



## GROW APPRENTICESHIP CALIFORNIA

POWERED BY THE  
FOUNDATION *for* CALIFORNIA COMMUNITY COLLEGES



The James Irvine  
Foundation

# Toward Sustainability and Scale

A Playbook for California Apprenticeship  
Stakeholders and Champions

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**Prepared for**

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# TOWARD SUSTAINABILITY AND SCALE: A Playbook for California Apprenticeship Stakeholders and Champions

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## INTRODUCTION

Apprenticeship is on the rise. California, the country's economic juggernaut, is poised to adapt apprenticeships to the needs of modern industries and occupations and to scale it as a strategy for cultivating the next generation of leaders and innovators.

Across the country, surveys indicate increasing interest in apprenticeship among both [parents](#) and [students](#). These sentiments are echoed in California, where apprenticeship has [increased 50%](#) in just the past 5 years.

Interest is also growing among many education and workforce organizations that are well suited to play important apprenticeship support roles in California: community colleges, workforce boards, training providers, high school career and technical education (CTE) programs, industry associations, firms within the state's key sectors, nonprofit organizations, state agencies and local governments, and even universities. Apprenticeship is an ancient education and training model, but updating it for the state's modern economy is new. This playbook reflects important steps in this undertaking.

## Background

In 2016, the California Community Colleges system launched the California Apprenticeship Initiative (CAI), a grant program designed to support the development of apprenticeships in nontraditional sectors and boost diversity, equity, and inclusion in apprenticeship. In 2018, Governor Gavin Newsom set a goal of reaching 500,000 apprenticeships by 2029, in order to connect more Californians to well-paying jobs.

That same year, following rapid growth in the number of nontraditional apprenticeship programs under CAI and increasing interest in apprenticeship from education and workforce stakeholders from across California, the state established the Interagency Advisory Committee on Apprenticeship (IACA) under the Division of Apprenticeship Standards (DAS). In parallel to the California Apprenticeship Council (CAC), IACA provides guidance on apprenticeship programs, standards, and agreements for DAS leadership regarding new and nontraditional apprenticeship occupations.



Since the U.S. Department of Labor began a more robust promotion of apprenticeship expansion in 2014, workforce development boards, state government agencies, foundations, labor unions, nonprofit organizations, industry associations, chambers of commerce, and businesses themselves have started programs, launched partnerships, or joined networks to learn more.

There is much to celebrate. To date, The California Community College Chancellors Office has awarded California Apprenticeship Initiative funding to over 100 projects throughout California. There are over 90 different apprenticable occupations represented by CAI projects, including Coach Operator, Health Information Technical, Teacher, Computer Support Specialist just to name a few.

At the same time, however, California lacks the infrastructure to meaningfully engage with all of these partners: There is no consistent process for launching new programs, no pathway to scale for even the most successful CAI pilot programs, and few formal policy linkages between youth CTE programs and youth or adult apprenticeship opportunities—all hallmarks of mature apprenticeship systems.

### **COVID-19 and The New Case for Apprenticeship**

In March 2020, the COVID-19 pandemic (COVID) upended the state’s economy. The health (and compounding economic) crisis profoundly disrupted work, learning, and life for all Californians, and especially the state’s most vulnerable residents. The pandemic has exacerbated preexisting wealth and racial inequities, including access to childcare, personal protective equipment, and financial resources or cash savings that might blunt the effects of economic hardship.

The pandemic has forced massive shifts in postsecondary enrollments and existential shifts in community economies and labor markets. California’s community colleges saw a [17% drop](#) in enrollment early last year. In addition, although in a recent [national survey](#) current students reported planning to continue their education, nearly half said it’s not worth the cost. Among current high school seniors, nearly one third reported uncertainty about pursuing higher education at all, and four in 10 reported changing their plans—for example, shifting to a college or university closer to home.

California’s labor market has also radically changed:

- The demand for essential workers in grocery stores, online retail (and distribution), and select healthcare occupations (e.g., pharmacy technicians) has [increased](#), while the market for others has nearly collapsed as a result of mandatory COVID-related closures.
- Remote work has become common and is likely to remain so for a much larger share of jobs, opening new opportunities for workers outside their home communities.
- COVID appears to be accelerating automation, especially in technology-forward states like [California](#).
- Women—especially women of color—and young workers have been particularly hard hit and are losing jobs or leaving the labor market in [disproportionately high](#) numbers.
- Small businesses employ nearly half the U.S. workforce—but in parts of California, they are permanently closing. Closure rates in the Bay Area are [double the national average](#). Four California cities (San Francisco, Oakland, San Jose, and Sacramento) are among the 10 U.S. cities with the highest percentages of small business closures.





California stakeholders working to advance apprenticeship in 2020 faced a sudden and dramatically altered environment.

- Rising absenteeism in the workplace (due to illness, childcare responsibilities, or fear among immunocompromised workers) and early retirements exacerbated talent shortages that predated the pandemic.
- Large-scale COVID-related closures in key sectors where new apprenticeship programs were expanding such as [food service and hospitality](#) caused programs to reduce enrollments or pause altogether.
- Interruptions or delays in the postsecondary education plans of tens of thousands of would-be college students delayed graduations and resulted in tens of thousands of California students opting for work out of choice or necessity—often in jobs unrelated to their career aspirations.

New opportunities have also emerged. New occupations for which there was no preexisting training—such as workplace safety officers with specific industry knowledge—emerged, and the demand for workers in select “essential” occupations—such as pharmacy technicians—skyrocketed. The demand for workers skilled in cloud technologies, business analytics, and cybersecurity continues to rise, even as the pathways into these careers have become less visible because of the pandemic-induced shift to remote work.

Because apprenticeship links education and jobs for those building or transitioning careers—through paid work-based learning (WBL)—it offers a solution to many of these challenges and could serve as a critical strategy for recovery.



## About This Playbook

Toward Sustainability and Scale: A Playbook for California Apprenticeship Stakeholders and Champions has evolved in the fluid environment that was 2020. In addition to the COVID-related crisis and drastic shifts in how work gets done—remotely, socially distanced, and with new protective equipment—the apprenticeship landscape itself has changed. The state has seen formal and informal policy shifts, new funders and philanthropic initiatives, key personnel challenges, and disruptions caused by pandemic lockdowns as well as wildfires and social unrest.

Moreover, the task itself is new: Building and scaling inclusive apprenticeship in nontraditional industries and occupations has not been done before—in California or elsewhere; in fact, it had not even been tried until just a few years ago. The playbook’s North Star is sustaining high-quality apprenticeship at scale. We recognize the range of challenges and opportunities that come from the pursuit of this goal in such a large and diverse state. Building California’s apprenticeship system requires many stakeholders, starting from different vantage points, to take action in the absence of a shared roadmap. Thus, with an ambitious goal in mind, our focus was on creating a resource that emphasizes action over planning, and experience over research—one that documents the wisdom of those who are experienced in the apprenticeship endeavor and offers practical steps for those who are new to it.

In this context, to inform the development of the playbook, we:

- interviewed apprenticeship experts who have built and scaled successful programs, launched intermediaries, and designed systems—from inside and outside of California—to gather their most important lessons;
- participated in CAI webinars, convenings, and events—several of which were specifically focused on sustainability—and hosted a series of convenings with foundation-supported apprenticeship programs to gather experience, lessons, and perspectives on critical aspects of expansion efforts (e.g., funding, intermediaries, COVID-related challenges and responses, policy); and
- drew insights from our work with the U.S. Department of Labor, JFF, New America, Urban Institute, and others on apprenticeship expansion, inclusive apprenticeship, and youth apprenticeship.

We then drafted six “plays”—strategies, tactics, or methods leading to sustainability—with key action steps in each. The plays and actions are rooted in the insights of experts and practitioners and drawn from our own experience in providing technical assistance and research services to apprenticeship stakeholders in California and elsewhere.



The plays are not intended to be equally relevant to all stakeholders; rather, they are designed to emphasize the foundational aspects of apprenticeship most crucial in scaling, sustaining, and systematizing the apprenticeship model. They reflect the strategies and effective practices of the most successful experts in this nascent business. The plays we describe are:

- 1. Target industries, sectors, occupations, and employer partners with a business case for apprenticeship.**
- 2. Build co-funded program models so that investments in inclusive program development endure.**
- 3. Cultivate intermediaries who can build knowledge and capacity, lowering the effort and cost of new program development and improving the quality and relevance of existing programs.**
- 4. Develop supportive policy and operational infrastructure so that apprenticeship is anchored within education and workforce development.**
- 5. Foster leadership to enable the system-level shifts necessary to scale apprenticeship.**
- 6. Advance a youth apprenticeship strategy as the anchor for sustainable apprenticeship in California and an equitable solution to the education and employment needs of generations to come.**

With a view toward achieving the higher-level goals cited through the playbook—including diversity, equity, and inclusion, career advancement, and economic mobility—we conclude with a call to define, support, and evaluate sustainability.

It is our intention to use this playbook to share advice from trailblazers that will help programs and stakeholders newer to the field launch, grow, and scale more sustainably. We envision it as a living document, inviting new and better plays as California's apprenticeship system evolves.



## THE PLAYS

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Photo provided by College of the Sequoias





## PLAY 1

# Target Industries, Sectors, Occupations, and Employer Partners with a Business Case for Apprenticeship

An apprenticeship is a job. Traditionally, apprentices apply for their positions and then begin their apprenticeship programs as employees, participating in a mix of Related Supplemental Instruction (RSI) or Related Technical Instruction (RTI) and paid on-the-job training (OJT). Apprenticeship “starts with the employer” because it is partially or wholly operated by the employer.

As apprenticeship has expanded to nontraditional industries and occupations outside the trades, it is frequently seeded by public and philanthropic investment. As a result, intermediary programs and organizations (e.g., high school and college CTE programs, industry associations, labor unions, chambers of commerce, university think tanks, and others), rather than firms themselves, tend to initiate new programs. It is these stakeholders who most often analyze labor markets, secure grants, and build new programs. These organizations and programs work alongside employers; they play critical roles in determining which industries, sectors, and occupations are well suited to apprenticeship growth and expansion.

This play focuses on the early stages of program development—identifying the industries and occupations with a business case for apprenticeship as a solution to key challenges and the partners who can help make an apprenticeship program successful. It covers labor market analysis, partner engagement, and goal setting, and includes a checklist, key questions, and a list of resources that cover these topics in more detail.

## UNDERSTAND THE LABOR MARKET

An apprenticeship program must understand the labor market in the region. It is useful to begin with a review of relevant economic and workforce dynamics across key sectors and demographic groups in the community, with a view toward understanding how labor demand (employers) and supply (students and workers) interact. This is a type of deep labor market analysis; it incorporates employer and worker needs, and often considers the public benefit as well, since public investment usually plays an important catalytic role in the early stages of development. The most effective analyses combine quantitative data with stakeholder engagement, since the experiences of employers, workers, students, and organizations in the labor market can add context and nuance to hard data and also generate insight and understanding.

Photo [opposite] provided by Contra Costa College



## Analyze Labor Market Data

Programs and organizations that seek to launch or grow apprenticeship programs will likely need quantitative information about:

- the size and composition of the labor market, including the demand for and supply of labor and how the two align;
- the factors that influence labor market and economic conditions (e.g., wage levels, location, key assets, and concentration of economic activity and/or proximity to economic hubs);
- anchor industries, skills in demand, and skill shortages;
- capacity and output of education, training, and job placement activities;
- data that describe the workforce by industry, occupation, wage level, educational attainment, and key demographics (e.g., race, ethnicity, age, ability status); and
- key drivers of labor market and economic conditions (e.g., technology, geographic location, immigration).

## Engage Data Partners and Stakeholders

Quantitative data collection is an important first step but gathering qualitative information about the labor market is equally important. This provides essential context for establishing priority sectors and occupations for apprenticeship expansion efforts. Business and community engagement is critical.

Apprenticeship programs should work with stakeholders to identify:

- important trends within the local economy and workforce, and how those have changed over time;
- the experiences and expectations of employers, students, and workers relative to jobs and economic opportunities, as well as perceptions of barriers and challenges; and
- knowledge, awareness, and perceived value of the education and training programs intended to prepare workers for jobs.

Engaging stakeholders in labor market analysis can help build a shared understanding of labor market dynamics and the complex ways in which they manifest. For example, when an employer, a group of employers, or even an industry sector complains about a talent or skills gap, they may experience the problem as rooted in the education and training system. After all, if the system was effectively developing talent aligned with labor market needs, firms would be able to recruit skilled workers from relevant training programs.

Photo provided by  
Santa Monica College



However, a labor market analysis may reveal other important factors. For example:

- Firms may expect more experience in the workplace or in a work environment than newly trained recruits can offer.
- Firms in a neighboring community may be actively recruiting local workers for similar jobs at higher wages, making it more difficult to recruit locally.
- Students and trainees may be relocating to communities with higher wages or more opportunities after they complete training in lower-cost local institutions.
- Firms themselves may be limiting candidates by recruiting only people with specific kinds of experience, by using out-of-date (or overly automated) resume-screening processes, or by conducting narrow outreach efforts that do not tap into diverse and inclusive social or professional networks. These approaches can eliminate qualified candidates from consideration early in the hiring process and give the appearance of talent or skills shortages.

Engaging local industry and community partners in data collection and analysis can provide insights that benefit everyone, and point stakeholders to industries, sectors, and occupations that are well suited to apprenticeship.

When it comes to apprenticeship, we know the what. It's really the how. Apprenticeship is employer driven.... We need employers to engage from the beginning. Then you can establish the expected return [on investment] and build from there.

—**Fran Kennedy, JFF**



## IDENTIFY APPRENTICESHIP OPPORTUNITIES

A labor market analysis can help point apprenticeship stakeholders to challenges for which apprenticeship is an optimal solution—new, quickly evolving occupations for which little training is available, for example, or growing occupations where large numbers of older workers nearing retirement will soon leave the field, taking their deep knowledge and expertise with them.

Opportunities for apprenticeship can arise where the demand for skilled workers exceeds the available supply of such workers. Stakeholders often identify such opportunities for apprenticeship in the following ways:

- **By assessing highly regulated industries or sectors.** Utilities, healthcare, food service, and advanced manufacturing are all examples of sectors with jobs that often require licenses and certifications or that are otherwise regulated by state or federal authorities. These occupations typically already have the kinds of robust job descriptions and defined skill requirements that apprenticeship requires, and they offer good opportunities for apprenticeship.
- **By identifying new occupations with demand across industries.** Network analysts, security specialists, and help desk technicians, for example, are all in high demand across industry sectors. The labor market for these occupations is complex—wages and job requirements vary, career paths can be opaque, and diversity is often lacking. Apprenticeship can be an effective strategy for solving these kinds of problems.

States can usually find good opportunities for apprenticeship in growing sectors that are high priorities for economic development leaders—sectors like the trades, biotech, cybersecurity, health care, financial services, and green energy. These sectors also employ a lot of people whose skills are broadly relevant but who have difficulty advancing within their fields without a degree or moving from one opportunity to another.... Apprenticeship could really help in these instances.

—Dr. Annelies Goger, Brookings Institution





- **By assessing needs in emerging industries or among small businesses.** New industries (e.g., cannabis) and start-ups and craft-style firms (e.g., specialty foods) tend to have only nascent human resources support and training or other structured career development opportunities. Apprenticeship can play an important role in establishing these and in setting new businesses and industries on a path to workforce success.
- **By identifying existing apprenticeship programs** in related industries or occupations (at the state and federal level) that could be leveraged to accelerate the development of programs in related occupations.

A labor market analysis can also boost interest in workforce investment and apprenticeship training among firms. For example, when firms with large-scale hiring needs or recruitment and retention challenges understand the nature of the labor market they are a part of, they may be more open to training. This is because they are more likely to understand that alternatives—like recruiting further afield or nominally increasing pay—may attract workers in the short term but will not likely boost longer-term talent pipelines. Training—including and especially apprenticeship—directly addresses this goal by cultivating workers with the skills, interests, and aptitudes to build careers within a chosen firm, industry, and community.

This type of analysis can also help apprenticeship stakeholders weigh a range of considerations as they invest public resources and support community partnerships. For example, apprenticeship intermediaries like colleges and workforce organizations—many of them publicly funded or managing philanthropy-supported initiatives—are often at the center of efforts to boost diversity, equity, and inclusion within their programs. Engaging Black, Indigenous,

It's important to think impact rather than just success, so that the full range of benefits get considered in assessing outcomes.

—Fran Kennedy, JFF

and People of Color, women, English-language learners, people with disabilities, and other groups that have not been included in apprenticeship in proportion to their numbers is one of the most important roles public and nonprofit stakeholders play in building programs that endure.

Finally, there may be important factors to consider outside of specific industry and labor market needs: The goals of new programs, the enthusiasm of specific employers, and the potential for long-term community benefits, for example, can all be factors in prioritizing new partnerships and program development efforts. Again, this makes engaging with a wide range of industry and community stakeholders—including students, workers, and employers who are likely to benefit—essential for informing early apprenticeship development efforts.



## IDENTIFY THE GOALS OF APPRENTICESHIP EXPANSION EFFORTS

Apprenticeship has been the gold standard of training in U.S. construction trades for a century. However, most apprenticeship initiatives in nontraditional industries, such as healthcare, advanced manufacturing, or information technology, are in their infancy. Stakeholders working in these sectors may prioritize different kinds of goals based on employer needs and opportunities or the needs of apprentices entering these occupations through new apprenticeships. These goals might include piloting a program in a key or high-growth sector, scaling a program in a growing occupation, building a program for a single employer or group of employers with common talent needs, or meeting a business or community need for which training programs either do not exist or have not proven successful.

Homing in on the primary goal of apprenticeship efforts is important so that stakeholders can optimize subsequent steps and associated metrics toward that end. For example:

- **If the goal is to pilot a nontraditional apprenticeship program in a community or industry that lacks such opportunities,** the enthusiasm of a particular employer, regardless of industry or size, may override other factors (e.g., costs, efficiency). This is because launching one or a few programs as proof of concept with an employer that is likely to champion the effort can pave the way for subsequent programs that build on the initial pilot.

- **If the goal is scaling an existing program in a key industry sector,** a supply-chain or sector-based approach may guide these efforts, because such analysis can reveal opportunities for meeting current needs, scaling within related occupations and business networks, and sustaining growth apprenticeship over time.
- **If the goal is meeting an unmet community need,** such as childcare, a community-impact assessment may be the driver of new program development; this approach would reveal the benefits beyond those that accrue to individuals and firms alone.

**Key Insight:** During 2020, a small group of apprenticeship champions working under the James Irvine Foundation’s Better Careers Initiative [shared lessons](#) aimed at scaling high-quality apprenticeship in California. A few members of the work group observed that keeping a narrow focus on “high-skill, high-wage” jobs when prioritizing sectors and occupations for apprenticeship could result in missed opportunities to integrate lower-wage essential occupations (e.g., care occupations) into career pathways and leave out whole swaths of the labor force that did not yet have the skills or training to enter higher-wage jobs—many of them women and people of color. If the goal is community benefit more broadly, then it is precisely essential workers who likely gain the most from new inclusive apprenticeships.



## ENGAGE PARTNERS IN PROGRAM DESIGN AND IMPLEMENTATION

Successfully implementing apprenticeship programs typically requires contributions from a network of partners and stakeholders—including champions and advocates, investors and funders, employers, educators and trainers, data analysts, evaluators, and others from public, private, and nonprofit sectors—each playing different and complementary roles in achieving shared goals. Program partners and stakeholders both play important (and possibly overlapping) roles, but the two groups are not likely identical. For example, partners—for example, data providers—are often central to the task of designing and implementing smart programs. Stakeholders—for example, industry associations or foundations—may be directly involved in programs or not, but typically also fund, support, and/or reap benefits from effective programs and efficient systems.

Experts in apprenticeship recommend building robust program relationships with partners that have capacity in each of the following components of apprenticeship:

- apprentice recruitment;
- technical instruction;
- on-the-job-training;
- student/apprentice support; and
- education and workforce policy.

Doing so will provide program designers with flexibility, since no single organization or agency needs to be responsible for delivering all program components. Partner collaboration in program design can also encourage sector approaches, which increases the likelihood that multiple (new and existing) apprenticeship programs designed for different occupations within a sector will leverage that same technical skills training. With more people enrolled, the training is easier to sustain.

Partnerships can also boost the demand for systems infrastructure, such as registration portals, curriculum and competency frameworks, and funding agreements that individual programs or partners would benefit from but do not have the capacity to develop themselves. This infrastructure is essential for scaling apprenticeship as a robust, high-quality education model and a desirable alternative to a traditional postsecondary degree.

Photo provided by  
Santa Monica College



Finally, partners can often secure important assets that new programs need, such as classroom space, tools and technology, emergency cash and other assistance, help with transportation and childcare, and even tutoring or cohort-based social-networking support. These can be critical in helping to remove barriers to success for both employers and apprentices participating in new programs. Engaging partners in providing these program services and supports—whether directly or indirectly—also makes the total effort and costs of new programs more transparent and helps programs design for sustainability from the onset.

If you want to build apprenticeship programs that endure, it's important to think about the design and scope of individual program components—like on-the-job training and technical instruction. Skilled trade apprenticeships have figured it out. Employers cover OJT and labor partners deliver related technical training. But for apprenticeship programs in nontraditional fields like healthcare, postsecondary education tends to play a greater role in preparing the workforce. There are fewer proven models to look to, but a lot of creative partnerships are emerging to ensure that apprentices are acquiring the skills and credentials that employers demand.

—Lul Tesfai, New America



## PROGRAM CHECKLIST

- **Understand the Labor Market**
  - Analyze quantitative and qualitative data
  - Engage data partners and stakeholders in data collection and meaning making
- **Identify apprenticeship opportunities**
  - Assess needs and benefit to make the business case
- **Identify the Goal(s) of Apprenticeship Expansion Efforts**
  - Address demand (needs of firm, industry, region)
  - Address supply (needs of diverse students and workers)
  - Consider community need/public benefit
- **Engage Partners in Program Design and Implementation**
  - Recruit partners to plan, design, and deliver key program components
  - Encourage collaboration, scale, and system building where possible

## KEY QUESTIONS

### For Policymakers

- What are promising models for analyzing labor markets and identifying trends?
  - Sources of data
  - Methods of analysis and engagement
  - Shared outputs
- How might we encourage collaborative approaches to identifying opportunities for new apprenticeship programs and aligning resources behind them?
- What are the priorities for growing and sustaining apprenticeship in nontraditional industries?

### For Employers

- How might supporting apprenticeship benefit local firms? Key industries? The community?
- How might apprenticeship be incorporated as a standard approach to talent development with a particular firm or sector over the long term?
- How might a particular firm or industry support the emerging apprenticeship system in California?

### For Philanthropy

- Where are philanthropic dollars needed most in the early stages of data collection, collaborative planning, and program development?
- How can philanthropy encourage, support, and protect a consistent focus on equity and inclusion in apprenticeship?
- What is philanthropy's role in apprenticeship system building?



Photo provided by  
Los Angeles Trade  
Tech College



## RESOURCES

The U.S. Department of Labor offers an [Apprenticeship Finder](#) (for both jobs and programs) that is searchable by location. The Division of Apprenticeship Standards at the California Department of Industrial Relations offers [a similar tool](#).

[A Targeted Approach to Apprenticeship](#) is a short guide to engaging business in apprenticeship. Developed by the U.S. Department of Labor for workforce stakeholders, it covers how to use data to identify opportunities and also identifies key workforce challenges—including descriptions and indicators—to ensure they are recognizable when they emerge.

The National Skills Coalition's [The Roadmap for Racial Equity: An Imperative for Workforce Advocates](#) speaks to the importance of equity and inclusion across workforce development policy and programs, including apprenticeship. It provides a wealth of recommendations and includes a chapter that covers apprenticeship and pre-apprenticeship.

JFF's [What We Know About Equity and Diversity in Apprenticeship](#) provides a brief overview of findings in this emerging area of inquiry together with an extensive resource list.

The following resources describe a range of crisis response strategies and new opportunities for growing and scaling apprenticeship in the post-COVID recovery period:

- Wolff, K., Koller, V., & van Docto, C. (2020). How Apprenticeship Programs for Opportunity Youth Stay Resilient through the COVID-19 Recession. JFF Center for Apprenticeship and Work-Based Learning; Social Policy Research Associates. [https://jfforg-prod-new.s3.amazonaws.com/media/documents/SPR\\_AEMF\\_COVID-19\\_Response\\_Report\\_100820.pdf](https://jfforg-prod-new.s3.amazonaws.com/media/documents/SPR_AEMF_COVID-19_Response_Report_100820.pdf)
- Elliott, D., & Katz, B. (2020). Three Lessons from the Swiss Apprenticeship Model to Inform Our Post-COVID-19 Recovery. Urban Institute. <https://www.urban.org/urban-wire/three-lessons-swiss-apprenticeship-model-inform-our-post-covid-19-recovery>
- Jansky, J. (2020). Tested by Coronavirus, Youth Apprenticeship Proves Its Value. CareerWise Colorado. <https://www.careerwisecolorado.org/en/tested-by-coronavirus-youth-apprenticeship-proves-its-value/>





## PLAY 2

# Build Co-Funded Program Models

Many apprenticeship programs, both inside and outside of California, receive initial start-up funding from private foundations or discretionary government grant programs. Flexible resources like these can be essential for conducting the preliminary work that new apprenticeship programs need to thrive: building partnerships, piloting program designs, and developing infrastructure and processes. At the same time, such grant funding is often temporary and subject to the shifting priorities of foundation or agency strategies and field-level trends, or to the program officer's discretion. Building funding models that reflect collaboration among program partners—that is, co-funded models—can help embed apprenticeship support for new programs into established agency allocation processes that will help sustain them over time.

This play focuses on funding. Specifically, it covers mapping programs costs and resources, leveraging resources, and designing sustainability into programs through co-funded program models. It concludes with a checklist, key questions, and a list of resources that cover this important topic in more depth and detail.

## MAP COMPREHENSIVE PROGRAM COSTS

An important step in building a co-funded program model is understanding the total costs of an apprenticeship program. Total program costs include not just the program budget and expenses but also the cost of any leveraged resources or in-kind support borne by host institutions, partner agencies, or nonprofit community organizations. These costs can be obscured by program budgets because the program may not directly manage the funds used to support particular program components, or because some costs, such as rent, are provided in kind.

Having a clear and detailed understanding of total costs, including the costs of individual program components and overall program administration, makes programs less vulnerable; it allows program managers to better anticipate fundraising needs and more effectively plan for growth and sustainability.

Key program components and cost categories include:

- **Program design and administration**, which comprises primarily program personnel—staff who serve apprentices and employers, those coordinating with partner organizations (such as K-12 or technical training schools or programs, youth programs, or workforce development programs), those engaged in outreach, fundraising, and one-time startup costs (including program design, curriculum development, and apprenticeship registration), and those responsible for fiscal management and data and performance tracking.

Photo [opposite] provided by Santa Monica College



- **Related supplemental instruction (RSI) or classroom training**, including the development and delivery of training, the licensing of intellectual property (training programs), certification materials, or other costs associated with training, certification, and credential attainment.
- **Structured on-the-job training (OJT)**. Although apprentice wages are typically paid by employers, mentor training, support for reporting skill gains and training hours, and a “help desk” may impose additional program costs.
- **Training-related costs for apprentices**, such as tools, laptops, uniforms, and safety equipment.
- **Training-related support for apprentices**, including tutoring, coaching, language translation, or other assistance (e.g., sign-language interpretation).
- **Supportive services for apprentices**, including childcare, transportation assistance, or emergency assistance.
- **Rent or maintenance of physical space, technology equipment, software applications, labs, tools, and office supplies**, as well as subscription-based services and other types of physical or technology infrastructure required by the program.
- **Non-personnel costs associated with program management**, such as additional insurance to protect the program and host organization against liability from workplace injury or other damages.



### **Exhibit 2A: How Many Apprentices Are Needed to Sustain a Program?**

Photo provided by Santa Monica College

Dr. Rebecca Lake, former dean of apprenticeship and workforce development, built the apprenticeship program at Harper College (Palatine, IL) into a national model. She advocates “costing *everything* out,” with a view toward understanding how many apprentices make a program sustainable. For example, she determined that 80 apprentices enrolled per year made her organization’s signature program sustainable. This calculation was based on total program costs compared with state reimbursement per student in combination with revenue from employer-paid training. (Apprentices’ wages are not included, since those are typically paid by employers.) Although the costs of different programs may vary widely depending on the level of staff support, infrastructure and equipment, and curriculum development or licensing required, it is important for programs to understand the cost ratio (or similar high-level metric) as they seek to grow and scale.





## MAP THE RESOURCE LANDSCAPE

As a complement to understanding apprenticeship program costs, program managers also benefit from a comprehensive understanding of the sources of revenue available to support apprenticeship and its individual program components. Mapping and analyzing the resource landscape is one way to achieve this. Currently, for early-stage, nontraditional programs, discretionary government or foundation grants support most program components or activities for a specific period of time; quality programs that have sustained themselves for more than a year or two are typically supported by a wider range of funds. Many program managers seek to embed their programs in other funding streams, secure regular allocations, or become approved training providers or otherwise designated partners within the broader workforce development and training system. This helps them access funding that is allocated each year rather than awarded competitively for a short period of time. Such funding can anchor programs, helping them become more secure and sustainable over time.

### Exhibit 2B: Using Workforce Innovation and Opportunity Act Funding to Support Apprenticeship

Under the Workforce Innovation and Opportunity Act (WIOA) Title I, Individual Training Accounts (ITAs) can support classroom instruction offered by providers on the Eligible Training Provider List. Under WIOA, all Registered Apprenticeship programs are automatically eligible for inclusion on the list. ITA resources can pay for tuition or

training fees, books, labs, equipment, and other training-related costs, and can be combined with WIOA OJT funds to support participation in apprenticeship, within the bounds of local workforce board policy and the availability of resources.

A comprehensive mapping of resources available to support apprenticeship programs includes reviewing federal, state, local, and philanthropic funding streams, such as:

- **workforce programs** funded under the Workforce Innovation and Opportunity Act (WIOA), including WIOA Title I Individual Training Accounts, Title II Adult Education and Family Literacy Act program funds, Title III Employment Services, and (for those eligible), Title IV Vocational Rehabilitation program funds;
- **federal funding**, including Pell Grants, Supplemental Nutrition Assistance Program Employment and Training funds, Perkins V funds available through community colleges, other federal programs that support target populations, such as people with disabilities, veterans, youth, Trade Act-affected, or justice-involved individuals;
- **federally supported industry or economic development programs**, including National Science Foundation, U.S. Department of Commerce, and Manufacturing Extension Partnerships initiatives;



- **state allocations or formula funds**, such as apportionment (state funds awarded to community colleges based on full-time student (equivalent) enrollment, or FTES);
- **Montoya funds or RSI reimbursement funds** used to support the classroom training portion of apprenticeship;
- **key state programs**, such as Employment and Training Panel, Strong Workforce, and CAI grants;
- **foundations** at national, state, and local levels;
- **city and county governments** (which often run WIOA programs locally);
- **corporate foundations and local partners**, such as United Way or Local Initiatives Support Corporation;
- **social enterprises**, including large national providers, such as Goodwill, and revenue-generating enterprises linked to education, training, or recovery programs; and
- **partner employers, industry associations, and chambers of commerce.**

Because the funding landscape is complex and can shift with elections or new legislation, programs typically monitor policy shifts and funder priorities regularly to identify new opportunities.

## LEVERAGE THE FUNDING OF PARTNER PROGRAMS AND ORGANIZATIONS

As pilot programs develop, they typically begin to leverage funding or co-fund programs using a range of different strategies. Three common approaches to co-funding programs are braided, blended, and aligned funding:

- **Braided funding** allocates resources from two or more funding sources to pay for a program or service whose costs are allocated and whose expenditures are reported to each individual funding source.
- **Blended funding** combines funds from two or more sources to pay for a program or service whose expenditures may be reported by an individual fund source or allocated across sources on a percentage or similar basis.
- **Aligned funding** allows two or more programs or organizations to allocate funding from different sources in support of a common set of outcomes. Each program or organization allocates and reports expenditures to its own funding source independently.

These strategies are frequently used in combination as programs grow, expand into new occupations, add new program components, or attract more diverse demographic groups.



## **PARTICIPATE IN THE APPRENTICESHIP COMMUNITY**

Finally, it is important for those who aim to build a mature apprenticeship program to participate in the broader apprenticeship community. Among the most significant challenges that new nontraditional programs face are the high cost and complexity of the start-up phase. Collaborating with other programs can help accelerate early progress and also reveal opportunities for resource sharing or other collaboratively funded partnerships. Rather than competing with other programs for funding, for example, programs in a common industry sector or geography might join forces and support an intermediary that lowers the barriers to apprenticeship for a range of different stakeholders, programs, or organizations. Moreover, this kind of collaboration can anchor apprenticeship in communities and regions, which opens doors to new partnerships and funding opportunities with economic development, chambers of commerce, professional and industry associations, municipal procurement, and local corporate philanthropy.

### **Exhibit 2C: Meeting Changing Community Needs**

Kitchens for Good (KFG) was among the most well-respected new apprenticeship programs under California's CAI effort. The program helped justice-involved individuals, people transitioning out of homelessness, and those with significant barriers to employment train for careers in the culinary and hospitality industry. It operated a catering business (a social enterprise) to provide employment for apprentices and generate revenue to support the program. In March 2020, at the start of the pandemic, the program's target sectors were largely shuttered. This might have shuttered the program as well, but KFG had built a reputation in the community. Recognizing that vulnerable populations in the region still needed food, KFG shifted its staff, kitchen, and resources to prepare and deliver meals to community members in need. The philanthropic sector supported the organization's transition. Co-founder Aviva Paley reflected, "We pivoted into hunger relief as a way to meet community needs and keep apprentices engaged and employed....When we took that leap, we were met with an outpouring of support." In September 2020, KFG relaunched its culinary apprenticeship program and launched its baking and food service management apprenticeship programs, adding a more robust complement of training and certifications aimed at meeting the talent needs of the growing sectors within the culinary and hospitality industry.



## Program Checklist

- **Map Comprehensive Program Costs**
  - Consider all program components, including recruitment, fundraising, and start-up expenditures
  - Include in-kind support, the costs of services provided by partner agencies, and administrative and other invisible costs
- **Map the Resource Landscape**
  - Identify the full range of potential program funders—federal, state, local, public and private sector, and philanthropic
  - Monitor changes in the funding landscape
  - Explore paths for accessing funding for programs and for individual program components
  - Consider “fit”: Which funds are best suited to which needs?
  - Consider tracking and reporting requirements and the costs (and risks) they impose
- **Leverage the Funding of Partner Programs and Organizations**
  - Consider braiding, blending, or aligning different funding streams
- **Participate in the Apprenticeship Community**
  - Be generous in sharing lessons and opportunities
  - Be open when the community reciprocates

## Key Questions

### For Policymakers

- How might California better align state and federal funding for apprenticeship in nontraditional industries?
- What investments in “infrastructure,” “systems,” and “anchor intermediaries” might help California preserve apprenticeship gains and scale success?
- How might California support new programs to build sustainable funding models?

### For Employers

- How might industry invest in strengthening and expanding apprenticeship beyond a single program or model?
- Are there opportunities to align public and corporate investment in specific areas, such as in new (nontraditional) sectors or essential worker occupations, or with opportunities for young people?

### For Philanthropy

- How might apprenticeship in nontraditional sectors be funded more strategically?
- Are there opportunities for co-funding (or funder collaboratives) to strengthen or scale programs?
- What are the needs within programs (or the apprenticeship ecosystem) that are well suited to philanthropic support versus government grantmaking?



Photo provided by  
Los Angeles Trade  
Tech College



# Resources

## For leveraging resources:

- U.S. Department of Labor, Employment and Training Administration. (2020). *The federal resources playbook for Registered Apprenticeship*. <https://www.apprenticeship.gov/sites/default/files/playbook.pdf>
- *Funding Inclusive Apprentices: Strategies for Braiding, Blending, and Aligning Resources* (forthcoming).
- *Making Apprenticeship USA Work for the Public Workforce System: Using Workforce Funds to Support Apprenticeship*. <https://www.accs.edu/wp-content/uploads/2019/05/Using-Workforce-Funds-to-Support-Apprenticeship.pdf>
- Tesfai, L. (2020, March 11). *Fostering Equitable Economic and Community Development through Apprenticeship*. New America. <https://www.newamerica.org/education-policy/reports/fostering-equitable-community-and-economic-development-through-apprenticeship/>
- Parton, B., & Prebil, M. (2020). *The Road to 500,000 Apprentices: Ideas for Expanding Apprenticeship in California*. New America. <https://www.newamerica.org/education-policy/reports/road-500000-apprentices/introduction/>
- *Expanding Non-Traditional Apprenticeships in California: The Role of 45 Local Workforce Boards* <https://drive.google.com/file/d/1CudCdGPJKQZMZbozLIqZnkPy0mKbhIwE/view?usp=sharing>

## For building sustainable models:

- Seleznow, E. M., & Walz, A. (2020, November 9). *Apprenticeship Offers a Path to Recovery through Tumultuous Times: A Q&A with Eric Seleznow*. JFF. <https://www.jff.org/what-we-do/impact-stories/center-for-apprenticeship-and-work-based-learning/apprenticeship-offers-path-recovery-through-tumultuous-times-q-eric-seleznow/>
- Boren, Z. (2020, April 9). *Three Ways Policymakers Can Support Apprenticeships During the Pandemic*. Urban Wire. <https://www.urban.org/urban-wire/three-ways-policymakers-can-support-apprenticeships-during-pandemic>



## PLAY 3

### Cultivate Intermediaries

Intermediaries serve as a common point of contact for all the parties involved in apprenticeship (or other WBL). They aggregate and share knowledge, leverage resources, and may fulfill a wide range of structural roles depending on the state or region they're operating in. Intermediaries often serve as catalysts for scaling apprenticeship, and they provide the capacity for sustaining a system to support it.

Just in the past year, stakeholder groups have begun calling for the cultivation of intermediaries. Grow Apprenticeship California, the learning community comprising CAI grantees, convened a series of peer learning sessions throughout 2020 during which the subject of intermediaries was addressed. Participants documented how intermediaries help nontraditional programs develop more quickly and efficiently. They recognized that equitable economic growth requires organizing specific training and support around essential worker occupations (e.g., childcare, home care), and that apprenticeship intermediaries could assist in the effort.

New America included support for intermediaries as one of its four core policy ideas in its recently released [The Road to 500,000 Apprentices: Ideas for Expanding Apprenticeship in California](#), and combined this with a call for a statewide quality framework for apprenticeship in nontraditional fields established through IACA. Finally, a group of apprenticeship practitioners supported by The James Irvine Foundation's Better Careers initiative collaborated on a [call to action](#), released in 2021, that called for intermediaries to “form the basis of an industry-driven statewide apprenticeship system rooted in community needs.”

This play focuses on intermediaries—what they are, why they are needed, and how to cultivate them as key actors in California's apprenticeship system. Examples from other states as well as within California are provided. The narrative concludes with a checklist, key questions, and a list of resources that cover this important topic in more depth and detail.

Photo provided by  
Sierra College





## DETERMINE INTERMEDIARY ORGANIZATION TYPES AND ROLES

There is no single model for intermediaries. Intermediary organizations can be public agencies or institutions or private for-profit or charitable organizations. Examples of intermediary organizations include community colleges or college systems, chambers of commerce, industry associations, labor unions, and community partnerships supported by fiscal agents (see Exhibit 3A). Some act within a local area or region, while others operate statewide, across multiple states, or nationally. Typically, they are organized around industries or sectors, geographies, or a combination. What they have in common is their important role in coordinating and aligning partners, sharing resources and learnings, and scaling programs and initiatives.

### Exhibit 3A: Examples of Apprenticeship Intermediaries

- [Youth Apprenticeship Carolina](#) (in South Carolina) focuses on youth apprenticeship. It has been embraced by the statewide technical college system's growing Apprenticeship Carolina program. It was initially centered at Trident Community College in Charleston and is now expanding to other communities in the state.
- [Aerospace Joint Apprenticeship Committee \(AJAC\)](#) is a statewide program anchored in Washington State's aerospace industry. It offers inclusive pre-apprenticeship training and Registered Apprenticeships for youth and adults in a variety of advanced manufacturing careers. AJAC maintains expansive networks of employers, partners, and service providers, including colleges, workforce boards, and organizations serving diverse demographic groups and geographic communities.
- [Chicago Apprentice Network](#) was founded by three anchor professional services firms—Accenture, AON, and Zurich North America—and has since expanded to over 40 companies in the Chicago area, five colleges and training providers (public and private) and the City Colleges of Chicago, and nearly a dozen nonprofit and community partners working to realize 1,000 new apprenticeship opportunities in 16 industries.
- [Strong Workforce Apprenticeship Group \(SWAG\)](#) is a partnership led by Goodwill Industries of Southern California and College of the Canyons. It includes over a dozen federal, state, and local agencies and nearly 20 employers training apprentices in manufacturing, logistics, healthcare, and cybersecurity careers. SWAG employs a skills-based, data-centered approach, with the goal of expanding apprenticeship to provide high-quality employment for people as well as good jobs and prosperity for communities.



A number of promising intermediaries have evolved from CAI-funded programs. For example:

- [Early Care and Education Pathways to Success \(ECEPTS\)](#) is a nonprofit intermediary organization founded in 2019 to help scale successful CAI-supported apprenticeship pilots in the childcare and early education sector.
- [Inland Empire's LAUNCH Network](#) is the product of a CAI-supported industrial maintenance technician apprenticeship pilot program housed at Norco College. It has evolved into a regional intermediary offering a range of manufacturing, supply chain, and culinary apprenticeships through partnerships with regional colleges, workforce boards, and nearly two dozen employers. Riverside Community College District currently hosts the regional apprenticeship director, who oversees the LAUNCH effort.

Cultivating apprenticeship intermediaries in California requires stakeholders to advance a range of strategies in concert. Play 2 (on funding) and Play 4 (on policy and operations) cover the enabling environment for cultivating intermediaries. The current play focuses on the actions that programs and intermediaries can take themselves.

## **LEVERAGE KEY ORGANIZATIONAL AND PROGRAM STRENGTHS**

Intermediaries often emerge out of individual programs that have developed particular assets or expertise—assets that could be leveraged to achieve wider impact. For example, an intermediary might provide industry knowledge; professional networks and relationships; administrative infrastructure; physical, financial, or staff resources; specialty expertise; curricula; software; or intellectual property. The function of an intermediary can vary greatly.

What typically distinguishes a program from an intermediary is scale. Intermediaries typically support, operate, sponsor, or connect multiple programs with or across sectors and firms. Once an initiative, organization, or institution expands beyond one or a few apprenticeship programs (and pre-apprenticeship programs), each subsequent program becomes easier and less expensive to launch because the processes for doing so are already in place. At that point, it is probably an intermediary. One intermediary we spoke with said they realized they were an intermediary when apprenticeship stakeholders and peer programs began seeking them out for advice.





Experts we spoke with identified four primary categories of intermediary work, acknowledging that there is some overlap between them:

- **Employer/industry engagement** includes developing apprenticeship opportunities, building programs, training and supporting mentors, managing apprenticeship committees, and serving as the conduit between employers and educators.
- **Apprenticeship administration and management** includes building occupational competency frameworks, registering programs, serving as a program sponsor, managing apprenticeship committees, and tracking outcomes and performance.
- **Apprenticeship program support** includes recruiting apprentices and providing outreach, assisting apprentices and parents with navigation, and helping apprentices successfully complete apprenticeships—typically for multiple programs within a sector or industry.
- **Research, capacity building, and advocacy** includes data analysis and research, evaluation, public relations, and coordination with peer or industry-adjacent efforts.

These experts recommended new intermediaries take on roles that build on their strengths and that are widely viewed as necessary to expand or improve apprenticeship in their particular contexts.



Experts and practitioners alike also emphasized that the apprenticeship system in California would benefit from intermediaries playing a role in its development, in partnership with the state’s DAS, IACA, and the agencies that govern California CTE and workforce training and programming more broadly.

Experts cited that intermediaries could help address critical system-level needs in the following ways:

- **Provide community outreach and develop apprenticeship system branding.** Many states are developing statewide apprenticeship brands and shared platforms (apps and websites) that provide common entry points for people interested in apprenticeship and that enhance the model’s credibility as a high-quality alternative to college.
- **Establish blended learning pathways.** This includes guidance on how to connect, align, and leverage programming across institutions that certifies and rewards new skills.
- **Engage and support employers as apprenticeship sponsors and champions.**
- **Leverage tools, knowledge, and capacity** from existing apprenticeship efforts and make it accessible to new programs, firms, partners, and stakeholders.
- **Make information about apprenticeship accessible.** Although recent improvements to the DAS have helped make apprenticeships far easier to locate, program outcome data that could help inform aspiring apprentices’ decision making remains elusive.

Photo [opposite] provided by Los Angeles Trade Tech College



Again and again, California’s program-level stakeholders identified the absence of apprenticeship infrastructure as a challenge. They also recognized that a top-down, single-agency solution was not the answer in a state as large and diverse as California. Intermediaries can help bridge this gap.

## DEVELOP A BUSINESS MODEL

While program-level grants during the start-up phase can seed intermediary work and act as an important catalyst, experts and practitioners pointed to the importance of establishing a business model. Because an intermediary is meant to endure, experts we spoke with cautioned against relying too much on “soft money”—such as one-time grants, informal in-kind contributions, and special programs and initiatives not backed by law or statute—or on a single income source, even if it is a coveted multiyear federal grant.

A business model identifies a clear value proposition; names specific products, services, and target customers; and estimates pricing, revenue, and expenses. Because apprenticeship intermediaries are a new kind of entity, there are few standard models. Enduring sources of revenue are not obvious. Moreover, the COVID-related crisis has upended what had been promising models. In this context, experts and practitioners who had launched intermediaries pointed to four approaches that programs and organizations aspiring to play an intermediary role could use as a starting point:

- **Develop the intermediary as a line of business within a larger organization that offers related products and services.** Colleges, workforce boards, training organizations, sector or industry partnerships, chambers of commerce, associations, and others can employ this strategy, which leverages other services to minimize administrative overhead costs.

- **Design products and services for scale** in order to access a wider range of resources (and confirm the need for an intermediary). For example, one expert we spoke with reported that her former college supported 100 apprentices enrolled in financed (credit-based) training; this yielded enough revenue to support designated intermediary staff. Such staff could even work across multiple colleges if a college-based intermediary is a consortium.
- **Generate repeat business** (and improve processes). Intermediaries may need start-up or seed investment for several years, but good programs have repeat business, grow more efficient and competent over time, reduce costs, generate additional revenue, and develop new intermediary business as well as business for host organizations and partners (e.g., colleges or workforce agencies).
- **Work toward a best-fit intermediary structure**, whether it is a for-profit business, a nonprofit organization, a separate entity, or an ongoing line of business within a larger host organization; account for staffing, physical space, branding, web properties, administrative support, and other expenses in conjunction with the evolving business model.

Photo provided by  
Los Angeles  
Southwest College



## ACTIONS FOR COMMUNITY COLLEGES

### Leverage Institutional Capacity

Although many types of organizations can become intermediaries, community colleges or community college systems have certain built-in capacities that lend themselves to the intermediary role. Unlike chambers of commerce or private businesses, for example, colleges are educational institutions and providers of training already. They have systems to recruit, enroll, assess, and accommodate diverse students; they partner with employers to design and deliver education and training; and they maintain networks of community partners that can help to provide tutoring, assistance with the cost of uniforms and materials, language translation, and health and wellness services.

Experts and practitioners pointed to a number of steps college apprenticeship programs could take to generate support from their administration and boost institutional capacity as apprenticeship intermediaries:

- **Engage senior college leadership in apprenticeship early.** For example, strong relationships with employers engaged in apprenticeship can lead to labor market intelligence (even new business) that extends beyond apprenticeship. This can help senior leaders see how apprenticeship work yields institution-wide benefits.
- **Review existing degree programs** for their potential to become apprenticeship programs, creating more options for students (and often better outcomes) and enhancing relationships with employers.
- **Draw on institution-wide capacity** to map required training and competencies for new apprenticeships in nontraditional industries that can solve industry-wide skills shortages.
- **Participate in the larger apprenticeship ecosystem.** Programs that collaborate with other apprenticeship bodies in the state or region can enhance the reputation and stature of their institutions as apprenticeship intermediaries, boost system-level apprenticeship capacity, and increase access to new revenue sources through partnerships.

### Exhibit 3B: A Texas College Anchors a Statewide Approach to Mapping Courses, Competencies, and Credit

[San Jacinto College](#) in East Texas has a growing array of apprenticeships, including in nontraditional sectors, such as information technology. It is working with the Texas Workforce Commission and the Texas Higher Education Coordinating Board to create 18 industry “crosswalks,” which map business needs and required competencies onto relevant community college courses, with the ultimate goal of establishing consistent practices across the state for awarding college credit for courses taken as part of a Registered Apprenticeship program.



## Explore New Intermediary Roles

The COVID-19 pandemic has introduced two potential new roles for intermediaries:

- **Designing remote-first apprenticeships.**  
Although in 2020 much RSI (or RTI) shifted to remote delivery out of necessity, far more training and employment is likely to occur remotely going forward. Design expertise suited to this new context will likely be an area of need going forward, and this may open apprenticeship opportunities in new firms, occupations, or industries.
- **Establishing formal linkages between apprenticeship and complementary WBL programs (including pre-apprenticeship).**  
Many states, regions, local education authorities, and school districts are improving and increasing their WBL offerings, which creates opportunities for college programs and intermediaries to connect them through articulation agreements and credit-recognition initiatives.

Programs able to address these emerging needs can boost their own capacity as intermediaries while strengthening the apprenticeship system.



# Program Checklist

- **Determine Intermediary Organization Types and Roles and Leverage Key Organizational and Program Strengths**

- Explore possible intermediary roles and functions
- Identify priority needs and gaps
- Identify program and organizational strengths

- **Develop a Business Model**

- Establish an enduring business model around a known value proposition
- Identify business model basics: target customers, products, services, pricing, costs, and revenue sources
- Explore opportunities for operating an intermediary as a line of business or incubation project within a large organization
- Design products and services to be delivered at scale
- Generate repeat business that improves and becomes more efficient over time
- Work toward a best-fit intermediary structure

- **Actions for Community Colleges**

- Leverage the capacity of the institution (e.g., recruiting, assessment, education, training, student support, data, accessibility)
  - Engage college leadership in apprenticeship and demonstrate institution-wide benefits
  - Participate in the larger apprenticeship ecosystem to boost institutional and capacity and increase partnerships

- Explore new intermediary roles
  - Design remote-first apprenticeship programs
  - Establish formal linkages between apprenticeship and complementary WBL programs (including pre-apprenticeship)

## Key Questions

### For Intermediaries and Aspiring Intermediaries (Including Colleges)

- What are the entity's strengths? Areas to consider include:
  - Are there already strong relationships with employers to build on? Is there capacity to engage employers on an ongoing basis?
  - Are there systems to support administration and management?
  - Is there organizational and staff capacity for apprenticeship program support—especially outreach and support for apprentices?
  - Are there organizational resources for conducting research, capacity building, and/or advocacy specific to apprenticeship?
- What is the intermediary's business model (including value proposition, products, services, target customers, pricing, revenue, expenses)?



Photo provided by  
College of the Sequoias



## For Community Colleges

- Is there buy-in at the leadership level on both the noncredit and credit sides for supporting an intermediary role?
- What existing offices/departments/systems can be engaged to support an intermediary role for the college?
- Where are the gaps in the college's capacity to promote, design, offer, and support apprenticeship?
- What other ways exist to expand apprenticeship at the college?
  - Have existing degree programs been reviewed for potential as apprenticeships?
  - Have existing noncredit programs been reviewed for potential as apprenticeships?
  - Has the college mapped the required training and competencies for programs that are good candidates for nontraditional apprenticeships (e.g., early childhood education, information technology, banking and finance, graphic arts, sales, and healthcare occupations, such as surgical technology, pharmacy technology, practical nurse, and medical claims)?
- Have potential employers with which the college already has a relationship been engaged to explore the possibility of creating an apprenticeship?

## For Policymakers

- Are intermediaries playing a strong role in system development? If not, how can they be brought in?
- Are there rewards for demonstrating positive apprenticeship performance outcomes that can support intermediaries to collect and report this information?
- Do the community and/or state colleges have the support they need to do the most effective work as intermediaries and as all-around leaders in the apprenticeship ecosystem?
- How can a stronger apprenticeship system be built in California?
  - Is apprenticeship system branding underway?
  - Do state-level leadership, statutes, and/or guidance exist for blended-learning pathways?
  - Have experienced employers been engaged as system champions?
  - Are there networks for disseminating tools, knowledge, and capacity from existing apprenticeship efforts?
  - What is the state of apprenticeship information transparency?
  - Is there a platform to anchor apprenticeship in California?





## Resources

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## PLAY 4

# Develop Supportive Policy and Operational Infrastructure

Apprenticeship is governed by a combination of federal and state law and policy. The policies of individual institutions, programs, and local and regional leaders also play important roles, but the task of today’s apprenticeship champions and stakeholders is to build systems—to work toward alignment and to craft an operational infrastructure that provides high-quality options for employers, workers, and communities (at scale) and the ability to embrace new opportunities. Achieving California’s goal of 500,000 apprentices requires work at this broader systems level. In turn, a supportive system-level policy environment promises to boost the sustainability of new programs in nontraditional industries and occupations and to increase their capacity to adapt as new workforce and training needs arise. Thus, this play focuses not on individual programs but on the governance, policies, models, and processes that can help existing and future programs succeed.

### Exhibit 4A: Who Governs Apprenticeship?

There are three primary sources of systems-level governance in California.

#### 1. Federal and state statutes.

- At the federal level, the [National Apprenticeship Act of 1937](#) guides policy and designates the U.S. Department of Labor Office of Apprenticeship or an authorized state apprenticeship agency as the primary regulator of apprenticeship, granting the agency (or designee) the ability to approve apprenticeship programs. An approved apprenticeship is referred to as a Registered Apprenticeship.
- At the state level, the [Shelley-Maloney Act of 1939](#) introduced California’s apprenticeship system; it has been subsequently amended by [California Labor Code 3070–3100](#).
- Because apprentices are employees, they are also subject to standard employment law unrelated to apprenticeship.

Photo [opposite] provided by California Community Colleges Chancellor’s Office





**2. Rules.** The California Code of Regulations, Title 8 (200–202, 205–224, 235–263, and 281–282), outlines the administration of apprenticeship in California. It covers committee responsibilities, requirements, and appointments; apprenticeship standards, agreements, and enforcement; program requirements and training authorization; and definitions of terms relating to apprenticeship.

**3. Hands-on practices.** The processes, models, assumptions, and approaches used in the implementation and management of apprenticeship and supported by key programs and initiatives, such as the CAI and federal and foundation-grant-supported programs. Outside of the trades, these practices are relatively new and have not been tested at scale.

In recent years, apprenticeship intermediaries—colleges, labor unions, nonprofit organizations, workforce boards, private sector firms, industry and trade associations, and others—have become critical actors in apprenticeship expansion (see Play 3: Cultivate Intermediaries). In addition, pre-apprenticeship is gaining in stature as a distinct and important precursor to apprenticeship. (In California and a few other states, pre-apprenticeship programs are registered with state apprenticeship authorities.)

California leads the nation in the number of apprentices working in the state, with over 93,000; the vast majority of these individuals work in the trades. Their programs are supported by statutory incentives and other apprenticeship-friendly policies, including apprenticeship requirements for public works projects, limitations on authorized training programs for certain occupations (e.g., electricians, pipefitters), and steep fines for employers who hire apprentices (trainees) and do not raise wages on a required schedule. New, nontraditional apprenticeships—in industries like healthcare, technology, manufacturing, and finance—are only now beginning to develop similar structures. The actions summarized here in Play 4 seek to advance a policy environment that can help scale these new programs and put California on a path to achieving its ambitious goals.

Photo provided by  
Los Angeles  
Mission College



## DEVELOP PARALLEL POLICY AND INFRASTRUCTURE

Experts and practitioners cited California’s need for policy that enables system building for nontraditional apprenticeship programs on par with that established for the trades. California has made progress in this respect in the following ways:

- **The Interagency Advisory Committee on Apprenticeship.** In 2018, the state established IACA and designated it as the body responsible for apprenticeship policy and programs in nontraditional sectors such as healthcare, advanced manufacturing, and information technology. IACA is intended to serve in a capacity similar to the California Apprenticeship Committee, which oversees apprenticeships in the trades. (See [California Assembly Bill 235](#).)
- **Reimbursements.** Also in 2018, the state equalized the full-time equivalent student (FTES) reimbursement rate to colleges for students enrolled in classroom instruction as part of an apprenticeship program and for students enrolled in the same course for academic credit. (See [California Assembly Bill 1809](#).)
- **Registered pre-apprenticeships.** In 2020, the DAS announced it would begin registering pre-apprenticeship programs as well as apprenticeship programs to encourage quality pathways into apprenticeship in California.

Nevertheless, there is much more to do. Apprenticeship practitioners in California have identified several key system-building actions, calling on the state to:

- **Adopt and promote a quality framework coupled with a more transparent process for registering new and publicizing approved nontraditional apprenticeship programs.** This will allow employers, colleges, and other intermediaries to understand the criteria governing registration and the nature of the approval process. Enhanced clarity around quality and registration, combined with an easily searchable inventory of approved standards, will likely increase interest in apprenticeship registration and bring additional consistency to apprenticeship programming, emphasizing apprenticeship as a system rather than a collection of disparate work-based training opportunities. In turn, IACA, as the lead governing body for nontraditional apprenticeship in California, can then shift its attention to addressing more strategic goals, such as equity, scale, and sustainability in apprenticeship.

### Exhibit 4B: Balancing Statewide Standards with Local Flexibility Through Quality Frameworks

A quality framework can help ensure that programs developed by local or regional stakeholders meet or exceed shared minimum standards. Standards can be developed around a whole range of issues or program components—training, OJT, mentoring, and equity, as well as the competency frameworks tied to specific occupations. They can help ensure that a cybersecurity program developed in Los Angeles for one employer, for example, trains apprentices in the same fundamental skills as a similar program in Fresno, even as both programs are customized to local labor market needs and contexts.



One of the most important aspects of a quality framework is the development process itself. It provides the vehicle for stakeholders to collectively determine what they mean by quality and to create incentives for the system itself to produce it. Examples of quality frameworks include:

- [\*A Framework for Quality Apprenticeships\*](#) (International Labour Organization, 2019)
- [\*JFF's Framework for a High-Quality IT Pre-Apprenticeship Program\*](#) (Bennett et al., 2020)
- [\*Local Leadership Model: Design Parameters & Flexibilities\*](#) (CareerWise Colorado, 2018)
- [\*Competency-Based Occupational Frameworks for Registered Apprenticeships\*](#), which offers a growing library of occupation-specific frameworks (Urban Institute, n.d.)
- **Invest in regional apprenticeship intermediary networks.** Intermediaries provide entry points into apprenticeship, support knowledge sharing and network development, boost program quality and efficiency, and anchor apprenticeship systems (see Play 3: Cultivate Intermediaries). Currently, few resources are available to support the intermediary function; those that are available typically pit intermediaries against programs through a competitive process.

- **Develop an integrated approach to funding nontraditional apprenticeship programs.** California is fortunate to have a wide range of [funding sources](#) that can support nontraditional apprenticeship programs: Montoya funds help pay for RSI; the Employment Training Panel works with industry to support training; the CAI grant program is responsible for the largest state-level investment in nontraditional apprenticeship in recent years. In addition, [WIOA funding](#), economic development and other resources allocated by regional planning units, Carl Perkins CTE resources, and other funds can also support these programs. But there is no integrated approach that outlines which resources can be used for which program activities and how. IACA could work with workforce and education policymakers to create such an approach and to support agency and program staff as they put it into practice.
- **Invest in dedicated apprenticeship staff, tools, and ongoing professional development.** Numerous experts and programs consulted on the subject identified dedicated staff with the ability to analyze labor market data and engage employers as key to scaling and sustaining apprenticeship. California's Sector Navigator effort may provide a model for how to increase staff for a system that is not managed by a single agency. Specific support for staff to launch or lead intermediary efforts offers another. In the context of COVID, designing and managing programs for a remote-first environment (not just moving services and training online) was raised repeatedly as an important aspect of staffing and capacity building going forward.



Photo [opposite] provided by Berkeley City College



- **Advance equity.** Diversity, equity, and inclusion were specific objectives of the initial CAI effort, and they remain key goals of apprenticeship expansion efforts. Practitioners have learned much about what works (and what does not). IACA could lead an effort to ensure that equity is an expectation of all apprenticeship programs and set targets that encourage stakeholders to address specific workforce gaps stemming from race, gender, ability, poverty, and digital and English language literacy, as well as other barriers.
- **Invest in data and information infrastructure.** Apprenticeship stakeholders need systems that help them identify opportunities and develop, register, and track new programs so they know what works (and what does not). California’s apprenticeship data challenges are robust enough to justify efforts to document current practices, conduct a needs assessment, and work toward solutions.

## **DEVELOP POLICIES THAT ENCOURAGE WBL GENERALLY, AND APPRENTICESHIP SPECIFICALLY, WITHIN THE PUBLIC EDUCATION SYSTEM**

Apprenticeship experts continue to advocate for inclusive WBL to be connected to the public education system. They argue that connecting WBL models, such as co-ops, internships, and apprenticeship, with foundational instruction in math, reading, and writing supports a high-quality career path. Linking WBL to academic credit (high school and college) will help ensure that the skills and credentials students gain stay with them as they advance.

## **Public K-12 Education**

Historically, apprenticeship in the United States has operated separately from the K-12 school system, though a few states operate programs that provide opportunities to youth starting at age 16. In states like Georgia and Wisconsin, state funding typically pays for coordinators in local school systems who counsel students, support career-focused learning, and help recruit employers, as well as for other program costs, such as required courses not offered in high school. Both apprentices and firms benefit from such a structured approach. Youth apprentices can typically support themselves on a training wage, since they rarely have high costs of living (such as mortgages or head-of-household expenses). Meanwhile, firms, having built lasting professional relationships with younger workers, can often retain trained workers through their years of peak productivity. Moreover, by offering a clear, income-generating career path, the marriage of apprenticeship with K-12 education can help reach students who would benefit from alternative learning environments. (For further discussion on K-12 public education, see Play 6: Advance a Youth Apprenticeship Strategy.)

To enhance connectivity between learning and work in K-12, apprenticeship, and WBL, champions and stakeholders can:

- Offer students WBL experiences. These can include project-based learning tied to local business, job-shadowing and work-experience, and pre-apprenticeship or related CTE in middle school and high school. This can normalize WBL and facilitate access to apprenticeship. These opportunities are increasingly supported by federal policy.





- New federal legislation ([Perkins V](#)) provides a new definition of WBL, requires states and localities to develop plans for providing it, supports it with resources and data, and encourages stronger collaboration with employers.
- Complementary workforce legislation, federal investments in apprenticeship and pre-apprenticeship, and state-level legislation in some states (e.g., [Indiana](#)) provide models for how policy can support WBL broadly and create pathways to apprenticeship.
- State plans and local applications can articulate the role of WBL in fulfilling their vision of CTE and career readiness, including by requiring WBL.

#### **Exhibit 4C: What is Pre-Apprenticeship?**

Like Registered Apprenticeship (RA) programs, pre-apprenticeship programs blend classroom training with applied learning (e.g., WBL). The U.S. Department of Labor identifies five main components in high-quality pre-apprenticeship programs:

- training curricula (both classroom and applied) that are approved by RA partners;
- meaningful hands-on training;
- strategies that support long-term success, such as helping participants apply for RA programs;
- access to support services, such as adult basic education and math tutoring support; and
- facilitated entry into RA programs, such as by making learning credits earned during the pre-apprenticeship program count toward the RA.

- **Adopt a quality framework to guide the development of pre-apprenticeship programs.** Pre-apprenticeships are effective pathways to apprenticeship, especially for students and younger workers. Additional structure and definition could better align them with apprenticeship programs and help bridge learning, work, and career development within the K-12 environment. Two steps toward that end are:

- developing a quality framework, quality indicators, and a shared definition of pre-apprenticeship, coupled with skills standards for different occupations and career pathways; and
- establishing a clear pre-apprenticeship certification process.

- **Establish youth apprenticeship programs and other WBL opportunities within educational institutions across California.**

Activities undertaken by other states include:

- hiring youth apprenticeship and WBL staff at every high school;
- establishing a state office or department for WBL and youth apprenticeship; and
- launching a universal requirement for participation in meaningful WBL or apprenticeship as a condition of high school graduation.

Photo provided by  
Irvine Valley College



## Postsecondary Education Institutions

Postsecondary education institutions, and especially community colleges, have played more critical roles in apprenticeship in recent years—as training providers, intermediaries, student support providers, skills assessment and testing providers, and program managers and administrators. Engagement of colleges with apprenticeship is still nascent across California, however. To increase this engagement, stakeholders and apprenticeship practitioners operating within colleges have noted several policy recommendations:

- **Develop an overarching state policy framework that links vocational and academic training to each other (and to credit).** Such linkages enable stackability—the idea that learners’ academic and vocational skills and credentials are cumulative. This approach enables permeability, where learners in a vocational program can change course out of interest or in response to new opportunities, and transfer to an academic program without losing ground. It also boosts the value of vocational or work-based learning, where a worker with an academic degree who has learned vocational skills on the job could accelerate the pursuit of a vocational credential through testing rather than unnecessary classroom instruction (or vice versa). Developing such a framework would support the growth of apprenticeship as a legitimate and desirable path to work and career.

## Exhibit 4D: Toward Vocational and Academic Linkages

In the United States, academic training is accredited, but skills training, whether delivered by private training providers or colleges, is typically not. Some education districts maintain articulation agreements that bridge the two (especially with K-12 dual-credit programs) and some offer credit for prior learning, but these are discrete and not widely used approaches. Switzerland’s “dual system” is the gold standard for permeability—the ability to shift between vocational and academic learning over a lifetime—and the United Kingdom, Germany, Singapore, and others are also moving in this direction. See <https://ncee.org/wp-content/uploads/2015/03/SWISSVETMarch11.pdf>.

- **Build apprenticeship capacity within community colleges (and establish ties to 4-year universities).** California’s community colleges have led the way in developing nontraditional apprenticeship programs. Some have emerged as intermediaries, but the college system has not developed a standard business model in this area. As a result, current initiatives are supported by time-limited competitive grants and they are often isolated from other college functions that could be leveraged—including business outreach, student advising and career guidance, and student support. Building a business out of apprenticeship (akin to contract-training units within colleges) offers a statewide path to scaling apprenticeship as part of a high-quality education and career pathway connected to credit or a degree. (For more information, see Play 3: Cultivate Intermediaries.) Low-cost steps that could be taken in the short term include:



- **Designing more courses that function as part of the “core” (RSI) for multiple apprenticeship programs.** For example, mechatronics, tool and die, and mechanical engineering all require some of the same courses; these courses could also support apprenticeship programs in a range of advanced manufacturing apprenticeship programs, making a wider range of offerings to students and employers more affordable for colleges.
- **Boost awareness and use of the option to receive financing and academic credit for WBL.** Currently, students can receive financing and up to 16 hours of academic credit for WBL, which can make apprenticeship more affordable for apprentices, employers, and colleges. For example, several colleges offer degree apprenticeships in which a portion of OJT counts as credit toward an academic degree.

#### **Exhibit 4E: The Business “Core” and Apprenticeship at Harper College**

Northwest of Chicago, Harper College built Registered Apprenticeship programs in finance, insurance, and banking, all rooted in the college’s associate degree in business. Harper’s former dean of workforce and economic development, Dr. Rebecca Lake, said this process is “mixing and matching what we’re already doing, with some custom content that’s largely in OJT and mentoring.”

- **Reimagine faculty participation.** In recent years, colleges have struggled to retain high-quality faculty instructors of STEM courses because they have difficulty offering competitive pay packages. This is especially problematic because of the large number of such faculty required for apprenticeship programs. The vastly increased use of synchronous and asynchronous learning, online platforms, and remote instruction since March 2020 provides colleges with opportunities to design new approaches to instruction and faculty engagement—perhaps in collaboration with one another.

Photo [opposite] provided by Los Angeles Trade Tech College





## APPLY LESSONS FROM THE COVID-19 PANDEMIC

The COVID-19 pandemic has presented enormous challenges for apprenticeship. Many career opportunities that colleges had been preparing students for have disappeared, along with employer partnerships.

However, new opportunities have also emerged.

Apprenticeship is both a job and training. As a result, when new occupational needs do emerge, apprenticeship programs can build training around those needs into the program in near real time. Two areas where we have seen needs emerge as a result of the pandemic are safety in the workplace and the increased use of remote technologies (in many occupational categories). In some cases, the job of “safety officer” is undergoing a radical upgrade; in other cases, safety is a more important and specific aspect of existing jobs. Apprenticeship programs can accommodate these shifts immediately, adapting training (i.e., RSI) and building skills in the workplace as required.

Another area where changes have occurred is in the demand for workers in healthcare—one of the primary sectors that has seen growth in nontraditional apprenticeship. Here, there are fewer direct care positions available, while the demand for pharmacy technicians has skyrocketed. Although potentially disruptive, this shift offers opportunities for programs seeking to grow into intermediaries organized around whole sectors rather than individual programs.

COVID threw us for a loop. But if we put funding and staff behind [the effort to build and sustain the apprenticeship system in California], we can make progress.

—CAI Program Manager

Finally, there has been a struggle to ensure apprentices can access the technology required to succeed in their programs (and the help they need to put it to use). Experts we spoke to expressed enthusiasm about the potential to expand apprenticeship training through remote RSI (and RTI)—and eventually to design remote-first apprenticeship programs. At the same time, they expressed concern about the digital divide: access to appropriate devices (and assistance using them) as well as to high-speed broadband to enable remote learning even when other members of the same household are also learning or working.



In order to ensure equitable access for groups already underrepresented in apprenticeship, including Black, Indigenous, and People of Color, women, English-language learners, and people with disabilities, apprenticeship policy should foreground accessibility. Examples of accessibility-forward policies that educational institutions and apprenticeship programs can undertake include:

- **investment in laptop libraries, hotspots, and technology support** for students accessing remote instruction, building the cost of these into program budgets;
- **creation of flexible course offerings**, including evening and weekend classes, both online and in person; and
- **accessible technical support**, such as through a help line, during work hours, and extending into morning and evenings.

Several experts also pointed to the increased need for WBL and apprenticeship in the wake of the COVID-19 environment as family finances have grown less secure.



Photo provided by  
Fresno City College



# Program Checklist

- **Develop Parallel Policy and Infrastructure**

- Develop policy to guide apprenticeship-specific infrastructure at the state, regional, and local levels
- Develop a quality framework and process for nontraditional apprenticeship approval and registration
- Develop apprenticeship system-building capacity at the regional level
- Develop an overarching strategy for the variety of apprenticeship funding that builds toward a stronger, more replicable system
- Invest in specific apprenticeship staff to connect with employers and related instruction providers to develop and register apprenticeships
- Create policy specific to equity and access—especially policy that directly clears barriers to access and digital literacy

- **Develop Policies That Encourage WBL Generally, and Apprenticeship Specifically, Within the Public Education System**

### At the K-12 Level

- Create openings for WBL earlier in the education pipeline, including via pre-apprenticeship or CTE
- Build out the overall ecosystem of youth WBL by connecting pre-apprenticeship to Registered Apprenticeship, and by creating paths to these opportunities through internships, project-based learning, co-ops, and other WBL activities

### At the Postsecondary Level

- Develop an overarching state policy and framework for linking vocational and academic training by mapping them to each other

- Develop consistent internal policies and systems for managing apprenticeship within education institutions, including through funding, student support, credit recognition and awards, and employer engagement
- Leverage apportionment and FTES on a large scale
- Build out and advertise California's capacity to receive financing and academic credit
- Direct core courses to feed multiple apprenticeship programs

## Key Questions

- What are the system's strengths and resources?
- What are the system's weaknesses and needs?
- What steps need to be taken to implement any of the policy considerations mentioned above?
- What is the map of the current apprenticeship ecosystem in California?
- Where are roles unclear?
- Where are new roles needed?
- What metrics should the apprenticeship system be tracking?
- Is messaging about apprenticeship reaching the intended audiences, including employers and potential apprentices?
- What processes can be improved?
- What of the five action steps are the highest priority?



## Resources

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## PLAY 5

### Foster Leadership

Awareness of apprenticeship as a high-quality training intervention is growing, but there is some distance between the reach of the current system and the 500,000-apprentice-strong alternative to college envisioned by Governor Newsom. Leadership in the apprenticeship arena will need to scale in concert with system growth. Fortunately, a growing cadre of collaborative, connected, and committed apprenticeship stakeholders are now taking an active role as system advocates. The actions outlined in Play 5 can help both leaders and newcomers to apprenticeship alike amplify the progress made to date and the opportunities to come.

#### LEAD BY EXAMPLE

Apprenticeship practitioners regularly operate in silos. The absence of an easy-to-recognize, easy-to-access, and easy-to-use apprenticeship system in nontraditional industries and occupations means that apprenticeship stakeholders launching new programs are facing the same problems that others before them have faced. Lacking a larger organizing system, apprenticeship trailblazers are resisting silent hacks or workarounds, opting instead to share their challenges and lessons with collaborators who can help solve them for everyone.

The absence of systems means that everyone is trying to do everything. In large regions, colleges, workforce boards, chambers, economic development organizations are all advancing apprenticeship and engaging employers (and all with too few resources). We need a lane for education, a lane for employer engagement, and a lane for human services—with leaders working in alignment.

—Dr. Annelies Goger, Brookings Institute





Practitioners and experts we spoke with cited many examples of the types of applied leadership necessary to build an enduring apprenticeship system. Specifically, they described a need for the following types of leaders:

- **Program-level leaders who “drive the bus.”** Effective program leaders simplify complexity, inspire confidence, and recruit champions of apprenticeship at every level and at every opportunity. They confront a myriad of difficult challenges, including employers who may have little awareness of apprenticeship, thin budgets to support programs with heavy administrative costs, and the challenges of securing academic credit for related instruction. These leaders master a variety of critical skills and strategic areas of knowledge: employment law and the apprenticeship regulatory environment; funding and resource landscapes available to apprenticeship; economic and labor market opportunities; apprenticeship program design strategies; and systems to track outcomes, measure returns, and share results, to name a few.
- **Business leaders who embrace training in the workplace, partner with government to solve workforce challenges, and engage industry peers and suppliers in sector, industry, or supply-chain workforce development efforts.** Some business leaders represent foreign-owned firms and are familiar with apprenticeship programs abroad; they may look to government or educational institutions for help navigating California’s nascent system. Others are searching for a way to train workers in specific in-demand skills, create a reliable pipeline for future talent, and boost employee engagement, innovation, and collaboration in the workplace. Many businesses that utilize apprenticeship also maintain a broader commitment to training and development, livable wages, and other high-road employment practices.
- **Policy leaders who are willing to experiment and are committed to advancing what works.** California has made large-scale state investments in nontraditional apprenticeship programs that center diversity, equity, and inclusion. The state has done so on the expectation that apprenticeship can provide a path to valuable skills and good jobs for Californians in need of high-quality alternatives to college and the [one in three California workers](#) (nearly 5 million) stuck in low-wage jobs without a path to advancement (among whom women, Black, Indigenous and People of Color are overrepresented). Leaders from DAS, the California Community Colleges Chancellor’s Office, the Foundation for California Community Colleges, the California Labor and Workforce Development Agency, IACA, and others are poised to play important roles in creating strategy, removing barriers to growing and scaling programs, and aligning education and workforce policy going forward.
- **Community leaders who advocate for positive change, engage diverse communities, and contribute in-kind program resources or funding.** These leaders and their advocacy organizations, as well as nonprofit workforce and education support organizations, foundations, and labor unions, play critical roles in adapting programs and processes, championing change, and advancing progress—especially across election cycles and in periods of crisis when collaborative work is most challenging.



Photo provided by  
Los Angeles Trade  
Tech College





### **Exhibit 5A: Why is getting apprenticeship off the ground so hard?**

Apprenticeship is an employer-led talent-development strategy. However, few U.S.-based employers outside the trades are familiar with the model. When employers sign on to Registered Apprenticeship, they agree to hire, train, mentor, and raise the pay of apprentices at regular intervals as a condition of participation. First-time participants or employers participating in new programs will also have to invest time up front, defining skill needs, designing learning pathways, and determining the credentials needed for new apprentice positions. This is a significant commitment of time and resources.

In addition, the apprenticeship model itself is aimed at skills mastery. Unlike short-term training focused on job placement alone, apprenticeship is intended to build skills, disseminate knowledge, and cultivate professional networks that lead to professional careers. That is why the duration of most apprenticeships is two to four years.

Finally, because apprenticeship outside the trades is still new, systems and processes are inconsistent or missing altogether. A shared approach to competency frameworks and college credit award, and program and funding models (across industries) that employers can simply join or adapt are not yet widespread. As a result, and because the system that would let them know a resource already exists has not yet come to fruition, employers and their program partners frequently duplicate efforts.

## **LEAD THROUGH LEARNING**

Experts and practitioners alike stressed the importance of collaborative learning in scaling programs and systems to support apprenticeship in California.

### **Support Apprenticeship-Centered Communities of Practice**

Creation of a community of practice (CoP) is a well-known approach to technical assistance and support for a new initiative or grant program. Programs funded through federal and state grants or foundation-supported initiatives typically participate in their own CoPs; programs with multiple grants often participate in multiple CoPs. CoPs typically emphasize peer learning and sharing, complemented by speakers who are subject-matter experts and by training on program elements that grantees share. Apprenticeship stakeholders can support CoPs by funding, championing, or participating in them.

Experts and practitioners generally recommended CoPs, but they also cited their limitations. They noted that CoPs work well when members share institutional expertise and knowledge, offer diverse experiences, perspectives, and contexts, and seek to accomplish similar or similarly scaled goals. This can be challenging when key apprenticeship program elements (industries, occupations, target demographics, etc.) and participant experience levels and expertise differ significantly. Therefore, CoPs should be designed around the needs of the participating apprenticeship programs. Practitioners and consulting experts specifically recommended that CoPs prioritize the following:



- **Emphasize collaborative practice.** A CoP is often organized around sharing individual practices. This is different from practicing together (i.e., applied learning), which can often deepen and accelerate learning—this is the theory behind apprenticeship itself! One way to encourage practice is through challenge competitions backed by incentives. For example, a government agency or foundation might set a goal to achieve a specific number of apprentices in a new occupation and reward the first team to achieve that number. In another example, the host of a CoP might establish affinity groups charged with solving a problem on behalf of the broader group as a way to promote collaborative action. Crafting shared workplans across programs with similar goals is another option.
- **Support and reward effective learning practices.** Field leaders (and funders) can support learning at scale by helping a CoP relentlessly document lessons and learnings, supporting the CoP over time (possibly beyond the life of the program from which it originated), and dedicating professional staff to the CoP support effort—ideally staff from across primary institution types or stakeholder groups represented in the CoP. Connecting the CoP to widely recognized subject-matter experts and organizing structured workshops, trainings, and other shared formal learning activities are also important aspects of supporting an effective CoP.

We should get serious about communities of practice—within and across states, inside national associations—maybe creating an association for apprenticeship intermediaries. Learning is essential for scaling apprenticeship.

—Robert Lerman, Urban Institute

- **Adopt a network approach.** Establishing regular points of formal contact between various related CoPs and other stakeholders in policy, philanthropy, and research community networks is especially valuable. This kind of connectivity can increase access to resources while minimizing duplication of effort, extend participation to broader groups of experts and stakeholders, and support affinity groups across CoPs without imposing impossible demands on staff or grantees.



As apprenticeship grows in California (and elsewhere), more CoPs focused specifically on sectors or occupations, communities or regions, or demographic groups are likely to emerge. CoPs will be even more crucial as programs that serve youth through apprenticeship and pre-apprenticeship emerge—such as [ECEPTS's](#) early care and education apprenticeships supported by [New America's Partnership to Advance Youth Apprenticeship](#). Supporting and connecting these CoPs promises to boost the system's capacity to achieve the governor's ambitious vision and sustain apprenticeship in California over time.

### **Exhibit 5B: The California Apprenticeship Initiative Hub as a Community of Practice**

The Foundation for California Community Colleges embraced the role of CoP convener early in the life of CAI. Together with partners and contractors, the CAI technical support team at the Foundation has published a newsletter and convened webinars, events (face-to-face and remote), labs, calls, and other activities. It commissioned an early developmental evaluation and established a semi-open platform, called “The Hub,” to connect grantees and to facilitate communication between grantees, the Foundation, key state agencies (such as the DAS), stakeholders from philanthropy, and technical support providers. The Hub was established as a custom platform; it was migrated to Facebook Workplace in 2018 and will launch in a new iteration on LinkedIn in 2021. Most of its members are past and present CAI grantees, though it is also open to others interested in apprenticeship on request. It provides a vehicle for those new to apprenticeship to engage, learn, and network in a transparent and accessible way.

## **LEAD BY LEVELING UP**

One of the most serious risks in the current apprenticeship environment—nationally and in California—is the focus on growing new programs without a clear path for sustaining them. CAI grantees consistently reported that this concern “keeps them up at night.” All new programs carry risk, but apprenticeship requires a significant investment of time in the early stages. Registering, approving credit, and implementing changes in employer partners' workplace norms all take time. The training itself requires the long-term commitment of apprentices. When such programs cannot sustain themselves and cease operating, much is lost—including the hard-won trust of apprentices, employers, and learning institutions.

Experts encourage funders to balance their resource allocations between investing in new program development and building on successful apprenticeship efforts already underway. We identified three key actions apprenticeship stakeholders can pursue to advance their current programs. We discuss each in turn.

Photo provided by  
Fresno City College



### Anchor Apprenticeship Within WBL

Registered Apprenticeship (RA) is a specific, highly-structured, and regulated training intervention—one that has proven its effectiveness for generations. But it is not the solution for every workforce development challenge. Other types of WBL can also boost understanding of and interest in RA among students or employers and grow interest in Registered Apprenticeship indirectly or as a next step. These include:

- **Co-ops** (cooperative education programs) provide structured WBL and training opportunities for students during their postsecondary education experience. Students usually participate in co-ops in lieu of their studies (from three months to one year), and they are typically paid a wage or stipend and awarded credit for learning. There is no expectation of continued employment at the end of the co-op experience, although some companies do hire former co-op participants.
- **Internships** are typically less structured, may be paid or unpaid, and can occur during the student's school experience, during summer or holiday breaks, or some combination. They may be facilitated by colleges, but students may also secure them independently. Typically, students and employers must apply for the student to receive partial credit by demonstrating learning outcomes and providing a portfolio of the student's work.

Registered Apprenticeship is a gold standard of work-based learning, but ecosystems and on-ramps matter. Apprenticeship does not stand alone.

—Eric Seleznow, JFF

- **Project-based learning** can occur entirely outside of a work context, but it is often work-based. For example, a college may cultivate employers with ongoing research, strategy, or data analysis needs and use those as the context for class projects. Students interact with employers but do not necessarily work on site. They are not paid but they do receive credit (because projects occur as a part of the course), and they may be offered job interviews or company tours in exchange for successful project completion. Project-based learning can also occur in a service-learning context. This is common in faith-based institutions of higher education or in education programs that emphasize social impact, public purpose, or community benefit.



- **Challenge competitions** are common to college and university business schools. They usually engage businesses in identifying a business challenge, and teams of students are invited to offer solutions, typically for prizes or awards (cash, scholarship, internships, job, start-up capital, etc.). Again, these may occur in a public-benefit context—such as a social innovation lab aimed at finding solutions to poverty—especially when they are supported by government or philanthropy.
- **Pre-apprenticeship** is a preparatory learning experience (for youth or adults) that is intended to precede participation in an apprenticeship program. During the past decade, coinciding with the increase in apprenticeship, educators and policymakers have placed more emphasis on the structure and quality of these programs, their role in advancing equity, and their direct connections to RA programs. Participants typically receive a certificate of completion but not academic credit, and they may also receive a stipend. A few states register pre-apprenticeship programs, including (as of 2020) California.

By anchoring RA in the broader field of WBL, apprenticeship stakeholders can offer learners, workers, and employers a greater range of options for collaborating to build next-generation talent, maintain real-time information about changing skill needs and new occupational demands, and establish the kind of trust between educators and employers that is required to launch new apprenticeship programs.

## Become an Apprenticeship Intermediary

For successful programs with an interest in building multiple apprenticeship programs around the needs of a key industry (or collection of industries), or to facilitate program development within a region, becoming an apprenticeship intermediary is one way to grow and scale apprenticeship and build system-level capacity. Several apprenticeship programs originally supported under the CAI are pursuing this path, as documented in Play 3: Cultivating Intermediaries.

Although the specific meaning of “apprenticeship intermediary” continues to evolve, and few states have established sustainable business models for intermediaries, there is growing awareness of the importance of these entities in getting to scale. California will almost certainly need intermediaries to achieve 500,000 apprentices and to sustain the systems that make this possible.

Photo provided by  
Evergreen  
Valley College





## Invest in System-Level Collaborative Learning

California's formal apprenticeship leaders have achieved remarkable progress:

- CAI has supported some 100 new programs and enrolled 2000 new apprentices since 2016.
- DAS has established IACA as the new advisory body for nontraditional apprenticeships and vastly expanded its capacity and employer outreach.
- California's community colleges and foundations have piloted intermediaries through grants and special purpose funds.
- Employers in a host of nontraditional industries and occupations—including advanced manufacturing, healthcare, recreation, hospitality, and information technology and data—have embraced apprenticeship as a strategy for addressing skill gaps, talent needs, and equity.

However, these stakeholders have had limited opportunity to engage collectively on the development of a robust state apprenticeship system.

Experts we spoke with advocated for participation in an in-depth, intensive, collaborative experience, such as an institute, design lab, or peer-learning activity (with at least one other state). Several had attended the [Center on the Economics and Management of Education and Training Systems](#) (CEMETS) Summer Institute on apprenticeship (sponsored by ETH Zurich) over the years—some of them multiple times. Colorado, for example, sent a delegation 4 years in a row, resulting in the establishment of CareerWise Colorado, a model upon which other states now advance their own efforts.

The program provided high-level stakeholders from across agencies an opportunity to collaborate on a shared strategy and implementation plan built on the best evidence-based research and practice in the world. Further, it resulted in a cohort of peers from other states (and countries) who became part of an extended apprenticeship network thereafter.

Although the program has been held in Switzerland—because the research institute is located there, and because Switzerland arguably boasts among the most effective apprenticeship systems—the Summer Institute's goal is to draw from the world's best research- and evidence-based practice to help teams identify the strategies and approaches that are best suited to their own particular needs and circumstances.

It would be great to invest in something like CEMETS. California could start by sending delegations there every year and work towards developing a training academy/research institution within the state. For apprenticeship to scale, you need data systems, think tanks, curriculum development—the ability to advocate for a new approach. No more one-and-done education models.

—AG





## LEAD THROUGH ADVOCACY

Advocacy has already played an important role in California’s efforts to scale and sustain apprenticeship. Several groups and entities are already engaged in advocacy work, including CAI grantees, the DAS, the James Irvine Foundation Better Careers grantees working on apprenticeship, Perkins-funded CTE programs delivering pre-apprenticeship programs, select employers, emerging intermediaries and industry partners, workforce boards, and IACA. But there is also more to be done.

### **Collect and Connect Data; Document Stories**

The most important stories to tell about apprenticeship are stories about impact. For employers, public agencies, and policymakers, return on investment (ROI) is an important impact story. ROI occurs over time (and changes as apprentice wages increase) but establishing the data collection approaches and methods—including data-sharing agreements that allow apprentice outcomes to be measured across education, employment, and human service systems early—is essential. California is a large and diverse state with a wide range of industries and occupations already represented in new, nontraditional apprenticeship programs. ROI studies that build on the emerging body of evidence about the effectiveness of these programs will be important tools for system advocates at every level in the medium term and in the years to come.

When engaging business in apprenticeship, stakeholders need to be clear about the return for the company—both the timeline and the value of time. That’s how companies recoup the upfront costs and stay good partners for the duration.

—Robert Lerman, Urban Institute



For parents, students, and programs, as well as for employers and policymakers, individual success stories are also consequential. Such stories tug at heartstrings and instill pride. More importantly, they communicate how apprenticeship works—not in the technical language of educators, but in the steps individual people take, what they learn, and how they advance as a result. Well-documented stories make apprenticeship visceral and begin to paint the broader picture of how educators and industry can work together to help the next generation innovate, through the post-COVID recovery and beyond.

Furthermore, although select philanthropic foundations are engaged in apprenticeship, much more could be done. Experts expressed concern that too few workforce grant makers understand apprenticeship, noting they would benefit from data and impact stories coupled with the identification of system-level assets that require investment to scale and sustain programs.

### **Link California's Apprenticeship Efforts to Federal Apprenticeship Efforts**

Although state-level policy, strategy, and program development are the primary focus of this playbook, federal policy is also critical, especially in 2021 as we begin to recover from the pandemic. In particular:

- **Recent legislation guides the implementation of CTE** ([Perkins V](#)). It requires states and localities to develop plans that could serve as platforms for connecting new partners and cultivating new advocates for RA, especially among leaders of pre-apprenticeship or youth apprenticeship efforts. (See Play 4: Develop Supportive Policy and Operational Infrastructure.)

- **Workforce legislation aimed at aiding in recovery was reintroduced in the U.S. House and Senate in January 2021.** [Relaunching America's Workforce Act](#) (RAWA) increases support for workforce training and career services for youth, unemployed, and dislocated workers, and incumbent workers, including apprenticeship; it also relaunches the TAACCCT program that supported apprenticeship in community colleges and aided recovery after the Great Recession). Some version of it or similar legislation will likely inform the workforce component of a subsequent recovery package and could boost California's efforts to scale apprenticeship in the next few years.
- **Also in January 2021, a bipartisan group of lawmakers from the House Committee on Education and Labor unveiled the [National Apprenticeship Act of 2021](#).** The legislation was passed by the House in early February 2021 and proposes the most significant changes to the U.S. apprenticeship system since it was established in 1937. It would more than double current funding levels, increase support for intermediaries, address key challenges in employer engagement, awareness, and equity, and boost data infrastructure and research—all challenges faced by California that are addressed elsewhere in this playbook.

Opportunities exist for California to help shape and influence federal legislation which could, in turn, help the state move further along the road to 500,000 apprentices.



## Leader Checklist

- **Lead by Example**
  - Name barriers, challenges, and problems, and find collaborative solutions
  - “Drive the bus,” experiment, and advocate in ways that expand opportunities for apprenticeship
- **Lead Through Learning**
  - Participate in communities of practice to advance field-level learnings
  - Learn from your own work and share learnings with peers and collaborators
  - Collaborate on learning and problem solving
  - Connect learnings (and learners!) from across communities of practice
- **Lead by Leveling Up and Through Advocacy**
  - Map your own apprenticeship ecosystem
  - Determine how your program is situated within WBL efforts
  - Understand your connection to state and federal stakeholder CoPs and policy-change efforts
  - Find opportunities to level up (e.g., by becoming an intermediary)

## Key Questions

- Which components of apprenticeship expertise are you leading in? How are you sharing this expertise?
- Which components do you need to learn more about? How will you do this?
- How are you contributing to collaborative learning to grow the field or enhance, scale, and sustain California’s evolving apprenticeship system?

Photo provided by  
Butte College



## Resources

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## PLAY 6

# Advance a Youth Apprenticeship Strategy

Youth apprenticeship is the key to scaling California’s apprenticeship system and reaching the state’s goal of 500,000 apprentices by 2020.

Young workers need jobs, but youth employment is declining. Youth were among the groups hit especially hard by COVID. [In July 2020, just over 46 percent of individuals ages 16–24 were employed, down from 56 percent in July 2019.](#) (The month of July is typically the summertime peak in youth employment.) The unemployment rate for youth was 18.5 percent in July 2020, down from nearly 27 percent in April, but still about twice as high as a year earlier. Further, [a recent report](#) from the National Governors Association, one in a long series of similar studies, pointed to profound shifts in the labor market: By 2020, more than one third of skills required for most jobs in 2016 had been replaced by new technologies and automation. Meanwhile, employers have long reported that traditional education systems are not preparing workers with the skills they need.

Youth apprenticeship (YA) connects high school-aged youth to paid work experience while helping to supply the talent needs of private- and public-sector employers across industries.

From a purely financial perspective, the apprenticeship model is well suited to young people, who can typically afford to live on an apprentice wage while they live at home or in shared accommodation, as many young people do. It is also well suited to employers, as they frequently begin to see positive returns on their investment during the training period as young people’s skills increase.

YA programs can draw on the same funding sources as all apprenticeship programs (see Play 2 on funding models), and don’t require specific legislation or the allocation of additional resources to be piloted across the state. The approach requires a partnership between an employer or industry sector, a high school or district, a postsecondary education institution, and often an intermediary, such as a youth-serving organization, a labor union, an existing apprenticeship intermediary, or a workforce board. California already has more apprentices than any other state, at just under 100,000. The average age is 29, but it [includes 1.8 million high school students and over 515,000](#) young people who are disconnected from work and school. If developed systematically, YA could be the key to reaching 500,000 apprentices by 2029.

Photo provided by  
Santa Monica College





## **Exhibit 6A: Benefits of Youth Apprenticeship**

Youth apprenticeship offers a host of benefits for all stakeholders.

- **Benefits for Youth**

- Paid work experience
- Applied, hands-on learning (which can be more effective than learning through study alone)
- Structured mentorship
- Access to postsecondary credits and credentials
- Access to professional networks
- Post-secondary education without debt

- **Benefits for Employers**

- A steady infusion of new talent to replace retiring workers
- Young workers with lower starting wages
- Opportunity to customize training for new workers (i.e., no “skills gap”)
- Reduced recruiting and hiring costs
- Increased retention
- Increased diversity within the workforce and talent pipeline
- Training often paid for by the K-12 and college systems
- Increased employee engagement

- **Benefits for the K-12 and Postsecondary Educational Systems**

- A strong model for career readiness
- Postsecondary educational attainment for many more youth than these systems currently reach
- An answer to widespread concerns about college affordability and completion
- More equitable and inclusive pathways to career opportunities for students
- Specific opportunities to partner with employers

The 500,000 apprentices the state aspires to are currently in elementary and middle school. If we wait for them to find their way to the non-system in place now, we won't get there. We have to build very deliberate pathways—a youth strategy within the apprenticeship system.

—Brent Parton, New America





## BUILD QUALITY INTO YOUTH APPRENTICESHIP FROM THE START

At the heart of YA is paid on-the-job learning (supported by a mentor) coupled with related training (and skills assessments). Typically, community partnerships make these possible, as outlined in the U.S. Department of Labor's [High School Apprenticeships: A Guide for Starting Successful Programs](#). Although YA can take a variety of forms, ensuring quality in the early stages is crucial for building the kind of permeability that will ensure technical training and academic instruction are recognized within each other's domains and provide meaningful opportunities for all learners, regardless of their starting points. The Partnership to Advance Youth Apprenticeship has identified five principles to guide program development and help existing programs boost their capacity and increase their impact (see Exhibit 6B).

### Exhibit 6B: Partnership to Advance Youth Apprenticeship's Elements of a High-Quality Youth Apprenticeship

- **Career-oriented:** Apprentices' learning is structured around knowledge, skills, and competencies that lead to careers with family-supporting wages.
- **Equitable:** Apprenticeship opportunities are accessible to every student, with targeted supports for those adversely impacted by long-standing inequities in our education system and labor market.
- **Portable:** Learning leads to postsecondary credentials and transferable college credits that expand options for students.
- **Adaptable:** Learning is designed collaboratively to be recognized and valued across an industry or sector.
- **Accountable:** Student, employer, and program outcomes are monitored using transparent metrics to support improvement.

See [Partnership to Advance Youth Apprenticeship: Principles for High-Quality Youth Apprenticeship](#)



## ANCHOR YOUTH APPRENTICESHIP WITHIN THE BROADER APPRENTICESHIP AND WBL ECOSYSTEM

Aligning YA (and pre-apprenticeship) with apprenticeship for adults, internships, co-ops, and other WBL activities can help strengthen programs. For example, a student enrolled in a project-based learning activity in one type of program could transition to a pre-apprenticeship bootcamp, which is then linked to a YA. With these linkages, the student benefits from labor market information and employer engagement efforts across programs, making all of the programs more efficient (and more sustainable). Furthermore, aggregating WBL programs helps universalize WBL as a whole: If a particular WBL activity does not appeal to a student, another might; it creates the expectation that WBL offers something for everyone. (Play 4 describes how the K-12 and community college systems can develop policies that encourage WBL generally, and apprenticeship specifically, within the public education system.)

### Exhibit 6C: Leading the Way on Linking Youth Apprenticeship and WBL

- [Partnership to Advance Youth Apprenticeship](#) is a multiyear initiative operated by New America that supports efforts in states and cities to expand access to high-quality apprenticeship opportunities for high school-age youth. Over 50 grantees as partners across the United States are participating in this effort.
- [JFF's Center for Apprenticeship & Work-Based Learning](#) provides expert guidance and resources on effective approaches to WBL that benefit businesses, students, and workers. The center is supporting work in some 21 states, including California, and offers specific expertise on equity and inclusion as well as apprenticeship for opportunity youth.
- [The Center on Labor, Human Services, and Population](#) is one of Urban Institute's signature policy centers, conducting research on a wide range of policies designed to improve people's lives, including apprenticeship. Urban Institute has produced dozens of reports and resources on apprenticeship, and several on statewide youth apprenticeship approaches, including in [Colorado](#), [Georgia](#), [North Carolina](#), [Tennessee](#), and [Washington, DC](#).



## EMBED YOUTH APPRENTICESHIP IN THE STATE'S DUAL-ENROLLMENT AND CTE INFRASTRUCTURE

Good quality apprenticeship programs are education programs. They provide quality training in the context of classroom instruction and ultimately deliver to students the knowledge—and academic credit—they need to build careers. Dual enrollment lets students earn both high school and college credit for college courses they complete while still in high school. Authorized by [Assembly Bill 288](#) in 2015, the College and Career Pathways program enables high school students to take college courses, taught by college professors, at their high school campuses. This program is the typical route through which dual credit is awarded.

Among the courses for which students may earn both high school and college credit are CTE courses funded under Perkins V. (For more about apprenticeship funding sources, see Play 2: Build Co-Funded Program Models.) CTE is a program of study comprising a multiyear sequence of courses that integrates core academic knowledge with technical and occupational knowledge. California calls its Perkins V State Plan “[a key part of the State’s more wide-ranging effort to create a world-class CTE system that can strengthen education and workforce preparation available to all Californians.](#)” It could also be a foundation for a world-class YA program.

## Exhibit 6D: San Joaquin County Office of Education’s ARCH Program

Apprenticeships Reaching Career Horizons (ARCH) is the first high school-based Registered Apprenticeship program in California. Launched by CAI grantee San Joaquin County Office of Education in partnership with regional employers, school districts (who are also employing apprentices), and the local community college, ARCH offers YA programs in information technology, automotive technology, home care, and logistics. ARCH integrates classroom instruction (RSI) with existing dual-enrollment provisions. Even during COVID, program participants were able to front-load RSI at San Joaquin Delta College. ARCH demonstrated how YA can be formally integrated with the state’s dual-enrollment and CTE infrastructure, bridge K–12 and higher education, and support students’ education, work, and career goals through apprenticeship.

As YA programs that combine dual enrollment and CTE become available, additional services and supports that help students navigate them will need to be in place—at least initially. For example, school districts, community colleges, and partnering state agencies will need to provide:

- **career education and programming**, including visits to work sites for students and presentations from employers at school;
- **vocational counseling** to help students navigate education and career options, including youth apprenticeship;



- **flexible approaches** to scheduling coursework and class attendance in order to accommodate student apprentices who are training at work sites;
- **a placement assistance system** for employers to connect with potential apprentices and for students to access apprenticeship opportunities; and
- **a data infrastructure** to track data that aids in program improvement and establishes the value of YA over time. Although schools and colleges already track student progress for funding and reporting purposes, they may need additional infrastructure for these purposes.

#### **Exhibit 6E: A State Example: Kentucky's TRACK Program**

Tech Ready Apprenticeships for Careers in Kentucky, or TRACK, is Kentucky's YA program. It uses the current high school CTE infrastructure to align courses with the requirements of a Registered Apprenticeship program. The model is scalable in all program areas, and numerous employers have registered as apprenticeship sponsors in order to access young talent in the pipeline. Apprenticeship is increasingly recognized as a valuable postsecondary option for student apprentices, who earn high school credit for OJT hours, college-level credit for prior learning through related technical instruction, and a paycheck. The combination saves education providers, students, and employers time and money. TRACK completion leads to a recognized industry certification in Kentucky.



## APPLY AN EVIDENCE-BASED PRACTICE APPROACH TO PLANNING AND IMPLEMENTATION

Although the research base is limited, existing evidence has shown that the key elements of YA—contextualized coursework, WBL, and the provision of industry-valued credentials—engage young people in learning, build relevant skills and knowledge, and jump-start careers in which young people can grow.

For example, although it is not YA, the California Linked Learning District Initiative combines academic and vocational education through industry-sector-themed pathways with work-based capstones that resemble YA. An evaluation of the initiative found that, compared with their peers, Linked Learning students:

- demonstrated increased academic success in high school;
- gained more 21st century skills;
- reported high school influences as important with respect to their major or program of focus;
- reported higher job quality;
- were 5% less likely to drop out and 8.5% more likely to graduate from high school; and
- earned 15.5 more credits overall, and 1.7 more college preparatory credits. More specifically:
  - English learners earned 11.7 more credits and one more college preparatory credit; and
  - students who identified as African American earned 15.2 more credits and, compared with their African American peers who enrolled in postsecondary institutions, were 12.4% more likely to enroll in 4-year colleges.

It will be important to continue to evaluate and collect effective practices, build them into program designs, and inform state efforts to establish quality frameworks for RA and pre-apprenticeship.

### Exhibit 6F: California's Linked Learning District Initiative

In 2009, the James Irvine Foundation launched the California Linked Learning District Initiative in nine school districts. Linked Learning pathways (educational experiences) are designed to integrate four core components throughout the student experience:

- **rigorous academics** that prepare students to succeed in college;
- **CTE courses in sequence**, emphasizing real-world applications of academic learning;
- **WBL that provides exposure to real-world workplaces** and teaches the professional skills needed to thrive in a career; and
- **comprehensive support services** to address the individual needs of all students, ensuring equity of access, opportunity, and success.

A multiyear evaluation documented implementation and lessons learned from participating districts and measured the effect of the initiative on [student outcomes](#).



Photo provided by Los Angeles Trade Tech College



## UPDATE THE POPULAR NARRATIVE ABOUT APPRENTICESHIP

In order for YA to scale in such a way that it helps California reach its goal of 500,000 apprentices, the popular narrative about apprenticeship—that it means blue collar jobs in the building trades—must change. The fastest way for this narrative to shift is for many more employers across industry sectors to participate. Further, apprenticeship programs will need to continue to develop relationships with higher education institutions in order for apprenticeship to develop as another valid pathway for education with career path possibilities—that is, to expand opportunities, not narrow them.

The CAI, nearly a decade of federal apprenticeship expansion efforts, and the growth of high-quality WBL opportunities linked to credit (or required by postsecondary education institutions) have vastly expanded apprenticeship opportunities and laid the foundation for a new understanding of apprenticeship. Across the nation—prior to the pandemic and since—we have seen increasing interest in apprenticeship, especially among young people.

During 2020, the labor market in California (and globally) was upended. As the COVID-related crisis gives way to recovery, the need to connect young people to new and newly redesigned jobs and training opportunities—many remote—will become urgent. California’s education, workforce, and business leaders will have the opportunity to reimagine apprenticeship for the modern era and employ it in service of the inclusive, equitable, and enduring recovery the state seeks to achieve.





# Program Checklist

- **Build Quality Into Youth Apprenticeship From the Start**
  - Draw on existing resources and frameworks for developing high-quality YA
  - Campaign and educate to ensure that technical training and academic instruction are recognized within each respective domain
- **Anchor Youth Apprenticeship Within the Broader Apprenticeship and WBL Ecosystem**
  - Map the local and regional apprenticeship and WBL landscape, and get to know the state system in order to connect new YA to the broader system
  - Reach out to the local and regional apprenticeship system to explore possibilities for YA among existing RA
- **Embed Youth Apprenticeship in the State's Dual-Enrollment and CTE Infrastructure**
  - Understand the mechanics of dual-enrollment and CTE in order to ensure that a new or nascent YA is taking full advantage of those pre-existing educational structures
  - Follow in the footsteps of those who have started YAs – ARCH, TRACK, and others
- **Apply an Evidence-Based Practice Approach to Planning and Implementation**
  - Study the evidence and shape program accordingly
  - Contribute to the evidence base – work with local researchers to track initial findings

- **Update the Popular Narrative About Apprenticeship**

- Understand the local and regional labor markets – where the need is and who might new employers be (don't overlook the public sector, including schools themselves)
- Reach out to employers in your community

## Key Questions

- What role does YA play within the context of CTE? What role might it play?
- Who should apprenticeship leaders look to for leadership on YA?
- How engaged is the business community to YA? Who are the champions?
- What policies are in place to support the development of YA? What policies are missing?
- What role does YA play in the context of the larger apprenticeship system in the state? What role might it play?



## Resources

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## Conclusion

The combined effect of a strong economic recovery and a steady federal push for apprenticeship from 2009 to 2019 [more than doubled the number](#) of new apprentices and new apprenticeship programs per year in the same period. California mirrored this growth with an added emphasis on expanding apprenticeships into nontraditional industries and occupations—the focus of this playbook. Dozens of employers partnered with state agencies, colleges, workforce boards, and nonprofit organizations to make this happen.

To their credit, California’s key stakeholders have had their eyes on sustainability since launching the CAI in 2016. Sustainability has been a regular subject of convenings, webinars, and discussion since the very first CAI Apprenticeship Lab in 2016. In 2020, the technical assistance team engaged CAI grantees in a sustainability series, during which they drafted program- and system-level indicators for consideration in program assessment and goal setting. The process informed the contents of this playbook and made important contributions to the field, especially in the areas of equity and program quality, as stakeholders sorted through their responsibilities within the growing apprenticeship ecosystem. This work continues in California and elsewhere.

At the same time, there is no single path to scaling these new programs or sustaining apprenticeship as a model in nontraditional sectors and occupations. It will likely require stronger programs, new kinds of intermediaries, and a collection of changes to legislation, rules, and approaches to funding to establish the kind of root system that sustains apprenticeship in the trades and that has endured for decades.

In the 30s, we created the public works systems. We could take a broader view and modernize workforce systems and support—data, infrastructure, energy, childcare and elder care, and so on. We could then be conscious about building apprenticeship and work-based learning into all aspects of the recovery plan, and help large numbers of Americans into longer-term articulated career paths. We could make everything a stepping stone. This is a choice.

—Dr. Annelies Goger, Brookings Institute



Both types of programs and systems—traditional and nontraditional—will have to adapt to the post-pandemic economy, to rightful demands for increased diversity, equity, and inclusion, and to the acceleration of automation, nontraditional forms of employment, and other future-of-work trends that were present prior to COVID. Both systems have the opportunity to integrate youth and YA as a fundamental component of California’s apprenticeship approach. And doing so will likely significantly boost sustainability as well as achieve important social and community goals over time.

Through modern, world-class apprenticeship, California’s choices during the post-COVID recovery period have the potential to vastly improve the transition from education to careers for millions of Californians in future generations.

Toward these ends, it is our hope that this collection of plays and actions can be adopted or adapted by diverse apprenticeship stakeholders representing a wide array of institutions.





# **GROW APPRENTICESHIP CALIFORNIA**

Supporting the expansion  
of apprenticeships and  
providing access statewide.