

**Impacts of the Funding Landscape on Los Angeles County's Education and Workforce
Misalignment**

Final Report

Areté Rising Practicum Group:

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EXECUTIVE SUMMARY

Los Angeles County faces a growing disconnect between credential supply and labor-market demand, particularly for middle-skill roles across various high-growth sectors. While many training pathways continue to produce credentials in low-growth, low-wage fields, high-demand industries often lack sufficiently aligned and accessible pathways, leaving many young adults unenrolled and unemployed. For organizations like Areté Rising, these challenges have become more pronounced amid recent legislative changes, such as the One Big Beautiful Bill Act (OBBBA), coupled with rapid AI adoption and evolving funding structures. Using a mixed-methods approach, this study finds that new performance-based funding streams expand short-term access while increasing the risk of exclusion for vulnerable youth, that institutional silos continue to create navigational barriers and information gaps, and that AI is accelerating the need for adaptable, continuous learning pathways. At the same time, high-growth sectors such as healthcare, logistics, and port-related industries present strategic opportunities, though these remain constrained by persistent misalignment in Los Angeles' workforce development. These findings served to inform the following recommendations:

1. Enhance and strengthen AltPath by highlighting which high-demand career pathways are most realistically accessible, not just available, helping youth distinguish between immediately attainable opportunities and those requiring more competitive pathways.
2. Use employer and workforce partnerships to continuously update AltPath with real-time, demand-driven pathway recommendations aligned with validated skills and hiring needs.
3. Add a grants and funding guidance feature to AltAid+ that connects users to pathway-aligned state and federal aid, improving cost transparency and access for high-barrier youth.

Overall, the findings suggest that improving long-term mobility for Areté Rising beneficiaries requires stronger coordination, clearer pathways, and training models better aligned with future skill demands.

ISSUE OVERVIEW

Education-Workforce Misalignment in Los Angeles County

Los Angeles County faces a widening disconnect between what its education and workforce development systems produce and what the regional labor market demands, disproportionately impacting uncredentialed and unenrolled young adults (ages 18-29). This disconnect is not simply a shortage of education or training opportunities, but a deeper structural misalignment between credential production, workforce system design, and evolving employer demand. The current distribution of certificates and associate degrees does not align with projected middle-skill job creation, particularly in fast-growing sectors such as health technology, advanced manufacturing, and clean energy (Strohl et al., 2024b; National Skills Coalition, 2024).

This misalignment manifests in two ways: first, the supply of credentials is concentrated in low-growth fields such as cosmetology and basic administrative services, which often yield low wages and limited career advancement. These programs may be more accessible or more visible to students, but they frequently lack strong connections to regional labor demand, limiting their long-term economic value. Second, even where regional labor markets anticipate high demand for middle-skill workers, training programs lag behind employer needs (Strohl et al., 2024b; Mitra et al., 2017). This lag reflects both slow institutional adaptation and weak coordination between employers and training providers, resulting in gaps between the skills taught in classrooms and those required in the workplace.

As employers increasingly require postsecondary training or industry-recognized credentials, youth are left behind, trapped in low-wage or unstable jobs, even as critical industries struggle to fill middle-skill positions (LAEDC, 2020; Strohl et al., 2024). This misalignment is evident in California, where 47% of jobs require training beyond high school but less than a four-year degree, yet only 39% of workers have the necessary preparation (National Skills Coalition, 2024). In addition, in many regions, existing credential production meets less than 35% of projected demand in key middle-skill fields, with some sectors meeting as little as 13% of demand (Weissman, 2024; Georgetown University Center on Education and the Workforce, 2024).

This challenge is reinforced by broader shifts in the U.S. economy, where demand for postsecondary training continues to grow. The national economy is projected to generate an average of 18.5 million job openings annually through 2031, with approximately 5.8 million (just over 31%) requiring middle-skills credentials such as an associate's degree, certificate, or some college (Strohl et al., 2024a; BLS, 2023). At the same time, access to good jobs is increasingly tied to postsecondary education and training, while opportunities for workers with only a high school diploma continue to decline (Strohl et al., 2024a; National Skills Coalition, 2024). This creates a paradox in which labor shortages and worker underemployment coexist, signaling inefficiencies in how education and workforce systems are aligned rather than an absolute lack of talent. Ultimately, understanding where misalignment occurs across funding, program design, and industry focus is essential for improving youth economic mobility and ensuring that Los Angeles's evolving workforce strategies truly serve those most excluded from opportunity.

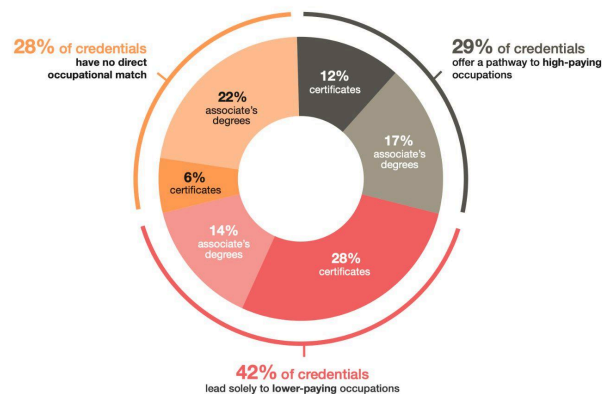
Without addressing these structural disconnects, investments in workforce development risk reinforcing fragmented pathways rather than building coherent routes into high-quality employment (McConville et al., 2021).

Scale of Skills Misalignment Among Young Adults

The scale of the education-workforce misalignment identified in Los Angeles County is significant and mirrors broader national trends. Between 2010 and 2025, the share of “good jobs” available to workers with only a high school diploma has fallen from 45% to just over 30%, and is projected to reach 25% by 2031 (Strohl et al., 2024a, U.S BLS, 2025). This decline signals a fundamental shift in the labor market, where access to stable, family-sustaining employment increasingly depends on postsecondary credentials or specialized training. Across the United States, more than half of all jobs now fall into the “middle-skill” category, positions requiring more than a high school diploma but less than a bachelor’s degree, spanning fields such as healthcare, information technology, manufacturing, and renewable energy. Yet only 18% of working-age Americans hold credentials within this range, leaving millions of critical jobs unfilled and millions of workers without viable pathways to economic mobility (Low, 2023). Moreover, in half of local labor markets nationwide, at least 50% of all middle-skills credentials would need to be awarded across different fields of study to match projected labor demand through 2031 (Strohl et al., 2024b). This gap highlights a systemic failure to align education systems with the structure of the labor market.

Nationally, 28% of middle-skill credentials are concentrated in liberal arts or general studies programs with no direct occupational match (McLeod et al., 2025; Strohl et al., 2024; See **Figure 1**). In Los Angeles, that figure rises to 36%, with an overall misalignment rate of 53%, approximately 70% higher than in Atlanta and exceeding rates observed in other major metropolitan regions (Strohl et al., 2024). These figures underscore that Los Angeles is not only experiencing misalignment but also doing so at a scale that exceeds that of comparable regions, suggesting deeper structural inefficiencies in how training pathways are designed and distributed.

Figure 1: National distribution of middle-skill credentials by alignment and wage outcomes



Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau, American Community Survey (ACS), 2016–19, 2021, and the US Department of Education, Integrated Postsecondary Education Data System (IPEDS), 2019–21.
 Note: Values may not sum to 100 percent due to rounding.

Racial and Ethnic Disparities in Alignment

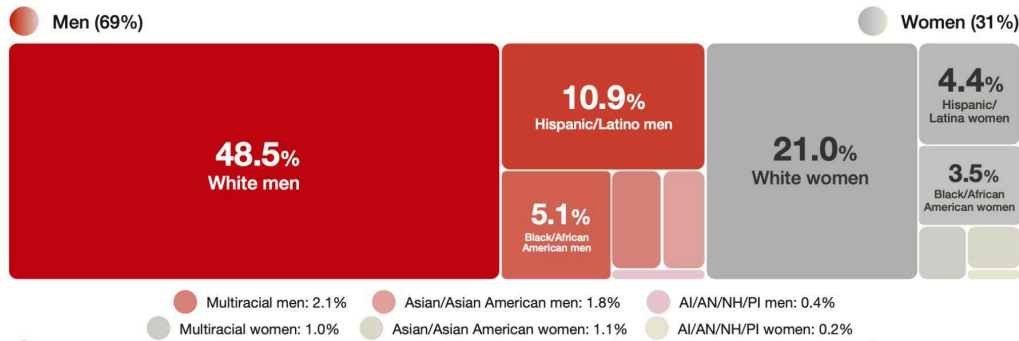
Racial and ethnic disparities in education and workforce alignment reveal how structural inequities continue to shape who benefits from economic opportunity. Access to high-quality schools, training institutions, and well-paying jobs varies widely across communities, often mirroring patterns of racial and economic segregation (Chetty, 2018). These disparities are not incidental but are embedded in how education and labor market systems are structured, funded, and geographically distributed.

Women and people of color remain underrepresented in high-paying middle skills pathways, with white men holding nearly half of all jobs in high-paying middle-skill occupations. In contrast, Hispanic/Latina and Black/African American women account for only 4.4% and 3.5% of workers in these roles, respectively, highlighting persistent racial and gender disparities in access to high-wage middle-skill employment (McLeod et al., 2025; **See Figure 2**). The disparities are even clearer when examining specific occupational groups. In high-paying STEM-related middle-skills pathways, about 83% of Black/African American men and 79% of white men who earn STEM-aligned middle-skills credentials do so in programs linked to high-paying occupations, compared with 37% of American Indian/Alaska Native/Native Hawaiian/Pacific Islander women and just 18% of Hispanic/Latina women (McLeod et al., 2025). These figures show that racialized and gendered inequities emerge not only in labor-market outcomes but also earlier in the credential pipeline itself.

Hispanic/Latino adults are also disproportionately concentrated in communities where the connection between educational credentials and available jobs is weakest; Approximately 42% reside in communities with higher-than-median levels of credential-to-job mismatch, relative to 31% of adults from other racial and ethnic backgrounds (Strohl et al., 2024b). By comparison, 32% of white adults, 30% of Black/African American adults, 29% of American Indian/Alaska Native adults, and 27% of Asian/Asian American adults live in communities with above-median misalignment (Strohl et al., 2024b; **See Figure 3**). Conversely, 71% of American Indian/Alaska Native adults with local provider access live in communities with below-median misalignment, and nearly three-quarters of Black/African American adults do as well (Strohl et al., 2024b). This suggests that inequity operates through multiple mechanisms at once: some groups are more likely to live in poorly aligned labor markets, while others face a different barrier, lack of local provider access altogether (Adarkar et al., 2023; Deming et al., 2023; McConville et al., 2021).

This underscores how geographic and racial concentration of misalignment compounds inequities in access to meaningful career pathways, leaving marginalized youth, already underrepresented in postsecondary education, at greater risk of economic disconnection and long-term exclusion from high-opportunity careers. Critically, this suggests that improving alignment is not only an economic issue but also an equity imperative, requiring targeted strategies to ensure that historically excluded populations can access and complete high-value pathways (Adarkar et al., 2023; Deming et al., 2023).

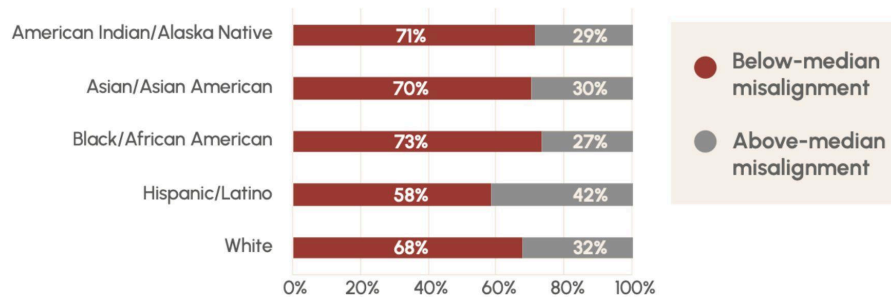
Figure 2: Racial and Gender Distribution of Workers in High-Paying Middle-Skill Occupations



Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau, American Community Survey (ACS), 2016–19, 2021.
 Note: AI/AN/NH/PI = American Indian/Alaska Native/Native Hawaiian/Pacific Islander. Values may not sum to 100 percent due to rounding. Analysis is limited to early-career workers (ages 18–35) who reported working more than 10 hours per week and at least 14 weeks in the previous year.

Figure 3: Racial Disparities in Labor Market Misalignment

Percentage of working-age adults living in a labor market, by level of misalignment



Source: Georgetown University Center on Education and the Workforce (GUCEW) analysis of data from the US Census Bureau, American Community Survey (ACS), 2012–21; US Department of Agriculture, Commuting Zones and Labor Market Areas, 2012; US Department of Education, Integrated Postsecondary Education Data System (IPEDS), 2019–21; and GUCEW State Job Projections data set, 2023.
 Note: The sample is restricted to adults ages 18–65 living in labor markets served by at least one middle-skills education or training provider

Structural Drivers of Misalignment

Several interlocking structural factors sustain the region’s education-workforce divide, as rapid technological change, fragmented education systems, and policy shifts are deepening the misalignment between what students learn and what employers need (See **Figure 4**). Technological development and automation are reshaping the demand for skills faster than education systems can adapt (California Competes, 2024). Artificial intelligence and digitization have already transformed the nature of work, with an estimated 19% of jobs at risk of displacement (City of Los Angeles Workforce Development Board, 2024). Broader labor-market research similarly suggests that automation and AI are reshaping task composition rather than simply eliminating jobs, increasing the importance of adaptable technical, digital, and

communication skills across the middle-skills labor market (Autor, 2019; Gutelius & Theodore, 2019; Holzer, 2021). Rather than eliminating jobs, these shifts are changing the skill composition of existing roles, raising baseline requirements for digital literacy, technical competencies, and adaptability.

In Los Angeles, the issue reflects a fragmented ecosystem of opportunities. Education providers, workforce boards, and employers often operate in silos with limited data sharing and coordinated planning (California Workforce Development Board, n.d). This fragmentation weakens the feedback loop between labor-market demand and training supply, making it difficult for programs to adjust quickly or strategically. Simultaneously, new state and federal reforms, such as the One Big Beautiful Bill Act and the Golden State Pathways Program, expand financial support for short-term, workforce-aligned credentials, but they also impose new eligibility, reporting, and performance requirements (Warick-Smith, 2025; Rodriguez et al., 2025). These include strict completion thresholds, earnings benchmarks, and full-time enrollment expectations that disproportionately limit access for working learners, part-time students, and adults enrolled in noncredit programs (Weissman, 2025; H.R.1, 2025). While these policies aim to improve accountability and outcomes, they may inadvertently restrict access for the very populations most in need of flexible and accessible training pathways.

Moreover, students and job seekers face a complex array of programs with limited transparency about quality, cost, or labor-market value (McConville et al., 2021). Research on career mobility among low-wage workers similarly finds that many workers rely primarily on family and friends for career information, receive limited guidance from employers, and often lack the time or information necessary to evaluate multiple career options, underscoring how information gaps can constrain labor-market mobility even when opportunities technically exist (Deming et al., 2023; Gable et al., 2023). This lack of transparency makes it difficult for individuals to make informed decisions about which pathways will lead to stable employment, contributing to inefficient enrollment patterns and reinforcing misalignment. This results in a system that offers pockets of innovation but lacks the coherence necessary to ensure that investments translate into equitable labor-market outcomes.

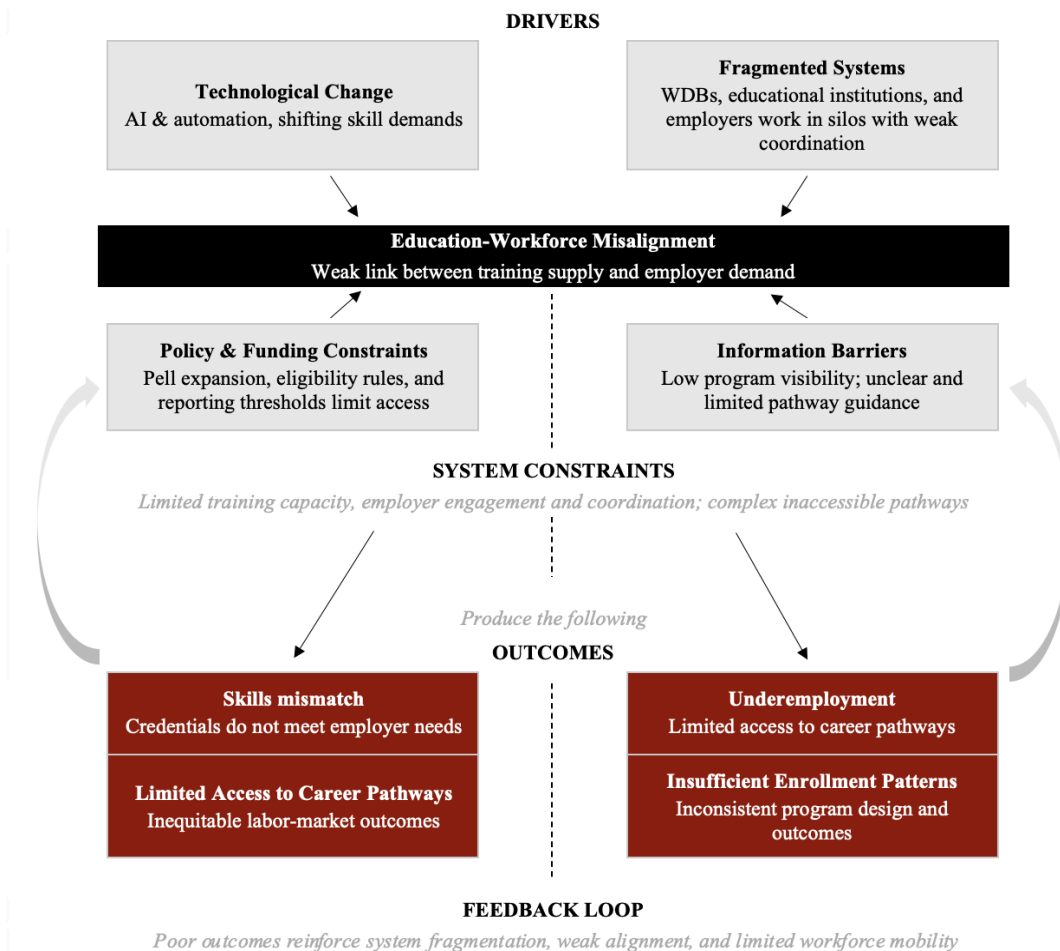
Employers also report that graduates lack industry-specific, applied certifications, creating gaps between formal education and job readiness. In the middle-skills economy, despite a large pool of aspiring workers, employers face challenges finding candidates with the appropriate credentials and skills (McLeod et al., 2025). This disconnect highlights a weak alignment between curriculum design and real-world skill requirements, particularly in technical and rapidly evolving sectors. Credential structures are often disconnected from regional industry requirements, and employers lack incentives to help design curricula or support paid apprenticeships (Strohl et al., 2024b). Without stronger employer engagement, training programs risk remaining disconnected from actual hiring practices.

Los Angeles exemplifies this disconnect: the region's employment growth lags behind that of peer counties, with an estimated 325,000 fewer residents employed than expected, and a growing concentration of jobs in a narrower set of industries, including healthcare, tourism, and education (Adarkar et al., 2023). This concentration increases vulnerability to economic shocks

and limits the diversity of career pathways accessible to young adults. As a result, many young adults who do pursue short-term credentials remain underemployed or in low-wage jobs unrelated to their training.

Moreover, workforce development initiatives have increasingly been positioned to bridge the gap between education and employment; however, they have faced challenges due to fragmentation and misalignment. LA County’s Workforce system operates within a dense network of state and local initiatives coordinated under the CWDB and the LA County Jobs First Collaborative, which unites over 700 partners across government, labor, and community sectors to promote “high-quality, accessible careers” and equitable economic growth (California Jobs First, 2024). However, significant access gaps persist: 75% of surveyed residents reported limited knowledge of local vocational programs and cited cost and information barriers as hindering their participation. This suggests that the issue is not only the availability of programs, but also their visibility and accessibility to intended participants. Moreover, automation is expected to threaten 700,000 local jobs by 2030, exacerbating the region's existing skills mismatch (Adarkar et al., 2023; California Jobs First, 2024).

Figure 4: Structural Drivers of Education-Workforce Misalignment in Los Angeles County



As shown in **Figure 4**, misalignment is driven by the interaction of technological change, fragmented systems, policy constraints, and information barriers. These forces collectively weaken the connection between training supply and employer demand, while system-level constraints limit responsiveness. The resulting outcomes, including skills mismatch and underemployment, reinforce these dynamics over time through a feedback loop, further entrenching misalignment.

Labor Market Dynamics in Los Angeles County

LA County is home to one of the largest regional labor markets in the United States, with more than 4.5 million workers across the country's economy (EDD, 2026). Regional labor market data highlights that professional and business services account for more than 1.37 million jobs in Los Angeles County. At the same time, the healthcare and social assistance sector employs roughly 782,000 workers, and the hospitality sector employs more than 634,000 workers (Los Angeles Regional Consortium, 2023). These sectors also generate large numbers of middle-skill jobs, which most often require education or training beyond high school but less than a four-year degree (Gerrain, 2016). According to the Los Angeles Regional Consortium (2023), regional planning data estimates approximately 87,000 annual middle-skill openings in health occupations and nearly 25,000 openings in transportation and logistics occupations over the coming decade. These labor market conditions create opportunities for workforce development systems to connect individuals without four-year degrees to stable employment.

Sectoral employment growth must also be considered alongside broader economic changes affecting the Los Angeles metropolitan area. The region faces structural challenges related to housing affordability, income inequality, and high costs of doing business. Simultaneously, Los Angeles remains an economic powerhouse in the United States, with a metropolitan GDP exceeding \$1.3 trillion, supported by global trade, entertainment, technology, and healthcare industries (LAEDC, 2024). Economic conditions shape the opportunities available to workers entering the labor market and, therefore, influence the demand for workforce training programs.

Table 1. Wage and Salary Employment by Sectors in Los Angeles County

Numeric change in wage and salary employment, by sector, projected 2024-34	
2024 National Employment Matrix title	Wage and Salary Numeric change, 2024–34 (in thousands)
Healthcare and social assistance	1982.7
Professional, scientific, and technical services	812.5
Accommodation and food services	553.6
Construction	360.5
Finance and insurance	226.4
Wholesale trade	208.6
Transportation and warehousing	198.8
Other services (except public administration)	192.5
Information	192.3
Arts, entertainment, and recreation	132.6
Management of companies and enterprises	114.9
Administrative and support and waste management and remediation services	101.7
Real estate and rental and leasing	81.8
Utilities	28.7
Educational services; state, local, and private	11.9
Agriculture, forestry, fishing, and hunting	1.4
Manufacturing	-0.4
Mining, quarrying, and oil and gas extraction	-9.3
Government, excluding state and local education and hospitals	-14.1
Retail trade	-181.9

New Funding Streams Dynamics in LA County

Recent federal policy changes under the OBBBA signal a broader shift in education and workforce development financing towards short-term, workforce-aligned credentials as complements or alternatives to traditional degree pathways. The legislation expands federal support for nondegree training based on labor-market demand, with the stated goal of accelerating entry into middle-skill occupations and addressing persistent workforce shortages (AACC, 2025). Within this policy context, new and evolving funding streams have emerged at the federal, state, and local levels, reshaping how institutions design programs and how learners access workforce training, including for Areté Rising’s target population: uncredentialed and unenrolled adults.

The Workforce Pell Grant, established under OBBBA, expands federal financial aid to designated institutions of higher education offering short-term, career-focused postsecondary training programs (AACC, 2025). While this funding stream is intended to reduce fiscal barriers for low-income learners and support entry into in-demand occupations, it presents implementation challenges. There are constraints in their requirements, such as the program length, which excludes workforce programs that fall outside the 8-15 week window and limits access for participants in both shorter and longer training pathways (Jobs for the Future, 2025). In addition, unresolved administrative guidelines related to outcomes and performance metrics create uncertainty for institutions and risk reinforcing uneven program quality rather than strengthening short-term training infrastructure (Knox, 2025; Weissman, 2025).

At the state level, the Golden State Pathways Program (GSPP), established under the California Budget Act of 2022-2023, provides competitive grant funding to K–12 local educational agencies to develop integrated college and career pathways aligned with regional labor-market needs (Cal. Code EDC 53023, 2022). Despite its potential to strengthen early postsecondary transitions, GSPP introduces structural equity concerns. Because funding is awarded through a competitive application process rather than universal formula allocation, only local educational agencies (LEAs) that can demonstrate strong employer partnerships, implementation readiness, and sufficient administrative capacity are likely to secure grants. This inherently leaves out many districts that may have equal or greater student need but lack the staffing, regional employer networks, or career-technical education (CTE) infrastructure required to submit a competitive proposal. Therefore, as a competitive grant, it excludes a significant number of LEAs, potentially widening disparities in access to workforce development resources and reinforcing low-wage pathways without upward mobility (Rodriguez et al., 2025). LEAs located in regions with limited employer partnerships or weaker career-technical curriculum (CTE) infrastructure face a higher risk of exclusion, while even funded LEAs may constrain opportunities for students whose interests fall outside preselected pathways (Career Ladders Project, 2025; Jones, 2024).

Finally, California’s High Road Training Programs (HRTPs) represent an industry-based, worker-centered approach to workforce development that prioritizes employer alignment, labor partnerships, and equity-focused access for adult learners (UC Berkeley Labor Center, 2020). HRTPs invest in human capital by supporting training pathways that connect participants to higher-quality jobs, particularly for populations facing structural barriers to employment. Yet, like Workforce Pell and GSPP, HRTPs operate within constraints imposed by competitive, grant-based funding models, raising questions about scale, sustainability, and coordination across regions (UC Berkeley Labor Center, 2020; California Workforce Development Board, 2025).

Table 2. Comparative Funding Streams and their requirements

Funding Streams and Requirements					
Funding Streams	Target Population	Eligible Organization	Focus Industries	Goal	Requirements
Workforce Pell Grants	Students and adult learners in eligible workforce programs	Title IV–eligible accredited higher education institutions	N/A	To build a stronger postsecondary education system – one where the Federal government invests in short-term, high-quality programs aligned with a State’s workforce needs, creating new affordable pathways to upward mobility for America’s students and their families	Training programs of 150-599 clock hours, 8-15 weeks, must be in-demand, lead to a credential, and meet a 70% job placement rate, offering a faster path to jobs.
Golden State Pathways Program	High school students (grades 9th-12th)	Local Educational Agencies (LEAs)	Technology, healthcare, education (including early education), and STEM/climate-related industries.	Ensure equitable access to high-quality career pathways and prepare students for both college and careers.	Integrated Curriculum: Programs must align Career Technical Education (CTE) with A–G requirements for UC/CSU admission. Targeted Pathways: Focus on high-wage, high-skill, and high-growth areas. Dual Enrollment: Offers students the opportunity to earn at least 12 postsecondary credits. Work-Based Learning: Include partnerships offering internships and apprenticeships. Targeted Student Support: Focus on underserved students, including low-income students and English learners.
High Road Training Partnerships	Job seekers 16/18 + (depending on the program)	Institutions (it can be individual training providers) that are able to prove a broader partnership across employers, labor, education, and community stakeholders.	Construction & Infrastructure (including Green Jobs), Healthcare, Aerospace & Defense, Hospitality & Tourism, Creative Sector, and Public Sector	To create pathways into high-quality, family-supporting jobs, especially for underserved populations, by aligning workforce training directly with employer needs and worker voice	This partnership is designed around sector-based partnerships, not isolated training programs, therefore, programs must demonstrate collaboration among actors.

Note: Author’s own elaboration based on California Grants Portal (2026), U.S. Department of Education (March 2026), and California Department of Education (n.d.).

For unenrolled and unemployed youth in Los Angeles County, Workforce Pell expands access to training by lowering financial barriers. Covering tuition for short-term programs creates new entry points for individuals who are disconnected from traditional higher education pathways. However, research on performance-based funding systems suggests that access under these models is often conditional and uneven (Kelderman, 2019). Because programs must meet strict performance thresholds, they face strong incentives to admit participants most likely to succeed, leaving disadvantaged people behind (Kelderman, 2019). This introduces risk-based screening, where youth who are relatively “job-ready” are more likely to be served. At the same time, those facing greater challenges, including housing instability, are more likely to be excluded. As a result, access to training expands in theory but becomes more selective in practice.

At the federal level, Workforce Pell facilitates faster entry into the labor market through shorter-term courses. Still, evidence from workforce development research indicates that longer, more intensive training programs tend to generate higher long-term earnings, particularly for

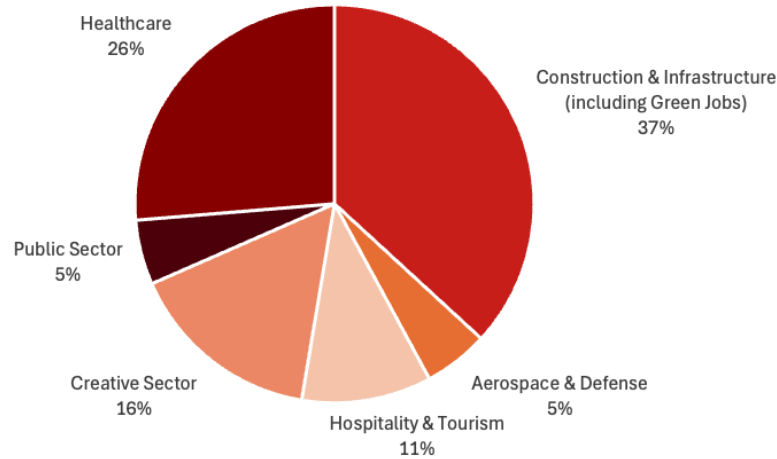
disadvantaged populations (Hillman et al., 2018, 2015; Li & Kennedy, 2018; Li & Ortagus, 2019; as cited in Kelchen et al., 2024). Consequently, the shift toward shorter programs may improve short-term employment metrics while potentially weakening long-term economic mobility.

At the local level, Community-Based organizations (CBOs) like Areté Rising have experienced changes in funding and policies as they implement them. The shift toward performance-based funding introduces financial uncertainty, as continued access to funding now depends on meeting specific outcome benchmarks. Fluctuating funding is not new in LA County; the city of Pomona created Measure Y in 2024 specifically to address this problem by setting a percentage of the budget for education programs (City of Pomona, n.d.). In practice, this creates strong incentives to prioritize participants who are more likely to complete training and secure employment, which can unintentionally reduce access for higher-barrier populations. The requirements for the Pell Grant are scheduled to take effect in July 2026, so discussions are underway regarding new compliance systems and auditing programs for short-term, workforce-aligned credentials ahead of the deadline (Tobenkin, 2025). Organizations may feel pressure to adapt their program models by shortening training durations, standardizing curricula, and focusing on immediately marketable skills.

While these changes can improve short-term performance metrics, they may come at the expense of longer-term impact. Additionally, Workforce Pell increases administrative demands, as compliance requires more sophisticated data collection, outcome tracking, and reporting systems (Advancing Board Excellence, 2025). For smaller community-based organizations, this can strain limited capacity and shift resources away from direct service delivery. Access to new funding is also uneven, favoring organizations with the infrastructure to meet these requirements, while smaller or less formal programs risk being left out, ultimately contributing to a more stratified workforce development system.

The interaction between GSPP, Workforce Pell, and HRTPs creates structural imbalances. GSPP expands the number of youth entering workforce pathways, while Workforce Pell channels them into short-term training programs. However, the availability of high-quality, employer-linked opportunities through HRTPs remains limited. When reviewing the HRTPs 2025 awardees list, for example, we can see the focus on certain industries, as one of the goals is to channel funds towards high-growth sectors. Still, the reach is only 1300 individuals, when 1800 was the amount originally expected (see **Figure 5 and refer to Appendix E**) (LA County Department of Economic Opportunity, 2025). This dynamic creates a bottleneck in which the supply of trained individuals outpaces the availability of quality job placements. Evidence from labor market studies suggests that such imbalances can lead to credential inflation, reducing the signaling value of short-term certifications, affecting the process of securing employment (Araki & Kariya, 2022).

Figure 5. High Road Training Partnership (H RTP) Fund Awardees July 2025
H RTP Fund Awardees July 2025 per Industry



Note: Author’s own elaboration based on: LA County Department of Economic Opportunity (August, 2025).

Client Overview: Target Population and Stakeholder Analysis

Areté Rising is a nonprofit organization whose mission is to bolster economic opportunity for uncredentialed and unenrolled young adults “through increasing access to curated information, higher education, and customized career guidance” (Areté Rising, n.d.). At present, the organization offers three main programs. The first of these is altPath, a free online platform that helps young adults visualize and understand their optimal career path. This program provides students with relevant information after high school graduation, helping them understand the required credentials and available pathways into their chosen career. The other two programs offered, LOC Scholars and altAid+, provide uncredentialed and unenrolled individuals with direct financial assistance to pursue a Bachelor’s degree and to support students through unexpected financial hardship during their post-secondary training and education, respectively. The motivation for these programs is to provide the target population with refined, strategic guidance to navigate the postsecondary education and workforce landscape, to bolster the economic mobility of uncredentialed and unenrolled young adults aged 18-26 in Los Angeles County.

This subpopulation is of particular interest to Arété Rising for several reasons. Among the age group of interest, the percentage of young adults (aged 16-24) who are uncredentialed and unemployed is 11.4% in Los Angeles County alone (Payares-Montoya, 2026). Therefore, focusing on individuals aged 18-26 will allow the organization to understand better why this demographic experiences high unemployment rates and often opts out of post-secondary education. Further, given the size of Los Angeles County, the region is split into eight serving planning areas (SPAs) – Antelope Valley, San Fernando Valley, San Gabriel Valley, Metro LA,

West LA, South LA, East LA, and South Bay – each offering its own health and regional services targeted at the subpopulation’s specific needs (LAWIC Data, 2024). As such, service and funding conversations across LA County’s SPAs often operate independently, leading to inefficient resource distribution and regional fragmentation, leaving the larger issues of education-workforce misalignment unaddressed (California Workforce Development Board, n.d.; Gonzalez-Vasquez & Lopez, 2021).

To most effectively support Areté Rising, it is critical to acknowledge the organization’s various stakeholders, all of which play a central role in shaping how misalignment persists or is addressed in Los Angeles County (see **Table 3**). Workforce intermediaries include the Los Angeles County Department of Economic Opportunity (DEO), the seven Workforce Development Boards (WDBs) in Los Angeles, CA’s Jobs First Collaborative (CJF), and the California Employment Development Department. Collectively, these stakeholders serve as the region's planning and policy bodies, connecting employers with job seekers, providing training and career services for young professionals, and shaping funding priorities for relevant regional industries. Los Angeles County is unique in that it is one of the largest counties in the country, covering nearly 10 million residents and just over 4,000 square miles (County of Los Angeles, 2024). Additionally, the California Employment Development Department produces state-level labor market information and employment projections that regional agencies and training providers use (California EDD, n.d.).

Table 3. Summarized Stakeholder Analysis

Stakeholder Group	Roles/Responsibilities	Specific Stakeholder(s)	Key Risks in Current Landscape	Interest Level	Influence Level
Workforce Intermediaries	Connects employers and job seekers through training and career services; Produces labor market data and employment projections	LA County Dept. of Economic Opportunity (DEO)	Political/budget shifts may defund youth programs; SPA fragmentation limits coordinated impact	High	High
		7 Workforce Dev. Boards (WDBs)	Siloed SPA-by-SPA funding creates service gaps; risk of duplication vs. collaboration	High	High
		CA Jobs First Collaborative (CJF)	Shifting state priorities may deprioritize LA-specific youth equity goals	Medium	Medium
		CA Employment Dev. Dept. (EDD)	Data lags may misrepresent fast-changing markets; limited regional granularity	Low	Medium
Labor Unions	Provides training standards, wages, credentials, and labor market conditions	The LA Fed (Construction)	Union membership barriers may exclude non-traditional entrants from pathway access	Medium	High
		SEIU Local 721 (Healthcare)	Credentialing gatekeeping may limit access for Areté Rising's target population	Medium	High
		UNITE HERE Local 11 (Hospitality)	Sector instability (seasonal, low-wage) may reduce long-term economic mobility gains	Low	Medium
Educational Institutions	Shapes postsecondary awareness, career placement outcomes, and development of skilled, credentialed workforce	Community Colleges	Budget cuts and enrollment declines reduce capacity; transfer barriers persist	High	High
		Vocational / Trade Schools	Variable quality and accreditation; student debt risk without strong placement rates	Medium	Medium
		K–12 School Districts	Inconsistent college/career counseling resources across districts and SPAs	Medium	Medium
		Adult Education Consortia	Underfunded relative to demand; coordination with WDBs and CBOs is uneven	Low	Medium
		Universities (Public & Private)	Rising tuition and institutional bureaucracy may limit flexibility for target population	High	High
CBOs & Advocacy Organizations	Advocates for equitable labor policies	LA Alliance for a New Economy (LAANE)	Competing advocacy priorities and funding capacity may dilute focus on youth education-workforce alignment;	Medium	Medium

Locally, labor unions, community-based organizations, and local educational agencies (LEAs) that serve similar target populations are also relevant stakeholders. Labor unions in key industries, including construction (The LA Fed), healthcare (SEIU Local 721), and leisure and

hospitality (UNITE HERE Local 11), have a relatively strong influence on wage structures, training standards, and credential expectations (CWDB, 2019). Similarly, in collaboration with these labor unions, the Los Angeles Alliance for a New Economy (LAANE) serves as a regional advocate for better jobs and equitable labor policies in Los Angeles County (LAANE, n.d.). Lastly, community colleges, vocational schools, K-12 school districts, adult education consortia, and other higher education institutions (both private and public) should also be recognized by the organization as key stakeholders for their influence on the availability of postsecondary pathways and career placement.

METHODOLOGY

Given Areté Rising’s mission to create economic opportunity for young adults through curated information and access to customized postsecondary guidance, this research employs a mixed-methods approach to examine workforce development opportunities and barriers for uncredentialed and unenrolled young adults in Los Angeles County. The methodology consists of four complementary components, which will be discussed in the following order: semi-structured interviews with workforce practitioners and higher education administrators, a policy field analysis mapping institutional actors and funding dynamics shaping local workforce and educational systems, a scenario-based labor market analysis, and several sensitivity analyses examining sector resilience under shifting fiscal and technological conditions. Together, these components are designed to address not only which sectors are projected to grow, but also whether those sectors offer accessible and feasible entry points for Areté Rising’s target population. The research questions guiding this analysis are as follows:

Research Questions

1. **Which industry sectors are projected to grow? Utilizing these projections, how can workforce advancement be directed toward uncredentialed and unenrolled adults?**
 - a. Which industries are positioned to benefit from the existing funding streams? And how has this changed in recent years?
 - i How are recent shifts in education and workforce development funding in Los Angeles County aligning with projected growth sectors (expanding, retracting)? What are the implications for expanding access to middle-skill pathways for uncredentialed and unenrolled adults?
 - b. Which sectors are vulnerable to the enhancement of generative AI?
 - c. Which sectors are receiving increased investment, and which are experiencing a loss of funding (e.g., healthcare, clean energy, infrastructure, entertainment technology)?
2. **What informational and structural barriers prevent uncredentialed and unenrolled adults from connecting to opportunities in projected high-growth industry sectors, and how can pathways be restructured to improve access?**
 - a. How can Areté Rising play a role in promoting transparency, accountability, and student protection?
 - b. What leverage points exist to improve alignment between funding, programs, and equitable access to high-opportunity careers?

Interview Methodology

Our chosen outreach strategy involved contacting potential interviewees via email to provide a brief self-introduction, a project overview, and other interview logistics. Once contacted, the interviewees were added to a spreadsheet where we tracked each interview's

status. The interviews were conducted by two team members, with one serving as the facilitator and the other as a note-taker. To ensure the accuracy of our notes, all meetings were recorded, and the audio files and Zoom-generated transcripts were securely stored in USC Google Drive and Dedoose. To maintain anonymity and confidentiality of the interviewees, no identifying information will be linked to their responses in the final report. This approach eliminates the requirement for Institutional Review Board (IRB) approval. Despite our best efforts to minimize harm to participants and eliminate interview bias, we acknowledge potential limitations, including the possibility that the insights gathered through these interviews may be sector- or location-specific and therefore not generalizable to broader populations. In addition, inconsistencies in interviewees' experience with funding streams or familiarity with generative AI may prompt unanticipated follow-up questions.

To complement the quantitative and literature-based components of this study, we conducted semi-structured interviews with both workforce practitioners and higher education administrators. These interviews were designed to provide implementation-level insight into how workforce systems function in practice and to better understand the barriers that uncredentialed and unenrolled young adults (ages 18-29) face in accessing middle-skill career pathways.

The workforce practitioner interviews were conducted to support Research Question 1. While the quantitative analysis identifies projected industry growth, entry-level occupational demand, and sector accessibility using labor market data and scenario modeling, practitioner interviews provide critical insight into how these sectors operate as actual entry points. Specifically, these interviews capture how funding structures, program design, employer engagement, and training capacity shape whether high-growth sectors translate into accessible opportunities. In parallel, interviews with higher education administrators were conducted to support Research Question 2, focusing on the informational and structural barriers that prevent individuals from accessing and navigating workforce and education pathways. Administrator insights help identify leverage points to improve system navigation, student support, and institutional coordination, particularly for populations disconnected from traditional postsecondary pathways. By integrating practitioner and administrator perspectives with quantitative labor market projections, the study is better positioned to identify not only which sectors are growing but which sectors offer feasible, stable, and scalable entry pathways for Areté Rising's target population.

Selection Criteria and Sampling Strategy

Participants were selected using purposive sampling to ensure that interviewees possessed direct, decision-relevant knowledge of workforce development systems and student access pathways in Los Angeles County. Across both interview groups, selection criteria focused on identifying individuals with institutional insight, regional perspective, and direct engagement with workforce or student populations.

Four primary criteria guided participant selection:

- **Sector and Institutional Relevance** - Participants were selected from organizations directly engaged in workforce development, higher education, employer partnerships, labor market analysis, or student services. This ensured that interviewees could speak to both workforce system design and barriers to student access.
- **Decision-Making or Implementation Authority** - Priority was given to individuals in leadership, managerial, or administrative roles with visibility into program design, funding structures, employer engagement, or student support services. This allowed the study to capture insights beyond individual experiences and instead reflect system-level dynamics.
- **Regional Scope** - Participants represented institutions operating across Los Angeles County, including countywide, city-level, subregional, and postsecondary institutions. This enabled the analysis to capture variation across a large and decentralized workforce ecosystem while maintaining a focus on regional patterns.
- **Feasibility and Access** - Participants were selected based on their availability within the project timeline, willingness to participate in a 30-45-minute semi-structured interview, and the accessibility of their contact information.

Sample Composition

Based on the selection criteria above, we identified and interviewed the individuals in the following positions:

Higher Education Administrators:

- Dean of Student Services at a vocational/trade school
- Supervisor of Student Services at a private university

Workforce Practitioners

- Workforce development leaders from a county-level economic development organization
- A representative from a city-level workforce development board
- A workforce and economic development administrator from a community college district
- Two leaders from subregional workforce development boards serving distinct areas of Los Angeles County

Interview Coding and Analysis

Interview transcripts were analyzed using an inductive thematic approach designed to capture patterns emerging directly from practitioner experiences rather than imposing predetermined categories. Coding was conducted using interview questions, with each question serving as an analytic unit, allowing themes to emerge from participants' responses within specific domains such as labor-market demand, credential alignment, and technological change. Separate coding frameworks were developed for workforce practitioners and administrators to reflect differences in institutional perspective and operational responsibilities.

All interviews were conducted via Zoom and transcribed using the platform's automated transcription feature. Transcripts were manually cleaned to ensure accuracy prior to analysis and then imported into Dedoose, a qualitative data analysis platform used to organize and code interview responses. Coding was conducted collaboratively by two researchers. Both researchers independently reviewed transcripts and applied preliminary codes based on recurring themes. The research team then compared coded segments and refined the codebook through iterative discussion to ensure consistent interpretation of codes across transcripts. Discrepancies in coding were resolved through discussion and agreement, strengthening inter-coder reliability and ensuring that themes were applied consistently across interviews. Codes were organized into higher-order thematic categories capturing industry growth dynamics, workforce pipeline barriers, employer skill and credential expectations, technological transformation, and system coordination structures. These themes emerged consistently across practitioner interviews and enabled the identification of shared patterns related to workforce alignment, training program design, employer engagement, and the accessibility of entry pathways into growing industries.

To protect participant confidentiality, interviewees are referenced using role-based descriptors (e.g., workforce board leader, economic development practitioner, community college administrator) rather than individual names. Interviews are cited using anonymized identifiers (e.g., Interview WP1-WP5) to preserve participant confidentiality while indicating the source of qualitative evidence.

Policy Field Analysis

To capture the different levels influencing the programs in LA County that help youth like the target population AltPath is meant to support, a policy field analysis was conducted. The purpose is to track the various factors and actors and how they interact under the OBBBA to understand implementation challenges and anticipate potential effects. Policy field analysis is a structured way to understand the broader environment in which a policy is implemented by identifying and mapping the key institutions, relationships, resources, and power dynamics within a given policy area (Sandfort & Moulton, 2014). It involves conducting a policy field audit to identify relevant organizations, laws, funding streams, and implementation tools, and then translating these into a policy field map that visually represents how actors are connected through funding, accountability, and service-delivery relationships (Sandfort & Moulton, 2014). The approach also examines both formal mechanisms, such as contracts and regulations, and informal ones, such as trust and collaboration, to understand how policies operate in practice. Importantly, it highlights how political authority, resource dependencies, and institutional norms interact within the field, shaping outcomes in ways that are often not immediately visible. Overall, this method will allow us to better understand how the current context influences implementation and identify leverage points to make more effective recommendations for the unenrolled and unemployed youth.

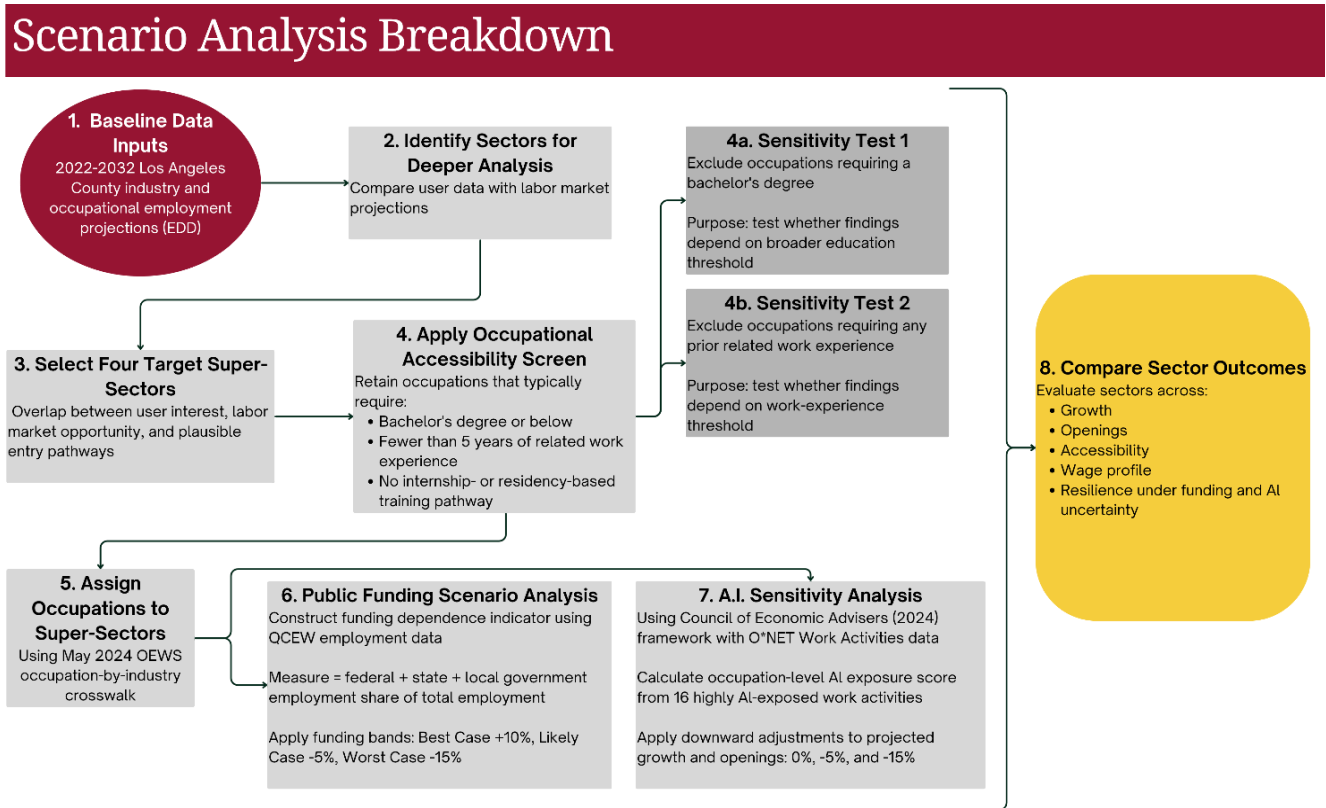
To perform this analysis, government reports, academic studies, international organization reports, and experts' opinions were reviewed on OBBBA. Documents published by Congress, studies by the National Bureau of Economic Research and the UCLA Labor Center,

and quasi-experiments conducted by Project QUEST, WorkAdvance, and Year Up on H RTP are currently on that list. The actors and factors are evaluated at the federal, state, and local levels to identify their relationships and how they have interacted over the past year, following the recent changes from the administration.

Scenario Analysis

The quantitative analysis was designed to identify which sectors are most relevant for Areté Rising’s target population once projected growth, accessibility, and uncertainty are considered together. The analysis used 2022-2032 Los Angeles County industry and occupational employment projections from the California Employment Development Department (EDD), derived from the Bureau of Labor Statistics (BLS), as the baseline and refined those projections through a sequence of screening and sensitivity tests. Rather than producing a separate forecasting model, the analysis used the baseline projections as a starting point and evaluated which sectors remain most meaningful for uncredentialed and unenrolled young adults after accounting for pathway accessibility and exposure to changing funding and technological conditions. **Figure 6** includes a step-by-step flow chart depicting the methodology.

Figure 6: Scenario Analysis Flow Chart



Data Sources

The analysis combined several quantitative inputs. First, Los Angeles County industry and occupational employment projections from EDD were used to establish baseline employment size and projected growth. Second, internal user data from Areté Rising's altAid¹ program was used to identify the industries most relevant to the client's target population. Third, occupational characteristics in the EDD projections data were used to assess entry requirements such as typical education, related work experience, and on-the-job training. Accessible occupations were then aggregated to the sector level using an occupation-by-industry matrix from the May 2024 Occupational Employment and Wage Statistics (OEWS) national cross-industry data (BLS, n.d.-a). Our subsequent scenario analysis used aggregated sector-level data, combined with Los Angeles County QCEW ownership-by-industry employment data, to create a funding dependence measure for each super-sector as the share of employment accounted for by federal, state, and local government combined, relative to total employment (BLS, n.d.-b). Finally, a sensitivity analysis that measured AI exposure using O*NET Work Activities data was completed. Together, these data sources allowed the analysis to move beyond broad sector growth and toward a more targeted assessment of sector accessibility and resilience. All quantitative data cleaning, merging, variable construction, and scenario modeling were conducted in Stata, with Excel used to organize outputs and support the final presentation and comparison of results.

Sector Selection Strategy

The first step was to identify which sectors warranted deeper analysis. This was done by comparing altAid user interest patterns with baseline Los Angeles County employment projections. Four super-sectors were selected for deeper analysis: education and health services; professional and business services; trade, transportation, and utilities; and leisure and hospitality. These sectors were chosen not simply because they were large or fast-growing, but because they represented the strongest overlap between labor market relevance and user interest, and also appeared to include at least some occupations that could plausibly serve as entry points for the target population.

Accessibility Screenings and Sensitivity Analyses

After identifying the four sectors of interest, an occupation-level accessibility screen was applied. Occupations were classified as accessible if they typically required a bachelor's degree or less, less than 5 years of related prior work experience, and no internship- or residency-based training pathway. This measure was designed to approximate occupations that uncredentialed and unenrolled young adults could plausibly enter through shorter training pathways, work-based learning, or employer-connected hiring pipelines. The purpose of this screen was not to define

¹ Areté Rising's altAid program provides financial assistance to students pursuing higher education during financial hardship. Students apply through an application linked to their altPath account, Areté Rising's student platform. The provided data included all-time application data, in which students identified their credential/degree type, field of study, and career goals.

accessibility perfectly, but to provide a structured way to distinguish between sectors that are growing in the aggregate and those that offer realistic entry pathways.

Under the baseline screen, 511 occupations remained in the analytic sample out of 836 total occupations in the Los Angeles County dataset, meaning roughly 61 percent of occupations were in scope. This showed that the set of eligible occupations was substantial enough to support a sector-comparison framework, but still selective enough to exclude a meaningful share of occupations with less realistic entry points for the target population. Of the 511 baseline-accessible occupations, 507 were successfully aggregated to their corresponding sectors using the occupation-by-industry matrix from the (OEWS) national cross-industry data (BLS, n.d.-a). Since the unmatched share included only four occupations, it is unlikely to materially affect the sector-level results.

Because the baseline accessibility screen reflects analytic judgment, two additional sensitivity tests were conducted. The first used a stricter definition that excluded occupations requiring a bachelor's degree. The second used a stricter definition that excluded occupations requiring any prior related work experience. These checks were included to test whether the sector findings were highly dependent on the baseline accessibility assumptions or whether the main patterns remained stable under more conservative definitions of entry.

Scenario Analysis: Public Funding Dependence Indicator

A funding scenario analysis was conducted to test whether the relative attractiveness of sectors changes under different fiscal conditions. This step was included because the existing literature argues that recent changes in education and workforce development financing may affect the long-term viability of certain sectors and pathways. A funding dependence measure was constructed using the public-employment-related composition of sectors, thereby treating sectors with stronger public or quasi-public dependence as more exposed to shifts in funding conditions. Alternative scenarios were then used to approximate more favorable and less favorable funding environments.

The funding dependence measure was derived from Los Angeles County QCEW ownership-by-industry employment data (BLS, n.d.-b). The best-, likely-, and worst-case public funding bands in the model were set at +10 percent, -5 percent, and -15 percent. These values were intended to be plausible rather than extreme; that is, they are large enough to affect program implementation and sectoral outcomes, yet consistent with recent budgetary behavior across official EDD projections.

These thresholds are supported by recent movement in workforce-related public funding streams. For example, recent higher education and workforce-related appropriations in California show moderate but non-linear growth. Core funding for the California Community Colleges (CCC) is projected to increase by approximately 8.8% in 2026-2027, with Proposition 98 General Fund support rising by roughly 11 percent (LAO, 2026; LAO, 2026). California's WIOA Title I total federal allotment also increased by roughly 21 percent from 2024-25 to 2025-26, and the amount available to local areas rose by about 20 percent (California Employment Development Department, 2024a, 2025). These figures support the decision to cap the best-case

scenario at +10 percent, as they reflect robust but not extraordinary expansion. Thus, the upper bound captures a realistic scenario of favorable fiscal conditions without stating the likelihood of sustained growth, thereby avoiding upward bias in projected workforce capacity.

The selection of -5 percent and -15 percent for the likely and worst cases were grounded in the growing prevalence of fiscal constraint mechanisms, including deferrals, delayed augmentations, and reliance on one-time funds, that introduce effective reductions in programmatic capacity (LAO, 2025). Recent state budget actions illustrate this dynamic: in 2025, California relied on \$144 million in payment deferrals and delayed base increases in multiyear funding, producing short-term liquidity constraints and uncertainty for institutions (LAO, 2025). At the federal level, we saw a decrease in the budget for the Make America Skilled Again (MASA) Grant Program of around 23% (from \$3,898,587,000 to \$2,965,905,000) when reviewing the 2026 FY approved budget compared to the previous year (U.S. Department of Labor, 2026). At the same time, there are changes in the focus of some programs like HRTP, where during 2024 FY, there was allocated a budget of \$24 million focused on healthcare, while the budget for 2025 FY was of around \$18 million for a more diversified pool of sectors, but this is considered a new appropriation for those specific grant rounds. Previously, there was a big investment during the period of 2021-2023 under the expansion period, and the active program spending still makes use of that initial budget allocation (California Workforce Development Board, n.d.). Considering these shifts, and that the Pell Grant—along with other programs—have seen delays, there is uncertainty regarding how variable the budget can be, which influenced our threshold selection.

Moreover, the expiration of one-time Proposition 98 funds (approximately \$1.7 billion) creates structural funding gaps that must be absorbed in subsequent years, thereby reinforcing the plausibility of moderate-to-significant reductions in effectiveness (LAO, 2025). In this context, a -5 percent band appropriately represented a consistent constraint characterized by mixed funding, minor reduction, and stagnation, while the -15 percent band captured compounded deferrals, expiring funds, and constrained general fund growth.

Artificial Intelligence Sensitivity Analysis

A final sensitivity analysis was conducted to test whether the sector findings remained stable under moderate technological disruption. The study did not interpret AI exposure as a direct substitute for projected employment change. Instead, AI was used as a structured robustness test that asks whether occupations and sectors that appeared strong under the baseline and funding scenarios remained attractive once a technological-vulnerability layer was added. The AI sensitivity analysis followed the Council of Economic Advisers' July 2024 framework. Using O*NET Work Activities data, the project identified 16 work activities classified as highly exposed to AI and computed an occupation-level exposure score as the difference between the average standardized importance of AI-exposed activities and that of all other activities. The full list of activities and definitions can be found in **Appendix C**. The sensitivity specification classified occupations into low-, medium-, and high-exposure categories using the 25th- and 75th-percentile thresholds (Council of Economic Advisers, 2024).

The AI results provided a usable sensitivity structure, but they also came with an important limitation. Not all occupations matched cleanly to the O*NET Work Activities file. The unmatched occupations were concentrated in broad residual “all other” categories, grouped occupational categories, and newer or revised SOC codes. They were distributed across all four target super-sectors rather than concentrated in a single one, suggesting that the missingness reflected limitations in occupation classification rather than a sector-specific weakness in coverage. For that reason, AI was best treated as a structured sensitivity analysis rather than as part of the baseline scenario model.

Limitations and Research Reflections

Throughout the data collection and analysis process, a central challenge was the rapidly shifting policy and economic context shaping workforce and education systems. Recent changes in funding structures, evolving federal priorities, and the growing influence of automation have limited the availability of stable, up-to-date data and constrained the ability to make long-term projections. Therefore, the results are a product of the analysis of current conditions, which, due to their changing nature, should be read with caution, as dynamics could shift, limiting their generalizability. This uncertainty underscores the importance of carefully cross-referencing sources and drawing on multiple forms of evidence. In response, this study intentionally adopted a mixed-methods approach, combining quantitative labor market analysis with qualitative insights to examine the issue from multiple angles and strengthen the foundation for recommendations.

Qualitative Strengths and Weaknesses

Despite challenges, the literature base was robust, reflecting widespread attention to workforce transformation across research institutions, government agencies, and policy organizations. However, as the analysis narrowed to Los Angeles County and specifically to uncredentialed and unenrolled young adults, limitations in localized and population-specific data became more evident. This gap underscored the need to complement quantitative findings with qualitative research to capture implementation-level dynamics and system-level barriers.

The interview component is a key strength of the study, providing implementation-level insight into how workforce and education systems operate in practice. Drawing on perspectives from both workforce practitioners and higher education administrators, the interviews capture cross-institutional dynamics related to sector growth, program design, employer engagement, and student access. These insights enhance the analysis by illustrating how projected labor market demand is mediated by institutional capacity, funding structures, and navigation barriers, shaping whether opportunities translate into accessible pathways.

At the same time, the qualitative component has important limitations. The study includes a relatively small sample of interviews, which allows for depth but does not fully represent the diversity of sectors, geographies, and training providers across Los Angeles County. Additionally, because participants were selected for their leadership and implementation expertise, the findings reflect system-level perspectives rather than the lived experiences of

uncredentialed, unenrolled young adults. Interviewees may also emphasize challenges most visible from their institutional vantage point, potentially overlooking informal pathways, smaller community-based programs, or sector-specific variation. Time constraints further limited the number and diversity of interview participants. Nevertheless, through referrals and practitioner networks, the study incorporated real-time insights into evolving workforce conditions.

Through the Policy Field Analysis, it's possible to obtain a visual representation of the different actors and their interactions after the OBBBA. This method is especially helpful in a complex scenario where different dynamics are at play at the federal, state, and local levels. An advantage of the final product is its ability to identify leverage points for intervention, which aligns closely with Areté Rising's goal of improving postsecondary pathways for unenrolled and unemployed youth. It is worth noting that, despite the support it provides for this study, this tool still presents challenges, particularly given the changing landscape surrounding this topic. Due to ongoing changes in Workforce Pell implementation guidance, local HRTF award structures, and employer demand conditions, the field map can quickly become outdated. Related to the previous point, because the map is constructed from documents, interviews, and available data, it is sensible to address information gaps at the local level and assess their quality. The importance of the findings and recommendations being based on the literature review, interviews, and quasi-experimental studies in conjunction with quantitative methods is vital to their accuracy and validity by the time they are delivered.

Ultimately, these strengths and limitations suggest that the findings should be interpreted as analytically informative rather than fully generalizable. When used alongside the study's quantitative analysis, however, the qualitative insights provide critical context for understanding how workforce systems function in practice and where key barriers to access and alignment persist. These insights are particularly valuable for Areté Rising, as they highlight where opportunities exist and the structural conditions that determine whether those opportunities are accessible to the populations they serve.

Quantitative Strengths and Weaknesses

The quantitative component of this study draws on multiple complementary data sources and seeks to move beyond simple labor market projection tables. Rather than relying solely on sector-level growth projections, the analysis combined Los Angeles County employment projections with altAid user interest data, occupational entry requirements, and structured scenario testing to evaluate not only which sectors are projected to grow, but which sectors are most relevant for uncredentialed and unenrolled young adults. This is an important strength because broad sector growth alone can obscure major differences in wages, entry requirements, and resilience to changing policy and technological conditions. By incorporating an occupation-level accessibility screen and multiple sensitivity checks, the analysis produced a more policy-relevant picture of opportunity than a standard projection exercise would. The broad sector ordering remains relatively stable under stricter accessibility assumptions and across both funding and AI sensitivity tests, increasing confidence that the main conclusions are not driven entirely by a single screening choice.

At the same time, the quantitative analysis has several limitations that shape how the findings should be interpreted. First, baseline labor market projections depend on assumptions that may not hold under rapidly changing economic, policy, or technological conditions. Second, the accessibility screen unavoidably simplifies reality by translating entry barriers into observable variables such as education, prior work experience, and training requirements. This process cannot fully capture informal and practical barriers such as cost, transportation, scheduling constraints, childcare responsibilities, language barriers, or uneven training quality across providers. Third, the funding scenario analysis should be understood as a structured sensitivity exercise rather than a precise predictive model. Its value lies in comparing relative sector vulnerability under different fiscal conditions, not in estimating exact employment outcomes. Finally, the AI sensitivity analysis depends on imperfect occupational matching. Not all occupations could be linked to an AI score, and unmatched occupations were retained with no adjustment, which makes the exercise conservative but also means the results are better interpreted as evidence of relative sector resilience than as precise estimates of future AI effects. For these reasons, the quantitative findings are best understood as structured comparative evidence about opportunity and risk rather than deterministic forecasts of future labor market outcomes.

FINDINGS AND ANALYSIS

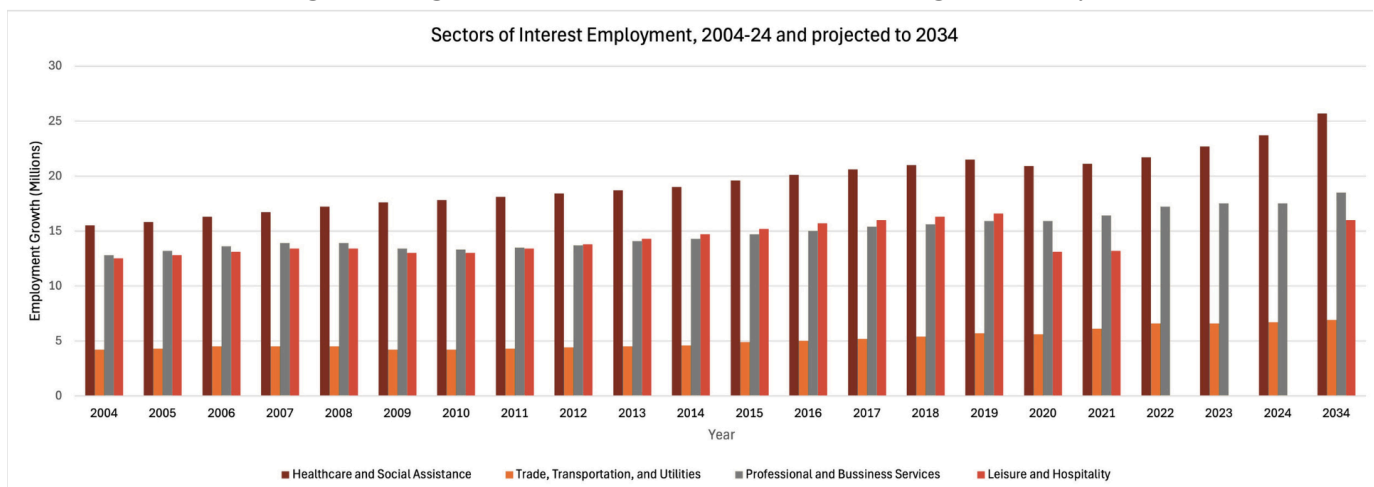
Research Question 1: Which industry sectors are projected to grow? Utilizing these projections, how can workforce advancement be directed toward uncredentialed and unenrolled adults?

Finding: Industry sectors projected to grow include healthcare and social assistance; trade, transportation, and utilities; professional and business services; and leisure and hospitality. Despite sector-based growth, ongoing changes in technology and funding reinforce the need for strategy-based career advancement pathways for uncredentialed and unenrolled adults.

Super-Sector Analysis

To identify industries of interest, we first examined altAid’s internal data to better understand user preferences (**Appendix Table 1**). 41% of altAid users reported interest in “Health and Medicine,” and 37% reported interest in “Trade or Vocational” pathways. This process identified four high-growth sectors of interest: healthcare and social assistance; trade, transportation, and utilities; professional and business services; and leisure and hospitality (see **Figure 7**; BLS, 2026; EDD, 2026). We then compared these preferences with unfiltered 2022–2032 employment projections for Los Angeles County and narrowed our focus to four super-sectors: education and healthcare; trade, transportation, and utilities; professional services; and leisure and hospitality. We utilize these super-sectors not simply because they are large or fast-growing, but because they represent the strongest overlap between user interest, baseline labor market opportunity, and the likelihood that at least some occupations within them can be entered without long formal credential pipelines.

Figure 7. High-Growth Sectors of Interest in Los Angeles County



Notes: Data refers to wage and salary employment
The U.S. Bureau of Labor Statistics does not project employment for the interim years 2025-33
Source: U.S. Bureau of Labor Statistics (2026)

Education and Healthcare

The healthcare and social assistance sector is one of the fastest-growing industry sectors in the United States over the coming decade (U.S. BLS, 2026). According to the U.S. Bureau of Labor Statistics (U.S. BLS), the sector will grow by 8.4% between 2024 and 2034, adding roughly 2.0 million jobs nationwide, making it specifically appear to be the strongest baseline sector by growth and one of the strongest by scale (U.S. BLS, 2026). In the EDD industry projections, healthcare and social assistance is a sub-sector of the education and healthcare super-sector, which employed 881,600 workers in 2022 and is projected to grow by 21.8 percent by 2032 (see **Table 4**; EDD, n.d.). This super-sector combines NAICS 61 (educational services) and NAICS 62 (health care and social assistance).

Table 4. Projected employment in select industries related to education and healthcare, 2022-32

2022 Los Angeles County Industry Matrix Title	Base Year Employment Estimate 2022	Projected Year Employment Estimate 2032	Projected numeric change in employment, 2022-2032	Projected percentage change in employment, 2022-2032
Total Employment	4,853,080	5,277,200	424,120	8.7%
Education and Health Services	881,600	1,074,010	192,410	21.8%
Educational Services	130,440	145,810	15,370	11.8%
Health Care and Social Assistance	751,160	928,200	177,040	23.6%

The growth of the healthcare and social assistance sector reflects both demographic pressures and the expansion of healthcare service delivery models. In relation to demographic pressures, the sector's growth is a by-product of the U.S. population's aging and rising life expectancy, which demand more medical and long-term care services, including home health and personal care aides (U.S. BLS, 2026; AACC, 2024). Nationwide, the share of Americans aged 65 and older is projected to exceed 20% of the total population by 2030, significantly increasing demand for healthcare services, including long-term care, home health support, and chronic disease management (Vespa et al., 2020). While this trend is occurring across the country, in large population states such as California, the absolute number of older residents is expected to rise substantially (University of Virginia, 2024). Looking at California, by 2050, the state is projected to have approximately 20% of its residents aged 65 and older (University of Virginia, 2024). Furthermore, the increase in the country's population's life expectancy contributes to prevalent chronic conditions, such as heart disease, cancer, and diabetes, and increased utilization of healthcare services (AACC, 2024). These regional demographic shifts are influencing demand for the healthcare workforce, particularly for occupations such as home health aides, nursing assistants, and personal care aides that support aging populations living with chronic health conditions (AACC, 2024).

Healthcare and social assistance employment growth is not limited to clinical occupations. The sector's employment growth also reflects changes in healthcare delivery systems. Over the past decade, healthcare providers have increasingly shifted services away from hospital settings and toward community-based care models. Outpatient clinics, telehealth

platforms, and home-based care services now play a central role in chronic disease management and preventive care (McConville et al., 2024). This transformation has increased demand for frontline healthcare workers who can provide patient support, care coordination, and community health services (see Table 5) (McConville et al., 2024). Healthcare workers who can provide such services include ancillary and support roles, such as medical assistants, pharmacy technicians, and administrative staff, who are also projected to experience new job growth (U.S. BLS, 2026).

Table 5. Projected employment in select industries and occupations related to healthcare and social assistance, 2024-34

2024 National Employment Matrix title	Employment, 2024	Projected employment, 2034	Projected numeric change in employment, 2024–34	Projected percent change in employment, 2024–34
Total employment	169,956.1	175,167.9	5,211.8	3.1
Healthcare and social assistance	23,692.2	25,674.9	1,982.7	8.4
Offices of mental health practitioners (except physicians)	247.9	313.4	65.5	26.4
Offices of physical, occupational and speech therapists, and audiologists	493.1	607.9	114.8	23.3
Outpatient mental health and substance abuse centers	314.8	377.6	62.8	19.9
Home healthcare services	1,750.80	2,076.60	325.8	18.6
Psychiatric and substance abuse hospitals; private	165.2	182.5	17.3	10.5
Residential mental health and substance abuse facilities	264.3	292.4	28.1	10.6
Continuing care retirement communities and assisted living facilities for the elderly	988.5	1,092.40	103.9	10.5
Services for the elderly and persons with disabilities	2,512.30	3,040.80	528.5	21
Management occupations	13,607.6	14,441.0	833.4	6.1
Medical and health services managers	616.2	759.1	142.9	23.2
Life, physical, and social science occupations	1,609.5	1,690.4	80.9	5.0
Clinical and counseling psychologists	76.3	84.8	8.5	11.2
Community and social service occupations	3,196.9	3,409.2	212.3	6.6
Substance abuse, behavioral disorder, and mental health counselors	483.5	564.6	81	16.8
Mental health and substance abuse social workers	136.8	150.1	13.3	9.7
Healthcare practitioners and technical occupations	10,067.5	10,794.4	726.9	7.2
Physician assistants	162.7	195.8	33.2	20.4
Occupational therapists	160	182.1	22.1	13.8
Physical therapists	267.2	296.4	29.3	10.9
Speech-language pathologists	187.4	215.5	28.2	15
Nurse practitioners	320.4	448.8	128.4	40.1
Audiologists	15.8	17.3	1.5	9.5
Psychiatric technicians	144.5	173.3	28.9	20
Ophthalmic medical technicians	78.8	94.4	15.6	19.8
Healthcare support occupations	7,982.8	8,971.1	988.3	12.4
Home health and personal care aides	4,347.70	5,087.50	739.8	17
Occupational therapy assistants	49.2	58.7	9.5	19.2
Physical therapist assistants	111.5	136	24.5	22
Educational instruction and library occupations	9,813.2	9,875.4	62.2	0.6
Postsecondary teachers	1,721.20	1,822.10	100.9	5.9
Engineering teachers, postsecondary	50.3	54.4	4.1	8.1
Biological science teachers, postsecondary	66	70.8	4.8	7.3
Health teachers, postsecondary	381.2	446.6	65.4	17.2
Health specialties teachers, postsecondary	289.6	339.7	50.1	17.3
Nursing instructors and teachers, postsecondary	91.6	106.9	15.3	16.8
Elementary and middle school teachers	2,070.40	2,029.90	-40.6	-2
Secondary school teachers	1,197.90	1,178.20	-19.7	-1.6

These dynamics reflect national and regional health policy trends, such as expanded Medicaid coverage and aging population projections, which further support sustainable long-term job growth in both healthcare and social assistance employment. For uncredentialed adults in Los Angeles County, healthcare occupations provide promising pathways for economic mobility. Entry-level certifications, such as certified nursing assistant (CNA), medical assistant, or pharmacy technician credentials, can lead to employment within months, with average hourly wages of approximately \$18-21 (McConville et al., 2024; U.S. BLS, 2023). Workers can then pursue additional credentials, such as licensed vocational nurse (LVN) or registered nurse (RN) training, enabling long-term career advancement and significantly higher-paying wages often exceeding \$35-50 per hour (McConville et al., 2024; U.S. BLS, 2023).

Its strong projected expansion, combined with the fact that health-related pathways are the most popular among altAid users, makes it a central candidate for further scenario testing. At the same time, this sector is important because it includes both highly accessible frontline care roles and more tightly credentialed occupations.

Professional and Business Services

BLS projections identify national growth opportunities in professional and business services as firms adapt to technological transformation (e.g., AI) and the increasing complexity of business operations, such as computer systems design, consulting services, and other corporate technical functions (Ratledge et al., 2023; U.S. BLS, 2026). Demand for IT support, data analytics, digital transformation, and cybersecurity has accelerated in recent years, reflecting a broader trend of digitalization across industries (U.S. BLS, 2026). However, Professional and Business Services, in contrast to our other sectors, is somewhat smaller in the baseline industry projections, with 651,080 base-year jobs and a projected growth rate of 11.5 percent (see **Table 6**; EDD, n.d.). It includes NAICS 54, 55, and 56, which cover professional, managerial, administrative, and support services. At a sectoral level, it appears promising because of its size and moderate growth; nonetheless, the occupational composition is more mixed than the aggregate sector label suggests (see **Table 7**). Some occupations in this sector offer high wages and upward mobility, while others may require a bachelor's degree or more formal prior experience.

Table 6. Projected employment in select industries related to professional and business services, 2022-32

2022 Los Angeles County Industry Matrix Title	Base Year Employment Estimate 2022	Projected Year Employment Estimate 2032	Projected numeric change in employment, 2022-2032	Projected percentage change in employment, 2022-2032
Total Employment	4,853,080	5,277,200	424,120	8.7%
Professional and Business Services	1,956,040	2,125,490	169,450	47.5%
Information	232,380	246,690	14,310	6.2%
Financial Activities	210,750	213,610	2,860	1.4%
Finance and Insurance	122,570	121,670	-900	-0.7%
Real Estate and Rental and Leasing	88,180	91,940	3,760	4.3%
Professional and Business Services	651,080	725,790	74,710	11.5%
Professional, Scientific, and Technical Services	308,630	352,770	44,140	14.3%
Management of Companies and Enterprises	61,220	60,900	-320	-0.5%
Administrative and Support and Waste Management and Remediation Services	281,230	312,120	30,890	11.0%

Table 7. Projected employment in select industries and occupations related to professional and business services 2024-34

2024 National Employment Matrix title	Employment, 2024	Projected employment, 2034	Projected numeric change in employment, 2024-34	Projected percent change in employment, 2024-34
Total employment	169,956.1	175,167.9	5,211.8	3.1
Professional, scientific, and technical services	10,825.8	11,638.3	812.5	7.5
Engineering services	1,179.60	1,228.90	49.3	4.2
Management, scientific, and technical consulting services	1,864.70	2,039.30	174.6	9.4
Research and development in the physical, engineering, and life sciences	866.7	942.5	75.8	8.7
Finance and insurance	6,702.8	6,929.2	226.4	3.4
Securities, commodity contracts, and other financial investments and related activities	1,084.90	1,150.30	65.4	6
Management occupations	13,607.6	14,441.0	833.4	6.1
General and operations managers	3,712.90	3,876.80	164	4.4
Business and financial operations occupations	11,262.0	11,848.9	586.9	5.2
Management analysts	1,075.10	1,169.70	94.5	8.8
Training and development specialists	452.3	501	48.7	10.8
Market research analysts and marketing specialists	941.7	1,004.70	63	6.7
Financial and investment analysts	368.5	389.6	21.1	5.7
Personal financial advisors	326	357.2	31.2	9.6
Sales and related occupations	14,532.6	14,234.8	-297.8	-2.0
Securities, commodities, and financial services sales agents	514.5	531.6	17.1	3.3

In Los Angeles County, professional and business services offer a wide range of jobs from bookkeeping and administrative support to specialized corporate consulting and technology services (U.S. BLS, 2026). While professional services roles often include high-skilled functions

requiring advanced credentials, the broader sector also includes numerous middle-skill occupations, such as administrative support specialists, IT support technicians, and business operations specialists, that can be fulfilled through short-term training and credentialing pathways rather than four-year degrees (LAEDC, 2025). The employer demand for adaptable technical skills suggests continued sector expansion as businesses invest in digital services, regulatory compliance, and outsourced specialized functions (LAEDC, 2025).

Effective workforce advancement pathways into the professional business services sector, particularly roles in IT support, data analytics, and consulting, are structured around sector-based training, community college programs, and work-based learning models (Hartog et al., 2024). Empirical evidence indicates these sector pathways are effective because (1) they align with employer demand and technical skill requirements, and (2) graduated individuals from these pathway programs generate average short-term earning gains of approximately \$4,031 and measurable improvements in employment outcomes into higher-wage, professional, and business service industry-aligned roles (Hartog et al., 2024).

Trade, Transportation, and Utilities

The trade, transportation, and utilities sector has one of the largest baseline employment levels, at 825,220 workers, but a considerably slower projected growth rate of 4.1 percent (see **Table 8**; EDD, n.d.). The sector includes utilities (NAICS 22), wholesale trade (NAICS 42), retail trade (NAICS 44-45), and transportation and warehousing (NAICS 48-49). Relative to Health and social assistance, its baseline growth is weaker, but its scale and alignment with vocational interests make it a more stable access pathway than a high-growth one, making it too important to exclude.

Table 8. Projected employment in select industries related to trade, transportation, and utilities, 2022-32

2022 Los Angeles County Industry Matrix Title	Base Year Employment Estimate 2022	Projected Year Employment Estimate 2032	Projected numeric change in employment, 2022-2032	Projected percentage change in employment, 2022-2032
Total Employment	4,853,080	5,277,200	424,120	8.7%
Trade, Transportation, and Utilities	2,121,430	2,183,860	62,430	19.8%
Utilities	11,840	11,690	-150	-1.3%
Construction	150,390	162,960	12,570	8.4%
Manufacturing	320,600	302,880	-17,720	-5.5%
Trade, Transportation, and Utilities	825,220	859,010	33,790	4.1%
Wholesale Trade	201,270	197,330	-3,940	-2.0%
Retail Trade	405,250	414,280	9,030	2.2%
Transportation and Warehousing	206,860	235,710	28,850	13.9%

Growth in trade, transportation, and utilities reflects both structural and technological changes in the broader economy. National employment in trade and transportation (i.e., distribution) has surged due to rising e-commerce demand and global supply chain disruptions (U.S. BLS, 2026). The Los Angeles County Economic Development Corporation’s (LACEDC)

2025 Economic Forecast Report outlines that the growth of online retail has accelerated demand for distribution and freight occupations, with logistics hubs like Los Angeles County serving as critical nodes in the national and global economy (LAEDC, 2025). California's U.S. Department of Labor WIOA State Plan states that trade, transportation, and utilities employment expanded at a rate significantly above the overall economy between 2018 and 2023, driven by increased demand for global commerce (e.g., ports), transportation services, and warehousing operations (U.S. Department of Labor, n.d.).

Trade, transportation, and material-moving occupations (see Table 9) currently represent approximately 8.2% of total employment in the Los Angeles metropolitan area (LAEDC, 2025). The Port of Los Angeles and the Port of Long Beach handle a substantial share of the nation's containerized imports, making Southern California a gateway for global commerce. Labor market analyses indicate that trade and transportation within Los Angeles County's global commerce hub employ more than 860,000 workers, including dockworkers, crane operators, clerks, stevedores, and harbor workers (Bohn & Cremin, 2025). Employment in transportation and warehousing occupations has also been affected by underlying drivers such as consumer demand for goods, regional and global trade activity, and infrastructure investment, which rely on logistics, coordination, and facilities support roles in trade, transportation, and utilities (LAEDC, 2025). Local regional planning data projects that trade, transportation, and utilities will generate job growth in Los Angeles County, with transportation and warehousing among the higher-growth sectors in projected private employment growth forecasts (CEDD, 2019).

Table 9. Projected employment in select industries and occupations related to trade, transportation, and utilities 2024-34

2024 National Employment Matrix title	Employment, 2024	Projected employment, 2034	Projected numeric change in employment, 2024–34	Projected percent change in employment, 2024–34
Total employment	169,956.1	175,167.9	5,211.8	3.1
Retail trade	15,532.0	15,350.1	-181.9	-1.2
Grocery and specialty food retailers	3,052.40	3,021.60	-30.8	-1
Furniture and home furnishings retailers	409.1	389	-20.1	-4.9
Electronics and appliance retailers	397	382.3	-14.7	-3.7
General merchandise retailers	3,265.50	3,341.00	75.5	2.3
Gasoline stations	983.4	845.2	-138.2	-14.1
Clothing and clothing accessories retailers	841.3	824.4	-16.9	-2
Sporting goods retailers	299.2	281.7	-17.5	-5.8
Transportation and warehousing	6,654.5	6,853.3	198.8	3.0
Freight transportation arrangement	266.1	292.8	26.7	10
Couriers and express delivery services	909.8	953.2	43.4	4.8
Local messengers and local delivery	186.6	202.2	15.6	8.4
Warehousing and storage	1,849.10	1,875.10	26	1.4
Office and administrative support occupations	19,325.2	18,563.3	-761.9	-3.9
Cargo and freight agents	100.6	109.2	8.6	8.5
Transportation and material moving occupations	14,204.6	14,784.4	579.9	4.1
Driver/sales workers	451.5	491.3	39.8	8.8
Light truck drivers	1,079.80	1,158.60	78.9	7.3
Stockers and order fillers	2,764.80	2,999.80	235	8.5

According to the LAEDC, the long-term trajectory of logistics employment is shaped by technological change. Warehousing and distribution operations are increasingly incorporating robotics, artificial intelligence, and advanced inventory management systems (Minehan & Li,

2024). These technologies improve efficiency but may also reduce demand for certain occupational groups. For example, automated warehouse systems can perform tasks such as inventory sorting, packaging, and order fulfillment with minimal human intervention (Minehan & Li, 2024). While these technologies do not eliminate the need for workers, they change the types of skills required for logistics occupations. Workers increasingly need to understand digital inventory systems, warehouse management software, and automated logistics technologies.

While employment in utilities may be relatively stable in absolute numbers due to technological productivity gains, many utility occupations fall within broader infrastructure and energy redevelopment efforts that support moderate employment expansion (CEDD, 2019). Environmental policies are reshaping employment in logistics in Southern California. State and local governments have implemented regulations, such as Advanced Clean Fleets (Governor Gavin Newsom, n.d.), AB 617 (California Air Resources Board, 2024), and CA CARB (California Air Resources Board, 2025), to reduce emissions from freight transportation, including requirements for electric trucks and zero-emission logistics infrastructure (California Air Resources Board, n.d.; County of Los Angeles, 2025). Policy regulations such as these are likely to create new occupations related to electric vehicle maintenance, charging infrastructure installation, and sustainable supply chain management (Elkind & Logar, 2018).

From a workforce development perspective, entry-level trade, transportation, and utilities jobs offer uncredentialed adults in Los Angeles County accessible employment opportunities. One widely used pathway involves the Certified Logistics technician (CLT) credential, which provides training in supply chain management, safety procedures, inventory systems, and warehouse operations (Community College Workforce Alliance, 2026). The CLT credential also prepares workers for entry-level roles such as material handlers, forklift operators, and warehouse associates (Community College Workforce Alliance, 2026). Furthermore, registered apprenticeship and earn-and-learn programs in transportation and supply chain occupations, including trucking, logistics coordination, and distribution management, combine paid on-the-job training with classroom instruction and nationally recognized credentials (U.S. Department of Labor, 2021). However, workforce training programs must ensure that workers develop the technical skills needed to adapt to industry-wide technological changes.

Leisure and Hospitality

Evolving consumer behavior, technological innovation, and investment activity are reinforcing drivers of long-term growth in the leisure and hospitality sector (PwC, 2025). The leisure and hospitality sector is the smallest of the four targeted sectors in the baseline industry projections, at 508,840 jobs, but it is projected to grow by 13.1 percent (see **Table 10**; EDD, n.d.). It includes arts, entertainment, and recreation (NAICS 71) and accommodation and food services (NAICS 72). Although altAid users do not currently prioritize this area to the same degree as health- or trade-oriented pathways, the baseline data suggest it warrants attention, as it combines scale with relatively strong projected growth. At the same time, it raises concerns about wage progression, job quality, and the strength of formal training pipelines.

Table 10. Projected employment in select industries related to leisure and hospitality, 2022-32

2022 Los Angeles County Industry Matrix Title	Base Year Employment Estimate 2022	Projected Year Employment Estimate 2032	Projected numeric change in employment, 2022-2032	Projected percentage change in employment, 2022-2032
Total Employment	4,853,080	5,277,200	424,120	8.7%
Leisure and Hospitality	1,181,420	1,327,080	145,660	49.7%
Leisure and Hospitality	508,840	575,560	66,720	13.1%
Arts, Entertainment, and Recreation	90,440	105,610	15,170	16.8%
Accommodation and Food Services	418,400	469,950	51,550	12.3%
Other Services	163,740	175,960	12,220	7.5%

The leisure and hospitality sector is projected to experience sustained employment growth over the coming decade, driven largely by the post-pandemic labor market recovery and structural demand for recreation and food services (U.S. BLS, 2024). According to BLS data, the sector is expected to account for nearly one-quarter of new jobs (U.S. BLS, 2022). This rapid growth is largely explained by the sector's disproportionate employment losses during the COVID-19 pandemic, which, in its recovery, has generated elevated growth rates relative to other industries. Food services and drinking establishments, in particular, are projected to generate some of the largest absolute employment gains because they are labor-intensive industries with high turnover and strong consumer demand (BLS, 2022). However, recovery alone does not fully explain projected expansions.

Persistent consumer demand for dining, travel, entertainment, and recreational experiences is a long-term structural driver of employment growth, particularly as population growth, urban tourism development, and rising household income increase discretionary spending on leisure activities (Dogru et al., 2020; Dogru et al., 2019; Los Angeles Regional Consortium, 2023). In the United States, leisure travel alone generated approximately \$876 billion in domestic spending in 2024, accounting for the majority of the nation's tourism economy and supporting millions of jobs across hospitality, food service, and recreation industries (U.S. Travel Association, n.d.). More broadly, leisure tourism contributes over \$1 trillion annually to the U.S. economy and supports millions of workers in sectors such as accommodation, entertainment, transportation, and dining (PwC, 2025).

The persistence of this demand is also reflected in travel behavior. Americans made roughly 2.3 billion leisure trips domestically in 2023, a significant increase following pandemic disruptions and signaling continued growth in experiential consumption (PwC, 2025). Importantly, discretionary spending on travel and entertainment is increasingly concentrated among higher-income households, with the top 10 percent of U.S. households projected to spend over \$544 billion annually on leisure travel by 2026, demonstrating the growing role of affluent consumers in sustaining tourism demand and hospitality investment (PwC, 2025; Resonance Consultancy, 2026). These patterns reinforce the importance of leisure-oriented industries as engines of employment growth, particularly in metropolitan regions such as Los Angeles that

host major tourism infrastructure, entertainment venues, and hospitality services that attract both domestic and international visitors.

Prior to the pandemic, Los Angeles welcomed more than 50 million visitors annually, supporting hundreds of thousands of jobs in accommodation, food service, recreation, and cultural industries (Martin, 2019). Today, the region is experiencing a strong rebound in domestic travel demand (Los Angeles Regional Consortium, 2023). Major attractions, including film studios, theme parks, beaches, and large-scale cultural events, drive employment growth in the food services, hotel, and entertainment sectors. For instance, the LAEDC's 2025 Economic Forecast report found that leisure and hospitality jobs account for roughly 1 in 9 jobs in the regional economy (LAEDC, 2025). Food services and drinking establishments account for the majority of these jobs; approximately 78% of total leisure and hospitality employment in the Los Angeles metro area (LAEDC, 2025). In addition, the expansion of sports and entertainment infrastructure (e.g., the 2028 Olympic Games) is expected to strengthen long-term tourism demand further and generate sustained workforce needs across hospitality, food service, and event management occupations in the Los Angeles metropolitan area (Los Angeles Regional Consortium, 2023).

Technological adoption, including artificial intelligence, dynamic pricing, and digital customer engagement platforms, is also improving operational efficiency and profitability, encouraging continued capital investment and sector expansion (PwC, 2025). AI-driven revenue management systems, for example, analyze real-time booking behavior, competitor pricing, historical demand patterns, and local events to automatically adjust room prices and inventory across distribution channels, allowing hotels and resorts to respond to market conditions with far greater speed and precision than traditional manual pricing strategies (Sciative, 2025). Beyond pricing, digital platforms are also reshaping customer engagement and operational efficiency. AI-powered concierge systems, chatbots, and reservation platforms allow hotels and restaurants to provide 24-hour multilingual customer service, automate booking and table management, and personalize recommendations for guests based on previous behavior and preferences (Sciative, 2025). These technological shifts suggest that digital transformation is not only improving operational efficiency and profitability for hospitality businesses but is also reshaping the sector's workforce needs by increasing demand for employees with digital service, data literacy, and customer experience management skills (Sciative, 2025).

Several workforce advancement pathways have emerged to connect students and uncredentialed adults to employment opportunities in the leisure and hospitality sector. Short-term industry credential programs such as food safety certifications (e.g., ServSafe), hospitality management certificates, and culinary arts training are widely used entry points because they provide industry-recognized credentials that prepare workers for front-of-house and back-of-house roles in restaurants, hotels, and entertainment venues while requiring relatively short training periods (PR&LA, n.d.). In Los Angeles, sector-based workforce initiatives include culinary arts development programs and industry-aligned certificate pathways that provide training in restaurant operations, entrepreneurship, and hospitality management while connecting participants directly to employer networks (Department of Economic Opportunity, 2026;

Workforce Innovation Labs, 2025). This creates structured pathways from entry-level service positions to supervisory and management roles within the broader tourism and hospitality economy (Workforce Innovation Labs, 2025).

Baseline Occupational Outcomes in Los Angeles County

The occupational findings reinforced the sector-level analysis (**Appendix Table 6**). Home health and personal care aides and nursing assistants strengthened the case for education and health services as a major entry pathway. Within leisure and hospitality, restaurant cooks illustrated that the sector contained roles with both strong projected demand and relatively low formal entry barriers. In professional and business services, software developers and market research analysts showed strong growth, but their bachelor's-level requirements made them less straightforward from an accessibility perspective. In trade, transportation, and utilities, occupations such as stockers and order fillers remained important because of their scale, even when overall sector growth was weaker. These results did not contradict the industry-level analysis; they refined it by showing which portions of sector growth were driven by accessible occupations and which were driven by occupations that sit closer to the edge of the baseline definition. As shown in **Appendix Table 6**, the top accessible occupations were not important for the same reason: some combined very large baseline employment with strong projected growth, while others remained important because of scale, even when projected growth was weaker. Negative projected growth did not necessarily imply low opportunity. Some occupations continued to show large numbers of projected openings despite declining employment because total openings included replacement demand in addition to net new job growth. This was especially common in large, high-turnover occupations such as cashiers, retail salespersons, and office clerks (in the trade, transportation, and utilities sector).

Taken together, these four sectors should be interpreted not as a hierarchical ranking of “best” industries, but as distinct configurations of opportunity within the broader labor market landscape. Although education and healthcare, trade, transportation and utilities, professional and business services, and leisure and hospitality are all projected to experience employment growth, the structural drivers and long-term economic implications of these sectors differ significantly. Understanding these differences is critical for workforce development policy because the quality of jobs, the risks of technological disruption, and opportunities for upward mobility vary across industries.

Projected Sector Growth and Demand

All five workforce practitioner interviewees identified a similar set of sectors projected to grow in Los Angeles County, including healthcare, logistics and transportation, advanced manufacturing, infrastructure and construction, aerospace, and selected technology-related occupations (Interviews WP1-WP5). Practitioners from economic development organizations, workforce development boards, and educational institutions referenced these sectors when discussing regional labor demand. Our descriptive super-sector strengthens this comparison further (see **Table 11**).

Professional and business services had the highest employment in 2022 among the four sectors, at 1,270,190 jobs, followed closely by education and health services at 1,207,440. Trade, transportation, and utilities followed at 948,290, while leisure and hospitality was the smallest at 532,750. However, those employment totals did not map perfectly onto projected growth. Education and health services and leisure and hospitality showed the highest projected growth rates in the aggregated occupation-industry data, at 13 percent and 12 percent, respectively, while professional and business services grew by 7 percent and trade, transportation, and utilities by only 2 percent. This comparison made clear that high employment and high growth do not always coincide. Education and health services combined both; professional and business services were stronger on scale than growth; trade, transportation, and utilities were strongest on stability through scale rather than dynamism; and leisure and hospitality were more growth-oriented but weaker on wage quality.

Table 11. Super-Sector Descriptive Comparison

Super-Sector	Education and Health Services	Leisure and Hospitality	Professional and Business Services	Trade, Transportation, and Utilities
2022 Employment	1,207,440	532,750	1,270,190	948,290
2032 Projected Employment	1,358,740	596,110	1,360,390	971,230
Projected Growth (%)	12.53%	11.89%	7.10%	2.42%
Total Job Openings	1,565,430	1,066,280	1,288,830	1,221,260
Accessible Occupations	115	55	208	129
Mean Hourly Wage	\$30.25	\$23.35	\$35.80	\$24.33
Mean Annual Wage	\$72,344.02	\$48,237.60	\$74,456.70	\$51,246.00

*Source: EDD 10-Year Occupational Projections and QCEW Ownership Share

Table 11 compares the four selected super-sectors in terms of occupational accessibility and mean annual wages. At the baseline EDD projections data, education and health services emerged as one of the strongest sectors because it combined a large employment scale with strong projected growth and close alignment with altAid user interest. The aggregated super-sector comparison included 115 accessible occupations and an average annual wage of roughly \$72,000, and it maintained the strongest growth rate among the four selected sectors. Professional and business services also performed strongly, particularly in occupational breadth and wage potential. It contained 208 accessible occupations, more than any other sector in the comparison, and the highest mean annual wage at approximately \$74,000. Trade, transportation, and utilities grew more slowly than the other sectors, but it remains important because of its large employment base, substantial replacement demand, and concentration of accessible roles. Leisure and hospitality also showed meaningful projected growth, though it was weaker on wages and long-term job stability than the other sectors. These results suggested that no single sector dominated across every measure. Education and health services appeared strongest in projected growth, professional and business services stood out in both accessible occupational breadth and wages, trade, transportation, and utilities was most notable for stable scale and practical access, and leisure and hospitality combined projected growth with relatively low

formal barriers but weaker wage quality. Rather than pointing to a single uniformly strongest sector, **Table 11** showed that the four sectors offer different types of opportunities, each with distinct trade-offs for the target population.

Emerging Opportunities and Risks

A comparative analysis of healthcare and social assistance, trade, transportation, and utilities; professional and business services; and leisure and hospitality revealed distinct patterns in job growth, wage potential, technological exposure, and labor market stability. Differences across these industries highlighted both opportunities and structural risks that policymakers and workforce development systems must consider regarding regional labor demand. Although each sector contributes to employment expansion in Los Angeles County, they differ significantly in long-term economic resilience and career mobility potential. These patterns also align with regional labor market research showing that employment growth in Los Angeles is increasingly concentrated in industries shaped by demographic change, public investment, and technological transformation (Strohl et al., 2024a; Adarkar et al., 2023).

One of the most significant contrasts among the sectors projected to grow is the extent to which employment growth is driven by demographic versus economic cycles. Healthcare and social assistance are the most structurally stable sectors because their growth is largely driven by demographic changes, particularly population aging and the increasing demand for chronic disease management. National employment projections indicate that healthcare employment will grow by approximately 8.4% (2 million jobs) between 2024 and 2034, which is reinforced by the expansion of outpatient care, long-term care services, and home-based healthcare delivery models (U.S. BLS, 2026; U.S. BLS, 2026; Vespa et al., 2020). From a workforce development perspective, aging population-driven demographic growth creates relatively stable employment opportunities, unlike sectors that depend on discretionary consumer spending. However, healthcare also faces structural challenges, including workforce shortages, rising healthcare costs, and burnout among medical professionals (Los Angeles Regional Consortium, 2025; McConville et al., 2024). Labor shortages in long-term care and behavioral health services illustrate how rapidly expanding demand can strain workforce supply, particularly in regions such as Los Angeles County, where population aging is accelerating (Los Angeles Regional Consortium, 2025; HCAI, 2025).

In contrast, employment in trade, transportation, and utilities is shaped primarily by technological and economic transformations, particularly the rise of e-commerce and the restructuring of global supply chains. Growth in online retail has significantly increased demand for warehousing, freight transportation, and distribution occupations (Gutelius & Theodore, 2019). National employment projections show continued expansion in logistics-related industries as e-commerce shifts economic activity away from traditional retail toward distribution networks (U.S. BLS, 2026). While this sector provides substantial employment opportunities, especially in regions like Los Angeles, which serve as global trade hubs, it also faces significant risks from automation and technological change. Warehousing and logistics operations increasingly rely on robotics, AI, and automated inventory management systems (Gutelius & Theodore, 2019). These

technologies may reduce the demand for certain routine manual occupations while increasing demand for technical logistics roles involving data analytics, equipment maintenance, and supply chain coordination (Guettelius & Theodore, 2019). Practitioners emphasized that this transition is already reshaping entry requirements, with increasing expectations for digital literacy and adaptability even in traditionally low-barrier roles (Interviews WP2 and WP5).

The professional and business services sector presents a distinct opportunity-and-risk dynamic. Employment growth in this sector is closely linked to the digital transformation of the economy as businesses increasingly require expertise in data analytics, information technology, regulatory compliance, and consulting services (U.S. BLS, 2026). As organizations adopt AI systems and digital platforms, demand for technical and analytical roles continues to expand. National employment projections highlight strong growth in computer and mathematical occupations, reflecting the increasing reliance on digital infrastructure across industries (U.S. BLS, 2026). However, the professional services sector also illustrates labor market polarization. Technological innovation simultaneously increases demand for high-skill analytical roles while reducing demand for routine clerical and administrative tasks (U.S. BLS, 2026). As automation replaces certain office functions, workers without digital skills find it increasingly difficult to access higher-wage professional services occupations.

Finally, the leisure and hospitality sector illustrates the tension between employment accessibility and job quality. Hospitality occupations often offer entry-level employment, making the sector an important gateway into the labor market. National projections indicate that leisure and hospitality will continue to expand, adding hundreds of thousands of jobs over the coming decade as consumer demand for travel, dining, and recreation reemerges post-pandemic (U.S. Department of Labor, 2024). Despite this projected growth, hospitality employment is also characterized by relatively low wages, irregular schedules, and high turnover rates compared with other sectors (Gould & Kassa, 2021). Because these jobs are closely tied to discretionary consumer spending, they are also more vulnerable to economic shocks. For instance, during the pandemic, leisure and hospitality employment fell by 48.6% between February and April 2020 (U.S. BLS, 2023; U.S. BLS, 2022). Thus, hospitality often serves as an initial step in a broader career pathway rather than long-term employment. While these sectoral trends highlight differences in growth, stability, and risk, technological change, particularly the rise of artificial intelligence and automation, further shapes how these opportunities evolve and who can access them.

AI Vulnerability by Sector

Building on these sectoral risks, technological change, particularly the growing influence of artificial intelligence and automation, emerged as a cross-cutting factor shaping how workforce opportunities evolve across industries (Interviews WP1-WP5). While projected growth captures the scale of opportunity, practitioner interviews highlight how AI is reshaping job tasks, skill requirements, and access to these roles. However, practitioners did not frame AI as causing immediate widespread job displacement. Instead, they described a gradual restructuring of job tasks and skill requirements across industries, where technology changes

how work is performed rather than eliminating entire occupations. This aligns with broader research indicating that automation is more likely to affect specific tasks than to fully replace jobs, with an estimated 60% of occupations having at least 30% of tasks that could be automated (McKinsey Global Institute, 2017; Brynjolfsson et al., 2025). One practitioner explained that while automation has displaced some positions, emerging technologies are also creating new roles that require digital competencies and familiarity with AI-enabled tools (Interview WP5).

Practitioners emphasized that the effects of automation vary significantly across sectors. While some administrative and technology-related roles may be more susceptible to automation, occupations requiring physical presence, complex manual work, or human interaction remain less vulnerable. A workforce administrator highlighted skilled trades as an example of work that is relatively resistant to technological displacement, noting that such roles are unlikely to be automated in the near term (Interview WP3). These findings align with broader research showing that automation is more likely to affect specific tasks rather than fully replace jobs and that vulnerability is uneven across occupations (Manyika et al., 2017; Autor, 2019).

Across interviews, practitioners emphasized that technological change is increasing demand for transferable skills and digital literacy across a wide range of occupations. In addition to technical competencies, employers increasingly value problem-solving, adaptability, and communication skills that enable workers to adjust to evolving workplace technologies (Interviews WP1, WP2, WP3). This shift is reflected in national data showing that approximately 92% of jobs now require some level of digital skill, even in traditionally non-technical roles (Bergson-Shilcock and Taylor, 2023). Practitioners suggested that workforce training programs must therefore focus not only on industry-specific technical skills but also on developing adaptable skill sets that enable workers to transition between roles as technology evolves.

These observations align with broader research showing that automation and artificial intelligence are reshaping occupational skill requirements faster than education and training systems can adapt, reinforcing that technological change shapes not only the volume of opportunity but also the skills required to access it, further complicating workforce alignment for uncredentialed and unenrolled adults (California Competes, 2024; Brynjolfsson et al., 2025). Critically, this means that even in sectors with strong projected growth, access increasingly depends on whether entry pathways equip workers with the evolving mix of industry-specific, digital, and transferable skills needed to enter and persist in these roles.

Entry Point Variation

Building off of these shifts in skill requirements, practitioner interviews highlight that access to employment opportunities varies significantly across industries. Even in high-growth sectors, the structure of entry pathways plays a critical role in determining whether projected job growth translates into realistic workforce opportunities for uncredentialed and unenrolled adults. In healthcare, practitioners consistently described strong labor demand paired with limited training capacity. A workforce administrator explained that healthcare is one of the

region's most in-demand sectors but noted that workforce training capacity remains constrained due to structural barriers within educational programs (Interview WP3). Clinical placement requirements for nursing programs limit the number of students who can complete training each year, even when hospitals face severe labor shortages. As a result, the number of workers who can enter the field is limited by licensing and training bottlenecks rather than labor market demand (Interview WP3). This highlights a critical implication: high-growth sectors do not necessarily function as accessible entry points when training pipelines cannot scale to meet demand.

These constraints are reflected in statewide workforce data. California continues to face significant shortages of registered nurses and allied health professionals, with demand projected to outpace supply, in part due to limited clinical training slots and faculty shortages (California Competes, 2021). In Los Angeles County specifically, healthcare workforce projections indicate tens of thousands of additional workers will be needed in the coming decade, yet training program capacity has not expanded at the same pace (Los Angeles Regional Consortium, 2023). This suggests that workforce access in healthcare is shaped less by labor demand and more by the structure and capacity of training systems.

In contrast, multiple practitioners highlighted logistics and transportation as sectors that provide more accessible entry pathways. A workforce development board leader explained that these industries allow workers to enter through entry-level roles and advance through targeted certifications or on-the-job training (Interview WP4). Short-term training programs, such as the Certified Logistics Technician (CLT) credential and supply chain training offered through community colleges, provide entry into roles such as warehouse associate, forklift operator, and logistics coordinator within a matter of months (Community College Workforce Alliance, 2026).

Additionally, registered apprenticeship and earn-and-learn programs in trucking, warehousing, and distribution combine paid work experience with classroom instruction, allowing workers to build skills while earning wages and advancing within firms (U.S. Department of Labor, 2021). Practitioners across interviews described logistics as a sector where training programs, employer demand, and entry-level hiring pipelines are more closely aligned (Interviews WP1-WP4). These findings highlight a critical distinction between industries that are expanding and those that offer scalable, accessible entry points for uncredentialed workers. While sectors such as healthcare demonstrate strong and stable demand, structural constraints within training systems can limit access. In contrast, sectors like logistics illustrate how alignment between training, employers, and entry-level hiring pathways can translate labor market demand into more immediate workforce opportunities. These differences in sector accessibility point to deeper structural misalignment within the workforce system that shapes how training pathways are designed, scaled, and connected to employer demand.

Structural Misalignment in Workforce Systems

These variations in access reflect broader structural misalignment within workforce systems. Practitioner interviews suggest that training supply and employer needs are not consistently aligned, contributing to persistent gaps between them (Mitra et al., 2017; Strohl et al., 2024b). Practitioners noted that workforce training programs preparing students for the same occupations may vary substantially across institutions in their curriculum structure and program design (Interview WP3). Statewide workforce reports similarly show that career education programs are developed regionally, resulting in variation in course sequencing and alignment with local labor market needs (California Community Colleges Chancellor's Office, 2023).

In healthcare, these differences are particularly pronounced, as programs vary in prerequisites, clinical hour requirements, and capacity constraints tied to limited placements (California Competes, 2021). These inconsistencies can create challenges for employers attempting to assess the value of credentials and for students trying to identify efficient pathways into careers. Research finds that when credentials are not clearly standardized or aligned with employer demand, they provide weaker signals of skill to employers (Strohl et al., 2024a). This highlights that workforce misalignment is not simply a coordination issue, but a structural outcome shaped by how funding and accountability systems incentivize program design across institutions.

Workforce Advancement for Uncredentialed and Unenrolled Adults

In response to these structural gaps, aligning high-growth industry sectors with career advancement pathways offers a promising strategy for improving employment outcomes for uncredentialed and unenrolled adults in Los Angeles County. Yet it is important to note that sector growth does not automatically translate into accessible employment pathways. The accessibility of a sector depends on whether training pipelines can realistically prepare workers to enter those industries through short-term training programs, apprenticeships, or employer-connected hiring pipelines (Interviews WP1-WP4). Practitioners emphasized that this distinction is critical in practice as sectors may show strong projected demand but remain functionally inaccessible when training capacity, licensing requirements, or unclear entry requirements limit who can actually enter these pathways (Interviews WP3 and WP4).

Sector-based strategies - organized training around specific needs of industry clusters - have demonstrated statistically significant gains in employment, earnings, and job stability, particularly when aligned with employer and labor market demand (U.S. BLS, 2023; Autor, 2019; Bartik, J., 2022; Ratledge et al., 2023). Research synthesized in the *Monthly Labor Review* highlights that sector approaches acknowledge regional economic dynamics and labor market changes, including those in the aforementioned sectors, and have produced measurable employment and earnings outcomes (U.S. BLS, 2023). These findings align with randomized and quasi-experimental evaluations of programs such as Project QUEST, WorkAdvance, and Year Up. For instance, a WorkAdvance quasi-experimental study of noncredit workforce training in community college systems found that earning an industry-recognized credential increased

participants' earnings gains ranging from approximately 11% to 40% within two to three years of program completion, with many programs sustaining gains of 17% to over 30% 5-10 years later (Xu, Bird, Cooper, & Castleman, 2024; Pyati, 2020) compared to control groups (Hendra et al., 2016; Barnow & Smith, 2015). These gains are economically meaningful. For example, Project QUEST participants earned 22% more (\$5,080 annually) six years after enrollment, with some high-performing models generating earnings increases up to 40% (\$8,000) relative to the control group (Abdul Latif Jameel Poverty Action Lab, 2022). Importantly, these statistically significant gains are driven less by increases in employment rates and more by placement into higher-wage, sector-aligned jobs (Katz et al., 2020). According to the National Bureau of Economic Research, sector-based strategies increase employment in targeted industries by 5 to 15 percentage points (Katz et al., 2020).

The literature also points to the importance of stackable credentials—short-term certificates that build toward advanced occupational credentials—as a mechanism for upward mobility for uncredentialed adults (Holzer, 2021). On average, certificates are associated with earnings gains of approximately 10-20% relative to those of high school graduates, with some administrative data studies finding premiums of 20-30% in specific states and sectors (Baum et al., 2021). In comparison, quasi-experimental estimates indicate that short-term certificates can increase quarterly earnings by roughly \$278-\$953, depending on program length, while also improving employment alignment with industry and accelerating entry into sector-specific jobs shortly after completion (Jabbari et al., 2025). However, these returns vary by field and program quality. Practitioner perspectives reinforce that the value of stackable credentials lies in earnings potential, accessibility, and flexibility. One workforce practitioner noted that short-term and stackable credentials, including industry-recognized certifications such as Google or Microsoft certificates, can provide more accessible entry points for individuals who may not be able to pursue traditional two- or four-year degrees, while also enabling workers to reskill or pivot into new career pathways (Interview WP1). Certificates in healthcare support, logistics operations, professional and business services generate wage premiums of 13-24% without requiring full degree attainment and reduce time-to-employment (Baum et al., 2021; Xu et al., 2024). This research is significant for Los Angeles County, where occupational wage data from BLS indicate that many entry-level roles offer wages above the regional average (\$36.64 per hour in Los Angeles) even for workers without bachelor's degrees, such as healthcare support (~\$19.31/hour), trade, transportation, and utility (~\$25.43/hour), and professional and hospitality services (~\$26.35/hour) positions (U.S. BLS, 2025).

Regional workforce development literature reinforces these national research findings. Los Angeles County Economic Forecasts project continued growth in healthcare and social assistance; trade, transportation, and utilities; professional and business services; and leisure and hospitality as drivers of employment through the late 2020s, creating thousands of job openings across occupations at multiple skill levels (LAEDC, 2025; EWDD, 2025). For example, the county's planning documents note expected growth of more than 56,000 jobs in healthcare and large expansions in transportation sectors by 2034, signaling sustained demand for workers, including middle-skill roles accessible without a college degree (EWDD, 2025). Taken together,

this body of research underscores that aligning workforce development with projected high-growth sectors, particularly healthcare and social assistance, trade, transportation, and utilities, professional and business services, and leisure and hospitality, offers a pathway to increase access to quality jobs for uncredentialed and unenrolled adults. These findings also reinforce an important distinction between industries that are simply expanding and those that provide practical entry points for workers without traditional academic credentials. Effective workforce strategies must therefore integrate these sectors into sequential career pathways, enabling workers to move from entry-level positions to higher-skilled, higher-wage occupations as they accumulate training and experience, and providing sectoral transparency to job seekers.

Scenario Analysis Results

The quantitative findings showed that projected sector growth alone does not determine which industries offer the strongest opportunities for uncredentialed and unenrolled young adults. Instead, sector opportunity depends on a combination of projected expansion, occupational accessibility, wage structure, and resilience under changing fiscal and technological conditions. Across these dimensions, the four selected sectors performed differently and represented different types of opportunity rather than a simple ranking.

Accessibility Screening Sensitivity Analyses

The accessibility findings assessed the strength of the parameters with respect to the target population. Under the baseline screen, the analytic sample included 511 occupations, suggesting that the opportunity set remained broad enough to support a sector-comparison framework even after entry barriers were imposed (see **Table 12**). Much of this opportunity was concentrated in occupations with relatively modest formal barriers. However, the sector distribution of accessible occupations showed that professional and business services had the largest number, followed by trade, transportation, and utilities, then education and health services, and finally leisure and hospitality (**Appendix Table 2**). This supports the previous discussion, reinforcing that high growth and high accessibility do not always coincide. Education and health services appeared strongest in growth; professional and business services in occupational breadth and wages; trade, transportation, and utilities in access, driven by scale and replacement demand; and leisure and hospitality in growth, with weaker wage quality. No single sector dominated across all measures, and workforce strategy therefore requires trade-offs rather than promoting a single “best” sector.

Table 12. Accessible Occupation Share Sensitivity Analyses

Accessible Occupation?	Frequency	Percentage
<i>Baseline (Overall)</i>		
No	325	38.88%
Yes	511	61.12%
<i>Excluding Occupations Requiring Bachelor's Degree</i>		
No	463	55.38%
Yes	373	44.62%
<i>Excluding Occupations Requiring Prior Experience</i>		
No	386	46.17%
Yes	450	53.83%

Sensitivity analyses were conducted to test whether the findings were highly dependent on the accessibility parameters. When bachelor ’s-level occupations were excluded, 373 occupations remained in scope, or 44.6 percent of the sample (**see Table 12**). Under this stricter definition, professional and business services still included 132 accessible occupations; trade, transportation, and utilities, 123; education and health services, 67; and leisure and hospitality, 49.

When occupations requiring any prior related work experience were excluded, 450 occupations remained in scope, or 53.8 percent of the sample (**see Table 12**). Under that definition, professional and business services contained 192 accessible occupations; trade, transportation, and utilities contained 116; education and health services contained 97; and leisure and hospitality contained 43. These results showed that the main sector patterns were not driven only by the baseline accessibility definition. When the entry criteria were tightened, the same four sectors still emerged as important, but their relative strengths became easier to distinguish. Professional and business services and trade, transportation, and utilities continued to stand out because they retained a large number of accessible occupations even under stricter definitions. Education and health services still remained important, especially because of its strong projected growth and overall labor market relevance, but its occupational breadth narrowed more noticeably when stricter credential filters were applied, indicating that many of their stronger opportunities depend on more formal educational requirements. Leisure and hospitality also remained in the comparison, but the stricter tests reinforced that its value as a long-term mobility pathway was more limited, as its occupations were fewer in number and generally weaker in wage quality and stability.

The accessibility sensitivity tests also allowed for comparisons relevant to entry-level job seekers. In the screened occupational data, 33.5 percent of occupations typically required a high school diploma, 10.3 percent required no formal educational credential, and 19.8 percent required a bachelor’s degree (**Appendix Table 3**). More advanced requirements were much less common: 7.1 percent required a doctoral or professional degree, and 4.1 percent required a master’s degree. Related work experience requirements were also limited for most occupations in the sample: 74.1 percent required no prior related work experience, 8.7 percent required less than

five years, and only 3.1 percent required five years or more (**Appendix Table 4**). On-the-job training requirements were similarly concentrated in lower-barrier categories: 35.1 percent required no training, 21.3 percent required moderate-term training, and 18.4 percent required short-term training, while only 3.7 percent relied on internship or residency pathways (**Appendix Table 5**). These descriptive statistics showed that the baseline sample spanned a broad range of occupations, yet many already clustered near the lower end of formal entry requirements. The occupational filter, therefore, refined, rather than radically remade, the baseline labor market picture.

Public Funding Scenario Analysis

The funding scenario analysis showed that the four sectors did not respond equally to fiscal uncertainty and that baseline growth projections may overstate the durability of some sectors if public funding conditions weakened. As shown in **Table 13**, the baseline ordering placed education and health services first in projected growth at 12.53 percent, followed by leisure and hospitality at 11.89 percent, professional and business services at 7.10 percent, and trade, transportation, and utilities at 2.42 percent. These baseline estimates were compared based on their growth rates and job openings in each scenario. Growth was measured by net employment change, while openings also reflected replacement demand from turnover, retirements, and occupational exits. As a result, sectors with large employment bases or high-churn occupations could show only modest changes in growth while still experiencing larger shifts in openings.

Table 13. Funding Scenario Comparison by Super-Sector

Super-Sector	Education and Health Services	Professional and Business Services	Trade, Transportation, and Utilities	Leisure and Hospitality
Baseline Growth Rate (%)	12.53%	7.10%	2.42%	11.89%
Baseline Openings	1,565,430	1,288,830	1,221,260	1,066,280
Worst-Case Growth Rate (%)	10.65%	7.10%	2.34%	11.76%
Worst-Case Openings	1,330,616	1,288,830	1,179,807	1,054,237
Likely-Case Growth Rate (%)	11.90%	7.10%	2.39%	11.85%
Likely-Case Openings	1,487,159	1,288,830	1,207,442	1,062,266
Best-Case Growth Rate (%)	13.78%	7.10%	2.47%	11.98%
Best-Case Openings	1,721,973	1,288,830	1,248,895	1,074,309
*source: EDD 10-Year Occupational Projections				

Under the likely-case funding scenario, education and health services declined to 11.90 percent, trade, transportation, and utilities declined slightly to 2.39 percent, and leisure and hospitality declined slightly to 11.85 percent, while professional and business services again remained unchanged at 7.10 percent. In projected openings, education and health services declined by 5.0 percent, trade, transportation, and utilities declined by 1.1 percent, and leisure and hospitality declined by 0.4 percent, while professional and business services remained unchanged. Here again, the difference between growth and openings was most noticeable in

education and health services. The sector continued to show strong net growth, but the opening results indicated that even moderate funding pressure narrowed the number of available entry and transition opportunities more than the growth rate alone suggested. In trade, transportation, and utilities, the very small decline in growth paired with a somewhat larger decline in openings again reflected the importance of replacement demand in shaping opportunity in that sector. The modest shifts in the likely-case scenario reflect that funding streams can affect projections, but are not sufficient on their own to cause a radical deviation from the baseline.

Under the best-case funding scenario, education and health services rose to 13.78 percent, trade, transportation, and utilities rose to 2.47 percent, and leisure and hospitality rose to 11.98 percent, while professional and business services remained unchanged at 7.10 percent. Relative to the baseline, projected openings increased by 10.0 percent in education and health services, 2.3 percent in trade, transportation, and utilities, and 0.8 percent in leisure and hospitality, while professional and business services again remained unchanged. The best-case results reinforced the same pattern seen in the other cases. In education and health services, favorable funding conditions increased not only net growth but also the overall volume of openings, suggesting that the sector's opportunity structure expanded substantially when funding conditions improved. In trade, transportation, and utilities, the increase in openings was again larger than the growth rate, indicating that opportunities in this sector were more tied to scale and replacement demand than to strong net expansion. Leisure and hospitality benefitted only modestly in both growth and openings, suggesting that improved funding conditions did less to change its overall opportunity structure than they did in education and health services.

Under the worst-case funding scenario, projected growth in education and health services declined to 10.65 percent, in trade, transportation, and utilities to 2.34 percent, and in leisure and hospitality to 11.76 percent, while professional and business services remained unchanged at 7.10 percent. A similar pattern appeared in projected openings. Relative to the baseline, projected openings declined by 15.0 percent in education and health services, 3.4 percent in trade, transportation, and utilities, and 1.1 percent in leisure and hospitality, while professional and business services remained unchanged. This worst-case scenario suggested that education and health services was the most sensitive to unfavorable funding conditions, whereas professional and business services was unaffected by public funding shifts, making it seem a more stable choice during funding stream changes. The contrast between sector growth rate and job openings was especially important in education and health services; although the sector appeared strong in net growth terms, the much larger decline in openings suggested that the overall volume of labor market opportunity was more sensitive to funding stress than the growth rate alone would indicate. Trade, transportation, and utilities showed the opposite nuance. Its growth rate changed very little, but openings declined more noticeably, which reflected the sector's reliance on a large employment base and replacement demand rather than rapid net growth. Leisure and hospitality showed only a small decline in projected growth but a somewhat larger decline in projected openings, suggesting that the sector may continue to grow overall while still offering slightly fewer hiring opportunities under less favorable funding conditions.

Artificial Intelligence Sensitivity Analysis

The AI sensitivity analysis suggested that the broad sector ordering remained stable under moderate technological disruption, but that sectors differed in the degree to which projected opportunities were reduced. In the sector-level AI summary, education and health services remained one of the strongest sectors after the AI adjustment, with projected sector growth declining from 12.5 percent under the baseline to 10.7 percent after the adjustment. Leisure and hospitality declined from 11.9 percent to 10.5 percent. Professional and business services declined from 7.1 percent to 6.5 percent, and trade, transportation, and utilities declined from 2.4 percent to 2.1 percent. The larger effect was observed in projected openings rather than in total projected employment. Compared with the baseline, projected openings fell by roughly 11.0 percent in education and health services, 13.3 percent in leisure and hospitality, 7.2 percent in professional and business services, and 11.3 percent in trade, transportation, and utilities. **Table 14** summarizes findings across each measure. These results suggested that AI-related disruption may matter less for shrinking entire sectors than for reducing the volume of projected opportunities within them. Education and health services appeared relatively durable; professional and business services remained attractive but somewhat more exposed to technological uncertainty; trade, transportation, and utilities remained important because of scale and accessibility; and leisure and hospitality appeared more vulnerable because projected opportunities declined more sharply and the sector was already weaker in wage quality and long-term stability.

Table 14. Sector Comparison Under Baseline, Funding, and AI Sensitivity Analyses

Sector	Accessible Occupations	Mean Annual Wage	Baseline Growth	AI-Adjusted Growth	AI Openings Shift	Funding Openings Shift (Worst / Likely / Best)
Education and Health Services	115	\$72,344	12.5%	10.7%	-11.0%	-15.0% / -5.0% / 10.0%
Professional and Business Services	208	\$74,457	7.1%	6.5%	-7.2%	0.0% / 0.0% / 0.0%
Trade, Transportation, and Utilities	129	\$51,246	2.4%	2.1%	-11.3%	-3.4% / -1.1% / 2.3%
Leisure and Hospitality	55	\$48,238	11.9%	10.5%	-13.3%	-1.1% / -0.4% / 0.8%

Note. Baseline growth and AI-adjusted growth reflect projected sector growth rates under the baseline and AI sensitivity scenarios. AI openings shift shows the percent change in projected openings relative to the baseline under the AI sensitivity analysis. Funding openings shift shows the percent change in projected openings relative to the baseline under the worst-case, likely-case, and best-case funding scenarios.

The unmatched-occupation chart (**Appendix Table 14**) was also important for interpreting the AI results. A total of 98 occupations could not be matched to the AI exposure

analysis: 34 in professional and business services, 28 in education and health services, 21 in trade, transportation, and utilities, and 15 in leisure and hospitality. Relative to the occupational counts in the sector summary, this meant that AI match coverage was weaker in some sectors than in others, especially in leisure and hospitality. For that reason, the AI sensitivity analysis should be interpreted as a structured stress test of sector resilience rather than a definitive estimate of future AI effects. Even so, the broad conclusion remains clear: sectors that appeared strongest under the baseline generally remained strongest under moderate technological disruption, although the total volume of openings may be weaker than baseline projections suggested.

Overview of Scenario and Sensitivity Analyses Findings

Collectively, the quantitative analyses and workforce practitioner interviews highlight a central finding: projected sector growth alone is insufficient to measure workforce advancement for uncredentialed and unenrolled adults. The four sectors examined each offer distinct opportunity structures, but their value to the target population depends heavily on whether training pathways, employer demand, and entry-level hiring are meaningfully aligned. Practitioners consistently point to the existing alignment in the logistics and transportation sector, offering short-term credentials, apprenticeships, and earn-and-learn models that create scalable entry points for workers without a traditional academic background. Education and health services and professional and business services appear to offer the strongest strategic opportunities, but for different reasons. Education and health services combine strong growth with high user relevance and relatively durable demand, but it also contains tighter credentialing constraints. Professional and business services offer the greatest occupational breadth and highest wages, but its opportunities are more unevenly distributed and somewhat more exposed to technological change. Trade, transportation, and utilities remain a critical access pathway because of its scale, replacement demand, and concentration of accessible roles, even though its growth is weaker. Leisure and hospitality may still matter as an entry sector, but it appears weaker as a long-term mobility pathway due to lower wages, greater instability, and greater vulnerability in the sensitivity analyses. For Areté Rising’s target demographic, the most relevant sectors are not simply those with the fastest growth but those that combine labor market demand with scalable pathways that translate into attainable, durable employment opportunities.

Research Question 2: What informational and structural barriers prevent uncredentialed and unenrolled adults from connecting to opportunities in projected high-growth industry sectors, and how can pathways be restructured to improve access?

Finding: Persistent institutional fragmentation has led to limited awareness of available pathways and credential structures that are misaligned with employers' actual demands. Navigating these fragmented systems is especially difficult for first-generation and historically underserved youth, who often lack early exposure to high-growth industries and are further disadvantaged by shifts in state and federal funding that restrict eligibility for financial aid.

Fragmentation across institutions

Fragmentation within the regional workforce ecosystem emerged as one of the most consistent barriers to workforce access across the practitioner interviews, appearing in four of the five interviews (Interviews WP1-WP4). Practitioners described a landscape in which workforce boards, educational institutions, employers, and training providers operate within separate institutional structures that often lack shared planning systems or coordinated data infrastructure.

A regional workforce development board leader explained that Los Angeles County contains multiple workforce boards serving different geographic regions, each responsible for its own funding streams and program implementation. While these boards collaborate on certain initiatives, planning frequently occurs at the subregional level because the county's labor market is too large and diverse to function as a single coordinated system (Interview WP4). This structure reflects the broader scale of the region's workforce system, which spans multiple workforce development boards and planning areas serving nearly 10 million residents, creating coordination challenges across institutions and programs (County of Los Angeles, 2024; McConville et al., 2021).

Fragmentation also appears within educational institutions. A workforce administrator described how workforce training programs that prepare students for the same occupations may vary substantially across institutions in curriculum structure and program design (Interview WP3). In healthcare, these differences are particularly pronounced due to variation in prerequisites, clinical requirements, and capacity constraints (California Competes, 2021). These inconsistencies can create challenges for employers attempting to assess the value of credentials and for students trying to identify efficient pathways into careers. Research on education-workforce misalignment finds that when credentials are not clearly standardized or aligned with employer demand, they provide weaker signals of skill to employers (Strohl et al., 2024a).

More broadly, Los Angeles County reflects a "fragmented opportunity ecosystem," in which education providers, workforce agencies, and employers operate in silos with limited coordination or data sharing (California Workforce Development Board, n.d.; McConville et al.,

2021). Institutionally, fragmentation can produce duplicative programs, inconsistent curriculum standards, weak employer signaling, and slower responses to emerging labor demand (Gable et al., 2023).

Information gaps and navigational barriers

These structural forms of fragmentation also translate into significant information gaps and navigational barriers for job seekers. Many individuals, particularly first-generation college students and disconnected youth, lack awareness of available career pathways or struggle to navigate complex eligibility rules across programs (McConville et al., 2021). One workforce practitioner explained that many individuals simply do not know which training programs exist or which credentials lead to stable employment (Interview WP2). As a result, individuals may enroll in programs with no clear labor-market value or fail to access available opportunities altogether. These barriers increase search costs, contribute to inefficient enrollment patterns, and make it more difficult for individuals to identify pathways that lead to stable employment (Strohl et al., 2024).

Consistent with previous literature, the interviewees highlighted a meaningful information gap between uncredentialed and unenrolled first-generation students. These students often lack exposure to high-earning, high-growth industries, which exacerbates economic inequities, particularly for students from lower-income and minority communities (Strohl et al., 2024). Higher education administrators see this lack of exposure firsthand, stating that “for this particular group of students, who are most reliant on need-based financial aid at the institution and federally, the exposure comes when...” they are immersed in the higher education spaces (IHEA2).

To address this gap and enhance access to high-growth industry opportunities, the higher education student services administrators emphasized the importance of engaging with students as early as 6th grade (IHEA1). This early outreach exposes students to a breadth of potential post-secondary pathways, connects them with industry professionals to set realistic career expectations, and dispels any misconceptions about which pathways may be within reach. This aligns with research from Goldhaber et al. (2019), who find that early-commitment outreach programs targeting socio-economically disadvantaged groups are most effective when they reach students before they form college-going expectations, and have adequate time to prepare for their chosen post-secondary pathway (Goldhaber et al., 2019). Additionally, aligning early outreach to the institution’s capacity to grow is another critical outreach strategy. One interviewee exemplified this idea, stating that “if [they] have space to grow in health and related sciences, by 3%, then [they] would do the outreach at specific high schools that have these types of programs, recruiting close to that percentage of needed students” (IHEA1).

Higher education administrators also emphasize the importance of targeting uncredentialed individuals already working in the industry and encouraging them to pursue an alternative pathway. In its outreach, the institution aims to expose this group to how ongoing technological advancements in their respective fields - such as the increased use of AI - may lead to shifts in future job security. This may prove particularly beneficial for older individuals in the

workforce, given that AI has been recognized as a key driver of internal restructuring, higher demands for upskilling the current workforce, and targeted layoffs (Leparmentier, 2025). Further, these initiatives aim to raise awareness of the potential for economic mobility through additional higher education or post-secondary training. For example, one administrator noted that the institution may advertise an entrepreneurship or business degree to increase the likelihood that uncredentialed individuals will later hold managerial positions within their current organization (IHEA1).

Moreover, in an effort to reach more uncredentialed and unenrolled individuals, recruiters at a local private institution seek to engage students in more rural areas of Los Angeles County (IHEA2). The existing literature indicates that individuals from rural communities are less likely to have graduated from college, are often farther from higher education opportunities, are more likely to be unemployed, and have lower average household incomes than those from urban communities (Johnson & Mejia, 2024). Therefore, by expanding its outreach to rural communities, the institution is equipping students with the resources they need to conduct their own research on which post-secondary pathway is best for them. Collectively, these efforts aim to narrow the existing information gap, increase access to higher education, and promote economic mobility.

Skills vs credentials mismatch

Beyond navigation challenges, fragmentation also contributes to a mismatch between the skills employers demand and the credentials training systems provide. Across interviews, practitioners consistently emphasized that employers increasingly prioritize applied competencies and workplace readiness over formal credentials alone, particularly for entry-level hiring (Interviews WP1, WP3, WP4). Employers frequently emphasize foundational workplace behaviors such as reliability, punctuality, communication, and adaptability. A college workforce administrator explained that employer conversations frequently center on soft skills rather than technical credentials, noting that “if you convene a bunch of employers...they all say the same thing, we need soft skills” (Interview WP3). Practitioners identified communication, teamwork, adaptability, and problem-solving as the competencies most frequently cited by employers, particularly because these skills enable workers to adapt to changing job tasks and workplace technologies (Interviews WP1, WP3, WP4).

At the same time, credential structures are often disconnected from regional industry requirements because education and training programs are frequently designed without sustained employer input and are not updated quickly enough to reflect changing skill demands. As a result, credentials may signal program completion but not necessarily the competencies employers need for entry-level roles (Strohl et al., 2024b; McLeod et al., 2025). This helps explain why practitioners repeatedly pointed to soft skills and work-based exposure as more reliable hiring signals than credentials alone (Interviews WP1, WP3, WP4).

However, it is important to note that these findings differ from our quantitative results. In the accessibility screening sensitivity tests, the sharper contraction occurred when bachelor’s-level occupations were excluded rather than when occupations requiring prior work

experience were excluded. Formal degree requirements appeared to carry more weight in shaping accessibility, suggesting that our model overstated the importance of formal education as a binding constraint relative to what practitioners described on the ground. This suggests that degree requirements alone may not fully capture how accessibility operates in practice. The nature of occupational and industry projections may fall short of capturing nuances of the job-hiring process, potentially contributing to information gaps.

This mismatch is further intensified by rapid technological change, particularly the growing use of generative AI, which is reshaping employer expectations faster than education and training systems can adapt. This dynamic was also reflected in interviews with IHE administrators, which highlighted the growing impact of generative AI on entry-level roles, particularly for students seeking employment post-graduation or upon completion of training. While the extent of AI's impact varies across industries, the interviewees emphasized the importance of “working closely with industry leaders to find out what knowledge and skills are expected of...” the institution’s graduates, so they can reverse-engineer the programs they offer and the curriculum taught in the classroom to prepare their students for that profession (IHEA1).

Despite their best efforts, higher education administrators face a significant challenge: faculty and workforce practitioners’ fear of AI. A 2022 report from the City of Los Angeles Workforce Development Board found that 19% of jobs nationwide involved manual tasks likely to be aided or replaced by AI (WIBLA, 2022; Dahlin, 2024). With that in mind, this fear may be attributed to the growing presence and use of AI across industries, which are perceived as a threat to middle-skilled positions. As a result, higher education administrators have recognized industry partners' hesitancy to share how AI is truly impacting their labor participation and workforce efforts (IHEA 1 & 2). In turn, institutions lack sufficient information about the AI curriculum necessary to include in their course offerings, leaving higher education institutions behind and staff unaware of how to prepare students for a workforce increasingly dependent on AI (Leparmentier, 2025).

As a way to bypass this obstacle, a VP of student services suggested that building these industry relationships could allow them to shadow industry professionals throughout a workday, giving them firsthand experience of how AI is used in the profession. For instance, faculty at the local trade institutions may be able to “shadow a doctor or nurse at Kaiser, and be able to tell how they are using AI for the doctor’s appointments, notes, processes, and then use that to inform the courses that a nursing student takes, [so that] there is no gap” between what the student is learning in their courses and what they will use in practice (IHEA1). Therefore, by incorporating these concepts directly from the field into classroom curricula and training experiences, higher education institutions will be better equipped to instill the skills needed to succeed in the workplace, especially given the rapid pace of technological advancement.

Work-based learning importance

In response to these gaps, practitioners consistently identified work-based learning as a critical mechanism for aligning training with employer expectations and for building both technical and applied competencies (Interviews WP1, WP2, WP4). Internships, apprenticeships,

and on-the-job training allow workers to gain real workplace experience while enabling employers to evaluate potential hires. One practitioner described these programs as the most direct bridge between training and employment (Interview WP1). These findings align with research documenting persistent gaps between credential attainment and job readiness, as many credential programs fail to incorporate applied learning experiences that employers consider essential (Strohl et al., 2024b).

At the same time, the effectiveness of work-based learning depends on how these experiences are structured. Research shows that programs with strong employer engagement, mentorship, and clearly defined skill-building components are more likely to produce sustained employment and earnings gains (Katz et al., 2020; Xu et al., 2024). This suggests that not all work-based learning opportunities are equally effective, and that program design, including the depth of employer involvement and alignment with specific occupational skills, plays a critical role in determining whether these experiences translate into improved employment outcomes.

These patterns are reinforced by the High-Growth Sectors of Interest analysis in the literature review, which shows that work-based learning is consistently embedded across industries such as healthcare, logistics and transportation, professional services, and hospitality, though with varying levels of accessibility and structure. In sectors like logistics and transportation, work-based learning is often integrated through short-term credentials and earn-and-learn models that provide more immediate entry into employment, while in healthcare and professional services, pathways tend to combine formal credentialing with required applied training components (Community College Workforce Alliance, 2026; U.S. Department of Labor, 2021; McConville et al., 2024; BLS, 2023; Hartog et al., 2024). These patterns highlight that work-based learning is a central mechanism shaping the accessibility and effectiveness of workplace pathways across sectors. Together, these barriers increase the cost of navigation workforce systems and reduce the likelihood that individuals will connect with pathways to stable employment.

Equity and funding barriers

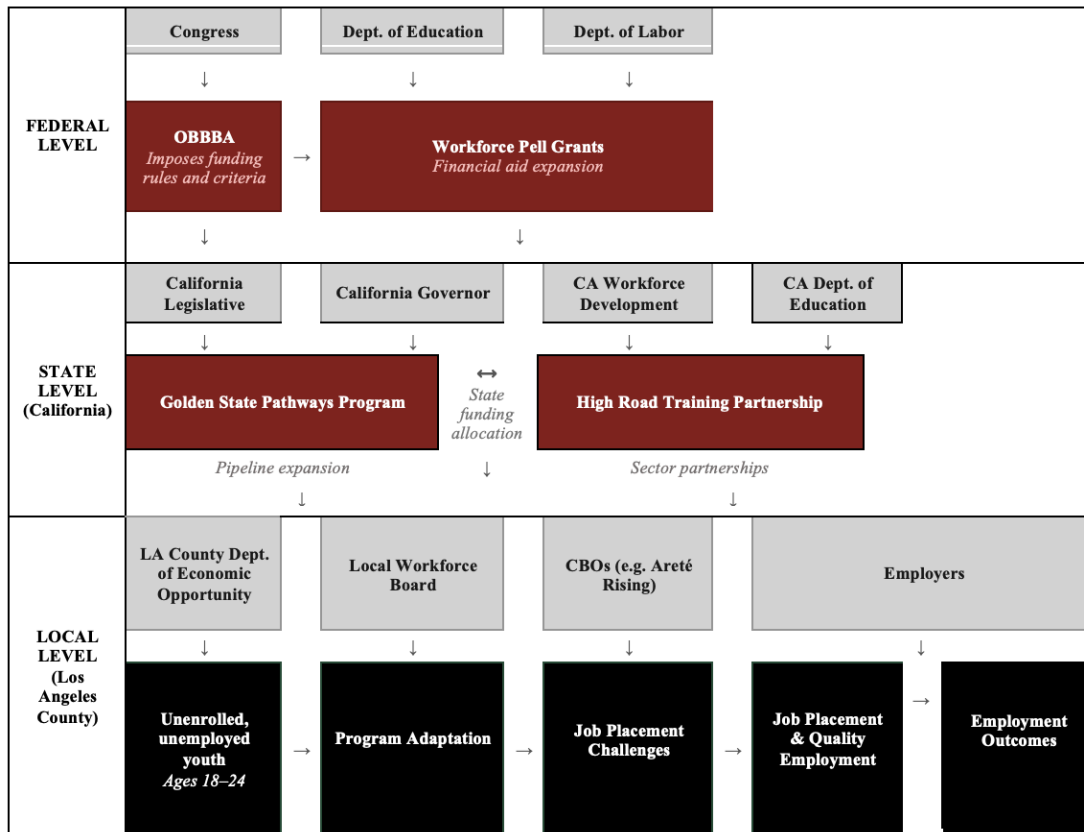
Recent funding changes have restructured access to postsecondary pathways for unenrolled and unemployed youth in Los Angeles County, producing a multi-level system shaped by federal, state, and local policies. The thematic analysis of this report highlights the impact of three main funding streams (Workforce Pell, Golden State Pathways Program (GSPP), and High Road Training Programs (H RTP)) on financial aid, student services, and career development programs, particularly for students from lower socioeconomic backgrounds. Higher education administrators at the institutions interviewed report that roughly 72% of students rely on GSPP to fund their higher education (IHEA1; IHEA2); a figure consistent with the Public Policy Institute of California's (2025) previous estimate that nearly 60% of students from LEAs receiving the grant will participate in the program (Rodriguez et al., 2026). The stakes of this reliance are heightened by the implementation of OBBBA, which threatens to undercut federal financial aid initiatives created to support students from historically underserved groups (Jackson, 2025). Moreover, the administrators stress that OBBBA imposes new eligibility,

reporting, and performance requirements, “making [higher] education incredibly inaccessible for lower socioeconomic status students,” leaving administrators challenged to counsel students who are “incredibly fit for the institution, but have finances preventing them from doing so” (IHEA2; Mowreader, 2025)

Figure 8 synthesizes the relationships across federal, state, and local systems, illustrating how funding structures shape workforce pathways and influence outcomes for youth, providing a foundation for understanding the impacts of OBBBA and informing subsequent recommendations. At the federal level, the Workforce Pell Grant, established under OBBBA, expands financial aid to short-term, workforce-aligned programs while requiring strict performance benchmarks tied to completion and employment. At the state level, programs such as GSPP and HRTPs expand training pipelines and align education with high-demand sectors. Together, these policies create a hybrid system that combines market-based access through individual funding, pipeline expansion, and quality-focused training partnerships.

However, these funding expansions introduce greater selectivity and incentivize short-term performance metrics. For instance, while the Workforce Pell expands access to training, it also conditions funding on measurable outcomes, pushing institutions to prioritize programs that meet completion and job placement thresholds. When combined with state programs like GSPP and HRTPs, the system increases entry into short-term credential pathways but does not guarantee a corresponding expansion in high-quality employment opportunities. As more young adults are funneled into short-term pathways without a proportional expansion in quality placements, the system risks creating a structural bottleneck in which participants compete for a limited pool of promising opportunities. For unenrolled and unemployed youth in Los Angeles County, this creates a mixed outcome: while entry points into training increase, access to high-support pathways and quality jobs that sustain long-term mobility may become more constrained.

Figure 8. Policy Field Analysis: OBBBA and New Funding Streams



Further demonstrating the impact of these funding shifts, interviewees pointed to a clear mismatch between eligibility criteria and the interests and needs of the student populations that these institutions serve, creating significant barriers to access. Both the Workforce Pell and the GSPP provide federal funding to students pursuing postsecondary education and workforce training credentials, provided that these programs align with regional workforce demands and yield positive labor market outcomes for students after graduation (H.R. 1, 2025; Cal. Code EDC 53023, 2022). However, interviewees mentioned that the regional workforce demands, namely construction and clean energy, do not align with students’ career aspirations, such as business and entrepreneurship, engineering, cinematic arts, and social sciences - career pathways that generally lack the direct occupational match that these grants require (Strohl et al., 2024; National Skills Coalition, 2024). Therefore, while the Workforce Pell is well-intentioned and has the potential to benefit particular groups of students, access to these funds is heavily contingent on which majors qualify students for the grants, limiting its broader impact on access to higher education (IHEA1).

This disconnect leads to a shift towards student reliance on private loans with higher interest rates and an overall higher cost of attendance, placing a disproportionate burden on students from minority communities and lower socioeconomic backgrounds (IHEA2; Haveman & Smeeding, 2006). Moreover, these grants do not provide direct financial assistance to cover

unexpected costs of attendance, which often deter students from persisting in higher education (Fosnacht & Calderone, 2017). Therefore, despite having incredible talent and the necessary qualifications to succeed at these institutions, racial and socioeconomically disadvantaged individuals are less likely to pursue higher education due to the high cost of attendance and limited access to direct financial assistance caused by these funding and legislative shifts.

Over time, this imbalance may weaken the signaling value of short-term credentials, increase pathway fragmentation, and leave some youth cycling through multiple programs without securing durable employment. Fragmentation and misalignment lead to greater difficulty in navigating workforce systems and identifying effective pathways for vulnerable populations, including first-generation, low-income, and disconnected youth (Interview WP2). A poor program choice can result in lost time, foregone earnings, debt, or disengagement from the workforce system altogether. More broadly, research shows that barriers to accessing effective training and employment pathways can reinforce inequality and increase the risk of long-term labor market exclusion (Jetha et al., 2021). These findings suggest that workforce challenges are not only structural but also equity-driven, requiring targeted strategies to ensure that historically excluded populations can access and complete high-value pathways. For organizations like Areté Rising, effectiveness will depend not only on navigating these constraints but also on helping beneficiaries identify pathways in which labor demand, training capacity, and job quality are more closely aligned.

KEY TAKEAWAYS

Overall, these findings highlight that the central challenge facing Los Angeles County is not a shortage of opportunity, but a persistent structural misalignment between the workforce and educational institutions that disproportionately impacts uncredentialed and unenrolled young adults. Improving workforce outcomes requires not only expanding opportunities to disadvantaged groups, but also ensuring that pathways are coordinated, transparent, and aligned with both employer demand and the needs of the populations they are intended to serve.

First, fragmentation across workforce institutions creates significant barriers to accessing and navigating career pathways. Disconnected systems, inconsistent program structures, and limited coordination among workforce boards, educational institutions, and training providers make it difficult for individuals to identify clear, efficient pathways to stable employment. This fragmentation not only complicates navigation but also weakens the alignment between training programs and labor market demand, resulting in pathways that are often duplicative, uneven in quality, or misaligned with employer needs.

Second, sector growth does not necessarily translate into accessible opportunity, as the effectiveness of workforce pathways depends on how individuals enter high-demand sectors and how well those pathways prepare them for employment. Labor market success is increasingly driven by applied skills and work experience rather than credentials alone, as employers prioritize job readiness, adaptability, and hands-on experience. Projective data may be understating unmeasured factors while overstating measured factors such as credentials and degree requirements. While credentials remain important in certain fields, they are most valuable when paired with real-world application and alignment with employer expectations. These dynamics highlight that pathway effectiveness is determined by job availability and whether entry points are accessible, scalable, and designed to equip individuals with the skills needed to secure and sustain employment.

Finally, technological change and evolving funding priorities are reshaping workforce pathways, affecting both access and outcomes. Shifts in skill demands, particularly in digital literacy and adaptability, are changing the competencies required across occupations, while new funding structures and policy requirements influence which programs expand, at what scale, and under what conditions, threatening equity and long-term outcomes. These dynamics are redefining labor market demand and altering the design and accessibility of training pathways, reinforcing the need for systems that are flexible, responsive, and aligned with both employer needs and participant realities.

IMPLICATIONS AND APPLICATIONS

While the high-growth sectors identified in this paper demonstrate strong labor market demand, sector growth alone does not guarantee accessible and scalable entry. The scenario and sensitivity analyses confirm that opportunities in these sectors must be evaluated across multiple dimensions simultaneously. Entry pathway structures vary significantly across sectors: healthcare remains constrained by licensing requirements and limited clinical training capacity despite high demand, while logistics and transportation offer more immediate entry through short-term credentials and on-the-job training, and infrastructure and construction rely heavily on registered apprenticeships and union-based pathways into skilled trades (California Competes, 2021; Community College Workforce Alliance, 2026; U.S. Department of Labor, 2021; Strohl et al., 2024b). This variation suggests that workforce development strategies should prioritize not only sector selection but also the intentional design of entry mechanisms that enable individuals without traditional credentials to access and advance in these high-demand industries. Expanding work-based learning opportunities, such as internships, apprenticeships, and employer-connected training, is a critical strategy for addressing persistent gaps between credential attainment and employment outcomes identified in both the interviews and the literature (Strohl et al., 2024b; Mitra et al., 2017; Katz et al., 2020).

Institutional fragmentation and operational silos create pervasive information gaps, leaving many individuals unaware of existing programs and credentials that could lead to stable employment, contributing to inefficient enrollment patterns and reinforcing structural misalignment. Therefore, improving transparency around program quality, labor market outcomes, and credential value for the target population is seemingly just as important as expanding the number of available programs. Moreover, strengthening coordination mechanisms, such as shared labor market data systems, regional workforce planning initiatives, and cross-institutional partnerships, is essential to improving alignment between training supply and emerging industry demand (McConville et al., 2021; California Workforce Development Board, n.d.). This implies that workforce challenges are not solely programmatic but also structural, requiring system-level solutions rather than isolated interventions.

Political and technological shifts add another layer of complexity, reshaping labor market signals, industry skill demands, and institutional capacity. Higher education administrators emphasized the importance of understanding how the LA workforce is evolving and where potential growth exists, in efforts for institutions to proactively position themselves to educate the region's future workforce, producing employees who are aware of labor market demands and can adapt to technological changes and new political landscapes (IHEA1 & 2). Locally, regional assets such as the Port of Los Angeles and Port of Long Beach - which support more than three million jobs nationwide and over 200,000 jobs in the region - represent strategic opportunities for workforce alignment (Center for Jobs and the Economy, 2024). On the other hand, the aging population in Los Angeles County underscores the urgent need to upskill the existing workforce (Bohn et al., 2025). As automation and the increasing use of generative AI continue to reshape

jobs across sectors, workforce programs must ensure that training prepares workers for flexible, long-term labor market participation (Brynjolfsson et al., 2025; OECD, 2019).

Informational and structural barriers further limit access to post-secondary pathways. Prior research similarly finds that limited information about career pathways and credential returns can discourage participation in workforce programs, particularly among individuals from historically marginalized communities (McConville et al., 2021). Workforce practitioners noted that many job seekers lack awareness of available workforce programs or do not understand which credentials lead to stable, well-paying employment (Interviews WP2, WP4). Improving transparency around program quality, labor market outcomes, and credential value could further support individuals in making more informed decisions about available opportunities. Higher education administrators support the existing literature, which suggests that early outreach is equally critical for broadening awareness of postsecondary pathways and for connecting marginalized students with industry professionals (Goldhaber et al., 2019). These findings suggest that improving workforce access requires not only expanding opportunities but also making those opportunities more visible and understandable to potential participants.

The passage of the OBBBA further narrows the viable options for Areté Rising's target population by tying access to funding to short-term labor market outcomes and imposing strict eligibility requirements that are misaligned with students' interests, needs, and demographics. Pathways for unenrolled and uncredentialed young adults are becoming increasingly conditional, putting those who require nontraditional training timelines, wraparound services, or additional exploratory career development support at a disadvantage (World Bank Group, 2018; Kelderman, 2019). This shift risks excluding the most vulnerable groups at a time when the labor market demands continuous learning and greater adaptability. These findings suggest that program advising should place greater emphasis on career durability, stackable credentials, and transitions to HRTP-aligned sectors with higher-quality jobs, particularly given the risks of credential inflation and uneven employer demand (Araki & Kariya, 2022).

The quantitative findings suggest that Areté Rising's recommendations should more clearly distinguish between sectors that are attractive at a headline level and those that remain practically viable once accessibility and uncertainty are taken into account. In particular, the results indicate that sector guidance should not be based solely on projected growth. Users are likely to benefit more from information that makes tradeoffs visible, including differences in training length, barrier level, wage potential, and the durability of opportunities under changing funding and technological conditions. This is especially important because the analysis shows that sectors with strong growth do not always offer the broadest accessible opportunity set, and sectors with weaker net growth may still generate meaningful openings through scale and replacement demand. Areté Rising can also add value by distinguishing between sectors that are best understood as immediate entry points and those better suited to longer-term mobility.




Collectively, these findings point to a clear need for strategic program redesign. This program strategy must move beyond providing broad information support and instead shift toward a coordinated, comprehensive approach that prioritizes long-term mobility over immediate placement. This means embedding work-based learning opportunities, strengthening

early outreach initiatives, improving transparency in sector navigation, and sequencing pathways that better equip uncredentialed and unenrolled young adults to succeed in an increasingly complex and fragmented workforce and education landscape.

RECOMMENDATIONS

This section evaluates three proposed policy alternatives for Areté Rising using a multi-criteria analytical framework grounded in a mixed-methods workforce development model and policy evaluation literature. Evaluative criteria serve as structured benchmarks for assessing trade-offs across competing policy options and determining their relative viability and impact. The analysis applies four criteria (**refer to Appendix D**) to assess how each proposed alternative performs within the broader education-to-workforce system (**see Table 15**).

Table 15. Criteria Alternatives Matrix

Recommendation	Program	Administrative Feasibility	Efficiency	Durability	Inclusive Parity
Rec. 1 Strengthening AltPath as Navigation & Transparency Hub for High- Access and High-Mobility Career Pathways		High Builds on existing digital infrastructure; requires data integration and UI enhancements rather than new governance structures.	High Reduces information asymmetries; shifts to active decision support, improving alignment between training and employment outcomes.	High Digital tools can be institutionalized within core operations and updated with real-time labor market data; not reliant on short-term grants.	High Addresses information gaps disproportionately affecting high-barrier populations; effectiveness depends on digital literacy supports and outreach.
Rec. 2 Centering Employer-Connected Training Models & Demand-Driven Updates		Moderate Requires sustained cross-sector coordination with employers and training providers; complexity varies by employer capacity and incentives.	High Employer-connected models directly improve skill alignment and employment transitions; real-time demand signals reduce skill mismatches.	High Employer partnerships create self-reinforcing feedback loops; durability contingent on demonstrated return on investment.	Moderate-High Expands employment access for high-barrier populations; without safeguards, employer-driven models risk reproducing existing inequities.
Rec. 3 Guiding Students to External, Relevant, and Pathway-Aligned Funding Opportunities (altAid+)		Moderate Operationally feasible within altAid+ infrastructure, but broader funding alignment requires coordination with state/federal agencies.	Moderate-High Improved funding transparency reduces financial barriers; directing resources toward outcome-driven programs enhances system-level allocation.	Very High Policies reshaping funding structures produce lasting system transformation beyond individual program cycles.	High Directly targets financial barriers disproportionately faced by marginalized communities; advocates for wraparound service funding models.

The policy recommendations advanced in this analysis are intentionally designed to respond directly to the core system failures identified in the findings: fragmentation across the education-to-workforce ecosystem, misalignment between training supply and labor market, and persistent barriers to access that disproportionately constrain high-barrier populations. Empirical research reinforces that these challenges are not isolated, but structural—manifesting in widespread misalignment between available credentials and actual job opportunities, particularly with middle-skill pathways (Weissman, 2024). At the same time, the rapid transformation of the labor market has intensified the need for systems that can guide individuals through increasingly complex and non-linear career trajectories.

Taken together, the findings suggest that the central policy problem is not simply a lack of opportunities, but a failure of coordination, signaling, and access within the system itself. The following recommendations therefore prioritize interventions that (1) improve decision-making infrastructure, (2) strengthen alignment between training and demand, and (3) reduce structural barriers to participation. These recommendations were selected because they leverage Areté Rising’s intermediary role while addressing system-level inefficiencies rather than creating parallel programmatic structures.

Recommendation 1: Strengthening AltPath as a Navigation and Transparency Hub for High-Access and High-Mobility Career Pathways

Our findings highlight that while career pathways may appear “available” within workforce systems, they are often not equally accessible due to constraints such as limited training capacity, credential inflation, and opaque entry requirements. This disconnect contributed to inefficient pathway selection, in which individuals pursue trajectories misaligned with both labor market demand and their likelihood of successful entry. Our research on workforce systems underscores that information asymmetries, particularly around credentials, outcomes, and entry barriers, are a key driver of these inefficiencies, limiting effective matching between workers and jobs (Jobs for the Future, 2024).

Areté should enhance altPath’s decision-support features by helping users identify which high-demand pathways are actually accessible, not just available. While altPath already enables users to explore careers, compare training options, and view key metrics such as earnings and job demand, the platform can be further strengthened by more clearly signaling which pathways are most accessible given structural constraints such as training capacity, credential requirements, and entry barriers. This could include prioritizing or flagging pathways based on accessibility and likelihood of successful entry, as well as distinguishing between high-demand careers that are immediately attainable and those that require longer or more competitive training pipelines. By shifting from information delivery to decision support, Arété can more directly address the fragmentation and misalignment identified in the findings and better guide users toward pathways that are not only desirable but realistically achievable.

Strengthening AltPath as a navigation and transparency hub was selected as a best-fit intervention because it offers high administrative feasibility and scalability. Rather than requiring the creation of a new program, the recommendation builds on Arété Rising’s existing infrastructure, aligning with broader workforce policy trends that emphasize interoperable data systems and digital navigation tools. It is also highly efficient, directing users toward pathways with a higher likelihood of completion and employment, reducing attrition, and improving overall system performance. From an equity perspective, this approach is particularly impactful. Individuals without access to social capital or institutional advising are disproportionately affected by unclear information about pathways. By making accessibility constraints visible, AltPath can prevent costly missteps and promote more equitable participation in high-mobility careers. In this manner, the recommendation directly translates the report’s findings on structural inequities into a targeted, system-level solution.

Recommendation 2: Centering Employer-Connected Training Models and Demand-Driven Updates

A second key finding of our analysis is the persistent misalignment between training programs and evolving labor demand. This misalignment is well documented in the literature, with evidence showing that education and training systems frequently fail to keep pace with

changing industry needs, resulting in skill gaps that a majority of employers cite as a primary barrier to growth. Moreover, confusion around which credentials and skills are actually valued by employers further exacerbates inefficiencies in pathway selection and completion.

Centering employer-connected training models and demand-driven updates allows Areté Rising to embed employer demand signals directly into Alpath's underlying architecture. By leveraging the organization's intermediary role to facilitate ongoing collaboration with employers and workforce practitioners, the platform can continuously update pathway recommendations based on real-time labor market data. This transforms Alpath from a static information tool into a dynamic, demand-driven system.

This recommendation is grounded in strong empirical evidence that employer-connected training models, such as apprenticeships and work-based learning, improve employment outcomes by aligning skill development with hiring practices. The recommendation directly addresses our identification of system fragmentation: rather than operating in separate silos, employers, training providers, and intermediaries are integrated into a feedback loop that enhances coordination and responsiveness. While this recommendation introduces greater administrative complexity due to the need for sustained stakeholder engagement, its long-term benefits justify its inclusion. The recommendation enhances system efficiency by reducing skill mismatches and strengthens durability by creating mutually reinforcing relationships between employers and training providers. However, the findings also caution that employer-driven systems can reproduce inequities if not intentionally designed. As such, this recommendation is paired with an explicit emphasis on equitable recruitment and support structures to ensure that high-barrier populations benefit from these opportunities.

Recommendation 3: Guiding Students to External, Relevant, and Pathway-Aligned Funding Opportunities

Our third and final recommendation responds to the cost of participation in workforce pathways. Even when high-quality training opportunities exist, fragmented funding streams and limited transparency around financial aid prevent many individuals, particularly those from historically marginalized communities, from accessing them.

Our proposed recommendation to guide students to external, relevant, and pathway-aligned funding opportunities expands Areté Rising's role by directly integrating structured funding knowledge into its existing altAid+ program. By connecting users to state and federal funding opportunities that are directly aligned with their chosen career pathways, the platform addresses both affordability and information gaps simultaneously. This reflects broader workforce research emphasizing that financial barriers are a primary determinant of participation and completion in training programs, and that better alignment of funding with outcomes can significantly improve system performance.

The recommendation was selected because it targets a root cause of inequity while further advancing system-level efficiency. By increasing cost transparency and directing users toward viable funding sources, the recommendation reduces dropout rates and improves return

on investment for both individuals and public systems. Additionally, by advocating for more coordinated and outcome-driven funding structures, this approach extends beyond individual navigation to influence broader policy alignment.

In contrast to recommendations 1 and 2, this alternative has moderate administrative feasibility because of the complexity of coordinating among multiple funding streams and stakeholders. However, it offers the highest potential for long-term structural impact. Workforce systems that are embedded in stable, aligned funding mechanisms are more likely to produce durable outcomes, particularly when those mechanisms prioritize access, competition, and equitable mobility. From an inclusive parity perspective, this recommendation is critical. Financial constraints are among the most significant barriers facing high-barrier populations, and addressing them is essential to achieving equitable participation in high-quality career pathways. By integrating funding guidance into the navigation process, Areté Rising can ensure that pathway recommendations are not only desirable and accessible, but also affordable—creating the alignment necessary for meaningful system transformation.

Collectively, our recommendations form a coherent strategy that aligns with the report's central findings: workforce system challenges are fundamentally issues of coordination, transparency, and access. Rather than introducing new programs, the proposed interventions strengthen Areté Rising's infrastructure to create a connective system that improves the alignment and delivery of information, resources, and opportunities. By doing so, Areté Rising is positioned to function not only as a service provider but as a systems-level intermediary capable of reducing fragmentation, improving efficiency, and advancing more equitable workforce outcomes.

CONCLUSION

Our findings emphasize that despite the existence of high-growth sectors, there remains a need for sector-specific pathway strategies adopted across the workforce and educational institutions. This is because fragmentation across industries, educational institutions, and employees results in persistent unmet labor market demand and hinders regional economic growth. Moreover, pervasive navigational and informational gaps prevent many job seekers from identifying pathways that promise genuine opportunity and long-term socioeconomic mobility.

The synthesis of the recommendations discussed in this report demonstrates that each occupies a distinct but complementary role within the education-to-workforce ecosystem. Recommendation 1: Strengthening AltPath as a Navigation and Transparency Hub for High-Access and High-Mobility Career Pathways provides a high-feasibility foundation by improving navigation and decision-making; Recommendation 2: Centering Employer-Connected Training Models and Demand-Driven Updates strengthens system responsiveness through employer alignment; and Recommendation 3: Guiding Students to External, Relevant, and Pathway-Aligned Funding Opportunities enables long-term transformation by restructuring funding and access. From a policy design perspective, the strongest overall strategy is sequenced integration: deploying Recommendation 1 for immediate gains, scaling Recommendation 2 to improve alignment and outcomes, and advancing Recommendation 3 to institutionalize equity and sustainability. This layered approach reflects a balanced strategy for Areté Rising to achieve both short-term feasibility and long-term systemic impact.

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Appendix A: Quantitative Method Figures

Appendix Table 1. Composition of altAid Users

Field of Study	Percentage of AltAid Users
Arts and Humanities	0.98%
Business	6.97%
Health and Medicine	40.77%
Interdisciplinary Studies	0.10%
Public and Social Services	2.36%
Science, Math, Technology, and Engineering	10.31%
Social Sciences	1.77%
Trade or Vocational	36.74%
Total	100.00%

*Source: Internal All-Time AltAid Application Data

Appendix Table 2. Comparison by Super-Sector and Funding Dependence

Funding Dependence (%)	Education and Health Services	Leisure and Hospitality	Professional and Business Services	Transportation, and Utilities
2022 Employment	1,207,440	532,750	1,270,190	948,290
2032 Projected Employment	1,358,740	596,110	1,360,390	971,230
Projected Growth (%)	12.53%	11.89%	7.10%	2.42%
Total Job Openings	1,565,430	1,066,280	1,288,830	1,221,260
Accessible Occupations	115	55	208	129
Mean Hourly Wage	\$30.25	\$23.35	\$35.80	\$24.33
Mean Annual Wage	\$72,344.02	\$48,237.60	\$74,456.70	\$51,246.00
Funding Dependence (%)	26.53%	2.19%	0.21%	6.16%

*Source: EDD 10-Year Occupational Projections and QCEW Ownership Share

Appendix Table 3. Distribution of Typical Entry-Level Education

Entry-Level Education	Frequency	Percentage
No Formal Education Credential	86	10.30%
High School Diploma or Equivalent	280	33.53%
Some College (No Degree)	7	0.84%
Postsecondary Non-Degree Award	43	5.15%
Associate's Degree	44	5.27%
Bachelor's Degree	165	19.76%
Master's Degree	34	4.07%
Doctoral or Professional Degree	59	7.07%
N/A	117	14.01%

Appendix Table 4. Distribution of Related Work Experience Requirements

Relevant Work Experience	Frequency	Percentage
None	619	74.13%
< 5 years	73	8.74%
≥ 5 years	26	3.11%
N/A	117	14.01%

Appendix Table 5. Distribution of Typical On-the-Job Training Requirements

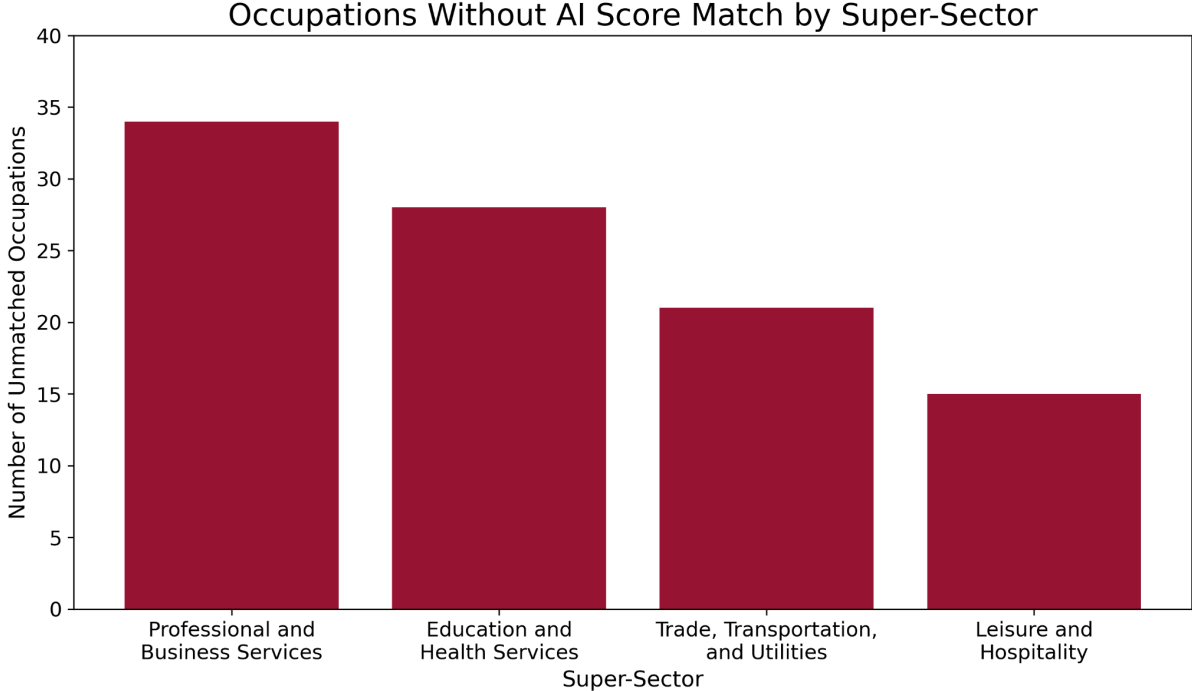
Typical Training	Frequency	Percentage
Apprenticeship	13	1.56%
Internship/Residency	31	3.71%
Short-Term Training	154	18.44%
Moderate-Term Training	178	21.32%
Long-Term Training	49	5.87%
None	293	35.09%
N/A	117	14.01%

Appendix Table 6. Top 20 Accessible Occupations by Baseline Employment and Projected Growth

Occupation	Super-Sector	2022 Employment	2032 Employment	Projected Growth (%)	Total Job Openings	Typical Entry Education
Home Health and Personal Care Aides	Education and Health Services	268,920	360,010	34	552,440	High school diploma or equivalent
Fast Food and Counter Workers	Leisure and Hospitality	107,040	119,070	11	270,140	No formal educational credential
Cashiers	Trade, Transportation, and Utilities	90,840	88,230	-3	170,280	No formal educational credential
Laborers and Freight, Stock, and Material Movers, Hand	Trade, Transportation, and Utilities	98,040	105,020	7	137,960	No formal educational credential
Retail Salespersons	Trade, Transportation, and Utilities	88,250	88,830	1	128,800	No formal educational credential
Waiters and Waitresses	Leisure and Hospitality	56,780	60,960	7	125,950	No formal educational credential
Stockers and Order Fillers	Trade, Transportation, and Utilities	67,030	75,100	12	121,850	High school diploma or equivalent
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	Professional and Business Services	65,230	72,640	11	103,340	No formal educational credential
Security Guards	Professional and Business Services	62,620	71,220	14	97,040	High school diploma or equivalent
Office Clerks, General	Education and Health Services	81,870	78,780	-4	92,670	High school diploma or equivalent
Cooks, Restaurant	Leisure and Hospitality	35,380	47,230	33	73,700	No formal educational credential
Registered Nurses	Education and Health Services	96,620	109,080	13	67,770	Bachelor's degree
Customer Service Representatives	Trade, Transportation, and Utilities	51,650	49,250	-5	65,360	High school diploma or equivalent
Cooks, Fast Food	Leisure and Hospitality	44,470	42,200	-5	62,610	No formal educational credential
Food Preparation Workers	Leisure and Hospitality	28,620	30,240	6	53,890	No formal educational credential
Bookkeeping, Accounting, and Auditing Clerks	Professional and Business Services	46,850	45,000	-4	51,340	Some college, no degree
Secretaries and Administrative Assistants, Except Legal, Medical,	Education and Health Services	51,630	47,530	-8	50,860	High school diploma or equivalent
First-Line Supervisors of Food Preparation and Serving Workers	Leisure and Hospitality	28,740	33,330	16	49,950	High school diploma or equivalent
Maids and Housekeeping Cleaners	Leisure and Hospitality	29,320	33,260	13	48,250	No formal educational credential
Teaching Assistants, Except Postsecondary	Education and Health Services	37,130	39,090	5	46,210	Some college, no degree

*source: EDD 10-Year Occupational Projections in Los Angeles County

Appendix Table 7. Occupations Missing in the AI Sensitivity Analysis



Appendix B: Interview Protocol

Project: Aligning Education, Workforce Funding, and Training Pathways for Uncredentialed and Unenrolled Youth in Los Angeles County

Purpose: To gather practitioner insight on how funding changes, program design, industry needs, and student barriers affect alignment between education and workforce systems.

Sampling Strategy: We will use purposive sampling to select interviewees based on their expertise, feasibility, accessibility, and relevance to our research questions.

Our target groups include:

- Workforce Practitioners
 - Participants will be selected based on sector relevance, implementation-level knowledge, expertise in workforce program design or employer engagement, influence over training or credentialing systems, and feasibility of access. Interviewees will include professionals working across workforce development, economic development, and education institutions in Los Angeles County, particularly those involved in aligning training pathways with labor market demand in high-growth, middle-skill sectors. ●
- Higher Education Faculty and Administrators
 - Participants will be selected based on participation in student services and career development, familiarity with the impacts of institutional funding and AI advancements, and the feasibility of access. Interviewees will be selected from relevant educational institutions (e.g., trade and technical colleges, community colleges, and two- and four-year institutions) based in LA County. Individuals will include program directors, funding administrators, and academic/financial aid counselors.

Risks to the Subject: The interviewees will remain anonymous, and no identifying information will be linked to their responses, thereby minimizing potential risks to confidentiality and social/economic status.

Limitations:

- Insights will be sector-expert and place-specific, not generalizable to broader populations.
- Some hiring or procurement incentives may be informal or undocumented, requiring interpretation based on practitioners' experience rather than on public administrative data.
- Interview access may face delays due to scheduling.
- Inconsistencies in the interviewees' understanding of/experience with funding streams or generative AI advancements may prompt additional, unlisted questions.

Plans for Data Storage: Interviews will be transcribed via Zoom's transcription extension, and completed transcripts will be securely stored electronically in our team's USC Google Drive.

Interview Questions: Workforce Practitioners

Introduction Script (Read Aloud to Participants)

Thank you for meeting with us today. We are graduate students at the USC Price School of Public Policy conducting a research study for Areté Rising. We seek your perspective to better understand how industry needs, funding systems, and credential requirements affect workforce preparation and economic mobility among uncredentialed young adults. You have been selected as an interviewee because you have been identified as someone with valuable insights into education and workforce misalignment, and/or first-hand experience navigating the implications of funding and AI changes affecting our target population.

Your participation is voluntary. You may skip any question or stop the interview at any time. With your permission, we would like to record the conversation to ensure accuracy in our notes. The recording will be stored securely, and only the research team will have access to it. Your name and affiliation will not be included in any report unless you explicitly consent.

Interviewer Ask:

1. Do I have your permission to proceed?
2. Do I have your permission to record the session?

Background

1. Could you briefly describe your role and how it relates to workforce development, employer partnerships, and training programs in Los Angeles County?
2. How long have you worked in workforce development in the region?

Labor-Market Needs & Credential Alignment

3. Which middle-skill roles are currently experiencing the greatest hiring challenges, and which job roles do you anticipate will grow in the next 5-10 years in LA County?
 - a. Is that a skills gap, a credential gap, or both?
4. Which certifications or applied competencies matter most to employers in practice, even if they are not listed as “degree required” on job descriptions?
 - a. Have those requirements changed recently? Why?
 - b. Where do you see the biggest disconnect between formal education/training and day-one job readiness for new hires?

Technological Disruption & Transferable Skills

5. How is generative AI changing the skill demands across key industries in LA County?
 - a. What new tasks will it allow workers to complete that were not possible before?
 - b. How are current workers adjusting to using AI?
6. Which industries have you observed to be most affected by this emerging technology?
 - a. Which industries have received increased investment and traction?

Practical Recommendations

7. If you could recommend one high-leverage change that would improve alignment between workforce funding, training pathways, and hiring in LA County, what would it be?
8. Based on your experience, are there best practices that regional education or workforce systems have not yet adopted?

Closing Script:

Thank you for your time and insights. Your perspective is extremely valuable to our project. We may follow up if clarification is needed. Before we end, is there anything you feel we did not ask that is important to understanding workforce and training alignment in Los Angeles County?

Interview Questions: Faculty and Administrators

Introduction Script (Read Aloud to Participants)

Thank you for meeting with us today. We are graduate students at the USC Price School of Public Policy conducting a research study for Areté Rising. We seek your perspective to better understand how industry needs, funding systems, and credential requirements affect workforce preparation and economic mobility among uncredentialed young adults. You have been selected as an interviewee because you have been identified as someone with valuable insights into education and workforce misalignment, and/or first-hand experience navigating the implications of funding and AI changes affecting our target population.

Your participation is voluntary. You may skip any question or stop the interview at any time. With your permission, we would like to record the conversation to ensure accuracy in our notes. The recording will be stored securely, and only the research team will have access to it. Your name and affiliation will not be included in any report unless you explicitly consent.

Interviewer Ask:

1. Do I have your permission to proceed?
2. Do I have your permission to record the session?

Background

1. Briefly describe your role as it relates to student services and career readiness programs.

Impacts of State & Federal Funding

2. How familiar are you with the following funding streams: Workforce Pell, Golden State Pathways, and HRTP grants?
 - a. Which, if any, are impacting your programs (e.g, financial aid and career development)? How so?
3. Are there any additional funding programs or considerations that impact your services?

- a. What advantages have these funding streams provided for your students or programs (e.g., expanded access, new credentials, stronger employer partnerships)?
- b. Are there any criteria or conditions that these funding streams require that have been challenging to meet?
- c. Have these funding changes shifted which programs or credentials your institution prioritizes? If so, how?

Student Barriers & Access

4. How do you reach and engage students who are not currently enrolled?
5. What services have you seen are most critical for your students' success in the classroom? In preparing to enter the workforce?
6. What are the existing information gaps between your students and available career pathways?
 - a. How aware are students of non-degree pathways that lead to living-wage jobs?
7. What credential pathways (certification, badges, apprenticeships) are students most interested in, and how well do these align with available funding?

Industry Alignment & AI Impact

8. In your opinion, what is the biggest disconnect between what education/training programs offer and what employers actually need from entry-level workers?
9. What role do industry patterns play in developing your programs and student services?
 - a. How do you ensure your programs align with growing career pathways and industry needs in LA County?
 - b. How is AI changing the skills or credentials that employers are seeking from entry-level workers, and how should workforce preparation programs address this change?

Practical Recommendations

10. If you could recommend one high-leverage change that would improve alignment between workforce funding, training pathways, and hiring in LA County, what would it be?
11. Based on your experience, are there best practices that regional education or workforce systems have not yet adopted?

Closing Script:

Thank you for your time and insights. Your perspective is extremely valuable to our project. We may follow up if clarification is needed. Before we end, is there anything you feel we did not ask that is important to understanding workforce and training alignment in Los Angeles County?

Appendix C: O*NET Work Activity Definitions (created by the Council of Economic Advisers)

AI-Exposed O*NET Activities

- Getting Information
- Monitoring Processes, Materials, or Surroundings
- Processing Information
- Evaluating Information to Determine Compliance with Standards
- Analyzing Data or Information
- Making Decisions and Solving Problems
- Thinking Creatively
- Scheduling Work and Activities
- Controlling Machines and Processes
- Operating Vehicles, Mechanized Devices, or Equipment
- Working with Computers
- Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment
- Documenting/Recording Information
- Performing for or Working Directly with the Public
- Performing Administrative Activities
- Monitoring and Controlling Resources

All Other O*NET Activities

- Identifying Objects, Actions, and Events
- Inspecting Equipment, Structures, or Materials
- Estimating the Quantifiable Characteristics of Products, Events, or Information
- Judging the Qualities of Objects, Services, or People
- Updating and Using Relevant Knowledge
- Developing Objectives and Strategies
- Organizing, Planning, and Prioritizing Work
- Performing General Physical Activities
- Handling and Moving Objects
- Repairing and Maintaining Mechanical Equipment
- Repairing and Maintaining Electronic Equipment
- Interpreting the Meaning of Information for Others
- Communicating with Supervisors, Peers, or Subordinates
- Communicating with People Outside the Organization
- Establishing and Maintaining Interpersonal Relationships
- Assisting and Caring for Others
- Selling or Influencing Others
- Resolving Conflicts and Negotiating with Others

- Coordinating the Work and Activities of Others
- Developing and Building Teams
- Training and Teaching Others
- Guiding, Directing, and Motivating Subordinates
- Coaching and Developing Others
- Providing Consultation and Advice to Others
- Staffing Organizational Units

Appendix D: Proposed Policy Alternatives Multi-Criterion

Recommendation Evaluative Criteria	Evaluative Criterion Definition	Evaluative Application of Criterion
<p>Criterion</p> <p>Administrative Feasibility</p>	<p>The degree to which the proposed workforce pathway intervention can be operationalized within the existing education-to-workforce ecosystems, including K-12 systems, community colleges, workforce boards, and nonprofit intermediaries.</p>	<p>Evaluates whether cross-system coordination, particularly between education institutions, workforce development agencies, and employer partners, can be executed effectively and at scale, given current governance structures (i.e., data systems and accountability mechanisms) and resource constraints (i.e., funding streams). High feasibility is demonstrated when implementation leverages existing infrastructure and minimizes duplication while ensuring consistent service delivery across partners (CA Department of Education, 2025).</p>
<p>Efficiency</p>	<p>Assess the extent to which the proposed policy intervention meaningfully strengthens and integrates career pathway systems that link education, training, and employment outcomes for priority (target) populations.</p>	<p>Evaluates whether the policy supports structured, multi-step progression from postsecondary education and/or credential attainment to employment in high-demand sectors. Efficiency is demonstrated when there is alignment with the defining characteristics of career pathways: multiple entry and exit points, integration of education and training, alignment with regional labor market demand, and provision of supportive services that facilitates persistence and advancement (H.R.7309, 2022).</p>
<p>Durability</p>	<p>The capacity of the proposed workforce pathway recommendation to maintain its operational viability and continue producing meaningful labor market outcomes over time, particularly with dynamic economic and political environments.</p>	<p>Evaluates whether the policy can be institutionalized within long-term funding streams, regulatory frameworks, and institutional practices rather than remaining dependent on short-term grants or pilot funding. Durability must consider whether the policy builds self-reinforcing partnerships with employers and regional industry sectors, ensuring continued demand for program outputs.</p>
<p>Inclusive Parity</p>	<p>The extent to which the proposed workforce pathway intervention systematically reduces structural disparities in access, participation, and outcomes across priority populations, ensuring that individuals' social identities do not predict their ability to achieve education and employment success.</p>	<p>Evaluates whether the policy extends beyond equal access to encompass the intentional design of differentiated supports and institutional practices that address historically embedded barriers.</p>

Appendix E. Breakdown H RTP 2025 Awardees per Industry

High Road Training Partnership (H RTP) Fund Awardees July 2025			
Industry	Percentage	Organization	Target Population
Construction & Infrastructure (including Green Jobs)	37%	Bridges LA	Underserved communities in LA county
		Careers for Change: Construction and Landscaping Advanced Training Pathway	People recently returning from incarceration
		Green Futures LA	Youth and young adults
		High Road to Building Decarbonization	Union apprentices
		Installation Basics Training 200 (IBT200)	Underserved communities
		LA/OCBCTC Apprenticeship Readiness H RTP	Underepresented workers
		Tiivac'a'ai H RTP	Native youth and other underserved communities
Aerospace & Defense	5%	Rio Hondo College High Road Training Partnership for Aerospace, Defense & Advanced Manufacturing	Underserved workers
Hospitality & Tourism	11%	Culinary Pathways: A High Road to Opportunity	Underserved, underrepresented, and under-resourced communities in Los Angeles County
		Culinary Arts Workforce Development Program	Youth (18-24)
Creative Sector	16%	Soundworks H RTP	Transitional-aged youth
		The Rain Man Initiative	Autistic and neurodivergent adults
		Workforce Innovation Network (WIN)	Where there is workforce disparities
Public Sector	5%	Strengthening Access to Fire Education and Reentry for Los Angeles (SAFER LA)	Incarcerated firefighters
Healthcare	26%	Building & Strengthening Los Angeles County's Healthcare Workforce through Partnership	Young adults
		Caring Workforce Training Program	Immigrant and low-wage caregivers
		From Recovery to Resilience	Equity-centered
		Bridge to Behavioral Health Careers: Empowering Talent with Lived Experience	People with lived experience
		Prestige Pathways H RTP	COVID-19 impacted and low-income individuals in Los Angeles County

Note: Author's own elaboration based on: LA County Department of Economic Opportunity (August, 2025).