DIGITAL EQUITY PLAN

June 2025

MBI
MASSACHUSETTS
BROADBAND INSTITUTE
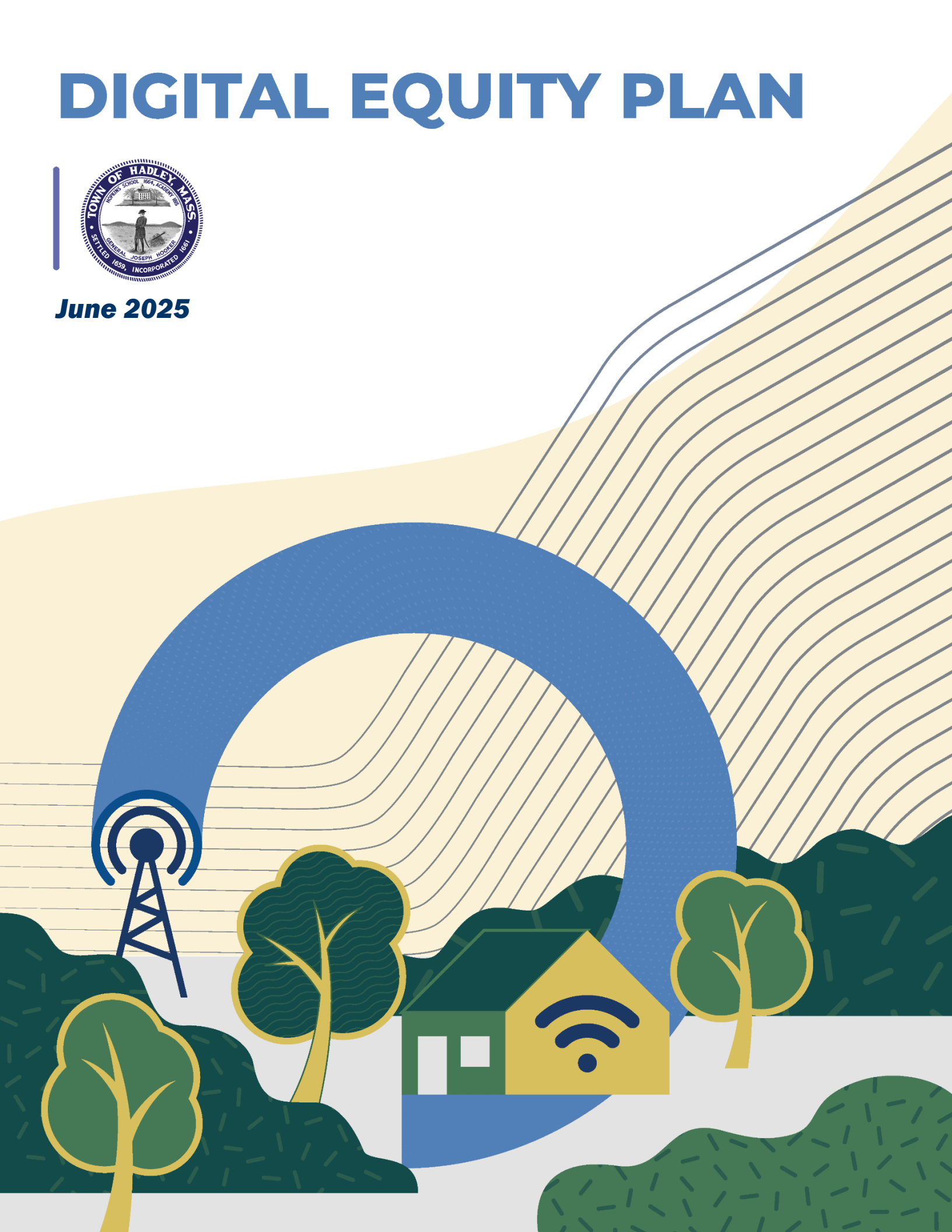
at the MassTech
Collaborative

Kimley》Horn

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1 Introduction

1.1 Project Background

Chapter 231 of the Acts of 2008 established the Massachusetts Broadband Institute (MBI) as a new division within the Massachusetts Technology Collaborative to provide for a program to achieve the deployment of affordable and ubiquitous broadband access for every citizen of the Commonwealth of Massachusetts.[1] This legislation provided funding to MBI to oversee and administer across the Commonwealth.

Additionally, the National Telecommunications and Information Administration (NTIA) allocated $147 million to Massachusetts under the BEAD program to build out broadband infrastructure to remaining unserved[2] and underserved[3] locations across the state.[4] The NTIA has also allocated $1 million to Massachusetts to develop a State Digital Equity Plan and another $14.1 million to implement that plan under the Digital Equity Act. Funds from the American Rescue Plan Act (ARPA) were then used to establish a Municipal Digital Equity Planning Program, supporting these efforts at the local level. Specifically, the Municipal Digital Equity Planning activities will accomplish two goals:

1. Guide municipal decision-making and investments that will increase access, adoption, and usage of the internet for the populations most impacted by the COVID-19 pandemic.

2. Prepare municipalities to submit grant proposals to existing or forthcoming state or federal programs to support digital equity activities.

1.2 What is Broadband?

The term broadband, also known as high-speed internet, is the transmission of data using a wide range of frequencies that allows for the fast and efficient transfer of large amounts of information. In contrast to traditional Digital Subscriber Lines (DSL) or dial-up access, which requires a telephone line to connect, broadband remains consistently connected to the internet without the need for manual connection initiation.

Broadband can be split into two (2) types, fixed and mobile. Generally speaking, fixed broadband includes those types of connections with a physical wire and cables to the home (e.g.: VDSL (Very High Speed Digital Subscriber Line), fiber optic, cable modem, fixed antenna, and satellite) and wireless broadband includes anything without a physical wire connection (e.g.: mobile and cellular). Broadband speed can vary based on factors such as technology, level of service, or congestion. In

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[1] Source: https://broadband.masstech.org/

[2] An unserved service project is defined as a project in which not less than 80 percent of broadband-serviceable locations served by the project are unserved locations. An "Unserved Service Project" may be as small as a single unserved broadband serviceable location (NOFO Section I.C.ee). An unserved location is defined as a broadband-serviceable location that the Broadband DATA Maps show as (a) having no access to broadband service, or (b) lacking access to Reliable Broadband Service offered with - (i) a speed of not less than 25 Mbps for downloads; and (ii) a speed of not less than 3 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds (NOFO Section I.C.dd).

[3] An underserved service project is defined as a project in which not less than 80 percent of broadband-serviceable locations served by the project are unserved locations or underserved locations. An "Underserved Service Project" may be as small as a single underserved broadband serviceable location (NOFO Section I.C.cc). An underserved location is defined as a broadband-serviceable location that is (a) not an unserved location, and (b) that the Broadband DATA Maps show as lacking access to Reliable Broadband Service offered with - (i) a speed of not less than 100 Mbps for downloads; and (ii) a speed of not less than 20 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds (NOFO Section I.C.bb).

[4] The current federal administration has halted the continuation of the Digital Equity Act and terminated grants to states as of May 12, 2025, including MA's award of $14.1 million.

March 2024, the Federal Communications Commission (FCC) voted to increase the threshold for speed from 25 megabits per second (Mbps) download speed and 3 Mbps upload speed to 100 Mbps download speed and 20 Mbps upload speed.

There are three (3) main metrics that must be met to an acceptable degree for the internet to be considered high-speed.

- **Speed** is typically measured in Mbps, which is a measurement of the amount of data capable of being transmitted each second.

- **Bandwidth** is the connection's capacity for transmitting data. Broadband is like an internet highway, the higher the bandwidth, the more lanes your internet highway has and the more devices you can connect simultaneously.

- **Latency** is the time it takes for the information to reach its destination related to potential delays. It is critical to applications that use live connections. The effects of high latency include jittery connections and frequent pauses while connected.

In 2015, the FCC defined high-speed internet as download speeds of at least 25 Mbps and upload speeds of at least 3 Mbps. In order to keep up with the increasing data demands, a new definition of "high-speed" is recommended by the 2021 Infrastructure Investment and Jobs Act (IIJA). The law sets a minimum threshold of 100 Mbps download speeds and 20 Mbps upload for new projects to receive federal broadband funds.

1.3   What is Digital Equity and Why is it Important?

Digital equity is a concept that ensures individuals and communities have equitable access to and use of information technology, enabling them to fully participate in social and economic life. It recognizes that in today's digital age, access to technology and the internet is essential for various aspects of life, including education, employment, healthcare, and civic engagement.

According to the National Digital Inclusion Alliance (NDIA), "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. Digital Equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services."

1.4   Vision and Goals

In the spring of 2024, the Town of Hadley completed a license renewal with Charter Spectrum. This license renewal had the following observed impacts on the community:

1. Identification of underserved areas where users are either unable to obtain cable and internet from Charter Spectrum or they cannot afford the capital costs to bring in coaxial cable to their homes/businesses.
2. Noted desire for more choice of internet provider, specifically municipal fiber. With high internet rates, residents expressed a need for price competition in the market and additional choice to provide the level of service needed.
3. Sustained connectivity to public access channels may be in jeopardy for all users as Charter Spectrum is a strictly internet-based system compared to traditional cable internet.

The Town sought to help their most vulnerable populations (seniors and low income) by:

- Implementing digital literacy courses, ensuring the underserved areas of Town have access to stable broadband
- Holding training on various health technologies such as medical devices and healthcare

- Identifying alternatives to the Affordable Connectivity Plan from April 2024

Consistent with the Massachusetts Broadband Strategic Plan, the strategy involves four (4) pillars.

- **Extend and Improve Broadband Access and Infrastructure.** Investments in reliable infrastructure where it's lacking, which may be found in pocket locations along town edges, low-density areas, and low- income urban neighborhoods.

- **Reaching Target Populations through Partnerships.** Best practice from the Mass Internet Connect implementation experience is that it is vital to have a distribution partner trusted in the community with the ability to reach the target population and deliver support on devices, subsidies, and digital literacy training.

- **Digital Literacy.** Go beyond connectivity by providing the necessary digital and computer skills for vulnerable populations. More than one out of four participants in the Mass Internet Connect program with MassHire has requested Digital Literacy support.

- **Adoption and Affordability.** Getting devices to people who need them and directing consumers to broadband service subsidies and low-cost service options.

2   Community Engagement

2.1   Steering Committee

The input of various municipal stakeholders was incorporated into the Digital Equity Plan through the Digital Equity Steering Committee (the Steering Committee). The Steering Committee included representatives from the Select Board; Hadley Media; Committee on Diversity, Equity, and Inclusion; Council on Aging; Public Library; Public Schools; Financial Committee; and members of the community. Members of the Steering Committee were interviewed for their feedback about existing conditions and challenges facing the community. In addition, a series of Steering Committee meetings promoted collaboration between the project study team and all committee members.

- **Steering Committee Meeting #1 (July 30, 2024)** – Introduced the Steering Committee to the project study team, explained the concept of the Digital Equity Plan and initial research findings, and held an open discussion for any additional information to consider. A high priority in the discussion was how to best share the MBI Survey (see Section 2.4.1 for additional information) with the public and ensure accessibility for older adults, non-English speaking, and low-income populations.
- **Steering Committee Meeting #2 (August 13, 2024)** – Determined the stakeholders who would be interviewed for the Digital Equity Plan and further strategized the distribution of the survey to the public.
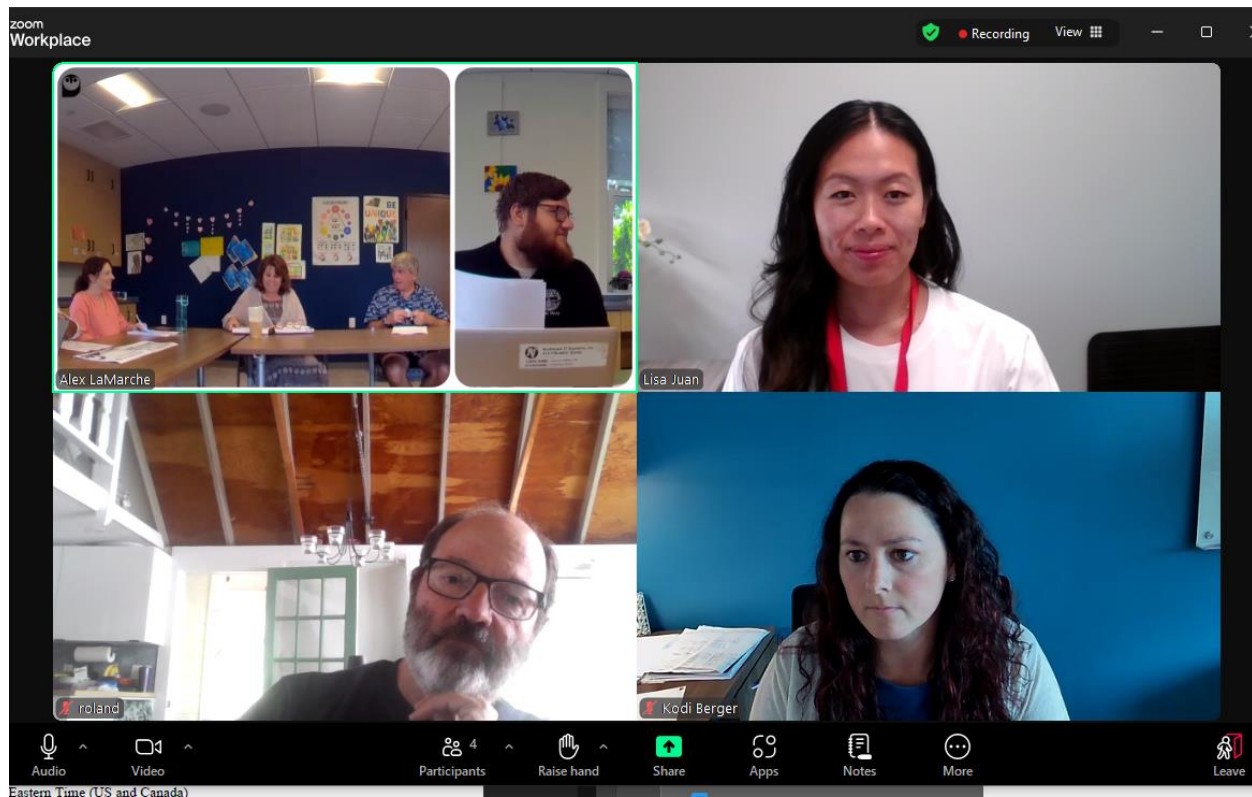

Figure 1. Steering Committee Meeting #1 Group Photo

2.2   Stakeholder Interviews

During the development of the Digital Equity Plan, the consultant team interviewed stakeholder groups to receive insight on challenges and opportunities in their work and personal lives. The following groups were selected to proceed with interviews:

1. Annie McKenzie, Superintendent of **Hadley Public Schools**
2. Patrick Borezo, Director of **Hadley Public Library**
3. Nichelle M. Liquori, Senior Services Director of **Hadley Council on Aging**
4. Molly Keegan, **Cooley Dickinson Hospital** Board of Trustees Member and **Select Board Chair**
5. Heidi Olmstead, Senior Administrative Assistant at **Hadley Fire Department**
6. Robb P. Levine, PA-C, MPAS, MS, Assistant Chief Medical Information Officer at **Mass General Brigham**

2.3   Community Outreach and Workshops

In addition to the Steering Committee and stakeholders, the broader Hadley community was involved in the development of the Plan through a series of community events during which citizens could provide input on the challenges they face with digital access and literacy.

Two events were held at the Hadley Senior Center on **January 7, 2025** and provided opportunities for citizens to learn about Digital Equity and provide their input for incorporation into the plan. The Digital Equity Fair was an informal event for citizens with limited availability, and the Public Hearing included a formal presentation explaining the concept of digital equity, the state of broadband in Hadley, and how public input would be incorporated into the Plan.

Figure 2. Community Workshop Public Input on Specific Locations – broadband quality

2.4 Community Surveys

2.4.1 MBI Survey

MBI also prepared a survey to assess broadband access and needs across the state. This anonymous survey included questions regarding residents' internet service provider, type(s), quality, and cost, as well as questions regarding their personal experiences with device access and desires to participate in training opportunities. As of January 2, 2025, Hadley residents had submitted 192 responses to the survey. Some of the information gathered from these responses included the following:

- On average, respondents reported spending $102 per month on their internet subscription.
- 25% of respondents indicated their internet services "does not work well enough" to support their daily needs.
- 40% of respondents indicated they were interested in training, with a preference (64%) toward online trainings.
- Most households reported accessing the internet using a cellphone or a laptop computer, with desktop computers and tablets being slightly less common.

2.4.2 Hadley Public Library Survey

The Hadley Public Library also conducted a series of three surveys to incorporate feedback into their long-range planning document. The surveys were available electronically on the Hadley Public Library website and asked about library patron demographics, interest in the library as a public meeting space, and prioritization of library resources. This data was shared with the Digital Equity team so that information regarding patron use of library internet, technology, and other resources could be incorporated into this Digital Equity Plan. Applicable findings have been incorporated into our **Key Findings**.

3 Community Assessment

Hadley is home to 5,250 residents and covers about 24.75 square miles, giving the town an overall population density of about 212 residents per square mile. Residences and businesses (potential internet connections) are primarily densely clustered along main routes and neighborhoods with several buildings in more rural parts of town, such as Honey Pot Road and Cemetery Road. This has led to most buildings being connected to fixed internet services but several buildings are isolated. Figure 3 below provides a visualization of building density across the Town.

The Town of Hadley is nestled along the eastern bank of the Connecticut River bordered by Amherst on the east, Sunderland to the north, and South Hadley to the south. Route 9, a major state road, cuts through the community from I-91 to Amherst. While Route 9 bisects the town from east to west, Route 47 traverses north/south along Hadley's western border near the river. Land in Hadley is currently divided into 3,067 parcels, according to data provided by the Hadley Board of Assessors, with 58% of all parcels being residential, 15% being farm and forest land (about 2/3 protected in Chapter 61-61a), and 9% being commercial/industrial/mixed use, as shown in Figure 4.

Figure 3: Map of Structures in Hadley
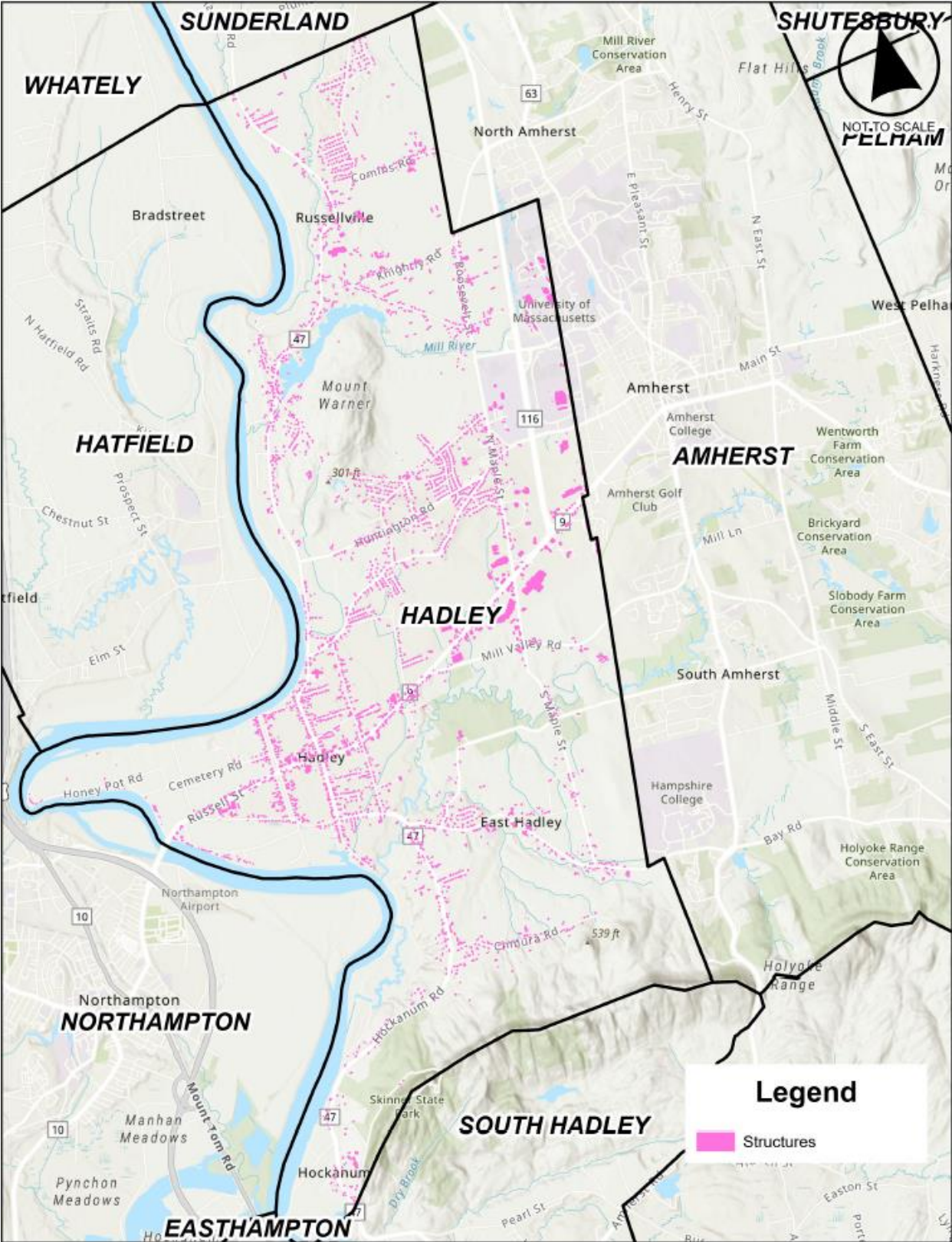
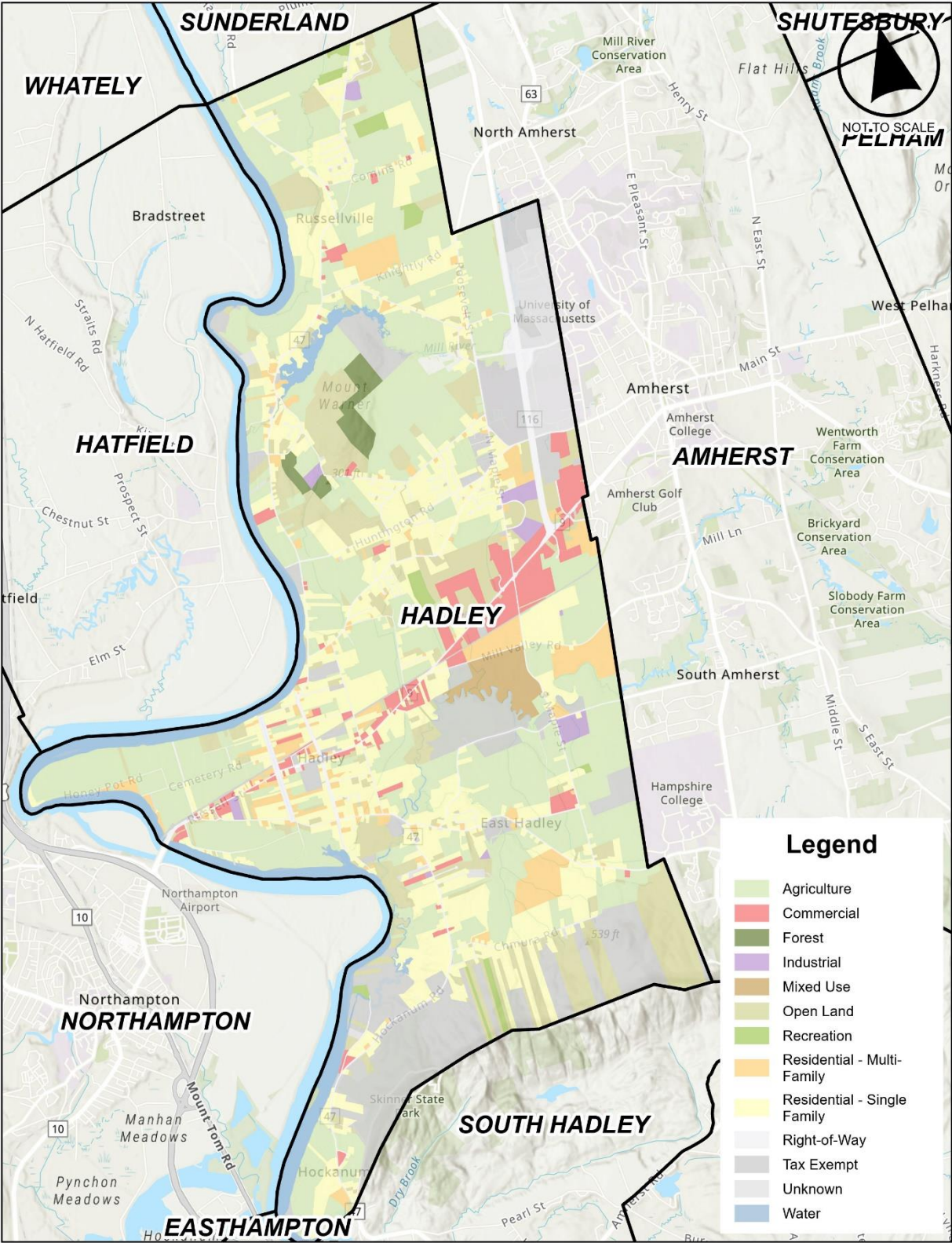**Legend**

- Agriculture
- Commercial
- Forest
- Industrial
- Mixed Use
- Open Land
- Recreation
- Residential - Multi-Family
- Residential - Single Family
- Right-of-Way
- Tax Exempt
- Unknown
- Water

Figure 4: Hadley Land Use Map

3.1 Demographics

KEY DEMOGRAPHICS INFORMATION

Table 1: Summary of Demographic information

Population[1]	Household Ownerships[1]	Race[2]	Language[2]	Education[2]	Disabilities[2]	Median Household Income[2]	Median Age[2]
5,250	31% occupied units are rental units 69% occupied units are owned	17.16% non-White	7.2% speak language other than English at home	60.7% have bachelor's degree or Higher	9% disabled	$112,450	48.7

[1] Hadley Master Plan, [2]US 2020 Census

About 17.16% of the Hadley population is non-white. The majority of the non-white population of Hadley are either Asian or multiracial. Figure 5 details the racial profile of the town. It is important to incorporate feedback from underrepresented non-white groups in Hadley to reduce any existing inequities and bridge gaps in access to technology and resources.
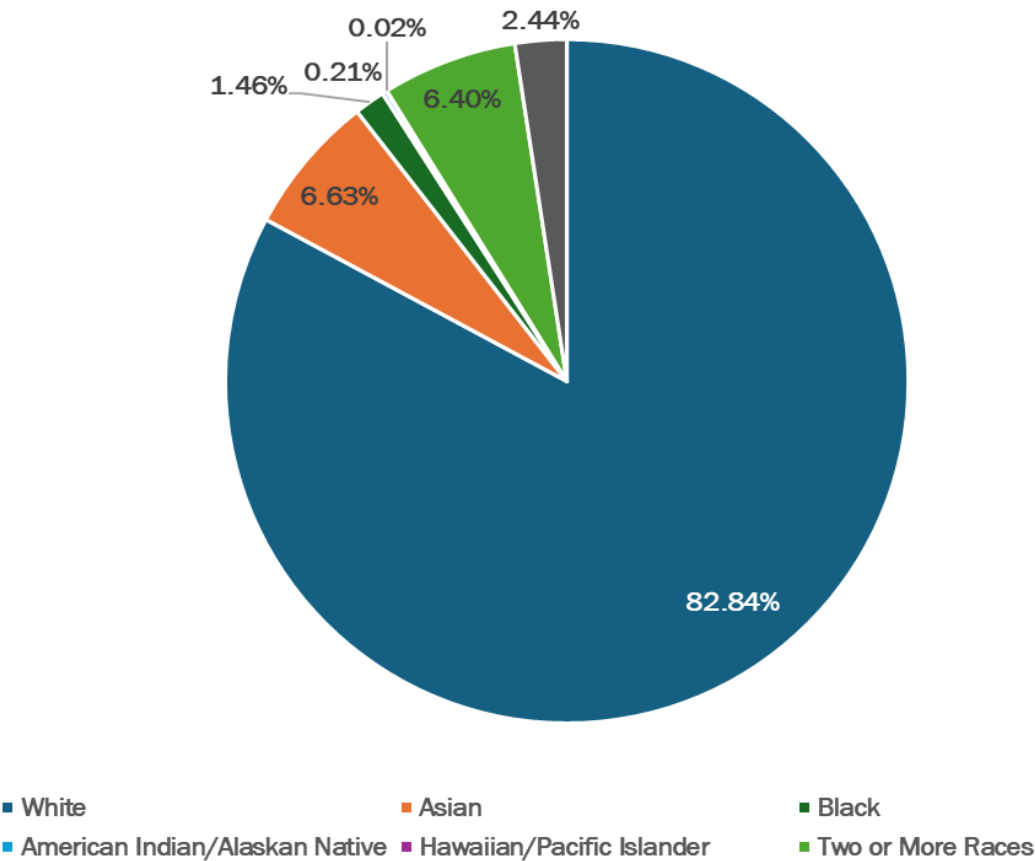

Figure 5: Racial Distribution of Hadley Residents

With about 24% of the population over the age of 65, the median age in Hadley (48.7) is over 10 years older than Hampshire County as a whole (37.3). Figure 6 illustrates the detailed age distribution for the town. Aging residents may face greater challenges being connected to broadband. For many, broadband offers a greater opportunity to utilize telehealth services and reduce the burden associated with seeing a doctor.

Median Age: 48.7

Under 20 Years, 18.17%

20 - 39, 22.19%

40 - 59, 27.72%
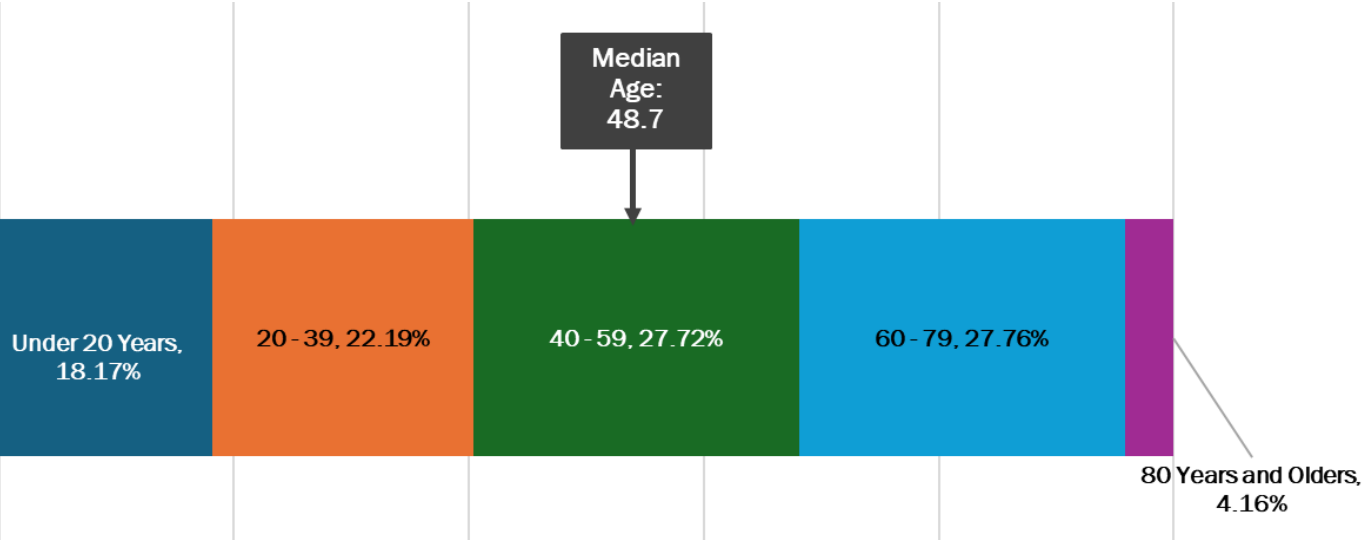
60 - 79, 27.76%

80 Years and Olders, 4.16%

Figure 6: Age Distribution of Hadley Residents

Access to telehealth services is particularly important to disabled residents, regardless of their age. According to the US Census, approximately 9% of the population of Hadley has at least one disability. The most common disabilities are shown in Figure 7, with ambulatory disabilities being the highest percentage. Despite the presence of disabilities across the population, the services and accommodation needed for each individual vary vastly. Digital literacy gaps are exacerbated by certain groups within the population that require additional intervention or support, and these gaps should be addressed accordingly in future implementations.

Cognitive	2.6%
Independent living	3.2%
Hearing	3.9%
Ambulatory	4.1%

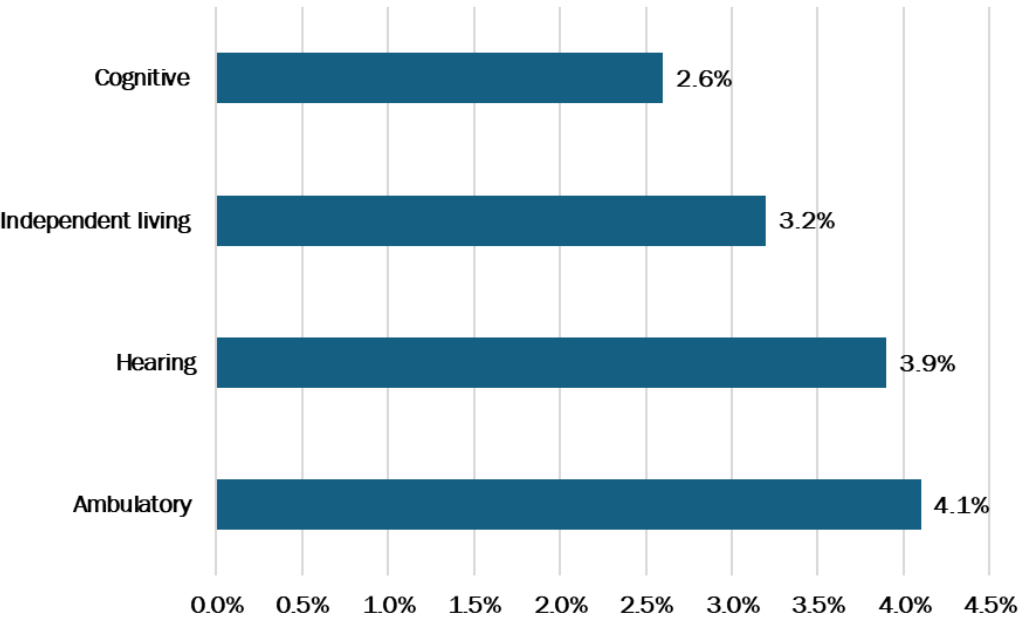0.0% 0.5% 1.0% 1.5% 2.0% 2.5% 3.0% 3.5% 4.0% 4.5%

Figure 7: Common Disabilities of Hadley Residents, US 2020 Census

Income disparities in Hadley were noted through the MBI survey. Approximately 20% of residents made less than $50,000 per year, while the median income was $112,450, over $30,000 higher than the median for Hampshire County. Figure 8 shows the overall distribution of income among Hadley residents.
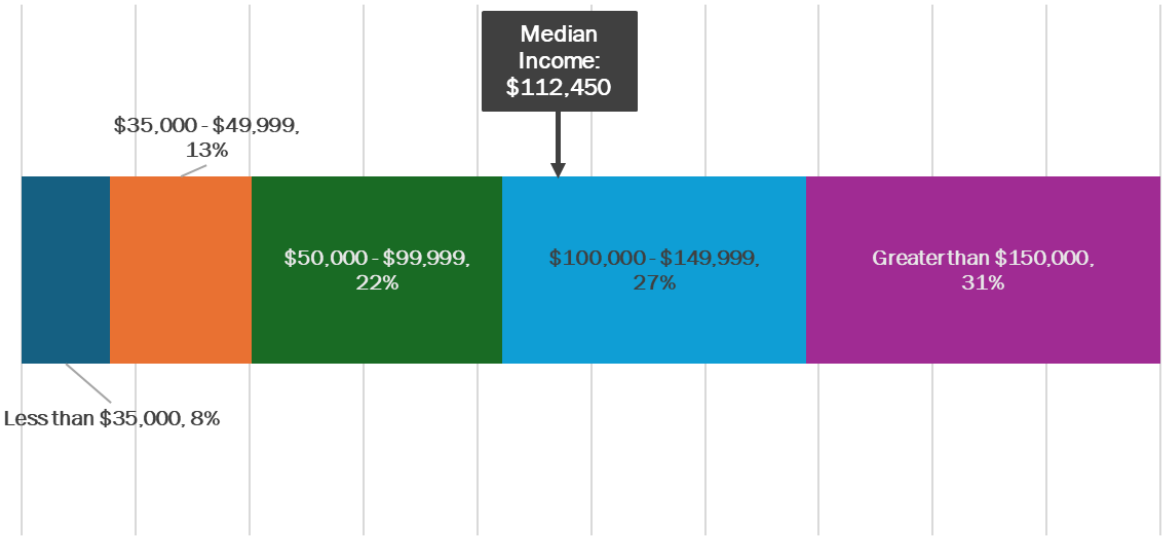
Figure 8: Income Distribution of Hadley Residents

Property ownership is another equity trend, as it demonstrates an ability to build equity. In Hadley, 69% of housing units are owned, 31% of which are owned free and clear. This could imply a high percentage of older, high-income residents. However, this is not true for all residents. Someone is considered "cost burdened" if they pay 30% or more of their income on housing alone. In Hadley, 14.8% of homeowners and 21.8% of renters are cost burdened. Among residents whose household income is between $50,000 and $70,000, over one-third fit into this category.

Figure 9: Property Ownership in Hadley

Additionally, while 76% of occupied housing units are classified as single-family detached homes, only 36% of homes house 3 or more people. Many older residents who are living independently may struggle to access broadband resources.
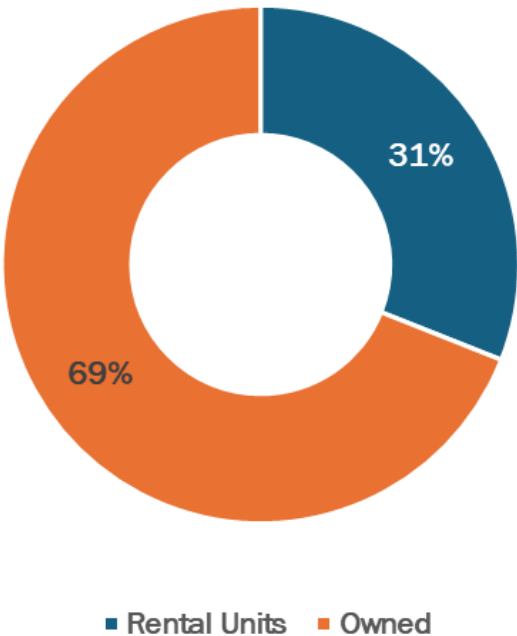
3.2 Broadband Access

In Hadley, there are six providers of fixed internet connections. All providers are available for connections to homes, while four (4) offer connections for businesses. These providers are listed, with their offered download and upload speeds, in Table 2. Note that some of these providers represent fixed options offered by wireless providers (i.e. the ability to install a Wi-Fi router in the home that is served[5] by wireless internet). Currently, Spectrum/Charter is the only provider offering a hard-wired (cable or fiber) internet option in Hadley. Additionally, only Spectrum and Starlink provide broadband access.

Table 2: Summary of fixed providers in Hadley

Provider	Residential		Commercial	
	Download (Mbps)	Upload (Mbps)	Download (Mbps)	Upload (Mbps)
Spectrum	1,000	35	1,000	35
HughesNet*	100	5	-	-
Starlink*	220	25	-	-
Viasat*	50	3	50	4
T-Mobile*	0.2	0.2	0.2	0.2
Verizon*	0.2	0.2	10	1

* Provider offers Wi-Fi in the home serviced by wireless internet or satellite

Wireless internet (cellular or satellite) is also available from four providers. These providers are listed along with their associated networks, in Table 3.

Table 3: Summary of wireless internet providers in Hadley

| Provider	Network	Download	Upload
New Cingular	4G LTE	-	-
Starlink	5G-NR	7	1
Viasat	5G-NR	7	1
Spectrum (business-only)	5G-NR	7	1

According to the FCC, 98.56% of Hadley is adequately served, 0.51% underserved, and 0.94% unserved. Where connected, 99.02% of Hadley internet meets the standard of broadband speeds (25 Mbps download and 3 Mbps upload). However, this only reflects the speeds offered by the providers and does not necessarily reflect what individuals are able to afford, nor does it reflect quality issues that may be present. The speeds of "served" locations are at least 100/20 Mbps

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[5] The National Broadband Map shows that a location has broadband service available at a speed of at least 100 Mbps for downloads and at least 20 Mbps for uploads and latency less than or equal to 100 milliseconds using Technology Codes 71 or 72, that location will be treated as "served."

across Hadley, qualifying as broadband. These quality and consistency issues were reflected in the public input.

According to public data, MassBroadband 123 (previously operated by Axia NGNetworks USA, now operated by Local Linx) and Windstream are two metro networks with resources in or near Hadley, as shown in Figure 10, that are not currently servicing Hadley residents or businesses.
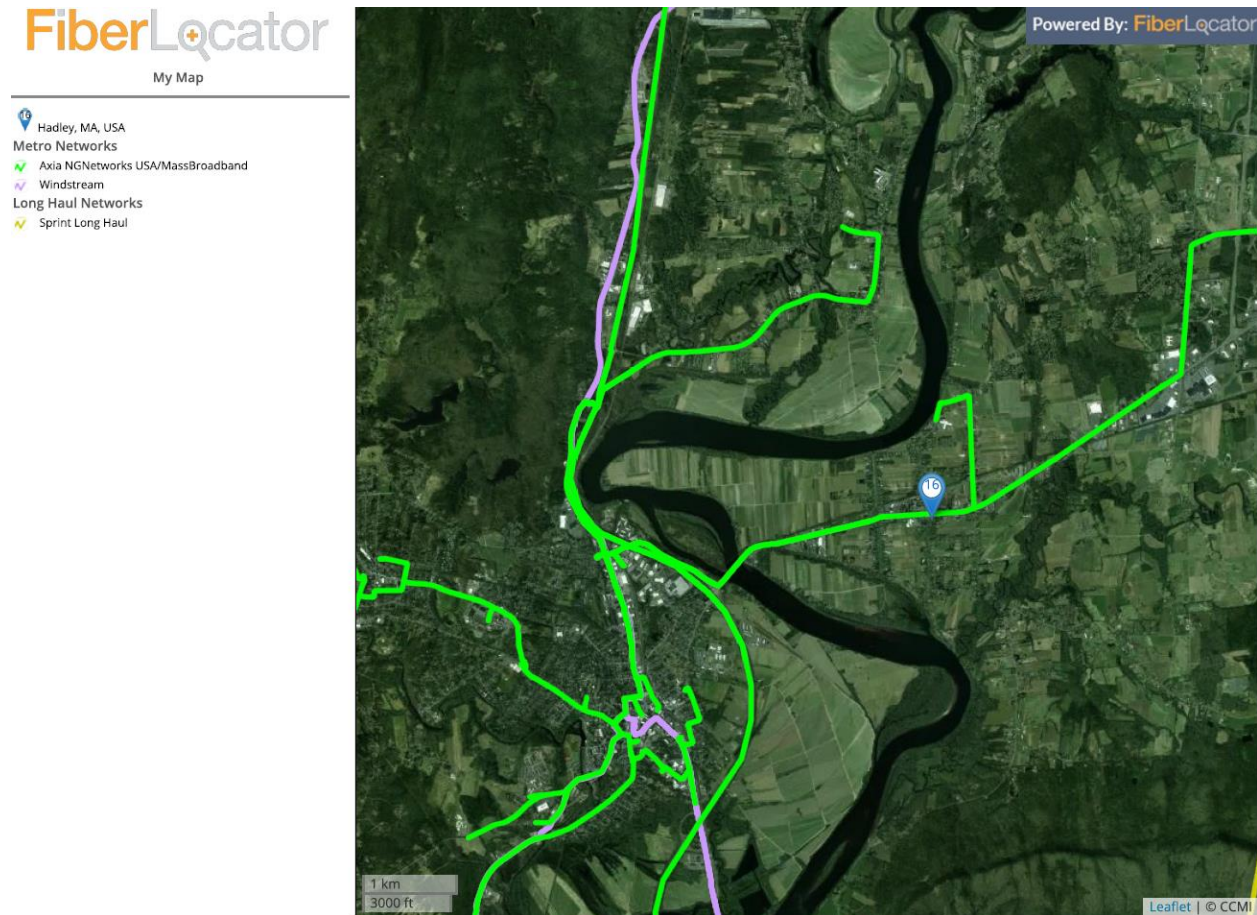
Figure 10: Fiber Providers in or Near Hadley

The **MassBroadband 123** network is part of a middle-mile fiber network built and owned by MBI to help bridge the gap between towns and internet service providers (ISPs) and bring broadband internet to communities without an existing network. This infrastructure is primarily along the Town's primary corridor (State Route 9) and would need expansions to reach most Hadley residents. In the future this service could be used as a backbone to bring a new ISP into the area or by the town to begin a municipal broadband network. In early 2025, the Town began conversations with Fiberspring – a local private ISP that was started in South Hadley as a municipal fiber program and now provides services to the nearby towns of Leverett and Shutesbury – to discuss the potential to utilize these resources to expand into Hadley.

In the case of **Windstream**, infrastructure would need to be built to bring the resources into Hadley, as well as to the residents and business. However, a provider like MassBroadband 123 could be used to bridge the gap. Bringing fixed competition into the area would provide options for the residents that are currently lacking service choice.

3.2.1 Federal Connectivity Programs

The **Affordable Connectivity Program (ACP)** offered monthly service and device discounts to eligible households to reduce the burden of internet and technology. Households were eligible for ACP if their income was at or below 200% of the federal poverty guidelines or if they received benefits from certain assistance programs or grants. In January 2024, there 270 ACP subscribers[6] within the Town's zip code. In 2022, it was estimated that 89 families and 713 individuals would qualify by income, out of 1,401 families and 5,122 individuals across Hadley. This program ended on June 1st, 2024, but it is possible that it will receive additional funding in the future.

Lifeline, another federally funded program through the Department of Telecommunications and Cable, was established in 1985 and has been available to support low-income households' access to broadband services. It has been noted that not all residents who previously received assistance from the ACP program may qualify for Lifeline, suggesting a potential gap in residents' ability to afford internet services.

The ACP offered a $30 per month subsidy, while Lifeline subsidy is only up to $9.25 per month.

3.3 Community Anchor Institutions (CAIs)

Community Anchor Institutions (CAI) are places such as schools, libraries, hospitals, safety entities, or religious institutions which support their communities access to and use of broadband service. In Hadley, there are several locations which either currently offer technical resources or have high potential to serve as CAIs in the future.

The **Hadley Public Library** has public access computers for residents, but use is limited based on demand to either 30 or 60 minutes. Expanding access to computers could help bridge gaps to broadband internet for those who are burdened not just by monthly service costs, but the cost of devices capable of connecting to the internet. Being open to the public during regular hours, the library can offer access to technology and direction to resources as needed by residents, in addition to the option of seminars or classes. The library has also offered resources for residents with vision loss, such as audiobooks and e-readers. Residents already use the library as a resource for their technology needs. A survey conducted by the library found that 62.7% of respondents went to the library to use computers, wireless internet, or printers at least once a year. 20.1% of respondents claim they would attend computer or technology programming at the library, if offered. In the next five years, 93% of respondents said that free wireless internet use was "essential" or "important," while 79.5% said the same in regard to wireless hot-spots to borrow.

The **Hadley Senior Center** offers one-on-one technology assistance to seniors. These services appear to be valued in the community, with 89% of respondents to the Livable Hadley Community Survey stating that they went to the Senior Center for information about technology services. In addition to one-on-one assistance, volunteers provide classes which connect seniors to other resources in Hadley. Tablets with connected Wi-Fi are also available to seniors.

Religious institutions may be used to serve as meeting places for digital literacy classes or technology support. Many religious leaders in Hadley expressed concern about the Town's digital connectivity during the COVID-19 pandemic, especially among older populations. Gaps in accessibility for vulnerable groups to attend services virtually deprived parishioners of an important aspect of identity and community. In Hadley and the surrounding area, institutions such as Wesley Methodist Church, Most Holy Redeemer Church, First Congregational Church, North Hadley

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[6] Based on data published by Universal Service Administrative Co. at https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/

Congregational Church, and Hampshire Mosque could serve as potential CAIs and help bridge these gaps.

Cooley Dickinson Hospital requires reliable and consistent access to internet and power. Though the main campus is in Northampton, there is a Family Medicine facility in Hadley which is utilized by a large percentage of Hadley residents. During emergencies or outages, Cooley Dickinson is well-equipped to provide the public with immediate access to broadband. This facility and its ancillary campuses could play a vital role in connecting its patients with internet to receive telehealth services.

Residents may also seek more established resources at **colleges and universities** in and around Hadley. Libraries and classes offered at these institutions could be valuable resources to those with the ability to regularly travel outside of town. A portion of **University of Massachusetts** is within the Town of Hadley and **Smith College**, **Mount Holyoke College**, **University of Massachusetts at Amherst**, **Amherst College**, and **Hampshire College** are all adjacent to Hadley.

3.4 The Alliance for Digital Equity

The Alliance for Digital Equity is a Western Massachusetts based coalition of community-focused organizations working toward digital equity for all people. The goal of the Alliance is to provide people with the access they need—to the equipment, infrastructure, and knowledge and skills—that will enable them to participate fully in the digital world, as shown in Figure 11. The Alliance works to develop big picture solutions as well as the routes that lead to them.

The Alliance plays several key roles to promote digital equity. The first is to help people understand what digital equity is, why it is vital to communities, and why it is a civil right for all people. The Alliance works at a grassroots level to raise awareness and to highlight community-focused efforts that help eliminate the digital divide. By bringing people and existing community resources together, the Alliance acts to increase the rate of positive change. Through collaboration, impact can be expanded by boosting the number of people reached and the number of people served.

Figure 11. The Alliance for Digital Equity

4 Key Findings

From public input and stakeholder interviews, challenges, opportunities, and resources were identified throughout Hadley in regard to digital literacy and access.

4.1 Barriers and Challenges

4.1.1 Vulnerable Populations

Different demographic groups may experience varying levels of digital literacy and access or have specific unaddressed needs compared to the general population.

Through stakeholder interviews and community outreach, several vulnerable populations were identified in relation to digital equity. These populations included older adults, non-native English speakers, and low-income individuals or families.

The Council on Aging and a representative from Public Safety also indicated that a digital connection (via social media, the organization's website, e-mail, etc.) to the entire community was critical to their ability to disseminate important information and communicate during emergencies.

4.1.1.1 Senior Population

With nearly a third of the Hadley population over the age of 60, it is essential to plan for Digital Equity with older technology users in mind. Those who were less exposed to technology in a formal context, such as through education or work, have been shown to be likely to have less interest or literacy with current technologies. It is also anticipated that a sustained effort of digital education will be needed as the pace of change in technology continues and seniors have fewer in-person options for keeping current or increasing their digital literacy. Older individuals can also be vulnerable to cybersecurity threats and scams, putting their personal data at risk.

Online resources can also be additionally helpful to older individuals, who are more likely to be faced with disabilities or limited mobility. Telehealth and other online services can reduce the effort associated with receiving the same services in-person, out of the house. As of September 2024, only 8% of visits to Cooley Dickinson Hospital were virtual in the previous six-month period. The combination of both digital literacy and access to the internet pose a challenge to the senior population, who would benefit greatly from telehealth appointments as they expand in availability in the future.

4.1.1.2 Multilingual Population

Approximately 7% of the Hadley population speak a language other than English at home. While the second most common language spoken is Spanish, other languages include Haitian Creole, Polish, and Chinese. Language barriers can create a major divide between non-native English speakers and the resources they need, including internet and devices capable of accessing the internet. While many stakeholders have expressed the importance of making resources available across multiple languages, there are few efforts currently to accomplish this.

In schools, 4.8% of students speak English as a second language, while 3.6% are considered English-Language learners, which reflects that they speak multiple languages, of which English is one. As school-provided computers or personally registered devices become more prevalent, school work has increasingly switched to digital formats, as have assigned reading materials. Students within the multilingual population may require access to internet in their homes for translation services and additional instruction outside of classroom time in addition to class assignments and homework.

4.1.1.3 Low-income Population

Costs can be substantial barrier to broadband access for lower-income individuals and families. 27% of survey respondents said that it is "hard" or "somewhat hard" to pay their monthly internet bill, which is costs $102 on average. Additionally, 26% of students were noted to be a part of a low-income family. More than 25% of survey respondents stated that they had heard of the ACP, suggesting that they were aware of the program while it was available. Finding a suitable substitute for this program will be required to support the populations that require assistance.

Information provided by the schools regarding 2023-2024 enrollment:

Selected Population	%
First Language Not English	4.8%
English Language Learner	3.6%
Students with Disabilities	18.6%
High Needs	39%
Low Income	26%

4.1.2 Broadband Access and Quality

The vast majority of resident as in Hadley have access to and are subscribed to broadband internet. According to ACS data, 6.89%[7] of residents are currently subscribed to dial-up or do not have an internet service subscription, and according to the MBI survey, approximately 1 % of respondents stated they do not have internet service. While promising, access to the internet does not convey the quality of the broadband being provided. Nearly three-in-ten respondents said that their internet service was "not good enough" for their needs.
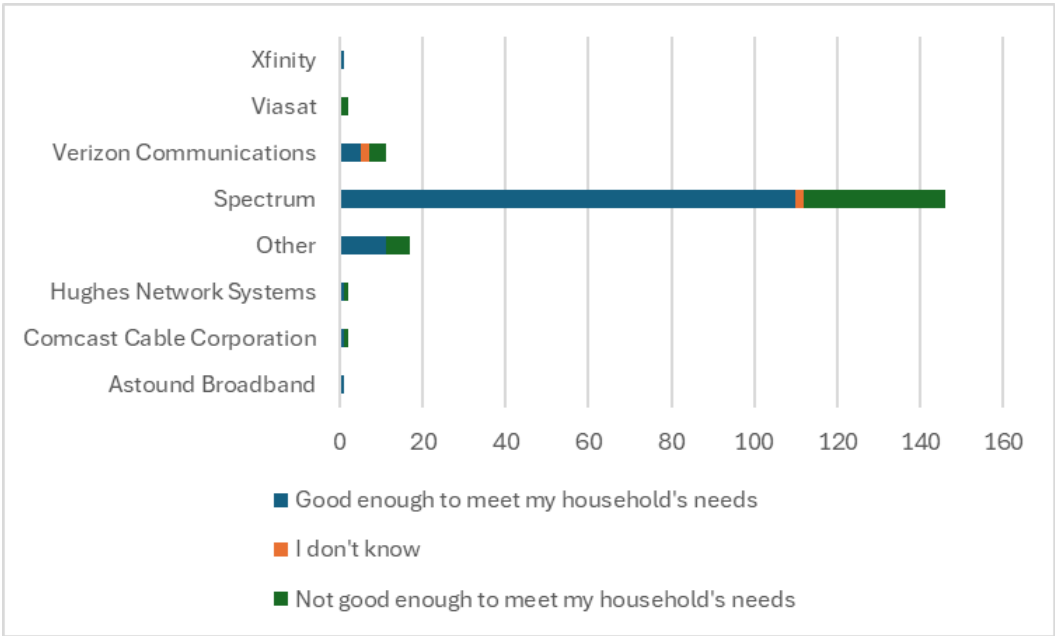
Several areas within the Town have been identified as having few or no internet options. There are 21 unserved and 8 underserved BSLs in Hadley which are all eligible to be served under the BEAD program. Charter quoted $121,180 to build out service connection to these unserved homes, including along Honey Pot and Cemetery Road.

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[7] American Community Survey (ACS) S2801

Poor/inconsistent quality or lack of broadband is also an issue for residents who telework or utilize virtual learning. It was noted during the public hearing that employees of the **Greater Commonwealth Virtual School** (GCVS) (formally known as Greenfield Commonwealth Virtual School) and **TEC Connections Academy Commonwealth Virtual School** (TECCA) have difficulties providing consistent, quality education to their students because of their internet service.

Access to internet also does not directly indicate the number of possible providers to receive service from. If few providers are available at a specific location, the cost of receiving service may be greater than in more densely populated locations, creating additional financial strain.

Internet consistency and quality are also critical to public safety. The Fire Department primarily communicates using a cellphone application. This requires consistent internet in the building, which relies on a fixed connection because of cellular coverage issues within the building, as well as consistent cellular coverage for their first responders.

During public outreach, residents also indicated they receive poor customer service and technical support from their current provider, which exacerbates existing barriers.

4.1.3 Digital Literacy

Digital Literacy is an important element of Digital Equity, as it impacts the ability of users to take advantage of internet service when it is available. Currently, there are few digital coordinators and literacy volunteers throughout the community. The Senior Center offers technology classes and one-on-one assistance, while the Hadley Public Library has some technology assistance available from its staff. In both cases, the help is largely provided by volunteers or staff who specialize outside of the technology field. A survey conducted by the library found that 37% of patrons who come to library staff with technology issues are not always able to resolve their issues.

There is a relatively high demand for digital literacy training among the public. About 61% of respondents to the MBI Digital Equity survey expressed an interest in either online or in-person digital skill support. Additionally, 69% expressed concern toward internet safety. Having staff specifically trained to answer technology questions and provide cybersecurity training could help the community feel more supported and confident in their use of the internet.

4.2 Assets and Strengths

4.2.1 Internet and Device Access

Within the Town of Hadley, there are multiple locations which already provide access to free devices or Wi-Fi, including the Hadley Public Library, the Senior Center and public schools.

The **Hadley Public Library** was observed to have the following resources at the time of this report: public Wi-Fi, private rooms, hot spots, desktop computer and printing capabilities. Tablets and e-readers were previously available to library patrons but were discontinued due to lack of funding. It was noted that these devices were challenging for the staff to keep up to date and required staff to sanitize the devices between each user.

The **Senior Center** also had public Wi-Fi and laptops which were made available to senior residents, caregivers and members of the Age and Dementia Friendly Hadley group.

Public schools within the Town of Hadley have committed to providing a Chromebook to all students who attend. Additionally, it was reported that a majority of middle and high school students in the Town had access to or owned a cell phone with internet capability.

In Hadley, 2,234 households out of 2,323 have a computer. This leaves 89 households without a computer. Survey respondents noted a variety of devices that they typically use to access the internet, as shown in Table 4.

Table 4: Primary Device Used (MBI Survey)

Device Used	%
Cellphone	36%
Desktop computer	16%
Laptop computer	35%
Tablet (or similar device)	24%
None or No Response	45%

Municipal fiber has been provided to some of the Town's public buildings already. Plans are in place to expand to the remainder through a project initiated by the Town's IT Department. Providing municipal fiber will introduce a lower-cost alternative that will allow the Town to dictate upload and download speeds within their facilities and for residents to use when in those public spaces. As mentioned above, Community Anchor Institutions have existing access to internet. In addition to those listed in Section 3.3, the Town of Hadley has a number of institutions that are already well integrated into the community. New opportunities for access include the **Center for New Americans**, a community-based, non-profit in the area which provides free English for Speakers of Other Languages (ESOL) classes, career preparation assistance, and support services for immigrants, migrants and asylum-seekers in Western Massachusetts.

The **Alliance for Digital Equity** is a community-focused organization, located at Baystate Health. With connections to the Public Health Institute of Wester Massachusetts, the Alliance supports a broad spectrum of initiatives, from equipment to infrastructure and skills that community members and organizations need to enhance digital equity. Unlike the Center for New Americans, the Alliance for Digital Equity can be seen as a connection between the Town and coalitions and funding sources that might be needed for implementation of proposed improvements.

4.2.2 Digital Literacy

Hadley already has programs and partnerships with non-profit and government organizations to improve digital literacy among residents.

Public schools provide a number of digital literacy training programs in the K-12 curriculum as part of the Massachusetts Department of Elementary and Secondary Education (DESE) Digital Literacy and Computer Science (DLCS) standards. **Project Lead the Way**, offered through the non-profit group One8 Applied Learning, offers courses to students and educators to help improve their interest in STEM subjects with a focus on computer science. DESE also offers a competitive grant program called **Computer Science Engage** which focuses on training educators to become more digitally literate, thereby creating opportunities for educators to be more prepared to teach computer courses to students. The Massachusetts Institute of Technology (MIT) offers a 10-week AI Cohort certificate that educators can use to become more comfortable with emerging technologies.

As noted, the Senior Center and Hadley Public Library are both Community Anchor Institutions (CAIs) that already provide a number of services to the residents of the Town. The Senior Center offers one-on-one support for senior residents as well as a program called Tech with Molly, a workshop for group education and awareness of technology uses and functionality.

Hadley Public Library received generally satisfactory responses from the survey respondents regarding the support that patrons receive and the equipment available at the time of this study. Opportunities for expansion of the current program included a request for additional hours of operation as well as the following:

- Technology instruction,
- Translation technology,
- Coding courses,
- Tablets,
- E-readers for children, and
- Zoom meeting capability

Table 5 reflects additional areas of interest that survey respondents expressed a desire to see the library offer. Expansion of the library's core function to truly embody a CAI is becoming increasingly common as a third space, a term coined for public spaces that are outside of work and home. Hadley Public Library already seems to be filling this need to the community and appears to be a prime opportunity to continue to meet this need in the future.

Table 5: Library Survey Results: What types of programming would you or your family member likely attend if they are offered at the Hadley Public Library (check all that apply)?

Arts & Crafts	40.70%
Author Talks	35.10%
Beer/Wine Tastings	26.70%
Book Clubs	40.40%
Book Clubs for children or young adults	30.50%
Chess/Game Nights	22.10%
Children's Play Groups	30.20%
Computer/technology	**21.10%**
Film Screenings	22.80%
Gaming (D&D, Magic the gathering, video games, etc.)	12.60%
Instructional/How to	**33.00%**
Language Instruction/Conversation	**27.70%**
Lectures/Continuing Ed.	**36.80%**
Potlucks	13.00%
Tutoring/Homework Help	**13.70%**
I do not attend programs	3.20%

5   Recommendations and Conclusion

5.1   Action Plan

The Town of Hadley's Digital Equity Plan provides a framework to unite existing work efforts and build new initiatives under a focused, evidence-based strategy for cooperative effort. Achieving digital equity for all residents will require a concerted effort by the government, community-based organizations, higher education organizations, and individuals who are committed to the goals of the Digital Equity Plan. To achieve the vision and goals, the Digital Equity Steering Committee/Broadband Committee is committed to taking the following strategies, as shown in Table 6. Each strategy identifies the focus areas, lead organization, cost, funding opportunities", and timeframe.

The cost is an approximation of the financial cost (capital or operational), defined as follows:

- "$": less than $5,000
- "$$": $5,000 to $50,000
- "$$$": more than $50,000

The timeframe is the anticipated length of time for the completion of a given strategy, defined as follows:

- "short-term": 0 months to one (1) year
- "mid-term": one (1) to three (3) years
- "long-term": more than three (3) years

Table 7 depicts the nine (9) focus area icons for the different strategies.

Table 6. Action Plan

Focus Area(s)	Strategy	Description	Lead Organization	Cost§	Funding Opportunities	Timeframe
	Establish Fiber Task Force	Establish a group dedicated to bringing additional internet connectivity to businesses and residents and apply for funding	Digital Equity Steering Committee	$	N/A	Short-term
	Designate a Digital Champion	Designate a Digital Champion to lead the Fiber Task Force and coordinate with external groups	Fiber Task Force	$	N/A	Short-term
	Connect underserved households	Provide service to the underserved areas of Honey Pot, Cemetery Road, Moody Bridge Road, Governors Drive, and Chmura Road (31 passings). These connections could be provided by Charter/Spectrum or through a first phase deployment of Fiberspring.	Fiber Task Force	$3M	BEAD Program‡, Community Compact Municipal Fiber Grant	Mid-term
	Complete Town's Municipal Fiber Buildout	Purchase and install remaining networking equipment to activate municipal fiber	Fire Department	$10,000	Community Compact Municipal Fiber Grant	Short-term
	Continue working to bring new internet providers into the Town	Pursue discussions with other service providers such as Fiberspring to gauge interest in working with Town	Fiber Task Force	$16.9M	Community Compact Municipal Fiber Grant	Short-term
	Improve Wi-Fi speeds at the Library, Fire Department, COA		Digital Equity Committee/Internet providers	$$	MBI Digital Equity Implementation Program	Long-term
	Purchase additional digital devices for public use at Library and Senior Center	Acquire additional tablets, desktop/laptop computers, instructional materials	Digital Equity Committee	$$	AARP, Healthy Aging Funds	Mid-term
	Increase device support staff at	Provide additional staff at Library and Senior Center to manage new	Library, Council on Aging	$*	AARP, Healthy Aging Funds	Mid-term

Focus Area(s)	Strategy	Description	Lead Organization	Cost§	Funding Opportunities	Timeframe
	Library and Senior Center	digital devices and provide troubleshooting support to the public				
📖	Create a digital library of on-demand digital skills training	Compile a library of on-demand trainings that can be hosted in-person or viewed online for free	Digital Equity Steering Committee	$	Municipal Digital Equity Implementation Program	Mid-term
👤💬	Establish "Digital Navigators"	Assign "Digital Navigators" at Library, Senior Center, Hospital, and Public Safety Facility	Digital Equity Steering Committee	$*	AARP, Healthy Aging Funds	Short-term
📖	Provide digital skills workshops	Host in-person workshops covering online safety and device troubleshooting	Library, Council on Aging, Digital Equity Steering Committee	$*	Municipal Digital Equity Implementation Program	Mid-term
🕐	Update the Town's Bylaws to require developers to install conduits for future use	To ensure long-term connectivity, require developers to install conduit(s) for future use by internet/cable providers	Bylaw Committee	$	N/A	Mid-term

* This strategy could be accomplished at no cost by volunteers but may require paid staff.

‡ The Town of Hadley is not eligible to apply directly for BEAD Deployment funds, but unserved and underserved passings may be connected as a part of this program.

§ Costs are approximate based on current (2025) estimates.

Table 7. Focus Area Legend

Focus Area Icon	Focus Area Description	Focus Area Icon	Focus Area Description
👤	Staff Capacity for Digital Equity	📖	Digital Literacy
📶	Wi-Fi Access and Innovative Connectivity Technology	💻	Device Distribution and Refurbishment
🏠	Public Space Modernization	💬	Education, Outreach, and Adoption
🏠	Connectivity for Economic Hardship	☁️	Access Diversification
🕐	Policies for Future Access		

5.2 Funding Opportunities

Various funding programs are available to help address the needs listed in Section 4. Project-specific applications should be researched and prepared in advance of the application deadlines, but the following programs have been identified as being applicable for the Town of Hadley's identified needs.

- BEAD Program: https://broadband.masstech.org/bead-program
- MBI Digital Equity Implementation: https://broadband.masstech.org/digital-equity-implementation
- USDA's Distance Learning and Telemedicine Grants: https://www.rd.usda.gov/programs-services/telecommunications-programs/distance-learning-telemedicine-grants
- Affordable Housing Trust: https://www.mass.gov/info-details/affordable-housing-trust-fund-ahtf
- Residential Retrofit Program: https://broadband.masstech.org/retrofit
- Community Compact IT Grant: https://www.mass.gov/community-compact-it-grant-program
- Community Compact Municipal Fiber Grant: https://www.mass.gov/municipal-fiber-grant-program
- Gap Network Grant: https://broadband.masstech.org/gap-networks-grant-program
- Massachusetts Community Health & Healthy Aging Funds: https://mahealthfunds.org/
- AARP Foundation Grants: https://www.aarp.org/aarp-foundation/grants/
- Retrofit Ancillary Grantee (RANGE) Program: https://broadband.masstech.org/RANGE
- Launchpad Program: https://broadband.masstech.org/launchpad-program

5.3 Conclusion

The Town of Hadley has completed a holistic analysis of their existing infrastructure with regards to digital equity. From organizational opportunities, like the Fiber Task Force to "Digital Navigators," there are quick wins that can help build upon the success and energy already established within the community. Sharing the successes of these programs while mid and long-term funding is being secured can provide a continued sense of sponsorship among the residents, who can act as project champions in future endeavors.