

NASHVILLE TECHNOLOGY COUNCIL

2014 Labor and Education Alignment Program (LEAP)

IT Pathway Collaborative

Nashville Technology Council

IN PARTNERSHIP WITH

Nashville State Community College & Columbia State Community College

Metro Nashville Public Schools & Williamson County Schools

Nissan North America, Hospital Corporation of America, The General Insurance, c/3 Consulting, Homeland, ForceX, FireFly Logic, BNY Mellon, Dell, Emdeon, Technology Advice, Griffin Technologies, NSG, Emerge Financial, Cap Tech, FDM Group, WPC, Michael Collins Associates, Perception Health, Kelly IT Resources, Teknetics, Qualifacts, Community Health Systems (CHS), Emma, Bridgestone, Dave Ramsey's Lampo Group, and ServPro

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Funding Requested:
\$1,000,000

A handwritten signature in blue ink, appearing to read "George H. Van Allen".

George H. Van Allen, President
Nashville State Community College

A handwritten signature in blue ink, appearing to read "Sandi Hoff".

Sandi Hoff, Project Director
Nashville Technology Council

SECTION 1: PROJECT SUMMARY

The IT Pathway Collaborative creates a regional, collaborative partnership that is committed to driving the economic success of Middle Tennessee through growing the skilled technology workforce. The partners include local economic development agencies, 43 Middle Tennessee employers, higher education institutions (community colleges and four-year universities), and local K-12 school systems. The proposed IT Pathway Collaborative project addresses the challenge of job candidate “skills gap” by promoting IT career opportunities in Davidson, Williamson, Rutherford and Sumner counties, in order to increase enrollment and graduation rates in local community colleges.

The goal of the IT Pathway Collaborative is to create long-term relationships between employers and educational institutions to address the deficit of IT job candidates in the local workforce. The IT Pathway Collaborative will reach that goal by 1) enhancing current academic programs through technology employer engagement, 2) expanding current, IT academic programs through corporate involvement, community outreach and programming in the K-12 schools to reach enrollment goals, and 3) providing internships, apprenticeships, and mentoring opportunities to keep students enrolled and prepare students for entry into the workplace. The IT Pathway Collaborative’s corporate partners have committed to providing volunteers and mentors, participating in career fairs, providing case studies for classroom use, and providing funding in the amount of **\$1,684,260 for internship and apprenticeship opportunities for 291 students**. A summary of the employer commitments is provided in Exhibit 1 in the Data List.

While the number of positions for the “Top 5 IT Occupations” in Middle Tennessee are projected to increase an average of 18% between 2014 and 2024, the combined IT course enrollment at Nashville State Community College (NSCC), Columbia State Community College (CSCC), and Volunteer State Community College is 616 students, but their capacity is 2,220 students. When these schools reach their enrollment goals, **each year an additional 1455 students will become skilled technology workers and fill the “skills gap.”** With the average IT worker earning \$30.38/hour, these additional 1455 technology workers will **increase Middle Tennessee’s economy by almost \$88 million each year** (Exhibit 2, EMSI Data, 2014).

SECTION 2.1: PROGRAM NEED

The IT Pathway Collaborative creates a regional, collaborative, partnership that is committed to driving the economic success of Middle Tennessee through growing the skilled technology workforce. The IT Pathway Collaborative addresses the challenge of the job candidate “skills gap” by promoting IT career opportunities in Davidson, Williamson, Rutherford, and Sumner counties, in order to increase enrollment and graduation rates at the community colleges. This approach directly aligns with the State’s *Drive to 55* goals.

By looking at Middle Tennessee’s current labor market, technology job growth projections, and the ability of the educational institutions and programs to build the future technology talent, the data supports the need for the IT Pathway Collaborative project. The EMSI data shows a 9% increase in STEM employment in Tennessee between 2010 and 2014. Since eight of the top 15 STEM occupations are IT jobs, the 9% increase in STEM jobs increased the number of IT positions by 4,741. Those eight IT positions top the list of the 15 STEM occupations identified as a “gap in Tennessee’s workforce” (Exhibit 3 in Data List). Additionally, the EMSI data projects that growth rates will increase to an average of 18% for the “Top 5 IT Occupations” in Middle Tennessee between 2014 and 2024 (Exhibit 2 in Data List).

A clear path for closing the “skill gap” in technology is increasing enrollment in IT academic programs. A 2011 study published by the Tennessee Higher Education Commission documents one of the greatest current “skills gaps” is in software development (Source: *Academic Program Supply and Occupational Demand Projections: 2008-2018*). Between 2011 and 2018, this study predicts that approximately 678 new software development positions will be needed yearly in Tennessee with only 397 new graduates each year to fill those positions. While this study clearly demonstrates a significant deficit in the supply of skilled and certified workers, it also states that applicants with two years or less of post-secondary education or training would be viable candidates to fill these positions. Therefore, an effective strategy for closing the “skills gap” is increasing enrollment in community colleges’ IT programs.

IT courses at NSCC, CSCC, and Vol State can enroll 1,455 more students. NSCC's current enrollment is 450 students yet their capacity is 900 students. CSCC's current enrollment is at 55% of capacity. Vol State has the capacity to serve 1020 students, but current enrollment is only 150 students. Therefore, through community and local school system outreach and the proper marketing of these programs, an additional 1455 students could become skilled workers and fill the "skills gap."

SECTION 2.2: PROGRAM PLAN

PROJECT GOVERNANCE AND ACCOUNTABILITY PLAN

Sandi Hoff with the Nashville Technology Council (NTC) will serve as the Project Director. The project shall be governed by a Steering Committee of technology leaders representing: the NTC, Metro Nashville Public Schools (MNPS), Williamson County Schools (WCS), Rutherford County Schools (RCS), NSCC, CSCC, Vol State, Nashville Career Advancement Center, Workforce Essentials, Nissan North America, Hospital Corporation of America (HCA), The General Insurance, c3/consulting, Homeland, and ForceX. The Steering Committee shall meet no less than quarterly to review progress on the project performance measures and make decisions regarding programming, community outreach strategies, budgeting, and sustainability.

PROJECT OVERVIEW

The IT Pathway Collaborative project provides an employer-driven regional, collaborative approach to address the challenge of job candidate "skills gaps" by increasing the local IT workforce pool in Davidson, Williamson, Rutherford, and Sumner counties. As stated on page 3 of the RFP Guidelines for Submission, this project's goals will be accomplished via these approaches: 1) enhance the technology-related academic programs at institutions of higher education, 2) expand the technology-related academic programs at institutions of higher education, and 3) implement collaborative apprenticeship [and internship] programs that prepare workers for rapid entry into the workforce. The goal of this project is to continue efforts that create long-term relationships between employers and educational institutions to address the deficit of IT job candidates in the local workforce.

IT Pathway Collaborative is uniquely qualified to create and sustain this program because the lead entity, the NTC, has been in the workforce development business since 2008. Deploying volunteer resources, the NTC has positively impacted technology careers by a) broadening awareness, b) building relationships between K-12 and post-secondary academia and the business community and c) integrating technology throughout K-12 classroom teaching and learning via its collaborative implementation of MNPS's Learning Technology Plan (LTP).

The IT Pathway Collaborative will enhance current academic programs by creating opportunities for meaningful interaction and alignment between technology employers and higher education institutions that result in long-term relationships through:

- **Building Relationships:** Each year, there will be two summits of technology industry professionals and representatives from community colleges, universities, and K-12 schools. Following all summits, documentation of the discussions and action items will be provided to the participants. Given NTC's experience in establishing and fostering relationships between K-12, post-secondary institutions and the business community, IT Pathway Collaborative is well positioned to enhance existing and create new meaningful relationships. The project anticipates attendance by over 150 companies, as well as ten institutions of higher education and the three local school system partners.
- **Providing professional development:** Externship opportunities will be made available to educators to provide experiences working side-by-side with knowledgeable and skilled technology employees. MNPS has an established summer program via its Academies of Nashville structure that will serve as the foundation for this program. The current program deploys 20 to 30 teacher teams to local business for three day externships that results in a course built around their experiences. In addition, Cisco Certifications, Project Management Institute Certifications, and Microsoft Academy training were identified as training needs for community college faculty.
- **Staffing Advisory Boards:** With dedicated resources, the 13 employer-driven NTC Advisory Boards will continue to provide feedback and guidance to institutions of higher education and meet over 100 times

during the grant period with quarterly meetings. The intended outcomes are 1) curricula that better addresses the "skills gap," 2) increased enrollment, 3) increased graduation rates in technology related fields, and 4) long-term relationships between employers and educators.

- **Increasing Employer/Student Engagement:** Employer involvement in classroom activities at the community colleges will be increased by 1) implementing case-based learning opportunities in appropriate courses and 2) increasing the number of adjuncts and guest speakers from the local technology industry. With increased connectivity between employers, educators, and students through the sharing of industry expertise in the classroom, the project anticipates increased student re-enrollment rates and higher graduation rates.
- **Assessing Current Practices:** An assessment of local technology industry job specifications, hiring practices, and internship programs will allow the faculty and leadership at the higher education institutions to better align their curriculum with current business needs. Best practices identified will be shared with industry leaders to encourage the re-assessment of antiquated job specifications and ineffective hiring practices. Although difficult to quantify, the outcome is to assist employers with understanding how positions could be filled with a lesser skilled worker. Decreasing requirements from a four-year to a two-year degree and re-evaluating requirements for experience will significantly increase the applicant pool, create jobs, and decrease the "skills gap."

The IT Pathway Collaborative will expand current, IT academic programs through corporate involvement, community outreach and programming in K-12 schools and will result in higher enrollment and an increased number of credentialed graduates by:

- **Targeting TN Promise Applicants:** An immediate, targeted outreach strategy to promote IT careers to 12th grade Tennessee Promise applicants will increase enrollment in IT courses at the community colleges. The IT Pathway Collaborative's initial outreach targets high schools in Davidson, Williamson, and Rutherford Counties with more than 90 senior applicants (Exhibit 4 in Data List).

- Engaging K-12 Students:** The project develops an outreach strategy to engage all students and promote technology sector jobs through formalized programming to students through 1) classroom activities with volunteers from local technology companies, 2) career fairs, 3) a Middle Tennessee Technology Day each October, and 4) employer-driven technology after-school programs. The afterschool programs will be based on the current programs implemented by Griffin Technologies in MNPS and CTS Nashville, Inc. in WCS. Since eighth grade students in MNPS choose their course of study through the academies program, they will be a target audience in order to increase enrollment in the STEM academies. This will lead to the reduction of the skills gap in the future. The intended outcome is to increase the connectivity of employers with students and faculty and to promote the IT career pathways to students in an age-appropriate, creative, and meaningful way.
- Providing a Connection Platform:** A connection platform creates a portal for matching: 1) interns with companies, 2) the speakers' bureau to guest speaking opportunities, and 3) industry experts with adjunct and substitute teaching needs. It will also engage students and employers by promoting: specific IT careers, local IT companies and the value of Tennessee Promise and Tennessee Pathways.

The IT Pathway Collaborative will provide internships and mentoring opportunities to keep students enrolled and prepare students for entry into the workplace by:

- Expanding and Promoting Internships:** A key component of this project is increasing connectivity between employers and students through internships, apprenticeships, and job shadowing programs at technology companies and IT departments. According to a May 2014 survey by the Tennessee Board of Regents, there are currently 14 documented internship opportunities for community college students in Middle Tennessee (Exhibit 5 in the Data List). This project has employer commitments to increase the number of internships offered to community colleges in Middle Tennessee from 14 to 150 annually. While successful internships and internships-to-hire currently occur, these successes have not been adequately promoted. The project will promote at least five successful internships per semester.

Chambers of Commerce will support this project by marketing this grant and promoting internship placement opportunities to local employers. Both Middle Tennessee Workforce Investment Board and Workforce Essentials will support this project by identifying candidates for the IT Pathway Collaborative project through their work with unemployed residents, many of whom will benefit from additional skills training. The NTC will serve as the lead and provide management, staffing, and administrative support to the project.

Employers with Demonstrated Need: The IT Pathway Collaborative has 43 corporate partners representing over 3,000 technology workers in Middle Tennessee. These technology industry partners will invest in this project both financially and through the engagement of their employees. These corporations will devote the time needed to work with higher education institutions and local school systems to build long-term relationships. The commitments made by these employers is detailed the letters of support provided. This information is summarized in a table marked Exhibit 1 in the Data List.

Higher Education Institutions: The higher education institutions' primary role in this project is to create an educated, credentialed IT workforce in Middle Tennessee. In addition, each community college has committed to build long-term relationships with local school systems and the technology industry, in order to increase the pipeline of students for their programs. Since the community colleges are not currently operating at capacity, there are opportunities to increase enrollment without increasing the cost of course delivery. This project seeks to increase enrollment to 100% through the promotion of these programs.

K-12 Education: The participation of local school systems will be key to the success of this project. MNPS, WCS, and RCS are partners for the IT Pathway Collaborative. Local schools will promote internship opportunities, promote and technology-based curriculum, and provide the access to K-12 students in order for industry and higher education institutions to reach that population. NTC's significant involvement with MNPS's Learning Technology Plan implementation will jump start the IT Pathway Collaborative's proposed activities. The grant activities align with current MNPS practices and will be amended into the Technology Learning Plan, where appropriate. The project will build upon current WCS's efforts, such as Girls Tech Camps,

Bring Your Own Technology (BYOT) initiative, and the WITT program, which is a CSCC and WCS joint initiative providing dual credit to Centennial High School students. The NTC sponsored <http://myitfuture.com/> in Williamson County. This content will be made available to all students in the region.

SECTION 2.4: BUDGET PLAN

The IT Pathway Collaborative requests \$1,000,000 in total funding for the two-year grant period. Although the NTC will serve as the lead entity for the grant, NSCC will serve as the fiscal agent and will receive \$80,000 as the administrative cost for the grant.

Project Staffing Plan: The project will be staffed with four positions. The **Project Director** position is a full-time position. The salary and benefits is \$9,750 per month. The Project Director will lead the implementation of the grant including: providing team leadership, managing programmatic and financial reporting, ensuring proper data collection to track performance measures, managing corporate and school system relationships, making community presentations, and building community partnerships. The person targeted for this position is already engaged with the Middle Tennessee technology community due to her role on the NTC staff.

The **Education Outreach Coordinator** is a full-time position. The salary and benefits is \$5,958 per month. The Education Outreach coordinator will lead the project in: outreach with local school systems, program development for K-12 students, coordination with individual schools for program delivery, and planning and executing the semi-annual Summits.

The **Internship Coordinator** position is a part-time (50%) position. The salary and benefits is \$2,979 per month. The Internship Coordinator will lead the project in the management of the internship program, which includes recruitment of interns, promotion of the internship program to local industry, intern placement, tracking intern progress, data collection, developing meaningful content for interns and prospective interns, and establishing the framework to sustain the program beyond the 24 month grant.

The **Volunteer Coordinator** position is a part-time (50%) position. The salary is \$2,979 per month. The Volunteer Coordinator will lead the project in: volunteer recruitment and training, development of a job shadowing program, coordination of job fairs, creating a system for volunteering at the post-secondary level, which would include identifying and matching adjunct teaching opportunities, soliciting and filling needs for guest speakers from local industry, and creating a mentoring program.

The **Marketing Specialist** position is a part-time (20%) position. The salary is \$833 per month. The Marketing Specialist will develop a marketing plan and develop the IT Pathway content and messaging for promotional materials and the website.

The **Graphic Design** positions is a part-time (10%) position. The salary is \$417 per month. The Graphic Design position will prepare the layouts for the publications and website.

Grantee Participation: As specified in LEAP Grant Information conference call held on October 22nd, the IT Pathway Collaborative will provide documentation of employer-paid internship wages to meet the \$50,000 match requirement. The IT Pathway Collaborative has commitments for 27 local employers to provide an estimated 291 internships over the 24 month grant period. \$1,684,260 in wages will be paid to interns by the participating employers.

Professional Fees Associated with Project: The fees associated with the development and maintenance of the project website are estimated at \$20,000. The fees to create a portal to make connections between students, employers and educators for matching internships, apprenticeships, adjunct instructor needs, volunteer and guest speaking opportunities is estimated to be \$250,000. Professional development and training opportunities for educators to build their skills and enhance their curricula are estimated at \$35,000. Additional detail is provided in Section 3 in the Grant Budget Line-Item Detail form.

Supplies/Publications: Supplies for the IT Pathway Collaborative project include the purchase of laptops, monitors, and docking stations for each staff member; marketing and training materials related to the grant objectives; office supplies (paper, file folders, pens, printer cartridges, jump drives, DVDs, folders).

Anticipated Travel Expenses: Travel will be required for local visits to employers, community colleges, and K-12 schools. Local travel will be reimbursed based on Tennessee Comprehensive Travel Regulations at \$.47 per mile. Staff mileage will not exceed 2,659 miles each year per person for a total in-state travel of \$5,000 per year.

SECTION 2.5: SUSTAINABILITY

The IT Pathway Collaborative will continue to follow a similar project approach and governance structure after the initial grant period. The necessary resources will come from two sources of funding. First, there are traditional fundraising methods. This would include 1) identifying, researching and cultivating high quality prospects based on industry partners in the pipeline and researched suggestions from staff, 2) making visits, assessing, cultivating, and asking for appropriate gifts to reach dollar goals, and 3) building deeper relationships with existing corporations, businesses, foundations and associations that have an affinity to technology education. Based on research of similar projects, this should yield \$250,000 in annual revenue. The Nashville Technology Council's 400 members will be a primary source for the IT Pathway Collaborative's ongoing fund raising efforts. NTC's members, who are experiencing a shortage of qualified technologists in Middle Tennessee, understand the value proposition of investing in the Collaborative where a \$25,000 contribution is equivalent to the recruiting fee for one .NET or Java developer. NTC's members will see their IT Pathway Collaborative dollars as a prudent investment in building the skilled workforce pipeline.

Second, the IT Pathway Collaborative will expand the connection platform and provide subscriptions to the IT community. This platform will provide: 1) custom video content to promote IT jobs in the community, individual companies, and educational institutions; 2) complete integration of the jobs4tn.com and WorkIT job boards; 3) assessment tools for employers to test potential employees and interns; 3) internship management tools, and 4) learning management system with tech-savvy training modules that allows badging and credentialing. This engagement platform has been successfully used in other programs. It is expected to yield \$250,000.