

Public Investment Plan (PIP)

Project Name:	Engage IT: Preparing Students for IT Careers in the "IT" City
Contact Information:	Sandi Hoff, Nashville Technology Council, sandi@technologycouncil.com , 615-424-4789
Category (A,B,C):	A
Funding Requested:	Year 1: \$84,500 [Estimated Matching Funds: \$119,100] Year 2: Estimated at \$65,000
Mayor's Priority Area :	Youth and Education

1. What is the purpose of your PIP proposal?

Engage IT seeks to pilot an educator/employer-driven collaborative approach to address the challenge of job candidate "skills gap" by providing the necessary support for MNPS students in IT Pathways taking the CompTIA A+ certification exam. The lack of support for students seeking certifications has resulted in students earning less than their potential (over \$1 million per person in lifetime earnings) and has impeded economic development in Middle Tennessee, as employers have consistently been unable to fill available positions.

2. Describe the problem you plan to solve.

In 2016, Middle Tennessee added 2,200 new IT jobs. Currently, there are almost 2,000 technology job vacancies (2/14/2017). The EMSI data projects that growth rates will increase to an average of 18 percent in ten years for the "Top 5 IT Occupations" in Middle Tennessee (2014-2024). As Nashville grows and the number of vacancies consistently climbs, the number of skilled IT workers is not keeping pace. Many of these positions do not require college degrees, but rather can be filled with applicants who have industry certifications and the 21st Century job skills necessary for success. Engage IT proposes to build both technical and soft skills in students to prepare them for technology jobs within our community

Currently, CompTIA A+ is the most employer-sought after certification in the Nashville area. Annually, there are over 500 openings for positions requiring the A+ certification. Although it is offered through the Networking Systems pathway at Overton High School, there are no students willing to attempt the CompTIA A+ certification exam this school year. This can largely be attributed to students not having dedicated time focusing on the certification curriculum with a skilled instructor and the instability of technology faculty. Excessive turnover of technology teachers is a problem that has plagued MNPS. Nashville schools are currently experiencing over 90 percent annual turnover rate for technology teachers.

3. Describe your proposed solution to the problem.

Engage IT is a pilot program to support Overton high school students in the Networking pathway so that they can be successful taking two certification exams: CompTIA IT Fundamentals and CompTIA A+. The program will provide classroom instruction, mentoring, tutoring, and promoting an awareness of the IT careers available when they are successful. In addition, this program will also provide mentoring and support for novice technology teachers.

Phase 1: CompTIA IT Fundamentals Certification Exam (June-July 2017)

Students will be selected for participation in the Spring of 2017. Through Opportunity Now, they will participate as summer interns with the Nashville Technology Council with the internship wages paid by the HCA Foundation. During the summer of 2016, the students will be exposed to a broad base of technology skills and experiences, including software, hardware, and routing aspects through the CompTIA IT Fundamentals curriculum. An industry professional will provide the classroom instruction for the course with the assistance of an Overton High School teacher. The MNPS teacher will support the course instructor with his or her classroom management skills, and in return, the MNPS teacher will learn the technology subject matter from the industry instructor. By the end of the

summer, the students and MNPS teacher should be prepared to successfully complete the IT Fundamentals certification exam.

Since employers have identified soft skills, or 21st Century job skills, as a significant gap in their new hires, this program will also provide soft skills training that corresponds with the technical skills being taught, which may include communication skills, teamwork, critical thinking, problem solving, and interview skills.

The Nashville Technology Council will partner with 3-D Technologies and other industry partners to provide mentors and guest speakers throughout the summer. The Nashville Technology Council will also draw upon its board and other members to provide on-site field trips to expose students to technology workplace environments and cultures, as well as technology professionals. Both on-site field trips and guest speakers are valuable tools for exposing students to the technology community in Middle Tennessee and promoting awareness of the available technology careers in the community.

Phase 2: CompTIA A+ Certification Exam (August 2017-May 2018)

In the Fall of 2017, the students will enroll in the Networking course at Overton High School which prepares them for the CompTIA A+ certification exam. Throughout the school year, the classroom teacher will be supplemented by an industry professional who assists in teaching the A+ curriculum. St. Thomas Hospital has implemented a similar model in partnership with MNPS to improve student success in the Health Sciences pathway). By the end of the 2017-2018 school year, both the students and the MNPS teacher will be prepared to pass the certification exam.

Phase 3: Preparation for Summer 2018 Program (March-June 2018)

In the Spring 2018, the Nashville Technology Council will prepare for the second cohort of this program. The Summer 2018 program will target a new IT pathway within MNPS to implement a program based on the lessons learned in the pilot, e.g. supporting students pursuing the Java certification exam.

4. Describe the market for your proposed solution (Size of Impact).

In the first year, **Engage IT** will reach 20-25 MNPS high school students and 1-2 teachers.

5. Describe how your proposal works.

Engage IT includes the following key components for success:

Participation in Nashville’s Opportunity Now Initiative: The summer program will provide internships to 20-25 high school students (16-18 years old). Student wages will be paid through a partnership with HCA Foundation. The program will meet all of the requirements of the Opportunity Now initiative. Through this program, the students will create work products that benefit other students, including:

- Creating fact sheets about IT careers from a student perspective, which can be incorporated into the Opportunity Now platform and We Build Tech;
- Creating a video of interesting/surprising facts from a tech office environment to share with students unable to go on the NTC’s Traveling Tech Day field trips. These can also be incorporated into the Opportunity Now platform and We Build Tech; and
- Building a list of study tips for high school students seeking certifications.

Providing Support for Success: Through Phase 1, Engage IT creates dedicated time for test preparation and mentorship that has not been possible during the school year. Experienced instructors will assist students in test

preparation activities aimed at the certification exams. Classroom instruction will be provided Monday-Thursday from 8am-2:30pm. In addition to instructors, local technology professionals will mentor students seeking to take the certification exam. In Phase 2, these efforts are continued by providing new, additional supports for the MNPS teacher. An industry professional will be under contract to mentor the teacher and provide instruction for the students. Industry volunteers will supplement these activities by mentoring and tutoring the students.

Increasing Employer/Student Engagement: The students will use the We Build Tech platform to explore technology careers and education programs. We Build Tech is a community connection platform that connects students, educators, and the local technology industry. In addition, students will take field trips to visit local technology companies and IT departments.

Providing tools for success: Students will be provided a personal laptop to ensure their ability to complete their studies effectively. Each student will receive a computer from the Community Foundation/Nashville Digital Inclusion Fund. Studies have shown that a student’s access to a computer at home not only increases his or her likelihood of high school graduation, but also increases his or her likelihood to enroll in a post-secondary program and is a strong indicator for post-secondary success. In reference to computers being necessary for college admission and continued enrollment, Kristen Venegas suggests that “the need to use the Internet for college-related tasks will not subside. More postsecondary institutions will rely on the Internet as a form of communication, recruitment, and retention” (American Academic 2007). Additionally, Robert Fairlie and Rebecca London studied community college students who were provided with free home computers. They found that “in addition to the [positive] effects on grades, receiving a free computer may affect longer term outcomes, such as transferring to a four-year school or graduating from a community college” (Council for the Study of Community Colleges, 2011).

Better Prepared Students: Through tutoring, mentoring, and job shadowing, students will be more prepared to take on the challenges of a post-secondary program of study. By providing these needed supports, students will have the opportunity to build the skills that are needed for these exams and later success. As success in certificate programs increase, student confidence will also increase. Students will arrive on college campuses with the necessary foundational competencies, which will lead to increased student retention and graduation rates in technology programs.

6. Describe your proposal’s business or financial model. Include dollars requested, total cost, budget estimates by category (capital, operations, staff, etc.), financial/in-kind contributions from partners, and recurring costs.

Engage IT is requesting \$84,500 in funding for Year 1. The project team has secured \$119,100 in matching funds for the project. If the proof of concept is successful, **Engage IT** anticipates requesting \$65,000 for expansion in Year 2.

DESCRIPTION	PROGRAM PARTNER	ESTIMATED COST
Summer 2017 Program		
Instructor & Assistant Instructor (MNPS Teacher)	Metropolitan Nashville-Davidson County	\$ 15,000
CompTIA IT Fundamentals - Exam Training Materials	Metropolitan Nashville-Davidson County	\$ 3,500
CompTIA IT Fundamentals - Certification Exam Fees	Metropolitan Nashville-Davidson County	\$ 3,000
Program Administration	3-D Technologies	\$ 15,000
Mentors for students	3-D Technologies	In-kind (valued at \$2,000)
Student experiential learning	Nashville Chamber	\$ 4,350

opportunities		
Student internship wages through Opportunity Now	HCA Foundation	\$ 75,000
Laptops (25)	Nashville Digital Inclusion Fund	In-kind (valued at \$ 8,750)
2017-18 School Year Program		
CompTIA A+ Certification Exam Training Materials	Metropolitan Nashville-Davidson County	\$ 3,500
CompTIA A+ Certification Exam Fees	Nashville Chamber	\$ 7,000
Part-time supplemental instructor	Metro Nashville-Davidson County	\$ 40,000
Mentors for students	3-D Technologies & NTC Corporate Members	In-kind (\$7,000)
Program Administration	Metro Nashville-Davidson County	\$ 17,000
Preparation for Summer 2018		
Program Administration	Metro Nashville-Davidson County	\$ 5,000

7. Describe your proposal's impact or return on investment for Nashville.

Engage IT will create strong career path for those successful in achieving an A+ certification. Positions requiring an A+ Certification encompass over 10,000 jobs in our area with an average over 500 openings annually. Currently, there are five different job titles in the Nashville area requiring this certification, including:

- Database administrators,
- Network and computer system administrators,
- Computer User Support Specialists,
- Computer Network Support Specialists, and
- Medical Records and Health Information Technicians.

In addition to job availability, the A+ Certification will have a lasting impact on the earning potential for those who successful. While the average income of workers with a high school diploma is \$27,930, an IT worker with a high school diploma and a CompTIA A+ certification jumps 53 percent to an average income of \$52,514. Based on this level of salary increase, each student who achieves an A+ certification can expect to earn an **additional \$1.1 million dollars** in his or her lifetime. Conservatively estimating that 50 percent of the students are successful in passing the certification exams, this program will yield an additional \$13 million in earnings for the successful participants.

8. Describe your team's experience and management plan for the proposal.

Engage IT Lead Organization: The Nashville Technology Council will serve as the lead and provide management, staffing, and administrative support to the project. Sandi Hoff, VP of Technology Learning and Development, will be the project manager. The Nashville Technology Council is uniquely qualified to lead this program with its previous experience providing technology summer programs for three years. The NTC has created and managed over 30 summer youth technology programs ranging from one week robotics experiences through an eight week camp for the older siblings of Head Start students (15-17 years old) conducted in partnership with the Metro Action Commission in 2016. In 2015, the NTC established the Traveling Tech Days program, which brings groups of students and teachers to local businesses & college campuses to learn more about careers and education in the field of technology. To date, almost 500 students have spent a day with our local industry professionals at their job sites.

Local Community Agencies: The Nashville Area Chamber of Commerce will support this project by promoting volunteer opportunities to its members and by supporting the program financially. Candy Johnson, Policy Director, will be the point of contract for the Nashville Area Chamber of Commerce.

Local Technology Employers: The employer partners will supply volunteers to work with students, provide mentoring to students, host on-site field trips, provide guest lectures, make presentations, host job shadowing opportunities, and provide case studies for classroom use. Chris Martinez at 3-D Technologies will be a key partner on this pilot project.

Nonprofit Community: HCA Foundation will partner with Opportunity Now to provide internship wages to the students. The Community Foundation/Nashville Digital Inclusion Fund will provide laptops to students for use during the camp and for use for their school work in the future. Caitlin Nossett, Program Manager, will be the point of contact for the HCA Foundation for Engage IT.

K-12 Education: MNPS is a key partner for the success of this project. Donna Gilley, CTE Director for MNPS, will promote this opportunity to both teachers and students. MNPS will select the appropriate students for the mentoring program.

9. Describe your proposal’s launch plan and timeline for implementation.

The program will begin in June 2017. The summer program will align with Opportunity Now’s timeline. The program will continue through the 2017-2018 school year.

10. Describe your sustainability plan—how will your PIP continue after PIP funding is exhausted?

Engage IT is expected to generate tremendous value for both students and the technology professional community by generating new skilled talent. If this concept proves successful, the program will continue to seek funding from a broad range of contributors, including foundations and corporate support, to expand its scope of services.