \$15 per hour.



Hours and Wages by Topic			
Topic	Hours of Training	% of class hours	Wage
Other	2,139	0.29%	\$27.95
Advanced Technology	32,084	4.31%	\$25.25
Business Skills	149,869	20.14%	\$24.53
Commercial Skills	67,460	9.07%	\$24.34
Computer Skills	61,913	8.32%	\$25.23
Continuous Improvement	297,225	39.95%	\$26.79
Didactic Medical Skills	5,798	0.78%	\$24.24
Hazardous Materials	1,675.5	0.23%	\$20.26
Literacy Skills	2,884.5	0.39%	\$14.93
Management Skills	20,164.5	2.71%	\$30.38
Manufacturing Skills	102,291.5	13.75%	\$20.09
OSHA 10	2366.5	0.32%	\$17.23
OSHA 30	173	0.02%	\$16.71
Totals	743,904.5		\$22.77

PATTERNS OF CAREER CYCLES

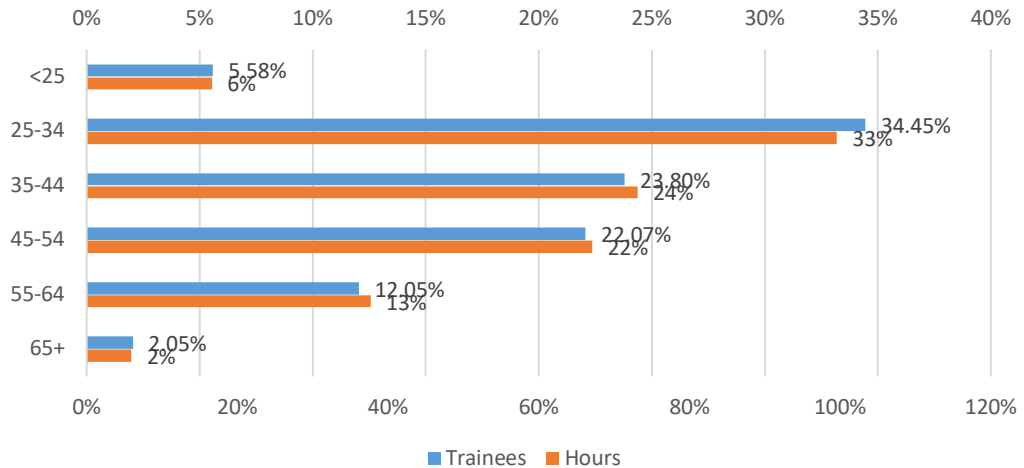
We see that training is occurring at the greatest rate upon career entry, and continuing throughout the career cycle. This shows a need for continuous training in industry for employee that are high school graduates, completed some college courses or completed a college degree. The data for college graduates shows that 35% of trainees are college graduates between 25-34 years old. This indicates the need for training upon career entry for college graduates. This is an interesting finding as we know industry has been expressing the increasing need to find qualified employees and has also expressed that the skills gap is widening.

In today's workplace, with technology integrated in every field, it is common for employees to have specific job skill training as industry certifications upon entry and throughout the career lifecycle. This trend is growing as the pace of technology changes and integration into the workplace increases. Lifelong learning becomes an important and necessary component that industry now incorporates to remain competitive.

The top categories of training for college graduates earning an average wage of \$29.22 receive training in Continuous Improvement (47%), Business Skills (20.53%) and Manufacturing Skills (8%).



College Graduate: % by Age Group



College Graduate: Training by wages

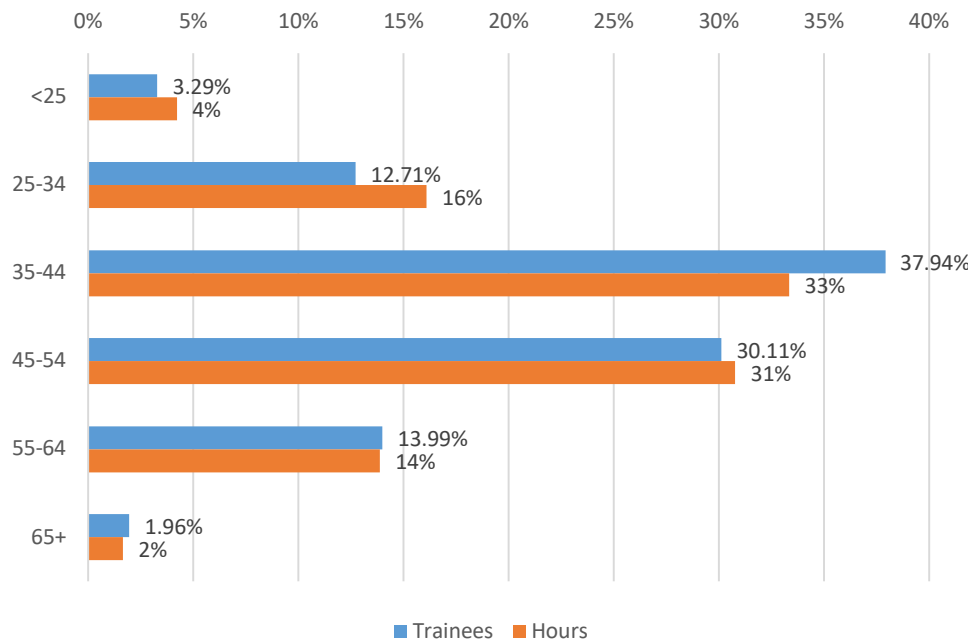
Topic	Hours of Training	% of class hours	Wage
Management Skills	6238	3.57%	\$38.39
Continuous Improvement	82432.5	47.22%	\$36.79
OSHA 10	203	0.12%	\$31.62
Computer Skills	15717	9.00%	\$31.39
Advanced Technology	4372	2.50%	\$31.24
Business Skills	35847	20.53%	\$30.02
Commercial Skills	15173.5	8.69%	\$28.28
Other	308	0.18%	\$27.54
Manufacturing Skills	13922.5	8.02%	\$26.65
Hazardous Materials	174.5	0.10%	\$24.57
Literacy Skills	108.5	0.06%	\$14.93
Totals	174497		\$29.22

For students with high school or less education, training occurs at a later age than college graduates (35-44 at 37.94%). These employees are upskilling in Continuous Improvement (29.68%), Manufacturing Skills (25.48%), and Business Skills (19.89%). This is different from the college graduate cohort. The manufacturing skills are in much higher demand in this cohort, indicating that employees that upskill enter the career with less education but eventually have the need to train in new manufacturing skills.



30-40 years

High School or Less: % by Education



High School or Less: Training by hours			
Topic	Hours of Training	% of class hours	Wage
Continuous Improvement	14651.5	29.69%	\$19.15
Manufacturing Skills	12575	25.48%	\$16.16
Business Skills	9819	19.89%	\$16.87
Commercial Skills	3251.5	6.59%	\$18.00
Computer Skills	3131	6.34%	\$18.26
Advanced Technology	2768	5.61%	\$23.17
Literacy Skills	2024	4.10%	\$14.12
Management Skills	658	1.33%	\$29.01
Didactic Medical Skills	200	0.41%	\$24.24
Other	155	0.31%	\$25.85
Hazardous Materials	104	0.21%	\$23.20
OSHA 10	19	0.04%	\$18.92
Totals	49356		\$20.25

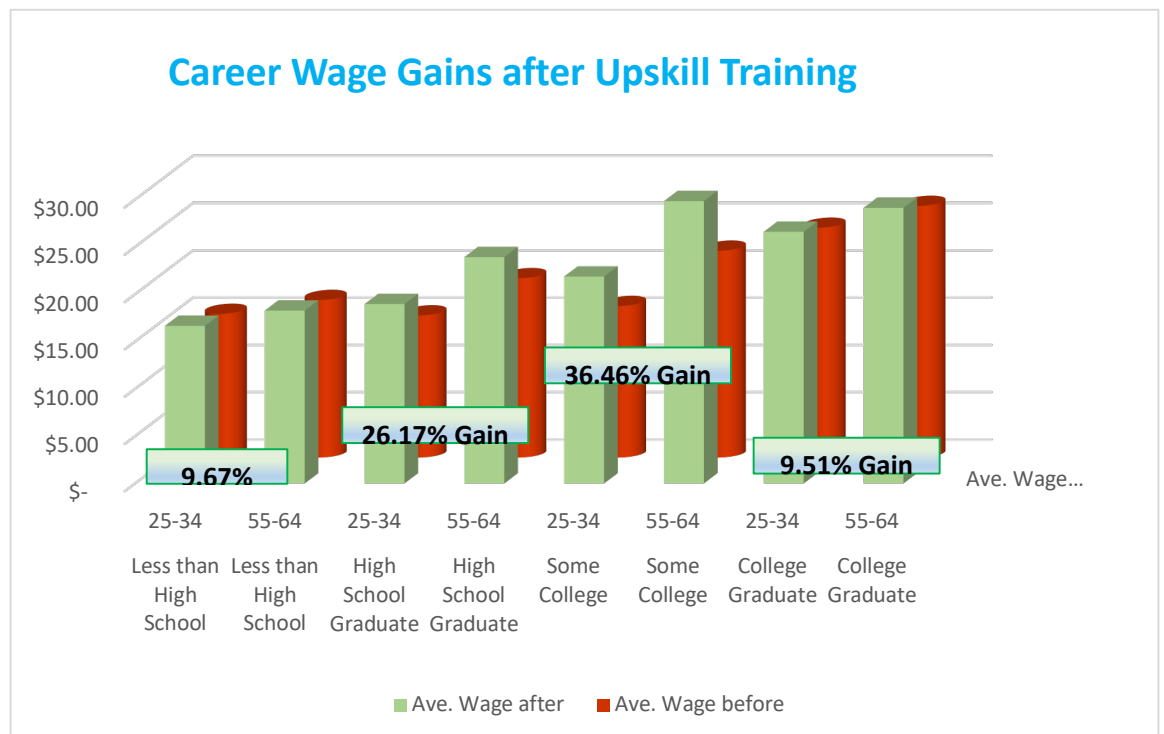
CAREER WAGES GAINS AFTER UPSKILL TRAINING

Looking at all students who completed training, the highest wage gain experienced was for those who had previously completed some college courses (36%). This finding aligns with prior research in the workforce field.

Carnevale and Strohl¹ found that the current global work environment requires most employees to be trained in higher skills beyond high school. This fundamental shift is called the “middle-skills pathway.” The people in this group are those who receive training beyond a high school education, who may have some college training or associate degrees, but do not possess a bachelor’s degree. Most of the growth in good jobs in the new economy has been in these middle-skills jobs. Some of those include blue-collar jobs as well as middle skills technical jobs. The continuous middle skill jobs training has created a needed increase in services for apprenticeships, certifications, on-the-job training, associate degrees, and Career and Technical Education.

Upskilling is now a mainstay for industry (Carnevale and Strohl, 2018). Rapidly changing technology and competition has created an environment of upskilling along a person’s career. Employers have had to keep up with the latest deeper and broader competencies required in today’s technical work environment and provide training for employees on a regular basis.

Associate degree holders have had the strongest boost for middle skill employees (Carnevale and Strohl, 2018). During 1991 to 2016, individuals with an AA degree secured good jobs at an 83% increase while those with a high school level education experienced a decline in securing good jobs. Younger workers are increasingly joining the middle skill workforce. This is again creating the need for lifelong skill training within industry.



¹ Carnevale, A. P., Strohl, J., Ridley, N., & Gulish, A. (2018). *Three educational pathways to good jobs: High school, middle skills, and bachelor’s degree*

Average Hourly Wages by Industry

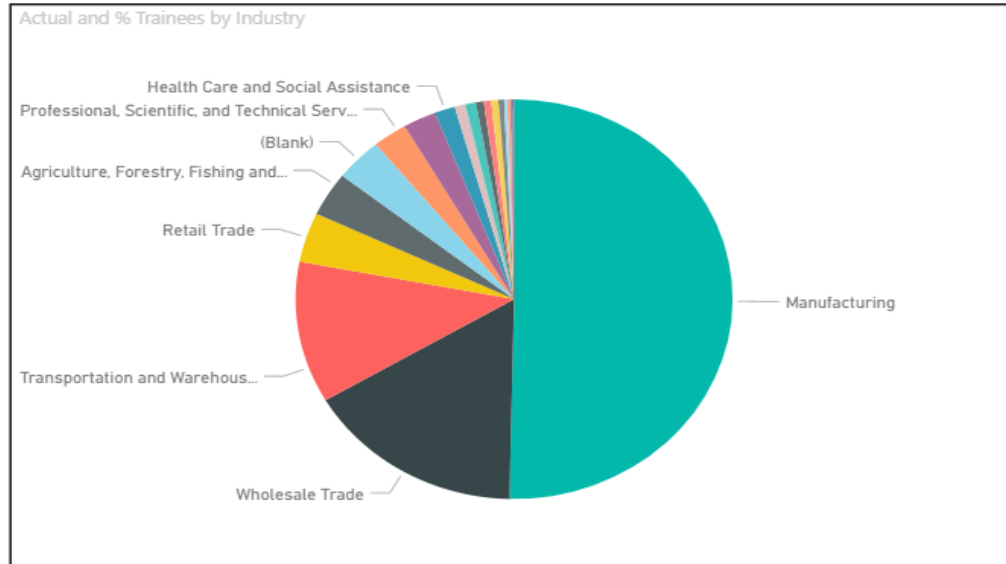
Industry-specific trainings are targeted to priority sectors with the highest average hourly wage.



Industry	Female	Male	Ave. Hourly Wage
Utilities	\$ 43.39	\$ 39.37	\$ 40.73
Arts, Entertainment, and Recreation	\$ 30.00	\$ 37.56	\$ 37.14
Administrative and Support and Waste Management and Remediation Services	\$ 22.63	\$ 32.68	\$ 30.48
Professional, Scientific, and Technical Services	\$ 22.33	\$ 32.02	\$ 28.23
Finance and Insurance	\$ 22.64	\$ 31.57	\$ 25.05
Retail Trade	\$ 24.78	\$ 29.01	\$27.30
Public Administration	\$ 30.22	\$ 28.93	\$28.95
Educational Services	\$ 18.19	\$ 28.77	\$28.71
Health Care and Social Assistance	\$ 22.46	\$ 27.78	\$24.24
Information	\$ 25.41	\$ 27.26	\$26.48
Manufacturing	\$ 20.50	\$ 27.18	\$25.40
Management of Companies and Enterprises	\$ 26.56	\$ 27.13	\$27.07
Construction	\$ 20.34	\$ 25.89	\$25.15
Transportation and Warehousing	\$ 25.42	\$ 25.60	\$25.55
Mining, Quarrying, and Oil and Gas Extraction		\$ 24.50	\$24.50
Wholesale Trade	\$ 20.81	\$ 24.04	\$22.82
Other Services (except Public Administration)	\$ 23.40	\$ 22.92	\$23.02
Accommodation and Food Services	\$ 22.71	\$ 22.28	\$22.38
Real Estate and Rental and Leasing	\$ 18.43	\$ 19.82	\$19.01
Agriculture, Forestry, Fishing and Hunting	\$ 15.89	\$ 15.49	\$15.51
Grand Total	\$ 23.61	\$ 25.32	\$24.85

Training & Upskilling Demand

The demand from industry is reflected in the number of contracts and training hours by industry sector. The majority of the training, nearly 70 percent, was in the Manufacturing and Wholesale trade areas. There is a critical need for California manufacturing employers to access more upskill training for the existing 1.3 million manufacturing workers and new entrants to job openings. On a positive note, in a LinkedIn 2018 Workforce Learning Report², 93% of employees said they would stay in their current job if their employer offered training and supported their career growth.



Industry	# of Contracts	Actual Hours Trained	Percent of Total Contracts
Manufacturing	88696	374480	51.53%
Wholesale Trade	34014	120710	19.76%
Transportation and Warehousing	13333	85119	7.75%
Agriculture, Forestry, Fishing and Hunting	9815	26556	5.70%
Retail Trade	5443	29878	3.16%
Professional, Scientific, and Technical Services	3368	18959	1.96%
Health Care and Social Assistance	2764	11174	1.61%
Public Administration	2287	18288	1.33%
Finance and Insurance	1397	5864	0.81%
Administrative and Support and Waste Management and Remediation Services	1002	5977	0.58%
Construction	747	2988	0.43%
Other Services (except Public Administration)	6825	30229	3.97%
Real Estate and Rental and Leasing	564	1741	0.33%
Utilities	558	4104	0.32%
Educational Services	518	4144	0.30%
Management of Companies and Enterprises	334	1392	0.19%
Information	327	1615	0.19%
Accommodation and Food Services	62	248	0.04%
Mining, Quarrying, and Oil and Gas Extraction	43	296	0.02%
Arts, Entertainment, and Recreation	18	144	0.01%
Grand Total	172115	743904	100.00%

² Biro, M., Developing your Employees is the Key to Retention, July 2018, Forbes

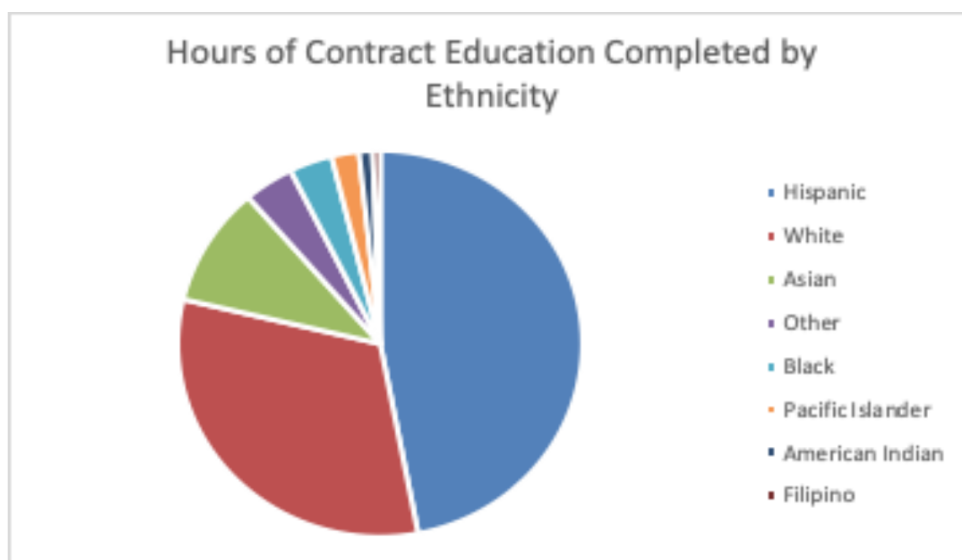
Trainee & Training Demographics

The following data reflects the demographics of the trainees and trainings conducted since 2010, demonstrating the reach of the program to all population groups and key sectors of training in demand to upskill employees and new entrants.

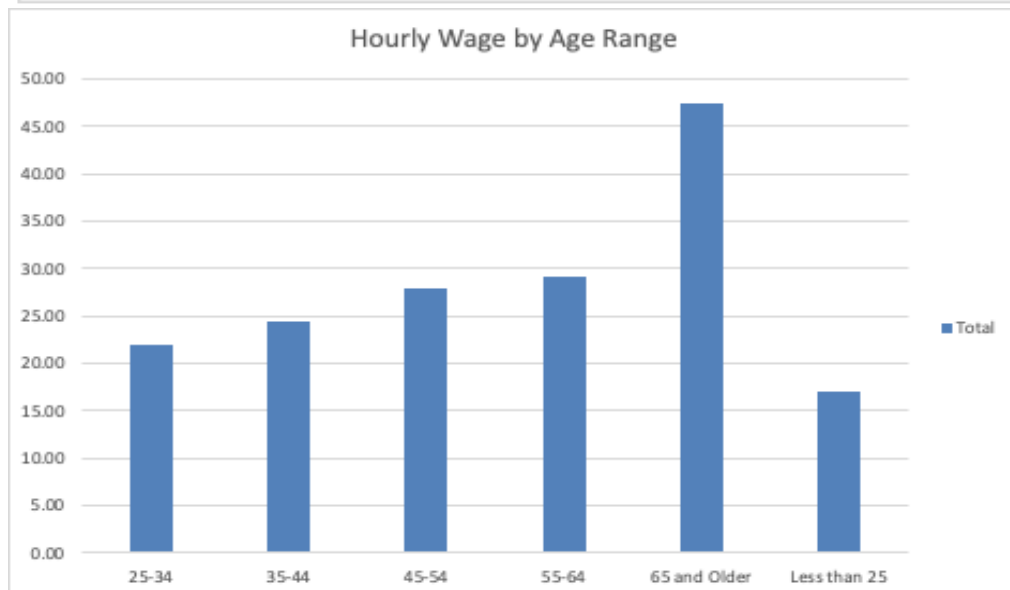
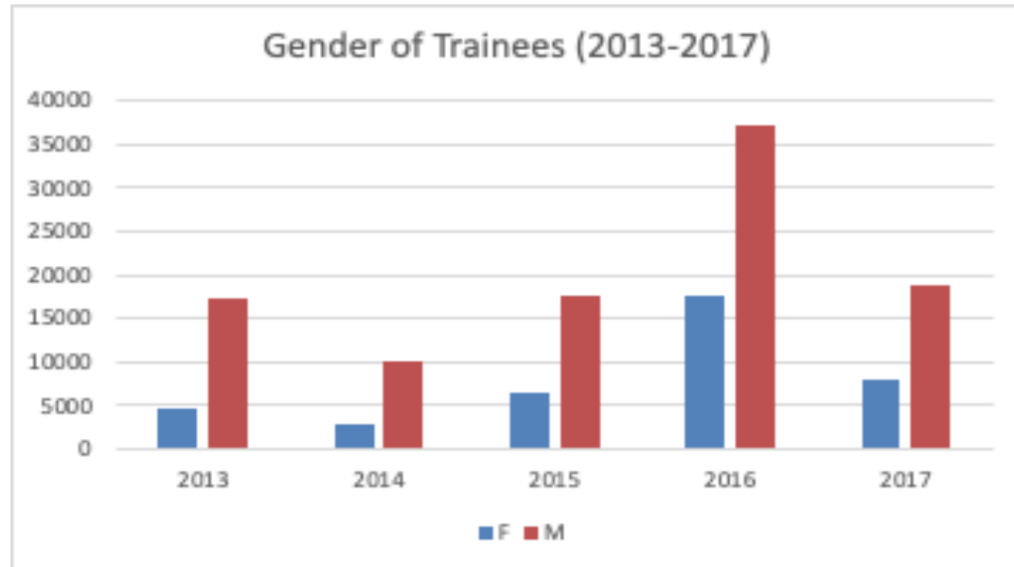


Ethnic Distribution

Ethnicity	Number of Trainees	Number of hours trained
Hispanic	82,978	347,405
White	53,472	236,531
Asian	15,129	75,630
Black	5,694	25,518
Pacific Islander	2,898	16,443
American Indian	2,562	8,018
Filipino	869	4,366
Other	8,513	29,994
Total	172,115	743,904



Trainee & Training Demographics (continued)



APPENDIX B

Success Stories

1. Clean Energy
2. Certified Nursing
3. Manufacturing





CALIFORNIA COMMUNITY COLLEGES

Doing What MATTERS™

CONTRACT EDUCATION



Community Colleges Collaborate to Meet the Clean Energy Training Needs of California's Transportation Industry

Alternative Fuel Vehicles Training

By Jon Wollenhaupt

To meet the challenge of keeping California's workforce productive and highly skilled, the state's community colleges are successfully developing multi-college partnerships designed to meet the regional and statewide workplace training and educational needs of employers. These partnerships refute past claims that the community college system is too large and cumbersome to meet employers' ever-changing workforce training and education demands.

An example of a successful, multi-college partnership is the collaboration among the Advanced Transportation and Alternative Energy (ATRE) centers of four community colleges: Cerritos, Long Beach City, El Camino, and City College of San Francisco. For more than five years, these colleges have been working in close partnership to deliver customized workplace training and education to municipalities and transit agencies statewide. Together, they have developed curricula, fostered industry relationships, and met the immediate training needs of municipalities and public transit agencies statewide.

The Advanced Transportation and Alternative Energy Program



The community colleges' ATRE training program provides students and current workers with education and

training in an array of clean energy technologies that form a critical part of California's strategy to mitigate the impact of climate change and reduce the state's dependency on foreign energy sources.

Employment Training Panel Funding Spurs College Partnership

The multi-college collaboration began in 2011 when El Camino College in Torrance, Calif., was awarded multiple contracts by the Employment Training Panel (ETP) to deliver workforce training programs to municipalities seeking to deploy advanced transportation and alternative fuel technologies.

The ETP contracts awarded to El Camino College were derived through the Alternative Renewable Fuel and Vehicle Technology Program (Assembly Bill 118) and the California Energy Commission. Under AB 118, the ETP contracts could take advantage of more flexible employer requirements and be used to offset the costs of job-skills training for public entities. ETP funding is normally intended for private for-profit employers subject to the Employment Training Tax.

The initial ETP AB118 contracts were awarded in 2011. Subsequently, ETP has provided an average of \$3 million annually for workforce training supporting the development and deployment of alternative and renewable fuels as well as advanced transportation technologies.



Stewart Knox, executive director of ETP, explains, “We receive \$2 million to \$3 million a year from the California Energy Commission to fund alternative energy training programs. In total, we’ve received roughly \$15 million through the ARFVTP. This funding gives us an unique opportunity to work with municipalities through our multiple employer contractors through contractors like El Camino and other community colleges.”

El Camino College’s working relationship with ETP was the starting point for the ATRE program partnership. “ETP contacted us because we’ve had a successful track record as a contractor in administering their contracts,” says Eldon Davidson, director for the Center of Customized Education at El Camino College. “To meet the grant requirements, we collaborated closely with the Advanced Transportation and Renewable Energy programs at Cerritos, Long Beach City College, and City College of San Francisco. We’ve created a long-term, successful partnership that leverages each college’s contract education, career technical education, and academic programs.”

Janet Malig, deputy sector navigator/advanced transportation, California Community Colleges, describes the collaborative efforts of the four colleges to win the contracts. “The ETP funding presented a significant opportunity for our ATRE programs,” she says “It was the first time ETP had offered funding for alternative energy training for public entities. Therefore, we made a strategic decision to partner with El Camino and the other community colleges to pursue those funds. Together, we had the expertise to cover all the requirements of the funds and to address the considerable training needs of municipalities and transit districts.”

The ongoing, five-year collaboration among the colleges’ ATRE programs has been focused on providing alternative fuel and vehicle training in a variety of clean air technologies for light- and heavy-duty vehicles, including hybrid-electric, electric, compressed natural gas, liquefied natural gas, and other systems.

“These short-term, customized training programs were not-for-credit and delivered through the contract education program—the side of our community colleges that delivers customized training solutions and courses that fit the methods and culture of businesses,” Davidson explains. “The training programs that contract education develops and delivers ultimately strengthen the for-credit programs because the curriculum has been developed with industry input and has been beta-tested.”

Training Courses and Topics Provided by the ATRE Centers Include:

- Cummings ISL-G Level 1
- Insite Software
- Cummins ISL-G Level 2
- Compressed Natural Gas Cylinder Safety
- Westport GS LNG
- Engine Control Systems & Diagnostics
- Electrical Voltmeter
- First Responder Safety Training
- Electrical Diagnostics & Scan Tools
- Hybrid Diagnosis and Repair

Contract Education’s Role Within a Community College

The mission of a college’s contract education department is to enhance local and regional economic development through designing, developing, and implementing customized training for business and industry. Contract education strives to provide employers with high-quality training and education that helps develop a competitive and productive workforce.

ETP’s Knox describes the role of contract education as “the side of a community college that provides responsive workplace training and education to the state’s private and public employers. It is the

component of the community college system that is uniquely positioned to respond quickly and effectively to employers' short-term training needs."

Contract Education Outreach Keeps Community Colleges on the Forefront of Industry Trends

"Many people within the community college system do not realize that contract education staffers are the ones who help keep the colleges on the forefront of industry," says Malig. "We are out meeting with industry executives daily. In those interactions, we gain knowledge of the latest industry trends and advances. In those conversations, we also promote the academic units and the career technical education programs of the colleges. We become aware of the employee skills gaps that are hindering organizational productivity and how to develop curricula and training programs that address those gaps."

Jerry Bernstein, deputy sector navigator, advanced transportation, at San Francisco City College, used his industry research and outreach efforts to find a match for ETP funding with the Bay Area Rapid Transit (BART). "For the ATRE partnership, we looked at the transportation trends here in the San Francisco Bay Area," he says. "We contacted the five transit districts and found they were transitioning from diesel to electric and hybrid vehicles. Our outreach efforts led us to find a great opportunity to underwrite electrical technician training for BART."

Knox adds, "The community colleges are a key partner of ours in developing outreach to employer groups, with contract education being the frontline player for marketing and gathering knowledge about the training needs of industry. We use the industry intelligence contract education provides us to develop funds that meet employers' training needs. We currently have contracts with 10 or 12 colleges and are looking to grow the number we work with and the industry sectors served by their contracts. Last year, we funded \$13 million to \$14 million worth of workplace training programs directly through the community colleges."

Measurable Outcomes of the Multi-College Partnership:

- A total of 57 California public employers, county regional transits, cities, municipalities, and businesses

"Our employees received training on the latest advances with Cummins CNG engines and components, and use of diagnostic equipment, which enables them to perform efficient, cost-effective repairs. Because of this training, they are better able to identify damaged or questionable defects. The availability of local instruction is key to helping our technicians stay abreast of the changes in automotive technologies and in maintaining our fleets at optimal efficiency for environmental and operational needs."

Donald Wilkes, Director, Transportation Services Division, Los Angeles Unified School District

that are engaged in alternative and renewable fuel and vehicle technologies participated in the training program.

- A total of 1,213 participants were trained, including 890 mechanics and 323 firefighters and police officers who participated in First Responder Safety Training.
- The program delivered 36,552 hours of student instruction.

Peter Davis, sector navigator for ATRE programs, California Community Colleges, describes the outcomes of this multi-college collaboration: "We have learned to work together better as community colleges. Because of this partnership, we have deeper shared industry knowledge and insights, which helps us win more contracts and deliver better workplace training. These successes bring many benefits to the colleges. The beta-tested training curriculum we've developed with our industry partners also helps to strengthen the colleges' career technical education programs."

Dana Friez, workforce development training manager, Long Beach City College, found significant benefits accrued to her program and clients from the multi-college partnership. "Because of this partnership, we have been able to provide our clients' employees with affordable, high-quality training," she says. "Many of these organizations are smaller transit agencies and city

services departments that do not have money in their budgets to provide employees with training to improve their skills. The importance of the ETP funding that offset the cost of training for our clients cannot be overstated."

Clients for the Community College Alternative Fuel and Vehicle Maintenance Program Include:

- Bay Area Rapid Transit
- Burbank Water and Power
- City of Anaheim
- City of Glendale Public Works
- City of Huntington Beach
- City of Santa Monica
- City of Torrance
- Complete Coach (bus manufacturer)
- Culver City Transit
- Gold Coast Transit District
- Long Beach Transit
- Los Angeles County Department Public Works
- Los Angeles Unified School District
- MV Transit
- Omnitrans

"I initially spoke with Janet Malig of Cerritos College about the ETP funded training programs. After explaining the nature of our fleet to her, which is composed of heavy-duty vehicles that run on compressed natural gas (CNG), she coordinated our training to be given at the Advanced Transportation Technology Center (ATTC) at her partner college, Long Beach City College. It was great that the ATTC had the Cumming CNG engines on-site for instruction. Over a two-year period, I've sent 25 technicians there for training on the Cummins ISL-G CNG Electronic Engine Management Software System. My technicians received a very high level of training delivered by very knowledgeable instructors. They are now versed in the diagnostics required to repair the heavy-duty vehicles in our fleet that include street sweepers, dump trucks, sewer trucks and other large road repair vehicles."

Mark Heighes, LA County Public Works, Power Equipment Technician Supervisor

AUTHOR

Jon Wollenhaupt is a marketing consultant working under the TAP Grant based at Mt. San Antonio Community College.

About the Employment Training Panel

The Employment Training Panel (ETP) provides funding to employers to assist in upgrading the skills of their workers through training that leads to good-paying, long-term jobs. The ETP was created in 1982 by the California State Legislature and is funded by California employers through a special payroll tax. The ETP is a funding agency, not a training agency. Businesses determine their own training needs and how to provide training. ETP staff is available to assist in applying for funds and other aspects of participation.



Contract Education Collaborative Responded to Governor’s Critical Proposal to Deliver Rapid Response to CNA Worker Shortage

California’s skilled nursing facilities faced a major challenge starting in spring 2018. State-required staffing ratios were changing. To meet the new state requirements, facilities needed more certified nursing assistants (CNAs).

To help meet the new requirements, the governor issued a critical proposal calling for the Employment Training Panel (ETP) to award \$2.5 million to reimburse skilled nursing facilities and other training providers for the cost of providing CNA training. ETP is a major funding source for workplace training and one that California community colleges rely upon in helping employers they work with cover the costs of upskilling current employees, or, in the case of the CNA training program, provide training for new employees. (Read more about ETP in our blog entry [Supporting the Demand Side: ETP Subcontracting as a Strategy to Expand Workforce Training for Employers.](#))

A number of community colleges already held contracts with ETP, so they were in position to deliver a rapid response through their Contract Education units to help solve the CNA shortage. The California Community Colleges Contract Education Collaborative (CCCCEC), a group comprised of the colleges’ Contract Education practitioners, responded to the governor’s critical proposal.

Contract Education units at community colleges help businesses and industries in California stay competitive, within the U.S. and globally, by creating and delivering customized training programs for their employees and/or helping them secure funding that covers a portion of their training costs.

The [new state rules](#) required skilled nursing facilities in California to meet a new standard of patient care starting in July 2018. Instead of the 3.2 nursing hours per patient day, facilities had to increase the amount of time staff is engaged with direct patient care to 3.5 nursing hours per patient day. And, the requirement specified at least 2.4 of the 3.5 hours must be provided by certified nursing assistants (CNAs). CNAs work under registered nurses or licensed vocational nurses and provide basic care to patients, helping them to eat, bathe and do other activities they cannot do on their own.

In some cases, facilities already had training programs in place, but needed help with the training costs. Windsor Chico Care Center in Chico, California, was one of seventy eight for Rockport Healthcare, having launched its CNA training program in 2015.

“It was kind of a financial hardship for us,” John Crowley, administrator at the Chico facility, said about implementing the program. “It was difficult to kind of take on the cost of the program, but the long-term benefits were certainly worth it.”

Crowley’s program qualified for ETP funding after extensive collaboration between community college Contract Education practitioners to pool existing resources and work with ETP to come up with a solution that created more CNA jobs to help skilled nursing facilities across the state.

Developing a Solution

Getting to the point of being able to reimburse skilled nursing facilities for training newly hired employees to become CNAs was no easy feat. It took the work of Contract Education units at six California community colleges and the involvement of the state’s Employment Training Panel to put the pieces in place, said Annie Rafferty, director of contract education, training and development at Butte College, The Training Place.

How could this existing pool of state funding be used to help address the CNA shortage? That’s the question the collaborative asked as its members worked together to develop a solution. They consulted industry experts, held a workshop to share information with skilled nursing facilities and gain deeper insight into their needs, attended conferences and worked directly with employers.

The solution involved a lengthy process by which the colleges worked together to modify each college’s ETP contract to include a clause that allowed employers to be reimbursed for training that led to CNA job creation. The participating colleges pooled their ETP funding to see how much money they could dedicate to reimbursing employers who trained newly hired employees to be CNAs. They compiled a list of facilities eligible for this performance-based funding, based on a number of factors, including which facilities had certified instructors and an approved program; a CNA turnover rate of 20% or less for the previous year; met the minimum hourly wage requirement and met the 90-day retention requirement.

While employers are reimbursed a portion of their training costs, not all of the costs associated with the training are offset.

“The employer is investing a significant amount of money in the training, in partnership with us because the CNA is being paid their wages during training,” Butte College’s Rafferty explained, adding that companies are reimbursed for costs related to delivering training, not employee wages.

Higher CNA retention rates, larger pool of applicants

Since the inception of the CNA training program in 2018, there have been 238 with Avalon Healthcare Services and Rockport Healthcare trainees across the state in Alameda, Chico, Eureka, Fresno, Hayward, Los Feliz, Merced, Modesto, Novato, Norwalk, San Diego, through programs that partner with Butte, Chaffey, College of the Sequoias, El Camino, Kern and San Bernardino colleges.

That includes trainees at the Windsor Chico Care Center, where 95% of CNA trainees passed the training and went on to become certified, as well as met the 90-day ETP retention requirement, thanks to the addition of an extra week of training, Rafferty said. The center has received ETP funding for seven cohorts of students, giving the facility \$4,000 per trainee, which covers virtually all of its training costs.

“They’re able to provide more training and reduce the cost of training and focus more on retention efforts with the newly hired CNAs,” Rafferty said.

Crowley, Windsor Chico Care Center’s administrator, said the funding has allowed his facility to really open up the training to a larger pool of applicants who otherwise could not afford to go through training without being paid. There typically are 60 applicants for 15 training slots. Would-be CNAs train at the Windsor facility and are placed there or at one of two other sister facilities in the area.

“[The cost] is a huge hardship,” he said of CNA training programs in general. “One is coming up with two grand. Some of these students are in their twenties. A lot of them had been working kind of entry-level or minimum-wage jobs. They don’t have two grand.”

The CNA program that has helped Crowley’s facility and others like his is another example of how the California Community Colleges Contract Education Collaborative has been able to help build up California’s workforce by providing rapid-response resources that address worker shortages in the state.



CALIFORNIA COMMUNITY COLLEGES

Doing What MATTERS™
CONTRACT EDUCATION



California Community College Helps Aerospace Manufacturing Company Stay Skilled and Competitive

By Jon Wollenhaupt

During the contentious political debates that have raged since the start of the new millennium—the verbal sparring over who and what is responsible for the steep decline in American manufacturing—Impresa Aerospace, based in Gardena, California, has continued to quietly build a stellar reputation as a premier supplier to the commercial and military aerospace industries.

In the aerospace industry supply chain ecosystem, Impresa is known as a build-to-print sheet metal shop that performs sheet metal fabrication, precision machining, and advanced fabrication methods such as hydroforming and titanium hot brake forming. At its Gardena facility Impresa employs approximately 200 machinists, engineers, and support staff and will achieve more than \$35 million in annual sales.

To keep its employees well trained and its business highly productive, Impresa has formed a long-term alliance with El Camino College, located in nearby Torrance, California. Through its contract education unit, El Camino College provides Impresa with responsive workplace education, customized employee training, and consulting services.

In addition to those workplace development services, El Camino College also plays an important role in helping companies like Impresa secure state funding that offsets the cost of employee training. Eldon Davidson, director for the Center of Customized Education at El Camino College, states, “We are very experienced at securing Employment Training Panel (ETP) funding and managing



those contracts on behalf of our clients. We know which industries and types of training qualify for ETP funding. Our staff is well versed in the entire ETP administrative process, including the initial application, contracts, program monitoring, and reimbursement of funds. Because of those capabilities, we are able to handle for our clients the extensive administrative work that comes with ETP contracts.”

To learn more about El Camino College’s alliance with Impresa Aerospace and how ETP funding is benefiting the company, UpSkill California spoke with Dennis Fitzgerald, vice president of operations for Impresa.

UpSkill California: When did you first begin talking with El Camino College about pursuing ETP funding?

Dennis Fitzgerald: We first began talking with El Camino College in 2013. At that time, we were not very familiar with ETP as a funding source for employee training. As we looked further into it, we realized that the administrative requirements of an ETP contract were more than our staff could handle. Because El Camino College had the expertise to write the initial proposal and manage the contracts on our behalf, it became feasible for us to pursue ETP funding. Once the application was submitted and the training approved, the biggest commitment on our end was to make sure our employees were available for the training. Without El Camino College's expertise and assistance, we never would have been able to pursue these types of grants. Our first training programs with El Camino College kicked off in 2014.

UpSkill California: How is ETP funding benefiting your organization?



Dennis Fitzgerald: We are in a very competitive industry segment and operate on very tight margins. There is a lot of pressure on us as part of the supply chain that serves large companies like Boeing. Therefore, the money we save on training costs because of the ETP funding is significant. Even though those costs are mostly offset, we still make a substantial investment because we pay our employees while they are in the classroom. There is also an opportunity cost involved, because instead of being in a training session, our operators could be making parts or servicing our customers. To give you an idea of the numbers, we typically have 15 to 20 people in a training class that provides 40 hours of instruction over eight to 10 weeks. That's 600 to 800 manufacturing hours coming off the shop floor that I must account for. It's a delicate balance

"The success El Camino College has had in delivering ETP funded training to Impresa Aerospace is exemplary and demonstrates why our partnership with California Community Colleges has been essential in expanding the deployment of these valuable resources to businesses across the state. We appreciate the dedication and quality of work the community colleges bring to administering ETP contracts.

Stewart Knox, *Executive Director*
Employment Training Panel

between training our team and doing what we've got to do to service our ownership and our customers. Because the state pays for the training, and because El Camino College takes on the administration processes, we are able to provide our employees with training that would not otherwise be feasible for us.

UpSkill California: How do the benefits of the training outweigh the cost of off-floor time for your employees?

Dennis Fitzgerald: In terms of ROI, it's difficult to point to a line on the balance sheet and say, "this is my return." But experientially, you absolutely know—without making any calculations—that you're better off. I can say, without having any empirical data to point to, that I know for a fact that we have better operators on the floor and we get a higher-quality product from the team that creates drawings and reviews product. Because of the training, I know our operators are making better decisions. I know that we are making fewer mistakes.

Some important issues to understand are the following: In our industry, we operate as a build-to-print aerospace sheet metal shop where there is a small pool of highly skilled operators. Our most highly skilled operators perform complex hydroform work, which involves a certain degree of art or magic. Those talented operators are at the heart of our business and are a key component of our competitive advantage. Therefore, we try to protect them as best we can. So, anything we can do to convey to them that they're part of a team and that they're highly valued is very beneficial to us. Providing them with training that further develops their

skills and enhances their productivity demonstrates to them that they are valued by the company. And when you perceive in those employees an increased sense of morale and engagement, that's the MasterCard commercial moment. That's the priceless piece.

UpSkill California: What is the process you go through to initiate ETP-funded training programs with El Camino College?



Dennis Fitzgerald: When we need to initiate training, we go to El Camino College's catalog, select the courses we want, and contact the instructors to determine their availability. It is a great advantage to have the instruction take place on-site at our company. I typically talk with the instructors before the training begins. I ask them about what they teach, how they teach it, and what types of teaching materials they plan to use. Eldon's staff is great about preparing the contracts and providing us with the Excel spreadsheets in which we provide the ETP-required demographic and pay-rate data.

UpSkill California: What types of ETP-funded training do you most often provide to your employees?

Dennis Fitzgerald: The courses we most often provide to our employees are Microsoft Excel training and blueprint reading, which also involves geometric dimensioning and tolerancing (GD&T), which is a very specific technical skill that involves breaking down three-dimensional shapes and models into two-dimensional drawings.

We've also held a vocational English for Spanish speakers class, which gave a broad overview

of manufacturing and basic information about manufacturing processes, and included sections on lean manufacturing, inspection, and material science. That class was very well received.

UpSkill California: What other factors make your working relationship with El Camino College successful?

Dennis Fitzgerald: El Camino College is a topnotch school that provides us with excellent instructors who are committed to delivering high-quality training. For example, we often work with Angel De Sevilla, who is a GD&T/blueprint inspector. Before a course begins, I'll send Angel drawings we've made, or I'll send him programs that we use, which gives him a good sense of the people he will be instructing. In the classroom, he'll use those drawings for critiques and ask the class if all the information in the drawing is presented accurately. He will press them further and ask, "How can we make these drawings better? How can we make them more readable, more understandable, so it's less likely the operator will make mistakes?" In this way, Angel ensures that the course is highly relevant to our needs and specific to our industry. It is also a big advantage that Angel can give instruction in Spanish if required.

In addition to the ETP administration component, I can attribute much of the success of our long-term relationship with El Camino College to our familiarity with their instructors, who have an in-depth knowledge of our business and our specific practices and processes. Instructors like Angel understand how our employees work and know our needs as an organization.

An additional benefit for us is that if we need an intern or someone for a project, I can send an email to one of our El Camino College instructors and they will post it in their classes. Last year, we were looking for part-time workers who had some design and drawing software experience to help us. We received 12 résumés for two positions."

UpSkill California: It sounds like the instruction your employees are getting is being contextualized and customizing spontaneously in the classroom, which makes it even more relevant to the work they are doing.

“Because of the training, I know our operators are making better decisions. I know that we are making fewer mistakes.”

Dennis Fitzgerald

Dennis Fitzgerald: Absolutely. Anybody can go on YouTube and find Microsoft Excel tutorials. The key is to teach people in a way that relates to what they do daily on the job. There’s nothing worse than contracting with an instructor for training who comes in and presents material that is not relevant to what our employees are doing in their day-to-day work. We also try to tailor our classes to the skill sets of the people being taught. For example, in our Microsoft Excel classes, we pay close attention to the proficiency level of the students to make sure don’t have beginners in the same class with more advanced users. This helps ensure we are getting the most for our investment and the students are not wasting their time.

About Impresa Aerospace



Established over 50 years ago, Swift-Cor Aerospace began a journey to become the premier provider of airframes and assemblies to the aerospace industry. Impresa Aerospace was formed in April 2012 when then Venture Aircraft LLC acquired Swift-Cor Aerospace; it is based in Gardena, California.

Impresa’s history as a supplier to the Tier 1, Tier 2, and OEM aerospace industry dates to 1962. The company now boasts major contracts with Boeing, Spirit AeroSystems, Sikorsky, Lockheed Martin, and Gulfstream. Notable commercial programs include Boeing 787, 777, 747, and 737; Airbus A330 and A340; and Gulfstream G650.

For more information about El Camino College–Center for Customized Education, please contact:

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Jon Wollenhaupt is a marketing consultant who writes about topics related to contract education, employee training, and corporate learning for the California Community Colleges. His work is funded by the Technical Assistant Provider (TAP) grant that is hosted at Mt. San Antonio College. He can be reached via email at jon@golaunchmarketing.com



APPENDIX C

Links to Additional Data and Literature



Links to Additional Data and Literature

1. **California Competes Back-to-College, Part 1**
<http://californiacompetes.org/publications>
2. **California Competes Back-to-College, Part 2**
<http://californiacompetes.org/publications>
3. **California Forward 2019 Roadmap to Shared Prosperity**
<https://cafwd.org>
<https://caeconomy.org/roadmap/>
4. **California Forward Workforce Priorities**
<https://cafwd.app.box.com/s/msm2mkanpgr44lmb2hhr5zdw5e8wdx0>
5. **California Strategic Workforce Development Plan**
https://cwdb.ca.gov/plans_policies/wioa_unified_strategic_workforce_development_plan/
6. **Centers for Excellence, Studies by Regions**
<http://www.coecccc.net/>
7. **The Future of Work Commission**
<https://www.gov.ca.gov/2019/08/30/governor-gavin-newsom-announces-members-of-the-future-of-work-commission/>
8. **Governor's Initiative Regions Rising**
<https://www.pe.com/2019/05/10/regions-rise-together-building-a-plan-for-inclusive-sustainable-growth-across-california/>
9. **Governor's Office of Business & Economic Development**
<https://www.business.ca.gov>
10. **Institute for the Future**
<http://www.iftf.org/futureofworkcommission/>
11. **Vision for Success, Foundation for California Community Colleges**
<https://vision.foundationccc.org>

APPENDIX D

Lifelong Learning & Upskilling Cited Works Bibliography



Lifelong Learning

Title	Publisher	Year	Type of Document	URL
Adecco_bridging_the_skills_gap_report-(WEB)v4	Stateuniversity.com	2020	Report	https://education.stateuniversity.com/pages/2181/Lifelong-Learning.html
Adecco_Bridging-the-skills-gap-infographic-v5	US Chamber of Commerce Foundation	2019	Blog	https://www.uschamberfoundation.org/blog/post/renewable-learning-how-new-partnership-taking-sustainable-approach-workforce-development
Definition of Lifelong Learning in British English	Collins Dictionary		Web page	https://www.collinsdictionary.com/us/dictionary/english/lifelong-learning
Here's How 'Renewable Learning Funds' Can Transform Workforce Development	Forbes	2017	Article	https://www.forbes.com/sites/michaelhorn/2017/12/13/heres-how-renewable-learning-funds-can-transform-workforce-development/#54ebfb466c81
Lifelong learning - Wikipedia	Wikipedia	Updtd 2020	Web page	https://en.wikipedia.org/wiki/Lifelong_learning
The Future of Your Career Depends on Lifelong Learning	Forbes	2017	Article	https://www.forbes.com/sites/schoolboard/2017/10/09/the-future-of-your-career-depends-on-lifelong-learning/#53c94fb71bd7

App D – Lifelong Learning & Upskilling Cited Works Bibliography

UpSkilling

Title	Publisher	Year	Type of Document	URL
Adecco_Bridging_the_skills_gap_report-(WEB)v4	The Adecco Group	Not dated	Report	https://future-skilling.adecgroup.com/downloads/Adecco_bridging_the_skills_gap_report-(WEB)v4.pdf
Adecco_Bridging-the-skills-gap-infographic-v5	The Adecco Group	Not dated	Infographic Fact Sheet	https://future-skilling.adecgroup.com/downloads/Adecco_bridging-the-skills-gap-infographic-v5.pdf
Are You Prepared for the Future of Work?	Georgia Tech Professional Education	2019	Blog	https://pe.gatech.edu/blog/future-work/reskilling-and-upskilling
As Pressure to Upskill Grows, 5 Models Emerge	Forbes	2019	Report	https://www.forbes.com/sites/allisondunne/2019/10/28/as-pressure-to-upskill-grows-5-models-emerge/#be600cc680cd
Bridge the Gap: Rebuilding America's Middle Skills	Havard Business School	Not dated	Report	https://www.hbs.edu/competitiveness/Documents/bridge-the-gap.pdf
Companies should help you retrain when you're automated out of a job	Quartz	2018	Brief	https://qz.com/1383658/companies-should-help-you-retrain-when-youre-automated-out-of-a-job/
Congressman Raja Krishnamoorthi Reintroduces the Investing in American Workers Act to Establish a Worker Training Tax Credit for Small and Mid-Sized Businesses	Congressman Raja Krishnamoorthi House website	2019	Press Release	https://krishnamoorthi.house.gov/media/press-releases/congressman-raja-krishnamoorthi-reintroduces-investing-american-workers-act
Credential Engine & Retail and Hospitality Initiative Highlighted by Training Industry, Inc.	Credential Engine	2019	Article	https://credentialengine.org/2019/08/07/credential-engine-retail-and-hospitality-initiative-highlighted-by-training-industry-inc/
DI_2018_Deloitte_MFI_skills_gap_FoW_study	Manufacturing Institute	2018	Study	http://www.themanufacturinginstitute.org/~media/E323C4D8F75A470E8C96D7A07F0A14FB/DI_2018_Deloitte_MFI_skills_gap_FoW_study.pdf
Fear of automation greatest among those getting fewest opportunities to upskill	PwC	2019	Press Release	https://www.pwc.com/gx/en/news-room/press-releases/2019/global-skills-survey-2019.html
Future_skilling_report__2018_Adecco	Adecco	2018	Report	https://future-skilling.adecgroup.com/downloads/Adecco_-_Future_skilling_report__2018.pdf
How Companies and Governments Can Advance Employee Education	Havard Business Review	2019	Article	https://hbr.org/2019/09/how-companies-and-governments-can-advance-employee-education
How do we upskill a billion people by 2030? Leadership and collaboration will be key	PwC	2020	Article	https://www.weforum.org/agenda/2020/01/2025-leadership-collaboration-skills-training/
How Upskilling Your Workforce Benefits Your Organization	ITA Group	2019	Blog	https://www.itagroup.com/insights/how-upskilling-your-workforce-benefits-your-organization
Impact of the American Skills Gap _ Adecco USA	The Adecco Group	202	Blog	https://www.adecgroup.com/employers/resources/skills-gap-in-the-american-workforce/

App D – Lifelong Learning & Upskilling Cited Works Bibliography

Upskilling

Title	Publisher	Year	Type of Document	URL
Local Upskilling and Related Resources Available to Support Your Business	National Association of Workforce Boards	Not dated	Brief	https://www.workforcesystem.org/DocumentCenter/View/3933/Local-upskilling-and-related-resources-to-support-your-business
Manpowergroup-2020-us-talent-shortage-what-workers-want-report	Manpower Group	2020	Report	https://go.manpowergroup.com/hubfs/MPG_WhatWorkersWant_2020_lo.pdf?hsCtaTracking=63dbd881-1525-489b-a9e5-546a3f1eccab%7C3eccbeb7-9e0e-4b10-be06-086ae6aeef8f
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“To improve access to education and employment, California leaders will need to embrace and deploy a multipronged approach that restructures the education pipeline and supports place-based investment throughout the state via new funding sources. This approach will require a model of continuous learning.”

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