

SIX EFFECTIVE APPROACHES FOR TECHHIRE INITIATIVES

LESSONS FROM THE FIELD

By Tara Smith and Randall Wilson



JOBS FOR THE FUTURE



Information technology jobs are among the fastest growing occupations in the country, spanning many industries—not only high tech but also manufacturing, health care, retail, and financial services. Yet over a half million IT job openings are unfilled. Many of these jobs do not require university degrees and could be filled by unemployed or underemployed Americans if they obtain training in a community college, industry certificate program, online program, or “coding boot camp.”

To meet the growing demand for skilled tech workers and to foster opportunities for entering the tech field, President Obama [announced](#) the launch of the TechHire initiative in 2015. [TechHire](#) is a network of regions across the country that are working to build an ecosystem where government, employers, training providers, and other stakeholders work together in collective action to achieve a unified goal—developing a pipeline of diverse talent to meet employers’ rapidly growing IT workforce demands.

This brief profiles TechHire communities and describes effective approaches for providing high-quality, accessible tech training. We hope that the information presented here will help other communities just embarking on this work, and in particular, workforce boards, education and training providers, and institutions looking to expand the supply of high-quality IT talent.

BACKGROUND

The TechHire initiative is part of the Obama Administration's [Job-Driven Training](#) agenda, based in part on a review of the evidence led by Vice President Biden and four federal agencies to determine [what works](#) in job training. As a result of that review, the Administration has focused its efforts on making federal workforce development and training programs more job driven, invested in apprenticeship programs, and worked to mobilize a broad set of stakeholders, including employers, educators, innovators, and communities, around new efforts to build skills and connect Americans to jobs. The "[Job-Driven Training Checklist](#)" outlines seven defining characteristics of the Administration's job-driven approach:

1. Engaging with employers to determine hiring needs.
2. Making smart choices based on labor market data.
3. Measuring and evaluating employment and earnings outcomes.
4. Developing steppingstones to support progression across education and training.
5. Opening doors and removing barriers to training and employment opportunities.
6. Offering work-based learning opportunities.
7. Creating regional partnerships including the public workforce system, education and training providers, labor organizations, and nonprofits.

As this brief demonstrates, TechHire communities around the country have embraced these characteristics in the design of their own initiatives.

TechHire is also aligned with the Workforce Innovation and Opportunity Act (WIOA) of 2014, which reauthorized the public workforce system. TechHire initiatives demonstrate many of the objectives defined by WIOA, including helping employers find skilled workers, increasing accountability and information for jobseekers, supporting regional collaboration, targeting workforce services to better serve jobseekers, and improving access.

Since the launch of TechHire, more than 50 communities with innovative IT workforce programs underway have pledged to work with national and local employers and the growing network of TechHire programs to improve recruiting, training, and placement in the tech industry.

The Department of Labor's [TechHire grants](#), funded by the H-1B nonimmigrant visa program user fee, will invest in both pilot and scaling programs that

will more rapidly build a skilled workforce to fill unmet demand in the IT sector. At least half of DOL's TechHire funding will go to projects working to prepare young people age 17 to 29 who face barriers to training and employment in tech industries including IT, health care, and advanced manufacturing. TechHire grantees are expected to be announced in mid-2016.

Government, employers, training providers, and other stakeholders work together in collective action to achieve a unified goal—developing a pipeline of diverse talent to meet employers' rapidly growing IT workforce demands.

EFFECTIVE APPROACHES TO TECHHIRE TRAINING

This brief provides profiles of six TechHire communities that demonstrate six innovative and effective approaches for tech industry training. These communities underscore the role of the public workforce system in creating new opportunities in the IT field.

Each of the communities profiled employs one or more of the following approaches:

1. Encourage strong employer participation across a variety of roles
2. Design accelerated and stacked programs focusing on technical and practical skills
3. Emphasize the importance of students learning the tech industry work culture
4. Expand opportunities for underrepresented populations
5. Use systems change as a key program driver
6. Leverage and braid funding across federal and other funding streams

These approaches are discussed in detail following the community profiles.

TECHHIRE TRAINING IN SIX COMMUNITIES

Opportunity@Work has been collaborating with the national network of TechHire communities to identify key challenges and solutions in providing high-quality, accessible tech training to meet employer demand for IT skills.

The six communities profiled below are innovative examples of TechHire work.

LA HI-TECH

The Los Angeles High Impact Information Technology, Entertainment & Entrepreneurship, and Communications Hubs (LA HI-TECH) is a regional consortium focused on developing a skilled and competitive tech workforce. Launched in 2015 to address current and projected IT workforce demand, the program is currently offering targeted training at 16 local high schools and eight area colleges. The consortium offers training in three career pathways: design, visual, and media arts; information support and services; and software systems and development. The LA HI-TECH model includes wraparound services to support students as they transition along a career pathway to employment in high-demand occupations. The project is tracking participant outcomes, including career preparation, dual enrollment in high school and college courses, entry and progress in college pathways programs, and connections with paid internships.

The initiative is sponsored in part through a \$15 million grant from the California Career Pathways Trust, as well as the state's Linked Learning initiative and WIOA youth funding. Key partners for LA HI-TECH are the Los Angeles Area Chamber of Commerce, the City of Los Angeles Mayor's Office of Economic Development, and local secondary and postsecondary institutions. Mayor Eric Garcetti established the LA Tech Council to identify challenges and opportunities, and the city is looking to use WIOA funds to support a tech sector intermediary for the region. More information at: <http://www.lahitech.org>

CODE LOUISVILLE

Louisville, Kentucky, launched the Code Louisville project in 2013 as a collaborative effort among Kentuckiana Works—the local workforce board and administrator of the program, the Louisville Free Public Library, the City's Office of Civic Innovation, EnterpriseCorp—the Louisville Regional Office for the Kentucky Innovation Network, and employers to address the growing demand for software developers in the region. Code Louisville offers accelerated online training leading to careers in front-end web development, as well as software development opportunities. In 2014, Code Louisville was awarded a \$2.9 million Workforce Innovation Fund grant from the U.S.

Department of Labor.

Using their public library account, any resident with a high school credential

in 13 Metropolitan Louisville counties in Kentucky and Indiana can open a free "Treehouse" learning account. [Treehouse](#) is an online instructional platform for learning web design, coding, and other technology skills. Individuals must complete 20-30 hours of work in Treehouse before applying to Code Louisville to continue their free training. Code Louisville training typically involves two 12-week sessions. Code Louisville also requires students to attend weekly in-person meetings to connect with mentors and other students, mimicking networking events and collaborative work climates common to the field. Mentors are an essential component of the Code Louisville program, and many area developers have proven eager for the opportunity to hone their own leadership and team management skills through the process. More information at:

<http://www.codelouisville.org>

The LA HI-TECH model includes wraparound services to support students as they transition along a career pathway to employment in high-demand occupations.

NYC TECH TALENT PIPELINE

New York City's Tech Talent Pipeline (TTP) is a public-private initiative to deliver quality jobs for New Yorkers and quality talent for the city's businesses through three core strategies: (1) working together with employers to identify tech workforce needs; (2) developing and testing education and training solutions to meet those needs; and (3) scaling solutions throughout the city to create new career opportunities for local residents and grow the tech talent pool needed by employers. Together with 150 employer partners, TTP is developing ten new and expanded programs to equip New Yorkers with skills and connections to employment in occupations including mobile, web, and other software development, data analysis, IT engineering, quality assurance and testing, and cloud and server administration.

TTP programs include a 16-week classroom training for mobile developers; a part-time program for data analysts targeting incumbent workers; and a tech prep training for computer science seniors in the City University of New York system that includes project-based and professional components. Each of these programs, together with broader initiatives like the TTP Academic Council—a consortium of 14 NYC colleges that have committed to working with the City and employers—are designed to drive systems change across the city's education and workforce investments by improving alignment with industry needs. TTP is funded through a mix of private and public funding, including federal, state, and city workforce dollars. More information at: <http://www.techtalentpipeline.nyc>

CODE OREGON

Code Oregon began in Portland, Oregon, in 2013 with a vision for developing Portland as both a tech capital and a tech talent capital with a skilled workforce representing the region's diverse population. Code Oregon was available free to any Oregon resident over the age of 18 through funding from the Oregon Governor's Office, JPMorgan Chase, and other sponsors. The initiative was based primarily on a partnership between Worksystems, Inc.—the local workforce board, and the online Treehouse platform's Code-to-Work initiative, with WorkSource and the Technology Association of Oregon also providing support. Code Oregon trained

residents for careers in software development, front- and back-end web development, and in multiple coding languages.

TechSF was developed in response to the rapid growth of the region's tech sector and efforts by local government to incentivize companies to revitalize the central city.

The goal of Code Oregon was to train 10,000 Oregon residents for software development and technology opportunities. In February 2016, Code Oregon [announced](#) that it had served 16,000 Oregon students and was ceasing its "version 1.0" program to retool and redesign program components to address student feedback and changing funding resources. A Code Oregon 2.0 is expected to launch by May 2016. More information at: <http://www.codeoregon.org>

TECHSF

TechSF is led by San Francisco's Office of Economic and Workforce Development and was developed in response to the rapid growth of the region's tech sector and efforts by local government to incentivize companies to revitalize the central city. The program offers training in more than a dozen IT occupations through the Bay Area Video Coalition including networking, technical support, programming, project management, and cybersecurity through boot camps, fast-track certificates (lasting 1-2 months), online training, and other community college and university programs. To address access issues, TechSF uses the Treehouse learning platform to offer pop-up coding labs in community centers and public libraries located in high-poverty areas. The initiative has built a new approach to personal networking in the region to create on-ramps for underrepresented jobseekers, mirroring more traditional industry and alumni networking/recruiting events. TechSF also offers targeted informational workshops on topics ranging from leveraging a LinkedIn profile to networking like a pro and doing taxes like a ninja, that have shown a positive impact on student completion. New clients are assessed for needs to keep them engaged, decrease attrition, and increase the likelihood of job placement.

TechSF started in 2012 with grants from the U.S. Department of Labor's Technical Skills Training Grant and Workforce Innovation Fund Grant programs. The initiative continues to grow through a DOL Apprenticeship Grant announced in 2015. This funding, along with support from the California Career Pathways Trust and local city/county general revenue, has allowed TechSF to expand project- and work-based training opportunities, and create career pathways for independent contractors, high school students, and other jobseekers. More information at: <http://oewd.org/tech-sf>

LAUNCHCODE ST. LOUIS

LaunchCode began in St. Louis, Missouri, in 2013 and has since expanded to South Florida, Kansas City, and Rhode Island. The program includes screening, training, and other supports to prepare individuals who might otherwise be overlooked for careers in the tech sector. The program recognizes that the tech industry values skills and competence over formal credentials, and helps individuals build the practical job skills in demand by employers. The Missouri Department of Economic Development, JPMorgan Chase, and others sponsor LaunchCode.

The CoderGirl group meets regularly to support women in the predominantly male field of software development.

In 2015, LaunchCode, in partnership with the St. Louis Agency on Training and Employment (SLATE), began

offering "[ReBoot U](#)" for individuals with long-term unemployment. This intensive 20-week boot camp offered through St. Louis Community College preps individuals in .NET and Java development. LaunchCode also has programs for other nontraditional tech workers, including the [CoderGirl](#) group that meets regularly to support women in the predominantly male field of software development. St. Louis is also working to bring opportunities to individuals in public housing through new onsite Tech Centers with mentors from local companies and broader access to WiFi services. The [Kick Start Jobs Plus Pilot Program](#) is funded through a \$3 million grant from the U.S. Department of Housing and Urban Development, with support services provided by SLATE and other public and private partners. More information at: <https://www.launchcode.org/communities/saintlouis>

EFFECTIVE APPROACHES FOR SUCCESS WITH TECHHIRE TRAINING

The TechHire communities profiled in this brief share six effective approaches for addressing the workforce needs of the tech industry and maximizing the role of the public workforce system.

We describe these approaches as either originating from work of the TechHire initiative or building on public workforce development efforts. These six approaches align well with the objectives of the WIOA legislation as well as the Administration's Job-Driven Training Checklist.

1. TechHire Training Approach: Encourage Strong Employer Participation Across a Variety of Roles

Employers take on a number of active roles in TechHire projects including sharing information on jobs and in-demand skills, designing and reviewing curricula, serving as mentors and instructors, and providing internship, apprenticeship, and other work-based learning opportunities. In addition, TechHire leaders actively reach out to employers at regular intervals and recalibrate their programs accordingly. These employer roles are essential components for insuring that TechHire training is job-driven. TechSF, for instance, convenes industry partners every six months to ensure relevance; monitor placements, enrollments, and recruitments; and share innovative program models with partners and providers. New York's Tech Talent Pipeline requires training programs to engage industry to reflect the skill needs of the local labor market. St. Louis verifies new curricula with industry partners, honing and retooling it as needed before launching programs.

Other examples of robust employer participation in TechHire:

- ▶ New York City's Tech Jobs Academy is a partnership between the Tech Talent Pipeline, Microsoft, and the New York City College of Technology to prepare unemployed and underemployed New Yorkers for careers as cloud and server administrators.
- ▶ Louisville-area software developers volunteer their time to support trainees in Code Louisville's coding boot camp sessions.
- ▶ St. Louis employers are sponsoring free Wi-Fi in public housing communities and providing

equipment for modern Tech Centers, including 3D printers and mobile devices.

Three of the initiatives profiled here—TechSF, Code Oregon, and Code Louisville—use the [Treehouse](#) online instructional platform. One advantage of the Treehouse platform is that its short program review cycle and commitment to training for current demand skills requires Treehouse to maintain strong relationships with industry leaders and associations. This frees local workforce boards and regional employers to focus their efforts on local mentorship, networking, and work-based learning opportunities to support and reinforce online coursework.

2. TechHire Training Approach: Design Accelerated and Stacked Programs Focusing on Technical and Practical Skills

While postsecondary computer science programs typically seek to balance theoretical knowledge and concepts, such as logic and probability, with practical skills, including coding, TechHire programs are largely focused on the practical, technical skills in demand by employers. By focusing on specific skill sets needed for targeted occupations, training programs are accelerated relative to traditional academic programs.

This lesson on practicality and speed was reinforced by staff from multiple TechHire programs that described project- and work-based learning assignments, internship opportunities, apprenticeship programs, and self-paced options to meet student needs and prepare them for jobs in the tech industry. In many cases, training leads to nontraditional credentials, including digital badging, online work portfolios, and local certificates. As recognition of these alternative credentials grows, more programs will develop to fill this middle-skill demand outside of traditional higher education systems that have previously dominated training for the tech field. In some cases, participating colleges are redesigning their programs by “chunking” curricula into shorter increments that allow students to exit at various points with industry credentials and certifications, rather than enrolling for two- or four-year degree programs. These stackable credentials provide the stepping-stones jobseekers need to progress in education and training and support TechHire’s job-driven focus.

TechHire programs also distinguish themselves in offering educational strategies keyed to differing learning styles and participant needs, including code academies or boot camps—which provide intensive,

accelerated instruction and support—community college classrooms, open labs, and online platforms such as the self-paced Treehouse curricula.

TechHire programs distinguish themselves in offering code academies or boot camps, community college classrooms, open labs, and online platforms such as the self-paced Treehouse curricula.

3. TechHire Training Approach: Emphasize the Importance of Students Learning the Tech Industry Work Culture

The tech industry approaches hiring and advancement differently from many other industry sectors. In tech, networking events—and the essential soft skills required—are often more important than resumes; practical skills can trump postsecondary degrees; and the whole industry shifts frequently as new technologies are developed and old ones fall into disuse. Organizations and individuals that stay current with the shifting nature of tech demand are best prepared to advance in the field.

TechHire programs help participants learn job-search skills that are targeted to industry hiring practices, rather than the generic skills too often emphasized in workforce development programs. The importance of networking and the strategic use of LinkedIn for tech industry recruitment and hiring were mentioned by many of the profiled TechHire communities as keys to a student’s success. By recognizing that the tech industry operates differently, students in TechHire programs can build confidence in networking and collaborative work environments before entering the tech labor market. This approach also gives them an on-ramp to tech industry networks that were previously closed to them. An independent evaluation of San Francisco’s workshops for TechSF participants found that workshops on topics such as networking, leveraging LinkedIn profiles, and “doing taxes like a ninja” had a positive impact on program completion.

Another way that students learn the tech industry culture is through work-based learning opportunities. In the web development fellowship that is part of the NYC Tech Talent Pipeline, students participate in an intensive 22-week program that includes a 12-week paid internship. These “earn and learn” strategies are essential to job-driven training.

4. Public Workforce System Approach: Expand Opportunities for Underrepresented Populations

Each of the six communities discussed the fact that the IT industry largely employs a white, male workforce but struggles to fill openings in skilled positions. In part, this hiring pattern can be explained by the tech industry culture. Employers use tech networking events and small meet-ups to find job candidates; these opportunities are often unknown and unavailable to those not already in the field. These TechHire communities were all intentionally designing and developing programs that will help women and people of color build the skills needed to gain entry into this high-wage, high-demand field. This approach aligns well with WIOA objectives for targeting workforce services and helping employers find skilled workers.

An important component of the TechHire design is that programs provide services to address the challenges that too often prevent people from participating in or completing skills training, including family responsibilities such as child care, transportation barriers, limited access to technology, lack of mentors or role models, full-time employment, and limited financial resources, among others. They also recruit actively in nontraditional channels, including outreach through public meetings and community-based organizations, and offer services in accessible community locations. Code Oregon, for instance, holds Coding Labs at public workforce centers, bringing in mentors from local industry to support participants during open lab times.

Three of the initiatives profiled here—TechSF, Code Oregon, and Code Louisville—use the Treehouse learning platform to address access issues. These programs were able to offer Treehouse courses for free to local residents through small state or federal grants. One advantage of the Treehouse platform is that a basic subscription only costs \$25/month for an individual to access training in a broad range of software languages and development skills. This means that even if program funding were to be withdrawn, many individuals might be able to afford the cost of a training credential on their own.

5. Public Workforce System Approach: Use Systems Change as a Key Program Driver

TechHire initiatives represent a significant change in the way communities typically approach workforce development. In these projects, communities are exploring how to change the way they do business to better meet the needs of employers and engage a larger segment of the labor force. These lessons apply well beyond the

tech industry and align with the new WIOA objectives for better and more strategic regional collaboration. In New York City, for example, Tech Talent

TechHire programs recruit actively in nontraditional channels, including outreach through public meetings and community-based organizations, and offer services in accessible community locations.

Pipeline's Academic Council, comprising 14 local two- and four-year public and private higher education institutions, works to better align educational solutions with industry needs and labor demand, while identifying and addressing capacity barriers. Community colleges partnering with Code Oregon have embraced digital badging after initial reluctance. Oregon's Mt. Hood Community College is developing credit for prior learning and for digital badges that students may already have earned prior to entry.

In St. Louis, a LaunchCode community, the workforce board maintains a jobseeker database of candidates with IT skills that are registered with the public workforce system, as well as those attending networking groups. This helps in closing the gap between the tech industry and the public workforce system. The workforce board has also actively used labor market information to support employer outreach—researching the core competencies that matter to employers, and data mining local job orders to identify the leading skills needed across industries for IT positions.

More than one of the profiled communities identified prior experience with sector-based workforce development strategies and plans to broaden the reach of the TechHire approach when discussing the key goals and drivers for their local TechHire initiative. LA HI-TECH's approach is informed by prior regional work in financial services and health care sectors. TechSF was designed to apply lessons from health care

academies and sectoral strategies. Code Oregon was framed more as an economic development strategy than as a workforce program—positioning Portland as a place for employers to go to find talent for high-demand tech positions.

6. Public Workforce System Approach: Leverage and Braid Funding Across Federal and Other Funding Streams

TechHire communities braid together a mix of public, private, and philanthropic dollars to meet common objectives. These six communities leveraged support from multiple sources to fund different pieces of the puzzle—often mixing formula, or statutory, funds like Workforce Innovation and Opportunity Act (WIOA) and Child Care and Development Block Grants (CCDBG) to support wraparound child care and transportation services, while discretionary grant funds supported tuition and curriculum development, and private and philanthropic dollars supported equipment purchases or infrastructure. This braided funding model enhances the sustainability of the TechHire program over time, as many of the core elements can be maintained through existing formula funds and in-kind supports. Braided funding also provides a strong foundation for leveraging additional discretionary grants needed to maintain training relevancy as in-demand skills can rapidly change in the tech sector. Examples of innovative braided funding:

- ▶ Code Louisville employs federal Workforce Innovation Fund (WIF) dollars to purchase curricula and manage the learning process, as well as for staffing to support students and provide a “home base” for networking; WIOA funds direct student support.
- ▶ TechSF has also leveraged WIF, as well as the U.S. Department of Labor’s American Apprenticeship grants and California’s Career Pathways Trust initiative, to support work-based learning opportunities for youth and adults.
- ▶ For Code Oregon, access to the Treehouse curriculum is covered through the state’s Governor’s Fund, while federal and philanthropic sources (H1-B and Ready to Work grants; JPMorgan Chase, John and Catherine MacArthur Foundation) support wraparound services and alternate delivery models, such as coding academies and open badging systems.

A SAMPLE OF FEDERAL FUNDING LEVERAGED IN TECHHIRE INITIATIVES

Formula Funds

Workforce Innovation and Opportunity Act

WIOA is the primary federal legislation for the public workforce system; it supports employment and training services for adults, dislocated workers and youth; adult literacy programs; and Vocational Rehabilitation services through formula grants to states.

Child Care and Development Block Grants

The CCDBG legislation reauthorized the Child Care Development Fund program providing grants to states to support working families by subsidizing access to child care and afterschool programs.

Discretionary Funds

Workforce Innovation Funds

WIF is a competitive grant program through the U.S. Department of Labor to support innovation and build evidence-based strategies in the public workforce system.

H-1B Technical Skills Training Grants support training initiatives for high-growth industries.

Ready to Work grants support targeted training to prepare and connect long-term unemployed individuals with middle- and high-skill job opportunities.

LESSONS FOR GROWING THE TECHHIRE FIELD

The TechHire communities profiled here and the effective approaches they shared for meeting the workforce needs of the tech industry can be summarized in these lessons for growing the TechHire field more broadly:

- Keep current with the tech lifecycle by regularly engaging with employer partners and identify what industry changes mean for training programs and incumbent workers. Build relationships for sustainability and curriculum for flexibility.
- Braid funding to build a broad base of support over different time periods to maintain and grow operations. Resources may include both formula and discretionary public grants as well as philanthropic and industry support.
- Look for opportunities to shape and align existing investments and programs to better meet the immediate training needs of jobseekers and employers. Use new investment dollars to test fresh ideas for recruitment, training, and placement, support deeper partnership development, and otherwise fill funding gaps.
- Build and maintain strong employer partnerships to ensure program relevance, leverage industry expertise and networks, and obtain in-kind assistance, such as mentoring.
- Take a comprehensive approach—move from a “training program” view to one that encompasses economic development, and systems change in the education, workforce, and industry sectors.
- Identify organizations that can serve as effective intermediaries between employers, training providers, job candidates, and funders.

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ABOUT JOBS FOR THE FUTURE

Jobs for the Future works with our partners to design and drive the adoption of education and career pathways leading from college readiness to career advancement for those struggling to succeed in today’s economy. Across the country, we work to improve the pathways leading from high school to college to family-supporting careers. Our work aligns education and training to ensure that employers have access to a skilled workforce.

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ABOUT TECHHIRE

Originally announced by President Obama in 2015 as a public-private initiative in 21 pilot communities, TechHire has become a rapidly growing national movement in 50 U.S. cities, states, and rural regions to get more Americans rapidly trained for well-paying technology jobs. TechHire expands job opportunity and economic growth by enabling employers to fill hundreds of thousands of entry-level, career-path, skilled tech jobs, by hiring trained jobseekers with the ability to do the job—but who are overlooked by typical hiring practices and/or underrepresented in the IT field. Opportunity@Work is a not-for-profit venture capital firm whose mission is to secure a future of robust opportunity in which all Americans can learn, pursue and realize their potential contribution. Opportunity@Work collaborates with communities and a wide range of partners to support the national TechHire initiative.

www.techhire.org