



Address local tech talent shortages with a customized IT apprenticeship model

Exploring a new strategy to quickly build tech talent pipelines for regional employers

»»»» A brief white paper

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The tech talent shortage in the US is a critical problem that affects local employers, communities, and regional workforce organizations. Today there are at least **500,000 unfilled tech jobs**¹ across the country. Although this figure is staggering, many estimates project an increase in the coming years²; one report expects 3.5 million unfilled jobs by 2021 – in cybersecurity alone⁴. With a recent valuation of nearly \$21 billion⁵, the tech talent gap imposes wide-reaching costs on businesses, and may range from lost revenue and profits to higher turnover and project failures⁶. Consequently, organizations are taking notice – chief technology executives have ranked talent as the largest issue affecting their business objectives⁷.

But this shortage also creates opportunities for workforce organizations and the individuals they serve. It's no secret that broad swathes of the US workforce are in need of retraining and skill upgrading, and a customizable apprenticeship model can help bridge the gap. Acknowledged as the workforce strategy with the **greatest return on investment**, apprenticeships often generate high wages, improve employee retention, offer strong employer satisfaction, and result in a competitive return on investment – producing \$1.47 for every \$1 invested by the business⁸. Despite the value to its stakeholders, organizations that presumably lack experience launching and implementing apprenticeships may face challenges, and as reported by the National Network of Business and Industry Associations, employers are looking for new, innovative apprenticeship versions to better meet today's challenges⁹.

A **customizable IT apprenticeship model** – administered by an experienced workforce service provider – represents a uniquely valuable solution to this complicated situation by 1) bridging the tech

talent gap to create more prosperous regional employers; 2) quickly building skills for local job seekers – many of whom may be from underserved communities – to access high-wage, in-demand occupations; and 3) ensuring that workforce development boards and organizations invest in the strategies that produce the greatest return. The insights outlined below are informed by our partnership with one of the longest-running IT apprenticeships in the US, paired with more than 30 years of public workforce experience.

Why IT apprenticeship works.

3.5 million

Unfilled jobs projected by 2021 – *in cybersecurity alone*⁴

91%

Average retention for apprentices after completing their programs¹⁰

\$300k

Lifetime earnings gain compared to non-apprentices¹¹

\$21 billion

Estimated valuation of today's tech talent shortage⁵

\$1.47

Return on every \$1 invested into apprenticeship by employers⁸

500,000

Unfilled IT jobs estimated across the US³



A new strategy to quickly build tech talent pipelines – customized to regional employers and the unique needs of workforce participants

We draw from more than 18 years of knowledge in apprenticeship to construct a comprehensive and successful model that both 1) supports regional employers and 2) prepares candidates for in-demand, high-wage IT jobs.

Using best practices developed with one of the longest-running and continuously-operating IT apprenticeships in the US, this new apprenticeship model develops the whole person, not just the worker - and incorporates **8 key components**:

- **Streamlined on-the-job training (OJT):** 2,000 - 3,500 hours
- **Related technical instruction (RTI)** aligned with the real-time needs of regional employers: 480 hours
- One-on-one, **executive career coaching** for apprentices: 18 hours
- **Mindfulness and emotional intelligence** training: 48 hours
- **Core and specialized IT certification options:** Up to 9 high-value credentials, including 3 core certifications (CompTIA IT Fundamentals, A+, and Network+) and 6 specialty certifications (Security+, Cloud+, Linux+, Server+, Project+, and Amazon Web Services Cloud Practitioner).
- **Certification assessment tools** that lead to more than 90% credentialing rates
- Targeted **financial education** to stabilize their finances and begin building long-term wealth
- **Pathways to a bachelor's-level education** via local college credits for certification attainment and/or prior learning experience

To facilitate 100% apprentice enrollment, 95% apprentice graduation, and 95% employee placement, a 2-year apprentice structure is recommended with an optional third year.

With nearly 2,000 hours per year available for combined classroom and on-the-job training, this flexible model is **customizable to the needs of regional employers**. Additionally, apprentices are incentivized to continue increasing their skills by receiving a \$1,000 wage bump for achieving one certification each year.

Although employers may opt to include other IT certifications that align with their own unique context, a **suggested structure for an IT Support apprenticeship** is outlined below. This model is particularly successful because it first builds a strong foundation of conceptual IT knowledge, forged by the CompTIA IT Fundamentals and A+ training curricula. These two certifications represent the gold standard for IT support roles, and are critically important, as they better prepare apprentices for next-level tech credentials (e.g., Network+) and also serve as the base certifications for so many IT career pathways.

IT Support Apprenticeship Structure

	OJT	RTI	Certification	Wage Increase
Year 1	1,300+ Hours	160 Hours	CompTIA IT Fundamentals	\$1,000
Year 2	1,500+ Hours	160 Hours	CompTIA A+	\$1,000
Year 3 Optional	1,500 Hours	160 Hours	CompTIA Network+	\$1,000

Supports CIP Codes 11.0101, 11.0103, 11.1002, 11.1003, 11.1006, & 11.1006

Additionally, to ensure any apprenticeship's holistic success, it must be supported by a diverse partner network, which includes employers, workforce boards and related organizations, training providers, community-based agencies, local colleges and school districts, and a wide range of public and private funding sources.



Next steps for organizations considering an IT apprenticeship

Although launching a new IT apprenticeship may appear daunting, resources are available to simplify the process, including the US Department of Labor's Office of Apprenticeship (OA) regional offices, state apprenticeship offices, and experienced workforce services providers. Federal and state apprenticeship offices often provide guidance, technical assistance, information about funding opportunities, and more. Workforce services providers, like JobWorks, may offer a wide range of support during the design, development, and implementation of new apprenticeships, including but not limited to:

- Outlining the components of an apprenticeship model that will best support the local region.
- Convening critical stakeholders (e.g., funders, employers/apprenticeship hosts, community-based organizations, etc.)
- Customizing the Registered Apprenticeship Standards that develop employees for available, in-demand jobs.
- Identifying funding sources that support a holistic apprenticeship for the local workforce.
- Offering payroll and back-office support
- Assessing the real-time talent demands of regional employers to better sync training and on-the-job learning with their needs.
- Managing data and generating reports and analytics for funders and apprenticeship offices

JobWorks, Inc.

For more than 30 years, JobWorks, Inc. has been a premier nationwide provider of workforce services to WIOA-eligible adults, TANF recipients, apprentices, dislocated workers, opportunity youth, and other populations that face barriers to employment. The JobWorks Education and Training Systems (JETS) division – the training and consulting arm of the organization – currently partners with workforce organizations and economic development agencies to train and develop the capacity of their participants, and assist with locating career-ladder job opportunities. Across all of our projects, we serve more than 10,000 public workforce customers each year through both short-term, credential-based training initiatives and large-scale, career one-stop operations.

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