

“Affordable, reliable access to high-speed broadband is critical to U.S. economic growth and competitiveness. High speed broadband enables Americans to use the Internet in new ways, expands access to health services and education, increases the productivity of business, and drives innovation throughout the digital ecosystem.”-President Barack Obama, March 23, 2015¹¹

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Executive Summary

The City of New Haven's Digital Inclusion Plan creates municipal synergies with existing public and private sector, and nonprofit digital literacy programs by proposing a new communication infrastructure and digital access. This will eliminate the digital divide for all New Haven, including residents, businesses of all sizes, and the City's many community anchor institutions. The City's 2-year digital plan focuses on expanding internet broadband access to all premises across New Haven, creating jobs and small business opportunities, and advancing the education of our children.

“The City is a regional hub of growth and activity, with a stable population and flourishing economy.”¹ The City is dedicated to collaborating with its' talented residents, businesses, institutions, and organizations to advance New Haven's standing in the regional and global economy. Through this commitment, New Haven will be able to develop a robust and affordable institutional and residential broadband internet access for all.. It is vital that every one of our residents have digital equity so that each may fully participate and contribute to the growth and prosperity that invigorates our area.

It is only through a concerted effort by all citizens, that the City can begin to address and overcome the key challenges related to the cost of access, particularly for disadvantaged users. By eliminating these challenges, our children can hope to receive all the tools needed for the quality education they deserve. It is essential that workforce development be integrated into the lives of all residents through advanced communications in order to create the startups and small businesses essential to driving the historic economic engine of the City.

“With the digital information age rapidly evolving and encompassing an ever-expanding role in the lives of all citizens, transforming how all of us live, work, and educate ourselves, a person lacking digital access will be left behind without access to the essentials of life in the 21st century.”² The City recognizes the importance of closing the digital gap and is committed to fully addressing the digital divide in order to overcome and remedy the City's poverty and unemployment rates, which are higher than the national average.

As detailed in this Plan, the City has a demonstrated commitment to digital inclusion. The Plan supports and builds on the City's deep roots in serving constituent vulnerable populations. The City's Request For Qualifications (RFQ), together with this Plan, has a very strong potential for bringing Fiber-to-the-Premises affordable broadband internet access to all premises in New Haven, including senior and low-income housing locations, and increasing broadband internet access to all citizens.

¹ “New Haven Demographics,” *Connecticut Demographics by Cubit*, accessed May 3, 2016, <http://www.Connecticut-demographics.com/New-Haven-demographics>.

² “New Haven Demographics,” *Connecticut Demographics by Cubit*, accessed May 3, 2016, <http://www.Connecticut-demographics.com/New-Haven-demographics>.

City of New Haven Digital Inclusion Plan

This Plan details the City's approach to addressing the increasingly crucial problem of digital inclusion with programs that will complement the deployment of a citywide wireless internet network. The City's Digital Inclusion Goals include:

- bridging New Haven's digital divide within all its' socio-economically diverse communities;
- enabling underserved New Haven communities usage of the internet to access to jobs, education, healthcare, and government services;
- encourage residents to better engage and participate in their communities; and
- empower all City residents to participate more fully in the global information economy and society.

The City's digital plan presents a coordinated approach with six steps to increase digital inclusion at an accelerated pace. One of the steps is to expand high speed internet access either through Wi-Fi or through fiber to the Premise-FTTP to provide connectivity to the internet at affordable rates to low income residents. Citywide broadband is an important driver of lowering business costs, attracting and retaining highly skilled residents, and creating sustainable new jobs in an entrepreneurial economy based on innovation and creativity. Robust residential and institutional connectivity will also expand opportunities for local students in grades K-12 and beyond and enable more open government and civic engagement.

The plan will also specifically initiate a pilot project to provide affordable high-speed internet access to low income residential areas. If successful, this pilot will become the standard for providing internet access to New Haven areas where access, affordability, and digital infrastructure is a challenge for residents.

As the City actively continues to pursue economic growth and jobs creation for all its' residents, the City recognizes the central requirement that all New Haven citizens have a right to unfettered access to affordable high-speed internet connectivity in their homes, schools, and work. The New Haven Digital Inclusion Plan provides the road map to eliminating the digital gap within our community and create sustainable growth in education, jobs, and businesses. We encourage all of the City's residents in joining us in the 21st century Information Age and help to make certain that digital inclusion is the centerpiece of this transformative effort.

Toni N. Harp

What is Digital Inclusion

“The definition of Digital Inclusion is the ability of individuals and groups to access and use information and communication technologies.”³ The importance of a digitally inclusive community cannot be generally overstated, but in the case of New Haven, it is an essential element in any plan for uplifting and enhancing the quality of life and opportunities for all its’ residents. The diffusion of the internet has created opportunities for residents and community businesses to develop and improve their lives and services through using greater connectivity to support critical public policy goals. Fundamental services and crucial goods – such as healthcare, education, jobs creation, and public safety – are vastly more accessible to diverse communities because of affordable broadband internet access.

This access has become essential for all aspects of life in New Haven and the U.S., including strong possibilities for internet connectivity to support positive social results. Unfortunately, as with many aspects of life, many social groups or entire communities, are ignored or even purposefully excluded from sharing in those opportunities.

Certain communities and demographic groups have much lower broadband adoption rates than the general population, including groups such as seniors age 60+, low-income individuals, including those with disabilities, African-Americans, Latinos, those with high school education or less and those who work under 15 hours/week.

The barriers, for example, for seniors include a lack of education/training, negative perceptions, being linguistically isolated, and not understanding broadband’s usefulness. Another example is the high number of New Haven youth who live in homes without broadband. Such students without broadband are at a greater disadvantage in terms of social economic welfare for their careers and lives, and furthering the risks the digital divide into the future. Research demonstrates that social isolation leads to health and mental health issues, including chronic disease and depression, which studies show can be reduced merely by searching the Internet.

Consequently, many underserved citizens, including small businesses, or populations that are less educated, with lower incomes, seniors or disabled individuals, are missing out on the opportunities presented by internet access. New Haven seeks Digital Inclusion so that it can address the underlying challenges with education and employment for its’ residents.

In addition to building the most advanced and future-proof (fiber optics) communication infrastructure possible, the vision for the City is to have a robust digital literacy and training program that will close the digital equity gap allowing residents to compete in the workforce, establish small businesses, and overall lifestyle improvement.

Beyond engaging in a public-private partnership to implement a fiber network to all premises in the City, the New Haven Digital Inclusion details possible avenues to be pursued to increase adoption and use of affordable broadband internet access. These issues include:

³ The Center for Digital Inclusion (CDI), School of Information Sciences, University of Illinois at Urbana-Champaign <http://cdi.ischool.illinois.edu/research/why-digital-inclusion/>

City of New Haven Digital Inclusion Plan

- access to affordable computers, networking equipment and devices for residents who cannot otherwise afford this equipment and hardware;
- computer skills training and technical support that enable underserved communities to take advantage of internet access – including limited-English speaking populations and the disabled; and
- relevant, diverse, community-based online content and services.

The City's Vision

The City of New Haven's administration has developed a team of dedicated staff devoted to the public policy vision. This vision is that every New Haven residents has the right to full digital inclusion to a world-class community communications infrastructure (affordable broadband internet access) at home and school, including access to affordable internet or to a computing device, with trainings available to support the increased adoption of internet access for the 21st century and beyond. Providing equal and affordable access to high speed broadband is essential in promoting equal opportunity in business, education, employment, and health care for City residents, not to mention all other aspects of everyday life. Broadband is a critical infrastructure—just like roads, water, sewer, and electricity. Every home, business, nonprofit organization, government entity, and educational institution should have the opportunity to connect at affordable rates and be on par with the highest and best internet access available in this country.

New Haven's Digital Equity Gap

Currently, access to reliable broadband-speed connectivity in New Haven is either unavailable or prohibitively expensive, leaving many consumers to settle for minimal speeds at exorbitant pricing. The New Haven Free Public Library system, which deployed high-speed broadband and Wi-Fi access in spring 2016 at its' five facilities across the City, stands out as an exception and demonstrates the need for this core infrastructure. There are an estimated 25,000 active internet logins monthly across the libraries, with Wi-Fi constituting more than 60% of the connections. Moreover, even when the libraries are closed, parents come and park near the buildings so their children can complete their homework or complete other essential tasks which now require internet access. The connections cited should be far higher for a high tech city like New Haven, with far more private and public computer centers available, at higher speeds and lower prices, in order to fully address the digital equity gap.



For the disadvantaged portion of the community, even basic services are too expensive, potentially creating large opportunity gaps for New Haven’s most vulnerable residents. The need for affordable broadband services is important because [Census data](#) details that about 30% of New Haven households lack a broadband internet subscription (the Connecticut state profile is 10 percent higher), thus leaving a third of residents, including students, without access to the 21st century essential public utility of affordable broadband internet access.

New Haven’s population is also quite diverse. At the time of the 2010 Census, the City was 35.4% African American and 27.4% Hispanic, compared to a national average of 12.6% and 16.3% respectively.⁴ Significantly, internet use among both African Americans and Latinos continues to lag behind the national average. For instance, a 2014 study by the Pew Internet and American Life project found that only 80 percent of African American adults report regular Internet use, compared with 87 percent of white adults. The disparity is even greater when considering home Internet use, with only 62 percent of African-Americans reporting a broadband connection at home compared to 74 percent of white Americans.⁵ In light of this data, providing ubiquitous, affordable broadband in the City is particularly important.

Road Map to Digital Inclusion – 6 Steps

Step 1: Digital Inclusion Plan	
Strategic Action	
1.1	Establish Baseline of Digital Inclusion for the City of New Haven
1.2	Action Plan to increase digital access to community.

Step 1. Digital Inclusion Plan:

1.1 Establish Base Line of Digital Inclusion for the City of New Haven

The City will establish a baseline for the digital equity gap among New Haven residents by partnering with the Connecticut State Consumer Counsel Office on future studies to determine the extent of the digital divide in New Haven. This will include surveys of residents on affordability, access to the internet, the magnitude of the technology need for underserved families and a listening tour of nonprofit organizations to understand best practices.

⁴ United States Census Bureau, Quick Facts, New Haven City, CT, <http://www.census.gov/quickfacts/table/PST045215/0952000,00> (visited Sept. 14, 2016).

⁵ Ryan W. Neal, Jan. 6, 2014, International Business Times, “Digital Divide’: Pew Study Finds Black Adults Have Less Internet Access Than Whites,” <http://www.ibtimes.com/digital-divide-pew-study-finds-black-adults-have-less-internet-access-whites-1528638>; Pew Internet & American Life Project, Anna Brown, Gustavo Lopez & Mark Hugo Lopez, July 2016, “Digital Divide Narrows for Latinos as More Spanish Speakers and Immigrants Go Online,” <http://www.pewhispanic.org/2016/07/20/1-internet-use-among-hispanics/> (reporting 84% Internet use among Latinos compared to 90% nationwide)

The information from the study will be used to formulate a baseline of the digital gap in the community and create indicators and benchmarks to measure the progress of the Digital Inclusion Plan.

1.2 Action Plan (Two-Year) to Increase Digital Access to Community

The City will develop a two-year action plan to address the findings of the study and include the objectives listed below. Also, the plan will establish the City as coordinator with community organizations (e.g., city agencies, libraries, non-profits, higher education) to expand and maximize digital literacy throughout the community. The City will establish a collaboration with Microsoft, local colleges and universities and ESRI (Environmental Systems Research Institute) that will encourage the sharing open authoritative data in both directions.

Step 2: Connectivity and Access to low income Residents	
Strategic Action	
2.1	Public Private Partnership to build fiber to the Premise (FTTP)
2.2	Expand Public Wi-Fi to Public areas of the City
2.3	Pilot Program to Close the Digital Gap to areas of limited broadband access
2.4	Dig Once Program

Step 2. Connectivity and Access to Low Income Residents:

2.1 Public Private Partnership to Build Fiber to the Premise (FTTP)

The City of New Haven, Connecticut (City) will issue a Request for Qualifications (RFQ) to convey its interest in partnering with a motivated, high-caliber partner to make affordable Gigabit-class broadband available to all New Haven homes and businesses over privately or publicly-constructed infrastructure (See Appendix A). Every home, business, nonprofit organization, government entity, and educational institution should have the opportunity to connect. Providing equal and affordable access to communications infrastructure and service is essential to promoting equal opportunity in business, education, employment, healthcare, and all other aspects of everyday life.

2.2 Expand Free Public Wi-Fi to Public Areas of the City

In 2016, the City of New Haven established its' first public Wi-Fi on the Historic New Haven Green. The City was able to accomplish the project by working with a local New Haven company "Spot-On, Inc.," specializing in creating Wi-Fi area networks. Wi-Fi access helps residents and businesses alike to stay productive and connected so they'll want to stay longer. And when they're there longer, they'll likely encourage their friends and family to spend more time there too. The City was able to accomplish this by utilizing access point Wi Fi devices on City-owned light poles surrounding both the upper and lower Green. In tracking the number of devices that connects to the free Public Wi-Fi, the City, on a daily average, saw the following outcomes: 1,800 devices were connected during the summer, with 3,000 users before and after a summer concert and 320 devices during the winter months.

The City intends to market advertisements on the public Wi-Fi to support the expansion of public Wi-Fi in other areas of the City.

2.3 Pilot Program to Close the Digital Gap to areas of limited broadband access

Within areas of low-income City residents, paying for internet access becomes a challenge since the lack of connectivity and minimal speed is very costly. As a result, it diminishes access to educational opportunities (especially with the advent of the flipped-classroom in which “homework” is done at school, while the teacher in the classroom provides support for completing studies and instructional videos or content are viewed at home), and digital literacy suffers. This lack of connectivity also reduces employment opportunities in these low income areas because the majority of US businesses now require job applications to be completed and submitted online (in order to generate “data” for corporate use in tracking job statistics). To address a few of these barriers, the New Haven Free Public Library has developed a digital literacy curriculum to teach core computer skills in English and Spanish. It also offers one-on-one tech assistance along with self-paced learning modules for writing resumes, interviewing, and job skill development through online resources including JobNow and Lynda.com. Nevertheless, it is a challenge to provide the individualized attention, which job-seekers require, particularly when there are limited resources such as the number of computers available (which in turn have time limits to ensure broad access) or sufficient staffing capacity.

The City plans to close the digital gap to these areas of the City by first conducting a pilot project with the Newhallville neighborhood by establishing free public Wi-Fi Elm City that not only provides access to the internet but also utilize splash pages similar to the green to promote small local business. This collaboration will use a well-structured pilot program to develop new and advanced wireless technology in order to establish internet access to the neighborhood.

2.4 Dig Once Program

The City of New Haven is considering a “Dig Once Program” designed to create more efficient delivery of communications services and minimize traffic disruption by taking advantage of opportunities during municipal or private utilities excavation to place communication conduit, when technically and economically feasible. A Dig Once Ordinance would require the installation of City-owned communications infrastructure in excavation projects where the City has determined that it is both financially feasible and consistent with the City’s long-term goals to develop the City’s communications infrastructure.

The ordinance would accomplish this by:

- (1) requiring all municipal agencies and utilities to take communications infrastructure into account in their planning process; and
- (2) establishing a process for the City’s Division of Technology (DT) to participate in utility excavation. The Department of Public Works would only approve an application for an excavation permit if the applicant includes communications facilities that meet DT specifications, or if DT has opted out of the excavation project.

Step 3: Digital Educational /Business training	
Strategic Action	
3.1	Coordinate with City’s Small Business and Public Library to provide digital business training
3.2	Microsoft Digital Alliance MOU with the City of New Haven
3.3	New Haven Free Public Library technology-based programs for youth

Step 3. Digital Educational /Business Training:

3.1 Coordinate with City’s Small Business and Public Library to provide Digital Business Training

The City can use its’ Small Business Division, in concert with the New Haven Free Public Library, to provide digital literacy and training on business software and computer skills for the City’s small business entrepreneurs. This will allow them to acquire the 21st century digital abilities necessary for these small businesses to expand their services, markets, and jobs creation. With the use of mobile laptops, training facilities at 200 Orange Street, a work space at 316 Dixwell Avenue, the network of library facilities (including its new Ives Squared (innovation commons)) and the Ives Main Library on the Green, small business startups have access to the digital tools and training necessary to accelerate and develop a competitive edge in the Information Age.

3.2 Microsoft Digital Alliance MOU with the City of New Haven

Microsoft and the City of New Haven signed a joint digital alliance in December 2014, with additional support from Southern Connecticut State University. Over the past three years, the City of New Haven made significant investments in its’ technology that has resulted in a public benefit to our community. In 2015, the City entered into a Digital Alliance Agreement with Microsoft that provides resources to the youth, jobs and small businesses and startups. The City of New Haven is one of 38 cities in the country that has this Digital Alliance Agreement with Microsoft. The City has utilized the first phase of the digital agreement to involve youth in a “Digi Camp.” In the past two years, in partnership with the Board of Education, over 125 kids participated



in Digi Camp where Microsoft exposed them to game programming, coding, and career paths at Microsoft.

DigiCamp experiences give 100 New Haven middle-school girls and boys a chance to realize that they can have a future in technology. The students also realize that there is a whole community of people in New Haven who are eager to help students engage with technology professionals, young inventors and current university students, highlighting the amazing potential of technology and show them what careers in tech can look like.

New Haven and Microsoft are committed to keeping them interested and to closing the gender gap in the technology industry. It's estimated that 77 percent of jobs in the next decade will require tech skills, yet only a small percentage of US students are pursuing computer science education to prepare for these jobs. Two New Haven/Microsoft programs, DigiGirlz and the Microsoft YouthSpark camp for boys, are designed to help middle-school and high-school students learn about what careers in technology can offer them.⁶ (See Appendix C- Microsoft Digital Alliance MOU).

3.3 New Haven Free Public Library digital literacy and technology-based programs for youth

The New Haven Free Public Library also regularly offers digital literacy and technology-based programs for youth, including bi-lingual early literacy content on workstations for toddlers and Lego Robotics to STEAM Clubs, Teen Tinker Labs at Ives Squared and Concepts for Adaptive Learning's Digital Literacy workshop for parents. Class visits to the schools focus on distance/home access of library resources and accurate and effective database research. In partnership with SCSU's outreach program, NHFPL offers KEVA Kids Building Hour, Dash and Dots (coding) and Makerspace activities. In spring 2019, NHFPL received a grant from the Community Fund for Women & Girls to launch "Tech Titans: Girls Who Code" clubs across all five library locations, offering a weekly coding curriculum throughout the school year to cohorts of 3rd-5th grade or 6th-12th grade girls.

Step 4: Raise New Haven School Technology to State of the Art	
Strategic Action	
4.1	Establish Computer Science as a Core curriculum for High School students by 2021
4.2	Raise the Board of Education up to a State of Good Repair (SOGR)
4.3	Provide Resources to students (e.g. Laptops, digital literacy programs, MIFI, Comcast)

Step 4. Raise New Haven School Technology to State of the Art:

⁶ <https://blogs.microsoft.com/newengland/2015/04/17/digicamp-gives-100-new-haven-middle-schoolers-a-chance-to-find-their-place-in-tech/#peYfj68jEhUBbidu.99>

4.1 Establish Computer Science as a Core curriculum for High school Students by 2021

The Board of Education will take the lead in establishing computer science as core curriculum for all high school students beginning the 2021 school year. As of June 2019, over 7,000 computer tech jobs in CT are unfilled because a lack of people trained in this job sector. By aligning the curriculum with the demand of computer tech jobs in the state, students will increase their opportunities for higher paying jobs.

4.2 Bring the Board of Education (BOE) Technology up to a State of Good Repair (SOGR)

The teaching of digital literacy to the students in New Haven is critical to their success in education and eventually in their careers. Over the years, the BOE has played catch up on bringing their IT environment to SOGR and that has presented challenges to the education of the students. Over the last several months, the BOE and the City IT departments as well as City IT consultants, have begun meetings to identify best practices and assist them in their strategic plans to improve the BOE IT environment.

4.3 Provide Resources to students (e.g. laptops, digital literacy programs, MIFI, Comcast Internet Essentials)

In order to bring students to a competitive level, we need to provide them with equipment such as laptops and other mobile devices so that when they are in school or home, they can continue their education without barriers. Too often, students don't have access to the internet, and when they do they lack the necessary equipment. One option to be explored, will be the development of a program where every high school student is provided with a laptop and access to printing.

Digital literacy starts with the training of teachers to become experts in teaching students how to learn a variety of software applications to prepare them down the road for higher education, technical careers or the workforce. Finally, the City will actively explore leveraging business partners in workforce development programs to provide additional resources to the schools.

Step 5: Coordinate Community Anchor Organizations for Digital Inclusion	
Strategic Action	
5.1	Coordinate Public Sector, Private Sector, Higher Institutions and Nonprofit Anchor Organizations to provide or expand digital literacy education/training programs (e.g. Library, New Haven Promise, New Haven Works, City of New Haven and many other nonprofits that provide digital literacy)

Step 5. Coordinating Community Organizations that provide Digital Inclusion:

5.1 Coordinate Public Sector, Private Sector, Higher Institutions and Nonprofit organization to provide or expand digital literacy education/training programs (e.g., the New Haven Free Public Library system, New Haven Promise, New Haven Works, City of New Haven government)

“Partnerships and interactions with organizations in the community are critical in efforts to increase digital inclusion.”⁷ Community Anchor Institutions (CAIs) need open, affordable, high-capacity broadband connections to the Internet in order to accomplish their mission and serve the public. High-speed Internet access is essential for learning and education, workforce development, creativity and collaboration, telemedicine, civic engagement, access to e-government services, and a host of other individual and community needs.

Anchor Institutions – schools, healthcare providers, libraries, public media outlets, public housing, community centers, community colleges and other institutions of higher education – serve as the gateway to the community. Deploying open, affordable, high-speed broadband connectivity to Anchor Institutions stimulates economic growth, promotes digital equity and encourages residential broadband adoption.

The City’s libraries already provide broadband internet access (within their budgetary restrictions) and provide more than simply passive banks of computers. Rather than creating technology hubs of active learning and trainings, facilitated by library staff or hosted by partner institutions well rooted in the community, emphasizing accessibility and decentralization. These sites should be augmented with community-based Public Computer Centers to be able to address the barriers indirectly providing accessible workstations, tackling concerns about online security and safety, and providing multilingual training in New Haven’s most commonly spoken languages (See Appendix C).

“Public libraries, many Americans say, should offer programs to teach people digital skills (80% think libraries should definitely do this) and help patrons learn how to use new creative technologies like 3-D printers (50%),” according to the “Libraries 2016” survey released by Pew Research Center.¹²

Unfortunately, the broadband needs of Anchor Institutions often do not receive the attention they deserve. The broadband industry and policymakers often focus on small businesses and/or residential users and overlook the broadband needs of Anchor Institutions. Many schools, libraries, and health clinics, especially those in rural areas, simply cannot afford the broadband connections they truly need.

The City will take the lead in coordinating and identifying resources, as well as sharing best practices in delivery of digital education and training to public, private, and nonprofit organizations. For instance, with the City’s Microsoft Digital Alliance Agreement, the City and its’ Community Anchor Institutions will be able to engage with Microsoft to develop multiple summer programs with various organizations to provide City youth with digital literacy programs focused on education in fields such as coding and game applications. Such a coordinated effort will allow the City to leverage existing digital literacy programs and provide new and enhanced educational opportunities for digital inclusion that will lead to workforce development and greater fulfillment for City youth.

⁷ **Connecting Anchor Institutions: A broadband action plan**, developed by the Schools, Health & Libraries Broadband (SHLB) Coalition - http://www.shlb.org/uploads/G2G/Broadband%20Action%20Plan_SHLB.pdf

Step 6: Measure Success of Digital Inclusion Efforts	
Strategic Action	
6.1	Establish benchmarks to measure efforts towards increased digital inclusion.
6.2	Report back to Mayor, School Superintendent, Alders, and Community leaders on the digital inclusion progress.

Step 6. Measure Success of Digital Inclusion Efforts:

6.1 Establish benchmarks and indicators to measure efforts towards increased digital inclusion

The success of the City’s Digital Inclusion Plan and its’ efforts to close the digital equity gap will be measured by establishing benchmarks and evaluating specific milestones/indicators to identify the results of the City’s digital inclusion efforts. The City will work with various industry experts such as CTC Technology & Energy and the CT State Consumer Counsel/State Broadband Office to establish bench marks and indicators. New Haven will work with its’ member partners of Next Century Cities, which is a collaboration of enlightened US cities devoted to seeking methods to strengthen the ability of communities nationwide to prosper and compete in the 21st century. Next Century Cities supports communities and their elected leaders, including mayors and other officials, as they seek to ensure that all have access to fast, affordable, and reliable Internet.

6.2 Report of Digital Inclusion to the Mayor, School Superintendent, City Librarian, Alders and Community Leaders on the Digital Inclusion Progress

The City will develop a digital inclusion report on defined and agreeable benchmarks and indicators for closing the digital gap. Also, a digital newsletter will be developed to highlight the digital inclusion efforts and success stories.

Valuable Programs and Successful Strategies

Over the last few years, the City of New Haven and Community Anchor Organizations have made efforts towards increasing Digital Inclusion for all residents in the City. There are many success stories in the New Haven community that have demonstrated the incredible strides achieved in increasing digital inclusion. In addition to the Microsoft Digital Alliance Agreement and activities noted above, Microsoft awarded two grants in March 2017, totaling over \$13,000, to two nonprofits to continue and expand digital literacy to our youths in New Haven.

For example, Concepts *for* Adaptive Learning (CfAL) is a New Haven, CT-based non-profit organization, founded in 2001, to help improve the education of disadvantaged public-school children throughout the state’s largest under-performing school districts. CfAL is unique in that it uses the resources of technology as the primary strategy for achieving its’ mission. CfAL has adopted a holistic framework for improving educational outcomes. The framework includes

projects and programs for students, educators, parents and the community. CfAL installs computers and computer related equipment, integrate educational software in the classrooms and homes, and train teachers, students and parents.⁸ CfAL has trained and given computers to 2,100 New Haven families, impacting the lives of more than 4,500 New Haven Public School students.

Along with the City establishing Wi-Fi on the Historic New Haven Green, it has leveraged computer technology such as the state-of-the-art training facility, four innovation rooms, and two mobile Surface Hubs that support organizations such as New Haven Promise, Black and Hispanic Caucus, and The Links.

Conclusion

Today, digital equity is critical for the residents of New Haven and the City has partnered with many community organizations to begin to provide digital inclusion for all residents. However, for New Haven to be competitive, these efforts are merely a good start to an effort that will require marshalling even more champions and allies, with an ever-increasing determination to advance our City and residents fully into the 21st century Information Age.

The City proposes a multi-layered ecology of infrastructure, comprehensive outreach, training and education programs that will be customized for vulnerable populations in the senior centers, affordable/public housing sites, (including supportive housing for persons with mental health issues), and persons with mobility and sight disabilities. The proposed fiber network project will stimulate demand for broadband by teaching seniors, unemployed, low-income and vulnerable adults how broadband can improve and enhance their lives through digital media creation, making social connections, providing tools for sustaining health.

This City of New Haven Digital Inclusion Plan is the initial blueprint to closing the digital gap. So, let's get started and be a model for of the rest of the state.

Next Steps

- ❖ Submit resolution to adopt the Plan to New Haven Board of Alders and Community Leaders.
- ❖ Determine metrics and benchmarks of digital inclusion for the City of New Haven.
- ❖ Complete the study of digital inclusion in the City of New Haven.
- ❖ Establish the plan to expand and increase of digital inclusion to the community.
- ❖ Take Action: Two-Year Implementation of digital inclusion Plan.

⁸ See e.g., *Concepts for Adaptive Learning (CfAL)* - <http://www.eachchildlearns.org/>

Endnote

11 “Presidential Memorandum-Expanding Broadband Deployment and Adoption by Addressing Regulatory Barriers and Encouraging Investment and Training,” White House Office of the Press Secretary, March 23, 2015,

<https://www.whitehouse.gov/the-press-office/2015/03/23/presidential-memorandum-expanding-broadband-deployment-and-adoption-address>

12 Trends in visiting public libraries have steadied, and many Americans have high expectations for what their local libraries should offer, by John B. Horrigan, PewResearchCenter Internet, Science & Tech September 9, 2016

<https://www.pewinternet.org/2016/09/09/libraries-2016/>