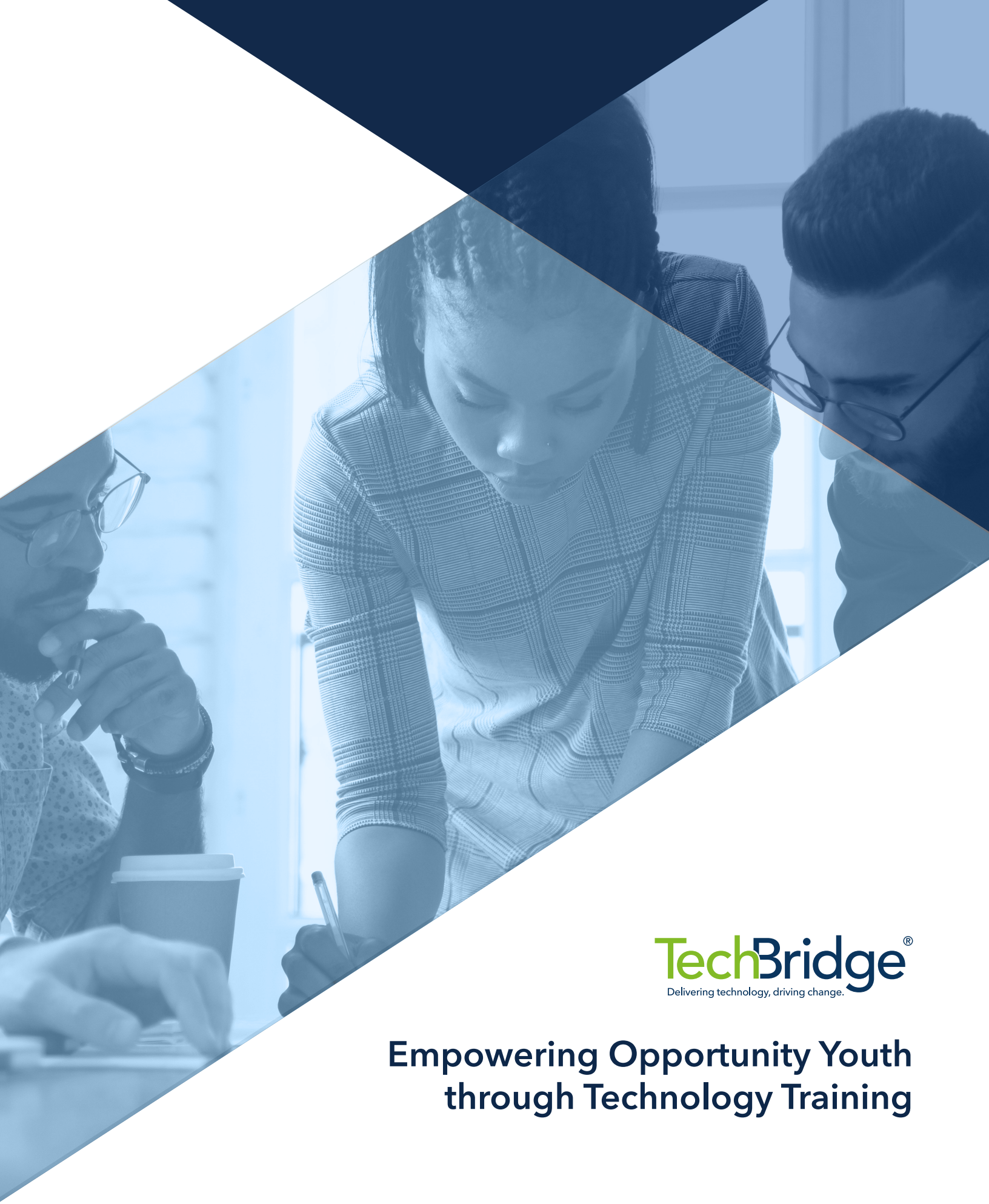

TechBridge®

Delivering technology, driving change.

Empowering Opportunity Youth through Technology Training

TechBridge's Mission

TechBridge breaks the cycle of generational poverty through the innovative use of technology to transform nonprofit and community impact.

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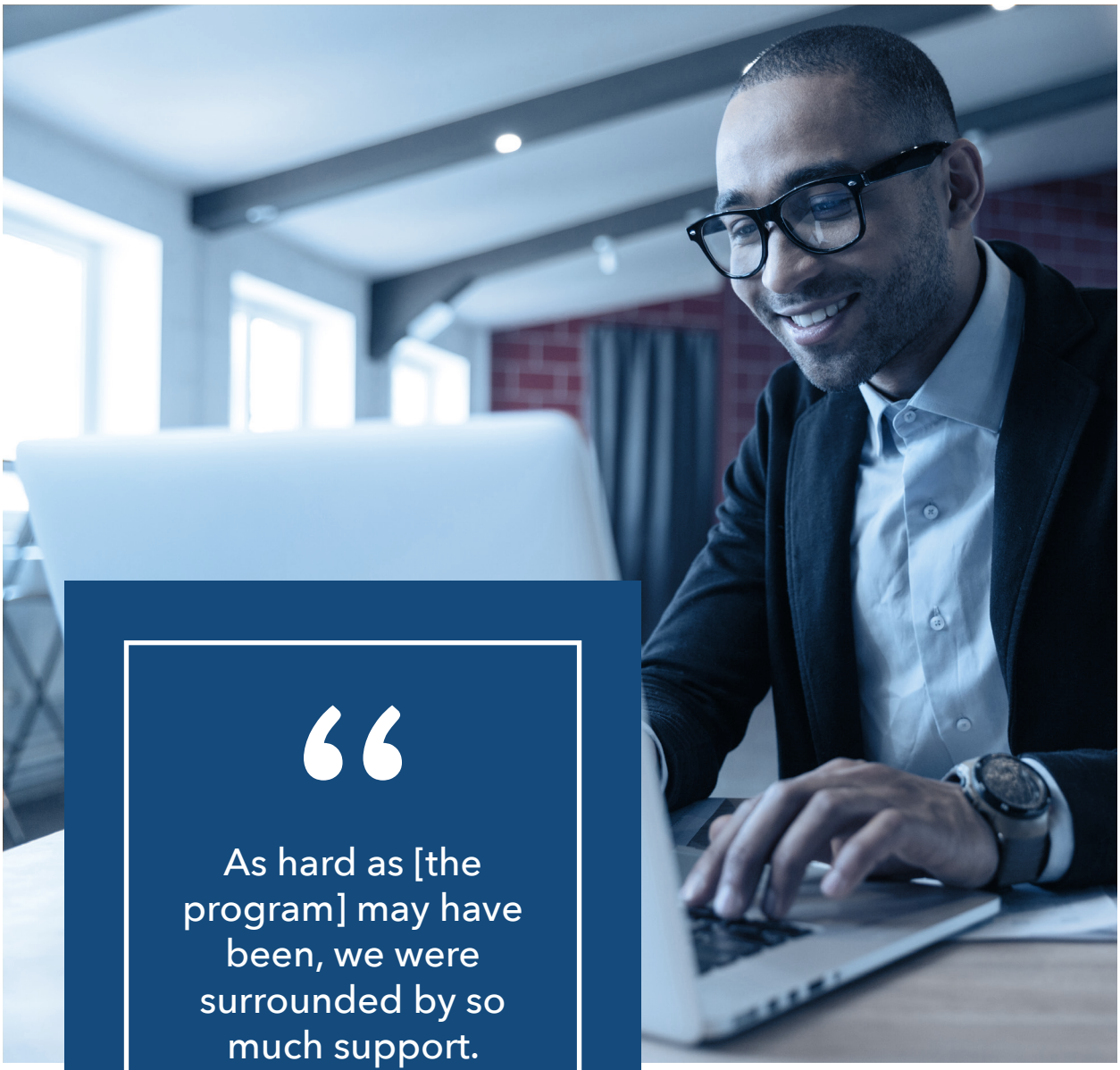


“

As hard as [the program] may have been, we were surrounded by so much support.
All of us crossed the finish line.

- Former TechBridge Student

Letter from TechBridge CEO

TechBridge has a 21-year legacy of transforming the nonprofit sector by providing innovative technology-based solutions. We leverage technology to create predictable pathways out of poverty, by focusing on four pillars: hunger relief, homeless support, social justice, and workforce development. Last year alone, through the use of our solutions, we supported the distribution of 5.2 billion meals, served 3,577 families through homeless support, 22,978 families through our social justice solution, and impacted 337 families through our workforce development programs.

While this past year was unprecedented, it has opened the door to new ways of addressing and solving persistent social problems for those most vulnerable. We witnessed employers renew their commitment to diversity and inclusion. We also saw the unemployment rates for BIPOC rise significantly. The technology sector struggled to keep up with market demand as remote work became the norm. All the while, K – 12 students fell further and further behind in school, widening the digital divide. In the United States, 4.6 million opportunity youth ages 16 -24 are neither enrolled in school nor participating in the labor market. This is unacceptable.

We know firsthand that the growing gaps in education, unemployment, and the tech-labor market are interdependent and are directly tied to the persistent issue of poverty. To address the digital divide, lack of resources and education, and social barriers that prevent access for BIPOC communities TechBridge piloted a solution that addresses the aforementioned issues holistically. Building on our existing programming and network, TechBridge designed a technology apprenticeship program tailored specifically to youth. Our intervention is designed to reach youth during their critical time of development and provides multiple pathways to financial stability.

I am very pleased to share our learnings and recommendations for creating equitable economic opportunities. Thank you for learning alongside us as we create predictable pathways out of poverty for all.

Nicole Armstrong

Nicole Armstrong
Chief Executive Officer, TechBridge

Acknowledgments

This whitepaper was led by TechBridge in collaboration with the Information and Communications Laboratory at Georgia Tech Research Institute. Funding for this work was provided by the Arthur M. Blank Foundation.

The Arthur M. Blank Family Foundation promotes positive change in peoples' lives and builds and enhances the communities in which they live. We seek innovative solutions that enable young people, families and communities to achieve results beyond what seems possible today.

THE ARTHUR M. BLANK FAMILY FOUNDATION

TechBridge breaks the cycle of generational poverty through the innovative use of technology to transform nonprofit and community impact. To stop the cycle of generational poverty, we must bridge the opportunity gap for middle-class jobs. TechBridge focuses on workforce development to change the trajectory of those that are unemployed or underemployed. By equipping adults from disadvantaged households with technological, financial, and professional skills, we can help provide financial stability and a path to life-long success and self-sufficiency.

TechBridge®
Delivering technology, driving change.

The Office of Education, Training, and Workforce Development, housed within the Information and Communications Laboratory at Georgia Tech Research Institute, focuses on research and development related to the workforce of the future. Georgia Tech Research Institute is the nonprofit applied research arm of the Georgia Institute of Technology.

Georgia Tech Research Institute

Executive Summary

TechBridge takes a systems approach to address education inequality and workforce development in the metro Atlanta area and is scaling for national impact. Through community partnerships, TechBridge aids in the recovery of the labor force by working with education and employer partners to build innovative training programs for those who want a technology job, but have never worked in the industry.

Many of our youngest students served are low-income students and students of color, who may never have encountered people working in the tech industry. As noted by Susan Cordova, "We are facing a critical juncture as a nation, and now we must double down on strategies, like strongly articulated career-technical education pathways, that we know work. We have to rethink what school can look like and how we can rapidly engage our students to make up for lost time. It is critical for our ability to prosper as a nation."[1] TechBridge will address this challenge with our IT pre-apprenticeship model. This youth program has the power to disrupt the status quo and reach students with intentional technical career pathways before it's too late.

We believe that early intervention and targeted instruction focused on cultural job readiness, social skills and thoughtful IT instruction over time will change the norm and build understanding of alternative pathways for those held back by systemic barriers and poverty. Providing digital literacy and STEAM exposure earlier will improve outcomes and prepare students for successful post-secondary options that include entry level technical roles, apprenticeship programs and post-secondary technical training or college.

TechBridge is well-equipped to build on our proven adult program by expanding our work to empower opportunity youth through technology training. Our knowledgeable and dedicated workforce development staff coupled with existing employer network and community partnerships allows us to implement and scale a model to reach students earlier. We believe that with like-minded partners and well-developed intentional curriculum pathways we can grow understanding of IT careers and develop opportunity youth to be well prepared for post-secondary options that lead to livable wage technology jobs.

Julie Neuner
Chief Program Officer, TechBridge

Throughout this publication, we'll be discussing opportunity youth, technology workforce statistics, and training perspectives; however, our work does not exist without context. To illustrate the impact of training and empowerment for opportunity youth, we tell the story of Denver. This fictional student exists as an amalgam of many of the situations, experiences, and successes of the opportunity youth TechBridge has served.

Meet Denver. Denver is 19, lives with their parents and grandmother, and currently does not work.

Although Denver graduated high school, they have not been successful in any future education or training endeavor.

They aren't sure what the next stage in their life is. They want to go to school, but can't afford tuition. Their parents would like them to go to work, but Denver has had trouble finding meaningful work that pays more than minimum wage.

Denver is like many of the thousands of opportunity youth in Atlanta, in Georgia, and across the US that are not participating in education or the workforce during one of the most critical periods of their lives.

CHAPTER 1

The Educational and Economic Status of Atlanta's Youth

In the Atlanta metro area

- 20% of youth under 18 live in poverty[2]
- 11% of youth ages 16-24 are neither working nor enrolled in school[2]
- In 2020, 14% of youth aged 16-24 were unemployed[3]

If our youth aren't engaged in education, training, or work, they are missing the most valuable opportunity in their lives to break the cycle of generational poverty.

To break the cycle of generational poverty, opportunity youth need transformational training. We believe that this transformational training meets students where they are and **bridges** students with livable wage technology jobs through:

1. Tangible and intangible services and supports
2. Technical skill development
3. Soft skill development
4. Networking, coaching, and ongoing mentorships

1 out of every 10 is not engaged in education or work[2]

The Engagement Gap

Opportunity youth participation in education and employment not only improves their current livelihoods, but their future livelihood as well. Recall that nearly **20% of all youth** in the Atlanta metro live in poverty.[2] Nationally, the poverty rate for opportunity youth is nearly double, with **41% living in poverty.**[4] Programs must meet opportunity youth where they are. In lieu of extended training and education without meaningful employment, programs that provide time-effective training and job placement have considerable impact for economically fragile opportunity youth.

82%

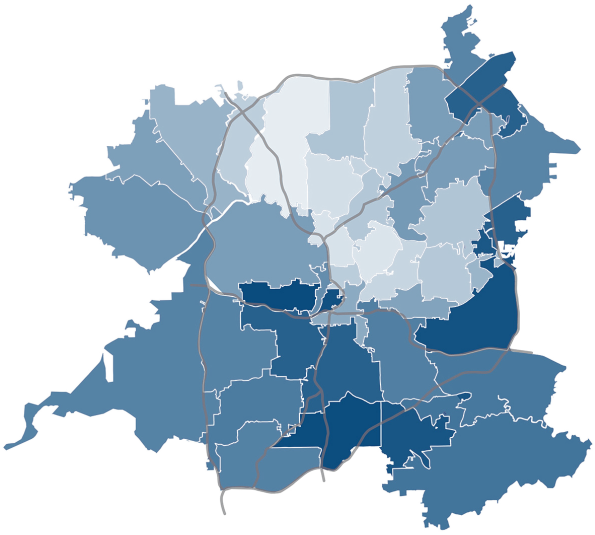
The 2017-2018 average high school graduation rate for Georgia. This is 3% less than the national average.[5]

1 in 3

Nearly 1 in 3 Georgians with less than a high school education live in poverty.[6]

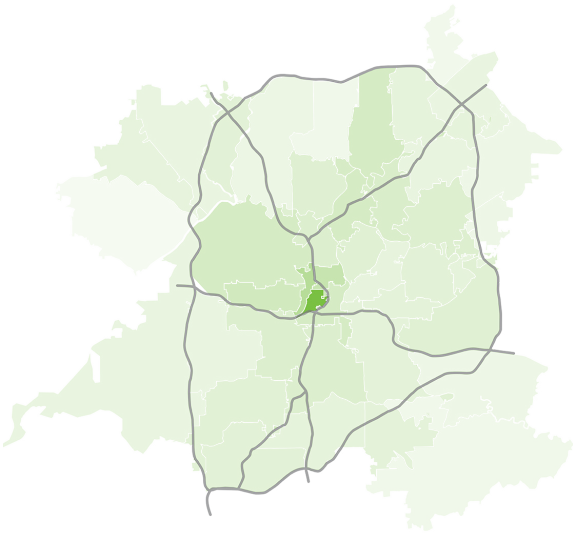
Atlanta's Communities of Opportunity

To identify education and economic communities of opportunity in Atlanta, data from the 2019 American Community Survey 5-year estimate were used to illustrate the stratified educational and economic outcomes of communities throughout Atlanta.[7]



Total percentage of community members with a high school diploma, GED-equivalent, or no diploma

0% 40%



Percentage of community members unemployed or underemployed within previous 12 months

0% 65%

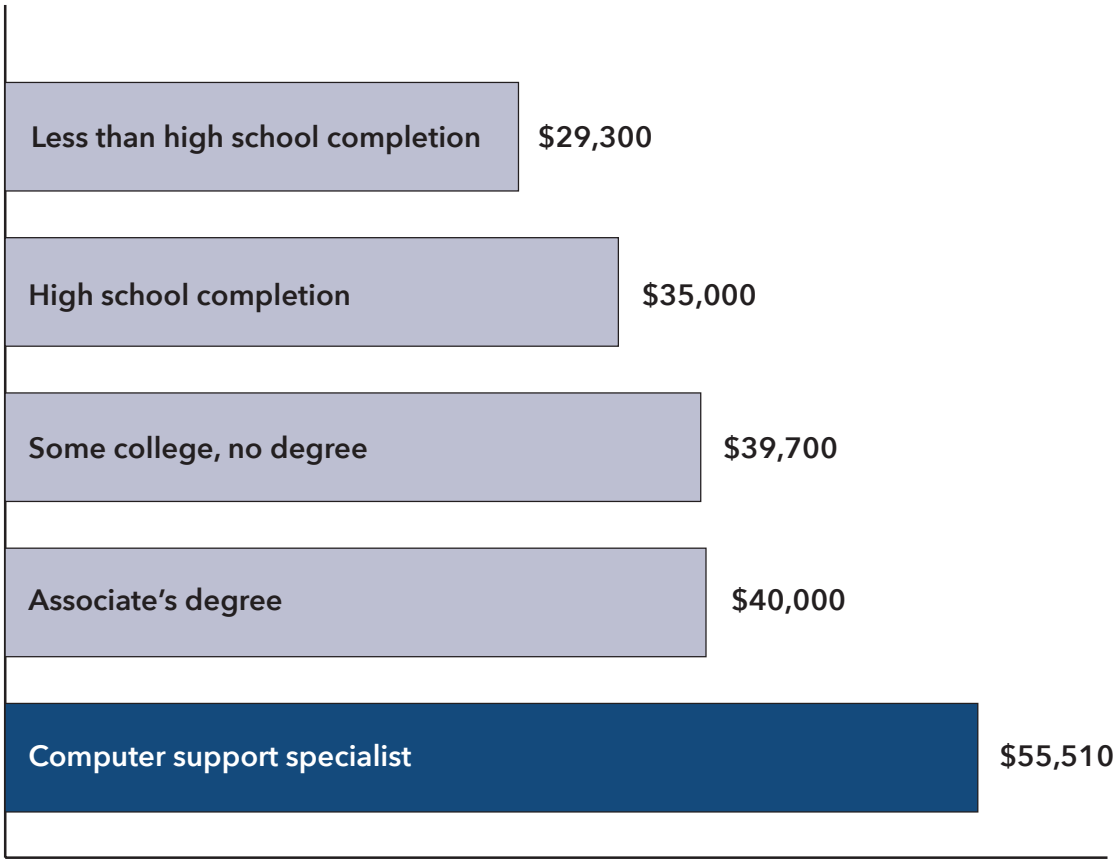
The Earnings Gap

The engagement gap puts Atlanta's opportunity youth on a trajectory of lifelong poverty Changing this trajectory, and breaking the cycle of generational poverty, requires equipping opportunity youth with job-ready skills for well-paying jobs.

The technology sector continues to be one of the highest paying fields within -- and beyond Atlanta. Technology roles comprise nearly 10% of the Atlanta metro area's workforce. Nationally, technology job salaries are well above the level of poverty for a family of four.[9] For organizations seeking to improve the lives of Atlanta opportunity youth, training, coaching, and placing students into entry-level technology roles is perhaps one of the most effective ways of breaking the cycle of generational poverty in our city.

Median Annual Earnings

National Data



Data from the National Center for Education Statistics[8] and the Bureau of Labor Statistics[9]

After a local community job fair, Denver is considering starting a training program that promises job placement in 20 weeks, as well as multiple industry certifications.

While the program has no upfront costs to participants, Denver is concerned about making it all work. Denver lives in a multigenerational household with young kids. Denver is often the babysitter, as well as the caretaker for the elderly members of the household.

Their home doesn't have reliable internet, and Denver doesn't have a computer. While the program is compelling, Denver has to figure out if, and how, they can participate in this free training program.

CHAPTER 2

Pathways for Technology Training

Atlanta's communities of opportunity can benefit from connecting with one of our city's most quickly growing and prosperous industries – technology.

Atlanta's Technology Leadership[10,11]

- **Nearly 19,000 tech jobs were added in Atlanta between 2016-2020.**
- **The median annual earnings for a tech employee in Georgia is $85,052.**
- **Atlanta is ranked as the most diverse of the top ten tech markets in the United States.**
- **The technology sector represents 10% of the state's entire economy.**

One may think of technology as a workforce that requires a four-year degree for entry; however, 1 in 4 workers in the IT industry do not possess a bachelor's degree.[12] With dozens of industry-accepted and in-demand certifications available, students without the resources to put meaningful employment on hold for years can have gainful employment on the horizon in just a few months, and with the help of community-based organizations and nonprofits, students can be supported in those critical months of intense learning, studying, and examination.

Certifications in technology are accredited credentials that focus on industry-aligned knowledge and skills that individuals can attain and even stack. The use of certifications is a technology industry standard that job-seekers of any educational or experience level seek out to bolster their resumes. There are numerous certificates available from for-profit, non-profit, and not-for-profit training programs, such as Microsoft, CompTIA, Amazon, and IBM. The three categories below represent a large swath of the most popular certifications, particularly for entry in the technology workforce.

Web Development

Certifications from Adobe, Microsoft, AWS, and similar organizations focus on front- and/or back-end web development. Work experience or a portfolio is sometimes required. These certifications prepare individuals for careers in web and app development. Industry advancements such as e-commerce, HTML5 and mobile web design fuel the changing learning and training requirements in this field.[13,14,15]

Network Support

Certifications, such as the CompTIA Network+, the Cisco Certified Network Computer Technician, and similar support-role credentials provide the skills for individuals to enter the workforce as network support specialists. New security and connectivity protocols fuel changes in the training and certifications associated with network support. Several certifications, such as those from CompTIA, have frequently refreshed exams for individuals seeking new and renewed certifications.[16,17]

Cybersecurity

CompTIA's Network+ certification and the Systems Security Certified Practitioner certification are the most popular entry-level cybersecurity credentials. Both prepare individuals to start their cybersecurity careers, equipping them with the skills to identify threats, design networks, and manage devices and identities in a company.[18]

The majority of certifications within the mentioned technology categories are awarded upon the successful passing of an examination. These exams are typically updated using industry feedback on a 2-3 year cycle to ensure certificate candidates are equipped with modern industry best practices.[15-19]

Preparing for the Future

In just the decade from 2010-2020, the world saw rapid growth in technological advancements and trends.

- **Voice-Activated Assistants and the vast data they generate**
- **Advancement of AI into mainstream technology and the opportunities for its broader utilization**
- **Explosion of consumer-oriented IoT devices and the security challenges they pose**

While the technologies above were decades in the making, their rapid commercialization and growth creates new workforce needs. Companies can't wait years for a workforce to catch up to these needs; however, traditional educational systems aren't always able to keep pace with these developments.

Not all students need immediately employable skills and certifications, but for opportunity youth with no time to spare, learning streamlined for industry roles improves the odds of a successful transition from education to employment. Although states and settings vary, K12 courses often begin with the development of standards, which are then approved and curriculum development begins. University-level courses often go through similar approval cycles for courses and syllabi.[19,20]

K-12

University

Consider the quick iterations of not only new technologies and fields, but also the 2-3 year refresh cycle of certifications. Timelines of standards approvals and course development increase the gap between traditional education and certifiable-industry skills.

However, there exists other educational and training pathways for opportunity youth that bridge their immediate needs with education and employment to change their trajectories. Pre-apprenticeships, apprenticeships, and other certification-focused learning programs offer learning that is uniquely-focused on industry-aligned and in-demand knowledge and skills. These programs each leverage their own mix of hands-on and classroom-based learning, as well as additional supports and services for students.

In the following section, we identify and describe five unique models of programs that capture a large swath of the technology training landscape beyond K12 and Higher Education. This comparison matrix was developed by evaluating program information from dozens of providers across Atlanta and comparable metropolitan areas.

While specific programs within each category may have their own unique components and features, the following categories and descriptions highlight the "core characteristics" of each program model.

1. **Bootcamps** - We define bootcamps, or coding bootcamps, as those programs aimed at educated and resourced individuals seeking to upskill for career advancement or the opportunity to build skills for new career fields.
2. **Workforce Training** - We define workforce training programs as those programs aimed at developing individuals to be members of the technology workforce at entry-level positions. These programs often work within disadvantaged and marginalized communities.
3. **Pre-apprenticeships** - We define pre-apprenticeships as those programs that focus on training individuals to be able to join the workforce as apprentices in the near future.
4. **Registered apprenticeships** - These Department of Labor apprenticeship programs use an "earn while you learn" model, providing students employment while they learn valuable industry skills. Dept. of Labor regulations require these programs to use an approved model of training.
5. **Unregistered apprenticeships** - These apprenticeship programs are not registered by the Department of Labor; however, they also employ an "earn while you learn" model.

Program Feature	Bootcamps	Workforce Training	Pre-Apprenticeships	Registered Apprenticeships	Unregistered Apprenticeships
Net Cost to Student	$$$$	No cost	No cost	No cost	No cost
Location	onsite or remote	onsite or remote	onsite or remote	onsite or remote	onsite or remote
Support with Equipment and Resources for Learning	✗	✓	⊖	✓	⊖
Employment Income	✗	✗	✗	✓	⊖
Basic Needs Support	✗	✓	⊖	⊖	⊖
Social Support	✗	✓	⊖	⊖	⊖
Soft Skills Training	⊖	✓	✓	⊖	⊖
Credential aligned technical training	✓	✓	✓	✓	⊖
Non-credential aligned technical training	⊖	✓	✓	⊖	⊖
Networking and Job Placement Support	⊖	✓	✓	✓	⊖
Continued Coaching, Mentorship, and Skill Development after Program Ends	✗	✓	⊖	⊖	⊖

onsite | remote | ✓ core program characteristic | ✗ not typical of models of programs | ⊖ may be offered, but not inherent to the model (program-specific)

Bootcamps

Coding bootcamps are generally twelve weeks to fourteen weeks, with specific length varying on the objectives and intensity of the program. Many popular coding bootcamps are offered fully online, with the option for part-time or full-time enrollment. Third-party curriculum developers and providers are common in this space, with many bootcamps utilizing a select number of curricula based upon the focus of the course or program. These programs lead to one or more certifications in an in-demand technology field, such as web development, UX/UI design, cybersecurity, and digital marketing

The average cost of attendance for online coding bootcamps in 2020 was just under $13,000. A 2019 study of 79 coding schools that offer these popular bootcamps revealed that the average student is an early 30s white male with a four-year degree.[21]

Some programs offer support in networking, resume development, and interview coaching; however, that is not a core characteristic of this program model. It is not uncommon for a coding bootcamp to offer a "money back" guarantee if the graduate does not obtain a job with a set amount of time following completion of the program.

Workforce Training

Workforce training programs, often run by a network of not-for-profit organizations, community-based non-profits, and industry partners, are often eight weeks to sixteen weeks in length. Many of these programs utilize a cohort-based model, with students attending classes and other training opportunities with one another for the entirety of their program. As these programs are typically aimed at disadvantaged or under-resourced individuals, eligibility restrictions, such as income, educational background, or residency often apply.

Additional soft skills training, coaching, and networking are often provided as part of these programs. These community- and individual-focused programs also offer additional supports and services. Tangible basic need supports, such as help in securing housing, emergency employment, or in navigating social benefits are often provided. As students take advantage of these resources throughout their programs, support personnel often become an intangible lifeline and support team throughout their training.

As many of these programs are offered in coordination with industry partners, an emphasis on job placement is common throughout these programs.

Pre-Apprenticeships

Pre-apprenticeships, offered by a network of not-for-profit organizations, non-profit organizations, industry partners, and occasionally, K12 education organizations, vary in length depending on the specifics of their program. As they occur prior to apprenticeship,

these programs focus on the high-yield knowledge and skill building that takes a student to a level where they are ready to join the workforce as an apprentice.

These programs may focus on skills required prior to the learning of certification-aligned skills, including both technical skills and soft skills. These programs also have an emphasis on job placement, with one or more of the industry partners with which the pre-apprenticeship program is affiliated.

Some pre-apprenticeships *may* offer additional support services, such as supports for basic needs, social support, one-on-one coaching and mentoring, depending upon the program and circumstances.

Apprenticeships

Apprenticeships are an on-the-job, earn-while-you-learn training programs offered by employers. As employers create and operate these programs to fill roles within their organizations, they are designed to develop skills in anticipation of employment. For technology apprenticeships, these are often certifiable skills, with certifications depending upon the job role.

To foster success after apprenticeships, many employers build in additional learning opportunities, such as specialized onboarding, soft skills training, mentoring, and internal networking.

- ### Registered Apprenticeships

  Some employers choose to register their apprenticeship programs with the Department of Labor. Registered Apprenticeship Program status requires several requirements to be met. Apprentices must be paid, including an increase in pay with increasing skill development. 2,000 hours of on-the-job training, as well as a minimum of 144 hours of classroom-based learning are required. Apprentices must be matched with mentors on a 1:1. The skills learned during the apprenticeship lead to an industry-recognized credential.

- ### Unregistered Apprenticeships

  Not all employers choose to register their apprenticeship programs; however, this itself means little about their legitimacy or effectiveness. It is not uncommon for apprenticeship programs to provide industry-recognized skills and certifications, while not being a Registered Apprenticeship program. Operating outside of Department of Labor apprenticeship models, these apprenticeships provide flexibility for employers to train individuals in new and growing career fields and job roles.

Enabling Access to Opportunity

Atlanta's technology training pathways exist across the spectrum of these programs. Within this spectrum, several organizations and partnerships exist that seek to serve Atlanta's opportunity youth. Alongside these programs are one of the nation's largest concentrations of Fortune 500 and Fortune 1000 companies, many of which are eager to fill technology-related focused roles.

In addition to these headquarters are numerous other companies and organizations seeking to engage the technology workforce. Despite the opportunities to fill critical roles in our local industry *and* serve Atlanta's opportunity youth, the literal distance between areas of economic activity and Atlanta's communities of opportunity is notable. For commuters in the Atlanta metro, these distances may seem small – perhaps even only a few miles – and thus should easily be traveled in a reasonable amount of time. But 13% of Atlanta metro's *super commuters*, defined as spending three or more hours commuting to and from work, live within 10 miles of downtown. Only 1% of jobs in the metro can be reached in under 45 minutes when using public transportation. Clearly, these small distances may not be as accessible as we believe, particularly for opportunity youth who cannot afford the lost time and opportunity cost of lengthy, unreliable commutes.[22]

Fortune 500 and Fortune 1000 companies headquartered in Atlanta[23]

Virtual learning and remote work have enabled schools and companies to persevere throughout the pandemic. We believe the capacities developed during this historic time can be leveraged to serve our opportunity youth. With hybrid or remote training possibilities, we can remove barriers and provide unprecedented access to economic empowerment for Atlanta's opportunity youth. To inform our continued service to our communities and support service to opportunity youth everywhere, we have developed the **TechBridge Framework for Empowering Opportunity Youth**. While this Framework is designed with new remote training possibilities at the forefront, we believe the components within it are universal to any program seeking to engage opportunity youth in economic empowerment through workforce development and training.

The TechBridge Framework for Empowering Opportunity Youth

Opportunity Youth

- Not engaged in education or training
- Not participating in the workforce
- Limited opportunities to break the cycle of generational poverty

Empowered Youth

- Equipped with high-value skills and credentials
- Employed in a livable wage
- On a trajectory of economic stability

Denver learned that the training program they were considering will help with the laptop and internet required to complete the coursework and examinations. They also were put in contact with additional organizations that partner with the training provider that will help provide Denver with a quiet, safe place to study and do work outside the home.

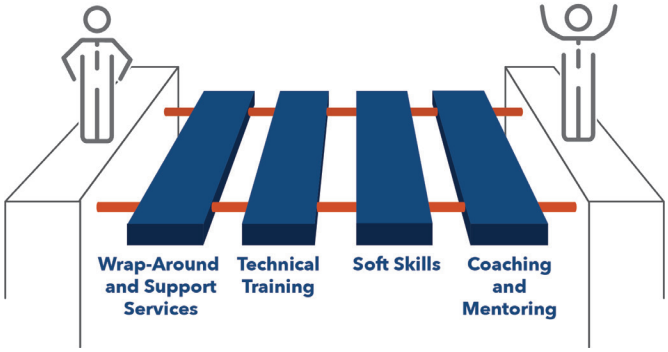
Denver feels like they will be supported in this program, and that if they have an issue, someone will be there to help them with it. Knowing this, Denver is not only ready to join the program, but excited to make a change and get on a pathway to meaningful employment.

CHAPTER 3

The TechBridge Framework for Empowering Opportunity Youth

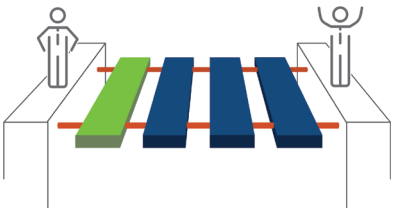
The TechBridge Framework bridges opportunity youth with meaningful employment to break the cycle of generational poverty.

The Framework consists of four critical elements, each equally-important yet occurring at various points throughout a student's training and transition.



- **Wrap-around and support services** are an industry-standard for nearly every community-based organization that serves individuals. Effective services and support provides critical support across a wide variety of areas to ensure students are able to focus on their studies.
- Informed, effective, and accessible **technical training** that leads to credentialing via certifications that provide the most opportunity for students to enter the technology workforce.
- The development of **soft skills** that foster the opportunity for students to not only enter the technology workforce, but succeed within it.
- **Coaching and mentoring** beyond the completion of the original training program helps to ensure success in the workplace, benefitting the students, industry partners, and the training organization.

Wrap-Around and Support Services



Wrap-Around and Support Services are the first plank for any program that seeks to engage opportunity youth and other marginalized communities. These services and supports help to address the diverse needs required for each student's success. Students' needs should be identified as early as possible in the program, ideally through the application, screening, and on-boarding processes.

Some may be tangible, such as finding emergency employment that will work around training schedules, transportation to work or training sites, or having the funds to feed a family. Other services, such as providing a non-instructional, trusted point of contact with which they can share struggles and personal issues, provide students a sense of psychological safety and belonging.

Providing services that meet both the physical and emotional needs of students is critical for programs that seek to engage opportunity youth.[24,25,26]

> Many opportunity youth likely have trauma from previous childhood experiences. While many relate trauma to only experiences involving violence or risk of injury, traumatic experiences are much more prevalent – particularly for opportunity youth. Food and housing insecurity, loss of a parent, and psychological or emotional abuse are examples of the types of traumatic experiences opportunity youth may endure.
>
> These experiences can impact opportunity youth later in life through issues managing conflict, trusting others, and even the learning process itself.[28]

42%

of all support services interactions were to share academic challenges and struggles

28%

of all support services interactions were to discuss solutions to financial barriers

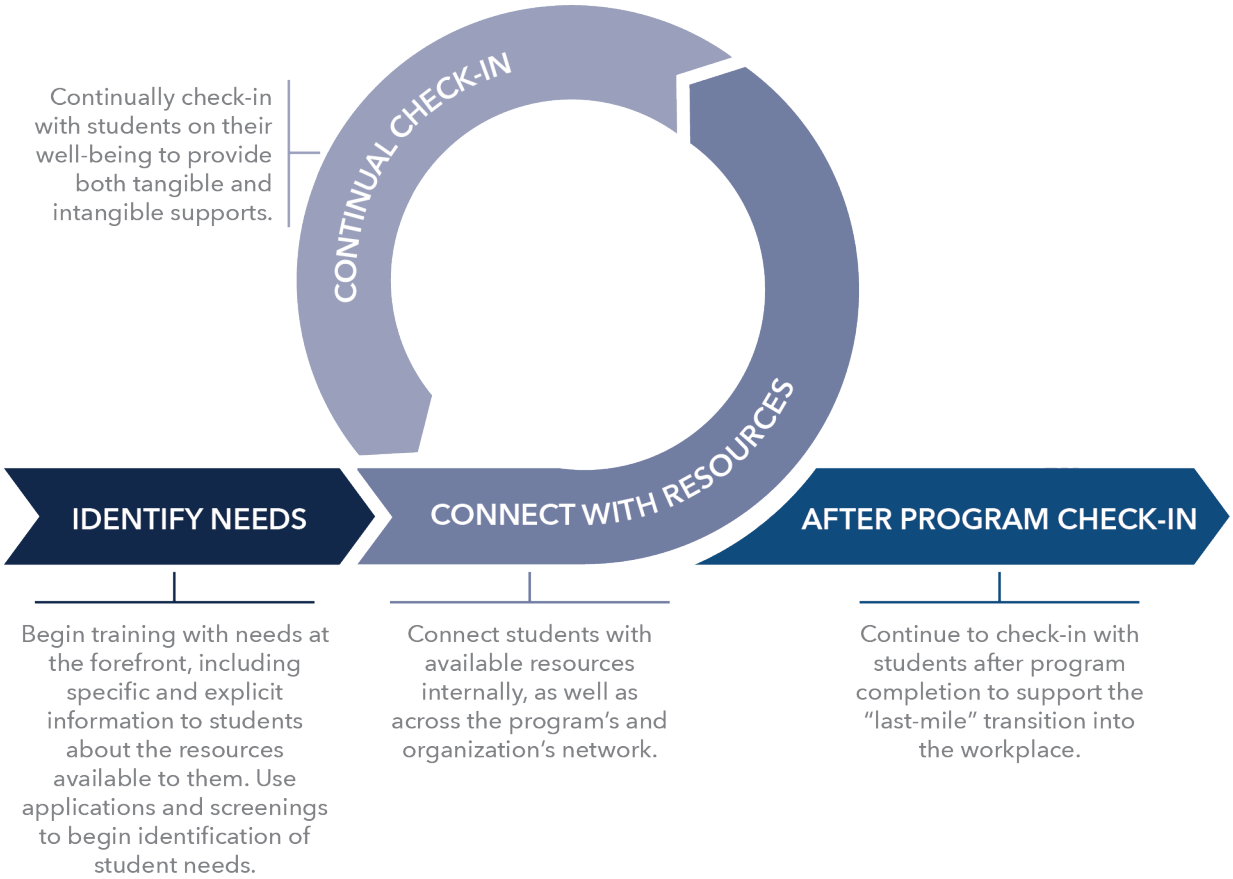
6%

of all support services interactions were simply for students to discuss their lives

Percent shown is the percentage of total utilizations with the described focus as reported by support services personnel across 11 weeks of a learning cohort facilitated by TechBridge.

To identify these needs and foster a feeling of safety in sharing vulnerabilities, communication needs to happen early and often. For programs coordinated by a team of organizations, cross-communication about student needs and struggles minimizes the potential for students to drop off from the program.

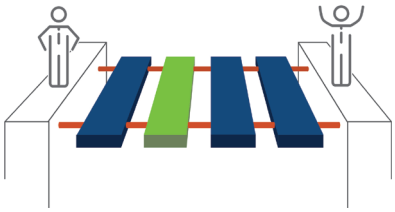
Wrap-Around and Support Services Cycle



"If I am underemployed, or not employed at all, and I'm seeking to do a 12 week technology programs. Well, the average person can't go 12 weeks and not work… So if they get a job in the midst of say, let's say week six, then they're going to leave that program to accept that job. That's why it is important to offer those wraparound services. Life happens, and life may not always necessarily be completing a program when I'm trying to struggle with putting food on the table for my family."

- TechBridge Community Partner

Technical Training



With supports in place to meet the needs of students, a program can engage in technical training.

Technical training that best bridges students with employment is:

- Informed
- Intentional
- Accessible

Informed instruction begins by identifying local industry needs, then selecting credentials, curricula, and programs to meet the needs of area employers. This alignment of training to industry needs requires deep, sustained, and continuous engagement with industry partners. Having technical advisory boards may inform the broad focuses of an organization's training effort, as well as demonstrate an organization's dedication to creating quality technology talent. Leveraging opportunities to invite industry partner representatives into the training process creates transparency and the unique opportunity to bridge talent-in-training with future employers. These relationships also foster the opportunity to bring industry partners into the program for networking, recruitment, and continuous ongoing dialogue about the needs of the industry – and how training programs can fill critical roles.

> "We provide instructors notes [to one another].
>
> Hey, you know, this student over here is not as confident. She might need a teaching assistant. She might need an extra mentor. She might need extra resources."
>
> - TechBridge Instructor

Informed instruction is also **intentional instruction**. This intentionality requires that instructors be informed about their students. Student's knowledge and skills within a domain are critical to ascertain – even prior to the start of a program. While curriculum may describe the steps from start to finish, instructors need to be informed and intentional so that they can best support students in moving through these curricular steps and to success beyond the program. This is particularly true for remote and virtual training, which may lack the subtle cues of a traditional classroom that inform instructors if students are not progressing as anticipated.

Although informed instruction begins with understanding your students, it hinges on the careful selection of instructors. Technical training is rarely developed for opportunity youth

in mind; therefore, it is critical to select instructors who are willing and capable to leverage curriculum as only one component of the total instruction required to achieve success.

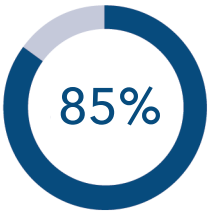
Instructors who understand their students' current progress can work to translate technical concepts in a way that meets students where they are. This often means going beyond the slides or modules, and creating interactive, hands-on, and engaging opportunities for learning. Frequent assessment, not just of student understanding, but also for feedback of the instruction used, helps instructors chart a course that supports success for each student during the training. And in training programs with multiple instructors, cross-instructor communication about students is key to ensuring consistent success and support.

> "We had a group chat for our class. I just proposed in there, that if anyone would like to take some time to study, [we] definitely would want to schedule that and then we created like a smaller group chat of people… I would say [the program] was a bit challenging trying to do alone, but we would do some practice questions together and think through things together."
>
> - Former TechBridge Student

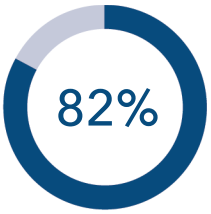
Accessible instruction means that students don't lose access simply when class stops - whether it's the materials, instructors, or each other. With demanding lives and schedules, opportunity youth need both the reliable routine of classroom learning and the ability to access training resources on their own time. Whether it's a virtual or face-to-face classroom, intentional utilization of digital tools for learning management and communication are key. The creation of communities within cohorts not only supports learning through study groups and peer instruction, but foster a sense of belonging that reduces student drop off.

An informed, intentional, and accessible instructional model works.

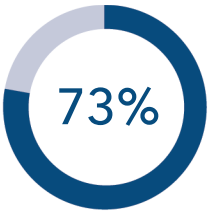
The TechBridge Works Framework is informed by the success of our Technology Career Program. As of Q1 2021, this program has served 320 students to achieve:



GRADUATION RATE

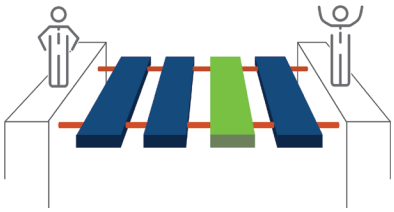


CERTIFICATION RATE



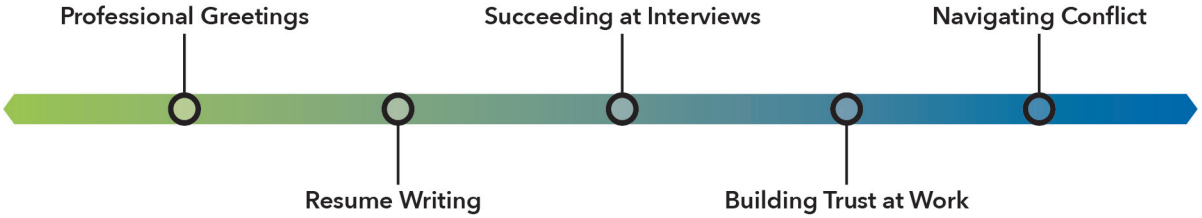
EMPLOYMENT RATE

Soft Skills



Even if training programs support students through a technical training program, success in the workplace isn't guaranteed. Particularly for opportunity youth, who are unlikely to know professionals in the technology industry or have experience navigating company cultures, the opportunity to develop soft skills is a critical component of the Framework.

Soft Skills Spectrum



Soft skills provide the opportunity for individuals to put their technical skills to work in gainful and consistent employment. Training programs that teach these skills and allow opportunities for authentic practice will best train their students for success in the workplace. Training and practicing of soft skills should span the basics, like professional greetings, to those that will be practiced for a lifetime, such as conflict resolution and building trust.

Authentic practice can, and should, include industry partners, such as managers and recruiters. Not only does this add the authenticity to training opportunities, but it provides the chance for students to benefit from their skill development, grow their network, and improve their job-seeking prospects after graduation. These authentic, skin-in-the-game experiences are crucial to preparing students for real-world employment.

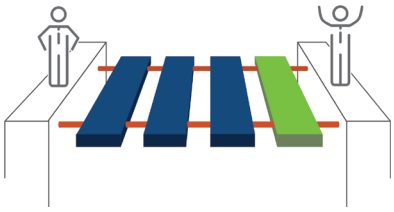
It also provides students the unique opportunity to see a diverse group of corporate representation and their different company culture and values. This helps students to recognize that starting any new role will require active learning and continual networking for success.

"I credit my hiring, my employment, completely to [TechBridge].

My personality was great, but learning the transactional languages and being able to navigate through my work environment was going to be key for me to be able to get into the job."

- Former TechBridge Student

Coaching and Mentoring



Industry partners relying on an organization to produce technology talent need to know that program graduates will not only be skilled, but also resilient and retainable. Successful training will not only support graduates in job placement and getting the first role, but staying and succeeding in those roles.

Opportunity youth, who likely lack a network of technology or other white-collar professionals, need continued coaching and mentoring to ensure they succeed at the onset of their careers.

More than just continued skill development or professional learning, the opportunity for these newly-minted professionals to obtain feedback, advice, and input from mentors outside their immediate work environment is crucial to their success.

> Consider the challenges of entering any new organization, such as setting reasonable expectations and navigating office politics.
>
> Now consider that neither yourself nor anyone you know have ever worked in an office. Where do you go for help? How do you know how to succeed?
>
> Continued coaching and mentorship is a key step in ensuring the long-term success of opportunity youth and company retention.

> "After the participants complete [the program], they have the opportunity to be pipelined across our respective client network ecosystem. So that gives them the foray into hundreds and thousands of client opportunities that are either tech specific or tech adjacent. So that benefits both TechBridge as a partner organization and what they're trying to accomplish while it also benefits our clients in terms of a pipeline of talent will be associated students."
>
> - TechBridge Industry Partner

> "Once they've been told something once, do they have the ability to retain that knowledge? Do they have the initiative to think on their own, instead of asking others? Do they have the ability to network and reach out? [Can they] ask the right questions?... and you don't need a college degree to do this. You just need the desire and understanding that this is what people look for."
>
> - TechBridge Industry Partner

Denver has completed the program. They now have multiple industry certifications and have begun an entry-level position at a local company. They are excited to be starting this new journey. They're also a little nervous, but the training program has assigned them an alumni mentor and will continue to provide training and coaching to help them succeed in their first year. Denver continues to feel supported, and that they aren't alone in the journey they are taking.

Denver's friends and family are impressed with their success. Some of them have asked Denver if they can find a similar training program that will help change their lives in the way Denver experienced. Thankfully, Denver's training provider works with many organizations that serve their community.

CHAPTER 4

Towards the Horizon - Areas of Consideration for the Future

Throughout the development of this whitepaper, multiple areas of opportunity for the field at-large were identified. Descriptions of these opportunities, as well as potential ideas and perspectives, are provided in this chapter. These opportunities and the discussion around them are intended to help organizations in Atlanta – and beyond – ponder ways to best serve opportunity youth.

What is the future of technology-enabled training?

The future of technology-enabled training and work has been accelerated during the COVID-19 pandemic. Apprenticeships were largely restricted to individuals who were within commuting distances to worksites, but now increased experiences with both remote work and remote learning open the door to unprecedented opportunities in engaging opportunity youth.

Transportation access and reliability is not always a given. The opportunity for remote learning, work, and apprenticeship creates accessibility for opportunity youth who may otherwise not benefit from a city's or region's strong technology industry.

How can organizations in the same communities better synergize?

An increased focus on vulnerable and disadvantaged communities has created new opportunities for workforce development, training, and improving the live of individuals. With these opportunities come growth.

Communication to maximize efforts and avoid "role-overlap" may not only help to create efficiency among partner organizations, but also reduce confusion for students being served by these collaborative efforts.

How can training programs continue to improve their outcomes?

Outcome goals vary among programs and organizations. Goal-setting for a training organization should be developed with external perspectives and feedback in mind. Training providers should engage industry and mission-alike partners in discussions over outcomes and metrics to improve the alignment of goals to the needs of communities and industries.

But feedback doesn't have to be external. Providers should seek ongoing, honest internal feedback; this includes having instructors reflect on and revise training programs using the experiences of themselves and their students.

How can training organizations retain their most valuable assets?

Training organizations should prioritize their most valuable assets -- their student-interacting instructors and personnel. As these individuals shape the experiences of students and the quality of their training, organizations should be mindful of the needs of their personnel.

Service to extraordinary populations, such as opportunity youth, require dedicated and trained instructors; therefore, organizations should act accordingly in recruiting, retaining, and growing instructional talent. The dedication and passion of instructors should be balanced with opportunities for instructors to take time for themselves. This may mean ensuring instructors have time for their own lives and personal responsibilities, but also professional growth and learning opportunities.

How can training organizations future-proof their programs?

The technology landscape is ever-evolving. Continued development into AI, machine learning, and big data are particularly compelling sectors of growth for technology. Within and beyond these sectors, the continual input of technology leaders is required for programs to have their finger on the pulse of industry needs and certifications.

Methodology

To develop this whitepaper, a scan of the technology workforce development and training landscape within, and beyond, Atlanta was conducted. An exploratory stakeholder study of Atlanta-based stakeholders in technology training for opportunity youth and marginalized communities served as the central anchor for this landscape scan. Quotes are anonymized to maintain the confidentiality of our interviews. The authoring team would like to thank all of our participants for sharing their time, perspectives, and experiences with the readers of this whitepaper.

Thanks to these Atlanta-based stakeholders for providing insight and commentary:

- Accenture
- Anthem
- Goodwill of North Georgia
- Randstad
- State Farm
- Urban League of Atlanta
- Urban Strategies
- TechBridge Instructors and Former Students

We also extend our gratitude to all of our partners and stakeholders who have collaborated with TechBridge over the years in support of breaking the cycle of generational poverty.

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TechBridge
One Midtown Plaza
1360 Peachtree St NE, Suite 175
Atlanta, GA 30309

www.techbridge.org