Apprenticeships
for Tech

The Case for Better, Smarter and More Inclusive IT
and Cybersecurity Talent Development

With a foreword by Amy Kardel
Senior Vice President, Strategic
Workforce Relationships at CompTIA

FOREWORD

A Smarter Talent Strategy for the New Tech Paradigm

This time of great challenge -- in the wake of a global pandemic and in the midst of a Great Resignation -- has yielded an even bigger opportunity to rethink how we hire for tech, who we hire for tech, and to redefine what it means to employ and be employed within the $5 trillion global tech ecosystem.

A paradigm shift -- from "buying" to investing in talent can open up a new world of possibility for employers; one in which realizing ROI and doing good are synonymous. Many employers, especially in the tech community, are uncertain that an apprenticeship program is right for them. But once they understand the benefits and ease of developing a predictable, skilled talent pipeline, a lightbulb turns on.

Apprenticeship is the "triple-threat" of the post-pandemic hiring landscape. It gives employers the chance to boost retention while organically building diversity, equity and inclusive access into hiring practices. And it helps, through the use of world-class certifications, to close the tech skills gap so organizations can focus on what they do best -- knowing that their key workers have what it takes. Best of all, it's easy to implement, and employers don't have to go it alone.

Thank you for taking the time to learn more about apprenticeships for tech in this brief guide. I hope you will feel confident and empowered to "take the leap" to a pathway that has nothing but upside for your organization, for the people you employ, and for the communities you serve and care about.

Sincerely,

Amy Kardel
Senior Vice President, Strategic
Workforce Relationships at CompTIA;
Appointee, U.S. Department of Labor Advisory
Committee on Apprenticeships*

CompTIA®

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Quiz
What's Your Organization's Tech Talent Reality?

We want our tech workers to stick around longer	We need better morale on our IT teams	We want better means to train and upskill tech workers
We want to spend less money on tech talent turnover	We want to find new sources of talent and not rely on 4-year degrees as much	We need to reduce our cybersecurity risks and vulnerabilities
We want to fill our open jobs	We want to close our IT and cyber-security skills gaps	We need to do better with diversity, equity and inclusion

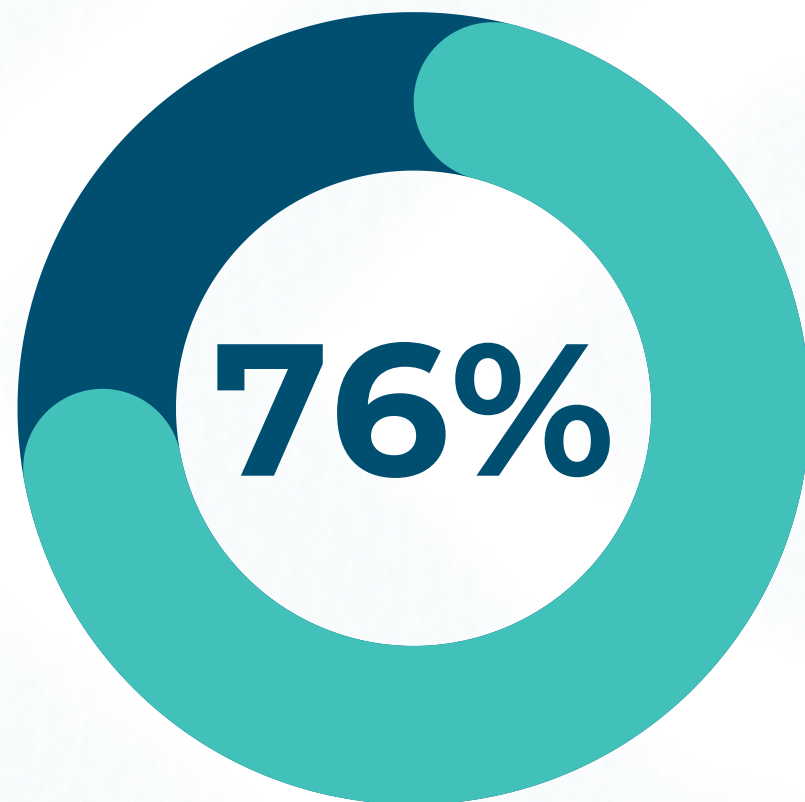**Get in Touch About Tech Apprenticeship Today**

Did you answer 'yes' to most of those?
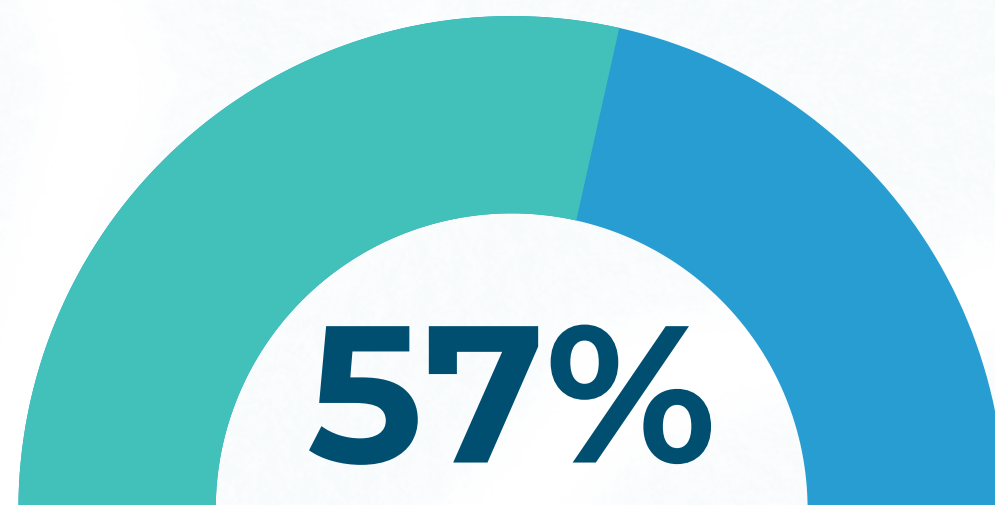
You're not alone.

Today, complex challenges confound an already difficult IT and cybersecurity jobs landscape.

From challenges finding the right skills for the IT and cybersecurity needs of today's teams....

76%

of IT decision-makers are experiencing critical skills gaps on their teams, a 145% increase since 2016*

57%

of organizations are impacted by a worsening cybersecurity skills gap that leaves them vulnerable**

*CompTIA, 2021, https://comptiacdn.azureedge.net/webcontent/docs/default-source/research-reports/comptia-workforce-and-learning-trends-2021.pdf?sfvrsn=ff890a85_2
**ISSA, 2021 https://www.issa.org/cybersecurity-skills-crisis-continues-for-fifth-year-perpetuated-by-lack-of-business-investment/

...to challenges creating roles and vetting talent

88%

in HR indicate that over-spec-ing job descriptions is an issue today*

76%
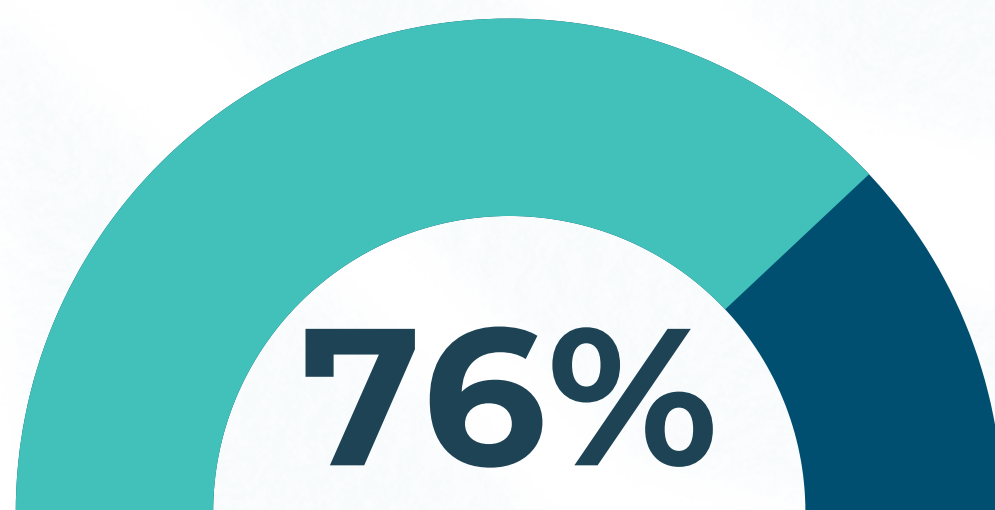
in HR support the trend toward relaxing or eliminating the 4-year degree requirement, but many are uncertain how to vet candidates without it*

*CompTIA, 2021, https://comptiacdn.azureedge.net/webcontent/docs/default-source/research-reports/comptia-workforce-and-learning-trends-2021.pdf?sfvrsn=ff890a85_2
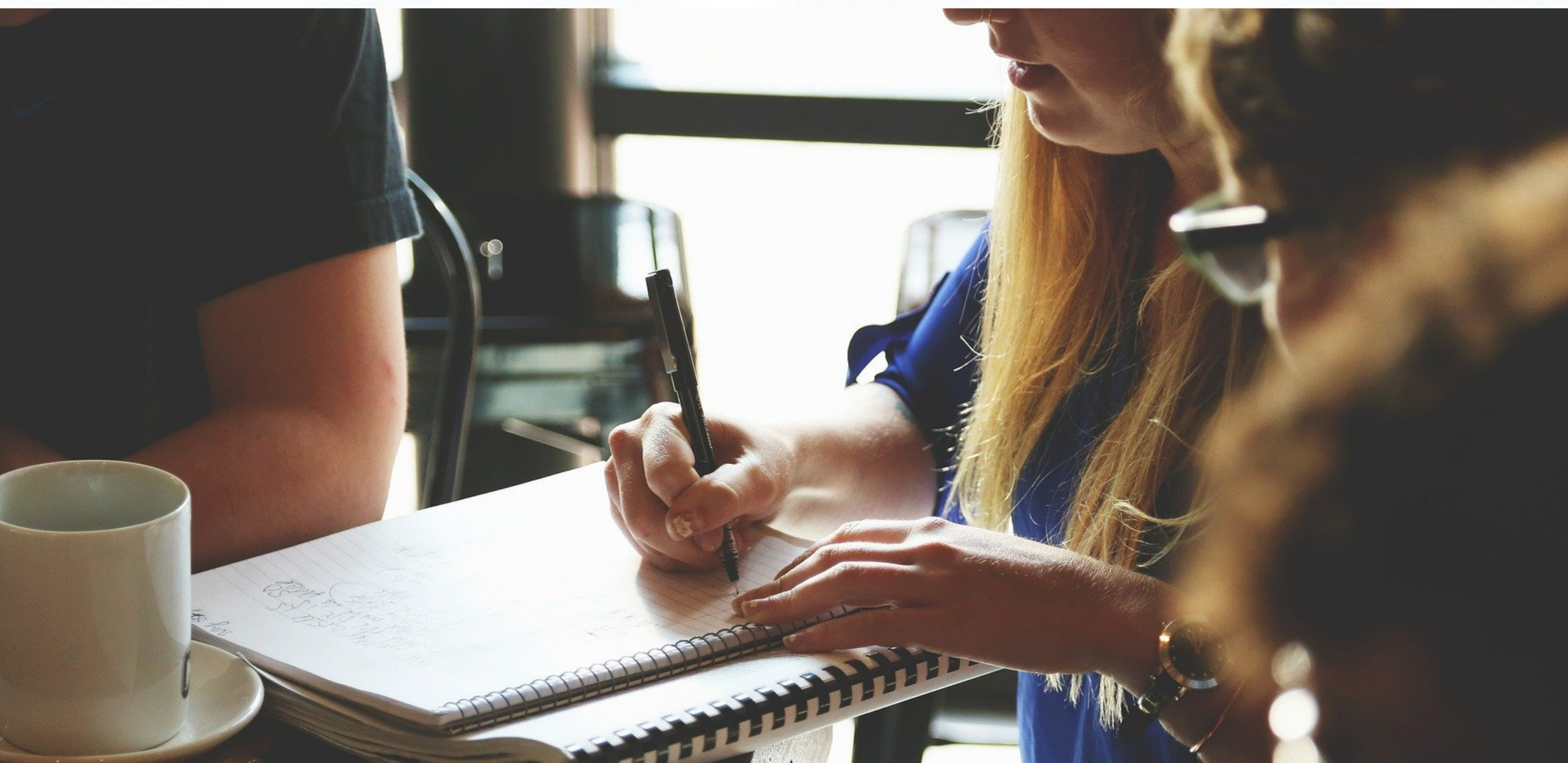
A tech skills gap with increasingly dramatic implications

75%

of companies experienced a phishing attack in 2020*

$4.24m

was the average cost of a data breach in 2021**

*Proofpoint, 2021, https://www.proofpoint.com/us/newsroom/press-releases/proofpoints-state-phish-report-reveals-ransomware-and-phishing-attack-trends
**IBM Security, 2021, https://www.ibm.com/downloads/cas/OJDVQGRY

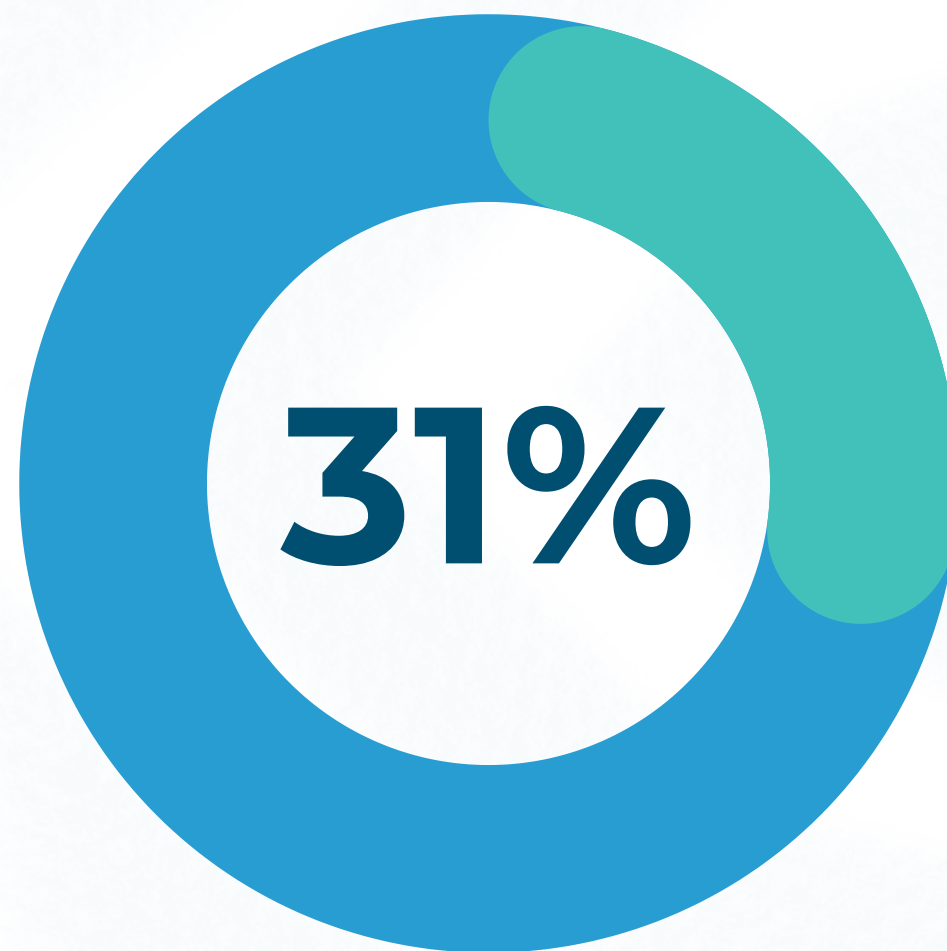# Shortcomings in building diverse, equitable, inclusive and welcoming workplaces...

68%
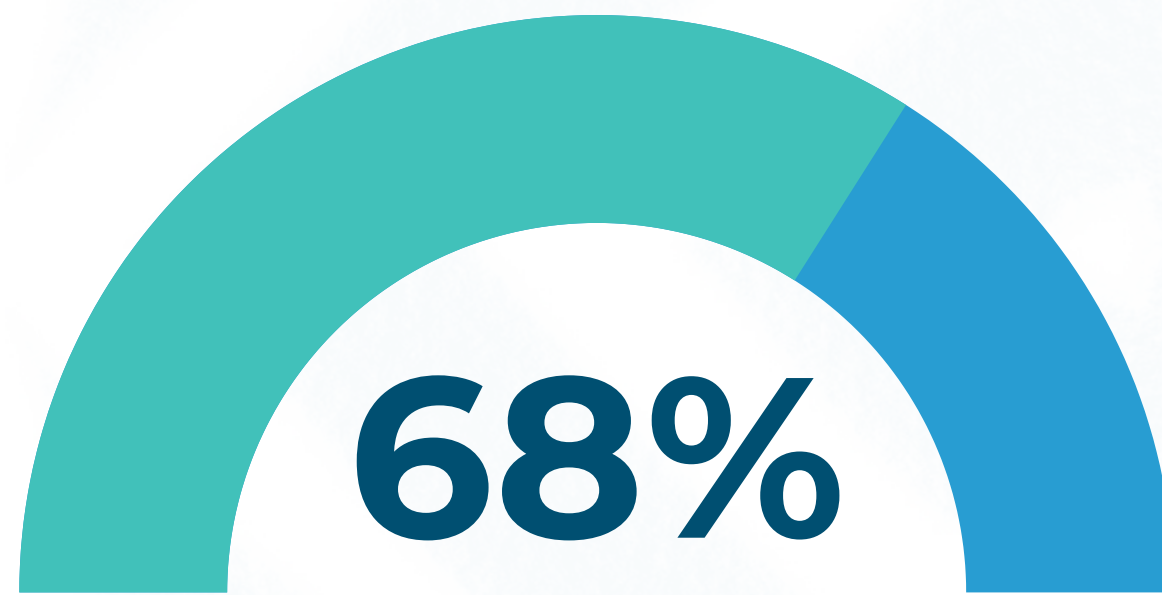
of businesses acknowledge
that there is a lack of diversity
on their tech teams*

...and difficulty keeping people around

31%

of IT workers reported they were looking for a new job between July-September, 2021*

Learn More

All with big implications for the bottom line...

It costs companies

$1,500

to replace an hourly tech worker*

For salaried technical employees, that amount is

100-150%

of the salary*

*SHRM, 2019, https://www.shrm.org/hr-today/news/all-things-work/pages/to-have-and-to-hold.aspx

...and a growing mismatch between what employers say they want...

95% of cybersecurity openings require

5+ years of experience

...And what's really out there.

40% of the IT workforce possess 5+ years*

not enough experience

*CyberUp, 2022, https://wecyberup.org/employers/

Organizations everywhere are realizing the risks and pitfalls involved in sticking with the status quo in terms of who they hire for tech, and *how* they hire for tech.

Many know it's time to think **bigger**, think **stronger**, and think **longer-term** about tech talent development.
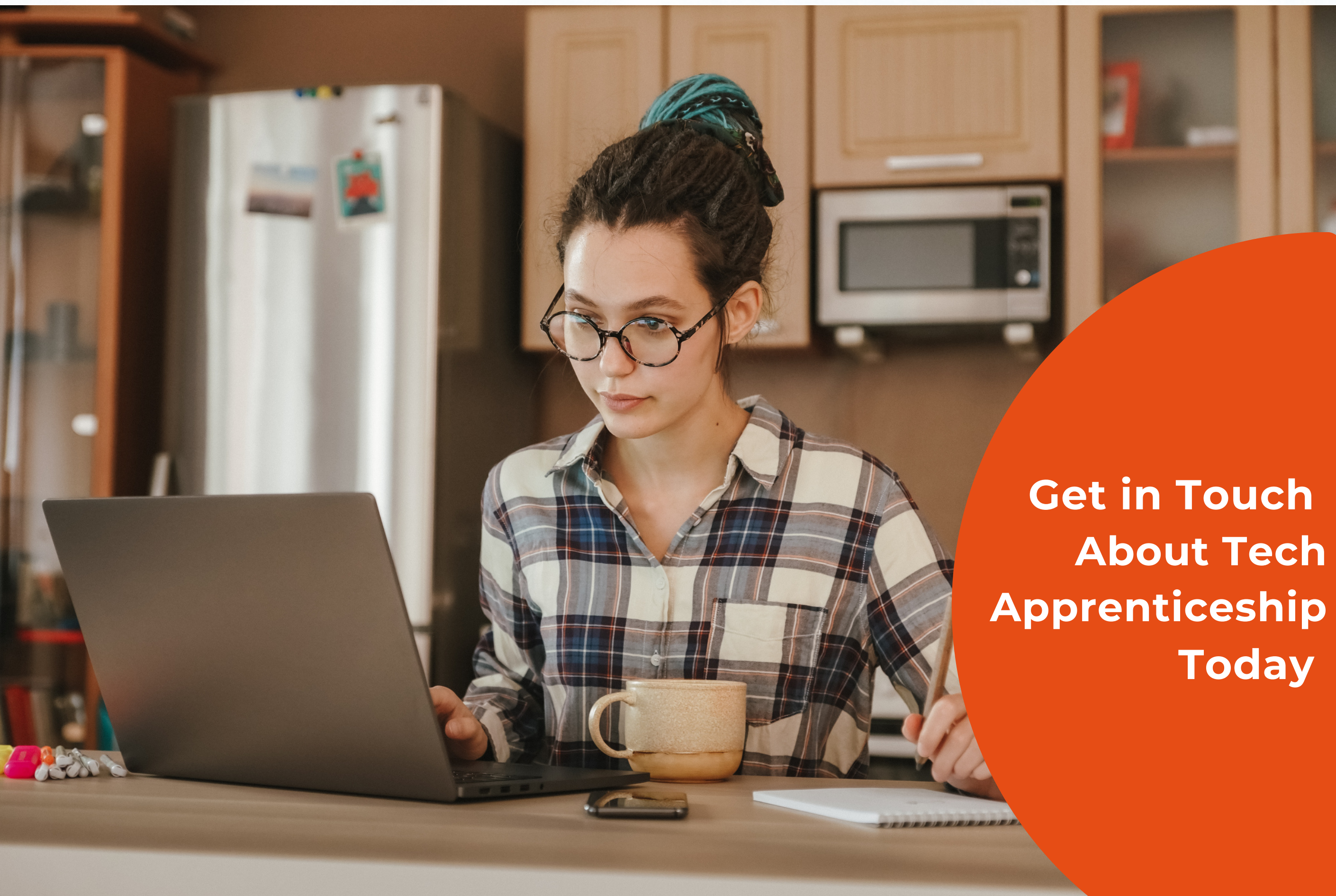
Get in Touch About Tech Apprenticeship Today

It's Time to Replace "Risk" with ROI

Apprenticeship is one of the smartest and most powerful tools with which employers can transform the IT and cybersecurity hiring and talent development landscape today.

It flips the conversation from "risk" to "ROI", and flips the emphasis from experience and credential, to aptitude and potential.
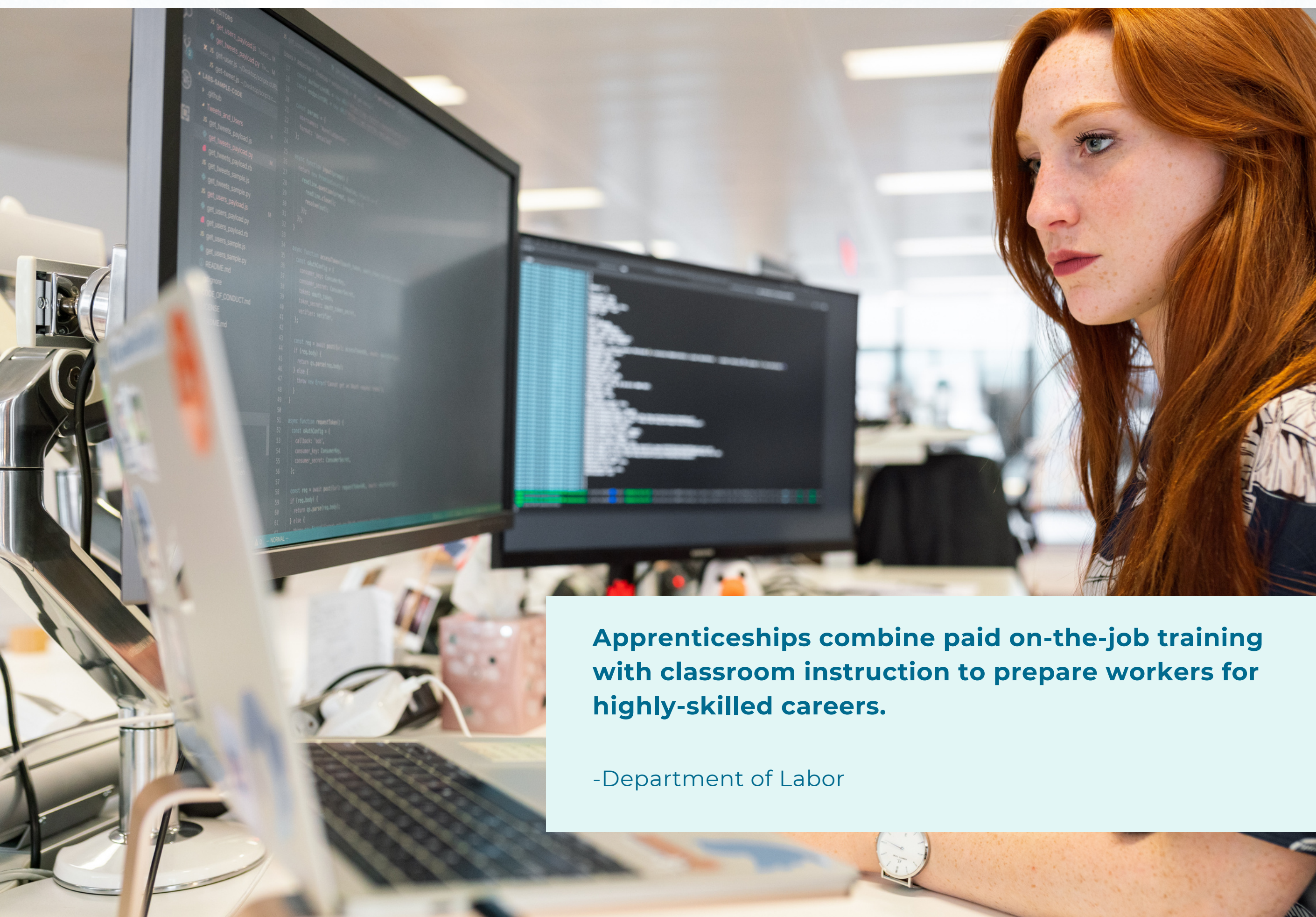
Apprenticeships combine paid on-the-job training with classroom instruction to prepare workers for highly-skilled careers.
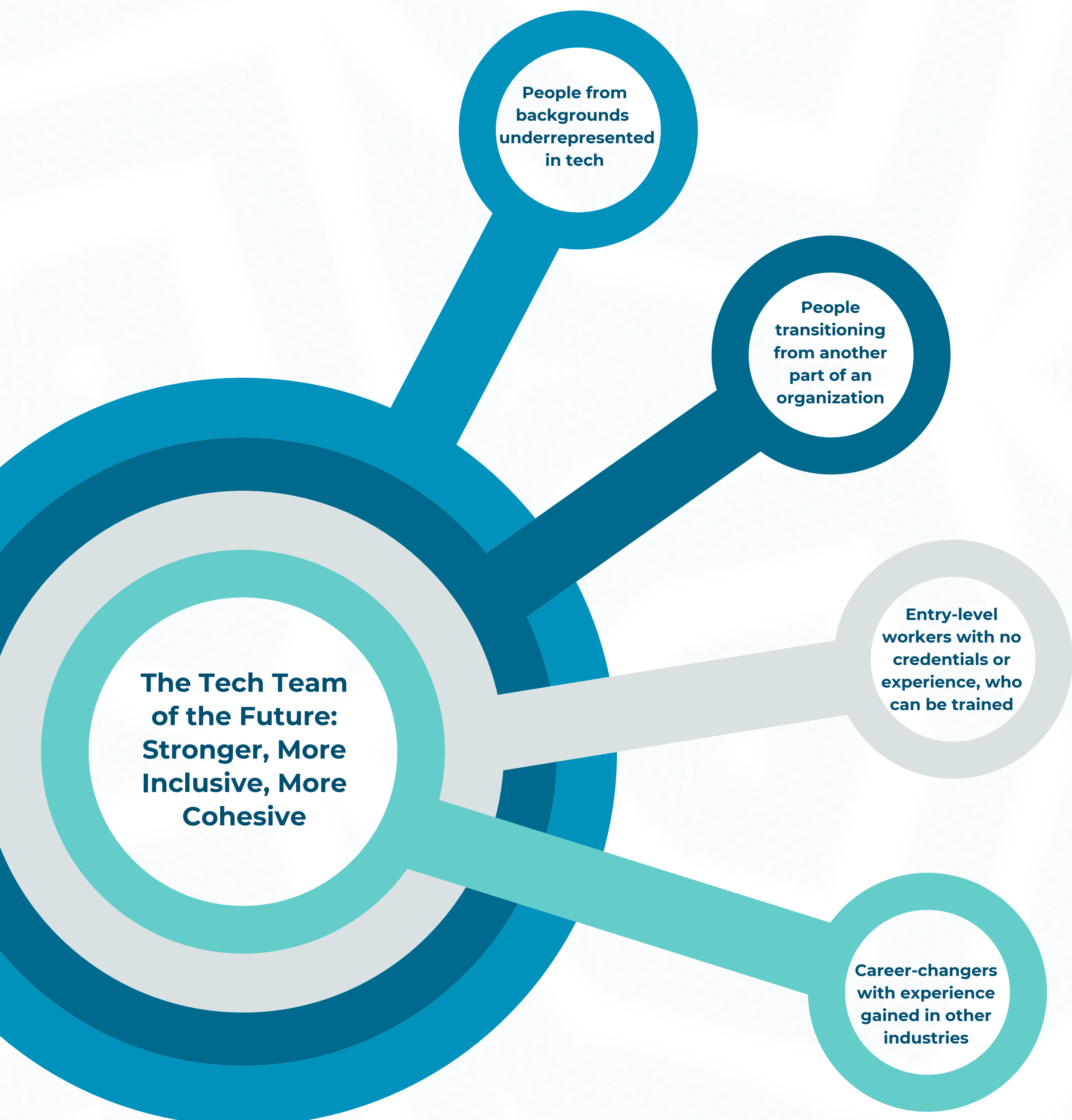
-Department of Labor

Apprenticeship offers a new take on career pathways and the talent pipeline

" Employers everywhere are discovering a new type of employee. They create your future workforce, lift up your community, and help grow your business.

-U.S. Department of Labor

People from backgrounds underrepresented in tech

People transitioning from another part of an organization

The Tech Team of the Future: Stronger, More Inclusive, More Cohesive

Entry-level workers with no credentials or experience, who can be trained

Career-changers with experience gained in other industries

So what exactly is a tech apprenticeship program?

✓ A structured talent development program that lets organizations hire for the most in-demand entry-level roles in IT and cybersecurity

✓ Paid employment with a rigorous, industry-aligned IT training and credentialing component

✓ Available for companies to launch independently, or with the guidance of an intermediary, who can help with program administration, design of a learning plan, and oversight of the apprentice(s)

✓ Typically a year long, featuring dedicated hours for real work, and dedicated hours for learning and instruction

✓ A smart career pathway opportunity, both for for entry-level workers coming into an organization, and existing employees who want to grow in their own careers

Get in Touch About Tech Apprenticeship Today

Apprenticeships for tech are *not...*

Just for the trades, like construction or manufacturing

A purely altruistic or philanthropic initiative

An internship or volunteer program

Only for big companies

Only a tool for hiring people from outside an organization

Expensive or time-consuming to launch

5
ways

Apprenticeships for Tech
Can Quickly Transform
Any Organization

1 Apprenticeship Creates a Culture of Learning & Competency

Apprenticeship involves rigorous educational and credentialing component, with roles aligned to occupational standards. This means apprentices are unlocking industry standard IT and cybersecurity skills while they work; bringing critical insights and knowledge to their roles and to their entire organization.

The norm of learning alongside working can have a ripple effect, meaning more workers are motivated to sharpen their skills and knowledge. All of this strengthens organizational performance and helps employers build competency into the landscape; allowing them to prepare for the needs of today *and* tomorrow!

Get Started

"

Today's workforce needs options that combine their work experience with pathways to gaining the practical skills and certifications needed to keep pace with the evolving state of technology.

- Brittany Locker, Director of Business Process Outsourcing, 1Path

2 Apprenticeship Creates ROI

For every **$1** invested in an apprenticeship program, organizations realize an average return of

$1.47

making apprenticeship a far safer and more cost-effective source of talent acquisition than traditional hiring.*

> " We know that the more educated our technicians are, the better our support will be.
>
> - Mike Ray, Owner, SNS Technologies

3 Apprenticeship (Organically) Widens & Deepens the Talent Pool

The 'earn-while-you-learn' model incentivizes people from all walks of life to apply, rather than only those with college degrees or experience, meaning new sources of ideas and a laser-sharp focus on aptitude and competency. An apprentice may be an existing employee looking for a new opportunity, or a fresh hire, which gives employers a whole new way to think about the talent pool!

Many employers strive to hire 50% of apprentices from backgrounds historically underrepresented in tech, which leads to the creation of more diverse teams, and therefore stronger and more profitable businesses.*

> **Apprenticeships are a proven method for building the technical and business skills that employers are looking for and to do so in a way that brings a broader diversity of people into the workforce.**
>
> -Amy Kardel, Senior Vice President, CompTIA

*McKinsey & Company, 2020, https://www.mckinsey.com/featured-insights/diversity-and-inclusion/diversity-wins-how-inclusion-matters

4 Apprenticeship Boosts Retention & Performance

An investment in an apprenticeship program IS an investment in organizational retention at all levels. Some **92% of apprentices retain employment after apprenticeship ends*** and even senior professionals can benefit from the ripple effect of retention. Apprenticeship features, like built-in mentorship, give apprentices the opportunity to learn, grow and build their skills, while giving existing workers the opportunity to grow as leaders and professionals. All of this, plus the newfound culture of learning, contributes to a more dynamic and positive workplace, where everyone wants to stay.

Learn More

> **You can continue using all that time finding the right candidates, or you can find someone who isn't as skilled and skill them yourself. Take that same time, and invest in them, and... build loyalty.**
>
> -Aaron Bolton, Owner, UpSkill Learning Solutions

*Department of Labor, 2022, https://www.apprenticeship.gov/

5 Apprenticeship Strengthens the (Double) Bottom Line

If the clear-cut organizational benefits weren't enough to convince you...apprenticeship also lets employers position themselves as desirable places to work, where social impact is a priority and where people are the biggest investment. In today's jobs climate, more people *insist* on working for organizations who invest in social impact, and this is where apprenticeship can help companies shine.

Every $1 invested in apprenticeships leads to a public return of approximately $28 in benefits.* The ability of apprenticeship programs to transform communities -- creating new opportunities for the local talent pool while strengthening the jobs landscape -- is nothing short of remarkable.

*National Apprenticeship, 2022, https://nationalapprenticeship.org/roi

Transform your organization

From → **To**

From	To
We're draining talent	We're building strong, capable teams
We're churning through new hires	We're realizing ROI on each hire
How many years of experience do you have?	How do you want to make an impact here?
Please don't leave	We're excited to see you take this next step with us!
How can we use technology to put out fires?	How can we use technology to innovate and grow?

Get Started

The only things standing in the way are...

~~We're not big enough~~
~~We're the wrong kind of company~~
~~It's too cost-prohibitive or hard to do~~
~~We'd have to do it alone~~
~~The status quo is working for us~~

Not really in the way at all.

Smarter and more dependable tech talent development is easier, faster & closer than you think.

Build *your* better with Apprenticeships for Tech

Get Started Now

AIR | **Apprenticeships for Tech**
Source & Grow Talent

AIR®

Advancing Evidence.
Improving Lives.