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LEAP

Annual Report
2018

Labor Education Alignment Program

Tennessee Higher Education Commission

THEC

Introduction from the Executive Director

January 1, 2018

Three years ago, just after the Drive to 55 was launched, Tennessee's education and workforce leaders saw a need to grow the connection and alignment between K-12 schools, higher education, and employers. In order to reach the goals of the Drive to 55 – and for its outcomes to be meaningful to our state's economy – those leaders understood that students needed to be graduating with skills that matched the demands of employers. In partnership with the Governor's Office, legislators, and key state agencies, the Labor Education Alignment Program (LEAP) was created and implemented.

LEAP presented an opportunity for the state to ensure businesses had direct input into higher education programs. Even through the proposal process, LEAP catalyzed much-needed conversations that allowed employers and educators to collaborate and build programs that would support Tennessee industry. Employers partnering with LEAP now know where they can go to find talented employees who have demonstrated their skills through training and certification, and are working closer than ever with education partners to provide work-based learning experiences where students can grow as professionals in a real working environment. Dual enrollment has increased in communities across the state, creating a culture where students can expect to graduate from high school with postsecondary academic credit that provides a head start towards a degree or technical certificate.

As we strive to reach the Drive to 55, we must ensure that the credentials we are producing align with workforce needs. LEAP is an important step towards that goal. As presented in this report, LEAP has already provided thousands of educational opportunities for students to walk into the workforce prepared to fill the jobs available in their communities. When students graduate ready for the jobs our state is producing, the Drive to 55 succeeds and so does Tennessee's economy.

Sincerely,

Mike Krause
Executive Director
Tennessee Higher Education Commission

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Executive Summary

The Labor Education Alignment Program (LEAP) was established in 2013 through legislation sponsored by Senate Majority Leader Mark Norris (R-Collierville) and Representative Gerald McCormick (R-Chattanooga), to address the growing disparity between workforce needs and the supply of qualified workers in Tennessee.

LEAP's primary goal is to execute strategies that close the skills gap by ensuring that students gain the necessary training for the increasing number of high-skill and high-technology jobs offered in the state. LEAP accomplishes this goal by providing grant funding to communities that develop a framework for regional partnerships – comprised of Tennessee Colleges of Applied Technology (TCATs) and community colleges, industry partners, workforce development professionals, and K-12 educators, particularly those associated with Career and Technical Education (CTE). Collectively, these stakeholders create tailored workforce pipelines designed to provide the requisite technical skills that local employers need.

In the first iteration of LEAP in 2014, referred to as LEAP 1.0, $10 million was made available to communities through a grant competition. In total, 27 proposals were submitted for review, and selected 12 were to receive funding. Grant proposals from this initial competition targeted skills gaps in sectors with the largest skills deficits and workforce needs, namely advanced manufacturing, mechatronics, information technology, and career readiness (soft skills).

Through LEAP 1.0, students from 51 Tennessee counties participated in over 20,000 training and workforce development experiences. Projects engaged students through a range of activities, including enhancing CTE offerings, initiating new dual enrollment and dual credit courses in partner high schools, establishing or expanding new academic programs at TCATs and community colleges, and facilitating employer engagement with students via professional training events, academic camps, job shadowing, and internships.

In 2016, less than two years after LEAP's initial grant competition, the Tennessee General Assembly appropriated an additional $10 million for a second grant competition (LEAP 2.0) to continue and expand upon the program's initial successes. A review committee selected 12 additional proposals, targeting production and healthcare occupations and increasing the total LEAP service area to 67 counties. In their first semester of operation in 2017, LEAP 2.0 projects have served an additional 2,400 students across 70 high schools, 16 TCATS, and seven community colleges within this service area.

LEAP 2.0 proposals mirrored much of LEAP's original structure, but also included additional funding opportunities dedicated to expanding Work-Based Learning (WBL) opportunities in communities throughout the state. To date 72 students have participated in a LEAP WBL experience, however LEAP 2.0 programs are working to offer more opportunities to these students every day.

I. What is the Labor Education Alignment Program (LEAP)?

In 2013, the Labor Education Alignment Program (LEAP) was established through legislation (Public Chapter 338) to empower Tennessee to close skills gaps among its workforce and introduce education and training programs that respond to the demands of employers in communities across the state. Through LEAP, Tennessee ensures that the state-wide effort to grow the number of postsecondary graduates in the state under the Drive to 55 is accountable to the needs of industry on both the community and regional levels. To date, there have been two distinct rounds of LEAP projects. The first iteration of the grant (LEAP 1.0) featured twelve projects that ran from January 2015 – January 2017. An additional twelve projects were selected for the second round of the program (LEAP 2.0); these projects began operation in January 2017 and will run through May 2019.

LEAP Supports the Drive to 55 and Tennessee's Workforce Development

LEAP is a component of the Drive to 55, Governor Haslam's goal of equipping 55 percent of working age Tennesseans with a degree or certificate by 2025. As Tennessee makes progress towards reaching this goal, it is critical for the state to ensure that new credentials produced towards the Drive to 55 are aligned with the authentic needs of industry in our communities. The LEAP program is designed to develop training pipelines that arm students with the specific skills needed to fill in-demand and open occupations, and create a pool of qualified workers for local industries.

According to analysis completed by the Tennessee Department of Economic Development, Tennessee currently ranks No. 1 among U.S. states for advanced industry job growth, outpacing the national average growth rate by 10.9 percent.[1] These advanced industries feature "...high levels of research and development costs per worker and an above average share of workers with STEM knowledge"[2] and often feature a working environment that requires specialized technical training and postsecondary education beyond high school.[3] However, these advanced skill requirements create significant challenges for employers in identifying and hiring qualified workers to fill open positions.[4] With Tennessee's growth in these industries, it is critical that the state be proactive in addressing the educational and training needs associated with this sector.

LEAP's structure empowers local stakeholders to identify advanced industry workforce needs, and create training pipelines that directly respond to those needs. By establishing these workforce-responsive postsecondary training pipelines, LEAP helps to align the mission of the Drive to 55 with the authentic needs of Tennessee's industries, producing a more qualified and credentialed workforce.

[1] Tennessee Department of Economic & Community Development & Center for Economic Research in Tennessee. (2017). LEAP 2017 Occupational Analysis. www.tnecd.com/files/514/leap-report_2017.pdf
[2] The Brookings Institute (2017). "America's advanced industries: New Trends." August 2016. https://www.brookins.edu/research/americas-advanced-industries-new-trends/
[3] Ibid
[4] Tennessee Department of Education (n.d.). Career Clusters https://tn.gov/education/topic/career-clusters

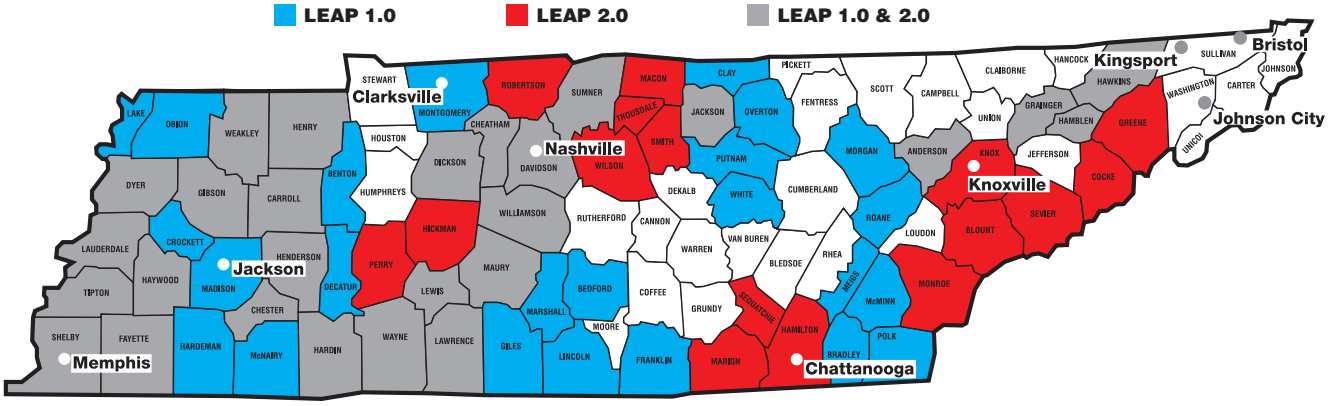
LEAP Responds to Local Needs with Collaborative Partnerships

LEAP helps communities close skills gaps by empowering regional partners from the educational, public, and private sectors to bridge silos and collaborate to develop local training solutions to workforce needs. These partnerships, called LEAP Collaboratives, work to identify skills gaps and initiate training pathways that directly respond to local shortages of qualified job candidates. Collectively, these Collaboratives create tailored workforce pipelines beginning in high school, and extending through postsecondary institutions and into the workforce. Collaborative partners include:

- Tennessee Colleges of Applied Technology (TCATs) and/or community colleges,
- Industry partners facing a demonstrable shortage of skilled workers,
- K-12 educators, particularly those associated with Career and Technical Education (CTE), and
- Workforce development professionals.

Each of these partners contributes expertise and functional knowledge to identify key labor needs within communities, and responds to those needs with specific academic and technical training opportunities. Partners also work to ensure the sustainability of each proposed training pathway.

LEAP Services Areas



LEAP Ensures the Alignment of Project Goals with State Directives

LEAP projects are selected through a competitive process by the Governor's Workforce Subcabinet, a taskforce comprised of leadership from the Tennessee Departments of Labor and Workforce Development, Economic and Community Development, Human Services, and Education, as well as the University of Tennessee and Tennessee Board of Regents systems, and THEC. The Subcabinet's role in selecting LEAP project recipients is intentional in that cross-agency representation helps establish a united vision for LEAP's success. Each Department represented has nuanced interest in workforce and economic development as it relates to their mission. Leveraging the Subcabinet in this capacity allows for the State to reflect the same alignment of partners and resources by bridging agency silos, and ensures that both the criteria for programmatic operations and the individual project goals are aligned with active state policy priorities and initiatives in all of Tennessee's communities.

II. Features of the LEAP Program

LEAP utilizes a flexible and customizable model to respond to the dynamic needs of local communities across the state. This model incorporates a framework that leverages multiple programmatic features that empower LEAP projects to be nimble in their efforts to meet the specific needs of each community. These features include shared stakeholder resources, multiple targeted funding opportunities, and customizable implementation strategies that enable communities to effectively identify skills gaps, build training pathways, and engage both students and employers in activities that build a robust and qualified workforce.

Local partners who work collaboratively to identify skills gaps and build professional pathways

The most important element of each LEAP project is the engagement of stakeholder partners within each LEAP Collaborative. Through their partnership, LEAP Collaboratives are able to effectively identify skills gaps, match training and educational competencies to identified gaps, and launch academic pathways to train students and produce graduates in high skill and high need fields. Collaborative partners accomplish this by utilizing their respective expertise, resources, and coordinating capabilities to build sustainable and workforce-responsive training pathways. Local partners Include:

Community Colleges and Tennessee Colleges of Applied Technology (TCAT)

Community colleges and TCATs serve as the foundation for LEAP training pathways. They provide the specialized training needed for students to develop the skills that are required in the workforce and coordinate with Local Education Agencies (LEAs) to embed career and technical training curriculum that matches the needs of employers within the community. Community colleges and TCAT partners also serve as the fiscal agent for each Collaborative and are responsible for the purchase of classroom equipment, and also the hiring and training of faculty.

Industry Partners

Industry partners help Collaboratives to identify specific skills gaps, lend expertise in the classroom through volunteer efforts, offer work-based learning opportunities, host professional development workshops and job shadowing days, and, most notably, donate time and equipment to enhance training on both the high school and postsecondary level. Through their input and collaboration, industry partners ensure that LEAP pipelines lead from education to employment.

Local Education Agency/Career and Technical Education Providers

High Schools that are part of Collaborative receive substantial support in the form of new equipment and faculty training. High schools play a role in maintaining program sustainability by coordinating career awareness programs and steering students into postsecondary programs. Because of their critical involvement in the Collaborative, LEAP pipelines require support from a variety of professionals in the Local Education Agency (LEA), including Career and Technical Education (CTE) administrators, faculty, and academic counselors.

Workforce Development Partners

Workforce development partners come from a variety of entities, but are typically comprised of one of the following: Workforce Development Districts, Chambers of Commerce, or Workforce Development Boards. As the lead entity of each LEAP proposal, workforce development partners fill the role of project coordinator, facilitating and mediating educational and employer partnerships, helping partners identify target work sectors, and ushering project deliverables throughout the LEAP grant lifecycle.

Targeted investments in equipment, personnel, and certifications to build professional pathways

LEAP Collaboratives invest grant funds to support initiatives that establish workforce pathways across Tennessee. These investments include capital purchases, the hiring of faculty and personnel, and the training of personnel and students through licensing and certification processes. The cooperation of LEAP Collaborative partners ensures that these targeted investments are optimized to produce skilled workers that meet the direct needs of industry within each respective community

Capital Investments

Capital investments comprise the largest proportion of grant expenditures and are used to provide new and state-of-the-art training equipment to education providers across all LEAP 2.0 projects. This equipment is used to transform classroom experiences into blended learning environments that engage students in both the theoretical and practical application of the technical skills and competencies needed by local employers. In some cases, capital investments are also leveraged to renovate or establish new classroom spaces to enhance capacity or meet energy and safety requirements for the new training equipment.

Personnel

Historically, both high schools and postsecondary institutions have struggled to compete with private industry to recruit talented faculty to train and teach students. LEAP investments provide education partners with funding to recruit faculty and establish funding streams to maintain their engagement with the institution over the course of the grant period. LEAP pathways cannot exist without talented and trained faculty to provide the classroom experience for students.

Licensing and Non-Credit Certifications

While in conversations with industry partners, many LEAP Collaboratives determined that proprietary non-credit certifications (credentials and certifications recognized by industry partners that are not recognized as postsecondary degrees on their own) are an effective way for students to signal competencies to employers. To respond to this opportunity, many LEAP projects have embedded new industry certifications within academic programs to serve as milestones that pace student progress through training pathways. LEAP funds support the purchasing of proprietary licensing for these certifications, and also provide any additional training to faculty to certify them in these training options.

Inclusion of Methods to Engage Students along the Postsecondary Pipeline

LEAP Collaboratives employ a variety of strategies and initiatives along the postsecondary pipeline to engage students in LEAP opportunities. These opportunities range from early engagement among middle schoolers, to high school dual enrollment courses, to TCAT and community college programs, and even among adults seeking to increase skill levels through short term or specialized incumbent worker training. As with LEAP's targeted investments, LEAP Collaboratives are empowered with the flexibility to identify local needs and implement any one, or even all, of these educational opportunities to best serve the community and its employers.

Career and Technical Education (CTE) Career Clusters

The Tennessee Department of Education has established 16 academic frameworks called CTE Career Clusters that develop technical work-based skill sets among high school students.[5] LEAP communities that face shortages of skilled workers often find that CTE offerings at the local high schools are limited and/or do not feature the specific high school level courses that will prepare students for the identified needs of the community. As a result, LEAP Collaboratives have leveraged funds to embed new career clusters within partnered high schools to match industry need. Students are typically recruited into these career clusters as freshmen, and complete courses within each cluster as they progress through to senior year. During this time, students are exposed to a wide range of technical skills and vocational training to prepare them to enter either the workforce or a postsecondary program.

[5] Tennessee Department of Education (n.d.). Career Clusters https://tn.gov/education/topic/career-clusters

Early Postsecondary Opportunities (EPSO)

LEAP Collaboratives also work to align CTE course offerings within career clusters with postsecondary coursework at both the TCAT and community college level in order to introduce dual enrollment and dual credit coursework to high school CTE students. These early postsecondary opportunities (EPSO) enable students to earn credit towards postsecondary degrees while still enrolled in high school. This provides tremendous benefits to the students as they are able to gain some exposure to the rigor of college-level work, while also accelerating their time to complete a postsecondary credential and enter the workforce.[6]

New Postsecondary Programs and Expanded Capacity

Several LEAP Collaboratives have partnered with TCATs and community colleges to initiate new training programs to match the needs of industry, resulting in the launch of both entirely new degrees and/or expansion classrooms for previously unserved communities across the state. In LEAP 2.0, these postsecondary pathways feature training exclusively in advanced manufacturing and healthcare fields. These programs also articulate to more advanced degrees offered by four-year institutions, providing students the opportunity to continue their education upon the completion of their two-year or less-than-two-year degree.

[6] Tennessee Department of Education (n.d.) Early postsecondary Opportunities. https://tn.gov/education/section/early-postsecondary

Incumbent Worker Training

LEAP Collaboratives have worked within communities to create specialized training opportunities through the TCAT or community college for incumbent workers seeking to increase their skill sets. In many cases, these opportunities are made possible by LEAP investments in renovations for lab space at partnered postsecondary institutions to enhance classroom capabilities to offer short-term specialized training for specific employers.

Career Awareness Initiatives

Career awareness initiatives are available across all ages and professional levels of the LEAP workforce pipeline and are essential to the recruitment and sustainability of each LEAP pathway. LEAP Collaboratives have utilized a wide range of strategies to gain the attention of students and educate them on the opportunities available within each LEAP career pathway. These include career fairs, corporate field trips, job shadowing experiences, faculty externships, summer academies, advisor trainings, parental outreach, as well as traditional marketing materials.

Career Awareness in Action: Tennessee Work Ethic Diploma

Due to the success of the "Strengthening the Lakeway Links" project's Work Ethic Diploma, the program has gained momentum in a number of communities across Tennessee seeking to address issues surrounding workforce readiness for graduating seniors. Students earn the diploma by completing a rubric that measures a number of essential qualities expected by employers in the workplace including: punctuality, a substance-free lifestyle, and general conduct befitting a modern professional. In exchange for completing the diploma, regional industry partners have committed to guarantee interviews to any graduate who has earned the distinction. Since its original introduction, 12 counties across the state have adopted the Work Ethic Diploma model for their graduating seniors.[7]

[7] TN Work Ethic Diploma. (2017). http://workethicdiploma.com/

III. LEAP Provides Opportunities for Students to Learn on the Job

Inclusion of a Work-Based Learning (WBL) Component in the LEAP Program

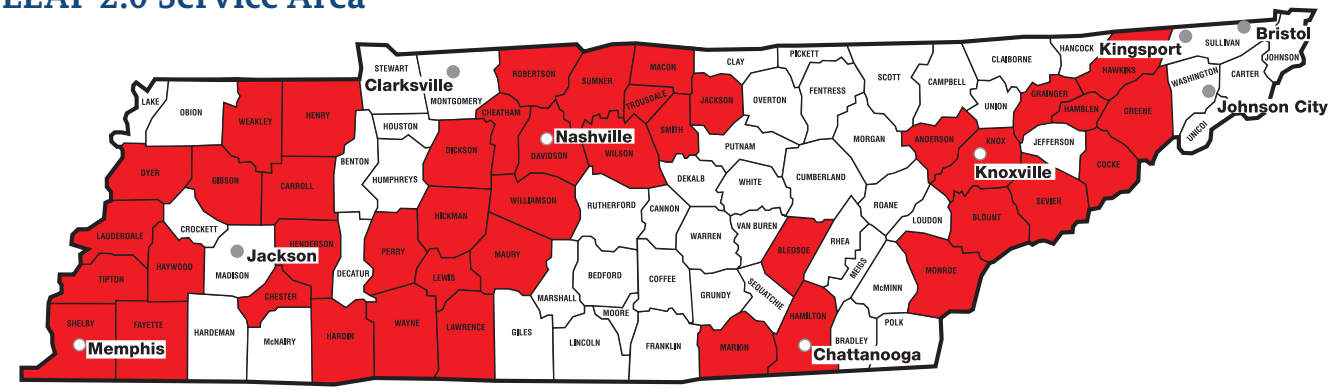
Research identifies several benefits gained by both high school and college students who participate in experiences that combine classroom instruction with on-the-job training in a professional environment.[8] Students enrolled in these work-based learning (WBL) experiences apply academic theory to the practical requirements of the job and also develop the professional acumen to succeed in the modern workplace. WBL participants are also notably more likely to complete high school, enroll in a postsecondary institution, complete their postsecondary degree on time, find employment in a related field, and increase their lifetime earnings.[9]

Because of the benefits that WBL provides student participants, it became a focus within the operational scope of LEAP 2.0, effectively serving as both a bridge to employment for students, and a tool to enrich LEAP's current training opportunities. Currently, 10 of the 12 LEAP 2.0 projects offer WBL opportunities. LEAP recognizes WBL as those experiences for which students are eligible to earn both a wage and academic credit relevant to an occupational subject area, as the result of an employment relationship between an employer and a student.

LEAP placements for WBL mimic the industry hiring process in that they require employers to establish hiring criteria, and evaluate and screen potential candidates before they can begin their WBL experience. Many employers require WBL placements to have completed some form of basic and relevant safety and skills training that is pertinent to the job before a candidate can be placed in a WBL experience. Because of this requirement, WBL placements are often delayed while students complete coursework demonstrating required skills.

Despite these requirements, projects have placed 72 high school and college students in WBL experiences in the advanced manufacturing and healthcare fields. Of those placed, 20 have continued their employment arrangement beyond the original scope of the WBL agreement and hope to transition to a full time position upon graduation. THEC expects these numbers to rise once more students complete preliminary training in Summer 2018.

LEAP 2.0 Service Area



[8] Association for Career and Technical Education (ACTE). (n.d.) *Work Based Learning ACTE Resources*. https://www.acteonline.org/clearinghouse_learning/#.WilMpkqnGM8
[9] Cahill, Charlotte. (July, 2016). *Making Work Based Learning Work*. http://www.jff.org/sites/default/files/publications/materials/WBL%20Principles%20Paper%20062416.pdf

Types of WBL Experiences for Students Created through LEAP Projects

WBL experiences are available across all levels of education and feature partnerships with employers in both the advanced manufacturing and healthcare fields. This variety of experiences requires that LEAP WBL programs be flexible enough to support each of the goals and outcomes expected from employers working with students in high school, TCAT, and community college environments. As a result, LEAP programs are empowered to include high school level internships experiences, cooperative education programs, and capstone experiences.

High School Internships

Students enrolled in a high school internship course spend time at both the employer and in a classroom setting under the tutelage of a state-certified WBL Coordinator. This structure ensures that the student is afforded the opportunity to participate in an immersive workplace experience, while also having resources that support reflection, self-awareness, and discovery.

The Tennessee Department of Education shares THEC's commitment to supporting quality WBL experiences in high schools across the state. In 2016, the department issued important guidance on implementing work based learning experiences.[10] This tool has been important in establishing structure around work-based learning completed as part of high school internships.

Partnerships between high schools and advanced manufacturing require integrating industry competencies within high school curricula. Many high schools simply do not have the resources to pursue this as a priority. Because of new educational pathways created through LEAP projects, students are now developing the competencies needed to complete relevant job tasks while in high school, which in turn opens new opportunities for employers to provide meaningful work-based experiences. Through these experiences, high school students are afforded the opportunity to discover professional interests and establish career goals within a field, and to determine what postsecondary programs are relevant to those discovered career paths.

TCAT Cooperative Education Programs

Students who have completed at least half of a program of study at a TCAT are eligible to enroll in a Cooperative Education (Co-Op) experience. Co-Ops provide students with the opportunity to earn academic credit while on the job at a partnered industry partner. In this type of WBL experience, a TCAT faculty member will review a work site and confirm that the competencies learned in the classroom are indeed being executed on site. The employer in turn will interview, hire, and train the student to develop additional skill sets on the job, replacing time in the classroom with an immersed workplace experience. Competencies not learned on the job are still completed in the classroom with the faculty member for all other facets of the program.

[10] Tennessee Department of Education. (2016). *Work-Based Learning Implementation Guide*. https://tn.gov/assets/entities/education/attachments/wbl_implementation_guide.pdf

Community College Capstone Experiences

Capstone courses often occur in the last semester of a student's academic program. Students produce a final project, presentation, or work-product or otherwise participate in an experience that demonstrates their mastery of the program's competencies. Several LEAP projects fund capstone experiences with employers in local industries like advanced manufacturing as well as with local healthcare providers through required medical practicum placements. Like a co-op experience, employers interview and hire students, and work in partnership with community college faculty to evaluate a student's work on their respective assignments. Employers also provide any additional training that may be required for the student to complete job requirements related to the experience. These experiences are designed to complement classroom training, serving as an evaluation on student progress to master competencies learned in the classroom.

Incentivizing Employers to Participate in WBL Activities

Establishing a strong and well-functioning WBL program is no small feat. Employers often voice concerns related to day-to-day processes such as scheduling and documenting student work time, coordinating with institutions, and providing instructions and guidance to students. Employers working with high school students must be careful to meet additional legal requirements related to employing minors. Those requirements ensure that minors are not exposed to hazardous workplace settings and are working with the consent of parents.[11] Of course, employers want all of their employees (students or otherwise) to have a set of skills that prepares them to be successful on the job. With interns, the employer takes on additional responsibilities and time in training employees to be able to complete job tasks proficiently.

These concerns can often overshadow the potential benefits associated with WBL experiences, so in an effort to provide an incentive that would motivate reluctant employers, LEAP 2.0 provides grant funding to empower Collaboratives to reimburse employers up to 50 percent of a WBL student's gross wages, capped at $2,000. In order to ensure that each of these reimbursements is delivered to employers for WBL experiences that are aligned with the real needs of the community, several qualifying criteria were established. These criteria include:

1. Students are paid during their WBL experience;
2. Students earn academic credit for the WBL experience from a LEAP education partner;
3. Students develop employable technical skills during the WBL; and
4. Students are placed in an occupational field with the employer that is facing a shortage of skilled workers.

[11] Tennessee Department of Labor and Workforce Development (n.d.) Labor Laws: Child Labor Act. https://www.tn.gov/workforce/topic/child-labor

LEAP WBL programs are still in their infancy; however employers utilizing the WBL reimbursement model are generally positive about the value that WBL students add to the company. Most employers surveyed agree that WBL students arrive with basic knowledge of technical skills, and were able to learn the technical skills quickly. Most are also satisfied with the product of work from those students.[12] Because of this reimbursement model, we expect to see increased interest in hosting LEAP WBL students in the future. As further evidence of employer's positive reception to WBL program, 8 new employers have already approached project directors to establish new WBL experiences since projects began coursework in Fall of 2017. THEC expects to be able to provide a full evaluation of the impact of this reimbursement model on establishing WBL programs will be included in future reports.

Preliminary WBL Outcomes for LEAP Program

In Fall 2017, THEC distributed a survey designed to measure how satisfied students, employers, and educational representatives were with the LEAP experience. Of the 115 industry partners who received the survey, 44 responded. Of the over 2000 students in LEAP 2.0 programs, THEC received 532 responses (429 high school, and 113 postsecondary students). A portion of this survey provided respondents with the opportunity to rate a variety of items related to the impact of WBL experiences. The employers engaged in WBL activities (16 of the 44 respondents) were overwhelmingly supportive of the WBL experience to date, and are optimistic of its growth in the future. Students who participated in WBL experiences (122 of the 532 respondents) were also generally positive of the experience.

Employers see growth in skills as a result of LEAP and the WBL opportunities

Half (50%) of the respondents agree or strongly agree that LEAP students who have completed LEAP coursework began their WBL activities with the basic knowledge of the technical skills that are needed on the job as a result of completing their respective LEAP coursework. In addition, nearly three-quarters either agree or strongly agree that LEAP WBL students were able to learn the necessary skills during their time in the WBL experience. This indicates that employers feel that LEAP pipeline courses and the accompanying WBL experiences are working to adequately prepare students for their respective career fields. This feedback marks a great start for both the students and the employers engaged in WBL programs.

Participating students learn new skills and find value in the WBL experience

Students who completed a WBL experience rated their experience positively, with 81 percent indicating that the experience was a valuable use of their time and 87 percent acknowledging that they would recommend their own experience to a friend. Additionally, 83 percent of these students agreed that they learned new skills needed in their chosen career field while on the job, and 82 percent agreed that they discovered more about their own career interests as a result of completing their WBL experience.

[12] Tennessee Higher Education Commission (2017) Survey to LEAP Employers. Limited Distribution.

Collaboratives that have not yet placed students in a WBL experience are working hard with relevant partners to align educators and employers to provide these experiences in the coming years. These projects expect to begin their respective WBL programs by summer 2018.

Internships that Work

Over the summer of 2017, Grainger High School senior Ayden Lima earned WBL credit working as an intern at Norris Homes, a prominent home manufacturer in Bean Station, TN. During his internship, Ayden was assigned duty of creating blueprints and floorplans in response to customer requests. Ayden exceeded all expectations in his work. The employer offered Ayden the opportunity to use Norris' computer drafting systems to create designs for his own build project. Ultimately, Ayden's home design impressed his employers so much that they began to place the home into production. Dubbed the "Independence", 8 families have purchased Ayden custom-design to date!

Ayden's manager at Norris Homes, Jordy Dalton, had high praise to share for both Ayden and the LEAP 2.0 program "Strengthening the Lakeway Links 2.0," which facilitated the WBL experience. "The LEAP program is great and will benefit everyone involved. As an employer, it has given us a better idea of what the younger workforce will be like and we were very pleased with what we saw." Dalton continued, "I believe the (LEAP 2.0 WBL) program will help the younger generation by giving them a better idea of what the workforce holds for them. Whether they want to go to a tech school, community college, or another path spending time as an intern can help them make right decision for them... The LEAP grant initiatives and WBL internships program can help them get on the correct path."

As a result of this inaugural internship experience, Norris Homes has committed to continue to offer internship opportunities for high school students in the years to come.

IV. LEAP Collaboratives Elevate Employer Voices and Promote Industry Engagement

LEAP Collaboratives rely heavily upon their industry partners to keep the needs of business central to the development of each new education and training pathway. LEAP projects provide Tennessee employers with the opportunity to engage and have their voices heard throughout the lifecycle of the grant:

- During the development of the LEAP project proposals, industry partners identify and help prioritize specific skills gaps around which educational and training pathways will be developed.

  During this planning and pre-implementation stage, employers also work with educators to identify necessary training equipment, confirm faculty credentials, and suggest changes or additions to curriculum, such as the inclusion of proprietary industry certifications.

- Once courses and training programs are established during the implementation stage and students begin to enroll, employers continue to serve in both an advisory role to the project team, and in a more active role by providing direct support to students through work-based learning opportunities, and by lending expertise in the classroom via guest lectures, hosting career awareness and soft skill development workshops for students and faculty, volunteering at career fairs, offering job shadowing days, and even donating additional or specialized equipment to be used in the classroom.

- As projects begin to transition off of LEAP funding support, industry partners play a key role in sustaining the initiative by maintaining their responsibilities associated with the grant and through their continued partnership with the LEAP Collaborative. This enables communities to respond to future needs of employers by empowering them to continuously adjust curriculum and shape training pipelines as new challenges arise in the years to come.

Collaboratives can only be effective if they are responding to the authentic needs of a region or community. The LEAP program is designed to serve as a platform for employers to voice their labor needs, and clarify the most effective training pathways to meet those needs. By remaining engaged in all phases of the LEAP grant cycle, employers voices are elevated to guide community efforts to close skills gaps that respond to increasingly complex labor demands.

Employers feel that LEAP is positively impacting the workforce pool (Survey Results)

In Fall 2017, THEC surveyed all 115 LEAP 2.0 industry partners about their engagement with and perceptions surrounding the LEAP program. THEC received 44 responses from employers across each of the 12 LEAP 2.0 projects. The survey addressed a wide range of topics, gauging perspectives on the climate of the current economy, expectations for future growth, anticipation of strengths and challenges with workforce needs, as well as their satisfaction with the work completed by their Collaborative and their proposed training pipeline. Overall, esponses from LEAP partners were overwhelmingly positive.

Responses also help to confirm the complex perspectives and challenges facing employers. From the survey, it is clear that employers believe the economic conditions found in their local community are primed for growth in the next five years. The survey also indicates that employers overwhelmingly expect their own companies will experience moderate to fast growth in that same timeframe. 89 percent of respondents estimate that their company will experience moderately fast to fast growth over the nest 3-5 years. However, employers shared concerns regarding the challenge of finding qualified local talent to fill both current and future positions within their company. Fortunately, employers reported that LEAP is already working to produce qualified workers that meet their respective needs. One employer noted, "[LEAP students already] have the skills our company needs," while another shared that LEAP students "...provided quality and detailed ideas and inputs to assist us in developing development programs that support our growth."

86%

of LEAP employers believe that their local economy will improve in the next 5 years.

89%

of LEAP employers estimate that their company will experience moderately fast to fast growth over the next 3 to 5 years

80%

of LEAP employers also agree or strongly agree that they anticipate having dificulty finding qualified skilled workers from the local area to fill high-need positions

81%

of LEAP employers agree or strongly agree that their LEAP Project produces more talent to help fill open positions

LEAP employers also indicate that LEAP is already having a positive influence on some long-term impacts. Employers report that LEAP provides a good return on investment of company resources, with many citing that LEAP programs will ultimately improve production value and support workforce forecasting efforts.

71%

of LEAP employers agree or strongly agree that overall, LEAP provides a good return on the investment made by my company in the program

62%

of LEAP employers agree that LEAP directly impacts production value

52%

of LEAP employers agree that the pipeline will support workforce forecasting efforts

Industry partners also indicated that LEAP Collaboratives can play a role in responding to future development needs and demonstrated a strong commitment to maintaining the relationships created by their LEAP Collaborative after the life cycle of the grant.

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84%

of LEAP employers agree or strongly agree that the relationships built by the LEAP Collaborative will enable the community to respond to new training needs in the future.

87%

of LEAP employers agree or strongly agree that they are committed to maintaining the relationships built by the LEAP Collaborative.

100%

Reinforcing this general consensus of employer approval of LEAP programming is the surprising statistic that all surveyed employers (44, 100%) would be more likely to hire a LEAP graduate for a full or part time position within their company.

This belief in the effectiveness of the program and commitment to maintain Collaborative partnerships is a strong indicator that LEAP communities will sustain the LEAP Collaborative model and leverage it to respond to future workforce challenges.

V. LEAP 1.0 Recap & Lessons Learned: What the first round of LEAP taught us and how it impacted LEAP 2.0

LEAP 1.0 Summary

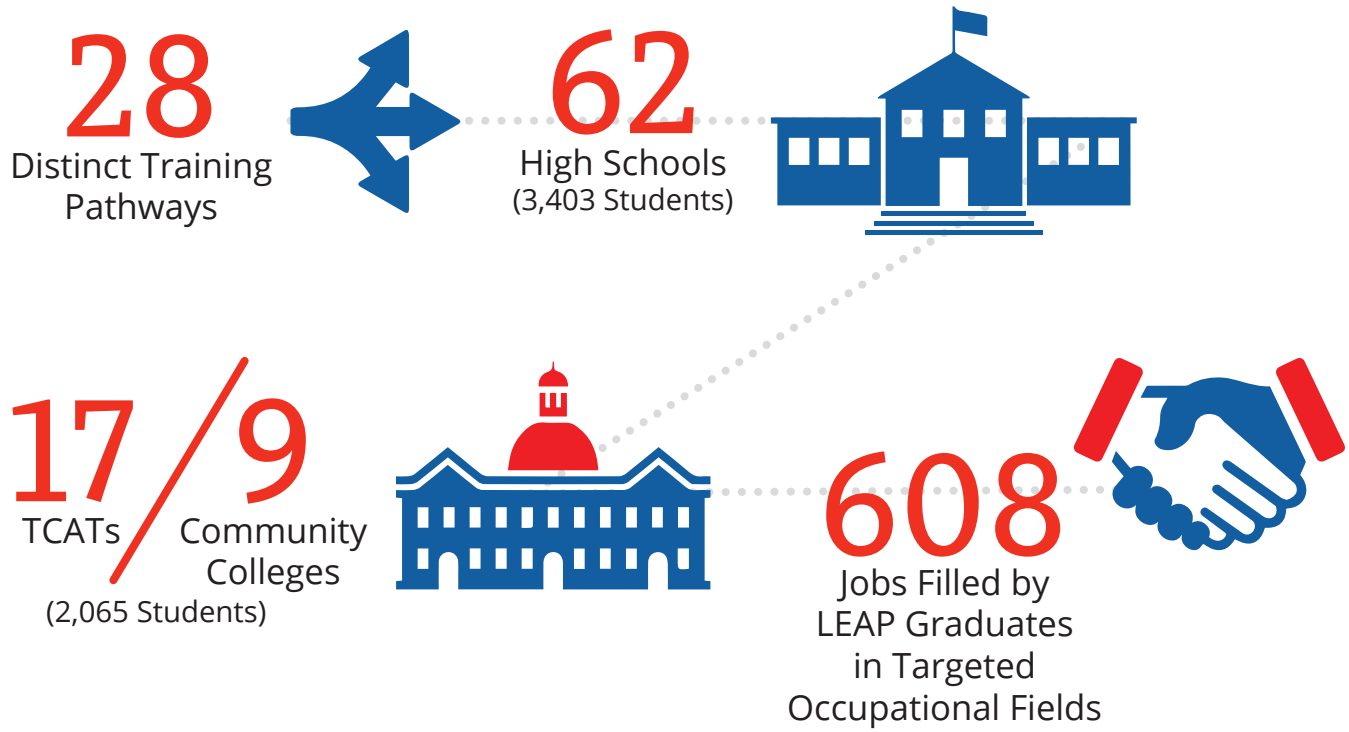
The first iteration of LEAP (LEAP 1.0) was comprised of 12 projects that ran from January 2015 to January 2017. In this first grant cycle, $10 million was made available to communities through a grant competition. Project awards were capped at $1 million, served at least 3 counties (with exceptions for major metropolitan areas with more than 170,000 residents), and were required to incorporate local stakeholders in a regional governing Collaboratives.

1. Local Industry Partners;
2. Postsecondary institutions;
3. LEA administrators (including Career and Technical Educators)
4. Local Economic Development Agencies and Boards.

Proposals also included additional data confirming industry needs and workforce projections as well as plans for sustainability.

In total, 27 proposals were submitted for review, and 12 were selected to receive funding by the Workforce Subcabinet. Selected LEAP 1.0 grant proposals targeted skills gaps in advanced industry sectors including advanced manufacturing and information technology. LEAP programs also established LEAP Impact Programming to improve career awareness and job readiness skills (soft skills). Refer to the 2017 LEAP Annual Report for a more detailed description of all twelve projects and their outcomes from the first round of LEAP.

LEAP 1.0 Grants Credential Pathways

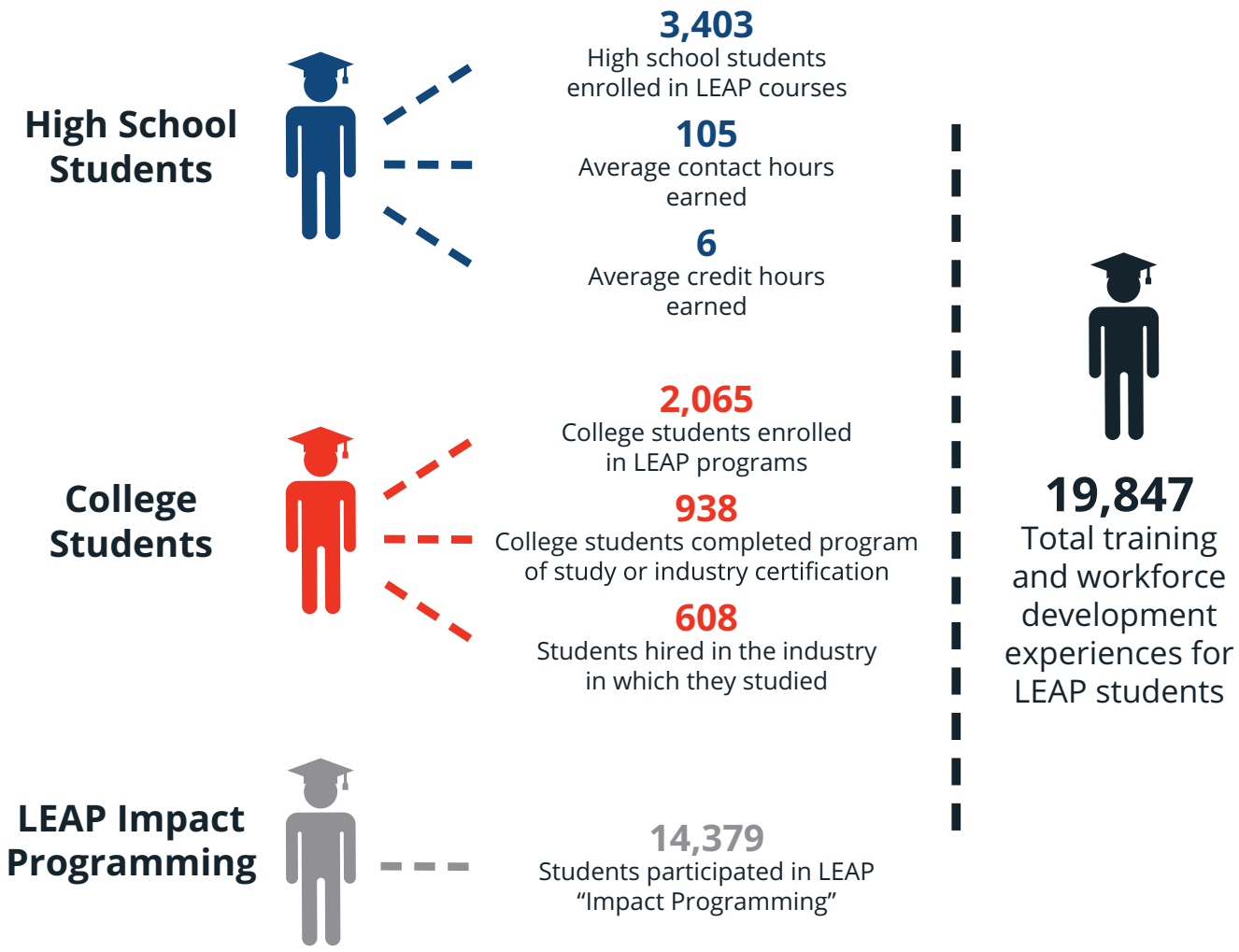


TCATs

By the end of the LEAP 1.0 grant cycle in January 2017, Leap Collaboratives had created 28 new distinct training pathways across 62 high schools, 17 TCATs and 9 community colleges. During the grant period, 3,403 high school students and 2,065 community college and TCAT students had participated in LEAP-initiated coursework and programs, and over 14,000 Tennesseans had participated in LEAP career awareness programs. Projects self-reported that LEAP pathways have enabled 608 Tennesseans to find jobs in targeted occupational fields to date.*

**Job placements will continue to grow and will be tracked via the Tennessee Longitudinal Data System beginning in Spring 2018.*

LEAP 1.0 Project Outcomes 2015-2017: [13]



[13] Tennessee Higher Education Commission (2017) LEAP Annual Report 2017. Available: http://www.tn.gov/assets/entities/thec/attachments/LEAPReport2017.pdf

LEAP 2.0 – Building on Lessons Learned

In May 2016, THEC released the RFP for a second round of LEAP funding (LEAP 2.0) to initiate a new set of projects that would run from January 2017 to May 2019. Much of the original grant structure was maintained, including Collaborative membership requirements, the regional 3-county service area requirement, and the $1,000,000 award cap, however THEC ensured that several lessons learned during the first grant cycle were addressed through the second RFP.

Extending the Grant Period

A January stop-date for LEAP 1.0 grants created challenges for some LEAP 1.0 grantees that could not adjust funding streams to cover the costs of faculty salaries mid school-year. To address this challenge, LEAP 2.0 extended the grant period for all projects to the end of May to enable grantees to disburse salaries through the end of the 2018-2019 school-year.

Narrowing Focus to Classroom Training

In the first round of LEAP, some projects leveraged LEAP funding to develop new outreach models such as online platforms to engage students across all levels of education in career exploration and awareness experiences. While career awareness is a critical component to the success of any LEAP pipeline, it was difficult to track and directly tie the impact of these awareness models to the education and workforce outcomes in each community. THEC thus narrowed the scope of LEAP 2.0 proposals to ensure projects implemented a more high-touch model that tied students to direct training experiences both in the classroom and on the job. This would allow for each project to clearly demonstrate student progression through the workforce pipeline.

Capitalizing on Best Practices: Transferability to other communities

LEAP 2.0 applicants from previously unserved regions were encouraged to review current projects to determine if the challenges and responses of a LEAP 1.0 community mirrored the workforce challenges facing their own service area. Two LEAP 2.0 projects were selected to replicate an original LEAP 1.0 project in their service area and transfer a previous LEAP 1.0 project to their own community under their own new local Collaborative.

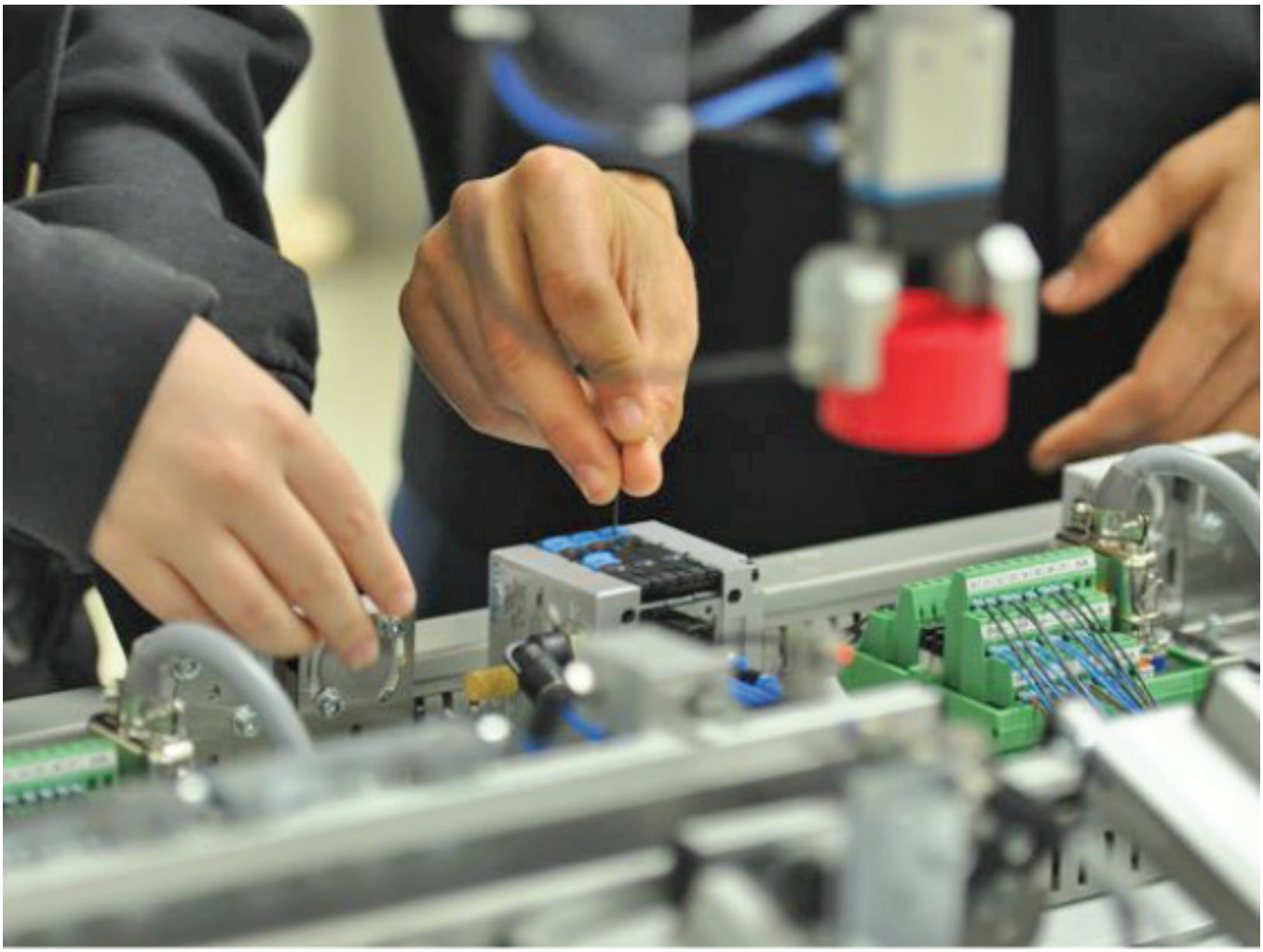
Focusing on scalability

LEAP 2.0 allowed for established LEAP 1.0 Collaboratives to leverage their current networks to scale operations to new service areas in adjacent counties. A caveat to this scalability option prevented LEAP 1.0 projects from using LEAP 2.0 funding to sustain LEAP 1.0 operations in their original service areas. Two projects were selected to scale LEAP 1.0 operations to adjacent service areas.

Emphasizing Work-Based Learning

The most successful LEAP 1.0 programs featured an integrated work-based learning model that enhanced student training in LEAP pathways. To incentive the use of this best-practice, the LEAP 2.0 RFP empowered applicants to build WBL experiences that reimbursed employer investment by 50 percent up to $2,000. Eleven of the twelve LEAP 2.0 projects all feature a LEAP 2.0 WBL component as a part of their project goals and operations.

By improving the timeline of grant operations, narrowing the scope of operations to focus on direct training activities, and encouraging the transfer and scaling of best-practices developed and implemented by LEAP 1.0 projects, LEAP 2.0 features stronger proposals that will build a more-qualified workforce in regional communities across Tennessee.



VI. LEAP 2.0 Overview and Project Profiles

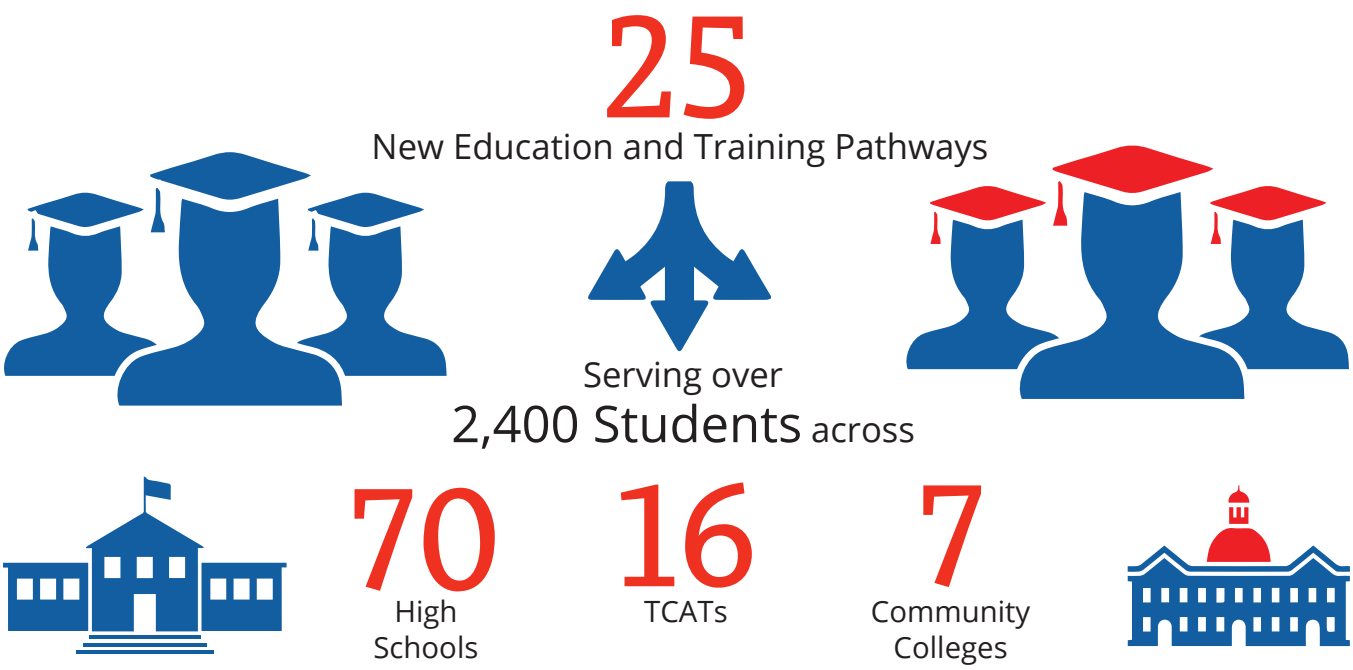
LEAP 2.0 Overview

The LEAP 2.0 Request for Proposals (RFP) directed grant recipients to address local community/ regional skills gaps through one (or a combination) of the following methods:

a) Enhance, expand, and/or acquire equipment to create an academic program at an institution of higher education that fills a critical and demonstrable local workforce need;

b) Develop and implement collaborative, meaningful, and sustained work-based learning (WBL) programs that incentivize industry partners to develop co-ops and internships that prepare students for rapid entry into the workforce in sectors facing a demonstrable shortage of skilled workers.

LEAP 2.0 Projects began operations in January 2017 and will run until May 2019. To date all 12 projects have enrolled students, with many working daily to increase capacity and enrollments.



This section contains overviews of the targeted occupations as well as project profiles and overviews for each of the 12 programs receiving LEAP 2.0 funding. Projects will continue to enroll classes and cohorts throughout the 2017-2018 school year. This report features preliminary enrollment data for each of the new training programs and pathways.

Note: *The following data will be made available as they become available in subsequent LEAP 2.0 reports in 2018 and 2019: course and program completions; average credit hours earned from EPSO enrollment; postsecondary enrollment and completion; and workforce outcomes.*

[14] Tennessee Department of Economic & Community Development & Center for Economic Research in Tennessee. (2017). *2017 Annual LEAP Report: An Occupational Analysis*

Alignment of LEAP Project Focus Areas with In-Demand Occupations as identified by the Tennessee Department of Economic and Community Development

The Center for Economic Research in Tennessee (CERT) and the Tennessee Department of Economic and community Development (TNECD) conduct an independent evaluation of LEAP Occupations each year. Their 2017 LEAP Occupational Analysis report identified occupational groups that feature a number of jobs for which Tennessee employers have a high demand to fill across more than one economic region.[14] From their analysis, the top three occupational groups demonstrating the greatest occupational demand in Tennessee include:

- Production (Advanced Manufacturing) Occupations;
- Information technology Occupations;
- Healthcare Occupations

LEAP 2.0 projects provide training designed to directly target advanced manufacturing and healthcare occupational pipelines, effectively closing skills gaps in two of the top three largest occupational groups with the great workforce demands in the state.

Because of the wide range of occupations that are aligned with both of these occupational groups, LEAP 2.0 projects are designated as either targeting Advanced Manufacturing or Healthcare Occupations. The following high need occupations identified for each of the two categories by TNECD's 2017 Occupational Analysis Report are listed below:

LEAP 2.0 Advanced Manufacturing Pathways target one or more of the following occupations:[15]

- Computer-Controlled Machine Tool Operators
- Cutting, Punching, and press Machine Setters, Operators, and Tenders
- Electrical and Electronic Equipment Assemblers
- Electricians
- Engine and other Machine Technicians
- Industrial Machinery Mechanics
- Industrial Maintenance and Repair Workers
- Machinists
- Plant and System Operators
- Team Assemblers
- Tool and Die Makers
- Welders, Cutters, Solderers, and Brazers

[15] Tennessee Department of Economic & Community Development & Center for Economic Research in Tennessee. (2017). pgs 12-13.

LEAP 2.0 Healthcare Pathways target one or more of the following occupations:[16]

- Licensed Practical and Vocational Nurses
- Medical Equipment Preparers
- Medical Lab Technicians

Funded LEAP 2.0 Programs

Project Name	Higher Education Partner(s)	Project Lead(s)	Counties Served	2016 Amount Awarded
Advanced Manufacturing in East Tennessee Powered by the Drive to 55	TCAT Knoxville	TCAT Knoxville	Anderson Blount Knox	$970,000
Advanced Manufacturing Skills and Internship Program	Chattanooga State Community College	Southeast Tennessee Development District	Bledsoe Hamilton Marion	$939,623
Marine and Advanced Engineering System Technology Regional Occupations	Cleveland State Community College Pellissippi State Community College TCAT Knoxville	Blount Partnership	Blount Knox Monroe	$959,267
Mechatronics-to-Jobs (M-2-J)	Austin Peay State University TCAT Hartsville TCAT Nashville Volunteer State Community College	Workforce Essentials	Macon Robertson Sumner Trousdale Wilson	$811,461
Mechatronics: A Pipeline from Dual Enrollment to TCAT to Work-Based Learning	TCAT Dickson	TCAT Dickson	Cheatham Dickson Hickman	$400,000
Mechatronics Accelerated Completion Program	Columbia State Community College	South Central Workforce Alliance	Maury Williamson	$891,536

[16] Tennessee Department of Economic & Community Development & Center for Economic Research in Tennessee. (2017). pg 21.

Funded LEAP 2.0 Programs (cont.)

Project Name	Higher Education Partner(s)	Project Lead(s)	Counties Served	2016 Amount Awarded
Nashville Area Automotive and Diesel Pathway	Nashville State Community College Tennessee State University TCAT Nashville	TCAT Nashville	Davidson Robertson	$571,998
Results Matter: Providing Qualified Healthcare Professional to Meet Workforce Needs in Southern Middle Tennessee	Columbia State Community College	South Central Tennessee Workforce Alliance	Maury Williamson	$568,426
South Central Tennessee LEAP Forward for Industrial Technology Training	TCAT Hohenwald	South Central Tennessee Development District	Lawrence Lewis Maury Perry Wayne	$960,829
Strengthening the Lakeway Links 2.0: Providing a Demand Driven Workforce Supply Chain	TCAT Morristown Walters State Community College	TCAT Morristown	Cocke Grainger Greene Hamblen Hawkins Sevier	$983,440
TCATs: Taking Charge of Applied Training - A Workforce Development Commitment to West Tennessee and Memphis Regional Megasite	TCAT Covington TCAT Crump TCAT Jackson TCAT McKenzie TCAT Memphis TCAT Newbern TCAT Paris TCAT Ripley TCAT Whiteville	TCAT Jackson	Carroll Chester Dyer Fayette Gibson Hardin Haywood Henderson Henry Lauderdale Shelby Tipton Weakley	$999,123
Tennessee Central Cooperative Manufacturing Education Program	TCAT Hartsville	Greater Nashville Regional Council	Jackson Macon Smith Trousdale Wilson	$944,009

Advanced Manufacturing in East TN Powered by the Drive to 55

The "Advanced Manufacturing in East TN Powered by the Drive to 55" project has empowered TCAT Knoxville to establish advanced manufacturing dual enrollment programs at eight high schools throughout Anderson, Blount, and Knox counties. Five of the eight high schools have already begun coursework in the Fall 2017. The remaining three high schools required additional support for classroom updates, and will be operational in the Spring 2018 semester. The project will also establish a welding program at the new TCAT Knoxville campus opening in Anderson County in January 2018. In addition to these efforts, the project will provide work based learning experiences for students that have received advanced manufacturing training beginning in the Spring 2018.

Total High School Students Enrolled in LEAP Courses: 66

Total High School Students Enrolled in LEAP EPSO Courses: 66

OSHA 10 Certifications Earned: 26

Target Sector:
Advanced Manufacturing Occupations

Service Area:
Anderson, Blount, and Knox Counties

LEAP Funding Amount: $970,000

Project Lead: TCAT Knoxville

Partners:

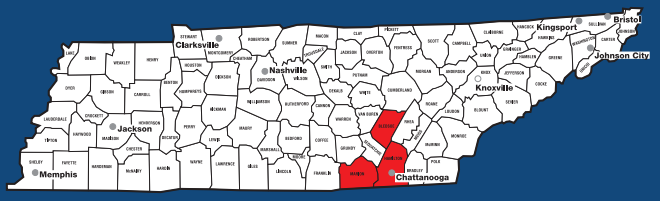
East Tennessee Development District
Alcoa City Schools
Anderson County Schools
Blount County Schools
Knox County Schools
Maryville City Schools
Oak Ridge Schools
3M
Alcoa, Inc.
Aisin Automotive Casting
BHS Corrugated
Cherokee Millwright and Mechanical
DENSO Manufacturing Tennessee, Inc.
Gerdau Ameristeel
Interstate Mechanical Contractors, Inc.
MAG-USA
Shoffner Kalthoff Mechanical Electrical Service, Inc.
SL Tennessee

Advanced Manufacturing Skills and Internship Program

The "Advanced Manufacturing Skills and Internship Program" (AMSIP) project provides advanced manufacturing courses including dual enrollment and dual credit EPSO courses in eight high schools across Bledsoe, Hamilton, and Marion counties. These courses range from mechatronics and robotics to welding and machining training.

The project also works to combat outdated perceptions associated with advanced manufacturing through faculty externships, community outreach, and awareness-programming such as advanced manufacturing academies during the summer. AMSIP will leverage these efforts as well as additional LEAP Collaborative resources to create an aligned work based learning pipeline, beginning with workforce readiness training embedded in the summer academies, followed by internship experiences, and finalized by full registered apprenticeship programs where available.

In addition to these efforts, the project has also added partnerships with regional Polytech Academies to provide work based learning opportunities for their enrolled students. The goal of the Polytech Academy is to academically prepare students for college and technically prepare them for the work force. With these shared goals, the Polytech Academies serve as an ideal partner to support AMSIP work-based learning pipeline.



Target Sector:
Advanced Manufacturing Occupations

Service Area:
Bledsoe, Hamilton, and Marion

LEAP Funding Amount: $939,623

Project Lead: Southeast Tennessee Development District

Partners:
Chattanooga State Community College
Bledsoe County Schools
Hamilton County Department of Education
Marion County Schools
Jasper Materials Inc.
Lodge Manufacturing
Valmont Industries Inc.
Wacker Chemie AG

Total High School Students Enrolled in LEAP Courses: 401

Total High School Students Enrolled in LEAP EPSO courses: 47

Teacher Externships: 11

Inaugural Summer Academy Participants: 12

Work Based Learning Placements: 15

Marine and Advanced Engineering System Technology Regional Occupations

The "Marine and Advanced Engineering System Technology Regional Occupations" (MAESTRO) project represents a collaboration between Pellissippi State and Cleveland State community colleges to create advanced manufacturing dual enrollment and dual credit courses for five school districts in Blount, Knox, and Monroe counties. Both institutions will hire faculty and purchase equipment that will enhance courses that lead to an Industrial Automation Certificate as well as Associate of Applied Science degrees in Industrial Technology, Electrical Engineering Technology, and Industrial Maintenance Technology. In addition to these dual enrollment opportunities, MAESTRO will work with industry partners to serve adults seeking additional training and to also create work- based learning opportunities for students participating in advanced manufacturing pathways. Work-based learning opportunities are expected to begin in Summer 2018.

Target Sector:
Advanced Manufacturing Occupations

Service Area:
Blount, Knox, and Monroe Counties

LEAP Funding Amount: $959,267

Project Lead: Blount Partnership

Partners:

Cleveland State Community College
Pellissippi State Community College
TCAT Knoxville
East Tennessee Human Resource Agency
Knoxville-Oak Ridge Innovation Valley
Alcoa City Schools
Knox County Schools
Maryville City Schools
Monroe County Schools
Alcoa Tennessee Operations
Blount County Public Library
Boatmate Trailers, LLC
Brunswick Boat Group
Carlex Glass Company
DENSO Manufacturing Tennessee, Inc.
EXEDY America Corporation
ProNova Solutions
Skier's Choice, Inc.
Yamaha Jet Boat Manufacturing

Total High School Students Enrolled in LEAP Courses: 107

Total High School Students Enrolled in LEAP EPSO Courses: 4

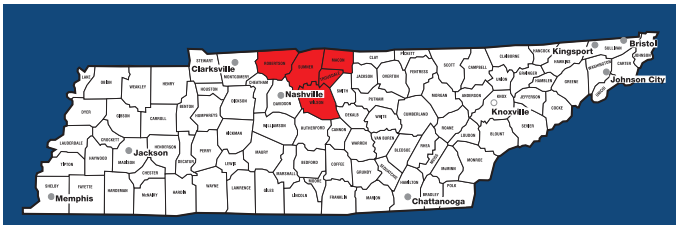
Total Adults Enrolled in LEAP Mechatronics Incumbent Worker Training : 4

Mechatronics-to-Jobs

The "Mechatronics-to-Jobs" (M2J) project provides a mechatronics program at Volunteer State Community College's main campus in Gallatin to serve students in Macon, Robertson, Sumner, Trousdale, and Wilson counties. This program operates as an integral component in a new linear pathway into advanced manufacturing beginning in local high schools, and extending through partner TCATs, Volunteer State Community College, and Austin Peay State University.

College and dual enrollment courses will be available to students at the main campus in Gallatin. Students that complete M-2-J coursework, or complete a degree at TCAT and wish to transfer to the program at VSCC, will earn college credit towards an Associate of Applied Science in Mechatronics from Volunteer State that will seamlessly transfer to a 4-year degree at Austin Peay for the students to continue their education.

In addition to the creation of this mechatronics pathway, M2J is also working with industry partners to initiate new work based learning experiences with regional partners beginning in the spring of 2018.



Target Sector:
Advanced Manufacturing Occupations

Service Area:
Macon, Robertson, Sumner, Trousdale, and Wilson Counties

LEAP Funding Amount: $811,461

Project Lead: Workforce Essentials

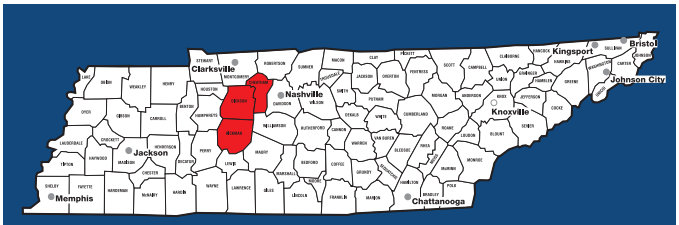
Partners:

Austin Peay State University
TCAT Hartsville
TCAT Nashville
Volunteer State Community College
Macon County Schools
Robertson County Schools
Sumner County Schools
Trousdale County Schools
Aladdin Temp-Rite
Betty Machine Company Inc.
YAPP USA Automotive Systems, Inc.

Total College Students Enrolled in Mechatronics Program: 36

Mechatronics: A Pipeline from Dual Enrollment to TCAT to Work-Based Learning

The "Mechatronics: A Pipeline from Dual Enrollment to TCAT to Work-Based Learning" project expands the Mechatronics Levels I and II dual enrollment curricula established in LEAP 1.0 grant (M2S2) to Cheatham, Dickson, and Hickman counties. Dual enrollment students who complete this curriculum can seamlessly transfer credits into the full-time mechatronics program at TCAT Dickson. The TCAT is also working with industry partners to establish work-based learning opportunities beginning in Spring 2018.



Target Sector:
Advanced Manufacturing Occupations

Service Area:
Cheatham, Dickson, and Hickman Counties

LEAP Funding Amount: $400,000

Project Lead: TCAT Dickson

Partners:

Joint Economic and Community Development Board of Cheatham County
Cheatham County Schools
Hickman County Schools
Dal-Tile Corporation
Tennsco Corporation

Total High School Students Enrolled in LEAP Courses: 107

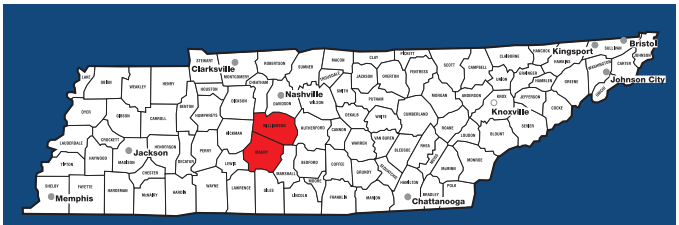
Total High School Students Enrolled in LEAP EPSO Courses: 4

Total College Students Enrolled in Mechatronics Program: 29

Totals OSHA-10 Certifications Earned: 21

Mechatronics Accelerated Completion Program

The "Mechatronics Accelerated Completion Program" (MAC Pro) project at Columbia State Community College provides the opportunity for students from Williamson and Maury counties to complete an accelerated Associate of Applied Science degree in Advanced Integrated Industrial Technology with an option in Mechatronics. This unique program combines a number of dual enrollment and dual credit courses to allow students to simultaneously meet both high school and community college requirements, enabling them to graduate from high school with both a diploma and a postsecondary degree. The MAC Pro collaborative has already initiated work based learning opportunities for students enrolled in the Williamson county location, and is coordinating with industry partners to offer additional opportunities in Spring 2018.



Target Sector:
Advanced Manufacturing Occupations

Service Area:
Maury and Williamson Counties

LEAP Funding Amount: $891,536

Project Lead: South Central Workforce Alliance

Partners:

Columbia State Community College
Maury County Public Schools
Williamson County Schools
Accurate Energetic Systems, LLC
AOC Metal Works
APCOM Inc.
Columbia Machine Works Inc.
GCP Applied Technologies Inc.
Horn USA, Inc.
Lasko Products Inc.
Nissan North America
Southeastern Manufacturing Enterprise

Total High School Students Enrolled in LEAP Courses: 253

Total High School Students Enrolled in LEAP EPSO Courses: 59

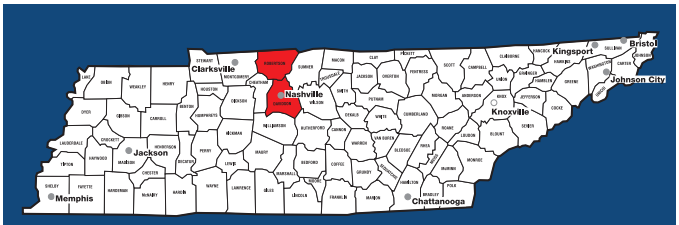
Total OSHA-10 Certifications Earned: 17

Work Based Learning Placements: 1

Nashville Area Automotive and Diesel Pathway

The "Nashville Area Automotive and Diesel Pathway" project will enable TCAT Nashville to enhance its Automotive Maintenance program to transition to the Diesel Maintenance program pending the completion of its new classroom facility in Spring 2018. The project also established a Diesel Maintenance career pathway beginning in middle school and fully engaging students at high schools in Davidson and Robertson counties. The project provides career awareness programming, as well as dual enrollment courses for high school students throughout the service area.

In addition to these dual enrollment pathways, TCAT Nashville has also expanded the pathway to allow for students to transfer to automotive and engineering programs at Nashville State Community College and Tennessee State University. TCAT Nashville is also working with industry partners to establish work based learning opportunities beginning in Spring 2018.



Target Sector:
Advanced Manufacturing Occupations

Service Area:
Davidson and Robertson Counties

LEAP Funding Amount: $571,998

Project Lead: TCAT Nashville

Partners:

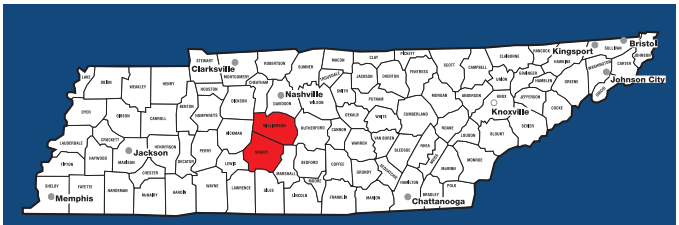
Nashville State Community College
Tennessee State University
Middle Tennessee Workforce Development Board
Metropolitan Nashville Public Schools
Robertson County Schools
Cummins Inc.
Hollingsworth Tire & Fuel Company
Rod's Tire & Automotive Service Center

Total High School Students Enrolled in LEAP Courses: 237

Total High School Students Enrolled in LEAP EPSO Courses: 63

Results Matter: Providing Qualified Healthcare Professionals to Meet Workforce Needs in Southern Middle TN

The "Results Matter: Providing Qualified Healthcare Professionals to Meet Workforce Needs in Southern Middle Tennessee" project leverages LEAP funding as seed money to establish two new healthcare programs at Columbia State Community College: a Medical Lab Technology Associate of Applied Science (A.A.S.) program and an Anesthesia Technology A.A.S. program. These high demand programs are being implemented in a phased approach, with the Medical Lab Tech program already underway with its inaugural cohort, and the Anesthesia Tech program on schedule to begin in Fall 2018. Per recommendations from the TN Medical Laboratory Board, Columbia State has deliberately limited enrollment to these programs in order to meet strict guidelines for accreditation and will look to expand the programs to more students over the following two years.



Target Sector:
Healthcare Occupations

Service Area:
Maury and Williamson Counties

LEAP Funding Amount: $568,426

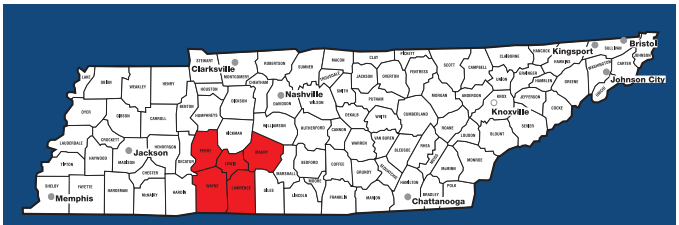
Project Lead: South Central Tennessee Workforce Alliance

Partners:
Columbia State Community College
Maury County Public Schools
Williamson County Schools
Maury Regional Medical Center
Vanderbilt University Medical Center
Williamson Medical Center

Inaugural Medical Lab Tech Program Enrollment: 10

South Central Tennessee LEAP Forward for Industrial Technology Training

The "South Central Tennessee LEAP Forward for Industrial Technology Training" project enables TCAT Hohenwald's to expand its capacity for its Industrial Maintenance and Welding programs by creating four new satellite classroom spaces throughout Lawrence, Maury (Mt. Pleasant area), Perry, and Wayne counties. Before the addition of these classroom spaces, both programs regularly featured an annual combined waitlist of 58 students seeking to enroll at the main campus for training in these fields. Each of the four new sites will allow TCAT Hohenwald to better serve these students and include flexible work spaces that can easily be transitioned into training centers that are responsive to specialized short- and long-term industry training needs.



Target Sector:
Advanced Manufacturing Occupations

Service Area: Lawrence, Lewis, Maury, Perry, and Wayne Counties

LEAP Funding Amount: $960,829

Project Lead: South Central Tennessee Development District

Total Students Enrolled in Industrial Maintenance Program: 49

Total SNAP-On Digital Multimeter Certifications: 42

Partners:

TCAT Hohenwald
Lawrence County Schools
Lewis County Schools
Maury County Public Schools
Perry County Schools
Wayne County Schools
Lawrence County Chamber of Commerce
Maury County Chamber and Economic Alliance
Perry County Chamber of Commerce and Tourism
Wayne County Chamber of Commerce
Wayne County Joint Economic and Community Development Board
American Hardwood Industries
The Bank of Waynesboro
Bates Rubber, Inc.
Columbia Machine Works, Inc.
DRM, LLC
GCP Applied Technologies
Hassell & Hughes Lumber Co., Inc.
IB-Tech Tennessee
IDC - Industrial Door Contractors, Inc.
Lincoln Brass Works, Inc.
Lifespan Health
Modine Manufacturing Co.
Mount Pleasant Power System
NYX Linden
Smelter Service Corporation
Sonoco
Tennessee Aluminum Processors, Inc. (TAP)
Tennessee Valley Electric Cooperative (TVEC)
United States Tile, Inc. (UST)

Strengthening the Lakeway Links 2.0

The "Strengthening the Lakeway Links 2.0" (STLL2) project will expand the industrial electricity, and advanced manufacturing EPSO and college training programs established by the LEAP 1.0 program into Cocke, Greene, and Sevier counties. Embedded in these programs are the opportunity to earn industry credentials including Starrett's SNAP-ON Precision Measurement Certification and the ACT's Work-Keys and National Career Readiness Certificate (NCRC), a nationally recognized job-readiness curriculum and assessment. Due to recent major changes to curriculum and testing for the NCRC offered by ACT, the implementation of this portion of the STLL2 initiative will not be in place until the end of the 2017-18 school year.

The project will also expand its soft skills initiative, the "Work Ethic Diploma", to newly partnered high schools in the project's service area. STLL2 has also coordinated with industry partners to deliver work-based learning opportunities throughout the year, with more to come in Spring 2018.

Target Sector:
Advanced Manufacturing Occupations

Service Area: Cocke, Grainger, Greene, Hamblen, Hawkins, and Sevier Counties

LEAP Funding Amount: $983,440

Project Lead: TCAT Morristown

Total High School Students Enrolled in LEAP Courses: 531

Total High School Students Enrolled in LEAP EPSO Courses: 202

Total SNAP-On Precision Measurement Certifications: 715*

Work Based Learning Placements: 37

High School Seniors Enrolled in Work Ethic Diploma: 480

Strengthening the Lakeway Links 2.0

Partners:

Walters State Community College
Smoky Mountain Area Workforce Board
Cocke County School System
Grainger County Schools
Greene County Schools
Greeneville City Schools
Hamblen County Schools
Hawkins County School District
Sevier County Schools
3M
Alcoa Howmet
American Appliance Products, Inc.
American Greetings
Ball Corporation
Bush Brothers & Company
Clayton Rutledge
Colortech Inc.
ConAgra Foods, Inc.
Cooper Standard
Dalton Hydraulic LLC
GE Energy
Funderburk Electrical Services
Hearthstone Homes
Huf North America
Hutchinson
Jarden Zinc Products
John Deere Power Products
Kelly Services
Leonard Associates, LLC
MAHLE Inc.
Meritor, Inc.
Newport Utilities
Norris Homes
The Original Footwear Co.
Parker Hannifin Corporation
Phoenix Closures Inc.
Renold Jeffrey
RGE USA Inc.
Rich Products Corporation
Sexton Furniture Manufacturing, LLC
SI Group Inc.
Sonoco
Team Technologies Inc.
Tuff Torq Corporation
U.S. Nitrogen
ZF TRW

**The industry certifications are the NC3 Starrett Snap-on Precision Measurement Instrument (PMI). Each student can earn up to six PMI certifications.*

TCATs: Taking Charge of Applied Training - A Workforce Development Commitment to West Tennessee and Memphis Regional Megasite

The "TCATs: Taking Charge of Applied Training - A Workforce Development Commitment to West Tennessee and Memphis Regional Megasite" project will expand and enhance dual enrollment opportunities in machine tool technology and welding technology in Carroll, Chester, Dyer, Fayette, Gibson, Hardin, Haywood, Henderson, Henry, Lauderdale, Shelby, Tipton, and Weakley counties. Coursework will incorporate industry-recognized certifications, including the National Institute for Metalworking Skills (NIMS) certification.

The project has also partnered closely with the Greater Memphis Medical Device Council to ensure the requisite skills are provided for the region. Additional industry partners, including Stanley Black & Decker, Inc. and Design Team Sign Company, have also contributed to optimize course offerings and initiate robust work-based learning experiences for students.

Target Sector:
Advanced Manufacturing Occupations

Service Area: Carroll, Chester, Dyer, Fayette, Gibson, Hardin, Haywood, Lauderdale, Shelby, Tipton, and Weakley Counties

LEAP Funding Amount: $999,123

Project Lead: TCAT Nashville

Total High School Students Enrolled in LEAP Courses: 607

Total High School Students Enrolled in LEAP EPSO Courses: 472

Total NIMS Industry Certifications Earned: 28

Total Additional Specialized Welding Certifications Earned: 14

Total Machine Tool Certifications Earned: 29

Total Certified Production Technician Safety Certifications Earned: 243

Work Based Learning Placements: 18

TCATs: Taking Charge of Applied Training - A Workforce Development Commitment to West Tennessee and Memphis Regional Megasite

Partners:

TCAT Covington
TCAT Crump
TCAT McKenzie
TCAT Memphis
TCAT Newbern
TCAT Paris
TCAT Ripley
TCAT Whiteville
Southwest Tennessee Development District
Bartlett City Schools
Carroll County Schools
Chester County Schools
Dyersburg City Schools
Fayette County Public Schools
Hardin County Schools
Haywood County Schools
Milan Special School District
Tipton County Schools
Weakley County Schools
Bennett's Inc.
Cupples' J&J Co., Inc.
DANA Holding Corporation
DENSO Manufacturing Arkansas, Inc.
Design Team Sign Company, LLC
Dynametal Technologies, Inc.
Greater Memphis Medical Device Council
Indmar Products Co., Inc.
Institutional Casework Inc.
Marvin Windows & Doors
Mueller Fittings Company, Inc.
ProMED Concepts, LLC
Republic Doors & Frames
SRG Global Newbern
Stanley Black & Decker, Inc.
Thyssenkrupp Elevator Manufacturing, Inc.

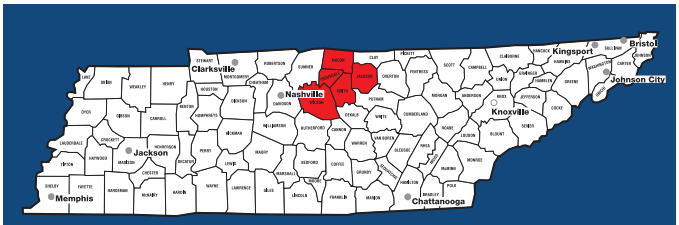
NIMS®

National Institute for Metalworking Skills®

Tennessee Central Cooperative Manufacturing Education Program

The "Tennessee Central Cooperative Manufacturing Education Program" (TCCMEP) delivers advanced manufacturing, industrial maintenance, and mechatronics training and dual enrollment coursework to Jackson, Macon, Trousdale, and Wilson counties. The project will purchase training equipment to outfit three TCAT classrooms to serve full-time students. Specifically, students will be trained in skill areas designated by industry partners including electricity, electrical controls, fluid power, motor controls, Programmable Logic Controls (PLCs), welding, and robotics.

The project will also grow dual enrollment for mechatronics, machine tool technology, and welding courses in four regional high schools.



Target Sector:
Advanced Manufacturing Occupations

Service Area: Jackson, Macon, Smith, Trousdale, and Wilson Counties

LEAP Funding Amount: $944,009

Project Lead: Greater Nashville Regional Council

Partners:

TCAT Hartsville
Jackson County Schools
Macon County Schools
Smith County Schools
Trousdale County Schools
Wilson County Schools
Amatrol, Inc.
DESTACO
Mueller Industries
Orchid International

Total High School Students Enrolled in LEAP courses: 49

Total High School Students Enrolled in LEAP EPSO Courses: 49

VII. Policy Recommendations and Next Steps

Now in its second round, the LEAP program has established reliable practices and processes to organize community engagement, clarify industry needs, and implement productive and sustainable workforce development pipelines on both the K12 and postsecondary levels. It is critical however for LEAP to remain nimble and responsive to future challenges related to educational and workforce alignment. Recent policy developments in Tennessee have created several opportunities to create new practices and that align LEAP with opportunities pertinent to adult learners, work based learning, and dual enrollment policies. Below are a list of recommended policy recommendations and next steps for the General Assembly to consider enhancing LEAP's effectiveness over the coming year.

Leverage new rounds of LEAP to increase adult learner engagement in LEAP initiatives in partnership with Tennessee Reconnect.

The implementation of the Tennessee Reconnect grant provides a remarkable opportunity for adult Tennesseans who are seeking to obtain a postsecondary credential. However, despite the financial support provided by these programs, many adults still face a number of well-documented challenges and barriers to enroll and complete a postsecondary degree. While a number of Tennessee's programs including the Tennessee Reconnect Communities (TRC) are working to overcome these barriers, their presence highlights the critical need for academic programs that are aligned with the authentic needs of regional industries so that adults can be assured that their degree will lead to gainful and meaningful employment.

The first two rounds of LEAP were largely focused on the implementation of pathways that began in high school and extended through a TCAT or Community College. While some adult learners have capitalized on these new pathways through specialized incumbent worker training, current LEAP pipelines do not primarily target adults as the principal benefactor of proposed operations. Despite this, LEAP Collaborative model is expertly positioned to support adult learners in more direct ways as they reconnect and earn their respective postsecondary credentials. LEAP will work to partner with Tennessee Reconnect resources to enhance incumbent worker pipelines and prioritize adult learning initiatives.

TENNESSEE LEAP

Align Work-Based Learning System across all K12, TCAT, CC, and Four-year institutions.

Processes and structures pertaining to work-based learning on both the secondary and postsecondary levels are still unclear for many LEAP Collaboratives and their students. As LEAP 2.0 projects work to clarify the structures for these programs, a unified WBL system and policies are needed to improve both the participation and completion of WBL experiences across all of Tennessee's K12, TCAT, community college, and four-year institutions.

In order to achieve this goal, THEC recommends the establishment of a cross-agency working group to pilot a comprehensive work-based learning system for the state of Tennessee. This pilot would produce a viable state-wide model that could adequately prepare communities to create WBL experiences across all education levels, and ensure full and seamless alignment across systems. This pilot would produce a viable state-wide model that could adequately prepare communities to create WBL experiences across all education levels, and ensure full and seamless alignment across systems.

Ensure that LEAP programs are champions for embedding best-practices pertinent to Early Postsecondary Opportunities.

Currently the Tennessee Higher Education Commission is working closely in partnership with the Tennessee Board of Regents, the University of Tennessee, Tennessee's Independent Universities, as well as the Tennessee Department of Education to review policies, highlight best practices, and produce recommendations pertinent to the implementation and operation of early postsecondary opportunities (EPSO) including dual enrollment and dual credit programming across the state. Because of LEAP's heavy reliance on EPSO programming, LEAP Collaboratives will work to ensure that all stakeholders and programmatic operations are aligned with recommendations put forth as a result of this ongoing collaboration.

TENNESSEE
LEAP

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Tennessee Higher Education Commission