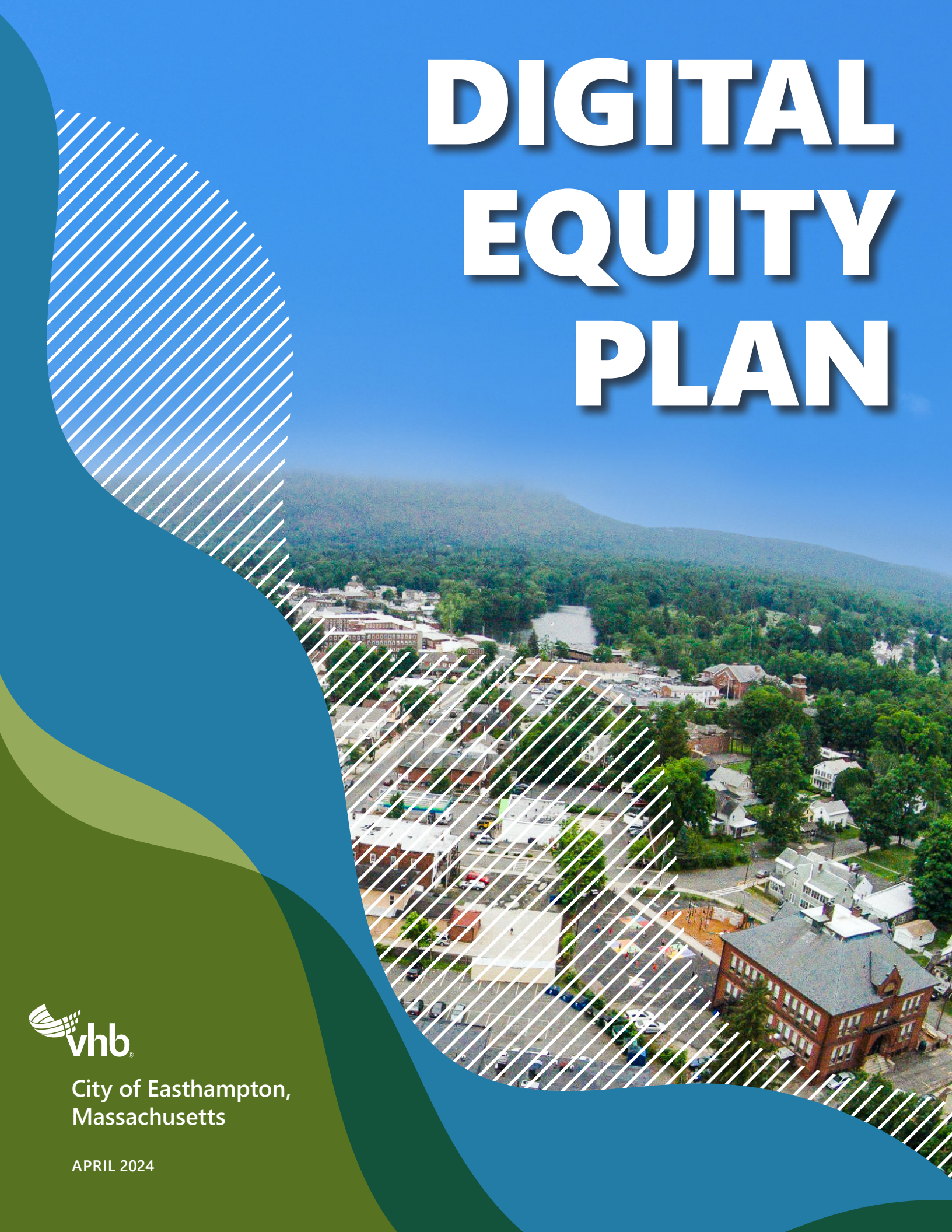
DIGITAL EQUITY PLAN



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City of Easthampton, Massachusetts

APRIL 2024

PREPARED FOR

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Acknowledgements

The Easthampton Digital Equity Plan would not have been possible without the support from the Massachusetts Broadband Institute (MBI) and Massachusetts Technology Collaborative (MassTech). This project was funded by MBI at the MassTech Collaborative under the Municipal Digital Equity Planning Program. Funding was provided by Massachusetts American Rescue Plan Act (ARPA) State Fiscal Recovery Funds.

The contributions of the Digital Equity Steering Committee and project stakeholders join the comments of residents and stakeholders who participated in meetings and surveys throughout the Digital Equity planning process.

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Executive Summary

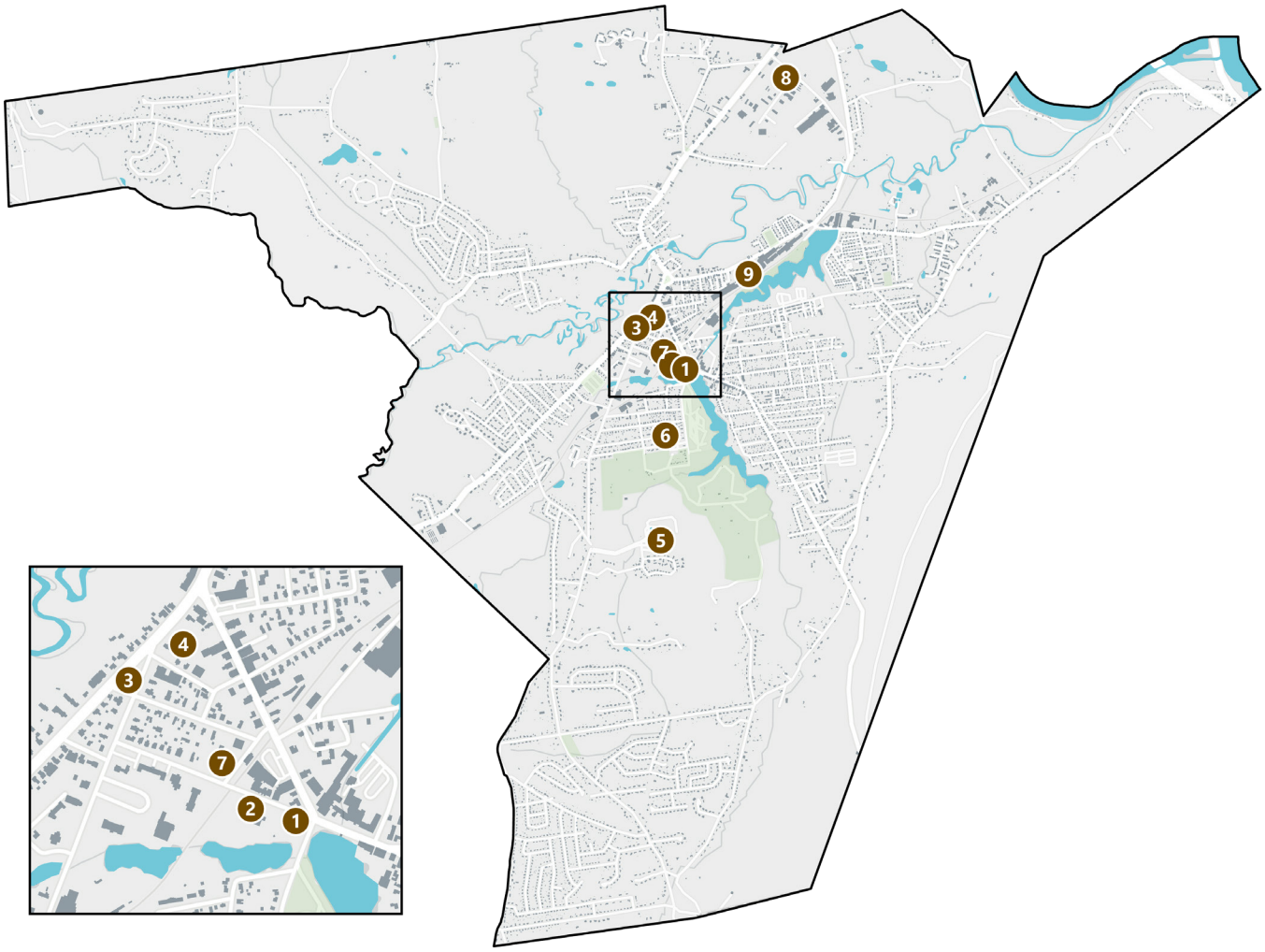
Given the increasingly prominent role of technology in every facet of life, digital equity initiatives have become ever more important in empowering individuals socially, politically, and economically.

To address the needs of its residents and prepare for future funding opportunities, the City of Easthampton initiated a roughly six-month planning process to develop a Digital Equity Plan, under the facilitation of MassBroadband Institute (MBI) and consultation of Vanasse Hangen Brustlin, Inc. (VHB). The result of extensive collaboration and community feedback on Easthampton's digital divide, this Plan aims to enhance the access, affordability, and adoption of broadband in Easthampton. The plan highlights the importance of digital literacy, broadband internet access, and device access in promoting digital equity. It contains strategies for improving broadband infrastructure, increasing the affordability of internet services, and opportunities and resources for digital literacy training.

Despite the high availability of broadband in Easthampton, data and community feedback indicate that, while many Easthampton residents have broadband subscriptions, internet service is expensive and unreliable. Hence, affordable, reliable, and high-speed internet service is paramount towards improving digital equity. Impacts of the digital divide are especially debilitating for vulnerable populations including older adults, individuals in low-income households, and individuals with disabilities.

Additionally, digital literacy remains a top priority for all residents of Easthampton, as work, education, healthcare, and financial systems continue to shift towards online platforms.

In summary, the Easthampton Digital Equity Plan explores opportunities to improve broadband infrastructure, forge partnerships with local and regional digital equity champions, and integrate solutions like "Smart Technology" to counter the impact of the digital divide and improve residents' quality of life.



Map of Easthampton's Community Anchor Institutions (CAI's)

#	Community Anchor Institution	Institution Type	Address
1	Easthampton City Hall	Municipal Building	50 Payson Avenue
2	Public Safety Complex	Fire Station / Local Police	32 Payson Avenue
3	Easthampton Public Library	Public Library	9 Park Street
4	Easthampton Family Center	Civic Center	128 Main Street
5	Mountain View School	Public School	200 Park Street
6	Easthampton High School	Public School	70 Williston Avenue
7	The Williston Northampton School	Private School	19 Payson Avenue
8	Hilltown Cooperative	Charter School	1 Industrial Parkway
9	Easthampton Media	Civic Center	116 Pleasant Street St. 102

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Introduction

In our technology-driven society, it is crucial to assess the effects of technology on our education, work, social and personal lives. The digital divide—defined as the gap between those with and without access to broadband or digital devices—significantly hinders individuals' involvement in their society, democracy, and economy. In an era of political, economic, and technological changes, communities need equitable access to resources, particularly for the most marginalized groups.

Without digital equity, broader social equity is unattainable. People of all ages must be able to access online resources to navigate life, especially in areas like education, health care, employment, personal finances, and political involvement. The COVID-19 pandemic underscored the vital role of broadband and technology in our lives and the negative effects on communities that lack full access and utilization.

Through this report, Easthampton's staff, digital equity partners, and community members can review current conditions and take action to close the digital equity gap through acquiring funding, improving broadband infrastructure, forging new partnerships, and developing instructional resources.

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What is Digital Equity?

The internet is a necessity in modern life for the exchange of commerce and information, access to government services and telehealth, social connectivity, and participation in school and employment. For equal opportunity to participate in our society and democracy, individuals, households, organizations, and businesses need fast and reliable broadband connectivity, as well as the skills and appropriate devices required to utilize the internet. A divide exists between those who can consistently afford and access these resources and those who cannot, exacerbating inequalities and creating challenges in everyday life.

The Issue: The Digital Divide

Digital equity planning addresses inequities in access to broadband internet, technology, and supportive resources, also known as the digital divide. The National Digital Inclusion Alliance (NDIA) defines the digital divide as "the gap between those who have affordable access, skills, and support to effectively engage online and those who do not."[1] This gap disproportionately impacts marginalized groups, including households with low incomes, older adults, minority households, people with disabilities, and people in rural areas, all of whom are less likely to have broadband service at home.[2]

According to the U.S. Census, approximately 16 million households nationwide are without an internet subscription, 12 million are without any internet access, and eight million are without a computer.[3] Several factors can limit reliable access to internet service with the speed and capacity to accomplish everyday tasks, including the quality and affordability of services provided by internet service providers (ISPs) companies offering subscription internet services. Subscribers can face confusion and unaffordability paying for bundles, including services or equipment they don't need (e.g., internet, television, home phone services).

Even with reliable internet service, users must have consistent access to a web-enabled device and the knowledge and skills necessary to participate online safely and effectively. Access to devices can be limited by factors such as affordability, physical mobility, and digital education. The availability of training opportunities and resources, fear or shame associated with learning new skills, and privacy concerns can all limit digital literacy.

The Work: Digital Inclusion

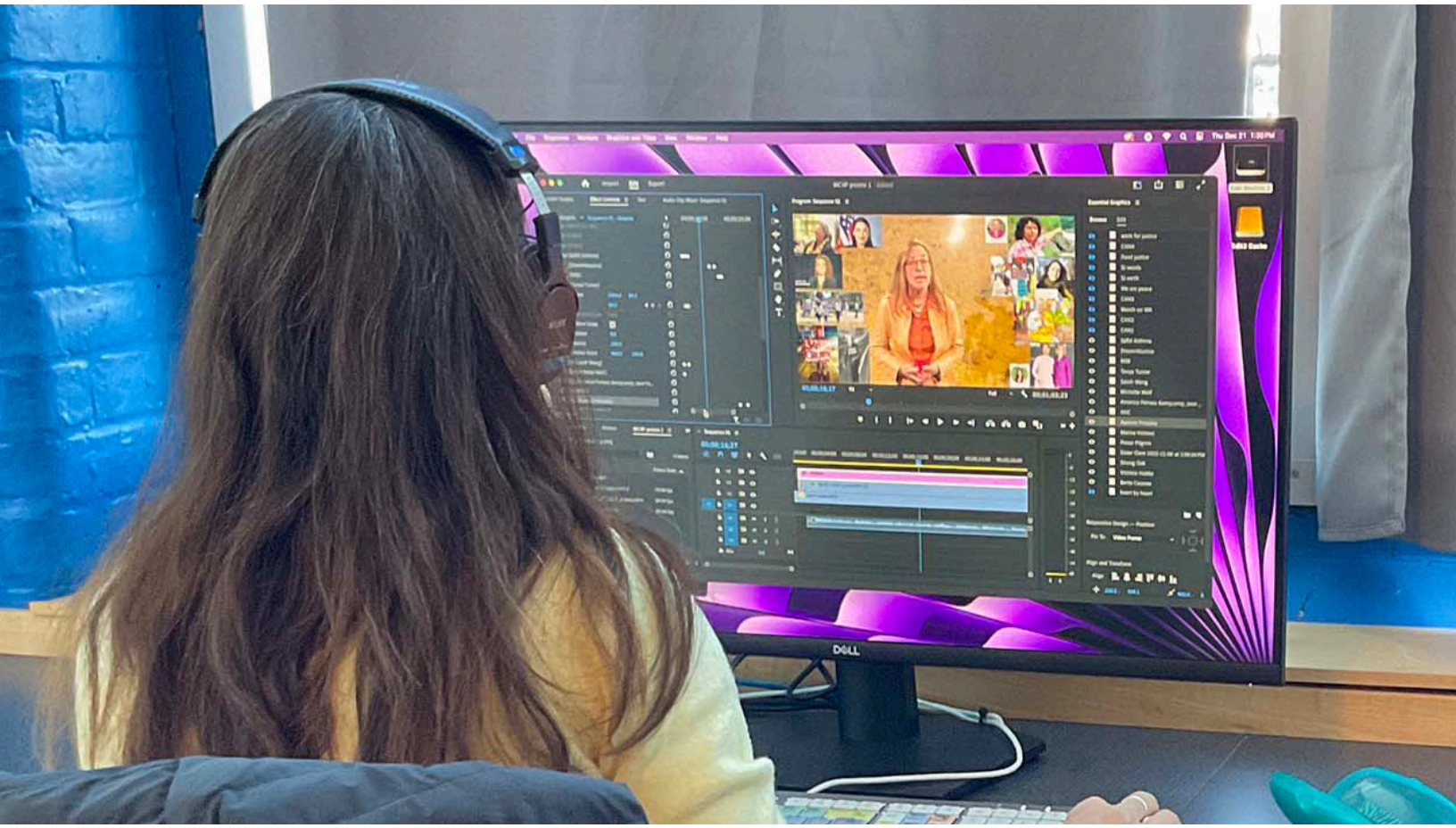
Municipalities can address the digital divide by investing in digital inclusion initiatives. Digital inclusion refers to the "activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs)."[4] ICTs, an extension of information technologies (IT), refers to the hardware, software, and systems that comprise our unified communications systems. The NDIA has identified five elements as integral to ensuring all individuals and households can effectively utilize these technologies.

1. Affordable, robust broadband internet service;
2. Internet-enabled devices that meet the needs of the user;
3. Access to digital literacy training;
4. Quality technical support; and
5. Applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration.

Digital Inclusion requires communities to intentionally address historical, institutional, and structural barriers to access and use technology.

The Goal: Digital Equity

The goal of addressing the digital divide through digital inclusion initiatives is to support digital equity for all individuals and groups within a community. Digital equity is "a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy, facilitating lifelong learning and access to essential services."[5] This plan focuses on three pillars of digital equity work, including broadband internet access, device access, and digital literacy. Communities can support digital equity by increasing subscribership to internet service, addressing infrastructural issues, expanding the availability of digital literacy training opportunities, and facilitating access to appropriate devices.



E-Media's digital devices are available for members to create visual and audio media. Photo credit: E-Media

Several types of devices can access the internet and serve as tools for work, school, and social connection, including cellular phones, tablets, and computers, each with benefits and drawbacks for the user. Cellular phones are one of the most portable web-based devices, offering multiple connection options and long battery life, but they cannot replace the functions of a computer. Tablets provide accessibility benefits and long battery life but cannot make calls without a cellular data plan. Laptops and desktop computers are necessary for many applied uses, including jobs, and have ample storage. However, computers have a shorter battery life and are the least affordable of these three devices.

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Our Process

The City of Easthampton's digital divide is characterized largely by a lack of internet access, directly correlated to the lack of competition between Internet Service Providers (ISPs) that provide reliable, high-speed internet. Furthermore, specific population groups are experiencing unique barriers to internet access, adoption, and use. Recognizing the need to address this barrier, the City of Easthampton organized a Digital Equity Steering Committee to prepare this Digital Equity Plan in collaboration with community members, broadband providers, and local and regional stakeholders. This Plan leverages current initiatives and services available at the local, state, and federal scales, pinpointing possible collaborations and recognizing local advocates for digital equity.

Digital Equity Steering Committee

The Digital Equity Steering Committee (the Committee) worked closely with VHB to oversee the project's process, provide strategic support, and facilitate communication with selected stakeholder groups. The Committee includes representatives from the City's Information Technology (IT) Department, the City Council, the Easthampton Public Library, Easthampton Media (E-Media), Easthampton City Arts, and the Massachusetts LGBT Chamber of Commerce.

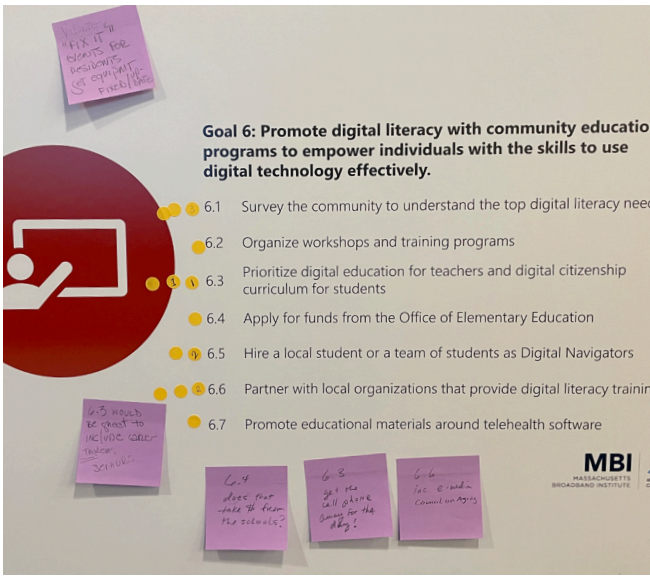
Public Engagement

One of the primary elements of Digital Equity planning is community engagement. To understand the gaps in broadband access, internet affordability, device access, and digital literacy, the City and VHB organized multiple community and stakeholder touchpoints. The feedback and ideas received during these events helped to identify the community's needs and shape the recommendations outlined in this Plan.

Stakeholder Interviews: VHB facilitated group interviews with the following digital equity stakeholders to discuss key challenges and opportunities related to their work.

1. Easthampton Public School District (EPSD)
2. GoNetSpeed
3. Information Technology Department, City of Easthampton
4. Council on Aging, City of Easthampton
5. Public Health Department, City of Easthampton
6. Easthampton Public Library
7. Easthampton Media (E-Media)
8. Veterans Services Office, City of Holyoke

The Consultant Team also engaged with the Easthampton Housing Authority (managed by the Northampton Housing Authority) to investigate internet connectivity challenges and opportunities at public housing properties. Notes for these sessions are included in Appendix I.



LEFT: VHB's Luke Mitchell presents at the first public meeting in October 2023. **CENTER:** VHB's Jennifer Nelson presents at the second public meeting in February 2024. **RIGHT:** Poster board with attendees' feedback on one of the Digital Equity Goals.

Public Meetings: The Team facilitated two in-person public meetings at strategic points throughout the planning process to disseminate information on ongoing planning efforts and solicit public feedback. The interactive public meetings were focused on iterative group dialogue.

At Public Meeting #1, attendees shared their experiences and challenges with broadband internet access, device accessibility, and digital literacy. Two concerns noted were (1) the lack of coordination between existing municipal resources including the Easthampton Public Library, EPSD, and the City's IT Department, and (2) the unreliability and costliness of internet subscriptions in Easthampton.

At Public Meeting #2, attendees had a chance to review the draft Digital Equity Plan and, using sticky notes and sticky dots, provided feedback on the Goals and Action Items that would be included in the final Plan. Attendees indicated that the City should strive to enhance communication between Community Anchor Institutions (CAI's), forge relationships with regional partners, and prioritize reduced local internet costs by working with Internet Service Providers and seeking additional state and grant funding.

Statewide Digital Equity Survey: In June 2023, MBI launched a Statewide Digital Equity Survey to understand Massachusetts residents' needs regarding internet access and digital equity. As of October 2, 2023, Easthampton participants comprised a sample group of 37 responses, all City residents, all aged 18 years and over.

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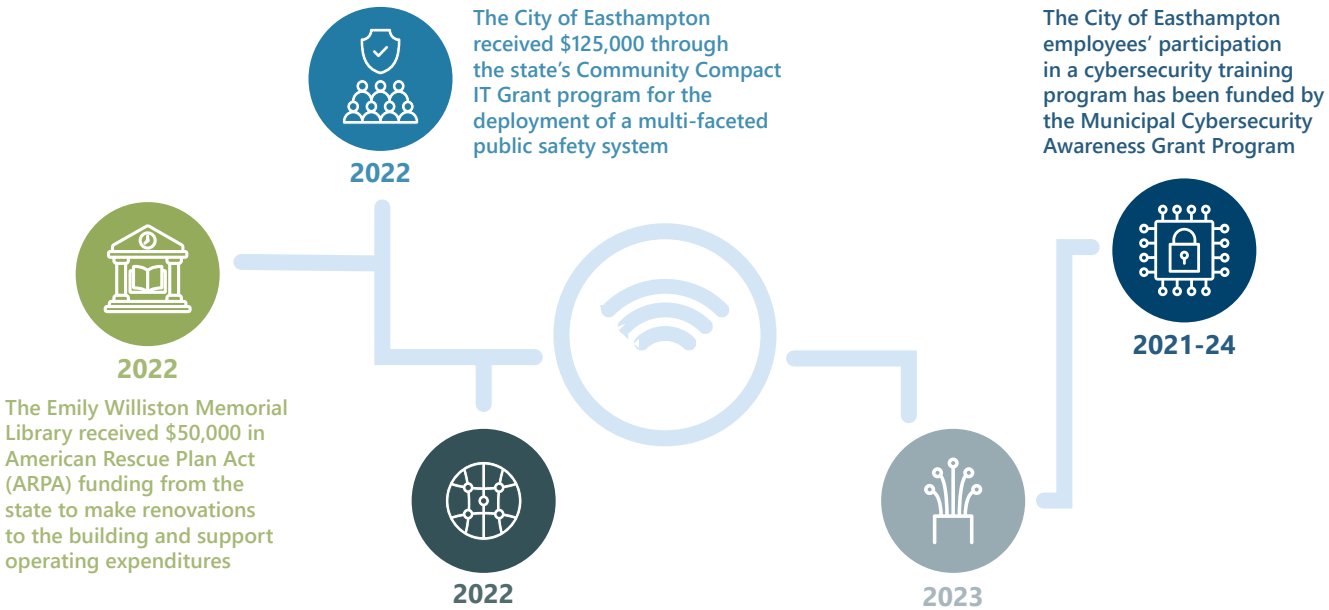
Community Assessment

Nestled in the Pioneer Valley, the City of Easthampton is a vibrant community (pop. 16,136[6]) with a rich artistic and cultural environment and picturesque natural landscape. In an effort to bring the City up to speed in a continuously changing digital landscape, municipal departments and public organizations are working to expand broadband connectivity, device access, and digital literacy among residents, businesses, and institutions.

Easthampton's Broadband Access Work to Date



However, the digital inequity—the divide between those who can access and use the internet to their full capacity from those who cannot—remains an ongoing challenge in Easthampton. Stakeholder conversations and analysis of local and regional trends reveal several barriers to digital equity, including the rising costs of internet subscriptions, the variability of internet speed, and the lack of funding for devices and training across public institutions. This section aims to highlight the populations most vulnerable to the digital divide as a direct result of these barriers.

Broadband Access

Massachusetts Statewide Digital Equity Plan assessed broadband availability, affordability, and adoption across the Commonwealth:

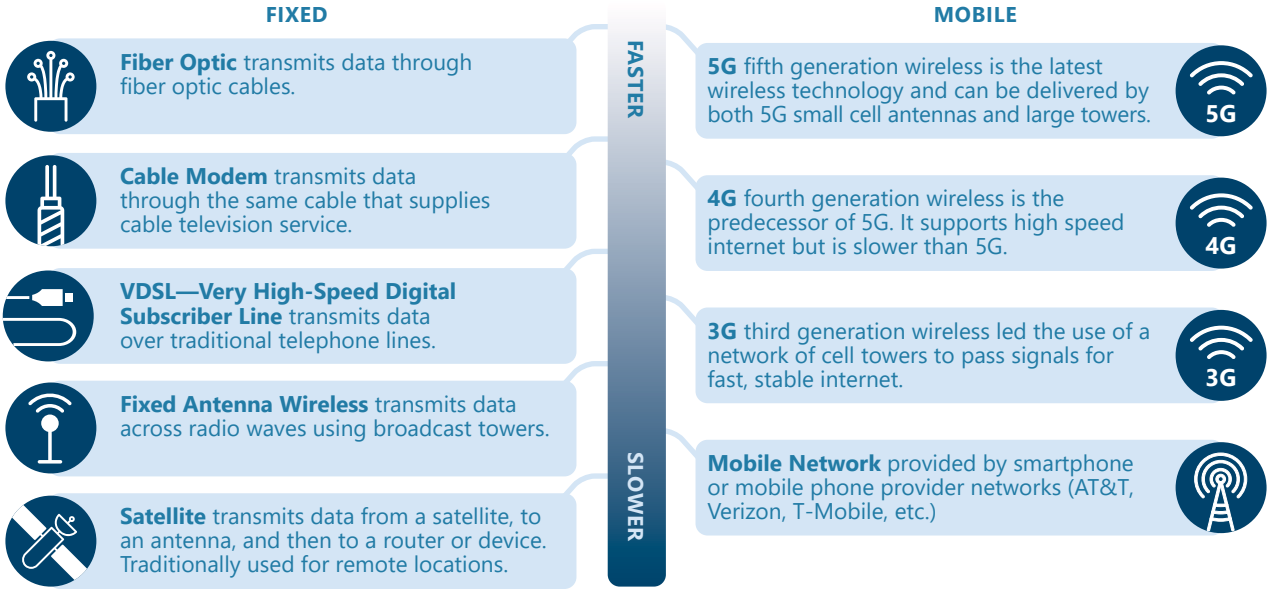
Availability refers to an individual's ability to get high-quality, high-speed internet available for them to use, regardless of their ability to pay for this service.

Affordability refers to an individual's ability to pay for high-speed internet, regardless of the availability of high-speed internet.

Adoption was calculated by MBI as the combined outcome of both availability and affordability, whether residents subscribe to high-speed internet plans.

Availability

In terms of availability, Easthampton residents have multiple options to connect to the internet, through wired connections such as DSL, fiber optic, or cable, or wireless options such as satellite or fixed wireless (transmitted over radio waves).



FCC's National Broadband Map indicates 99% of Easthampton households are "served," meaning they can connect to and utilize internet at speeds of at least 25/3 Mbps (the federal fixed broadband speed benchmark, though in recent years efforts have been made to push this minimum to 100/20 Mbps). These connections are provided by the following ISPs in Easthampton.

Table 1: Residential Broadband Providers and Advertised Speeds in Easthampton

Internet Service Provider	Connection Type	Percent Households Serviceable	Advertised Maximum Speeds (Upload/ Download Mbps)
Hughes Network Systems, LLC	Satellite	100%	25/3
Space Exploration Technologies Corp.	Satellite	100%	100/20
Viasat, Inc.	Satellite	100%	25/3
Charter Communications (dba Spectrum)	Cable	94%	250/25
Verizon Communications Inc.	Cable	72%	100/20
T-Mobile USA, Inc.	Fixed Wireless	57%	100/20
Comcast Corporation	Fixed Wireless	0.5%	250/25

Source: FCC National Broadband Map, 2022

While broadband is largely available in Easthampton, data and community feedback indicates that service is often unreliable. For example, residents who get their internet through satellite may experience a loss of service during rain, snow, or windstorms. Internet through coaxial cable is often more reliable and faster than satellite, but only two companies—Charter Communications (doing business as Spectrum) and Verizon—provide cable services in Easthampton (residents at both public meetings confirmed Charter as the prominent ISP in the area). Fiber is the fastest and most reliable broadband technology, but no residential fiber connections are available in Easthampton.

Whether service is impaired by weather, high demand, or other factors, internet reliability can be improved through network redundancy, or overlapping networks. By partnering with nearby towns and explicitly contracting ISPs to create redundant networks, Easthampton can eliminate downtime resulting from a single point of failure.

A limitation of this data is it does not account for internet demand which, at peak hours, can significantly reduce internet speeds. Speed test software such as OOKLA[7] highlight discrepancies between speeds reported by ISPs and speed tests conducted in individual households. Speed test data collected through OOKLA in February 2022 indicate 86% of tests taken in Easthampton calculated internet speeds of at least 25/3 Mbps, but only

18% of tests calculated internet speeds of at least 100/20 Mbps. Feedback from the City's IT Department and from residents during the first public meeting confirm the unreliability and lagging speeds of internet service in Easthampton dependent on technology, provider, time of day, and weather conditions.

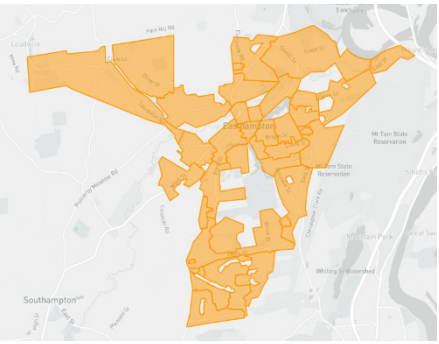
Table 2: Speed Tests in Easthampton (collected by MBI in February 2022)

Total Tests: 3926 Unique ID Tests: 686

	Tests	Percent of Total Tests
Speeds less than 25/3 Mbps	170	4%
Speeds less than 50/10 Mbps	458	12%
Speeds less than 100/20 Mbps	1450	37%
Speeds at least 25/3 Mbps	3371	86%
Speeds at least 50/10 Mbps	2669	68%
Speeds at least 100/20 Mbps	712	18%
Speeds at least 100/100 Mbps	0	0%

Source: Ookla

30% of Easthampton respondents to MBI's statewide survey reported their internet as being "Not good enough to meet my household's needs."



Map of connected households through installation of GoNetSpeed's new fiber network. (Source: GoNetSpeed)

To enhance public internet access, the City has guest Wi-Fi in City Hall, the Public Safety Complex, and Council on Aging. In the future, the City hopes to increase network connectivity by expanding their closed-loop fiber system and by building mesh networks in other popular locations throughout the City.

Affordability

The second pillar of broadband access is affordability; a household may have the ability to connect to the internet, but the cost of a monthly internet subscription may be prohibitive to actually receiving that connection. According to BroadbandUSA's 2021 Community Reports, residents of Hampshire County paid an average minimum monthly subscription price of $42.55, compared to $29.99 in Hampden County, and $43.59 in Franklin County.[8] In contrast, the average minimum monthly costs for eastern Massachusetts were lower (with Middlesex County reporting minimum monthly costs of $33.52; Suffolk County reporting $33.80; and Plymouth County reporting $37.38). MBI's statewide survey provided a more granular look at this data, revealing even higher average monthly internet costs in Easthampton ($96/month for internet on a bundled plan; $80/month for internet on a non-bundled plan).

35% of Easthampton respondents to the MBI statewide survey reported having a "somewhat hard" time paying for internet services and 5% reported having a "very hard" time paying for internet services.

The City's IT Department, Easthampton Public Library, and EPSD confirmed cost to be one of the greatest barriers to internet adoption in Easthampton. Due to a lack of market competition between ISPs, cable providers in Easthampton may charge more than if there were multiple providers competing for customers.

One additional challenge is the rollback of the FCC's Affordable Connectivity Program (ACP). Funded through ARPA, ACP provided a $30/month internet subsidy to eligible households. Households enrolled in ACP could also receive a one-time discount of up to $100 to purchase a laptop, desktop computer, or tablet from participating providers. Currently, 16% of Easthampton's households are enrolled in ACP.

Table 3: ACP Adoption in Easthampton and Westhampton (ZIP code 01027) and Hampshire Count (December 2023)

	01027	Hampshire County
Net New Enrollments Alternative Verification Process	-1	-3
Net New Enrollments Verified by School	0	0
Net New Enrollments Lifeline	-9	-73
Net New Enrollments National Verifier Application	24	68
Net New Enrollments Total	14	-8
Total Alternative Verification Process	731	1,218
Total Verified by School	0	0
Total Lifeline	138	1,113
Total National Verifier Application	539	4,230
Total Subscribers	1,408 (16% of households)	6,561 (10% of households)

Source: Universal Service Administrative Co. (USAC): ACP Enrollment and Claims Tracker December 2023

Figure 1: ACP Enrollment as Percent of Total Households

However, in January 2024, the FCC announced the end of ACP as early as April of the same year. To address the upcoming gap between ACP enrollees and affordable internet, the City should endeavor to promote alternative internet options to eligible households, including ISP discount programs like Spectrum Internet Assist and Comcast Internet Essentials or government subsidy programs like Lifeline.

Long-term, the best solution to bring down internet costs and bring up internet adoption in Easthampton is by enhancing market competition between high-speed ISPs, particularly those providing wired connections, like coaxial cable or fiber. MBI found 52% of municipalities in the Pioneer Valley have little or no competition in the broadband market. To address the lack of competition, Easthampton partnered with GoNetSpeed in 2023. The $3.6 million investment from GoNetSpeed aims to bring fast, reliable internet to all Easthampton residents and businesses through fiber-optic technology.[9] Through partnerships such as these, Easthampton can strengthen market competition among ISPs, both resulting in reduced internet costs and high-quality internet connectivity for residents and businesses.

Adoption

Despite the challenges of serviceability and affordability, 89% of Easthampton's households reported having a broadband internet subscription, slightly lower than that of the County (93%) and the State (90%).[10] Though the percent of households accessing the internet is on an upward trend (up from 85% in 2017), this data also highlights that about 10% of Easthampton's households (about 790) do not subscribe to internet services. Conversations with relevant stakeholders and residents highlighted potential reasons for this gap—including the high cost of internet services, distrust of the internet, or no desire to have home connectivity—but access and affordability remain the greatest barriers to adoption. By addressing broadband access and affordability, Easthampton could see increased adoption of broadband services in households that may otherwise be unable to afford it.

Device Access

According to 2022 American Community Survey (ACS) data, 93% of Easthampton's households have a computing device such as a desktop, laptop, smartphone, tablet, or other. This is slightly lower than that of the County (96%) and higher than that of the State (96%).[11] Regarding which devices are used to connect to the internet, MBI statewide survey respondents in Easthampton reported a wide distribution of devices: 78% reported using a cellphone, 67% use a laptop computer, 48% use a tablet or similar device, and 30% use a desktop computer. Additionally, while a high percentage of Easthampton's residents report having at least one computer, there is a gap in computer access for approximately 500 households.[12] There is potential to improve community awareness of publicly accessible devices in Easthampton and philanthropic organizations that can help with purchasing devices at a lower cost.

Digital Equity Hubs

Digital Equity Hubs are critical public resources for residents, students, and employees to access internet services and devices outside their homes. The Easthampton Public Library is a hub for the City of Easthampton, providing access to public computers. The Library also has seven mobile hotspots—a portable wireless access point allowing users to connect devices to the internet anywhere—which patrons can check out, helping fill in internet access gaps for those without service or with unreliable service. The Library Director describes these resources as being well used, and the Library could better serve the community with additional hotspots.

Other Digital Equity Hubs in Easthampton include the Council on Aging (Senior Center) and E-Media. The Council is a great resource for residents 55 and over. They currently have a public computer and offer tech support on Wednesday afternoons (by appointment). They are actively working towards training their staff to be Digital Navigators and are investigating opportunities to serve all Easthampton residents (not just those 55 and over). E-Media, located in the Eastworks building in the Pleasant Street mills area, is a non-profit community media center and public television station serving Easthampton and Southampton. Members gain access to professional video and film equipment, production studios, editing stations, and staff-led training sessions.

Education

Like districts nationwide, classroom technology use has become more extensive in Easthampton Public Schools (EPSD) in response to the COVID-19 pandemic. Using American Rescue Plan (ARPA) funds, EPSD became a one-to-one institution providing each student with a Chromebook for academic work. EPSD also has approximately 40 hotspots available for eligible students, an initiative fostered through EPSD's partnership with T-Mobile and their Project 10Million program. The EPSD IT Department mentioned their hotspots are used occasionally, but further outreach and education about these resources could increase utilization and help more students access the internet to complete online education material.

An on-going challenge for the EPSD IT Department is the cost of their one-to-one device program. In the next two to five years, EPSD must seek additional state funding to upgrade or replace student Chromebooks, which are heavily used and whose shelf life is estimated to be four to five years.[13] The district has also shifted most of its textbooks to online material, making students' accessibility to devices and the internet a top priority.

Another challenge reported by EPSD's IT Department is staffing. Currently, the IT Department is comprised of three staff who serve approximately 2,000 end users, with tech support conducted through a ticket system. The Department noted that, though it would be helpful for students and staff, they currently do not have the resources to offer one-on-one training. Through future partnerships with other Digital Equity Hubs or by implementing a student-assisted IT Support Desk, the school's IT Department could expand their services and capabilities.

Table 4: Community Anchor Institutions (CAIs) with Public Devices

CAI	Computer	Tablet	Printer	Wi-Fi Hotspot
Easthampton Public Library	✓		✓	Library card needed
Easthampton Public Schools	Students only		Students only	Qualifying students only
Council on Aging (Senior Center)	✓			
E-Media	Must be a member			

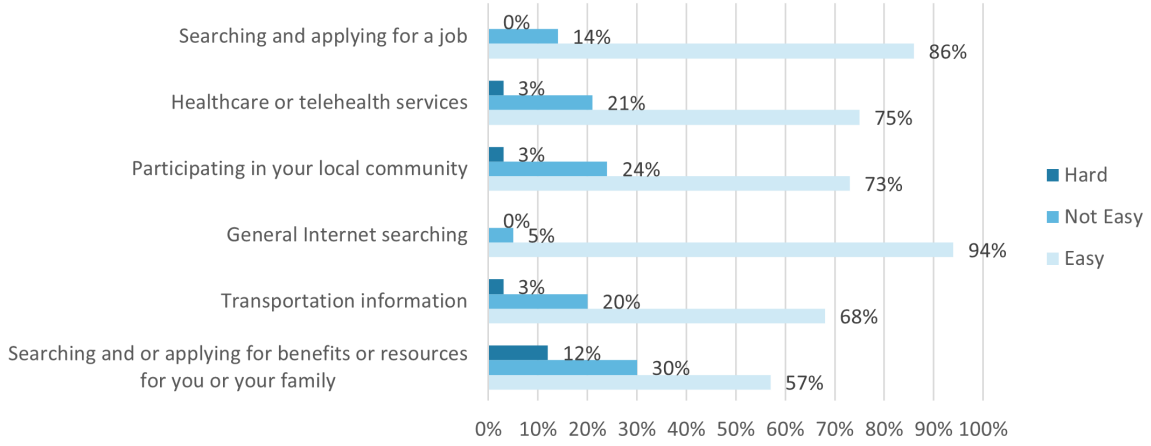
Source: City of Easthampton

Digital Literacy

Digital literacy is a critical component of digital equity and refers to the ability of technology users to understand and comfortably use the internet. Easthampton residents have reported a need for more digital literacy classes and training opportunities for different proficiency levels, focusing on how to use online applications and troubleshoot device issues.

MBI statewide survey responses regarding the difficulty level of various internet activities indicate some difficulty with "Searching and/or applying for benefits or resources for you or your family" (42% of respondents reported this activity to be "Not easy" or "Hard") and "Participating in your local community" (27% of respondents reporting this activity to be "Not easy" or "Hard").

Figure 2: Please Rank the Level of Difficulty for Types of Internet Use



Source: MBI Statewide Digital Equity Survey (Easthampton, October 2023)

Regarding what format of digital literacy training Easthampton respondents preferred, 45% indicated they would prefer a do-it-yourself training module, 29% indicated they would prefer an in-person class or in-person support from a friend or instructor, and 26% indicated they would prefer an online class.

Virtual formats, such as online training and webinars, are convenient and flexible, allowing users to learn at their own pace and on their own time. These formats also make it possible for people with mobility difficulties or those who live in remote areas to participate. It can include video tutorials, online quizzes, web conferencing, and many other engaging and interactive methods.

In-person classes are also important. In-person training can provide direct, hands-on learning experiences that can be beneficial for people who prefer that method or have difficulties with virtual learning. These in-person trainings rely on the traditional teaching method, face-to-face interaction, allowing immediate feedback and better understanding.

Providing opportunities for both in-person and virtual training can accommodate different learning styles, accessibility needs, and personal preferences, ensuring maximum participation and success. It is also vital to inform residents about the availability of these training opportunities and encourage everyone to take advantage.

Easthampton Public Library currently offers appointments for technical assistance which fill up quickly. The Director reported in-house requests for tech help are near constant. To address residents' more specific needs, the Library is experimenting with more themed educational sessions, which include how to send emails, password safety, and setting up audiobooks. Attendance at these events have been positive so far, and staff hope to expand course offerings to include other topics. In terms of format, the Library increased its virtual and hybrid programming during the COVID-19 pandemic, but some programs have since dropped off due to lower demand and limitations of space in the existing building.

Staffing is one restriction on Easthampton Public Library's ability to facilitate digital literacy training. The Library, in partnership with other Community Anchor Institutions (CAI's), could explore the opportunity to engage one or more Digital Navigators. The NDIA defines Digital Navigators as "trusted guides who assist community members in internet adoption and the use of computing devices… including ongoing assistance with affordable internet access, device acquisition, technical skills, and application support."[14] Several funding avenues exist to support the engagement of a Digital Navigator, including Commonwealth Corporation's YouthWorks (detailed in **Future Funding** section).

The Council on Aging provides technology help to residents 55+ by appointment. A volunteer can assist with basic computer functions (how to check email, open a Word document, view photos) by appointment on Wednesday afternoons. Residents 55+ who have mobility issues are also able to use the Council's transportation options or, in certain cases, the tech volunteer can make house calls. The Council is currently working towards training additional staff to serve as Digital Navigators, and are investigating options to serve all residents—not just those over 55.

While facilities work to expand training opportunities, the community should enhance municipal outreach by using digital and physical marketing methods (e.g., email/text alerts, word-of-mouth, City website, local TV station, mailouts, and community radio). The City's IT Department voiced a desire for the City to hire a Resident Engagement Coordinator or Community Navigator to work between several community hubs and support with community outreach and education of public resources. E-Media also hopes to support public engagement by promoting events through the local television channel.

Vulnerable Populations

The Digital Equity Act of 2021 identified eight "covered populations" that are historically more likely to experience digital inequity because of certain demographic and economic characteristics. These eight categories are:

» Individuals who live in covered households (household income no more than 150 percent of federal poverty threshold)

» Aging individuals (60 years and older)

» Incarcerated individuals, other than individuals who are incarcerated in a Federal correction facility

» Veterans

» Individuals with disabilities

» Individuals with a language barrier, including individuals who are English learners and have low levels of literacy

» Individuals who are members of a racial or ethnic minority group

» Individuals who primarily reside in a rural area

According to the National Telecommunications and Information Administration's (NTIA) Digital Equity Act Population Viewer—which allows users to visualize Census data pertinent to "covered populations" at the national, state, county, and tract level—55% of Easthampton residents fall into at least one of these covered populations. Of these, the Steering Committee and stakeholders helped to identify the populations most in need of support for digital device access, broadband access, and digital literacy.

Older Adults

According to 2022 Census data, 1 in 3 Easthampton residents are over the age of 60. As with any population group, some older adults are connected to the internet and comfortable using digital devices while others may struggle to understand newer technologies and feel safe online. Conversations with the Steering Committee, stakeholders, and residents (in addition to responses submitted through MBI's statewide survey) highlighted the following barriers preventing older individuals from using devices and the internet.

One barrier to internet adoption for seniors is **device access**. In Easthampton, older adults are less likely to own a computer than their younger counterparts (8.8% of seniors aged 65+ as opposed to 0.5% of residents 18 or under).[15] Easthampton's Council on Aging reported this may be a result of high device costs, or disinterest in or distrust of technology. Easthampton CAI's offer devices for public use—including hotspots, printers, and four computers at the Easthampton Public Library and one desktop computer at the Council on Aging—but transportation is a barrier for seniors to get to these institutions. Seniors who have physical limitations, who are no longer able to drive, or who prefer to use public transportation may not be able to access these devices as easily or frequently as they need. The City can support seniors by increasing community outreach of transportation options (such as through the Council on Aging and Pioneer Valley Transit Authority) and facilitating home-delivery of loaned devices.

The Council on Aging and the Easthampton Public Library indicated seniors often need support with two key elements of **digital literacy: technical support** (the ability to understand how to use your device) and **cybersecurity** (the ability to understand online threats like scams and fraud). Seniors often require more technological support to complete online tasks like monitoring email, accessing bank accounts, keeping track of login credentials, submitting tax forms, and accessing social benefits like Medicare, Medicaid, and the Supplemental Nutritional Assistance Program (SNAP). Through partnerships with organizations like American Connection Corps, Community Action Pioneer Valley, and Easthampton Neighbors, Easthampton can promote technical support services for aging adults in the forms of group classes and one-on-one troubleshooting.

This technology education gap goes hand in hand with fears of cybersecurity, with the Council on Aging noting many seniors' concerns about scams, phishing, and fraud. Public training or one-on-one support can improve recognition and avoidance of security threats. The Council on Aging currently offers basic tech support on Wednesdays and will be training staff as Digital Navigators to support residents with cybersecurity concerns.

91% of MBI statewide survey respondents in Easthampton indicated they are "Somewhat concerned" (52%) or "Very concerned" (38%) about internet safety, and 91% indicated they are most concerned that their data could be stolen or used without their consent.

Impacts of the Digital Divide on Seniors

Lack of device access or digital literacy affects other aspects of seniors' lives, like their ability to apply for and receive public benefits, manage their wealth, access telemedicine services, and more. Telemedicine, which involves providing healthcare services remotely via computer or cellphone, is a convenient way for patients of all ages, especially older adults with mobility or transportation issues, to access healthcare services that might be difficult to reach otherwise.

The demand for telemedicine services nationwide was greatly exacerbated by the COVID-19 pandemic. In Easthampton, the Council on Aging noted that seniors often had trouble signing up for vaccination clinics, calling into telehealth appointments, or scheduling home visits. Representatives from both the Council on Aging and Public Health Department also shared they had difficulty communicating with seniors during this time because most of their information and notices were shared in an online format during the pandemic, inaccessible to those without devices, an internet subscription, or the know-how to find this information.

Individuals Living in Low-Income Households

Historically, households with lower incomes have been more prone to challenges with internet access, affordability, and device accessibility compared to those with higher incomes.[16] NTIA defines low-income households as households with incomes equal to or less than 150 percent (1.5 times) of the U.S. Census Bureau's poverty threshold. In the Pioneer Valley region, 54% of the region's households are low-income, compared to 39% of households statewide.[17] In Easthampton, 37% of households reported income of less than $50,000, an income less than the approximate living wage for two or more people.[18]

The main barrier to online access for individuals in low-income households is affordability, in terms of both affording the internet and affording digital devices like laptops, tablets, and cell phones.

Conversations with stakeholders and City staff emphasized concern about **internet affordability**. According to MBI's statewide survey, Easthampton respondents with bundled services paid an average of $97 per month for internet, while respondents with unbundled internet plans paid an average of $80 per month. While these prices are on par with the statewide averages ($100 and $75, respectively), 35% of Easthampton residents reported having a "Somewhat hard" time paying for internet services.

Easthampton City Arts mural by Tom Pappalardo in the Cottage Street Cultural District. Photo credit: City of Easthampton

Enrollment in FCC's Affordable Connectivity Program (ACP) is a strong indicator of internet affordability. As of April 2023, 16% of households (1,408) in Easthampton and Westhampton (zip code 01027) were enrolled in the ACP program, through which they receive a $30 subsidy from the federal government to go towards their monthly internet bills. As the ACP program winds down in 2024, it is vital that Easthampton support ACP enrollees in their transition to other affordable internet options like Spectrum Internet Assist and Comcast Internet Essentials.

Some residents of Easthampton look for other options to connect to the internet outside of home Wi-Fi. The Easthampton Public Library currently has seven hotspots in circulation, all of which are used regularly. Additional hotspots could allow the Library to lengthen the circulation period for residents. EPSD has approximately 40 hotspots for qualifying students.

Device affordability is another barrier to internet use in low-income households. With low-end laptops typically costing between $200 and $400, mid-range laptops costing between $400 and $800, and high-end laptops costing over $1,000, the purchase of one (or potentially more than one) laptop per household can be a burden for households with limited income.

Local CAI's have devices available for public use, offering a solution for residents who cannot afford a device. CAI's with public computers include the Easthampton Public Library, the Council on Aging, and E-Media (only available to members). However, access to devices at these institutions are restricted based on the number of available devices (the Council on Aging has only one public computer) and operating hours.

Impact of the Digital Divide on Low-Income Households

The financial barrier for low-income individuals to access the internet and digital devices carries through many facets of life, including how people are able to work, learn, shop, receive public resources, and access necessities like telemedicine services and financial information.

Since the COVID-19 pandemic, school-age children are more likely to need digital devices to complete schoolwork. The disparity between students who are able to access the internet and those who cannot has been coined the "homework gap."[19] EPSD's one-to-one Chromebook program and hotspot lending program helps students access devices, but the limited capability of Chromebooks (and the relatively short shelf-life of these devices) is a future challenge EPSD must address through additional funding and ongoing education about alternatives for students and parents.

The pandemic also accelerated the adoption of remote work, putting a renewed emphasis on the necessity of a strong, reliable internet connection and suitable devices for Easthampton's workforce. Low-income households that cannot afford one or both of those elements may miss out on job opportunities, public benefits, professional development courses, and may also experience increased feelings of isolation.[20]

Individuals with Disabilities

A June 2022 report from the U.S. Department of Labor indicates that—though the gap has closed considerably over the past two decades—there are still digital inequities between individuals with disabilities and those without disabilities.[21]

In Easthampton, 2022 ACS data indicates approximately one in five (19%) residents have a physical or cognitive disability.[22] To continue closing the digital equity gap, CAI's in Easthampton must assess the accessibility of their buildings and devices, and focus on creating ample opportunities for digital education for those with cognitive challenges.

The Easthampton Public Library and Council on Aging mentioned the **inaccessibility of digital devices** for individuals with disabilities largely revolves around transportation to CAI's, internal accessibility of municipal buildings, and limited access to assistive technology (AT; includes physical products like wheelchairs and crutches as well as digital technology like screen readers and software-aided mobile devices). With limited public transit in Easthampton, most residents drive to destinations, which may not be an option for individuals with physical disabilities. Spreading awareness of on-demand transportation options available through the Council on Aging, Easthampton Neighbors, and Riverside Industries may help individuals get to places with public devices and broadband. Riverside Industries, Bay State Council of the Blind, and Easterseals Massachusetts may be able to provide additional information about assistive technologies that could best support individuals with disabilities.

At the time of this report, the Easthampton Public Library was beginning construction of a new building. While the new building will offer updated spaces for youth, teens, and adults, one lingering concern is the accessibility of the lower floor, which is currently not accessible to anyone with mobility issues. The Library hopes to make structural improvements to ease access to all resources.

Another barrier to device access is cost. Results from MBI's statewide survey indicate that individuals with disabilities were more likely to have a lower budget for buying devices, with 38% reporting they would be able to pay up to $50 for a laptop or desktop. Assistive technology devices are another necessary expense for some individuals with physical or cognitive impairments. According to the American Foundation for the Blind, the cost of screen readers can range from free to $1,200[23] and the cost of Braille displays can range from $3,500 to $15,000 depending on the number of characters displayed.[24] Fortunately, many devices have begun to feature increasingly accessible features such as text-to-speech reading applications that allow people to listen to webpages and other digital content.

Podcast Studio at E-Media. Photo credit: E-Media

Digital literacy is another top concern for people with disabilities. Easthampton's Public Health Department stated that most residents who contact the Department prefer to do so through calling rather than requesting support online (through the website or email). This was especially true for older adults who may not feel comfortable sharing health information over the internet. The Department also said that, during the COVID-19 pandemic, they shifted their appointment request form to an online software, which some residents (especially those with vision problems or cognitive disabilities) reported to be confusing or inaccessible.

Impact of the Digital Divide on Individuals with Disabilities

Restricted access to devices and internet services can prevent individuals with disabilities from receiving public benefits, getting and keeping remote work opportunities, and connecting with others.[25] Additionally, some people with disabilities rely heavily on Assistive Technology (AT) such as speech recognition systems, refreshable Braille displays, and screen-reading software. The Public Health Department and other Council on Aging's should endeavor to connect with folks in this population group to identify their needs and address gaps in device access and digital literacy.

06

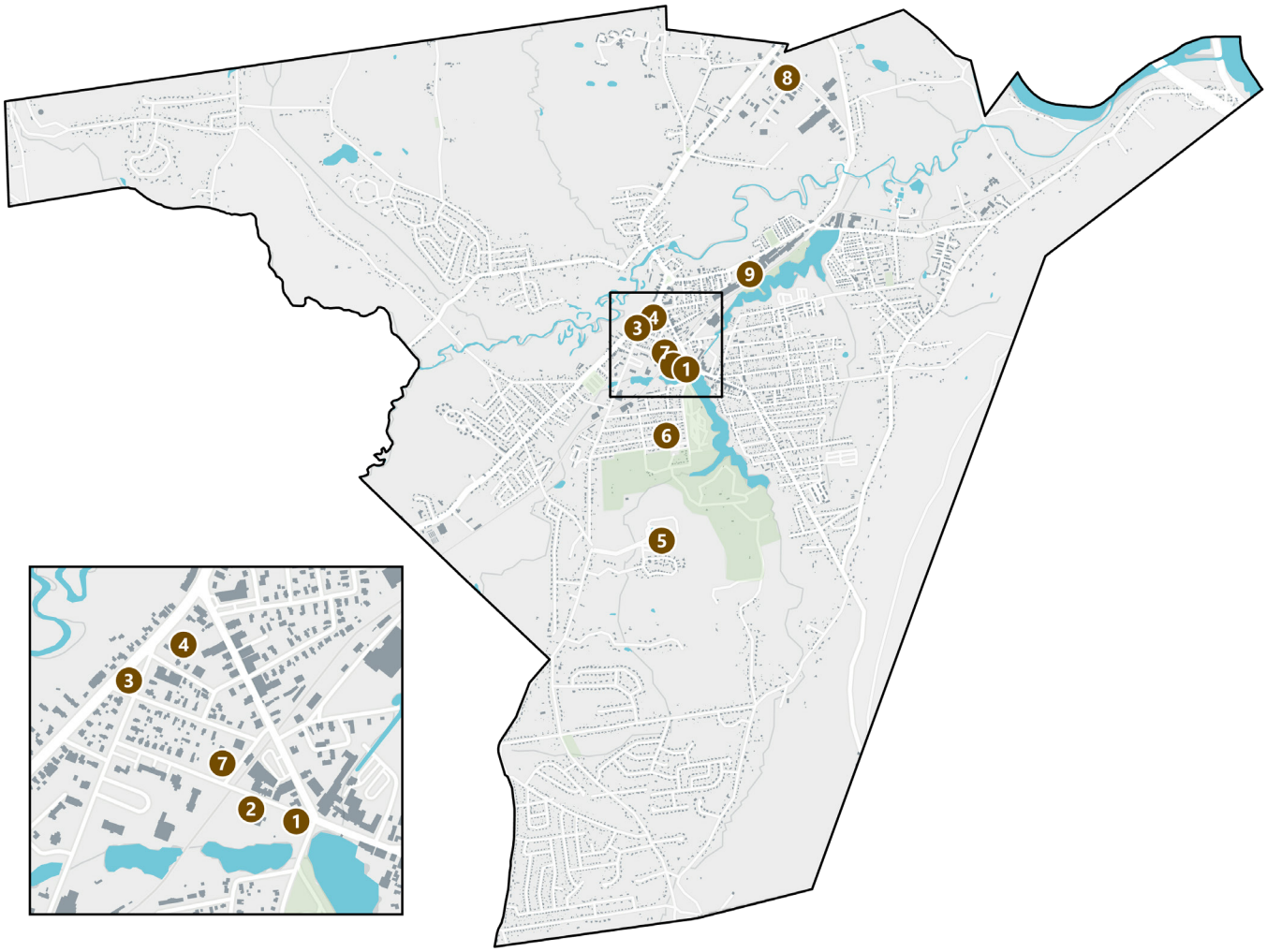
Digital Equity Assets

In assessing digital equity in Easthampton, the Steering Committee and stakeholders identified local digital equity assets whose work is helping address the digital divide. The following organizations, programs, and public facilities are important resources providing the community with access to broadband and digital devices and providing digital literacy training.

NOTE: This list is not comprehensive—it would be in the best interest of the City to maintain an up-to-date list of resources for residents to access via the City's website.

Aging Adults	**City of Easthampton Council on Aging** provides access to a public desktop computer and technical support, including for telemedicine and applying for public benefits. Residents 55+ can get tech support on Wednesday afternoons through the Council's volunteer-run tech support program, and are also able to utilize the Council's transportation options to travel to the Senior Center or other CAI's. **Easthampton Neighbors** provides transportation services and one-on-one technical support (including with telemedicine). **Cyber-Seniors** provides one-on-one tech support appointments, drop-in tech support, and cybersecurity training.
Individuals with Disabilities	**Riverside Industries** provides transportation services and workforce development trainings. **Bay State Council of the Blind** provides accessibility training for mobile devices and tablets, utilizing accessibility features for people with vision loss. **Easterseals Massachusetts** helps individuals with disabilities acquire digital devices (through loans), learn how to use Assistive Technology (AT), and test devices before purchasing.

Individuals with Language Barriers	**City of Easthampton Public Library** provides translation services (with the help of EPSD) and notes the most popular languages in the City apart from English include Spanish, Russian, Khmer, Ukrainian, and Haitian-Creole. **The Center for New Americans** has publicly accessibility hotspots and tablets, assists with career preparation, and provides supportive services for immigrants.
Individuals in Low-Income Households	**EveryoneOn** has a search tool for users to find refurbished devices and low-cost internet subscriptions in their area. **Tech Goes Home** offers basic computer literacy training and small business technology classes. The program includes a free laptop and one year of internet access. **City of Easthampton Public School District** partners with T-Mobile (through Project 10Million) to provide hotspots to eligible students. The IT Department has approximately 40 hotspots for lending. **City of Easthampton Housing Authority** (managed by Northampton Housing Authority) offers their residents free Wi-Fi in community spaces. The NHA has a Resident Services Coordinator who can support with ACP enrollment and connection to digital training opportunities.
Racial and Ethnic Minorities	**The Center for New Americans** has publicly accessible hotspots and tablets, assists with career preparation, and provides supportive services for immigrants.
Rural Residents	**City of Easthampton IT Department** has partnered with GoNetSpeed to increase access to high-speed, reliable internet. Residents can visit Easthampton's website to learn how to sign up for priority installation of fiber optic cable.
Veterans	**South Hadley-Easthampton Veterans' Services District** provides veterans with resources and support, including assisting with and advising on public benefits.
All	**E-Media** provides members access to professional audio and video production equipment for broadcasting, education, and content creation. **City of Easthampton Public Library** provides access to public computers, hotspots, technical support (including with telemedicine), and some computer trainings. They are currently piloting themed training sessions (sending emails, password safety, setting audiobooks, etc.).



Map of Easthampton's Community Anchor Institutions (CAI's)

#	Community Anchor Institution	Institution Type	Address
1	Easthampton City Hall	Municipal Building	50 Payson Avenue
2	Public Safety Complex	Fire Station / Local Police	32 Payson Avenue
3	Easthampton Public Library	Public Library	9 Park Street
4	Easthampton Family Center	Civic Center	128 Main Street
5	Mountain View School	Public School	200 Park Street
6	Easthampton High School	Public School	70 Williston Avenue
7	The Williston Northampton School	Private School	19 Payson Avenue
8	Hilltown Cooperative	Charter School	1 Industrial Parkway
9	Easthampton Media	Civic Center	116 Pleasant Street St. 102

07

Future Focused: An Approach to Easthampton as a Smart City

Smart Cities and Digital Equity

The connection between smart cities and digital equity is fundamental. Digital equity refers to equal access and opportunity to digital tools, resources, and services. It covers aspects such as affordable, high-speed internet, digital literacy skills, and access to devices like computers and smartphones.

As cities begin to integrate "smart technology" where services and infrastructure heavily rely on digital technology and the Internet of Things (IoT), digital equity becomes crucial. Without it, a significant portion of the population might be left behind, unable to fully participate in or benefit from smart city innovations. This digital divide can lead to increased socioeconomic disparities.

Conversely, smart cities, when built to address specific, community-identified needs, have the potential to greatly advance digital equity. Through initiatives aimed at expanding internet access, promoting digital literacy, and ensuring public services are accessible online, smart cities can help bridge the digital divide.

For example, smart cities may implement free or low-cost community Wi-Fi, distribute devices to low-income households, or offer digital skills training programs. This not only helps citizens to take advantage of the benefits of the smart city but also equips them with skills and resources that are becoming increasingly important in the digital age.

In essence, a truly smart city is not just technologically advanced, but also inclusive and equitable. It uses technology to improve the quality of life for all residents, not just a privileged few. Hence, digital equity is an essential consideration in smart city planning and development.

What is a Smart Community?

Many cities are on the cusp of rapid change precipitated by technology, with technology being integrated into local and county government operations for a variety of applications. A "Smart Community" is generally understood to be a city or county that has developed (or intends to develop) a plan for digital infrastructure that enables it to collect, aggregate, and analyze real-time data, and has made a concerted effort to use that data to improve the lives of its residents.

Mountain View School. Photo credit: City of Easthampton

This may include artificial intelligence (AI) powered systems to automate workflow, filter data, and inform decision-making; integration of renewable energy sources and smart metering technology to conserve water and energy; autonomous vehicle infrastructure and circulators to provide last mile connectivity; electric vehicle charging infrastructure to meet consumer demand; environmental sensors to monitor flooding and groundwater flow; dynamic street lighting that can improve public safety; and digital twin simulation to visualize and analyze scenario plans and changes in the environment.

Each community should go through a thoughtful visioning and planning process, co-created with stakeholder input, to create a vision for the future that selects the right technology to address critical community issues.

Foundational Elements of Smart Communities

VHB recommends that Smart Communities use the following foundational elements, or guiding principles, during the plan creation and implementation of projects:

People Focused/Community Driven: The needs and challenges of residents, businesses and visitors are the primary focus for adoption of new technology and innovation

Co-Created: Residents, businesses and government participate in the decision-making process, including identification of challenges and opportunities

Heathy: Smart Communities promote active lifestyles that improve physical and mental health

Equitable: A Smart Community is a compassionate community that works to enhance vulnerable and disadvantaged populations, reducing gaps to access and opportunity

Sustainable: A Smart Community has an equilibrium between environmental protection, social equity, and economic development

Resilient: A Smart Community maintains continuity of governance and business during chronic and acute stressors, including climate and severe weather impacts

Data Driven: A Smart Community collects and analyzes data to provide better and more efficient digital and physical services for all

Solution Oriented: A Smart Community matches the right technological and innovative solutions to identified and established community issues and challenges

Transparent: A Smart Community discloses what data it collects and how it is used. The public understands how decisions are made

Interconnected: A Smart Community is connected digitally by information technology and physically through urban planning and mobility solutions

Benefits of Smart Communities

A Smart Communities plan for Easthampton would identify technologies and innovation that address current issues and prepare for the future. This can include implementing renewable energy sources, green buildings, and efficient transportation systems as well as promoting equitable access to resources and services like affordable housing, transportation, and healthcare.

Many cities, towns and counties across the United States have implemented Smart Community technologies. For example, Washington D.C. has developed a program to replace all streetlights with smart LED lights, which has resulted in 50-70% energy savings. The city of Cary, North Carolina implemented a network of advanced metering infrastructure (AMI) that allows for real-time tracking of water usage. This system helped the city identify and repair over 1,000 water leaks in its first year of implementation, leading to significant water conservation. Additionally, a smart community can be prepared to respond to natural disasters and other challenges by implementing emergency preparedness plans and investing in resilient infrastructure. By integrating technology solutions to solve community problems, Easthampton can become a more livable, sustainable, and resilient place for all its residents.

Example Smart Communities

City of Holyoke, MA

The City of Holyoke, Massachusetts (pop. 38,000) went from having the last coal-powered plant in the Commonwealth to utilizing Smart Grid technology to monitor and improve the efficiency of its electrical supply and operating one of the largest solar farms in the region.[26] The shift is being led by Holyoke's municipal energy provider, Holyoke Gas & Electric (HG&E), whose goal is to "expand carbon-free sources of electric generation in environmentally sensitive ways and promote the reduction of energy use through energy efficiency programs, all while maintaining some of the lowest electric rates in the Commonwealth of Massachusetts." Together, the City of Holyoke and HG&E have shifted to greener energy sources and have prioritized the use of Smart Technology for enhanced efficiency and monitoring.

Key Outcomes:

» A Clean Energy Dashboard for users to learn about the City's electrical and renewable energy efforts

» 18,000 smart meters that assist HG&E with data analytics, energy efficiency assessments, consumption management, outage communication, power quality reporting, and remote accessibility

» Automated "Smart Grid" equipment that can sense the system's operation and attempt to "self-heal" when issues arise

» A "Connected Homes Smart Device Monthly Incentives" program through which customers can receive a $5-$8/month incentive for enrolling a qualifying smart thermostat, HVAC control, or water heater

Town of Morrisville, NC

The Town of Morrisville, North Carolina (pop. 29,000) aims to transform itself into a smart city through the adoption and incorporation of technological advancements intended to enhance the overall wellbeing and lifestyle of its residents. The strategic plan comprises several key aspects.

Connectivity: Morrisville aspires to improve connectivity through high-speed broadband access all across the town. This will narrow the digital divide and centralize the town's data for improved service delivery.

Smart Infrastructure: The town seeks to create a solid foundation for a smart city, focusing on improving infrastructure like installing digital kiosks, sensor-based LED streetlights, smart grids, and more.

Digital Inclusion: To ensure no one is left behind, Morrisville plans to enable low-cost or free access to digital devices and services for lower-income households.

Sustainability: There are plans to use technology to create more sustainable solutions like renewable energy and better waste management systems.

Public Safety: By integrating state-of-the-art public safety technology, Morrisville aims to improve emergency response times and crime prevention strategies.

Citizen Engagement: Upgrading the town's website and mobile applications and integrating social media platforms to enable citizens to interact more efficiently with the town government.

The town intends to work in partnership with technology-driven companies and apply for grants and secure funding to bring the Smart City Plan to life.

Key Outcomes:

» Deployment of occupancy sensors at tennis courts and moisture sensors at athletic fields

» Digital dashboard with real time availability for recreational amenities

» Received two Smart City 50 Awards in 2023 from Smart Cities Connect for its mobile application and connected parks initiative

City of Orlando, FL

The City of Orlando, Florida (pop. 307,000) adopted its Future-Ready City Master Plan in 2021. The planning process required abundant collaboration and consensus among stakeholders to prioritize programs and efforts that will address current and future challenges. Community Input was collected through stakeholder discussions, focus-area roundtables, public workshops, and an online virtual feedback platform. The input helped the City to identify and prioritize short-term strategies, then prepare conceptual plans, life cycle assessments, and business models to implement these strategies. The plan is organized by focus areas representing the major services provided by the city—Connectivity, Energy, Water, Health and Safety, Materials, Mobility, and Placemaking—and includes mid- to long-term strategies that will evolve as technology and innovation progress.

Key Outcomes:

» Mobile Tablet and Wi-Fi Hotspot checkout program to bridge the digital divide

» Autonomous shuttle pilot project

» Resilience hubs at community centers with battery backup for climate hazards

» Zero Waste Plan

» Smart building pilot in community center

» Advanced Air Mobility transportation plan

» Smart parking and digital wayfinding advancements

Next Steps for Easthampton

In order to effectively implement the prioritized Smart Community strategies, it's recommended that Easthampton prepare a Smart Community Plan. This will serve as a roadmap to guide the integration of Smart Community strategies and technologies into existing City policies and processes. The VHB Smart Community Playbook is a framework that can be used to develop a plan. It is comprised of three different phases.

1. **Exploration**: This phase is internally focused and establishes a smart community vision. This phase includes assessing the current City assets and technology needs, selecting a champion to lead it, aligning departmental priorities and metrics of success. It also includes selecting "pillar focus areas," or topics of importance to the community. This may include transportation systems, housing, environmental protection, energy systems, public safety, or other public service functions that local governments provide. The outcome of the Exploration Phase provides the direction for the components to be analyzed and included in the Planning Phase.

2. **Planning**: This phase incorporates community engagement to identify common challenges and potential solutions. Smart Community plans should be co-created with residents, businesses, and other members of the community. This could consist of stakeholder focus group meetings, public workshops, online surveys, and other means of civic engagement and public participation. The City should strive to be inclusive and equitable, making accommodations for Justice 40 communities, persons who do not

speak English as a first language, and other underserved communities. Next, the City and community members should brainstorm, then prioritize potential Smart Community strategies and solutions that address current and anticipated needs. Once the City has the confirmed list of prioritized Smart Community strategies, it should analyze use cases, constraints, feasibility, benefit-cost analysis and identify a responsible department or partner agency, potential cost-sharing partnerships, risks, and any alignment with City policies and planned projects.

3. **Implementation**: Once the previous phases are completed, this phase is needed to fund, procure, and execute projects. The City should formally adopt (by resolution or ordinance) the recommended Smart Community Plan goals, objectives, and policies into its strategic planning or regulatory documents (Community Development Strategy, Strategic Plan, etc). This establishes the public policy, purpose, and need for project implementation. The plan should be reviewed and amended periodically to adjust for changing policies and laws, additional climate hazards, changes in technology, and other factors. Projects should then be included in annual or five-year capital improvement program (CIP) budgeting processes. Where applicable, the City should seek grant funding (described further below) or explore the potential for public-private partnership (P3) funding.

The end product is a Smart Community Master Plan, which is the overall guidance document that programs investments in technology and innovation across departments and agencies. Without an established plan, there is a risk of chasing pilot projects that have low impact and longevity.

08

Available Funding

Easthampton can leverage numerous state and federal funding opportunities to support digital equity initiatives. These funding programs target critical implementation areas of digital equity planning, including workforce development, digital literacy education, device distribution, broadband adoption, infrastructure, and outreach.

Statewide Digital Equity Planning

At the State level, MBI is developing a Statewide Digital Equity Plan for Massachusetts, integrating efforts conducted under the Municipal Digital Equity Planning Program (MDEPP).[27] Massachusetts has received funding under the State Digital Equity Planning Grant Program, one of three grant programs established by the $2.75 billion federal Digital Equity Act (DEA). The DEA aims to "promote the achievement of digital equity, support digital inclusion activities, and build capacity for efforts by States relating to the adoption of broadband by residents of those states."[28] MBI anticipates leveraging the statewide plan as a framework for implementing DEA State Digital Equity Capacity Grant funds toward future planning efforts.

Massachusetts municipalities must understand their digital divide and identify opportunities for advancing digital inclusion to inform statewide planning efforts. This plan provides a roadmap for addressing Easthampton's digital divide, identifying implementation areas to inform prioritization and allocation of funding.

Funding for broadband infrastructure (e.g. construction, equipment, materials)

Funding for planning (e.g. feasibility, data collection, mapping)

Funding for digital inclusion (e.g. broadband adoption, devices, training, tech support)

Funding Sources: Local

The City of Easthampton can leverage the following local funding programs to support the implementation of this plan.

Easthampton Learning Foundation

E.L.F. partners with Easthampton Public Schools and various community entities to back initiatives led by teachers, stimulate engagement rooted in community, promote creativity and innovative practices inside and outside the classroom, and ensure more equitable opportunities for all students within the district.

E.L.F. has awarded grant money to Easthampton Public Schools to support the above activities. Future funding could be used to support digital training initiatives or purchasing of devices.

Funding Sources: State

The City of Easthampton can leverage the following state funding programs to support the implementation of this plan.

Commonwealth Corporation (CommCorp) YouthWorks Funding

Commonwealth Corporation's YouthWorks is a state-funded youth employment program that supports skills training for youth up to age 25 from households earning less than 200% of the federal poverty rate.[29]

YouthWorks funding can support workforce training in Easthampton for roles in the local broadband economy. YouthWorks participants can also participate in a formalized local network of digital navigators in Easthampton.

Community Compact Cabinet Efficiency & Regionalization Grant Program

The Community Compact Efficiency & Regionalization (E&R) Grant Program, administered by the Division of Local Services, is a competitive grant program that provides financial support for government bodies interested in regionalization and other efficiency strategies. Funds may be administered by government entities, regional school districts, regional planning agencies, and councils of governments. Example eligible expenses include equipment or software, technical assistance, or transition or project management costs for one year.

Easthampton can use E&R funding to secure software packages needed by municipal offices, including but not limited to permitting software for the Public Health Department. Easthampton could also partner with adjacent communities to secure a shared resource, like a Resident Engagement Coordinator.

Community Compact Cabinet IT Grant Program

The Massachusetts Community Compact IT Grant Program, administered by the Division of Local Services, provides grants of up to $200,000 to support the implementation of local innovative IT projects, including one-time capital needs related to planning, design, installation, implementation, and initial training.[30]

Easthampton can leverage the IT Grant Program funds toward developing a municipal wireless mesh network to provide free public internet outdoors.

Community Compact Cabinet Municipal Fiber Grant Program

The Massachusetts Division of Local Services Municipal Fiber Grant Program assists municipalities with the construction and completion of municipal fiber networks.[31] A cohesive municipal network "allows for centralized management of IT infrastructure, including an enterprise approach to network monitoring, cyber security, records management, and backup and recovery." All municipalities that are not grantees of the program's previous fiscal year round are eligible.

Easthampton can leverage Municipal Fiber Grant Program funds for creating redundancy for the municipal closed-loop fiber network.

Determination of Need (DoN)

The Massachusetts Department of Public Health (DPH) Determination of Need (DoN) program was established to "encourage competition with a public health focus; to promote population health; to support the development of innovative health delivery methods and population health strategies within the healthcare delivery system; and to ensure that resources will be made reasonably and equitably available to every person within the Commonwealth at the lowest reasonable aggregate cost."[32]

The Massachusetts Executive Office of Elder Affairs (EOEA) created the Massachusetts Community Health and Healthy Aging Funds initiative in partnership with the Massachusetts DPH in 2017 as a revision to the DoN program.[33] This program aims "to enhance the capacity of multi-sector collaboratives to authentically engage residents and work together" to remove barriers to health."

Easthampton can leverage funding through the DoN program to establish training opportunities for local consumers regarding tracking medical records.

Metropolitan Area Planning Council

The Metropolitan Area Planning Council's (MAPC) Apartment Wi-Fi Program works with municipalities, public housing authorities, and affordable housing developers to build Wi-Fi networks for residents. The Apartment Wi-Fi Program provides funding, project management, and procurement support to fund the construction of Wi-Fi networks, providing residents with equal or superior service to what is available from commercial ISPs at no cost to residents. Program funding covers all capital costs associated with network design, construction, equipment, and the first year of ongoing operating expenses.[34]

Easthampton Housing Authority (managed by Northampton Housing Authority) should connect with representatives from MBI and/or MAPC to learn about the Apartment Wi-Fi Program and find out if there are any opportunities to leverage this program in Easthampton's affordable housing buildings.

Municipal Cybersecurity Awareness Grant Program

Administered by the Executive Office of Technology Services and Security (EOTSS), the Office of Municipal and School Technology facilitates cybersecurity training at no cost to participating organizations.

City employees have participated in cybersecurity training through the Cybersecurity Awareness Grant Program for years 2021 through 2024. The City should continue to apply for this grant program to continue to enhance employees' cybersecurity expertise.

Municipal Digital Equity Implementation Program

In January 2024, MBI announced the new Municipal Digital Equity Implementation Program, through which municipalities who have created Digital Equity Plans through MDEPP are automatically eligible to receive up to $100,000 in state funding to implement projects or programs that support the community's digital equity goals.

The City of Easthampton, alone or partnered with other CAI's, should apply for implementation funding to pursue one or more programs or projects outlined in this report's **Goals and Recommendations** section.

Funding Sources: Federal

The City of Easthampton can leverage the following federal funding programs to support the implementation of this plan.

Broadband Equity, Access, and Deployment (BEAD) Program

The BEAD Program, created by the Bipartisan Infrastructure Investment and Jobs Act (IIJA) and administered through the NTIA, is a $42 billion dollar program with the goal of increasing access and affordability of broadband, creating jobs, increasing access to healthcare services, improving educational experiences of students, and improving quality of life for residents. Funds can be used for broadband deployment activities (e.g. construction and deployment of broadband infrastructure, personnel costs, leasing of infrastructure, etc.) and non-deployment activities (e.g. multi-lingual outreach to support adoption and digital literacy, direct subsidies for broadband subscriptions, costs associated with stakeholder engagement, etc.).

Easthampton should conduct outreach to CAI's and residents (particularly those in multi-family developments) around the BEAD Challenge process. By encouraging participation, the City and local organizations can receive federal funding to improve or build upon existing infrastructure to strengthen local broadband connectivity.

Community Development Block Grant (CDBG)

The Department of Housing and Urban Development's (HUD) CDBG program provides annual grants on a formula basis to states and local governments. Communities use CDBG funds to address local needs with eligible activities including public facilities, infrastructure, housing, economic development, and planning. The projects should also accomplish a National Objective of either: 1) benefitting low- and moderate-income persons; 2) eliminating slums or blight; or 3) addressing urgent needs for community health and safety.

Easthampton can apply for federal CDBG funding to assess existing broadband infrastructure and make additions or improvements where necessary. Eligible activities include the acquisition, construction, reconstruction, rehabilitation, or installation of public facilities and improvements (which include infrastructure improvements), digital literacy classes, and internet subsidies for low-income households.

Emergency Connectivity Fund

Facilitated by the FCC, the Emergency Connectivity Fund can be used to reimburse eligible entities (schools and libraries) for device purchases (hotspots, modems, routers, connected devices) or to reimburse households for internet service (for students participating in remote learning). Funded through ARPA, this funding is set to end on June 30, 2024.

Easthampton Public Library and Easthampton Public Schools can apply for funding to reimburse device purchases. The Library has indicated a need for more hotspots—this funding could help address that need.

E-Rate Program

The E-rate program helps schools and libraries gain affordable access to broadband. Eligible institutions may apply individually or as part of a group, requesting funds under two categories of service: (1) data transmission services, and (2) internal connections, managed. Discounts are determined by poverty levels and location (urban or rural) and range from 20% to 90% of service costs. The Universal Service Administrative Company (USAC), under the direction of the FCC, administers the program, with an annual cap of $4.456 billion. USAC verifies eligibility, processes applications, reimburses providers, and ensures compliance with program rules.

Easthampton Public Library currently does not qualify for Category 2 services (defined in the FCC's Eligible Services List[35]) because they are not compliant with the Children's Internet Protection Act (CIPA). They are, however, eligible for and receive funding for Category 1 services. The Library's application agent is the CW MARS library network.

Office of Secondary and Elementary Education Title II and III

The U.S. Office of Elementary and Secondary Education (OESE) Title II, Part A grant program provides grants to state educational agencies and subgrants to local educational agencies to increase student achievement consistent with challenging state academic standards and improve the quality and effectiveness of teachers.[36] Eligible activities under Title II, Part A, include providing support and professional development for teachers.

The OESE's Title III, Part A grant program was established to improve the education of English Learner (EL) children and youth by helping them learn English and meet challenging state academic content and student academic achievement standards.[37]

In FY2023, Easthampton Public Schools received just under $70,000 in grant funding through Title IIA and Title IIIA (FY2024 Budget Book). The Schools should continue to apply annually through their current consortium.

USDA Distance Learning and Telemedicine (DLT) Grants

The DLT Grant program, administered by the USDA, is a competitive grant program that helps rural communities (with populations less than 20,000) use advanced telecommunications technology to connect to each other. Key priorities for the program include supporting health care needs stemming from the COVID-19 pandemic, ensuring racial equity, rebuilding the U.S.'s rural economy, and addressing the climate crisis. Eligible applicants include state and local government entities, non-profit organizations, for-profit businesses, groups of eligible entities working together, and federally-recognized Tribes.

CAI's can use DLT Grant funding to purchase audio/video equipment, broadband facilities for distance learning or telemedicine, computer hardware and software, instructional programming, and some kinds of technical assistance. Awards range from $50,000 to $1 million, and require a 15% match.

Caption

Workforce Innovation and Opportunity Act

WIOA is a federal law enacted in 2014 that helps job seekers access employment, education, training, and support services to succeed in the labor market. Funding through WIOA can be used to help residents access digital skills training and learn to apply for jobs online.

CAI's (including training institutions, non-profits, or businesses) can use WIOA funding to implement programs such as career services, vocational training, and adult education programs.

09

Easthampton's Digital Equity Goals

Establish Easthampton as a leader in digital equity and inclusion through collaborating with local, regional, and statewide partners.

Improve the efficiency, efficacy, and quality of local digital equity initiatives by prioritizing City-wide knowledge- and resource-sharing.

Expand digital inclusion through community outreach and strategic long-term planning.

Ensure affordable and reliable high-speed internet (100/20 Mbps) access for all community members.

Facilitate access to digital devices both in the home and in the public realm.

Promote digital literacy with community education programs to empower individuals with the skills to use digital technology effectively.

Make Easthampton a Smart City.

Implementing the Plan

The following Implementation Matrix provides a blueprint for the City of Easthampton to work towards achieving the digital equity goals outlined above. These actionable strategies, shaped in conjunction with the community, City staff, and Steering Committee members, are essential for accomplishing the City's long-term vision. Certain actions were influenced by previous or ongoing plans (such as the partnership with GoNetSpeed, Easthampton Public Library's Strategic Plan, and EPSD's Strategic Plan), while others are based on new community feedback, existing best practices, and evolving technology trends.

The Implementation Matrix includes anticipated requirements for each strategy, addressing the following:

Champion	the City department or board/committee that holds responsibility for implementation
Cost	an approximation of the financial cost (capital or operational), defined as "$" (less than $10,000), "$$" ($10,000-$100,000), "$$$" (more than $100,000)
Funding Opportunities	potential funding agents or partners that could provide financial support, through grants or direct investment, to implement a certain strategy
Timeframe	the anticipated length of time for completion of a given strategy, defined as "Short-term" (less than 2 years), "Medium-term" (2–5 years), "Long-term" (more than 5 years)

Goal 1: Establish Easthampton as a leader in digital equity and inclusion through collaborating with local, regional, and statewide partners.					
Index	Action	Champion	Cost	Funding Opportunities	Time Frame
1.1	Be an active member of the Western Massachusetts Alliance for Digital Equity coalition.	City IT Department; EPSD; EW Library Director; CoA Director	$	-	Short-term
1.2	Apply to be a Digital Inclusion Trailblazer through NDIA. Utilize their open-access catalog to build upon digital equity and inclusion goals and work with other Trailblazer communities to share ideas and stay informed on current and future public digital projects.	City IT Department; Resident Engagement Coordinator	$	-	Short-term
1.3	Work with the Greater Easthampton Chamber of Commerce to assess businesses' needs in terms of digital access and literacy. Provide support and resources when possible.	City IT Department; Resident Engagement Coordinator	$	-	Short-term
1.4	Support the One Touch Make Ready bill (Bill H.3208) currently in the Massachusetts House of Representatives to simplify and expedite the installation of overhead cables and support market competition between ISPs. Connect with lawmakers to express Easthampton's interest in and support for the bill.	Mayor; City IT Department	$	-	Short-term
1.5	Work with neighboring municipalities to create network redundancy, which will improve Easthampton's network reliability, speed, and security.	City IT Department	$$$	MBI Implementation Funding; BEAD Program; Community Compact Cabinet E&R Grant Program; Community Compact Cabinet IT Grant Program	Long-term

Goal 2: Improve the efficiency, efficacy, and quality of local digital equity initiatives by prioritizing City-wide knowledge- and resource-sharing.					
Index	Action	Champion	Cost	Funding Opportunities	Time Frame
2.1	Assemble a Digital Equity Coalition (consisting of digital equity champions) in the Easthampton community who can meet regularly and advance the goals of this Digital Equity Plan. This group could include the Resident Engagement Coordinator and representatives from the City's IT Department, the Easthampton Public Library, Easthampton Public School District, and the Council on Aging.	Resident Engagement Coordinator; City IT Department; EPSD IT Department; EW Library Director; CoA Director	$	-	Short-term
2.2	Generate an Asset Map to help each Community Anchor Institution understand its role and responsibility in the mission to achieve digital equity. This Map may be shared publicly to help Easthampton residents identify resources and digital hubs.	City IT Department	$	MBI Implementation Funding; Community Compact Cabinet IT Grant Program	Short-term
2.3	Create and maintain maps of fiber and cable networks of local ISPs (Crown Castle, MBI, Comcast, Spectrum, T-Mobile, etc.).	City IT Department; Department of Public Works	$	MBI Implementation Funding; Community Compact Cabinet IT Grant Program	Medium-term
2.4	Encourage each Community Anchor Institution to make a long-term strategy to identify strengths, weaknesses, opportunities, and challenges related to broadband connectivity, device access and digital inclusion.	Resident Engagement Coordinator; All Community Anchor Institutions	$	-	Medium-term

Goal 3: Expand digital inclusion through community outreach and strategic long-term planning.					
Index	Action	Champion	Cost	Funding Opportunities	Time Frame
3.1	Hire a Resident Engagement Coordinator to generate, coordinate, publish outreach materials for all departments and committees. This Coordinator could be a staff member at the Easthampton Public Library but could support other Community Anchor Institutions as needed. May also guide students or volunteers in becoming Digital Navigators or operate as a public liaison for these supportive services.	EW Library Director	$$	MBI Implementation Funding; BEAD Program; Community Compact Cabinet E&R Grant Program	Short-term
3.2	Collaborate with E-Media and other local media channels to spread awareness of community resources, upcoming events, and training opportunities.	Resident Engagement Coordinator	$	MBI Implementation Funding; BEAD Program	Short-term
3.3	Evaluate websites and communications materials published by the City and Community Anchor Institutions to ensure that they are universally accessible and are usable on all Internet-enabled devices including cell phones and tablets. Refer to the U.S. Department of Justice Civil Rights Division's guidance on web accessibility and compliance with the Americans with Disabilities Act (ADA).	Resident Engagement Coordinator	$	MBI Implementation Funding; BEAD Program	Medium-term
3.4	Establish consistent benchmarking and data collection to inform strategic planning and funding pursuits. Assess FCC serviceability data. Accessible data sets include a National Broadband Map showing broadband serviceable locations (BSLs) and internet service provider (ISP) areas. Challenge BSLs where projected service does not match actual service (particularly important for Community Anchor Institutions).	City IT Department	$	MBI Implementation Funding	Long-term

Goal 4: Ensure affordable and reliable high-speed internet (100/20 Mbps) access for all community members.					
Index	Action	Champion	Cost	Funding Opportunities	Time Frame
4.1	Encourage CAI's and residents to use the BEAD challenge process in summer 2024. 1. Evaluate all CAI's for 1 Gbps symmetrical internet speeds; those who do not meet this criteria may qualify for BEAD funding. 2. Encourage residents to conduct speed tests and, if speeds are less than 100/20 Mbps, households may qualify for BEAD funding.	City IT Department; Resident Engagement Coordinator	$	MBI Implementation Funding	Short-term
4.2	Publish a local public survey (via City website and/or paper copies) that evaluates household connectivity, reliability, and affordability of broadband services and digital devices.	Resident Engagement Coordinator	$	MBI Implementation Funding; Digital Equity Partnership Program; BEAD Program	Short-term
4.3	Create and disseminate outreach materials for internet subsidy programs and low-cost internet plans. Materials should be available in English, Spanish, Portuguese, Russian, and other languages as necessary.	Resident Engagement Coordinator	$	MBI Implementation Funding; BEAD Program	Short-term
4.4	Investigate public housing eligibility for MAPC's Apartment Wi-Fi program or MBI's Residential Internet Retrofit Program. Easthampton Housing Authority—operated by the Northampton Housing Authority—is eligible to apply.	Easthampton Housing Authority (with Northampton Housing Authority)	$	MAPC Apartment Wi-Fi Program; MBI Residential Internet Retrofit Program	Short-term
4.5	Negotiate lower internet subscription rates with local ISPs or investigate the possibility of direct subsidies.	Mayor; City IT Department	$	BEAD Program	Medium-term

Index	Action	Champion	Cost	Funding Opportunities	Time Frame
4.7	Create partnerships with other ISPs and broadband infrastructure experts to investigate the expansion of last-mile fiber optic network connections.	Mayor; City IT Department	$	MBI Implementation Funding; USDA Community Connect Program; BEAD Program	Long-term

Goal 5: Facilitate access to digital devices both in the home and in the public realm.					
Index	Action	Champion	Cost	Funding Opportunities	Time Frame
5.1	Promote EPSD hotspot lending by broadcasting availability (and eligibility criteria) for T-Mobile's Project 10Million school hotspot program. Outreach may be most effective via school website, newsletter, and social media.	EPSD IT Department	$	MBI Implementation Funding; BEAD Program	Short-term
5.2	Support Easthampton Public Library with purchasing new hotspots and computers (desktops and/or laptops). Support with grant writing as needed. Explore the possibility of refurbishing old school Chromebooks for back-up lending purposes at the library.	EW Library Director; EPSD IT Department	$	MBI Implementation Funding; Community Compact Cabinet E&R Grant Program; Community Compact Cabinet IT Grant Program; BEAD Program; Emergency Connectivity Fund	Short-term
5.3	Partner with organizations that provide refurbished devices at lower costs. For example, PCs for People, Computers with Causes, On It Foundation, local ISPs, and local schools or universities. See here for more organizations that offer devices for reduced cost.	City IT Department; EPSD IT Department; EW Library Director; CoA Director	$	BEAD Program	Short-term
5.4	Create outreach materials (in English, Spanish, Russian, and others) to inform the community of partner organizations and purchasing opportunities.	Resident Engagement Coordinator; EPSD IT Department	$	BEAD Program; MBI Implementation Funding	Short-term
5.5	Organize and facilitate bulk device purchasing and grant pursuits between public institutions (such as the Easthampton Public Library, City departments, Council on Aging, etc.), and expand the community's system of device recycling, refurbishing, and tech support, specifically for devices for public access.	All City Departments; EPSD; EW Library Director	$	MBI Implementation Funding; BEAD Program; MBI Implementation Funding; Emergency Connectivity Fund	Medium-term

Index	Action	Champion	Cost	Funding Opportunities	Time Frame
5.6	Organize a device donation drive in the community.	Resident Engagement Coordinator; City IT Department; EPSD IT Department; EW Library Director	$	MBI Implementation Funding; BEAD Program; MBI Implementation Funding	Medium-term
5.7	Improve transportation to Community Anchor Institutions by working with local transit authorities and transportation providers, including Easthampton's Council on Aging and Pioneer Valley Transit Authority.	CoA Director; Pioneer Valley Transit Authority	$$	BEAD Program; MBI Implementation Funding	Medium-term

Goal 6: Promote digital literacy with community education programs to empower individuals with the skills to use digital technology effectively.					
Index	Action	Champion	Cost	Funding Opportunities	Time Frame
6.1	Survey the community to understand the top digital literacy needs and interests of the community, like basic computer skills, cybersecurity, public benefic applications, telemedicine, etc.	Resident Engagement Coordinator; CoA Director; Public Health Department	$	MBI Implementation Funding; BEAD Program	Short-term
6.2	Partner with local organizations that provide regular digital literacy training. Examples include Easthampton Neighbors, MassHire Holyoke Career Center, Springfield Technical Community College, Cyber Seniors, the 5 College Consortium, and more.	Resident Engagement Coordinator; City IT Department; EPSD IT Department	$	MBI Implementation Funding; BEAD Program	Short-term
6.3	Hire a local student or a team of students (potentially high school or college students) and train them to work as digital navigators who can support community members with basic technical troubleshooting. Refer to the National Digital Inclusion Alliance (NDIA) Digital Navigator Model as a guide for establishing this group. This group may work alongside the aforementioned Resident Engagement Coordinator.	Resident Engagement Coordinator; City IT Department; EPSD IT Department	$	MBI Implementation Funding; BEAD Program	Short-term
6.4	Organize workshops and training programs (around topics based on the results of the survey) at Community Anchor Institutions like the Easthampton Public Library, Council on Aging, and the Community Center.	Resident Engagement Coordinator; Digital Navigators	$$	MBI Implementation Funding; BEAD Program	Medium-term
6.5	Prioritize digital education for teachers and digital citizenship curriculum to enhance students' digital literacy skills.	EPSD IT Department; Digital Navigators	$	Digital Equity Partnerships Program; BEAD Program; Office of Elementary Education	Medium-term

Index	Action	Champion	Cost	Funding Opportunities	Time Frame
6.6	Apply for funds from the Office of Elementary Education: Title III, Part A (Strengthening Institutions Program) funds to improve instruction for English Learners, including those with a disability, through enhanced curricular and programs. Next competition round is 2025.	EPSD IT Department	$	Office of Elementary Education	Medium-term
6.7	Promote educational materials around telehealth software, and address specific informational needs regarding accessing medical records, paying bills, making appointments, etc.	Resident Engagement Coordinator; CoA Director; Public Health Department	$	MBI Implementation Funding; BEAD Program	Medium-term

Goal 7: Make Easthampton a Smart City.					
Index	Action	Champion	Cost	Funding Opportunities	Time Frame
7.1	Create a Smart City Committee consisting of relevant department members (Planning Department, Public Health Department, for example) and technology experts to plan for Smart City integration, pursue funding, and support infrastructural changes.	City Council	$	MBI Implementation Funding	Short-term
7.2	Determine community needs and opportunities through drafting a Smart Community Plan. With the help of a consultant or Regional Planning Agency, engage the public to learn residents' needs, determine funding opportunities, and prioritize implementation strategies for integrating Smart Technology into public infrastructure.	Smart City Committee	$$	MBI Implementation Funding; Community Compact Cabinet IT Grant Program	Medium-term

Appendices

GLOSSARY

Broadband Adoption: Broadband adoption has traditionally been defined as residential subscribership to high-speed internet access. But for those in the field working to increase the digital capacity of communities, broadband adoption is daily access to the internet:

» At speeds, quality and capacity necessary to accomplish common tasks,

» With the digital skills necessary to participate online, and

» On a personal device and secure, convenient network (NDIA)

Broadband Equity: Broadband equity is achieved when all people and communities are able to access and use affordable, high-speed, reliable internet that meets their long-term needs (NDIA)

Broadband: A transmission system granting users access to the internet. Broadband refers to a high-capacity transmission technique using phone lines, coaxial cable ("coax"), or fiber optic cable, enabling a large amount of information to be communicated simultaneously

Broadband Serviceable Location (BSL): A BSL is a business or residential location in the United States at which mass-market fixed broadband internet access service is, or can be, installed (FCC)

Coaxial Cable: Coaxial cable (or simply coax) is a type of electrical cable that is used as a transmission line for radio frequency signals. Coax networks operate at faster speeds and higher reliability than DSL but is slower than fiber

Community Anchor Institution (CAI): NTIA defines "Community Anchor Institution" as an entity such as a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization, or community support organization that facilitates greater use of broadband service by vulnerable populations, including, but not limited to, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals

Digital Divide: The gap that exists between those who have access to information and communication technologies and those who do not

Digital Equity: Equal access to digital tools, resources, and services, and the capacity to utilize them effectively

Digital Inclusion: Digital Inclusion refers to the activities necessary to ensure all individuals have access to and use of Information and Communication Technologies (ICTs). The five elements of Digital Inclusion include:

1. Affordable, robust broadband internet service;
2. Internet-enabled devices that meet the needs of the user;
3. Access to digital literacy training;
4. Quality technical support; and
5. Applications and online content designed to enable and encourage self-sufficiency, participation and collaboration. (NDIA)

Digital Literacy: Digital Literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills. (American Library Association)

Digital Navigators: Digital navigators are trusted guides who assist community members in internet adoption and the use of computing devices. Digital navigation services include ongoing assistance with affordable internet access, device acquisition, technical skills, and application support. (NDIA)

Digital Subscriber Line (DSL): DSL is a type of internet connection that transmits digital data over the wires of a local telephone network. DSL offers a faster connection than dial-up but is slower and less reliable than cable or fiber.

Fiber: Fiber optic cable is a type of high-speed cable that transmits data as pulses of light. Fiber is referred to as the "gold standard" for telecommunications networks because of its speed, reliability, and resiliency.

High-Speed Internet: The FCC defines high-speed internet as speeds that exceed 25/3 Mbps. This baseline was raised from 4/1 Mbps in 2015. Today. some members of the FCC are calling for another increase of the baseline to 100/20 Mbps.

Homework Gap: The homework gap refers to the disparity between students who have reliable, high-speed internet access at home and those who do not. This gap can hinder students from completing homework assignments, conducting research, and accessing educational resources online and disproportionately affects low-income, rural, and minority students. The gap became increasingly evident during the COVID-19 pandemic as schools moved to remote learning platforms.

Internet: A communications network transmitted to users by broadband. The internet refers to a global computer network providing information n and communication facilities consisting of interconnected networks using standardized communication protocols.

Internet Service Providers (ISPs): Companies that provide subscribers with services for accessing and using digital tools, entertainment, and services

"Last-Mile" Infrastructure: Last-mile internet connections refer to the final leg of telecommunications networks that deliver broadband services to end-users or customers. These connections link the broader, high-capacity middle- and first-mile backbone networks with smaller, local networks that directly serve households or businesses

Massachusetts Broadband Institute (MBI): MBI, at the MassTech Collaborative, was established in 2008 with a mission "to make affordable high-speed internet available to all homes, businesses, schools, libraries, medical facilities, government offices, and other public places across the Commonwealth." MBI facilitated the funding of this plan

"Middle-Mile" Infrastructure: Middle-mile internet connections refers to the segment of a telecommunications network that connects first- and last-mile networks. Typically, this infrastructure includes high-capacity, long-haul fiber optic cables that transmit data over large distances

National Digital Inclusion Alliance (Ndia): NDIA is a national non-profit organization that brings together 600 non-profit organizations, policymakers, and academics with a mission to "advance digital equity by supporting community programs and equipping policymakers to act"

National Telecommunications And Information Administration (NTIA): NTIA is the federal agency responsible for the State Digital Equity Planning Grant Program which funded the creation of this plan

Network Redundancy: Network redundancy refers to the process of adding extra, duplicate hardware, software, or network devices to a network infrastructure to serve as a backup or fail-safe system in case the primary network components fail. Network redundancy between towns or ISP's ensure there is no single point of failure and enhances overall reliability and performance of the network

Satellite: Satellite internet involves a dish installed at a user's location to communicate with a satellite in space. Satellite internet is prevalent in rural areas where cable, DSL, or fiber may not be available. Satellite connections are generally slower than cable and fiber options and its reliability can be affected by weather conditions

WI-FI: Wi-fi provides users with a wireless broadband connection. Wireless fidelity, or Wi-Fi, refers to a wireless network connection between devices and broadband networks

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APPENDIX I

Stakeholder Sessions

Schools	Tuesday, September 26, 2023	1 PM
GoNetSpeed	Tuesday, September 26, 2023	2 PM
Council on Aging	Wednesday, September 26, 2023	10 AM
Public Health	Thursday, September 28, 2023	10 AM
Library	Thursday, September 28, 2023	11 AM
E-Media	Thursday, September 28, 2023	2 PM
Veterans Services	Emailed responses to Julia Mintz and Jennifer Nelson	

EASTHAMPTON STAKEHOLDER SESSION—SCHOOLS

Date: September 26, 2023

Attendees: Maureen Binienda (MB)—Interim Superintendent, Easthampton Public School District

Justin Tietze (JT)—Director of Technology, Easthampton Public School District

1. What are the greatest challenges facing schools regarding technology? What initiatives have you taken to date to address these challenges?

MB:

- Funding to replace Chromebooks is an issue
- The district has provided hotspots in the past for students without internet access at home
- In the past, many families who used Charter did not pay their internet bill. When the City eventually reached an agreement with Charter, the City had to pay for internet for all households. However, Charter would not service any household that owed them money. The City provided hotspots for these households.
- The District stopped buying physical books because they were too expensive and invested in digital books.
- Textbooks are resources for students and often contain assignments. Teachers also utilize Google Classroom—if students don't have access, they miss critical class content.

JT:

- Easthampton Public Schools (EPS) is a one-to-one district and needs adequate funding to buy devices for all students and faculty under this setup.
- The district became one-to-one during COVID and bought a huge allotment of its Chromebooks at this time (roughly 600). Chromebooks have a lifespan of roughly five years and will soon need to be replaced all at once, requiring significant funding.
- EPS uses an Access and Availability model to protect students, online safety is a huge concern for the district. This model utilizes security groups (gives access to platforms that the district offers) and networking/subnetting (providing security regarding who can access what server)
- If a student makes a harmful search (e.g., "self-harm") the district is notified and has protocol to ensure the student gets the help they need
- EPS partnered with T-Mobile to leverage its Project 10million program, acquiring 40 hotspots for the district, 100% free of charge to the end user and the district. These hotspots are underutilized (two currently deployed and running) – unsure if this is because of poor outreach or lack of need. Family engagement coordinator is responsible for outreach and working with families.
- No ongoing issues regarding accessibility of Google Classroom

2. Please discuss how you assess the technology needs of students, manage your IT systems, and facilitate professional development for staff. What are your key performance indicators—if you have any?

JT:

- Most outreach is done through word-of-mouth and a ticket system
- There are many individualized education programs (IEPs) in the district requiring specific technology needs – these needs are relayed to IT via word-of-mouth, ticketing, or directly via the special ed department
- The IT Department ensures technology works and that students and faculty have up-to-date devices that are safe. The IT Department does not conduct a lot of training.
- There are currently three staff in the IT Department, serving approximately 2,000 end users. IT doesn't have time to sit down and train people, and themselves don't get trainings (would be interested in this down the road)
- If IT had two more staff members, one could probable go teach 30 min training sessions

3. For what demographic groups do schools provide IT support? E.g., students, faculty, staff, families? Please characterize the services provided for these groups.

JT:

- IT does not conduct training for families beyond ensuring they can access Power School to get alert emails
- IT works largely with students and staff regarding technological needs
- During COVID the IT Department spent whole days for weeks at a time calling families to make sure technology was working at home – this stopped after students were back in school full-time

4. **What future plans and external support do you believe are necessary to further enhance digital equity efforts in your school and the greater Easthampton community? Are there partnerships or resources that could support the school's IT capabilities?**

MB:

- Funding
- MB would like to see EPS become more of a community resource (e.g., partnership program where kids could train elderly residents)
- The district has a low percentage of multilingual students, including Spanish-, Portuguese-, and Russian-speaking students.
- The district is required to translate documents into English and Spanish
- The district uses tech where you speak in English and it converts it to the target language, as well as Google Translate and Microsoft's translation tool

JT:

- Funding for hardware/replacing Chromebooks
- Grants/external funding would be helpful

EASTHAMPTON STAKEHOLDER SESSION—GoNetSpeed, Easthampton IT

Date: September 26, 2023

Attendees: Heidi Mahoney (HM)—Manager of Government Affairs, GoNetSpeed

Maureen Hopkins (MH)—Associate General Counsel, GoNetSpeed

Karin Moyano Camihort (KMC)—IT Director, City of Easthampton

Eleanor Cartelli (EC)—Easthampton IT Group

Mayor Nicole LaChapelle (MNL)—Mayor, City of Easthampton

Steve Anderson —Technology Service Lead, VHB

Curtis Ostradka—Director of Smart Communities, VHB

Luke Mitchell—MA Planning Team Lead, VHB

Christa McGaha—Urban Planner, VHB

Jennifer Nelson—Urban Planner, VHB

Julia Mintz—Urban Planner, VHB

1. **Are there specific populations or groups within the community that face unique accessibility and technical barriers, and how can they be addressed effectively through the relationship with GoNetSpeed?**

2. **What tools or initiatives does Easthampton's IT Department use to help users, especially those in marginalized populations, understand and maximize the benefits of the internet?**

   MNL:
   - Library, Easthampton Media, Community Center, CoA – these are the networks through which we share info about ACP program

3. **What technical support services can be put in place to assist community members with digital inclusion, such as troubleshooting connectivity issues or device setup?**

   MNL:
   - Our idea is to learn from GoNetSpeed so our own people can learn how to advance digital learning and programming. So we can send out people to community centers and maybe to housing projects.

4. **GoNetSpeed is investing in the installation of fiber optic cable for Easthampton residents and businesses. What are the greatest challenges to advancing this project?**

   HM:
   - Lots of work ongoing in western MA.
   - Make-ready barrier in MA – in terms of installing; waiting for utility poles permitting takes 2-3 years; in other areas, utility pole permitting is as fast as 6-9 months. So the timeline is greatly inhibited
   - Phase I plan: deploying aerially as opposed to underground
   - We do this because it's cheaper than deploying the entire community at once
   - Providing fiber to everyone in Easthampton
   - 2 packages
     - $60/month—is offered to other communities in MA
     - $80/month
     - 100/100 service for $30 (through MAPC)
     - Prices are competitive, but less than other ISPs

   MNL:
   - $60 GoNetSpeed price is $19 cheaper than Spectrum
   - Spectrum kind of enforces bundle, with "useless" landline
   - Speeds are comparable
   - Even with 2 partners (Verizon and Eversource) in Easthampton, it makes no difference. We can get stuck behind a city doing "municipal light plant" (MLP)
   - Eversource won't work on poles, is waiting on Verizon to move out of Amherst
   - Verizon is a big hold up for us

SA:

- An incentive for implementation and deployment may be to offer to replace providers' poles

MNL:

- Public discourse can sometimes be tricky to navigate (because of the speedy process and because we are working with a private for-profit company) but the truth of the matter is the access only adds to the bottom line of household economic development and business

5. Once GoNetSpeed is operational, how will it improve digital equity in Easthampton?

HM:

- ACP program and outreach events
    - Great turnout in ME
- We will do a workshop to help people sign up in areas where we support networks
- Cord-cutting classes to improve understanding of devices
    - Most successful when events have the support of the City and outreach from the City to the public
- We don't go and advertise ACP, but it is on our website
    - 1,140 subscribers within our network (out of 7,000 subscribers total) – roughly 16%

6. Are there any other barriers, challenges, or solutions to digital equity not yet discussed today?

HM:

- State-wide one-touch make ready bill in MA state legislation process
    - We are talking to everyone we can about this legislation
- We are attending listening sessions through MBI and we are tracking the funding that is coming into the state as well
- Do you have anyone at MBI who can help to support this legislation?
    - Josh Eichen

7. Other

MH:

- On involvement in other locations
    - Finishing in Amherst
    - Deploying in Ludlow
    - Deploying in Agawam
    - Deploying in Granby
    - Deploying in Easthampton
    - Also working in other states; MA is the toughest because of the hold up from other ISPs and energy providers

MNL:

- GoNetSpeed was a slam dunk for Easthampton's MLP RFP
    - Cheap, fast, transparent
- Very honest partnership
- National League of Cities grant for increasing access to fiber for microbusinesses
- And a huge barrier to us was upfront funding ($600-800 mill) to deploy this

EASTHAMPTON STAKEHOLDER SESSION—COUNCIL ON AGING

Date: September 27, 2023

Attendees: Cynthia Tarail (CT) – Director, Council on Aging

1. What services or programming does your community provide seniors for broadband/ computing device access or digital literacy?

CT:

- The COA turned down a digital literacy grant opportunity from the Executive Office of Elder Affairs (EOEA). The grant required the City to have a digital equity needs assessment for seniors which the City did not have and still needs.
- CT joined the COA in 2021, there may have been initiatives done during COVID that didn't work or weren't continued
- Many seniors use the Library for tech needs, general questions (e.g., can't get a doc off their phone/email to print)
    - If people want to print a document from their email, they email that document to a librarian's personal work email where the librarian can then print it from the library printer – the library can do this because they are a nonprofit organization
    - The COA cannot do this for security reasons (there could be viruses in emails/ documents that could threaten the City's computer system)
- The COA recently set up a public desktop computer (will be able to sit with seniors and assist with online applications/questions) and is looking into buying a Wi-Fi printer that will be separate from the City's network using a firewall. Members of the public will be able to print from their email through Wi-Fi (no cost if you are a client, small cost if you are not)
- Seniors come to the COA most often for help with online application processes (e.g., jobs, public benefits, housing). Seniors frequently have challenges logging into online platforms, due to forgetting passwords, accessing the internet, understanding confirmation codes, etc. If an individual needs to create a Gmail account, the COA will do this for them and will sometimes keep login information on file for that individual.
- COA is trying to divert some people from the library by setting up a digital navigator system. This includes a volunteer that can visit the home of an individual and

troubleshoot device issues with a COA staff person in attendance (supervision to prevent claims of fraud by confused individuals)
- For internet access issues, seniors can check out a hotspot from the library or the COA will help them apply for discounted internet service
- The COA bought an uncommon brand of tablets to rent out to seniors during COVID which are now out-of-date and in the COA office unused. People experienced a lot of problems using the tablets on their own and COA didn't have sufficient capacity to provide technical support. Lesson is never to buy and distribute devices to the public without a plan for sufficient technical support and buying updated devices over time. If you are trying to provide new devices for individuals, need to have resources for where to buy devices, what kind, when to update them, installing software, etc.
- Before COVID the library would send a staff member to the COA to teach a traditional computer class. This program is no longer available, COA doesn't have space to host it + would rather have a more modern training model.
- Regarding digital literacy training, COA/library staff currently focus on applying for and maintaining social benefits and essential services and are not taught to educate on editing photos, social media, etc. (things that enhance people's lives)

2. Talk about your facilities: is there internet? Public devices?

CT:
- Public Wi-Fi with simple login info (recently improved by IT with Wi-Fi extenders to service more rooms)
- Public computer
- Cellular connection is pretty good throughout the building unless many people are heavily using the Wi-Fi (generally low use)
- The COA building is made of brick/stone/concrete which can sometimes cause connectivity issues. It is on IT's list to improve this but it is not a high priority compared to other IT issues in the City and would be expensive to fix.
- No hybrid option available for work (no private office space for calls, unreliable wifi)

3. What challenges do residents age 60+ report concerning broadband/computing device access and/or digital literacy? What resources could support improvements?

CT:
- Challenges
    - Using smartphones
    - Engineering issues (e.g., connecting to a printer with a computer)
    - Dual verification
    - Websites with login requirements – passwords and verification codes are too hard for most seniors (many telehealth platforms require this)
    - One-to-one support is needed for questions regarding basic functionality of modern life, no class for nuanced questions (e.g., logins)
    - Likely a large percentage of seniors who don't reach out to the COA for technical assistance (boomers who are steadfastly "not seniors" or are still working)
        - Approx. 1,000 residents are active with the COA but only about 30-70 people use the senior center on a daily basis (very low use for a community this size) – center is small with little parking

    - There is a need for technical support at the state-level to provide senior centers with access – grant funds to obtain devices are not enough, need follow through, tech support for the tech supporters (COA)
    - Perception of privacy: many people need in-home support to connect their devices or get specific help, but are concerned about strangers coming in
        - Also poses a risk to helpers who may be accused of fraud or identity theft if something goes wrong, even if they're not at fault
    - Digital equity for FOOD
        - Sometimes elderly people require help with every step of applying for food assistance programs like SNAP or ordering groceries through delivery (signing up, entering credit card info/delivery address/drop-off time)
- Opportunities
    - Grant money
    - Partner with other communities and CoA's to enhance offerings or go in on grant application together
    - Get additional IT support from Easthampton

4. What outreach methods can be utilized to inform the senior population of programming opportunities?

CT:

- Social media
- No budget for paid media/advertising
- Newsletters – COA has a very popular newsletter (people read it for very specific things, skip notices for other things)
- City has little budget for advertising
- Word-of-mouth – limited capacity, small % of seniors who interact with COA
- Going to senior housing or places where seniors congregate, setting up flyers, holding office hours in satellite facilities in the community, would have to form close relationships with management of housing facilities
- There is a need to integrate the senior center into other forms of municipal outreach from the start (e.g., City events, programming) to avoid isolating seniors

5. What resources or funds are necessary to expand or improve existing services, if any?

CT:

- COA does not want to charge seniors for services related to essential services
- COA doesn't solicit funds as a municipality, but people donate to them
- IT department is not a standard IT department – the department does traditional IT work but is also very tied into socio-economic justice issues and has the know-how to get involved
- Funding
    - Was going to apply for EOHHS Enhancing Digital Literacy for Older Adults

Grant; deadline was May 2023

- Part of American Rescue Plan
- Could have been used for
    - Tablets, laptops, and computers
    - Monitors, keyboards, and computer mouses
    - Speech-to-text/Text-to-speech software
    - Mobile hotspots or stipends for home internet (for older adults who are not eligible for the FCC's Affordable Connectivity Program)
    - Part- or full-time staff or third-party contracts to provide training/support
    - Devices to help older adults access training (e.g., headphones, webcams)
    - Equipment for training sessions (e.g., projectors, example devices)

- Service Incentive Grants
    - Fund seed projects (examples below) which could lead to larger projects
        - Age and Dementia Friendly Capacity Building (up to $10,000 each)
        - Memory Café Innovations and start-ups (up to $5,000 each)
        - Nutrition Innovation and/or Expansion (up to $20,000 each)
        - Senior Center Modernization (up to $25,000 each)
        - Public Health Connections (up to $5,000 each)
        - Development and implementation of Outreach and Marketing of your COA to older adults and caregivers (up to $10,000 each)
        - Capacity-Building for Caregiver Respite Services or financial aid to enable Caregiver Respite Financial Assistance (up to $10,000 each)
        - Provision of Transportation Services to support older adults in maintaining their independence (up to $25,000 each)
    - RFP released on Sept 18 and must be completed by June 30 2024

- Partnerships
    - Health Equity Consortium
    - Bay State Health

- Digital Equity Collaborative
- MA Councils on Aging (given money directly from state to allocate to CoA's)

EASTHAMPTON STAKEHOLDER SESSION—PUBLIC HEALTH

Date: September 28, 2023

Attendees: Allison Egan (AE) – Director of Public Health, City of Easthampton

1. **What challenges has the Public Health Department experienced regarding internet access, device access, and digital literacy?**

AE:

- For clinic registration
  - Offer registration by web, call, or walk-in
  - General public uses web
  - Seniors most often call
- Homebound vaccination
  - The public health nurse and a member of the fire department offer in-home vax appts
  - Requires patient to complete a Google Form or call office to make appt
  - Can be very confusing to reschedule or fix any errors, especially for patients who are not tech savvy; also can be time consuming for staff, and takes focus away from other programs
- Online health forms
  - People nervous about sending forms through web or email (privacy, identity theft, etc)
- Hoarding
  - Not uncommon to have a resident with a mental health disorder or hoarding disorder to be disorganized with devices, information, bills, etc. --- ties in relevancy to financial literacy (when to pay bills, how to set up automatic payments, how to pay for health appts online)

2. **What strategies or initiatives has the Department implemented to ensure Easthampton residents have access to digital resources and devices for healthcare information and services?**

AE:

- Usually refer people with technical questions to library or Council on Aging
- We have one full-time social worker who can "hold residents' hands" and walk them through online logins and public assistance programs
  - Benefits
  - Health records
  - Housing --- very helpful for homeless populations
  - SNAP --- very helpful for homeless populations
- In emergencies, Public Health Dept has access to Fire Dept's emergency management and notification system (managed by Fire Chief Norris)

3. **Can you share any success stories or best practices in bridging the digital divide to improve public health outcomes?**

AE:

- During peak COVID vaccinations, Public Health Dept. set up folks at local Councils on Aging to sit on phone lines and book appointments for people – they prioritized local vaccinations first so larger metro areas (NY, Bos) couldn't take over. Also kept registration/appt links private until they felt community was adequately served

4. **What resources or support does the Department need to ensure residents are informed of health care events (i.e., clinics), emergency preparedness planning, and public health education?**

AE:

- Currently market events and content on website and Facebook – post 1-2x per week
- Opportunities
    - Would love to have an online payment option
        - Current system is just set up for cash and checks, which can be problematic if there's an issue with these payments; requires additional staff time and focus to rectify issues
    - Would love to have a digital inspection software
        - Current system is to complete a paper inspection, transcribe it to digital software like Word, print and file for the Department's records, and email copy to client
        - Digital software could increase the speed of inspections, make it easier to navigate historical records
        - Problem is the $$$ -- perhaps a regional shared subscription could help?
    - Would love to have a digital permitting software
    - Would love to enhance partnership with library or Council on Aging
    - Would also benefit from language translation software
        - There is a language barrier with some shop owners and food vendors, specifically around inspection and permitting
        - This can increase anxiety on both sides of the conversation and escalate the situation
    - For more consistent online interaction, the Dept would benefit from a Resident Engagement Coordinator or dedicated communications person to
        - Manage social accounts
        - Make public messaging
        - Serve as the general support line for the Dept
        - Perhaps could be fulfilled by a college intern or could share one communications person across several departments?

EASTHAMPTON STAKEHOLDER SESSION—LIBRARY

Date: September 28, 2023

Attendees: Katya Schapiro (KS—Director, Emily Williston Memorial Library

1. **Please discuss existing services or programming the Emily Williston Memorial Library provides concerning (1) broadband access, (2) computer/device access, and (3) digital literacy. What challenges and opportunities exist across these program areas?**

KS:

- Have 7 hotspots – consistently used and could use more
- 4 patron access computers – may be coming to the end of their useful life; library might look into receiving schools' or E-Media's hand-me-downs
- Wifi available in and around the building
- Library also owns laptops, but needs to get back into loaning them out
- There is tech help (1 on 1, no group classes because that would require more staff)
- Have online services: e-books, audiobooks, etc.

- Challenges
    - Inadequate staff time/hardware/dedicated staff visioning for long-term projects
    - Tech grants are good for big purchases, but not for support or replacement or maintenance
    - Can't offer 1-on-1 support in residents' homes; only offered in the building
    - Transportation (esp. for seniors) to and from tech courses or to library in general
    - Accessibility in the new building could be problematic and prohibit access to devices or services (first floor is not accessible, there are heavy doors, uncomfortable furniture, etc.)
- Opportunities
    - New building space will broaden device lending
    - Could reuse school or E-Media laptops
    - Coordinated staff time to plan for investment and issue resolution
    - Direct students and parents interested in getting hotspots to high school (have 40 that aren't often used)
    - Get more hotspots and make them holdable
    - In process of rolling out a new website with new accessibility features

2. **Have the Library's IT policies or programming changed in response to the COVID-19 pandemic?**

KS:

- In response to the pandemic, we upped our virtual/hybrid programming; this has trended down after COVID
- Upped number of available hotspots (still need more)
- Upped bike delivery service

3. **What demographic groups does the Library provide IT support for (e.g., students, seniors)? Please characterize the services provided for these groups.**

KS:

- Provides services to lots of seniors
- Provides printing services for patrons of the RMV down the street (don't have a public printer there if people forget documents or need to make copies)
- Provides services to those who lack access to or have slow internet at home
- Hotspots commonly used for --- need more for these, and KS want to make them holdable, right now they aren't
    - People who are traveling
    - Students
    - Unhoused populations

4. **Does the Library offer any translation and interpretation services regarding IT resources and programming?**

KS:

- Need additional translation services
- Library dials into schools for translation call-in line, this has been very supportive
- Another local agency that is supportive is the Center for New Americans in Northampton (they offer computer classes)
- Lots of Ukrainian and Haitian new arrivals in the community
- Historically large language groups and Spanish, Russian, Khmer
- Recommends Spanish interpreter for digital equity planning

5. **Is there significant participation in the programming you offer, and how do you market these resources?**

KS:

- Appts for tech help fill quickly and on-call requests are constant
- Could think more creatively about tech help; themed support courses are popular
    - Email / password security
    - Microsoft or Zoom licenses available
- We market through social media, flyers, and referrals
- Most people just come to us; we wish we could offer them more
- Need help with transportation to the events
- In new facility, we could partner with other orgs to get highest use of a computer lab (schools, night courses, etc.)

6. **Are there additional partnerships or resources that could support the Library's IT capabilities?**

KS:

- Existing partnerships
    - Schools
    - CoA
    - Community Center
    - Center for New Americans, NoHo (has computer classes)
    - Easthampton Neighbors (offer in-house tech support)

- Desired partnerships
    - Easthampton IT Dept
- Funding
    - State tech grant
    - Chamber of Commerce and business community
        - Eastworks' Will Bundy
        - E-Media—would like to set up device recycling or repurposing with them

EASTHAMPTON STAKEHOLDER SESSION—VETERANS SERVICES

Date: September 28, 2023

Attendees: Luz Ortiz-Rivera (LOR) -- Director, City of Holyoke Veteran's Services

1. **How has access to devices and internet (or lack of access) impacted your ability to access healthcare services and benefits as a veteran?**

LOR:

- For those veterans who are technologically inclined, and have access to devices and internet, access to healthcare is greatly facilitated, particularly if their health-care needs are met through other options such as virtual appointments (tele-health visits). This allows the working population more options and flexibility to their schedules.
- I do have to argue that it creates an inequality in healthcare access for veterans who are not as technologically inclined or have internet access. This majorly impacts the older veteran population. At times, the older veteran population relies on other caretakers for assistance in this field.

2. **Have you encountered any challenges related to digital literacy or access to technology when trying to access resources or information specific to veterans' needs?**

LOR:

- I have indeed. Some apps that are requested for veterans to utilize, be it for healthcare needs or benefits information, are not always user friendly. At times, the language is not very clear, and one must continue to research in order to find the answers. I personally will continue to conduct further research in order to aid my veterans, however, some veterans may not be as motivated or become frustrated with the operations of technology and will end their search for information.

3. **What initiatives or support have you found helpful in addressing digital equity issues within the veteran community, particularly for those with limited access to devices and the internet?**

LOR:

- As a VSO, I always encourage my veterans to call me for anything they need. I have made appointments with veterans in which I have taught them how to navigate a computer, or their smartphone, how to utilize apps for information, and how to safely navigate the internet. My department is still attempting to create a computer room for Veterans to come in and learn more about computers or

utilize them to work on resumes as well as apply for jobs. There are work centers that have a similar set up, but as a VSO, I understand Veterans may not always feel comfortable in such settings. We want to create a safe space for veterans where they can feel at ease when coming to visit our department.

4. **How can the City's administration or other organizations better serve veterans in terms of improving access to devices and/or internet?**

LOR:

- I believe it is important for the City's administration to be aware and involved with veterans in order to better assist in their needs. Prior knowledge of their struggles can help create a structure of tasks that need to be accomplished in hopes to better support veterans. Creating that supportive network is the key to assisting the veterans in our communities. Not all veterans are aware of all the knowledge and assistance there is to support them and being able to provide them with that knowledge and assisting them, especially on a one-to-one basis, really makes a difference for them. And not just the veterans, but their families as well. I believe that creating a space and time for veterans to come in and learn about technology and providing them with access to the internet does have a grand impact on their abilities.

EASTHAMPTON STAKEHOLDER SESSION—E-MEDIA

Date: September 28, 2023

Attendees: Jeff Mastroianni (JM)—Director, Easthampton Media

1. **What challenges has E-Media experienced regarding internet access, device access, and digital literacy?**

JM:

- Challenges
  - Bandwidth to upload
    - Currently livestream 3 HD TV channels 24/7
    - Publish and move large data files
    - 200 download speed vs. 12 upload speed – lots of wear and tear on tech
  - Streaming is good, which is good for people watching content anywhere, but bad because people aren't paying for cable (E-Media funding has decreased 20% in past 5 years and Jeff expects it to keep declining)
  - Hard to come back from COVID: appx 3 years of low use
  - Translation not historically a problem
    - Everything on YouTube automatically closed captioned – is this translated? Unsure..
    - Streaming: E-Media just picked up live captioning for broadcasts 1 year ago and, within the next two months, expect to caption in other

languages
        - This is expensive, and Jeff hopes to get an underwriting sponsorship to help pay for this service ($3500 for 500 hours, or appx 2 years of captioning services, probably will be more for live translation)
- Opportunities
    - GoNetSpeed fiber – would be best to get mills (or somewhere near mills) served fist

2. How successful has the membership program been? What are the most common reasons for residents using E-Media's technology and services?

JM:

- Services
    - Podcast studio
    - Blackbox broadcast facility (for TV or theater performances)
- Membership
    - All services are membership based; membership gets you
        - Access to technology, services, and support
        - Membership numbers growing, managed through SOS platform on new website

3. How do you market your services to the community? Do you target specific populations (i.e., students, teachers)?

JM:

- Marketing could be better
    - Don't have any ads on TV or commercials
    - Advertisement primarily conducted through word of mouth, tabling, social media
    - It is time consuming and expensive to have a full staff member working on this
    - Good thing is that a new website rolled out in spring which has an internal SOS platform to manage membership
- Targeted populations
    - Schools
        - Have interns through High School and Williston school)
        - Working to establish a media program or club at the HS
    - Older folks
        - Volunteers are primarily retired folks, usually tech savvy
    - Other non-profits who are doing events (i.e., library)

4. How do you reach people who may have limited access to traditional media channels and/or the internet?

JM:

- We really don't… that's the nature of our work

5. **What additional partnerships or support does E-Media need to further their mission and provide necessary services to Easthampton? For example, financial support, additional staffing, more physical space, etc.**

JM:

- Funding
    - Decreasing cable subscribers directly affects our funding (down 20% over past 5 years)
    - There is legislation at state level to change the funding mechanisms for access sites such as E-Media
    - **An Act to modernize funding for community media programming**
        "The "Act to Modernize Funding For Community Media Programming" is proposing a five percent fee on digital streaming providers, based on a company's gross annual revenue in the state. A portion of the fee would be distributed to municipalities for the support of their community media centers — colloquially known as public access television."
- Partnerships
    - Schools
    - Library
    - CoA / senior center
    - IT Dept – wants to generate content with them specifically for this Digital Equity Plan
- Staffing
    - Currently staff =
        - 2 full time staff
        - 1 part-time admin
        - 1 part-time operations manager
        - 3 per diem producers

APPENDIX II

Public Meeting 1

DATE:	October 25, 2023
TIME:	6 PM
LOCATION:	Mountain View School
ATTENDEES:	Luke Mitchell, VHB
	Jennifer Nelson, VHB
	Christa McGaha, VHB
	Mayor LaChapelle, City of Easthampton
	IT Department, City of Easthampton
	Easthampton Community

Agenda

- Luke Mitchell and Jennifer Nelson presented a brief slide presentation about the Digital Equity Plan purpose, planning process, existing conditions analysis, and notes from the various stakeholder sessions held to date.
- Following the presentation, VHB staff sat with attendees and discussed considerations for the plan, including the state of broadband access and device access, and the availability of digital literacy education.

Findings

- The event was attended by 8 individuals, including the Mayor, the City of Easthampton IT Department, state legislative aids, a digital equity representative from Baystate Health, and Easthampton residents.
- Attendees provided comments, transcribed as follows.
    - One attendee was the former Director of Deployment at Comcast, now lives in Westfield, just stopped by to see what was happening and if he could give any input. Jennifer asked him the following questions and received answers:

- Q: What makes towns ripe for local broadband deployment and operation?
- A: the town should own the poles (which by-passes any pole fees and often tough collaboration with other pole owners/operators; have make-ready in place. Not many towns can get municipal broadband if they don't own the poles. And it is SO expensive to install new poles or dig broadband trenches:
    - Price for aerial installation = $25k/mile
    - Price for trench installation = $60k/mile

- Q: Examples of municipal broadband around western/central MA?
- A: Westfield could do municipal broadband because they owned the majority of poles in the town and there was staff/resident willingness to participate

- Q: Discussion of Easthampton and GoNetSpeed (or any other private ISP trying to come in)
- A: Verizon can drag their feet because the town has no leverage. If anyone could help move this process along, it would be the state.

- Q: What could the town do if they want to extend broadband to currently unserved or underserved residents?
- A: If the town could offset some construction cost for installation through federal or state money, they could get the ISP to install. Installation cost is the most prohibitive for getting residents access to broadband; if the ISP don't think they can offset it, they won't install.

- Q: What about the current quality of services?
- A: Charter has good service and customer service management

- Q: Differences between coax and fiber?
- A: Fiber is more reliable -- it's generally harder to damage the line. It is also faster and doesn't have to be amplified. In contrast, coax can be damaged if a tree falls on it or something, causing everyone from that point onward to lose connection. It also requires amplification about every half mile, which degrades the quality of the connection as you get further from the main power source. Coax cables are cheaper and more widespread for this reason. https://www.astound.com/business/smb-insights/fiber-vs-coax/

    - Q: Words of wisdom for GoNetSpeed and Easthampton?
    - A: Be very careful with the contract language re: how many homes per square mile GoNetSpeed will install for and service (lower density = less likely to be serviced because profit margin is low). Also be sure to include 100% deployment to future development - you don't want to agree to 100% deployment, but then have GoNetSpeed walk back their talk to have only 100% build out at the time of installation. Make sure future homes and apartments will be accounted for through specific contractual language.

- Christa sat with the digital equity leader from Baystate Health and 2 other attendees, who provided the following feedback.
    - Seniors need one on one or group training
    - Libraries -- FCC has regional trainings? -- Write letters
    - General service notes: Service is spotty and weather dependent
    - Mass Broadband 123 in the region -- Most is installed aerially (on poles) – operated by Local Linx
    - Other resources: 5 College Network, TEK Collaborative, Western MA Digital Equity Alliance, Tech Goes Home, Tech Foundry, FBI (How to Be Safe Online), Greater Easthampton Chamber of Commerce (Networking Business Model?), small business administration has virtual and in-person trainings)
    - Schools: E-Rate doesn't allow (censors content)
    - Piloted statewide projects
        - Unfunded Device Initiative
    - Public wifi for farmers market? Credit card readers won't run on guest wi-fi
    - Explore buying more fiber
    - Purchase services on lines?
    - Right of way permit often required for installing fiber

APPENDIX III

Public Meeting 2

DATE:	February 25, 2024
TIME:	6 PM
LOCATION:	Mountain View School
ATTENDEES:	Luke Mitchell, VHB
	Jennifer Nelson, VHB
	Christa McGaha, VHB
	Mayor LaChapelle, City of Easthampton
	IT Department, City of Easthampton
	Easthampton Community

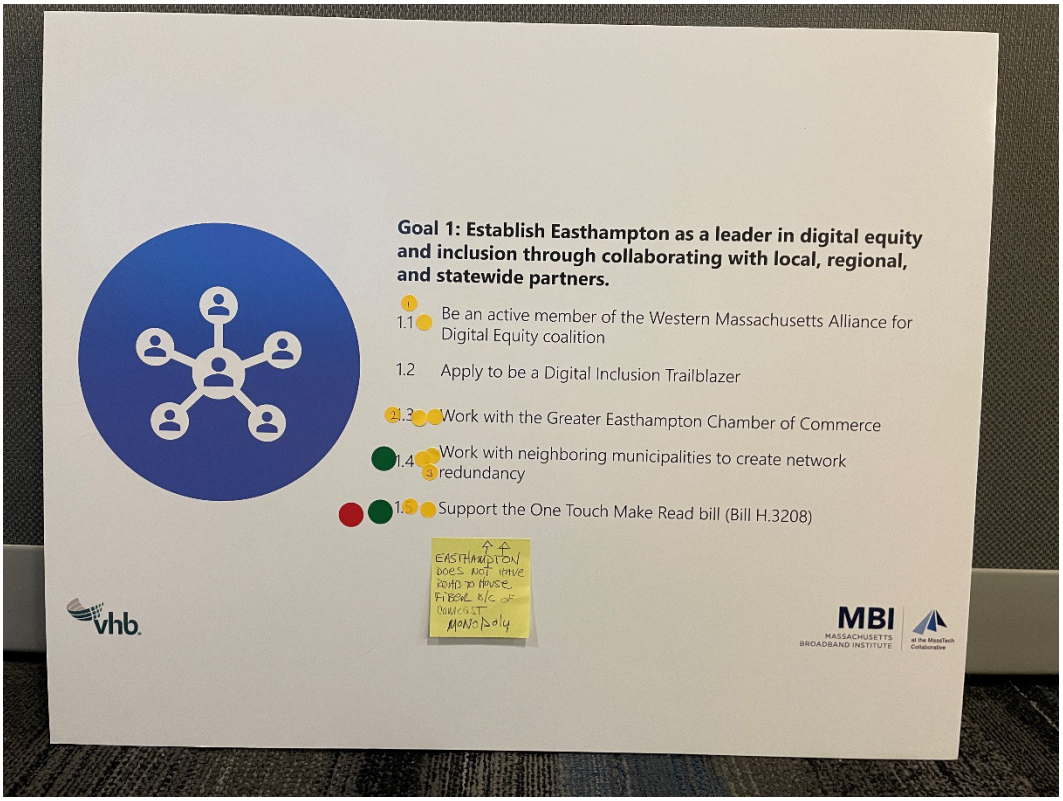
Agenda

- Mayor LaChapelle welcomed the crowd and provided a brief overview of the purpose of the Digital Equity Plan.
- Jennifer Nelson presented a brief slide presentation about the Digital Equity Plan purpose, planning process, current work to date, and the resulting goals and action items.
- Following the presentation, attendees were asked to move around the room and visit seven poster boards, each with a goal and its associated action items, to provide feedback or new ideas:
    - Goal 1: Establish Easthampton as a leader in digital equity and inclusion through collaborating with local, regional, and statewide partners.
    - Goal 2: Improve the efficiency, efficacy, and quality of local digital equity initiatives by prioritizing City-wide knowledge- and resource-sharing.
    - Goal 3: Expand digital inclusion through community outreach and strategic long-term planning.
    - Goal 4: Ensure affordable and reliable high-speed internet (100/20 Mbps) access for all community members.
    - Goal 5: Facilitate access to digital devices both in the home and in the public realm.
    - Goal 6: Promote digital literacy with community education programs to empower individuals with the skills to use digital technology effectively.
    - Goal 7: Make Easthampton a Smart City.
- Attendees were asked to indicate their top three action items for each goal using sticky dots or provide comments on post-it notes.

Findings

- The event was attended by 8 individuals in-person, and 6 tuned in to the Zoom webinar facilitated by Christa.
- Attendees provided comments, transcribed as follows.

- **Goal 1: Establish Easthampton as a leader in digital equity and inclusion through collaborating with local, regional, and statewide partners.**



Attendees highlighted their top 3 goals as:

- **1.3** Work with the Greater Easthampton Chamber of Commerce
- **1.4** Work with neighboring municipalities to create network redundancy
- **1.5** Support the One Touch Make Ready bill (Bill H.3208)

Attendee added one sticky note:

- **1.4** "Easthampton does not have road to house fiber because of Comcast monopoly"

› **Goal 2: Improve the efficiency, efficacy, and quality of local digital equity initiatives by prioritizing City-wide knowledge- and resource-sharing.**

Attendees highlighted their top 3 goals as:

- **2.2** Create and maintain maps of fiber and cable networks
- **2.3** Generate an Asset Map
- **2.5** Share existing software packages across City Departments

Attendee added one sticky note:

- **2.5** "Share w/ schools?"

› Goal 3: Expand digital inclusion through community outreach and strategic long-term planning.

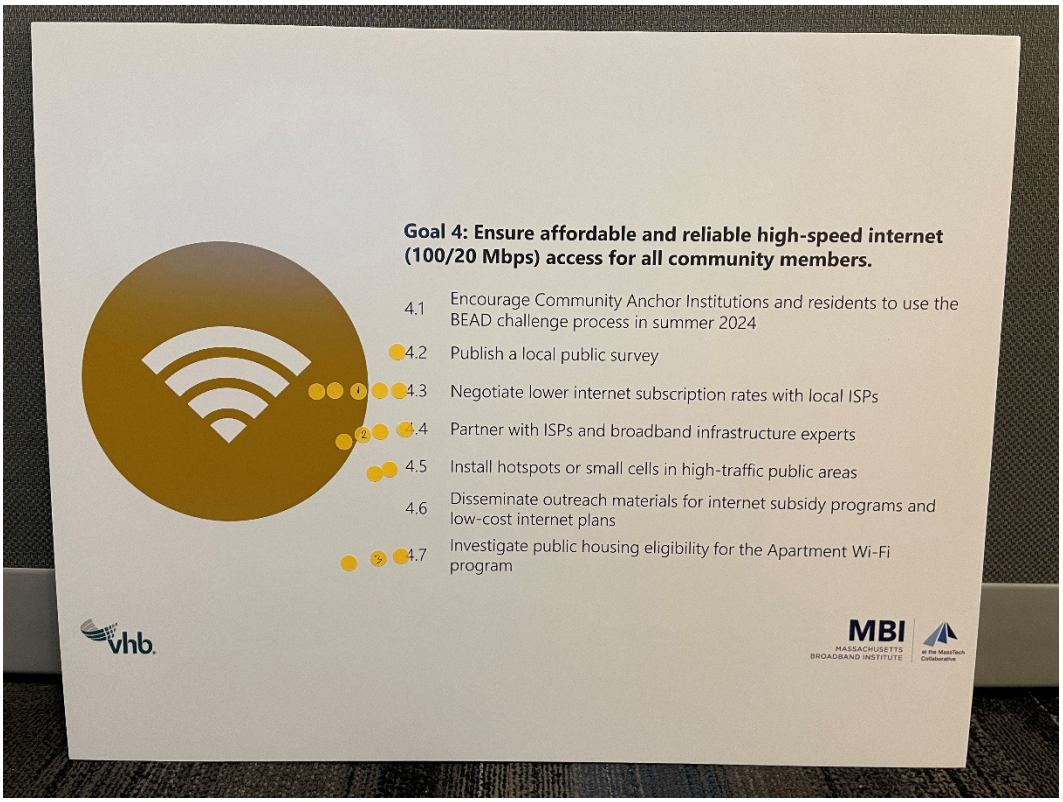
Attendees highlighted their top 3 goals as:

- **3.1** Hire a Resident Engagement Coordinator
- **3.2** Collaborate with E-Media and other local media outlets
- **3.3 and 3.4** were tied with 2 votes each

Attendee added one sticky note:

- **3.1** "So, so, so important"

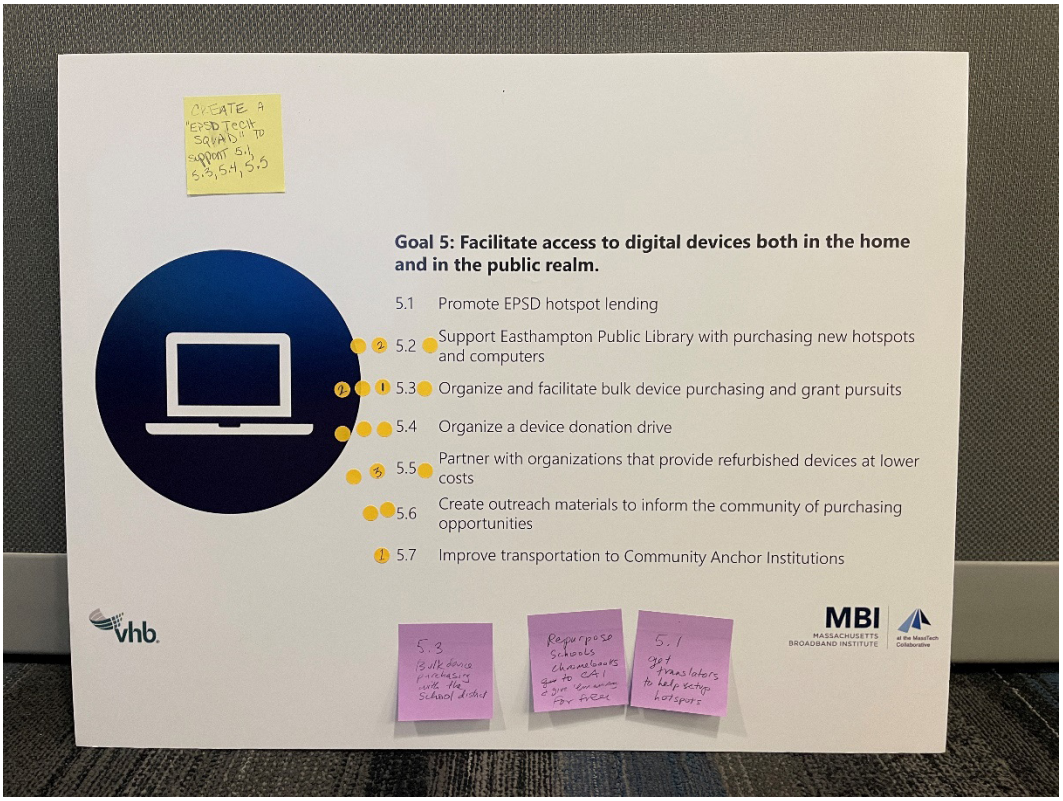
› **Goal 4: Ensure affordable and reliable high-speed internet (100/20 Mbps) access for all community members.**



Attendees highlighted their top 3 goals as:

- **4.3** Negotiate lower internet subscription rates with local ISPs
- **4.4** Partner with ISPs and broadband infrastructure experts
- **4.7** Investigate public housing eligibility for the Apartment Wi-Fi Program

› Goal 5: Facilitate access to digital devices both in the home and in the public realm.



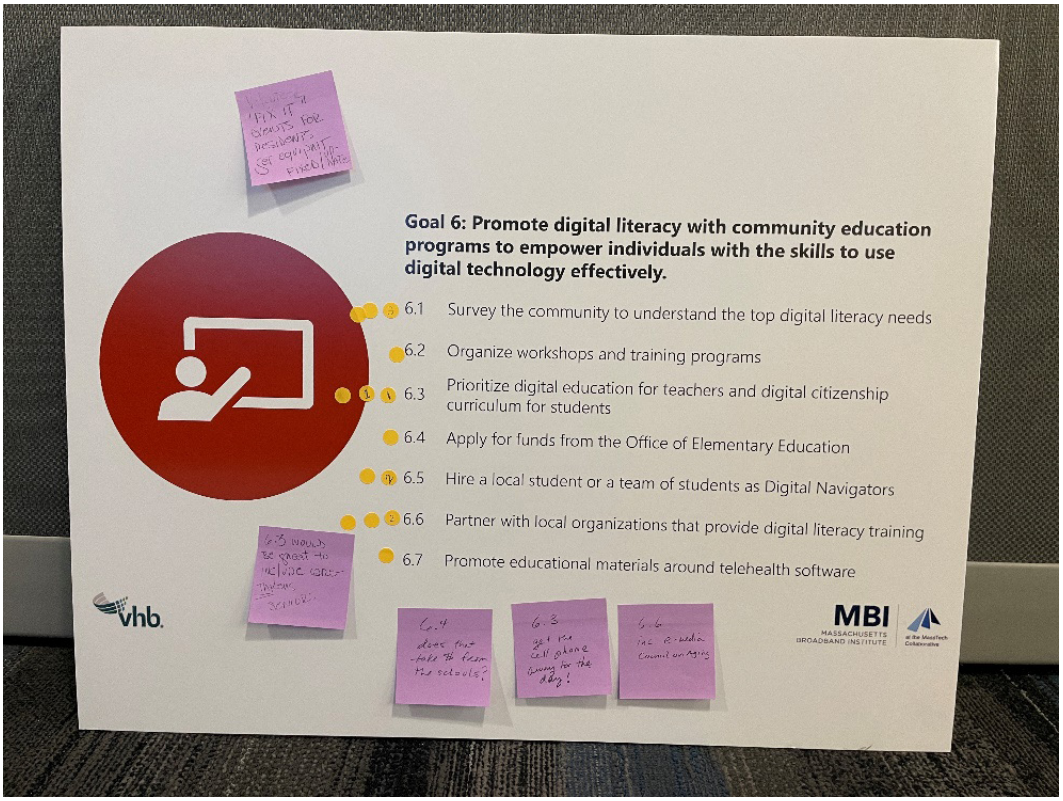
Attendees highlighted their top 3 goals as:

- **5.3** Organize and facilitate bulk device purchasing and grant pursuits
- **5.2, 5.4, 5.5** tied with three votes each

Attendees added four sticky notes:

- **5.1** "Get translators to help set up hotspots"
- **5.3** "Bulk device purchasing with the school district"
- "Create a 'EPSD Tech Squad' to support 5.1, 5.3, 5.4, 5.5"
- "Repurpose schools Chromebooks give to CAI and give 'em away for free"

› **Goal 6: Promote digital literacy with community education programs to empower individuals with the skills to use digital technology effectively.**



Attendees highlighted their top 3 goals as:

- **6.1** Survey the community to understand the top digital literacy needs
- **6.3** Prioritize digital education for teachers and digital citizenship curriculum for students
- **6.6** Partner with local organizations that provide digital literacy training

Attendees added five sticky notes:

- "'Fix It' events for residents get equipmt fixed/update"
- **6.3** "Would be great to include care-takers, seniors"
- **6.3** "Get the cell phone away for the day!"
- **6.4** "Does that take $ from the schools"
- **6.6** "Include E-Media, Council on Aging"

› Goal 7: Make Easthampton a Smart City.

Attendees highlighted their top goal as:

- **7.1** Create a Smart City Committee

Attendee added one stick note:

- "Enhances city depts ability to consolidate data across city."