

## **PROGRAM OUTCOME INFORMATION**

### **The Enterprise Center - Digital Equity/Tech Goes Home**

#### **Agency Mission:**

The Enterprise Center is a non-profit organization with a local board of directors whose public-serving mission is to establish Chattanooga as a hub of innovation and improve people's lives by leveraging the city's digital technology to create, demonstrate, test and apply solutions for the 21st century.

The Enterprise Center is a public-private partnership dedicated to achieving three strategic goals in the following ways:

- Innovation District - The Enterprise Center helped establish and continues to promote and develop Chattanooga's Innovation District, 140 acres in the heart of the city where creative thinkers, entrepreneurs, students and tech-savvy innovators can collide and collaborate to conceive and implement new ideas.
- Research and Application Development - Through partnerships with EPB and UTC, and by leveraging The Enterprise Center's relationships with such institutions as ORNL, the National Science Foundation, U.S. Ignite and the University of Southern California, The Enterprise Center is helping establish Chattanooga as a test-bed for the development of next-generation smart technologies, processes and services.
- Digital Equity - The Enterprise Center is determined to address issues of digital equity and to promote digital asset availability through programs such as Tech Goes Home, a digital inclusion program that provides Chattanoogaans with the skills, hardware and connectivity to thrive in a technology-driven environment.

#### **Program Goal:**

Digital equity and inclusion are core tenets of The Enterprise Center's economic development mission for Chattanooga and Hamilton County, leveraging our community's advanced technological capacity to ensure equitable access to 21st century opportunities for every resident. In working to eliminate the digital divide, in close partnership with local and national stakeholders, our goal is to provide educational opportunities and increase access to digital services, concentrating on (1) community and workforce development, (2) connectivity and (3) technological strategies to achieve those outcomes. In FY2020, the Enterprise Center will continue to hone this growing suite of digital equity and inclusion programming built over the past four years - namely Tech Goes Home and our low-cost Internet initiatives - while expanding efforts with Hamilton County Schools, in early childhood education, for workforce readiness and increasing access to broadband connectivity.

Fundamentally, The Enterprise Center is working to build long-term, sustainable and equitable economic growth for our entire community while leveraging technological assets in order to rapidly expand the scale, scope and mode(s) of impact. Entrepreneurial opportunities, high-tech jobs and a

thriving innovation economy have helped define this period of growth for our region; ensuring access to this success isn't limited by arbitrary barriers is central to Hamilton County and the City of Chattanooga's sustainable long-term success. Through the lens of digital equity, we know that disconnectedness - whether a lack of internet access, limited or no access to a device or a need for fundamental digital literacy and training - has a disproportionate effect on opportunity in the 21st Century, and is particularly exacerbated within rural areas. As an increasing percentage of life takes place at least partially online - from how we communicate, to homework assignments, to job and school applications, to shopping and banking, to entertainment, and so on - we must ensure that not just some, but all Hamilton County residents, can participate, and participate fully, in our increasingly digital world.

**- Community and Workforce Development: Long-Term Economic Growth and Mobility -**

Intended outcomes related to community and workforce development are to:

- (1) Improve the overall digital literacy of the targeted population;
- (2) Increase the number of individuals with access to computers and home Internet;
- (3) Improve digital skills, employment opportunities and professional development for targeted populations through an increase in partner organizations.

Tech Goes Home, the Enterprise Center's central community and workforce development initiative, will continue offering its core programs - focused on early childhood education and the families of young children; on school-age children (K-12) and their families; and on adult residents and workforce needs - providing an estimated 1,030 individuals in FY 2020 with 15 hours of age-appropriate digital literacy training, the opportunity to purchase a new device for only \$50 and access to low-cost home internet. Tech Goes Home will also scale programmatic offerings developed in FY2019, including an expanded Early Childhood program, re-focused on supporting families, as well as providing professional support for early childhood providers; programming specifically focused on accessibility, creating digital scaffolding alongside the work of disability service organizations; additional Small Business programs serving a diverse community of entrepreneurs; professional development opportunities for Hamilton County Schools educators; and an expanded Office Ready program, designed to help under- and unemployed residents develop the necessary skills for success in the 21st century office.

As Tech Goes Home has grown, we have realized the importance of our relationship with Hamilton County Schools, through which we offer regular programming in every School and Commission District across the county. As of the end of 2018, 1927 of our 3457 graduates - approximately 56% - have attended a school TGH program, in which students and guardians co-develop their digital skills. Of our 80 community sites where classes are held, 33 take place inside a Hamilton County school building - with a wait list for each quarter. Additionally, we have worked with Hamilton County educators to provide between 100 and 150 of their peers with 15 hours of education-specific Google suite training and a Chromebook through a TGH: Educator Edition, hosted each summer since a pilot in 2016.

Tech Goes Home prioritizes low-income and underserved populations, including those in disconnected neighborhoods, those without technology at home, those currently unemployed/underemployed, those who do not speak English, and those with disabilities. Our students have ranged from age 1 to age 93 years old, approximately 48% are workforce age, 70% are female, 70% identify as persons of color,

59% have a household less than \$30,000/year (with average family size of 3.4 people) and nearly 34% are un- or underemployed.

Since launching in 2015 and with the support of Hamilton County, 3,457, people, representing 2,162 households, have graduated from 234 classes at 80 partner locations across Chattanooga and Hamilton County. 99% of families have elected to purchase a subsidized device, meaning more than 2,100 homes in Chattanooga now have access to an internet-connected device. Tech Goes Home plans to graduate 1,030 individuals during FY 2020 through its Early Childhood, Accessibility, School, Community, Small Business and Office Ready programs.

#### **- Broadband Connectivity: Impact, Efficiency through Increased Access -**

Increasing home and public access to internet connectivity - and particularly at broadband speeds - is a key strategy for developing 21st century access, agency and opportunity in Chattanooga; it is also important scaffolding for supporting the work of civic, non-profit and private sector service organizations, facilitating efficiency and capacity for additional scale. Through partnerships with community organizations, we plan to leverage the human network inherent to our strong communities to improve connectivity in traditionally underserved and, per a seminal Brookings study, digitally divided neighborhoods.

In FY2019, we connected numerous families to the Internet, many for the first time. Our goal is to continue increasing the number of households in our targeted populations with Internet access. In collaboration with our community Digital Equity Committee, representing a cross-section of community organizations and stakeholders, the Enterprise Center has identified two central initiatives to support and scale connectivity across Hamilton County. The first builds off of the success of the school-based connectivity drives of the last few years: A multifaceted campaign focused on the best low-cost internet options available to low-income families in Chattanooga; developing educational marketing materials, an ambassador corps of partner organizations able to help individuals and families get connected; structural support through existing services like 211; and high-impact Connectivity Drives, connected with community events like Neighborhood U, job fairs, CNE's Money School and school parent nights. The second, currently with design funding from the National Science Foundation and Mozilla (and not included in this ask of Hamilton County) is a replicable public WiFi strategy, combining both infrastructure and programming within disconnected neighborhoods.

#### **- Smart & Connected Community Infrastructure: Strategies and Applications for Equity -**

While we are not seeking programmatic funding for the smart and connected community prong of our digital equity and inclusion strategy, the work in this space (supported by local and national funders, including US Ignite, Mozilla and the National Science Foundation) complements and supports the Enterprise Center's mission to develop, test, apply and scale technological solutions for improving people's lives and making our community a hub and model for innovation. For the past four and a half years, the Enterprise Center has been engaged in some of the most advanced gigabit research and applications development on the national and international stage, and nowhere else have these Smart and Connected Community projects been deployed with the same emphasis on equity and inclusion. Indeed, the impact continues to deepen as the projects themselves grow; our approach has not been just to demonstrate what's possible, but to move beyond pilots into sustained and sustainable programming.

Through a focus on education within and the overall accessibility of the Innovation District, as well as education-centric initiatives and application development - like the 4K microscope now housed at the STEM School, which provides access to next-generation research equipment to students and educators at 5 additional schools, including Hixson High School, the Howard School, Brainerd High School, East Hamilton Middle/High School and Red Bank High School; the 4K streams from Tennessee Aquarium exhibits directly into elementary and middle school classrooms, which are scaling across the county; mobile, modular and accessible L<sup>O</sup>wL<sup>A</sup>tency equipment supporting connected, collaborative arts experiences for area students (like a combined music and dance class, taught between CCA and a local elementary school); and a VR workforce development pilot around green energy technologies through Career Technical Education classes in high schools - the Enterprise Center's efforts will continue to embody the Hamilton County story: Not only can you employ next-generation infrastructure to develop cutting edge technologies, they can make a difference for residents immediately - and, in fact, the system works more efficiently and successfully when those things happen in concert.

Of particular importance is this work happening in concert with our community, workforce and connectivity projects. We know we must avoid the pitfall of lowered expectations for residents who begin life, or find themselves living, across the digital divide - ensuring that our communities, and that individuals from every background, have not just the capacity to access technology, but to achieve their highest potential is essential to our continued growth.

### **Outcome Objectives:**

- (1) Improve the digital literacy of the targeted population;
- (2) Increase the number of individuals with access to computers and home Internet;
- (3) Improve digital skills, employment opportunities and professional development for targeted populations through an increase in partner organizations.

### **Priority Area Addressed:**

Plans for each of the Enterprise Center's Digital Equity and Inclusion programs is outlined in brief below. As we are seeking to expand programmatic offerings in FY 2020, additional details (including funding sources) for our school, community, early childhood, office readiness, inclusivity and community connectivity initiatives have also been included. Our requested increase over FY 2019's Hamilton County Government budget will directly expand the number of school-based sites and courses offered there, up to four additional sites per quarter.

### **- Community and Workforce Development -**

#### *Tech Goes Home Overview:*

Tech Goes Home will continue offering its core and expanded programming during four program sessions per year: Winter from January to March, Spring from April to June, Summer from July to August, and Fall from September to December. In 2018, Tech Goes Home supported approximately 15 sites per program session (8 School, 5 Community, 2 Early Childhood and/or Small Business), with up to 20 individuals or families participating per class, we're proposing an increase and adding an additional 6 Tech Goes Home base program sites per quarter due to increased demand from our

current partners and a growing list of new potential partners. Our school sites, in particular, fill to 100% capacity with a waiting list each quarter; we are currently at capacity for our school-based programming into the summer of 2019. Please note that the sole financial burden of this increased impact is not being made solely of Hamilton County Government; Tech Goes Home is asking for additional revenue from the City of Chattanooga, as well as from independent financial partners, to increase the scale and scope of this vital work. The requested funding from Hamilton County Government will directly support an increased number of school sites.

In addition to its site based programming, Tech Goes Home also offers follow-up support for participants through a constantly evolving resource page and monthly “tune-up” sessions featuring new skills, as well as for facilitators through a network of professional, in-person events and trainings and a digital communication platform and resource page.

Tech Goes Home relies heavily on our partners to implement it at locations across Chattanooga and greater Hamilton County, and staff time is spent identifying, assessing and developing new partnerships on an ongoing basis.

Tech Goes Home provides our partners with:

- (1) Curriculum and program resources
- (2) Marketing materials (posters, flyers, etc.) and forms
- (3) Training and support for all Tech Goes Home course trainers
- (4) Stipends for Hamilton County teachers/staff serving as trainers/co-trainers
- (5) Trained volunteers
- (6) Subsidized, new Chromebooks, Android tablets or iPad minis for participants who complete the training program
- (7) Annual graduation celebration for all participants, trainers, volunteers and partners

Partner locations/organizations provide:

- (1) Course site and classroom equipped with WiFi
- (2) Course trainer (teacher, staff member or volunteer)
- (3) Assistance collecting surveys

Each course location will have a different class schedule (depending on the length of classes, start date, etc.), but courses will begin within a few weeks of trainers completing the “Trainer Training” (occurring prior to the start of each program session), and are required to conclude by the last day of the program session.

In order to track our specific outcomes, Tech Goes Home requires each participant/family to complete two surveys - one pre-training and one post-training. We collect contact information, demographic data, feedback on the program and curriculum, as well as information regarding usage of online resources for adults, Internet access and information about student’s usage of technology for school. We also administer surveys to participants via email at intervals of one and twelve months post-training, with additional annual surveys after the first year.

Tech Goes Home requires our trainers to complete a Post-Training Survey in order to get constant feedback regarding the viability and health of the program. In addition to these surveys, we will begin working with our trainers to develop a more robust, guided curriculum through trainer networking events, on-going training events and an online forum for trainers.

The milestones for each program session are outlined below and repeat each quarter.

- Sites Identified & Courses Scheduled - Monthly/Ongoing

Completed by: Q1, June 15; Q2, September 15; Q3, January 15; Q4, April 15

Key Activities:

- (1) Schedule courses for existing partner sites and determine how many new sites are required.
  - (2) Identify/recruit new partner locations.
  - (3) Review applications and secure new sites for session.
- Successfully train new trainers, assistants, and volunteers.

- Monitor Enrollment & Attendance - Weekly/Ongoing

Key Activities:

- (1) Help trainers market their courses (provide materials and tips, publicize new classes on website and social media, etc.)
- (2) Track applications submitted and number of applicants accepted for each course remains in target range and within acceptable min/max number of participants (between 5-20 participants/pairs per course).
- (3) Provide device order forms for each course and confirm attendance for participants/households.
- (4) Order devices (Chromebooks/tablets) from local vendor and confirm delivery.
- (5) Periodically check in with trainers and visit each course site at least once.
- (6) Track attendance for each course to monitor dropout rate is within acceptable limits (<20%) and completion rate is on target during each quarter.
- (7) Confirm pre- and post-training surveys and final projects are completed.

- Assess Data, Targets, & Revisit Goals - Quarterly/Ongoing

Completed by: Beginning of each quarter for the previous quarter and at intervals 30 days and one year after each program session.

Key Activities:

- (1) Debrief with trainers after each course concludes.
- (2) Collect information about participant's ongoing computer usage, Internet access, etc. in surveys.
- (3) Make adjustments to program based on feedback from participants and trainers.
- (4) Conduct quarterly networking/informational sessions for trainers to provide continued curriculum support.

In addition to continuing to grow and hone Tech Goes Home's core offerings, three programs in particular - our Office Ready track, the Early Childhood program and a dynamic accessibility focused course - will undergo more dramatic expansion in order to most effectively serve Chattanooga residents.

*Tech Goes Home Office Ready Expansion:*

Tech Goes Home: Office Ready, building from the model outlined above, will provide a minimum of 16 hours of intermediate level training in technologies commonly required in office work to an estimated underserved residents of Hamilton County. Each graduate will be proficient and confident in using email, word processing, spreadsheets and presentations with both Google and Microsoft Office software; these curricular areas were determined through data from local employers collected by the Chattanooga Area Chamber of Commerce, as well as the wants and needs of surveyed TGH graduates, trainers and pilot participants. The Office Ready program will also provide each participant with a Microsoft Windows-enabled laptop upon completion of the program.

Tech Goes Home will expand its Office Ready program in FY2020 by working with partner organizations such as the Chattanooga Public Library, Hamilton County Schools and The Chatterry. We will train staff members within each organization to implement the curriculum tested in FY2019. The project-based curriculum has been developed and was implemented by four TGH-trained HCDE teachers during the first cohorts, in collaboration with employers and industry professionals. We're building on what was learned through surveys and interviews with participants, trainers and employers during the first iteration to improve on subsequent courses, including the two being run by partner organizations this winter.

The Office Ready program follows the same TGH model - free training, opportunity to purchase a low-cost device and assistance securing affordable Internet - but will provide longer, intermediate level training (akin to a TCAT or college course) in software and technologies most commonly required in an office setting. Classes will be a total of 16-20 hours over 6-8 weeks. Classes will be from 2 to 3 hours long and meet 1 or 2 days/week. The course will be free to City of Chattanooga residents with a qualifying low-income. In order to qualify, applicants need to: reside in Hamilton County, be 18+ years old, pass a basic assessment of computer skills, want to work in an entry level office position and meet a low-income threshold.

The Office Ready program, piloted in the Spring of 2018, targeted those who are seeking entry level employment in an office setting but lack the specific computer skills and software knowledge to do so; after the initial pilot, new partners (including Orchard Knob Elementary and the Chatterry) have taken on new iterations of the class in order to best meet specific community needs. Additional partners will continue to expand the reach of the program. The Office Ready course will continue to focus on developing intermediate skills in both the Microsoft Office and Google Suites (Word/Docs, Excel/Sheets, Outlook/Gmail, and Powerpoint/Slides). The program instills software agnosticism so that our students learn transferrable skills and are better prepared for the inevitable changes in workplace technology.

#### *Tech Goes Home: Early Childhood Expansion*

Children from low-income backgrounds start life at a disadvantage - in FY2019, Tech Goes Home worked to redesign our Early Childhood program, to rapidly shrink that gap and foster the resiliency to continue shrinking it. We partnered with the Office of Early Learning, Signal Centers, Head Start, BabyU and other Chattanooga 2.0 stakeholders to reshape the course in order to better serve Chattanooga's early childhood community and provide a localizable platform organizations can easily implement; with a renewed focus on parent empowerment and quality early childhood education, every child born in Hamilton County can have an equitable chance at a happy, healthy and successful life.

The first prong of the program targeted the parents and guardians of young children, as well as families taking part in BabyU, while providing a subsidized device, low-cost internet and specific training building on the TGH model outlined above. Working with content experts and our partners, we built an adaptable 15 hour curriculum providing approximately:

- (1) 5 hours of fundamental digital literacy education (for example, e-mail communications, navigating the web and/or using a spreadsheet to build a budget - as well as confidence in translating those skills elsewhere), allowing parents to make best use of resources available to them;
- (2) 5 hours of training focused on developing and augmenting life-skills through technology (areas including telemedicine, nutrition, financial literacy and transportation), aimed at improving overall health outcomes and engendering parental agency, with a particular focus on local resources; and
- (3) 5 hours of child-centric strategies, using connectivity to directly support your child through online resources - like literacy and numeracy applications, interactive music and arts websites or access to eBooks at the Public Library; applications designed specifically - and research-backed best practices, like the Chattanooga Basics, to improve school-readiness and educational outcomes.

Through Camp Kindergarten, we were able to pilot the revamped curriculum with parents of children entering school for the first time; we will continue that partnership with Hamilton County Schools in FY 2020, as well as expand the number of schools offering TGH's early childhood opportunities.

And we're continuing to work with many of those same partners to develop support for early childhood educators through the end of FY2019 into FY2020, with an additional \$25,000 funding from the Lyndhurst Foundation to support pilot expansion. The TGH model has been used successfully with both students and teachers, K-12, and we see both a need and a fit for the diverse array of early childhood providers across our community, particularly taking into account a rapidly evolving certification and higher education landscape. Using the same 15-hour framework, the curriculum will again loosely break down into three 5-hour areas of focus:

- (1) Fundamental digital literacy, providing new and current educators with the skills to take advantage of emerging tools and resources;
- (2) Professional development for improving educational practices and providing access to higher education (advanced strategies, classroom management skills and continuing education/certification opportunities, among others); and
- (3) Tools and resources for directly supporting students and their parents, as well as communication skills and applications related to professional networks and learning communities.

As community stakeholders work collaboratively to support the health, happiness and success of its youngest and most vulnerable residents, we have recognized the value of more support for the professionals working within the space, both as independent entrepreneurs and with larger childcare centers. One professor lamented that more than a third of her early childhood education students turned in papers written on cell-phones - illustrating how the digital divide extends well beyond K-12, further impacting vital professionals-in-training. During a pilot class, we learned that a number of older professionals were only willing to attempt new certifications with the support of TGH. Licensure and professional development can have an impact on raises, on whether or not individuals can keep their jobs and on the quality of care and education provided to future generations. Again, the digital divide has a direct impact on outcomes we know crucial to the success of our community.

With these two courses working in tandem, we hope to improve early childhood outcomes community-wide by:

- (1) Empowering parents to support their children's development and successes, academically and beyond;
- (2) Ensuring all families have access to quality providers, and educators have opportunities to continually improve their practice;
- (3) Building two-way communication between service organizations and the communities they serve;
- (4) Creating a framework for a collaborative network of early childhood providers and educators; and
- (5) Developing the infrastructure for organizations and agencies to do their essential work more effectively, providing them with an application they themselves can deploy.

Through a partnership with the Office of Early Learning, Signal Centers, Inc. and other early childhood stakeholders, The Enterprise Center honed these pilot ideas through an Open IDEO Early Childhood Challenge, launching both redesigned and new programming throughout FY2019. Additional support from the Lyndhurst Foundation will support an additional 8 sites through the 2019 calendar year.

*Tech Goes Home: Accessibility and Inclusion:*

Accessibility, and particularly accessibility in the digital age, has an outsized impact on those Chattanoogaans with disabilities - but the same technologies fueling the digital divide can be harnessed to rapidly close those same gaps. Tech Goes Home's digital inclusion strategy, to date, has focused largely on our population as a whole; this pilot, with \$25,000 in support from Unum, will instead focus on tailoring our platform to better meet the 21st century challenges facing disabled persons in our community while developing a sustainable, replicable and systems-level digital equity platform in collaboration with disability service organizations.

Our project, informed in part by our experiences redeveloping TGH's early childhood platform, proposes a threefold strategy:

- (1) Convening industry experts and co-developing the curricular and programmatic structures necessary to meet pressing and immediate community needs, as well as instill foundational digital literacy skills;
- (2) Iteratively piloting those resources in the field and working with participants to further improve and expand on programming elements; and
- (3) Facilitating organizational development and capacity building, both our own and our partners', directly integrating digital equity and inclusion within their core missions, programming and strategies.

And, while we are aware that disability services covers a broad array of practices and practitioners, our project proposes an intentional, if initial, focus on four central areas, based on the demonstrated needs of partners:

- (1) Individuals with limited hearing or who are deaf;
- (2) Individuals with limited vision or who are blind;
- (3) Those with limited or developing capacity for verbal speech, particularly children, and their parents; and
- (4) Case managers and in-home healthcare providers working directly with individuals with disabilities, particularly those in rural areas.

These are four areas where opportunities exist, but augmentation with device-access, home connectivity and additional digital skills acquisition, as well as a network of support, can have a more substantial cumulative effect in conjunction with partner's existing programming.

For individuals with disabilities, tailored pathways for device access, connectivity and digital literacy education will catalyze 21st century opportunities from which they might otherwise be excluded. By mitigating fears and introducing participants to positive, meaningful relationship with technology, we're supporting individuals' abilities to take a more active part in their own lives, digital or otherwise - and to develop the resilience to overcome the next hurdles they'll inevitably face. And by working with parents of young children with disabilities, particularly around language acquisition, we're also empowering caregivers with that same agency and resiliency.

Our intent is to also support organizations in doing their own important work - and, for this project, particularly the broad group of Chattanooga and Hamilton County partners working with individuals with disabilities. The impact is twofold - first, by co-creating an adaptable and replicable TGH model specifically for the communities these organizations serve, we're developing institutional capacity that leverages Chattanooga's unique connectivity. Residents are able to stay better connected with these service organizations, as well as access forms, resources and other online tools, increasing efficiency of service. Second, by developing a professional development model for caseworkers and other in-home health professionals (whose salaries often place them squarely within TGH's broader demographic), we're supporting shared best practices and a connected learning community, as well as arming professionals with important resources for those with whom they work.

Our prospective partners have lamented the cost of consumer devices, as well as equally expensive specialized software, rarely covered by insurance. Tech Goes Home is ideally positioned to remove many of those barriers through our ability to subsidize Chromebooks and tablets; additionally, certain operating systems and hardware can provide a better and/or more practical user experience, depending on specific disabilities. Our model allows us to ensure individuals receive the equipment best suited for their needs. By reducing costs to the service organizations themselves, as well as providing individuals with new devices where shared or used equipment might have previously been used, we're allowing providers to reallocate time, money and attention for direct service.

With pilot funding, we are able to facilitate two Accessibility pilots per quarter, for a total of eight - two from each proposed demographic over the course of the year.

#### **- Connectivity -**

Our Digital Equity Committee, representing a cross-section of community organizations and stakeholders, met monthly over the past calendar year to plan and execute on various equity and inclusion initiatives, providing steering and expertise for work like school connectivity drives and Tech Goes Home, as well as proposals or programming stemming from other partners.

The Enterprise Center and these partner organizations are continuing to execute on a four-tiered strategy for helping to connect Chattanooga with the low-cost broadband and home WiFi options available in Chattanooga. The strategy includes:

### *Marketing/Awareness Campaign*

We've developed a number of easy resource guides and other information materials, including a new website, in FY2019. In FY2020, our focus is on more widely distributing resources and information about low-cost Internet options and its value to Chattanoogaans, through community partners, trusted channels and traditional marketing media, such as billboards and radio. (ISPs themselves rarely actively market these offerings, if they do so at all, as they operate at a loss in providing them.)

Through our partnership with La Paz, we are also continuing to increase multilingual outreach. Better connecting Latinx residents is vital to the work of other organizations focused on supporting the disparate needs of recent immigrants, long-term residents and other Chattanoogaans for whom English is not a first and/or primary language. Specific training on Hamilton County Schools' PowerSchool platform has proven especially important.

### *Connectivity Ambassadors*

Working with partners like the Chattanooga Public Library, La Paz and the United Way, we're developing a train-the-trainer model to create physical locations with office hours, where and when residents can get help registering for low-cost home Internet.

### *Existing Service Streams*

Using services residents already know and trust for help, we've begun distributing information on low-cost home Internet. From informing residents about where they can get help, to making an appointment for them, to directly connecting them with customer service of the ISP right for them, we're developing a number of resources deployable by other community organizations.

### *Connectivity Drives*

We'll continue to work with partners, volunteers and ISPs to host connectivity drives at high-impact events, like job fairs, school registration and CNE's Money School. We plan to connect a substantial number of residents outside of our Tech Goes Home courses to low cost plans in FY2020, with an emphasis for increased adoption in rural areas. (Note that a degree of unreliability in FCC Form 477 data, as well as from ISPs, prevents us from accurately measuring our impact here; our goal is to double the number of residents who go through registering for a new plan through TGH courses, or approximately 500 families.)

Additionally, and outside of our requested support from Hamilton County Government, The Enterprise Center is also continuing to develop a smart-city blueprint focused on leveraging civic technology for equity and inclusion in communities like ours. Initially focused on the East Lake Neighborhood, this project will provide a reliable public WiFi network within a 0-5 minutes walkshed for residents in a targeted geographic area - in this case the 1mi<sup>2</sup> East Lake neighborhood. The goal of the project is to leverage increased connectivity for delivering services, contributing to the success of ongoing community initiatives and creating a platform for education, workforce development, health and financial literacy, among and other programmatic solutions, to challenges exacerbated by the digital divide. We received planning funds through the Mozilla Foundation and the National Science Foundation in FY2019 and are continuing to pursue other sources of funding to support project development; UTC researchers have also expressed interest in measuring the impact of connectivity on

our communities. Our ultimate goal is to create a playbook of strategies for meaningfully connecting other neighborhoods and communities, allowing every resident to fully participate in 21st century opportunity.

In moving beyond simple deployment, as other smart cities have done, we hope to further cement Chattanooga and Hamilton County as a leader in equity in innovation - not just demonstrating that these technologies are possible, but in magnifying their impact for real people and on life in an age of rapid technological development.

### **Means of Measurement:**

#### **Measure 1: Individuals showing a demonstrated ability to use online resources**

##### **Measurement Plan:**

We measure the number of individuals that actually graduate the program, meaning they have completed the 15 hour course at our partner location and have presented a required final project demonstrating their new skills at the end of the course. The strongest indicators of success are the number of sites offering courses each term and the number of participants per class. We spend a substantial amount of time building strong relationships with our partner sites after they have been approved and trained, periodically checking in with trainers and visiting each course site (at least once).

Our average class size is approximately 14 people. Our goal is to maintain or exceed this average, so we work closely with sites to help them recruit and maintain participants. We require our trainers to take attendance on a Google spreadsheet (provided and monitored by our Program Coordinator) to ensure each participant completes the entire 15 hours and presents their final project. We monitor enrollment, participant attendance (to ensure the dropout rate is within acceptable limits), and completion rate for each site in a spreadsheet throughout the course of each program/sessions/quarter.

Our staff analyzes all of this information after each program session has wrapped (quarterly) to help determine if we are meeting our targets and how our partner sites are performing, so that adjustments can be made for the next session. They also provide periodic reports to update the Enterprise Center's CEO and Board on the program's progress, successes, challenges, and upcoming plans, as well as sharing this information with others on the the Digital Equity Committee for feedback. Our results will be published on our website in a final report at the end of each fiscal year, and copies will be provided to each of our funders.

#### **Measure 2: Households with a subsidized device**

##### **Measurement Plan:**

Tech Goes Home staff and our local computer vendor track devices distributed to each site in a spreadsheet throughout the course of each program/session/quarter. Our goal is to have at least 98% of participating households obtain a subsidized device for their home each quarter.

Our staff analyzes all of this information after each program session has wrapped (quarterly) to help determine if we are meeting our targets and how our partner sites are performing, so that adjustments

can be made for the next session. They also provide periodic reports to update the Enterprise Center's CEO and Board on the program's progress, successes, challenges, and upcoming plans, as well as sharing this information with the Digital Equity Committee for feedback.

**Measure 3: Improve digital skills, employment opportunities and professional development for targeted populations through an increase in partner organizations.**

**Measurement Plan:**

Tech Goes Home continually solicits partner organizations that can reach not only more individuals throughout Hamilton County but a more diverse set of constituents. We have partnered with 80 different organizations throughout the county, consisting of schools, churches, non-profits, and civic/public locations. Our program continually strives to circulate our courses among all our partners throughout each quarter of each year, ensuring the highest impact of reach.

Through increased partnerships we are able to reach differing populations based on who each organization serves - i.e. low-income families, disabled individuals, diverse demographic populations, entrepreneurs, etc.

**Outcome Results:**

Since launching in 2015 and with the support of Hamilton County, 3,412, people, representing 2,162 households, have graduated from 234 classes at 80 partner locations across Chattanooga and Hamilton County. 99% of families have elected to purchase a subsidized device, meaning more than 2,100 homes in Chattanooga now have access to an internet-connected device. We've also helped approximately 20% of our participants sign-up for discounted Internet access, which has brought over 300 families across Hamilton County online.

Tech Goes Home plans to graduate 1,030 individuals, distributing an estimated 620 devices during FY 2020 through its Early Childhood, Accessibility, School, Community, Small Business and Office Ready programs.

Historic results and targets for each outcome are outlined below.

**Objective 1: Improve the digital literacy of the targeted population.**

Measure: Individuals showing a demonstrated ability to use online resources

Historic Baselines and Targets:

FY 15 Actual - 72

FY 16 Actual - 996

FY 17 Actual - 1,114

FY 18 Actual - 1,132

FY 19 Target - 950

FY 19 Projected - 1,005

FY 20 Target - 1,030

**Objective 2: Increase the number of individuals having access to computers.**

Measure: Households with a subsidized device

Historic Baselines and Targets:

FY 15 Actual - 49

FY 16 Actual - 667

FY 17 Actual - 652

FY 18 Actual - 809

FY 2019 Target - 940

FY 2019 Projected - 1,005

FY 20 Target - 1,030

**Objective 3: Improve digital skills, employment opportunities and professional development for targeted populations through an increase in partner organizations.**

Measure: Number of partner organizations hosting TGH courses.

Historic Baselines and Targets:

Calendar Year 2015 Actual - 20 total partner organizations

Calendar Year 2016 Actual - 45 total partner organizations

Calendar Year 2017 Actual - 66 total partner organizations

Calendar Year 2018 Actual - 80 total partner organizations

Calendar Year 2019 Projected - 100 total partner organizations

**Comparative Information: (Using local, regional, national data and/or similar type programs, indicate how the program compares relative to effectiveness)**

Tech Goes Home Chattanooga is modeled after Boston's award-winning Tech Goes Home program founded in 1999. Tech Goes Home follows a "train the trainer" model that relies upon successful partnerships with schools, community centers, libraries, churches, and other anchor institutions.

Those who live at or below the poverty level, live in rural communities, are African American or Latino, have a disability, have a high school diploma or less, or are over the age of 65, find themselves disproportionately on the wrong side of the digital divide. Lack of basic computer skills and access means families are at a disadvantage when it comes to doing homework, finding employment, securing housing, accessing resources, optimizing finances, maintaining health and staying in touch with loved ones.

With the support and backing of the City of Chattanooga and Hamilton County, Tech Goes Home Chattanooga prioritizes low-income and underserved populations, including residents from disadvantaged neighborhoods (both urban and rural), those without technology at home, the unemployed and underemployed, English-language learners and individuals with disabilities.

By partnering with trusted institutions to host courses around the City and County at their locations and provide familiar trainers (staff, teachers, or volunteers), residents are less apprehensive and don't need to travel across town to participate. In the case of our public schools, this may be the first time a parent/caregiver has visited/participated at their child's school, and Tech Goes Home opens the door for more communication and future participation. This also allows us to serve far more people than our small staff of two could train directly, keeps our overhead to a minimum, and ensures our partners are truly invested and engaged in the solution. When surveyed, 99.5% of graduates would recommend the

program to friends and family, and some of our sites now have waiting lists. We have had several graduates return as trainers or volunteers for the program at new locations (such as their church or child's school).

We are particularly proud of our ongoing partnership with La Paz to provide translators to assist our trainers in serving our growing Latino population, as well as develop an entirely new class dedicated to Spanish speakers. We've had a dozen courses taught simultaneously in English and Español to date, and the demand for translation remains steady. We've also been able to extend the immediate reach of the program beyond the individuals taking the class through new collaborations - from training for HCS teachers through disability services support for non-verbal youth and their parents - detailed in the program descriptions above.

Our results are in line with what those seen in the Boston program and are on par or exceed those in more advanced digital literacy programs. In order to track our specific outcomes, TGH requires each participant or family to complete two surveys during class—one pre-training and one post-training. We collect contact info, demographic data, feedback on the program and curriculum, as well as information regarding usage of online resources for adults, Internet access, and information about student's usage of technology for school. We also administer follow-up surveys to participants via email and/or phone at intervals of 1 and 12 months post-training, as well as annually after that first twelve months. We require our Trainers to complete a post-training survey and participate in a follow-up interview to help us improve upon the program curriculum and structure.

Based on data from our Pre-Training Surveys, we have found that:

- 25% of our participants had no Internet access at home prior to entering our program;
- 50% have changed/canceled Internet service previously because it was too expensive;
- 51% of our participants had a device (computer/laptop/tablet) at home before TGH; and
- 73% had a cell phone they used to access the Internet.

Through our Post-Training and Follow-up Surveys with TGH CHA graduates, we have found that:

- 97% of our graduates continue using their device to go online;
- 94% have maintained Internet access at home (up from 72% who had access prior);
- the average self-reported computer skill rating increased from 4.9 (out of 10) before the course, to 7.36 at the end; and
- 51% have pursued additional training online

Tech Goes Home has also surveyed its participants over the past three years to identify ways we can help them achieve various goals, including employment or obtaining better employment. Over 48% of our participants are workforce age, while a staggering 34% report being unemployed or underemployed. 72% of our past graduates have sought additional training after our Tech Goes Home core programming. Over 51% of our participants have also indicated that they would pursue training to help them learn basic office skills (Microsoft Office and Google products).

In pairing participant data with local employment data, we're continuing our Office Ready program. According to the last 90 days of Burning Glass data available through the Chattanooga Area Chamber of Commerce, employers listed over 1,700 jobs that require the skills taught during our Office Ready

program - i.e. word processing, emailing, spreadsheets and presentations. While Burning Glass data is no longer current, we expect, if anything, an increase in the availability of those opportunities. We hope to help fill a portion of that gap with underserved residents of Chattanooga and Hamilton County.

Finally, our Early Childhood programming - unique to Hamilton County in its support of both parents and professionals - is helping to develop a foundation for a more connected community of practice, with support for formal, informal and home learning spaces. In particular, it will support an industry statistically dominated by female and minority professionals - as well as an often overlooked class of entrepreneurs contributing to our local economy in myriad ways.

Tech Goes Home Chattanooga will continue to host numerous classes across Chattanooga, serving thousands of families. The mission of TGH CHA remains helping provide disconnected residents the opportunity, tools, education and access required for success in the 21st Century.