



February 8, 2019

Mayor David Briley
Metropolitan Government of Nashville and Davidson County
Metropolitan Courthouse
Nashville, TN 37201

Dear Mayor Briley,

I am pleased to write you today to request a \$250,000 investment in the future of Metropolitan Nashville-Davidson County's technology workforce through the Nashville Technology Council Foundation to support **Apprenti TN**.

Tech is the fastest-growing occupational sector in the world. The number one job for 2018, as reported by U.S. News & World Report, was software developer. Middle Tennessee is one of the fastest growing regions in the United States, ranking 7th in technology job growth by Forbes magazine and ranking 2nd in overall job growth since 2009. With this level of growth in workforce demand and record low unemployment, additional attention must be placed on growing the supply of skilled workers, specifically technology professionals. With every city in the nation competing for available tech talent, it is not realistic to think that we can recruit all the talent needed to sustain and grow our needs.

With an estimated 39 percent of Nashvillians underemployed, too many Nashville residents find themselves locked out of the economic growth in the region, due to the lack of skills, experience and/or education (JobsEQ 2018). The average tech worker in Middle Tennessee earns 96 percent more than a non-tech worker, further highlighting the economic benefits of expanding our tech workforce with local talent.

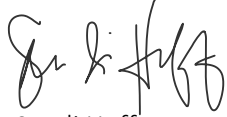
To expand career pathways and increase positive economic mobility, the Nashville Technology Council Foundation has launched the first technology apprenticeship program in Tennessee. Unlike traditional job-training options, Apprenti TN combines education and paid on-the-job training for placement in a high paying, high-skill occupation. The program works with tech employers to identify mid-tier jobs ready to be filled by highly competent people — regardless of educational background. With the tech industry seeking to diversify its workforce, Apprenti TN actively recruits women, minorities and veterans — although anyone is eligible to apply.

Program design is inclusive and builds upon Nashville's current assets to offer a solution to close the tech skills gap. This program partners with existing training providers to provide high quality, accelerated skill building. The classroom training period is 12-24 weeks depending on occupational track. The apprentice will then work with a hiring partner for one year of paid on-the-job training. During those 12 months, they will begin at a training wage at least 60 percent of fully-qualified regular employees, which will increase over the year of apprenticeship.

The attached proposal outlines our request for apprentice training and support in the amount of \$250,000 from Metropolitan Nashville-Davidson County. Technology can be a great equalizer. We look forward to working with the city to bridge the 'opportunity gap' for Nashvillians with the aptitude to learn a tech skill

but who have never had the opportunity to take advantage of these higher paying jobs. Please let us know if we can provide any additional information or answer any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Sandi Hoff". The signature is fluid and cursive, with the first name "Sandi" being more prominent than the last name "Hoff".

Sandi Hoff

Executive Director, NTC Foundation

A handwritten signature in black ink, appearing to read "Brian Moyer". The signature is fluid and cursive, with the first name "Brian" being more prominent than the last name "Moyer".

Brian Moyer

CEO & President, Greater Nashville Technology Council

Board Chair, NTC Foundation

APPRENTiTN Proposal

1. Background

In 2008, the Nashville Technology Council (NTC) began helping the local tech industry find qualified job applicants by forming relationships with area universities to guide curricula to meet local business needs. In 2013, the NTC created the NTC Foundation (formerly known as Turning the Tides of Technology) to focus its efforts around STEM education and workforce development. In 2015, the NTC received a \$850,000 LEAP grant from the State of Tennessee to raise student awareness of tech career opportunities through camps, tech industry field trips, a technology lending library, and internships. Also in 2015, the NTC also became the Nashville lead for President Obama's TechHire program, working to develop non-traditional ways to recruit and place applicants based on their actual skills and to create more fast track tech training opportunities. In 2018, the NTC Foundation (NTCF) launched Apprenti TN to meet the education and tech training needs in the community. As a technology apprenticeship program, the goal of Apprenti TN is to not only provide an additional source of tech talent, but to do so by bridging the 'opportunity gap' within minority segments of our population who have the aptitude to learn a technical skill but have not had the opportunity.

The mission of the NTCF is to raise funds to support the education and workforce development efforts and programs of the NTC. As an IRS designated 501(c)(3) charitable organization, the NTCF expands the opportunities of the NTC by connecting to a broader and more diverse group of funders in support of technology programs. The mission of the NTC is to be the catalyst for the growth and influence of Middle Tennessee's technology industry. The NTC's programs align with four pillars: to connect, develop, promote and unite the Middle Tennessee tech community. It is under the "develop" pillar that the NTCF raises the necessary funds for the NTC's education and workforce development programs.

2. Statement of Need

Nashville has the lowest unemployment rate (2.7%) of any metropolitan area in the US with over one million people (Bureau of Labor Statistics, February 2018). While Nashville is experiencing historic growth and vitality, there are Nashvillians being left behind. In Nashville, more than 250,000 people are earning less than \$30,000 annually in a housing market that estimates an average salary of \$50,000 annually is required to manage all household expenses. Many of these Nashvillians have earned a high school diploma, but have struggled to transition to prosperous employment or credentialing opportunities that will provide a sustainable living wage.

Employers across all industries are challenged to find people with the right tech talent. Unable to fill vacant positions through their established pipelines, employers resort to poaching talent from others. That practice, perhaps helpful in the short-term, is simply unsustainable. This is the time to make investments in a scalable, industry-led apprenticeship program, like Apprenti TN, to augment the existing talent pool and usher in a culture that promotes the training and use of home-grown talent. Moreover, Apprenti TN creates opportunities for all Nashvillians to experience the city's prosperity by quickly upskilling people for high demand jobs that pay 96 percent more than the median salary in Middle Tennessee.

Tech employers in Middle Tennessee are faced with an increasingly challenging recruiting environment, as demand for talent vastly outweighs the supply of workers. There were 46,099 tech online job postings in 2018, which is more than 12 times the number of tech degree completions (3,673 degrees earned from Middle Tennessee institutions) in 2017 (MTSU State of the Tech Industry Report 2018).

The discrepancy in postings demand versus degree completions shows that relying on graduates of higher education and certificate programs to meet the demand for additional tech professionals is simply not robust enough. With every city in the nation competing for any available tech talent, it is not realistic to assume we can recruit to this area all of our tech talent needs. Apprenti TN will augment the existing pipelines using its nationally recognized “turn-key” framework, which combines traditional methodology with a new application: tech apprenticeship.

Based upon job posting data, four of the top eight tech occupations listed for the Nashville MSA are occupations that will be available for apprenticeships through the Apprenti program in 2019 (Source: Emsi, January 2019).

Occupation	Avg Monthly Postings (Jan 2018 - Dec 2018)	Avg Monthly Hires (Jan 2018 - Dec 2018)
★ Software Developers, Applications	1,165	186
Computer User Support Specialists	930	255
Computer Occupations, All Other	887	106
Marketing Managers	672	77
Management Analysts	672	194
★ Computer Systems Analysts	657	212
★ Network and Computer Systems Administrators	586	130
★ Web Developers	373	46

3. Program Description

Apprenti TN is based on the successful experience of the Washington Technology Industry Association in Seattle, who launched the original Apprenti program in 2015. Time-to-market and sustainability were critical factors in the decision of NTCF to partner with WTIA and Apprenti. From the beginning, Apprenti has been structured with the goal of national expansion in-mind. The Apprenti program is both scalable and repeatable. Although piloted in Nashville with three occupation tracks in 2018, NTCF intends to scale to additional tech occupations thereafter.

Tech employers in Middle Tennessee are taking advantage of the time-tested method of apprenticeship for bolstering their ranks with a diverse, well trained, and experienced talent pool, and those interested in starting a career in the high-paying field of technology now have a path to do so. Thirty local companies have signed on as Apprenti TN hiring partners (Appendix 1). Although the program initially launched in Nashville with three tech occupations - software/web/application development, network security and system administration, Apprenti TN will scale over the next three years to include additional tech occupations based on employer needs.

Since June 2018, almost 1000 people have taken the Apprenti TN online assessment. Most of those people were identified through twenty-five community agency partners (Appendix 2) that share this opportunity and encourage local residents who are interested and underemployed to participate. 58% of the participants are people of color, 43% are veterans, and 23% are women. More than half have scored above an 80% and moved into an intensive interview process that examines career goals, fitness for an intensive training program, and the soft skills necessary to be a culture fit with local hiring partners. Those who are successful in that process move forward to interview with employers. The Selection Process is detailed in Appendix 4.

Those selected by hiring partners to become an apprentice sign a contract contingent on successful completion of the training. Apprentice candidates originally were required to cover their living expenses during the 12 to 24 weeks of training and successfully complete certification exams in addition to the training course. The ability to cover living expenses during the full-time, 40 hour per week training is the most significant barrier to entry for applicants. These grant funds will allow Apprenti TN to provide support to those in need. Upon successful completion, apprentices begin twelve months of paid on the job training. Those who make it into the program and successfully complete their front-loaded technical training and 2,000 hours (or one year) of OJT can expect to earn the going rate for entry level positions in their chosen occupation.

Twelve apprentice candidates were selected for the first cohort of system administrator apprentices that began training on November 5, 2018. They began their paid apprenticeships during the first week of February 2019. The average age of apprentices is 29. Candidates are currently being interviewed for additional cohorts scheduled for Spring 2019.

The goal for 2019 is to have 85 apprentices in the program, with an additional 170 in 2020 and 250 in 2021. In year four, we hope to take the program statewide and educate and train more than 1,000 apprentices annually. We are beginning to work with hiring partners now to transition the responsibility for training costs to them. Our hiring partners have indicated a willingness to pay for all or part of the training expenses as we move forward.

4. Program Evaluation

Results will be measured by the number of apprentices, community and hiring partners in the program, by regular surveys, and by monitoring the backgrounds and minority status of those in the program. A more detailed description of program metrics includes:

Goal 1: Identify, vet and pair apprentices with hiring partners in one of three tech occupations (Systems Administration, Network Security, Software Developer).

- 1.1 Place 85 candidates in technology apprenticeships with area employers in 2019, with an additional 170 in 2020 and 250 in 2021.
- 1.2 Increase the number of community partners that recruit apprentices from 25 to 35 in 2019.
- 1.3 Survey candidates at beginning of program, end of training, at 2, 5, and 10 months on the job, and at the conclusion of the apprenticeship to identify and overcome challenges to success.

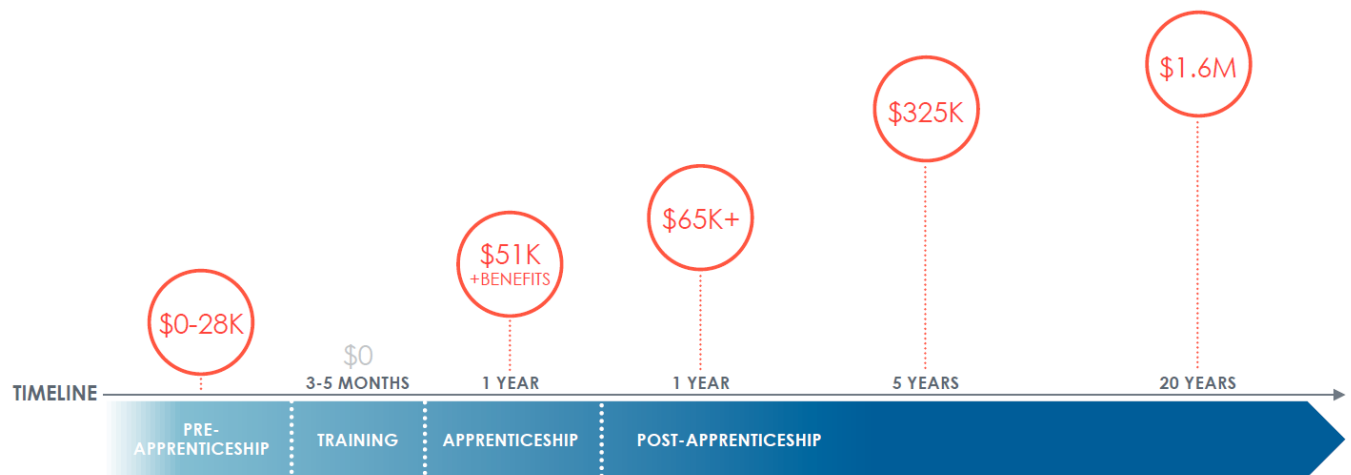
Goal 2: Among the 85 apprentices in 2019, maintain or exceed the current diversity percentages among targeted groups as follows: Minorities 58%, Veterans 43%, Women 23% Work with community agencies to

reach and engage potential Apprenti TN candidates, tracking referrals from agencies, noting percentage pass rates.

Goal 3: Build public/private partnerships to fund training and support for the apprentices.

5. Return on Investment

The cost is approximately \$100,000 for each apprentice, which is spread among the employer, the apprentice, and public/private funding partners for the pilot program. The return on this investment is significant with an apprenticeship increasing an individual's annual earning potential by an average of \$30,000 initially. Since all apprenticeships are in tech occupations with a significant career path, their salaries will continue to grow over their work life. Over the course of a lifetime, each apprentice will earn on average an additional \$1.6 million.



Appendix 1: Hiring Partners

Hiring Partner Responsibilities: As a registered apprenticeship program, Apprenti TN is required by law to meet the parameters established by the National Apprenticeship Act to protect the welfare of the apprentice. Apprenti TN will act as the Apprenticeship Intermediary - managing the apprentice employment process, maintaining documentation and fulfilling statutory reporting requirements for all apprentices registered in the Apprenti program. Hiring partners affiliated with Apprenti TN must commit to the approved Standards of Apprenticeship, including but not limited to, supervision and one-to-one mentorship of apprentice for OJT training, paying apprentices at least \$36,000 or 60% of entry-level salary (whichever is higher) plus benefits for one year with a 10% raise after six months based on improved proficiency, and providing OJT instruction and experience as is necessary to become a qualified journey-level worker in the agreed upon occupation. This agreement is solidified with the signing of a memorandum of understanding (MOU) by the hiring partner.

The hiring partner is also responsible for identifying the number of apprentices needed by occupation as well as identifying the desired start dates for the apprentices selected. Hiring partners will also be required to pay a placement fee of \$2,500 per apprentice to cover administrative costs associated with all clerical duties, including, but not limited to recruiting, placing and tracking of apprentices, and meeting government reporting requirements, which are managed by Apprenti and NTCF personnel.

Initial Hiring Partners:

3-D Technology
A.O. Smith
Alliance Bernstein
Asurion
Atiba
Bank of New York Mellon
Bedroc
Bridgestone Americas
Brookdale
Change Healthcare
Community Health Systems
Dell
Eventbrite
Evidence Care
Infoworks
Ingram Barge
Ingram Content
Kraft Technology Group
Lifeway
Parallon
Plow
Stratason
Teklinks
The General
UBS

Appendix 2: Community Partners

Role of Community Partners: Apprenti TN is a community initiative focused on bridging the opportunity gap by training a diverse populations. Relationships with community organizations ensure that the program remains inclusive and is focused on bridging the opportunity gap. Building capacity for Apprenti TN has required engaging multiple stakeholders – many of whom are our community partners who serve as program ambassadors. Our community partners ensure Nashville’s diverse population is aware of and participates in Apprenti TN. The role of local community partners is to identify candidates that are underemployed and have the aptitude and grit for a technology career. Apprenti TN works closely with local nonprofits whose clientele could benefit from a technology apprenticeship program. Partners provide opportunities for Apprenti TN staff to discuss the program by hosting targeted events onsite or participating in existing functions, as well as distributing literature to increase the reach of our message.

Initial Community Partners:

Bordeaux North Nashville Community PTA
Bunker Labs
Courtney Fullum - Thompson Kane
Ft Campbell USO
Family and Children Services
Gallatin Economic Development Agency
Goodwill Industries
ICD/USW Learning Center
Knowledge Academies
Lee Chapel AME Church
Martha O’Bryan Center
Metropolitan Action Commission
Metro-Nashville Housing Authority
Nashville Career Center
Nashville Chamber of Commerce
One Nashville
Operation Stand Down
The Connect Magazine
Urban League of Middle Tennessee
Vine Glen MB Church
Women in Technology TN
Workforce Essentials
YWCA
Salvation Army
United Way of Nashville
United Way of Williamson County

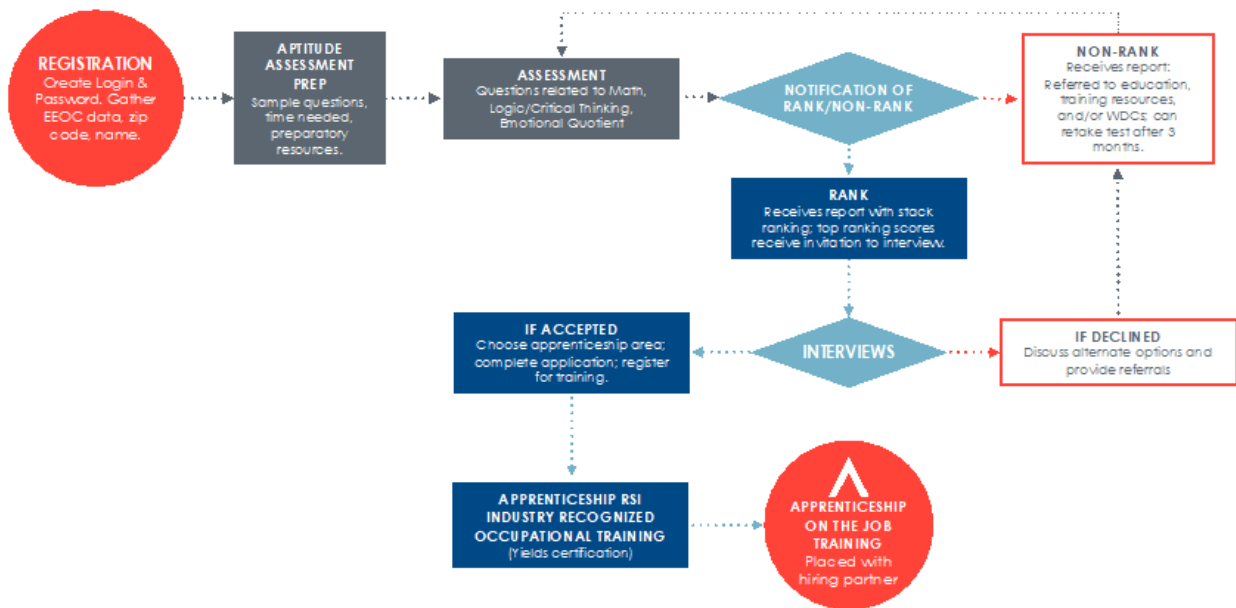
Appendix 3: Training Partners

The founding training partner for Apprenti TN is the Nashville Software School. Apprenti TN is actively exploring opportunities to partner with the Trevecca University, Tennessee College of Applied Technology-Nashville, and Nashville State Community College to deliver accelerated training to apprentices in 2019.

To be considered as a training partner with Apprenti TN, the training partner must be certified by the Tennessee Higher Education Commission and Department of Veterans Affairs. Once approved, the training partner must sign a master services agreement (MSA). Upon signing the MSA, the training partner agrees to the following:

- The curriculum developed by the training partner must meet or exceed the professional competencies established by any applicable testing or certification providers and meet or exceed the content coverage of vendor-specific reference courses (e.g., Microsoft Official Academic Course standards, Cisco, CompTIA, etc. competencies) and that all instructors are qualified and experienced in the subject matter undertaken by Apprenti students;
- The training partner will provide adequate physical facilities, computing hardware, and software licensing to accomplish the learning outcomes of the training programs; and
- The training partner will honor the minimum hours and content coverage required to satisfy completion of the training program as agreed, and will supply NTCF with all required progress, attendance, academic performance (including grades), and exam results data related to Apprenti students upon request.

Appendix 4: Section Process



Candidate Evaluation and Selection: Guided by Apprenti TN’s commitment to increase access to high-paying technology jobs for minorities, women, and veterans, the program has a unique and comprehensive on-boarding process. That process begins with the completion of a basic online profile through the Apprenti TN portal, which does not require a candidate to disclose any education or employment background.

The candidate is evaluated through an online assessment, followed by a series of phone and direct interviews. The online assessment, developed to identify individuals with the potential to succeed in high demand technology career pathways, tests the candidate’s competencies in math and logic, critical thinking, and emotional intelligence. If the assessment is passed successfully, the applicant is moved into a ranking system, based on their assessment scores, and the highest-ranking candidates move forward into the interviewing process.

The applicant will then participate in a face-to-face interview with Apprenti TN staff and hiring partners. At no point in the process does the hiring partner inquire about past work or education experience.

Apprenticeship Training Process: Once the hiring partner interview is successful, the candidate and hiring partner will sign a contingent contract (the contingency being that the candidate successfully completes the front-end training associated with the occupation of need). Following the signing of the contingent contract, depending on the field chosen, the new apprentice will receive three to six months of technical training followed by one-year (2,000 hours) of full-time, paid, OJT training in the occupation being sought by the hiring partner(s). Upon completion of the OJT portion of the apprenticeship, the apprentice becomes a journeyman in their occupation and receives a journeyman card that will be recognized as a national, portable certificate of occupational competence.

Appendix 5: Budget

APPRENTI TN PROGRAM LINE-ITEM BUDGET

	2019 85 apprentices	2020 170 apprentices	2021 250 apprentices	Total 505 apprentices
Income				
Corporate Investment	\$251,000	\$300,000	\$350,000	\$901,000
Private Foundations	\$160,000	\$200,000	\$250,000	\$610,000
Public Grants/Assistance	\$500,000	\$500,000	\$500,000	\$1,500,000
Apprenti TN Placement Fees	\$212,500	\$425,000	\$625,000	\$1,262,500
Corporate Training Support	\$250,000	\$900,000	\$1,750,000	\$2,900,000
TOTAL PROJECTED REVENUE	\$1,373,500	\$2,325,000	\$3,475,000	\$7,173,500
Expenses				
NTCF Apprenti TN Staff	\$164,000	\$204,000	\$264,000	\$632,000
Marketing	\$18,000	\$18,000	\$18,000	\$54,000
Supplies	\$3,000	\$3,000	\$3,000	\$9,000
Travel	\$6,000	\$6,000	\$6,000	\$18,000
Dues, Subscriptions, Technology	\$30,000	\$30,000	\$30,000	\$90,000
Apprentice Training Costs	\$707,200	\$1,414,400	\$2,080,000	\$4,201,600
Apprentice Support Costs	\$340,000	\$680,000	\$1,000,000	\$2,020,000
TOTAL PROJECTED EXPENSES	\$1,268,200	\$2,355,400	\$3,401,000	\$7,024,600

Budget Narrative

Apprenti TN Staff: Initially, Apprenti TN has been staffed by a Corporate Outreach Director and an Apprenti TN Program Manager. As the number of apprentices increases, the team will grow to include an additional Program Manager and an administrative assistant.

Marketing: Marketing efforts will primarily consist of advertising and collateral development and printing to reach our ideal candidates for apprenticeships.

Supplies & Equipment: Although most supplies and rent will be covered by the Nashville Technology Council, there will be some programmatic supplies needed.

Travel: Travel costs will include local travel, as well as travel to meet with the national Apprenti team.

Dues, Subscriptions & Technology: The NTCF will license the candidate assessment tool, the apprentice tracking portal, and all necessary contracts and agreements from Apprenti.

Apprentice Training Fees: Training fees average \$520 per week. Training periods range from 12-24 weeks.

Apprentice Support: Assistance provided to apprentices to help offset living expenses while a student.

Placement Fees: Employers pay a \$2,500 placement fee when the apprentice begins OJT.