Even though we’re entering a decade of increasing uncertainty, the goal is the same: to ensure equal access to meaningful work and a sustainable livelihood for all San Franciscans. Focusing on three guiding principles to ensure that goals can create a clear sense of direction as city government strives to create the workforce development ecosystem we want in 2025. Workforce development ecosystem has always been informed by these guiding principles, and they can serve as beacons for navigating the coming decade.

1. **Ensure equity**
   - In the next decade, global economies and algorithmic scheduling threaten to create new forms of wage slavery. We must ensure that the workforce development ecosystem provides equal access to meaningful work for all. Profiting equally will mean finding new ways to empower workers and job seekers to better match their skills and interests to available jobs. The workforce development ecosystem will need to provide access to education and training opportunities that workers need to be job-ready and to create more access points to employment and cleaner pathways to meaningful work.

2. **Expand job readiness**
   - Many workforce development programs primarily focus on helping people develop a skill set to find a full-time job. A single employee, the gold standard for job placement. As new jobs and tasks evolve more quickly, our ability to provide timely and effective employment training programs will need to expand accordingly. Workers and job seekers will need to continuously learn new skills and adapt to the changing job market and find a way to work. Communication skills, etiquette, and cultural competency—which are more important than ever—will become more so than now. Ensuring equity will mean finding new ways to empower workers and job seekers to build networks and acquire the skills to thrive in the ever-changing job market.

3. **Catalyze collaboration**
   - The same technologies disrupting today’s economy can be leveraged to create unprecedented opportunities for workers and job seekers. And, for the first time, workers and job seekers will have access to powerful digital tools to connect with each other and with the right people and opportunities. Collaboration is key to successful workforce development. We need to ensure that workers and job seekers have the tools to find meaningful work and acquire the skills to thrive in the ever-changing job market.

A MESSAGE FROM THE OFFICE OF ECONOMIC AND WORKFORCE DEVELOPMENT...

In a world with numerous workforce development stakeholders, OEWD sets out to envision the future of work and identify the challenges that the workforce development ecosystem must address to ensure equal access to meaningful work. The guiding principles provide a filter for developing insight about what future change could mean and how best to respond.

We would like to thank all of the stakeholders that worked with us to develop this map, including those within the workforce development ecosystem who provided input and who helped us to understand better how the workforce development ecosystem is changing. Our insights and contributions to this process are invaluable and help us to connect the dots between the guiding principles and key challenges we must address in the next decade.

FUTURe FORCES

Three forces in particular will alter the overall work landscape, demanding responses across the workforce development ecosystem.

- **Automation and job erosion**
  - Job erosion—the destruction and creation of jobs caused by automation—is accelerating rapidly and spreading across occupations. Even as workers’ need for meaningful and sustainable employment increases, employees’ need for human labor will be massively and continuously disrupted by automation over the next decade. Even so, many organizations will still need many of their professions enabled as automation moves into service, knowledge, and creative jobs. New jobs will be created at the expense of old ones, but new and creative work is becoming a swiftly moving target. Expect to see a rebalancing of jobs and gigs, and of government and private employment.

- **Platform economy and task souring**
  - Employees are learning to provide services to customers purchasing labor outputs. New platforms from TaskRabbit to Lyft to Elance-oDesk are now available. As automation advances, workers will be displaced from jobs. This displacement process can be anticipated, and workers will need to have the skills and education to move into new work. The workforce development ecosystem and education system have the opportunity to help workers gain new skills and knowledge to transition from one work role model to another.

- **Open and independent learning paths**
  - New platforms and tools make it easier to track accomplishments outside traditional institutions and career ladders—but only for people with the time, know-how, and capital to invest in learning. For many who work part-time or have unstable employment, a new learning model online for free, alternative credentialing models reduce the necessity of a diploma, and lifelong learning can become a reality. And independent learners build meta-cognitive skills and the confidence in their own ability to acquire the skills that they need to do the work that they enjoy. Expect new learning and education options to emerge as people adapt to changes in the job market and in their own lives.

Cities make the future. They’re where people from all walks of life and cultures live, work, and play in close quarters. This intersection of diverse people, ideas, and ways of being creates and makes culture with astounding speed.

San Francisco has a long history of changing how we work, and why we work. The city is the golden gate to the future. The city’s workforce development ecosystem is a network of public, private, and nonprofit service providers connecting job seekers with employers and employers with opportunities to grow their companies by providing industry aligned training and access to job opportunities. Today, the city sets an example for cities across the country. San Francisco is one of 10 cities to win an open and independent learning paths RFP to develop the Future of the Workforce Development Ecosystem.

This is your guide to anticipating and responding to the workforce development ecosystem of the next decade. The map is your resource to develop a clear sense of direction in the workforce development ecosystem. You can use it to develop employment and highlights potential pathways to meaningful work.

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FUTURE FORCES
shaping the workforce development ecosystem

San Francisco’s workforce development ecosystem has successfully adapted and evolved over the last 150 years, meeting all manner of technological and economic changes head on, ensuring that the City and its people prosper. Today, three disruptive technology-based forces in particular will alter the overall work landscape, demanding responses across the workforce development ecosystem.

1 automation and job erosion
Job erosion—the destruction and creation of jobs caused by automation—is accelerating rapidly and spreading across occupations. Even as workers’ need for meaningful and sustainable employment endures, employers’ need for human labor will be massively and continuously disrupted by automation over the next decade. Even white-collar workers will see many of their professions eroded as automation moves into service, knowledge, and even governance work—creating new vulnerable populations. Job readiness is becoming a swiftly moving target. Expect to see a rebalancing of jobs and gigs, and of government and private employment.

2 platform economies and task routing
Employers have long functioned as middlemen, connecting employees to customers purchasing labor outputs. New platforms from TaskRabbit to Lyft to Elance-oDesk are now matching people in need of goods or services directly with people providing them. Over the next decade, many people will transition from working a single steady job to managing multiple income streams from gig-based work. In this world, platforms and algorithms instead of employers and managers define the rhythms of daily work. Workers may have greater access to new opportunities and more choice about the kinds of tasks they do and when, but they will also be subject to new vulnerabilities such as lack of benefits and income stability. Expect to see platform workers organize for compensation, worker rights, and greater equity, and begin to share strategies and resources as they attempt to thrive in this new world.

3 open and independent learning paths
New learning options create opportunities to learn and track accomplishments outside traditional institutions and career ladders—but only for people with the time, know-how, and access to leverage them. Resources like Coursera put top-tier university classes online for free; alternative credentialing models reduce the necessity of a diploma; and platforms like Skillshare turn anyone with something to teach into a teacher. Such learning paths are more affordable and agile than traditional education, which is saddling a generation of students with unprecedented debt and the burden of matching their learning to employment. And independent learners build meta-cognition skills: awareness of and control over their own learning journey, motivation to succeed, and a clear vision of where they aim to end up. Expect these new options to bring an element of improvisation, and a demand for more collaboration and intention, to the ever-shifting meaning and task of learning for job readiness.

THREE GUIDING PRINCIPLES
for workforce development

Even though we’re entering a decade of increasing uncertainty, the goal of workforce development remains the same: to ensure equal access to meaningful work and a sustainable livelihood for all San Franciscans. Focusing on three guiding principles for action that move us towards that goal can create a clear sense of direction as city government strives to create the workforce development ecosystem we want in 2025. Workforce development has always been informed by these guiding principles, and they can serve as beacons for navigating the coming decade.

1 ensure equity
In the next decade, gig economies and algorithmic scheduling threaten to create employment systems that prioritize the needs of the client over those of the worker, even more so than now. Ensuring equity will mean finding new ways to empower workers and job seekers to control their work situation, to protect them from exploitation, and to create more access points to employment and clearer paths to meaningful work.

2 expand job readiness
Many workforce development programs primarily focus on helping people develop a skill set to find a full-time job with a single employer, the gold standard for job placement. As we move toward more dynamic, gig-based forms of employment, the concept of job readiness will need to expand accordingly. Workers and job seekers will need to constantly learn new skills and accumulate experience, and leverage that experience to find new work. Communication skills, etiquette, and cultural competency—which employers report matter more than job-specific tasks that can be taught on the job—will be more important than ever before as people come to rely on networking and reputation to seize job opportunities. The workforce development ecosystem will need to help workers and job seekers build networks and acquire the skills to thrive in the ever-changing work world of the next decade.

3 catalyze collaboration
The same technologies disrupting today’s economy can be leveraged to create unprecedented opportunities for worker and job seeker support. And, for the first time, workers and jobseekers will be able to access a broad range of services on-demand, anytime, anywhere. But to help jobseekers and newly vulnerable populations effectively navigate and access these opportunities, stakeholders will have to coordinate and collaborate closely. Workers will need to connect to government resources and to one another to find meaningful work and sustain their livelihoods. And stakeholders will need to collaborate closely to create seamless experiences, spread best practices to the entire ecosystem, and ensure equal access to meaningful work and a sustainable livelihood for all San Franciscans.

The workforce development ecosystem can respond and adapt to change to continue serving existing populations, as well as meet the needs of newly vulnerable populations it’s never served before. Workers can connect to government resources and to one another to find meaningful work and sustain their livelihoods. Stakeholders can collaborate closely to ensure that best practices spread to the entire ecosystem. Making progress on these fronts will help us move towards the unchanging goal of workforce development.
Although the technology-based disruptions we outline might undermine traditional workforce development approaches, they open up powerful new opportunities to act on the three guiding principles to build new workforce ecosystems: increase equity, ensure workforce readiness, and collaborate closely. Workers will need to connect to government resources and to one another, partnerships, with employers in ways that use the power of technology to sharpen their focus and add the benefits of training.

What if unemployment training organizations helped specific clients harness platform ecosystems? Employed-looking people looking for first-time, side-door, either clients in vocational training or transitioning to schooling or to boost their income, and traditional workers seeking supplemental income can graduate for platform work.

What if employers bring part-time or full-time employees with them to build something spontaneously? Today, working multiple part-time jobs is really more frequent, and employers are shifting away from unpredictable shift scheduling and accepting new kinds of work into their working practices.

What if workforce training organizations helped educate job seekers about new platforms and build financial stability? Service providers can connect individuals to a shared economy, and employers can automate savings for workers who never had savings before, and decrease their costs using new software services.

What if workforce training organizations helped job seekers identify new pathways to meaningful work? Many of these new support platforms benefit from economies of scale. Buying health insurance as a large group could be facilitated from economies of scale. Buying health insurance as a large group could be facilitated in terms of training funding because they are now technically “employed.”

What if workforce training organizations helped job seekers create the workforce development ecosystem they want? Platforms like Uber and Lyft are again experiencing profound transformation.

What if workforce training organizations helped job seekers take on more meaningful work? What if employers actively helped job seekers create a basic income guarantee? Autonomous work from the future could be facilitated in terms of training funding because they are now technically “employed.”

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Cities are where we face the future first. This map highlights three future forces, major technological changes redefining work in cities, and outlines six powerful strategies for updating workforce development processes to address these changes.

**Future Forces**

1. Automation and job erosion
   - As automation advances, algorithms and robots are replacing much human work. "Jobs readiness" becomes a moving target as many jobs disappear, replaced by different ones.

2. Open and independent learning platforms
   - New learning options, like online courses and new credentials, are enabling individuals to build their own learning pathways outside of institutions.

3. Platform economies and task routing
   - New platforms from TaskRabbit to Elance-UxWeb are matching people who need services to those who can provide them, changing work for many from a single job to build gig-based work.

**Guiding Principles**

1. Ensure equity
   - Empowering workers and job-seekers with the ability to control and negotiate their working situations.

2. Expand job readiness
   - Helping workers and job-seekers learn skills valuable for existing and emerging job opportunities, including access to high-quality training and development for all.

3. Catalyze collaboration
   - Identifying new partnerships within the community of workforce development stakeholders to improve outcomes.

**Anticipate job erosion and the need for reskilling**

During the crucial period when workers are clearly heading towards work replaced by machines, there is an opportunity to plan for a career that leverages their existing skills but pays more. Designing this "reskilling window" to key in ensuring equity and expanding job readiness. A new level of transparency and cooperation from employers is required by divulging plans to automate early and thus extend the window. And workers must finish to build new skills while fulfilling their existing work requirements, a fail-safe for those who work multiple part-time jobs or have other responsibilities.

**Identify new ways to build skills and credentials**

Online courses and course certificate programs are new ways for workers to prove to employers that they have valuable skills—but only if employers recognize them. At the same time, the millions of people who see such courses are college graduates, moving or in no hurry to create or modify learning platforms to make them more inclusive. Finding ways to get employers to recognize online credentials and designing learning platforms that are accessible to the most vulnerable populations is key strategies. That many many workers lack access to the Internet at home today and in the future is a basic rights issue that must be addressed first.

**Help workers build a portfolio of income sources**

In the platform economy, workers make money when they complete a task rather than work a shift. Because of it’s "nowhere, whenever" nature, platform economy work can supplement traditional incomes, but although these jobs might offer access to quick money, they provide little job stability, access to equity, or opportunity for promotion and often no traditional benefits. This is changing as more companies realize that making these platforms work for systems is helping them understand their employees and to bring into these resources and to how to manage these new sources of income like a portfolio.

**Teach networking skills for self-directed work**

With the industrial model of employment declining along with tenure at jobs, workers are moving from job to job at a more rapid pace. With the needs to use social networking to find and secure jobs, the sharing economy, and access to networks has never been more important. While middle-income workers are establishing online networking technologies, workers in the sharing economy and gig workers do not feel welcome to them. Developing all workers’ and job-seekers’ social networks and finding ways to connect them with opportunities more inclusive and accessible, both physically and socially, will be critical.

**Create new support services for gig workers**

Gig workers lack many basic worker protections and benefits of full-time employees, such as reliable income, health insurance, benefits, sick leave, paid vacations, and access to management and resources. Workers unions and the law provide financial services, including opportunities to receive impact investing and microcredit, as well as tax management and savings accounts or retirement services that will emerge over the next decade. Stakeholders in the workforce development ecosystem may have the opportunity to facilitate the creation of responses to the needs of gig workers and even create support services themselves.

**Rethink paths to meaningful work**

As the paid labor economy changes, initiatives like the basic income guarantee point to responses that are not about getting people back into paid work and more about living them to take on meaningful work that can help them nurture their communities, families, and themselves. While such initiatives are urgent social policy discussions in some countries, more modest new-term initiatives could still create an environment where it’s safe to grow, giving people new incentives to pursue small businesses and other entrepreneurial enterprises. As the same time, new living arrangements, like co-working and co-living, point to new ways to prioritize quality of life while reducing costs.

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Even though we’re entering a decade of increasing uncertainty, the goal of workforce development remains the same: to ensure equal access to meaningful work and a sustainable livelihood for all San Franciscans.

The changing world of work creates new opportunities for workforce development organizations to use this map to explore new strategies and resources as they attempt to thrive in the next decade. It highlights ways to move toward the workforce development ecosystem we want in 2025. Here’s how to use them:

1. **Ensure equity.**
   - The next decade will see new workforce development stakeholders. Ongoing efforts to understand the future of work and identify the challenges that the workforce development ecosystem must meet is essential. Workforce development organizations will need to be less siloed and more collaborative.

2. **Expand job readiness.**
   - Many workforce development programs primarily focus on helping people develop a skill-set to find a full-time job. A single employer, the gold standard for employment, is not enough. Expect to see a rebalancing of jobs and gigs, and of work and leisure. Expect workers to have more access to employment and clearer paths to meaningful work.

3. **Catalyze collaboration.**
   - The same technologies disrupting today’s economy can be leveraged to create unprecedented opportunities for workers and job seeker support. And, for the first time, workers and job seekers will have access to data about wages, skills, and work. Workers and job seekers will have access to data about wages, skills, and work.

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Cities make the future. They’re where people from all walks of life and cultures live, work, and play in close quarters. This intersection of diverse people, ideas, and ways of being creates and remakes culture with astounding speed.

San Francisco has long had a history of changing workers. Valley workers nurtured and developed the gold rush to the digital revolution. From the San Francisco Bay area to the Bay Area, San Francisco has been a key player in the economic development of the nation and the world.

But this is not the beginning. Over the next decade, many will be even more rapid and accelerate, opening up new opportunities for workers. As automation advances, workers will be displaced from jobs. This displacement process can be anticipated, monitored, and addressed.

**FUTURE FORCES**

1. **Automation and job erosion.**
   - Job erosion—the destruction and creation of jobs caused by automation—is accelerating rapidly and spreading across occupations. Even as workers’ need for meaningful and sustainable employment increases, employees’ need for labor is maximally and continuously diminished by automation over the next decade.

2. **Entrepreneurialism.**
   - From Lyft to Elance-oDesk, each platform is encouraging workers to take control over their own learning journey, motivation to succeed, and a clear vision of where, when, and how to work. The "basic income guarantee" points to new priorities around freeing people up to take on more meaningful work and multiple income streams. And activists are encouraging clients to try sharing economy platforms.

3. **Open and independent learning paths.**
   - New kinds of learning platforms and job accommodations outside traditional institutions are changing the game. Online courses, badges, and micro-credentials are becoming a reality, and the skills people earn online can be verified by employers. Micro-credentials can be stacked into larger certifications and academic degrees, and can even be verified by employers. Virtual reality and augmented reality can be used to train workers.

**TAKING ACTION**

Futuring the workforce development ecosystem requires using this map to navigate and access these opportunities. And stakeholders will have to coordinate and collaborate closely to create meaningful experiences, speed best practices to the whole ecosystem, and enact equal access to meaningful work and a sustainable livelihood for all San Franciscans.

The workforce development ecosystem can expand and adapt to continue serving existing populations, as well as meet the needs of newly vulnerable populations. Workers can connect to government resources and use one another to find meaningful work and digital skills. And workforce development organizations will need to collaborate closely to create meaningful experiences, speed best practices to the whole ecosystem, and enact equal access to meaningful work and a sustainable livelihood for all San Franciscans.

The Institute for the Future is located in Palo Alto, California. More information about the Institute can be found at www.ift.org. The Institute’s mission is to help us understand how to teach vulnerable populations to use new software services.