Connect Pittsfield

April 2024

A Municipal Digital Equity Plan

Acknowledgments

City of Pittsfield Steering Committee
James Clark, Director, Council on Aging
Justine Dodds, Director, Community Development
Noé González Ortiz, DEI Administrative Coordinator
Michael Obasohan, Chief Diversity Office
Alex Reczkowski, Director, Berkshire Athenaeum
Catherine Van Bramer, Director, Administrative Services
Kevin Zawistowski, Director, Information Technology

Elected Officials
Linda Tyer, Mayor (2015-2024)
Peter Marchetti, Mayor (2024)
Tricia Farley-Bouvier, Representative
Paul Mark, Senator
Richard Neal, U.S. Congressman

Community Partners

1Berkshire	Computers 4 People	
2nd Street, Second Chances	Cultural Pittsfield	
21st Century Learning Communities	Downtown Pittsfield, Inc.	
AdLib	Elizabeth Freeman Center	
Attorney General's Office	First United Methodist Church	
Berk K-12	Literacy Volunteers of BC	
Berkshire Black Economic Council	MassHire Berkshire Workforce B	
Berkshire CanCode	Molari Employment and Healthcare Svcs.	
Berkshire Community College	Mundo Latino	
Berkshire District Attorney's Office	Pittsfield Community Justice Center	
Berkshire Family YMCA	Pittsfield Community Television	
Berkshire Health Systems	Pittsfield Health Department	
Berkshire Housing	Pittsfield Public Schools	
Berkshire Immigrant Center	Rainbow Seniors of Berkshire County	
Berkshire Jobs	Roots, Dreams, and Mustard Seeds	
Berkshire Pride	Soldier On	
Berkshire Regional Housing Authority	St. Stephen's Episcopal Church	
	United Cerebral Palsy	
Berkshire United Way	Western Mass Digital Equity Alliance	

Berkshire Regional Planning Commission
Wylie Goodman, Senior Economic Development Planner
Mark Maloy, GIS, Data & IT Manager
Andrew McKeever, Community Planner
Jocelyn Latvalla, Economic Development Program Associate
Nat Karns, Project Specialist
Robert Ireland, ACC Lead for America Fellow

Blackshires / Team R3SET

Brigham Center

Central Berkshire Habitat for Humanity

Westside Legends

William Stickney Adult Learning Center

Zion Lutheran Church

Executive Summary

In May 2023, with funding from the Massachusetts Broadband Institute (MBI), the State's Broadband Agency, the City of Pittsfield, Berkshire Regional Planning Commission (BRPC), and community partners — from nonprofit and faith leaders to educators and residents — joined forces to shine a light on a topic few think about but which is central to daily life: the internet.

Life without internet access, the devices to conduct activities online, and the knowledge to feel confident and safe navigating a digital world may be hard to imagine, but as leaders learned during the COVID-19 pandemic, not everyone in the community has these essential tools, resulting in a divide between the digital haves and have nots.

The Digital Equity Act

The federal government observed how the pandemic had affected the nation as well as existing needs pre-dating COVID-19 and responded by passing the Bipartisan Infrastructure and Investment Jobs Act (IIJA), which authorized $1.2 trillion to strengthen the nation's infrastructure, including broadband. Title III of the IIJA, the Digital Equity Act, addresses three critical challenges:

Digital Equity: The condition in which individuals and communities have the information technology they need for full participation in U.S. society and its economy;

Digital Inclusion: The activities needed to ensure all people in the U.S. have access to, and use of, affordable information and communication technologies, and;

Digital Literacy: The skills associated with using technology so that people can find, evaluate, organize, create, and communicate information.

Under the Digital Equity Act, states were funded to create State Digital Equity Plans and, in Massachusetts, MBI offered cities and towns the opportunity to draft Municipal Digital Equity Plans to:

- guide municipal decision-making and investments to increase access, adoption, and use of the internet for the people most impacted by the COVID-19 pandemic; and

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

The primary focus of the state's and towns' plans is on individuals who fall within the federal government's definition of what it calls "Covered Populations." They include:

- People aged 60 and older
- Incarcerated individuals*
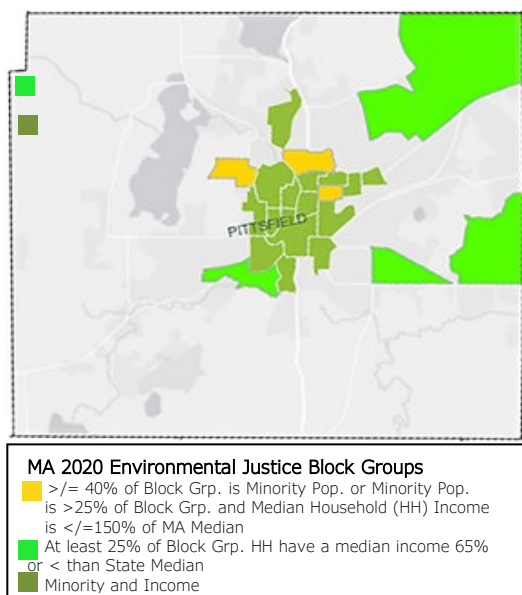- Veterans
- People with disabilities

- People who belong to a racial or ethnic group (i.e., Black, Indigenous, People of Color: BIPOC)
- English language learners and people with low literacy
- People living in households with incomes at or below 150 percent of poverty
- Rural residents

While not required by the federal government, Pittsfield chose to expand its definition of the Covered Populations beyond Incarcerated Individuals to include those who are justice-involved, which includes people on probation as well as victims of crime and their family members.

BRPC and the city's work to engage people and organizations to address digital inequity was broad and comprehensive with the items below representing some of the team's major accomplishments:

- meeting bi-weekly with city leaders to discuss the digital divide and potential solutions (Mayor's Office, Department of Diversity, Equity, and Inclusion (DEI), Information Technology Department, Department of Community Development, Council on Aging, and Berkshire Athenaeum, Pittsfield's Public Library);
- creation of a digital equity landing page within the city's Office of DEI webpages;
- engaging over 500 Pittsfield residents to take MBI's *Internet for All* survey;
- connecting with over 200 staff from community organizations and faith-based institutions to increase digital equity, inclusion, and literacy awareness;
- facilitating focus groups with 54 residents at seven community-based organizations (CBOs);
- hosting a Digital Resource Fair at the Berkshire Athenaeum featuring eight public, nonprofit, and private sector representatives;
- liaising with and learning from the Alliance for Digital Equity to bolster Pittsfield's status in statewide advocacy;
- bringing onboard an AmeriCorps Lead for America (LfA) fellow to reach residents about the Affordable Connectivity Program and digital literacy;
- attending the National Digital Inclusion Alliance's (NDIA) Annual Meeting in Philadelphia to learn from digital equity experts;
- helping the city be recognized by NDIA as one of 47 National Trailblazers for its work to close the digital divide.

These efforts culminated in actionable recommendations informed by six key takeaways:

MA 2020 Environmental Justice Block Groups
- >/= 40% of Block Grp. is Minority Pop. or Minority Pop. is >25% of Block Grp. and Median Household (HH) Income is </=150% of MA Median
- At least 25% of Block Grp. HH have a median income 65% or < than State Median
- Minority and Income

1.   While the city is well-served by cable internet, the cost of service is unaffordable for many, especially those in environmental justice communities. Fifty percent of Pittsfield's households (9,993) qualify, based on income, for the federal government's Affordable Connectivity Program (ACP), which lowers the cost of internet by $30 a month and provides $100 toward the purchase of a new computer. yet only 6,286 Pittsfield households are enrolled and many may not be fully accessing the benefit due to bureaucratic hurdles. More concerning is that ACP ends in April 2024, placing these households at risk of credit default if bills are unpaid or leading some to reduce service.

Source: Massachusetts 2020 Environmental Justice Populations

to a degree that will severely compromise their online experience. MBI's *Internet for All* survey, focus groups, and comparisons of internet rates across the Commonwealth confirm that those in the city and region are higher than other parts of the state. For these reasons, advocacy supporting a) swift re-authorization of ACP; b) digital navigation re-enrollment support if the program is reinstated; c) and education of residents about negotiating their bills in the meantime while finding new ways to provide households with affordable, reliable internet should be at the forefront of city leaders' attention.

Additionally, efforts to ensure residents have reliable, affordable internet, appropriate devices, and access to free and low-cost digital skill classes should start in the city's 23 Environmental Justice (EJ) Block Groups, communities that have a high percentage of minority households; households whose incomes are 65 percent or below the state's median; or both. In many EJ communities, especially those in and around downtown, a digital divide has historically existed. As the city continues its efforts to bridge that gap, ensuring these residents are prioritized in implementation is a tangible step the city can take to demonstrate its commitment to Diversity, Equity, Inclusion, Accessibility, and Belonging (DEIAB).

2.   **Cybersecurity education is urgently needed to help people feel safe online**. Nearly all MBI *Internet for All* survey respondents (84%) and many focus group participants expressed concerns about internet safety, with many sharing stories of having experienced or knowing someone who had been the victim of an attack, scam, or hacking incident. While 61 percent of survey respondents said they had the tools and resources to stay safe online, some may be unprepared for new threats arising from artificial intelligence that are difficult to detect and stop. For young people and seniors, these risks are particularly concerning and will require more deliberate education at school and through public awareness campaigns to combat them.

Photo by Robert Ireland, Roots, Dreams, and Mustard Seeds

3.   **Increasing access to large-screen devices that allow full participation online could improve quality of life.** Eighty-six percent of survey respondents listed a cellphone as being among their main connectivity devices and 20 percent used a cellphone exclusively to connect to the internet, often due to cost. While cellphones are popular as an affordable alternative to home internet, there is ample evidence that they are insufficient for complex tasks such as job searches and telehealth. In a city where the unemployment rate is significantly higher than the state; access to outpatient healthcare is limited by transportation barriers; and county-wide health conditions leading to lower lifespan are some of the highest in the Commonwealth, ensuring people have large-screen devices and appropriate adaptive technologies to use the internet fully should be prioritized as part of digital equity implementation.

4.   **Digital literacy and skill-building should start earlier and evolve throughout the lifespan**. Data from the Department of Elementary and Secondary Education (DESE) from its *Count of Students Taking At Least 1 Digital Literacy and/or Computer Science Course,* interviews with school and nonprofit leaders, and findings from an ID3A Jam led by the cooperative firm R3SET Enterprise, Inc., confirm that more Pittsfield youth, including those attending Title I schools, youth of color, English-language learners, youth with disabilities, and girls, would benefit from starting digital skill and media literacy earlier in their educational careers. Building interest in technology could also happen outside the classroom through coding, robotics, and video and game design activities at after-school programs, youth-serving nonprofits, and the library.

For older youth, college students, recent college graduates, and young professionals, digital and media literacy should not be assumed because this generation grew up as digital natives. Instead, classes in basic software programs should be required for high school graduation, and all students should be asked about home internet access and devices to ensure they can knowledgeably engage in more complex tasks. Creating a social or community center or ancillary library branch focused on computer skills and support, potentially modeled after places such as The Norfolk Hub, could also be explored as a way to appeal to this demographic.

To help those seeking to upskill or reskill into careers in the tech sector, *critically needed to expand the pool of applicants for roles at Pittsfield's advanced manufacturing, STEM, and technology firms* (e.g., Berkshire Innovation Center and General Dynamics), Berkshire Community College (BCC) should be provided with tools to increase enrollment in its computer science degree and technology credentialing programs and MassHire Berkshire should be funded to expand its offerings of computer skills classes so that unemployed and under-employed residents can qualify for remote and in-person work.

For Pittsfield's older adults, gaining digital fluency is best delivered one-on-one or via programs tailored to this audience (e.g., OATS: Senior Planet). In the future, teaching may need to evolve in parallel with technologies still to be invented.

5.   **As more states, cities, and towns fund fiber to the premises (fttp) to attract residents and businesses, ensure redundancy, and improve efficiency (i.e., smart cities), Pittsfield cable-predominant landscape could affect perceptions of its competitiveness.** As noted above, Pittsfield residents can access high-speed internet either via cable at the new federally defined speed of 100/20 Mbps via Charter Communications Spectrum (99.7% of the population) or T-Mobile's fixed wireless network (1.2% of the population). The city will participate in MBI's Broadband Equity, Access, and Deployment (BEAD) Challenge process to improve the accuracy of its service data and identify unserved and underserved locations not currently known. However, as more states (Vermont; New York) and towns fund fiber to the premises (FTTP), Pittsfield — and much of Berkshire County — risks *appearing to be* at a competitive disadvantage, especially for attracting remote workers. Separately, if Charter's service is affected by inclement weather or terrorist attacks, reliance solely on cellphone service and data plans could quickly overwhelm the network. Given the high cost of FTTP buildout, however, municipal leaders are encouraged to join forces regionally to a) use BEAD and state and federal grants to offer FTTP in multi-tenant buildings with households whose incomes are at or below 150 percent of poverty (see: https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf); b) pilot faster and cheaper fixed wireless service via a Wireless Internet Service Provider (WISP) to residences in and around downtown; and c) connect with start-up ISPs in neighboring states interested in cross-border expansion.

1. Access
- Available
- Affordable
- Designed for Inclusion

2. Adoption
- It Matters to Community Members
- They Know How to Use It
- They Feel Safe and Comfortable Using it

3. Application
- Equitable Design Centered on Users

Source: Alliance for Digital Equity

6.   **A digital equity coalition organized and led by Pittsfield could strengthen the city's ability to positively change conditions for its residents and move the needle regionally**. Pittsfield would benefit from taking a leading role as a municipality, in partnership with an outside community partner, to facilitate regular gatherings of central Berkshire or Berkshire-County-wide stakeholders serving the Covered Populations to oversee digital access, adoption, and application implementation in the region. Such a coalition can function as an extension of or be modeled after the Alliance for Digital Equity in Springfield. Forming a coalition would raise the city's standing in policy and programmatic conversations across the Commonwealth and cement its profile as a digital innovator with federal, state, and philanthropic partners.

In the sections that follow, we review how BRPC arrived at these findings; share information about leading organizations serving the Covered Populations in Pittsfield — and the challenges they face around digital equity — and recommended actions the city and its partners can take to make digital equity a sustainable reality for years to come.

Existing Conditions Analysis

Pittsfield is the largest city in Berkshire County with a population of 43,935 (19,952 households). Located 16 miles southeast of Albany, 49 miles northwest of Springfield, 137 miles west of Boston, and 150 miles north of New York City, Pittsfield is one of the most rural cities in Massachusetts. The city has two Opportunity Zones, around North Street and nearby Tyler Street, defined as low-income neighborhoods where investors can receive tax benefits by initiating real estate projects that spark economic activity. The first is home to 3,289 people and has a Median Household Income of $20,310. The second has a population of 4,227 and a Median Household Income of $28,692.

Pittsfield is also one of 26 Gateway Cities in the Commonwealth, defined as a midsize urban center anchoring a regional economy that, while once offering a "Gateway to the American Dream" through manufacturing jobs, subsequently declined economically and struggled to reposition itself for a 21st-century economy. Thirteen other Gateway Cities (Attleboro, Brockton, Chicopee, Fitchburg, Holyoke, Leominster, Lowell, Lynn, New Bedford, Peabody, Quincy, Springfield, and Worcester) are developing Municipal Digital Equity Plans. This plan uses Holyoke and Leominster as comparison cities to Pittsfield because of their geographic proximity (Holyoke) and similarity in terms of population density and diversity (Leominster).

Covered Populations

People Aged 60 and Older

Older adults make up nearly 28 percent of Pittsfield's population with the city ranking second among the comparison locations (Massachusetts, Berkshire County, Leominster, Holyoke) for older adults living alone as well as households in which a grandparent cares for a grandchild (52.9%; 302). While technology use among older adults rose dramatically during the pandemic, nearly 60 percent of adults 55 and older report concerns about affording high-speed internet despite their reliance on it for social connections, telehealth, and daily activities like shopping. The high percentage of older adults in Pittsfield reinforces the importance of delivering digital support in safe, trusted spaces and adapting materials and devices to older adults' preferred learning styles.

Figure 1: Comparison of Population Age 60 and Older
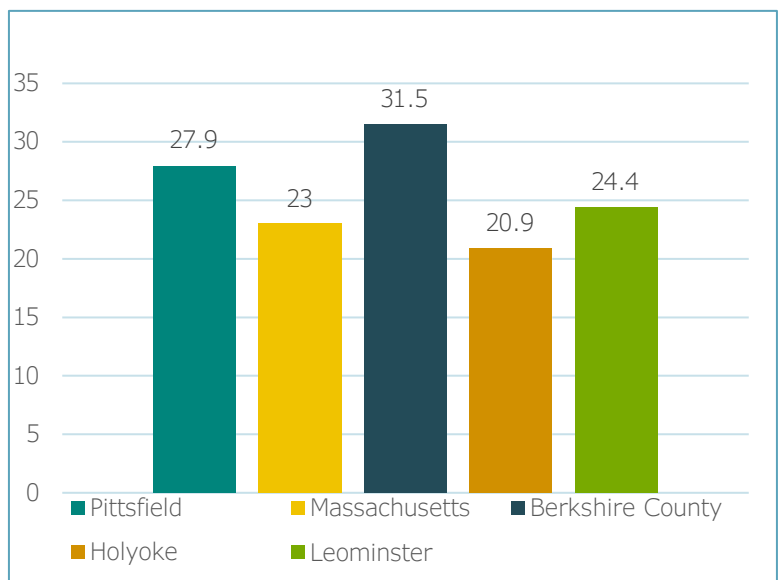
Source: U.S. Census Bureau. "ACS DEMOGRAPHIC AND HOUSING ESTIMATES." American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP05, 2021. Accessed on September 29, 2023.

Incarcerated

Berkshire County has a regional jail and house of corrections which, according to the Massachusetts Department of Corrections, had 118 individuals awaiting pre-trial case determination and 82 serving sentences at the beginning of 2024, and 12 who had been released into the community in the previous year; The Prison Policy Institute estimates the total number of people on probation in Pittsfield at 416. The Berkshire County Sheriff's Office also runs 2nd Street Second Chances a program that, since 2022, has

provided 575 formerly incarcerated individuals county-wide with services supporting positive re-entry.. Pittsfield is also home to the Office of Community Corrections which provides similar wraparound services.

Multiple studies link digital literacy training during incarceration to lower rates of reoffending after release. Providing individuals at the Berkshire County Jail and House of Correction with digital training so they can more confidently use the internet to find jobs, housing, and support services should be included in the city's digital equity implementation efforts.

Veterans

Pittsfield has the second-highest percentage of veterans among the comparison locations (6.6%; 2,395). In the first eight months of the pandemic, veterans organizations nationally saw an over 200 percent rise in veterans using telehealth, and by February 2021 the Veterans Administration reported that 77 percent of all its mental health visits were conducted online. Yet a survey by the National Institutes of Health found that "individuals were less likely to use telehealth and reported fewer visits if they were 55 years and older or lived in a small city." For these reasons, city departments and agencies, like Soldier On that serve Pittsfield's veterans, should discuss digital skills and device needs as part of intake to ensure vets feel confident accessing critical online support.

People with Disabilities

Across the comparison locations, Pittsfield has the highest rate of non-institutionalized civilians with disabilities among those 18 and younger (7.7%; 581); the second-highest rate among those 18 to 64 (16.3%; 4,420); and the second-highest rate for those 65 and over (31.9%; 2,651). *These figures exempt those in prisons, psychiatric hospitals, nursing homes, inpatient, or assisted living facilities, or on active military duty*. Americans with disabilities in the U.S. are less likely than those without to own a computer or smartphone, while less than three percent of all websites are considered fully accessible. Pittsfield is currently redesigning its website to meet ADA-accessibility best practices. Community-based organizations (CBOs) and nonprofits in Pittsfield, however, may lack the resources or knowledge to make their websites ADA-compliant. Connecting them with free and low-cost state training to help them re-design digital assets (e.g., websites, e-newsletters, apps) to meet ADA best practices would ensure more Pittsfield residents with disabilities can find the online resources they need.

Members of Racial or Ethnic Minority Groups (Black, Indigenous, People of Color - BIPOC)

Just over 80 percent of Pittsfield's residents identify as white (36,528), while Hispanic/Latino residents represent the city's second-largest ethnic group (7.9%; 3,476). People who identify as belonging to two or more races (7.3%, 3,225); Black/African-Americans (5.2%, 2,295); Asians (1.3%; 591); and American Indians, Alaska Natives, Native Hawaiians, Other Pacific Islanders, and those of another race (2.9%, 1,251) complete the city's racial/ethnic landscape. A report by the *Program for the International Assessment of Adult Competencies,* concludes that "workers of color are disproportionately affected by digital skill gaps compared to their white peers, in large part due to structural factors that are the product of longstanding inequities in American society, such as income and wealth gaps and uneven access to high-quality K-12 education."

Among the recommendations by BIPOC organizations that inform this plan, including the cooperative firm R3SET Enterprise, Inc., Berkshire Black Economic Council (BBEC), Berkshire Immigrant Center, and Blackshires was strengthening the capacity of BIPOC organizations to provide digital navigator support to the audiences they serve, given their established trusted relationships.

English Learners and Those with Low Literacy

Pittsfield ranks third (6.9%; 3,019) among the cohort in its percentage of foreign-born residents, with nearly 75 percent having entered the country before 2010. The city is currently seeing a rise in immigration from 4.10 percent in 1990 to 6.16 percent in 2020 with most arrivals coming from the Caribbean and Eastern Europe. The number of residents with limited English similarly grew from 2.44 percent in 1990 to 3.2 percent in 2020, outpacing the county; limited English is highest among Spanish and Russian/Polish/ Slavic speakers. Among U.S.-born residents in Pittsfield who speak Spanish as their primary language, just over one percent (492 people) speak English less than very well. For those born in the U.S. whose primary language is one other than Spanish, 2.2 percent (903) speak English less than very well. *Appendix A provides a summary of immigrant learners participating in Berkshire Community College's ESOL Program in Great Barrington and Literacy Volunteers' Program at the Berkshire Athenaeum as two indicators of the range of non-English speakers living and studying in Pittsfield and across the county.*

A 2019 study by the U.S. Department of Education, *Supporting English Learners through Technology*, found that a common barrier for English language learners trying to gain digital literacy was the lack of digital resources at home. As immigration to Pittsfield rises, reaching this audience with online information in their primary language and ensuring households have the devices to engage with civic life, search for work, and educate their children will be important to their success in becoming established in the community.

Households with Incomes At or Below 150 Percent of Poverty

The percentage of individuals, families, and families with children in Pittsfield whose income in the past 12 months was below poverty is second highest among the cohort. The chart below underscores how poverty disproportionately impacts Pittsfield's BIPOC residents.

Table 1: Poverty in Pittsfield by Race/Ethnicity

Race/Ethnicity	# in Poverty	% in Poverty
White Alone	3,959	11%
Two or More Races	857	27%
Hispanic or Latino (Any Race)	723	21%
Black or African American Alone	506	23%
Some Other Race Alone	117	11%
American Indian and Alaska Native Alone	36	40%
Asian Alone	6	1%
Native Hawaiian and Other Pacific Islander	0	0%

Source: U.S. Census Bureau. "POVERTY STATUS IN THE PAST 12 MONTHS." American Community Survey, ACS 5-Year Estimates Subject Tables, Table S1701, 2021.

A national study by the [Pew Research Center](#) found that 36 percent of low-income parents surveyed found it very or somewhat difficult to help their children with technology generally and online instruction specifically during COVID-19 as compared to 18 percent of high-income parents. Pittsfield's high rate of child poverty reinforces the importance of ensuring parents and guardians have the knowledge and devices to help their children stay on track academically.

Digital Inequity Indicators

In addition to understanding the breakdown of Covered Populations most impacted by the digital divide, other indicators should also be considered as part of the city's Existing Conditions Analysis.

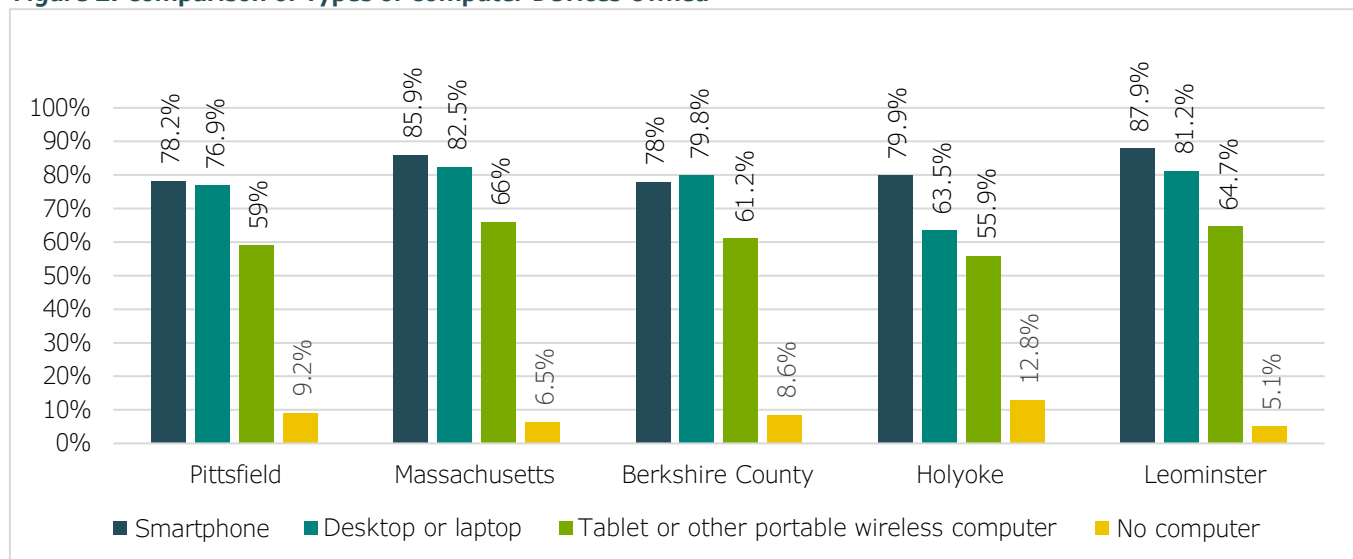### Environmental Justice Communities

When considering where digital equity efforts should be directed, one criterion is whether a neighborhood is an Environmental Justice Community where residents face greater challenges due to factors such as climate change, energy costs, health disparities, lack of housing, and pollution. Four Pittsfield census tracts (900100; 900200; 900400; 900600) meet the [EPA's Disadvantaged Community Criteria](#) and seven block groups rank above the 80th percentile in broadband gaps (9001001; 9001002; 9001003; 9007004; 900900; 9011003; 9121005) while 23 block groups, as noted at the beginning of this report, are considered Environmental Justice Communities by the state. These communities should be prioritized when Pittsfield begins digital equity implementation.

Broadband, Internet, and Computer Ownership

Of 19,952 households in Pittsfield, close to 91 percent have a computer and nearly 86 percent have a broadband subscription. Yet Pittsfield's computer ownership rate is the second-lowest among the cohort, while its broadband subscription rate is in the middle — on par with Berkshire County.

Figure 2: Comparison of Types of Computer Devices Owned

	Pittsfield	Massachusetts	Berkshire County	Holyoke	Leominster
Smartphone	78.2%	85.9%	78%	79.9%	87.9%
Desktop or laptop	76.9%	82.5%	79.8%	63.5%	81.2%
Tablet or other portable wireless computer	59%	66%	61.2%	55.9%	64.7%
No computer	9.2%	6.5%	8.6%	12.8%	5.1%

Source: U.S. Census Bureau. "TYPES OF COMPUTERS AND INTERNET SUBSCRIPTIONS." American Community Survey, ACS 5-Year Estimates Subject Tables, Table S2801, 2021. Accessed on September 29, 2023.

The percentage of households in Pittsfield who own a computer but lack an internet subscription is highest among Asian households while the percentage of households without a computer at all is highest among

Black/African-American households. Maps depicting neighborhoods in Pittsfield with the highest rates of households without internet or computers can be found in Appendix C.

The Benton Institute for Broadband & Society estimates that, for adults with annual household incomes below $30,000, close to a quarter lack a smartphone, and more than four in 10 are without home broadband or a desktop or laptop. By comparison, each of these technologies is common among adults in households earning $100,000 or more a year.

While the Berkshire Athenaeum offers computer and broadband access for those who lack either at home, limited public transportation makes it a place some may find challenging to reach. Instead, to get more large-screen devices to people faster, the city should consider identifying a regional (PCs 4 People) or national (e.g., Compudopt) nonprofit partner with which it can coordinate the distribution of enterprise-grade devices to residents or the nonprofits that serve them. The city may also wish to explore with Taconic High School developing a Vocational Technical Education (VTE) Framework to teach students how to repair devices.

$ Income

Enrolling households in the Federal Communications Commission's (FCC) Affordable Connectivity Program (ACP) had, until recently, been a key strategy to close the digital divide by lowering the cost of internet for income-eligible households by $30 a month and up to $75 a month for households on qualifying Tribal lands. Now that the program is ending, nearly 6K+ Pittsfield households are about to lose this benefit, including Pittsfield households with children in the public school system, households with incomes at or below 200 percent of the federal poverty level, and households who have a member who participates in any of the programs below:

- Assistance Programs: Supplemental Nutrition Assistance Program (SNAP), Medicaid, Federal Public Housing, Veteran's Pension or Survivor Benefits, Social Security Income (SSI), Women, Infants, and Children (WIC), or Lifeline
- Tribal Specific Programs: Bureau of Indian Affairs General Assistance, Tribal TANF, Food Distribution Program on Indian Reservations, or Tribal Head Start (income-based)
- Federal Free and Reduced-Price School Lunch Program or School Breakfast Program, including through the USDA Community Eligibility Provision
- Federal College Pell Grant
- Broadband Providers' Low-Income Internet Program Qualifications
- All Households with Children in the Pittsfield Public School System

With ACP funding exhausted and no new commitment from Congress, low-income Pittsfield residents seeking new options would benefit from a digital navigator who can assess their needs and financial capability and assist them in enrolling in the lowest-cost option that best meets their needs.

Although the Benton Institute rated Pittsfield as a *Highest Performing City* for having 6K+ of its 9K+ eligible households enrolled in ACP, rebuilding trust so households re-enroll, should funding be reinstated, will be challenging. To overcome that hesitation, the city's Department of Diversity, Equity, and Inclusion should educate social service nonprofits, faith-based institutions, housing organizations, and medical facilities about how to guide people through ACP re-enrollment to ensure more realize this benefit.

Educational Attainment

Among Pittsfield residents age 25 and over, 30 percent are high school graduates or have earned a GED (9,809); 20.2 percent have attended some college but have no degree (6,626); just over nine percent hold an associate degree (3,000); 19.8 percent have a bachelor's degree (6,471); and 13.3 percent hold a graduate or professional degree (4,339). With nearly 70 percent of Pittsfield's adults over age 25 lacking a four-year college degree or higher, Pittsfield educators and workforce development specialists should consider providing digital skill training through non-traditional programs that lead to micro-credentials or certificates targeted to local industry

and remote work needs. Among the Top 30 fastest-growing occupations in Berkshire County that likely require digital skills, only four need no more than a high school diploma or equivalent for entry. For students who stop their education at this juncture, such careers should be highlighted by guidance counselors and MassHire Berkshire Workforce staff to bring more individuals into the digital career pipeline. *A chart showing — from among the Top 30 Fastest-Growing Occupations in Berkshire County (2020-2030) — the ones most likely to require digital skills is in Appendix D.*

Employment

The percentage of Pittsfield residents age 16 and over in the labor force is the second-lowest among the comparison cohort (63.2%) while the unemployment rate is the highest (7.3%) and slightly higher for Pittsfield's Black and Hispanic residents. A February 2023 report by the National Skills Coalition found that 92 percent of all jobs now require digital skills. Increasing residents' digital fluency could therefore be critical to addressing unemployment.

Even with more training, however, there remains a wage gap that makes it hard for the city and region to attract talent. The annual mean wage paid to Pittsfield workers in higher-level computer professions (e.g., Computer User Support Specialists and Software Developers) is lower than that of the nation and state. For entry-level digital jobs, local employment firms report companies wanting to hire Pittsfield residents for remote work but having difficulty due to applicants' lack of affordable, reliable broadband, appropriate devices, and skills. Expanding MassHire Berkshires' and private employment agencies' ability to provide digital skills training should be a high priority for digital equity implementation. **Appendix E highlights the use of MassHire by jobseekers countywide, including resources available within the agency's computer lab.**

Separately, a significantly lower percentage of Pittsfield residents, relative to the comparison locations, report working virtually (1,273), even after the pandemic increased the shift to remote and hybrid employment. The reason for this is unclear but could be due to the issues noted above.
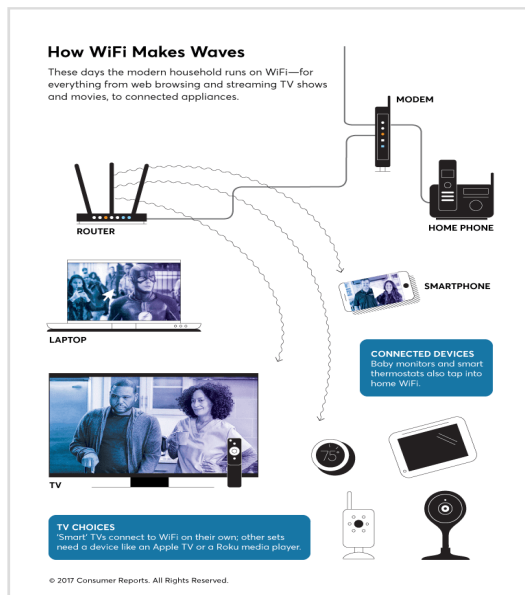
Figure 3: Percent of Residents Working From Home
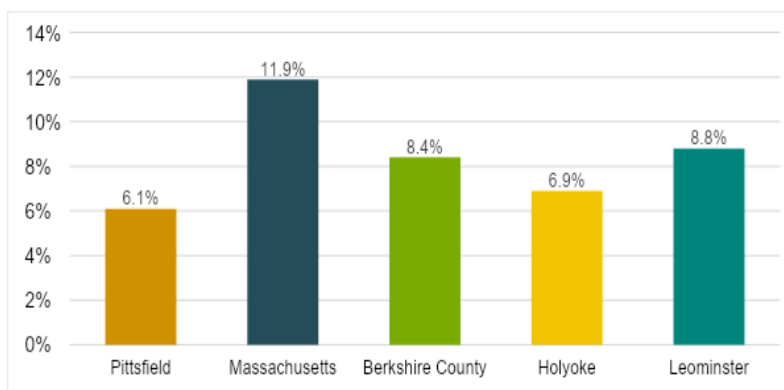
Source: U.S. Census Bureau. "SELECTED ECONOMIC CHARACTERISTICS." American Community Survey, ACS 5-Year Estimates Selected Population Data Profiles, Table DP03, 2021. Accessed on September 30, 2023.

Industry Diversification and Worker Readiness

The Information industry is second to last among Pittsfield's Top 10 Industries in t h e number of people employed, which highlights the need for an educated

technology workforce as part of attracting more information firms to the city. To reverse this trend, 1Berkshire, in partnership with the Berkshire Innovation Center, recently formed the Tech Impact Collaborative and was subsequently selected by the International Economic Development Council from a pool of national applicants to host an Economic Recovery Corps (ERC) fellow who will be working to grow the region's creative technology sector by supporting existing businesses; providing recruitment, technical assistance, and navigation for emerging startups; building partner and resource networks and referral systems; and engaging youth in startup development to foster workforce growth and entrepreneurial skill-building for the next generation.

Pittsfield could build on this momentum by directing MBI implementation funds to free and low-cost digital skill training for unemployed and under-employed adults, along with wraparound services (e.g., childcare, transportation), and then promote the city's digitally ready workforce.

How WiFi Makes Waves

These days the modern household runs on WiFi—for everything from web browsing and streaming TV shows and movies, to connected appliances.

MODEM

ROUTER

HOME PHONE

SMARTPHONE

LAPTOP

CONNECTED DEVICES
Baby monitors and smart thermostats also tap into home WiFi.

TV

TV CHOICES
'Smart' TVs connect to WiFi on their own; other sets need a device like an Apple TV or a Roku media player.

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Source: Consumer Reports, 2017

Internet Availability, Affordability, And Performance

Digital equity depends not only on the devices, skills, and services people have but also on a city's broadband infrastructure. As the Institute for Local Self Reliance (ILSR) explains in *"What is Broadband?"*

"Whether an Internet connection is considered to be broadband typically depends on the speed at which the connection can download (receive) and upload (send) data, and the overall reliability of the Internet connection. However, broadband has been defined differently over time and in different contexts…[t]here is widespread expert agreement that the federal government's current minimum speed threshold — at 25 Megabits per second (Mbps) download and 3 Mbps upload — is too slow considering the rise of remote work, distance learning, telemedicine, and video streaming applications."

The FCC recently changed its definition of high-speed broadband to 100/20 Mbps, in part due to the realities noted above. Pittsfield residents can access 100/20 speeds with Charter Spectrum, the sole broadband provider for the city.. However because of the city's small population, lack of density, and terrestrial (mountainous) challenges, the choice of ISPs is limited, and pricing for higher-speed broadband is something many households cannot afford; MBI categorizes the state of Pittsfield's ISP landscape as having "little to no competition."

In Massachusetts, 85 percent of cities have electricity distributed by an investor-owned utility while 15 percent (41 cities and towns) have a municipal electric utility. Similarly, only a handful of cities have addressed the lack of ISP competition by developing municipal broadband, while one city with a long-established municipal ISP (Braintree) in 2021 sold its network to Comcast due to the high cost of maintaining quality of service. Municipal fiber in cities such as Concord offers customers faster speeds but at prices nearly comparable to those Charter makes available while Westfield Gas & Electric (Whip City Fiber), a start-up ISP, offers fast fiber in small towns previously lacking internet (e.g., Alford, Becket, Washington) at only slightly lower rates ($69.95). The largest cable competitor in the state, Comcast, offers an Internet Essentials plan for $9.95 a month for a speed below what the FCC considers broadband but faster than Charter's lowest-priced $19.95 plan. The largest fiber providers in other regions of the state are Verizon New England and RCN's Astound Broadband, the latter of which offers a home MESH option. The largest fixed wireless provider is T-Mobile.

MBI's Public Beta Map shows only 37 broadband serviceable locations (BSLs) in Pittsfield without any internet service (unserved) or where speeds are below federal standards (underserved). The city has stated that many of these BSLs are municipally owned accessory BSLs and improperly listed while others are served by fiber and should be removed from inclusion (e.g., Wastewater Treatment Plant has access to 36 strands of fiber and 10G internet). MBI's upcoming BEAD Challenge Process aims to bring the FCC map into alignment with real-world conditions.

Anecdotally, some Charter customers complain about speeds that do not match the rates they pay; inconsistent service; outages during foul weather; and difficulty connecting multiple devices within a home simultaneously. *These reports are difficult to verify and fall outside of the plan to confirm.*

Internet Speed

The fastest residential broadband speed in the U.S. is 1 gigabit (Gbp) simultaneous or symmetrical (equal upload and download) for FTTP. ISPs charge customers more for faster speeds but confirming whether advertised speeds match what customers pay for can be difficult due to:

- age of the user's computer
- distance between computer and router
- geography (e.g., rural vs. urban)

- number of household members online
- type of activity (e.g., gaming versus email)
- user's choice of internet browser

One way to measure upload and download speeds is via online tests. The company Ookla has for years provided speed test data to Pittsfield, most recently showing the city's overall residential median download speed at 214.65 Mbps with a low median of 189.14 Mbps (October 2022) and a high of 247.44 Mbps (April 2023). Given that Charter offers 1-gigabit speed citywide, Pittsfield households are using less than a quarter of Charter's potential. Ookla upload speed tests show a similar disparity, with Pittsfield's median upload speed being 11.5 Mbps, while Massachusetts' median upload was between 23 and 24 Mbps for the same period (September 2022 to September 2023).

When Ookla's speed test data was mapped, it showed that most of the city has at least 25/3 Mbps, except for a handful of scattered locations, notably around First and Eagle Streets. The city has generally good coverage at 50/10 Mbps citywide, although some areas (Morningside neighborhood: Curtis Street; south of East Street around East Housatonic Street; and between Elm and Williams Streets) have limited speed test data upon which to make definitive conclusions. Few locations report the fastest speed (100/100 Mbps). These tend to be clustered downtown and are likely commercial locations. Commercial businesses, city agencies, and community anchor institutions can access 100/100 fiber optic service and the library is slated to offer two-gigabit service by July 2024. More detailed speed test and Charter offer and feature data can be found in Appendix F, along with an estimate of how much speed people need based on their activities.

Tier Flattening and Digital Redlining

In some cities, researchers have separately found evidence of speed problems unrelated to customer behaviors but rather internet service providers, notably:

Tier Flattening, which involves ISPs providing low-income communities and communities of color in historically disadvantaged neighborhoods with poorer quality service (i.e., below 25 Mbps) despite charging the rates charged for faster speeds enjoyed by customers in wealthier, white neighbors; and,

Digital Redlining*, in which ISPs delay infrastructure maintenance or upgrades or provide lower-quality service or slower speeds to poorer communities and communities of color. *The term redlining historically refers to the practice of denying a creditworthy applicant a loan for housing in a certain neighborhood even though the applicant may otherwise be eligible for the loan. The term refers to the presumed practice of mortgage lenders drawing red lines around portions of a map to indicate areas or neighborhoods in which they do not want to make loans.*

A 2020 study by three Princeton researchers found evidence of ISPs "overstating to the FCC where they offered service, particularly in rural areas and neighborhoods where people of color live." In 2022, the nonprofit news organization The Markup, which specializes in technology reporting, set out to replicate the study's findings and evaluate whether tier-flattening was taking place in 45 U.S. cities by comparing internet offers from major ISP and cellphone providers to demographic data and internet speeds. The authors concluded that "AT&T, CenturyLink, EarthLink, and Verizon offered households in the same city the same price for vastly different levels of service, disadvantaging households in lower-income, least-white, and historically redlined areas." The authors did not include Charter Spectrum in their analyses.

When BRPC attempted to replicate the Markup's methodology for a random sample of 110 residential addresses in Pittsfield, the exercise uncovered that Charter offered its most inexpensive plan ($19.99 a month) with its slowest download speeds in one-third of the random addresses generated – those in neighborhoods with a larger proportion of non-white residents and/or residents with lower incomes – while offering its most expensive ($89.99 a month) and fastest plan at every random address, regardless of race or income. Rather than providing evidence of Tier-Flattening or Digital Redlining, BRPC found that Charter tried to reduce the cost of monthly internet in more disadvantaged neighborhoods, albeit with slower speed as a trade-off. While inexpensive plans are more attractive to low-income residents, some people may not understand the consequences of slower speeds in a world in which tasks increasingly require higher bandwidth. More education may thus be needed to help consumers understand why speed matters as well as small actions they can take to improve internet quality without paying more.

Digital Equity Assets

In addition to learning how digital inequity affects individuals and households, the Existing Conditions Analysis looks at digital equity assets: individuals, programs, and organizations working to close the digital divide or well-positioned to do so because they provide support and have trusted relationships with one or more of the Covered Populations.

Since August 2023 when BRPC staff began asking local stakeholders to add to the State's Asset Map Inventory, 16 organizations, five programs, and one volunteer group have been identified as digital equity assets in Pittsfield (see below). *This list does not include all organizations supporting Covered Populations, only those who responded to the State's Asset Map or a BRPC-initiated survey. Most notably, the list does not include food pantries operated by faith-based institutions that serve the Covered Populations on a weekly basis and could distribute information to clients about free, online digital literacy training, ACP enrollment, and device refurbishment.*

Organizations
- Attorney General's Office
- Berkshire Athenaeum
- Berkshire Community College
- Blackshires Community Empowerment Foundation
- CanCode Communities

- Central Berkshire Habitat for Humanity

- Clinical Support Options
- Cyber-Seniors

- Hillcrest Educational Foundations
- Literacy Volunteers of Berkshire County
- MassHire Berkshire Career Center
- MOLARI Employment and Healthcare Services
- Pittsfield Community Television
- Pittsfield Council on Aging/ Ralph Froio Senior Center
- Second Street Second Chances
- United Cerebral Palsy

Programs
- Berkshire Black Economic Council
- CanCode Communities

- Pittsfield Public Schools
- Three County Continuum of Care

Individuals
- Ralph Froio Senior Center Volunteers

The Asset Map Inventory suggests the local ecosystem is strongest at an organizational level, particularly in providing digital support to older adults and low-income individuals. In contrast, the ecosystem would benefit from more programs addressing device distribution and cybersecurity.

Figure 4: Pittsfield Digital Equity Assets Foci
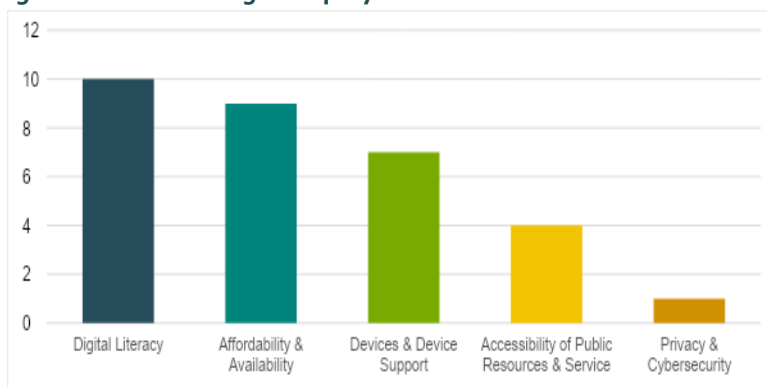
Source: Massachusetts Broadband and Digital Equity Asset Inventory

Below are summaries of representative Pittsfield organizations serving the Covered Populations and the status of their digital support work.

Organization: 2nd Street Second Chances
Covered Population: Formerly Incarcerated

2nd Street Second Chances, Inc. is a 501(c)3 that serves formerly incarcerated individuals to reduce Berkshire County's recidivism rate (36%), one of the highest in the Commonwealth. The organization, along with its community partners, provides people with job readiness skills and access to job opportunities, preparing them to become productive and contributing members of society. The organization has three computer stations participants can use to complete job searches and applications, schoolwork (including Zoom classes) and test-taking, filling out insurance paperwork, and finding housing. 2nd Street Second Chances has helped 575 individuals since its inception and has steadily increased the number of clients it serves. The organization would benefit from having more computers, a dedicated computer lab, access to large-screen devices clients could use on-site, and access to proctored digital skills training, (e.g., Northstar) to help prepare clients for life in an increasingly digital world. https://www.digitalliteracyassessment.org/.

Organization: AdLib Center for Independent Living   Covered Population: People with Disabilities

AdLib is a 501(c)3 whose mission is to provide independent living and specialized services to people with disabilities throughout Berkshire County. AdLib's specialized services range from information and referrals to advocacy and skill training through its Vocational Rehabilitation Program. The Center assists clients with online activities related to telehealth, job searching, and internet safety and security. The organization is well-positioned to provide the approximately 1,500 people it serves annually with expanded device and digital knowledge support. AdLib recently partnered with Easter Seals and other local organizations, such as the Pittsfield Senior Center, to provide digital skills training and device giveaways. AdLib would benefit from funding to expand its digital skills training, assist clients with ACP enrollment, and support device and specialized assistive technologies distribution and lending for people with disabilities whose needs are overlooked by major insurers.

Organization: Massachusetts Attorney General's Office   Covered Population: Youth, Seniors

The Attorney General's Office offers free training about cybersecurity, identity fraud, and online privacy. Its program *Internet Safety for Parents* educates adults about scams targeting children, cyber-bullying, online privacy, and prevention measures. *Internet Safety for Students* covers the same content but is targeted to youth. Scams and ID theft training helps people recognize online, mail, and in-person scams and identify the procedures to take if one's identity is stolen; the course is also available to seniors, with content designed specifically for this audience. While the Attorney General's Office serves the entire Commonwealth, it is currently seeking to expand its reach in Berkshire County, including Pittsfield, and

looking to partner with schools and community-based organizations to do so.

Organization: Veterans' Services Department: City of Pittsfield   **Covered Population**: Veterans

Veterans' Services Department sits within city government to bridge the financial gap for veterans awaiting assistance and services from the Veteran's Administration. Since January 2023, Veterans Services has supported over 100 clients through community outreach, financial aid, and Chapter 115 benefit registration that helps vets access money for daily living expenses, medical costs, housing, and other necessities. The office currently offers veterans one computer they can use to search and apply for jobs and complete benefit paperwork. Veterans Services previously partnered with Berkshire Works (MassHire Berkshire Workforce Board) to create a computer lab; however, it was later disassembled to create more office space. Most veterans now use the library to meet their digital needs. Given more computers, space, and instructors, the Veterans' Service Department could assist more clients access transitional resources and on-site digital skills training.

Community Anchor Institutions

Pittsfield has 60 Community Anchor Institutions (CAIs), defined 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." With funding from the federal Broadband Technology Opportunities Program and investment from the State, MBI installed a fiber network across central and western Massachusetts (middle mile and last mile) connecting CAIs, in part to expand public access to high-speed internet from locations considered central to community activities and critical to public safety, education, health, and commerce. A recent search by Local Linx, which built the backbone of this fiber network, however, found that 26 of Pittsfield's 60 CAIs are not taking service through MB123 and are instead paying for private enterprise-level service due to the higher cost of MB123. Equally concerning, a majority of CAIs are not public-facing, meaning they allow connectivity for agency staff but not vulnerable populations.

Figure 5: Pittsfield Community Anchor Institutions Not Taking MB123 Service
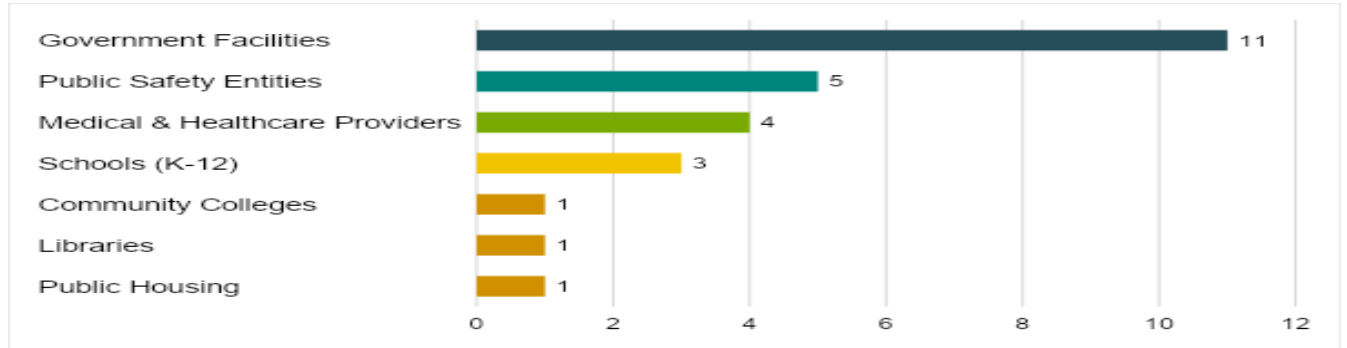
Source: Local Linx Pittsfield Downtown Wi-Fi Network

Pittsfield Free Wi-Fi Network

In January 2022, the city received $100K from the Commonwealth's Community Compact Cabinet Information Technology Grant to create a free publicly accessible Wi-Fi network along an eight-block stretch of downtown North Street. At the time, NTIA maps showed census tract 90001 (1,909 households) as the only one in the city not meeting a satisfactory level of broadband with nearly 28 percent of households having no internet and 24 percent no computer, smartphone, or tablet. In February 2023, the city expanded Pittsfield Free Wi-Fi to include the intersections of East and West Housatonic Streets and South Street north

to the intersection of Linden Street and Maplewood Avenue and The Common, a city park at 100 First Street. At its peak, Pittsfield Free Wi-Fi saw 400 unique monthly and 55 concurrent users with a total unique usership of 3,782.

The network has a peak bandwidth of 250-300 Mbps download and 30-80 Mbps upload on average; faster than the FCC's current definition of broadband. In November 2023, the city saw the network accessed by 325 users with 38 concurrent users at its peak. The city's Department of Information Technology is currently working to expand Pittsfield Free Wi-Fi to include the senior center and City Hall, with funding coming through the IT Department's operating expense budget. Anecdotally, some residents report the network's service as inconsistent — depending on location and number of users. BRPC staff testing the network in February 2024 found mid-day service with few users to be best in The Commons to North Street and across the street and most inconsistent toward the sides and rear of The Commons near the playground and at the corner of Maplewood and Linden. Without public signage, however, few residents and visitors may know Pittsfield's free public Wi-Fi network exists.

Free downtown Wi-Fi also benefits the city's small business community and helps ensure an economically vibrant downtown. There are approximately 540 businesses in downtown Pittsfield. Professional, scientific, and technical service providers; health care and social assistance specialists; and services such as salons and barbers together represent 14 percent of these businesses followed by retail trade (11%), and accommodation and food services (7%). Although the city's Transformative Development Initiative (TDI) Fellow noted that downtown businesses have not been surveyed about their internet needs and challenges, she felt many small businesses would benefit from help with online marketing and ensuring their websites for accessible to people with disabilities; the city does offer technical assistance grants to eligible business owners for activities such as website redesign. Separately, the TDI Fellow noted that expanding free or low-cost downtown public Wi-Fi could help people who are unhoused and congregate downtown more easily access resources that help them find shelter.

Berkshire Athenaeum, Pittsfield's Public Library

One of the most frequently cited locations for those needing internet access and computer devices in Pittsfield is the public library, the Berkshire Athenaeum, which served just over 129K visitors in 2022, making it the 38th most used of the State's 370 libraries. The library provides free, open access to high-speed wireless internet with average speeds of 500 Mbps upload and 500 Mbps download. Service is provided by Crocker Communications through membership in the Central and Western Massachusetts Automated Resource Sharing (CW MARS) library network. Across 32 Gateway Cities' public libraries, Berkshire Athenaeum ranked 10th in both the number of patrons served in a typical week (2,482) and number of users of public internet computers weekly (248) but 14th for internet-enabled computers available to adults and 20th in public-use computers in the children's area.

Digital Devices

The Athenaeum expanded its Wi-Fi hotspot lending program during the pandemic, but the number of devices is often in flux because they are prone to theft; new purchases are thus more accurately described as replacements rather than expansions. The library spent $10,355.96 to purchase 50 mobile beacons and upgraded 24 others from 3G to 4G in 2023; 4G service costs the library $10 a month. From March 16, 2020, until May 12, 2023, patrons checked out these devices 1,265 times. Patrons with a library card are eligible to use the devices for a week at a time. The Berkshire Athenaeum also lends patrons Chromebooks, which were checked out 109 times in 2022 and 85 times as of October 2023. Patrons can borrow Chromebooks for up to two weeks or use them on-site through the library's technical services office. As of July 2023, the library had four of eight Chromebooks in circulation with two on loan and two on-site. Of the remaining devices, two are lost, and two have been damaged. In March 2024, the library expects to order an additional three to four to replace those damaged or missing. Every year, the library purchases about six to eight Chromebooks based on cost and budget. The library tries to

purchase models similar to those offered previously to reduce patron confusion, typically HP Chromebook 11MK G9 EE 11.6" Rugged Chromebook HD - 1366 x 768 - ARM Cortex A73 Octa-core (8 Core) 2 GHz + Cortex with current prices around $230.The library's reference desk also lends individual tech-related items such as voice recorders, a document scanner, and an SD to USB memory card to transfer data from one device to another.

Digital Skills Classes

In September 2022 during the pandemic, the library began its first series of digital literacy and skills classes, hosting nine classes attended by 82 patrons. The classes grew in popularity, with three people participating in the initial class and 21 attending by the end. The library now provides digital literacy classes monthly, and attendees regularly request one-on-one appointments with library staff to enhance their skills. In September 2023, the library started a series titled *Digital Literacy for All* that ran through March 2023. The courses were free, and registration was not required. Attendees were invited to bring their own laptops, but a computer was not required to attend. Courses included: *Intro. to Email, Intro. to the Internet, Intro. to Cybersecurity, Intro. to iPhones and iPads,* and *Intro. to Video Chat/Zoom*. Funding was initially provided (September 2022 through March 15, 2023) by the Public

Photo: Wylie Goodman, BRPC

Library Association and AT&T; since March 15, 2023, classes have been funded through the library's own operating budget. Despite minimal marketing for the initial classes, attendance increased from two to five students per class between September and December 2022 to 15 and 22 after that. In January 2023, after the grant was fully processed and funds made available, staff used the money to offer small tech-related giveaways to attendees and raffle off Chromebooks to two attendees each session.

Digital Services and Resources for People with Disabilities

Many libraries in the Commonwealth are designated as centers where people with disabilities can access assistive technology aids such as screen readers, assistive listening systems, mobility devices, and speech recognition software. All Massachusetts libraries can also apply for the Massachusetts Board of Library Commissioner's *Access for All* grant, which provides $7,500 to $20,000 for libraries to plan and launch projects to address local accessibility needs; the Berkshire Athenaeum is the only library in Berkshire County to have applied for and received this grant, in 2016 being awarded $17,500.

Pittsfield Public School District

The Pittsfield Public School District serves approximately 5,000 students starting with its nationally recognized Parent-Home Child and Pre-K Programs and continuing through Grade 12. The district encompasses 14 schools, including two Special Education Day Treatment Programs. The entire district is designated as Title 1, which qualifies it for federal financial assistance to ensure children from low-income families can meet challenging state academic standards. **As a result of this designation, all households whose children are enrolled in Pittsfield Public Schools are automatically eligible to enroll in ACP.**

The district also offers Chapter 74 (Vocational Technical Education) Programs related to technology, including Information Support Services & Networking; Advanced Manufacturing Technology; and Radio & Television Broadcasting.

Table 2: DESE Participation in Digital Literacy and Computer Science Courses

Student Group	All Grades %
Asian	21.5
Male	18.9
White	16.9
All Students	16.1
African American/Black	16.1
High Needs	15.7
Multi-race, non-Hispanic or Latino	14.8
Hispanic or Latino	14.4
American Indian or Alaskan Native	13.3
Female	13.2
English language learner	11.8
Students with disabilities	11.3
Native Hawaiian or Pacific Islander	0

Source: Massachusetts Department of Elementary and Secondary Education

The chart at left from the Massachusetts Department of Elementary and Secondary Education (DESE) offers an overview of recent digital literacy and computer science course-taking data for the district. Students begin exposure to digital literacy and computer science starting in Grade 3 with participation ramping up in Grade 6. Participation in digital literacy and computer science courses is highest among Asian students, who are already participating at a high level (16.7%) by Grade 4; moderately lower for Black/African American, multi-racial, and Hispanic/Latino students; and significantly lower for English Language Learners, female students, and students with disabilities.

As a result of these findings, the school district may need to conduct more intensive outreach to parents across racial/ethnic groups earlier in their educational journeys to ensure their children are benefiting from these critical life and workforce skills.

To address digital literacy inequities, the district applied for and was awarded last year a Computer Science (CS) Engage Grant from DESE to implement digital literacy courses at the elementary level (pre-K to grade 5) where they are currently not offered. However, due to the recent departure of the district's Professional Development Coordinator (PDC), and subsequent lack of teacher capacity, the grant was never activated. Before leaving, the PDC noted during an interview with BRPC that, in Grades 6 to 8, digital literacy courses are considered electives, and many students are regularly pulled from classes for reading, math, and science, while in high school, only 11 to 13 percent of students take computer science courses.

DESE also selected Pittsfield to participate in an educational technology peer learning cohort to align the district's software programs and measure the impact different educational software has on student success. Due to the pivot to online learning that took place during COVID, teachers in the district are currently accessing over 120 educational software programs but only a handful have been evaluated for efficacy. This effort is also on hold due to the PDC leaving.

DESE offers high school students the opportunity to participate in the Innovative Career Pathway Program, in which they are introduced to training and real-world experiences in high-demand industries, among them information technology, engineering, and networking. This year Pittsfield High School launched a Technical and Engineering Pathway Program and has been recognized for closing the digital divide for enrolling BIPOC students in Advanced Placement (AP) computer classes; PHS has the third-largest AP program in the state. PHS students, however, do not have access to an open and free Wi-Fi internet network during the school day, according to some students, and must rely on hotspots to get online. Some students also complain of poor service and frequently dropped connections, due to overuse of the network, and needing to install VPNs to bypass blocks on websites that could be used for basic research.

At Taconic High School, the district's vocational school, students can take a career and technical education program (CTE) focused on Information Support Services & Networking. According to the school's website, "The program will introduce students to computer networking and support. Students will be trained in the latest industry help desk concepts, application and end-user operating system support, Server maintenance, computer network operation and support, web technologies, Cyber Security, and wireless and mobile support. Students will have the opportunity to obtain certifications in A+, Network+, LINUX PDC, Microsoft Technical Associate, CISCO certified Entry Network, and CISCO Certified Technician." As of this writing, it is unknown how many students have matriculated through the program.

Device Distribution

In 2020, as schools shifted to online learning, the Pittsfield School District availed itself of federal and state grants to purchase 2,500 Chromebooks for students who lacked devices. In the 2021-2022 school year, the district replaced 2,088 at a cost of over $1M, and by March 2023 had to replace 1,785 that were lost or broken. In March 2023, the Pittsfield School Committee released the results of a *Student Chromebook Deployment Survey* given to superintendents, teachers, families, and students to assess opinions about students taking Chromebooks home. Elementary school teachers and families felt it was preferable to restore lending Chromebook carts to classrooms, the result being teachers' inability to issue assignments requiring students to access the internet at home. Middle- and high-school teachers, families, and students were divided about device distribution, with about half of middle-school families and students advocating for the continuation of a take-home option while teachers preferred devices only to be available in class. For high-school students, the results were even more divergent. Close to two-thirds of families and students still wanted a take-home option while only one-third of teachers agreed. In the end, the school determined it would need an additional $500,000 annually if all students continued participating in the current Chromebook Deployment Program.

After-School Program: 21st Century Community Learning Centers

Pittsfield's public-school students are also served by 21st Century Community Learning Centers CCLC), federally funded after-school programs that provide academic support and enrichment during the school year and summer at three sites*:

- Herberg Middle School
- Morningside Elementary School
- Reid Middle School

The program used to serve Conte Elementary School but lost its funding in FY23.

During the pandemic, and continuing into 2024, the programs pivoted from in-person to remote learning and now offer live instruction, homework support, and enrichment via Zoom. The CCLCs also rely on community partners such as Berkshire Art Center (formerly known as IS183), Berkshire Botanical Garden, Berkshire Museum, Berkshire Theater Group, Boys & Girls Club, Flying Cloud Institute, Mass Audubon, and Operation Better Start for programming. Programs have enrollment limits and registration is on a first-come, first-served basis, although they currently have space in most programs.

According to Pittsfield's last CCLC director, the three programs currently serve about 160 to 170 students. The director noted challenges with the Chromebooks students use, which are not suited for all programs and are cumbersome to carry while participating in after-school activities. Many Chromebooks are also in rough shape, malfunction, are slow, or have technical issues. The CCLS used to lend students iPads, but those have been lost, not updated, or recycled.

More urgently, the program's director reports a lack of teachers, paraprofessionals, and supplies to run the programs, particularly after having lost funding at Conte. He notes that teachers rarely want to work after school after completing a regular school day due to 'stress' and 'burnout.'" He estimated that if the program had another $100-$150K annually, he could raise staff salaries to improve teacher retention; increase student enrollment, and more fairly compensate community partners.

Pittsfield Council on Aging

The Pittsfield Council on Aging (CoA) is dedicated to the interests and needs of Pittsfield's more than 13,000 seniors aged 55 and older, which it serves through programs and services that seek to enrich and maintain their quality of life.

The Ralph Froio Senior Center, which hosts many of these activities, annually serves 2,000 to 3,000 clients. The building is handicapped-accessible, within walking distance of several housing projects, reachable by bus, and open Monday through Friday from 8:30 am to 4:00 pm. The center had to close in April 2020 due to COVID-19 and began gradually re-opening on a limited basis in September 2020 (by appointment) and October 2020 (by arrangement). The center fully reopened to in-person services in April 2021.

During the pandemic, the center continued connecting with some participants and board members via Zoom and similar technologies. The center has a computer lab with five desktop machines and, starting in March 2022, began offering a once-monthly session — followed by two two-hour classes (twice monthly from July to October 2022) — with its IT staff to help clients one-on-one with laptop, tablet, or cellphone questions. In January 2023, the center offered monthly, one-time, two-hour sessions (Tech Savvy Seniors) to help those who had received new electronic devices as holiday gifts learn how to use them; the center earlier created the Ralph Froio "Surf Club" in 2015 to teach seniors about email and social media. It publishes a once-monthly online newsletter to help clients stay connected with its activities. The center benefits from two volunteers who come to the center bi-weekly to work one-on-one with seniors who have questions about basic digital skills such as attaching a photo to a text message, blocking unwanted emails and callers, and creating a contact list. A volunteer from the nonprofit Cyber Seniors visits the center twice weekly to provide similar one-on-one support. Each comes to the center for approximately five hours weekly, during which time they serve approximately 10 to 12 clients; the center's leader notes that seniors prefer one-on-one help over group support. MassEDP recently distributed six free and reduced-cost

TECH TALK
It's that time again....
You received a new electronic for Christmas and you are in need of help! Help is on the way!!
We have out IT Tech guy to answer your questions.
January 5th from 2-3pm in the lounge. Please call to sign up... limited space.

Source: Ralph Froio Newsletter

specialized telephones, wireline, and wireless, to residents with disabilities. In 2023, the Pittsfield Council on Aging served as the lead applicant on a Massachusetts Executive Office of Elder Affairs *Age Friendly Berkshires: Digital Literacy and Inclusion* grant that will soon bring devices, curriculum, program support, and training of trainers to Pittsfield and 13 other CoAs across the county.

Berkshire Community College

Student Demographics

Berkshire Community College (BCC) is a public college in Pittsfield with a student body of 1,611, 703 (43%) of whom are Pittsfield residents. School enrollment increased by approximately 200 since 2020, an indication of the school's critical role in the wake of COVID-19. A description of the class of 2023 *as a reflection of key Covered Populations* is summarized in the chart below. Last year, 813 BCC students were Pell-grant eligible,

but the school awarded only 627 grants because the remaining students had outstanding paperwork. In fall 2023, 70 percent of the student body was Pell-eligible.

Table 3: BCC Computer Information Systems Enrollments / Covered Populations / Degrees

Covered Populations	Fall 2023 CIS Enrollments
Enrolled students	46
Pittsfield residents	19
Low-income Proxy[2]	19
Low-Income Proxy[1]	17
Members of a racial or ethnic minority group (BIPOC)	12
Veterans	2
60 years and older	1

Source: Berkshire Community College

Courses of Study

BCC offers more than 50 associate degrees and certificate programs and began offering two completely online degree options in the fall of 2023 in response to growing interest in this approach. This past fall, 60 students enrolled in all online programs. In-person, BCC offers courses in Business and Computer Information Systems (CIS) and currently has 46 students enrolled in its CIS Programs. A summary of those programs is in the chart below:

Table 4: BCC Computer Science Degree or Certificate Programs: Fall 2023

Degree or Certificate Program	Enrollments
AS.CISC-CIS-Computer Science	25
AS.CISS-CIS-Networking & Cybersecurity	13
CgF.CNET-CIS Networking	3
AS.CISB-CIS-Business Systems	2
CF.CPCT-CIS Programming-Technical	2
CF.CPCB-CIS Programming-Business	1

Source: Berkshire Community College

The school reports lower-than-expected graduation rates for these programs, however, which points to the need to identify the factors distinguishing students who complete courses from those who do not. BCC computer science alumni have found with the following regional employers:

- Adams Co-op Bank

- Berkshire Community College
- Berkshire Health Systems
- Berkshire Life (now Guardian)
- Central Berkshire Regional School District

- General Dynamics (employs largest # of BCC CS alumni)
- DB Consultants
- Lenox Public Schools
- MCLA
- The Options Institute

BCC is now developing new training through its Workforce Development and Community Education Program to prepare adults for jobs as IT Help Desk - CompTIA A professionals. Once open for enrollment, the grant-funded program will offer an entry-level, foundational certification to unemployed and underemployed Berkshire County residents to gain essential skills and knowledge needed for careers in IT support and technical assistance. Eligible students are provided funding to attend courses free of charge and will receive wraparound services to help them graduate on time and find employment, including career readiness

preparation, Northstar Digital Literacy assessment, a laptop, and a stipend upon completion. The program was informed by MassHire's Berkshire Workforce Blueprint, which identified Information Technology as a regional industry need, as well as economic and job trend data about current and projected workforce trends. The school hopes to enroll two cohorts per year into the program with eight to 10 students in each.

BCC also offers its students in-person computer and IT support from 8 am to 7 pm both in computer labs, equipped with desktop and laptop devices, as well as virtually. The school maintains an open Wi-Fi-accessible campus for faculty, students, and visitors with a helpful map that directs users to locations throughout campus where they can connect online. According to administrators, the top five technology challenges facing BCC students are:

- Access to appropriate technology hardware
- Computer literacy about general computer operations and functions
- Computer literacy about the internet/email
- Reliable access to MFA devices or numbers
- Reliable access to home internet

The school seeks to eventually provide a computer and appropriate software and training to all students. With 1,600 enrollees this fall, BCC estimates the cost for a computer, software, security, and training at $1K per student or $1.6M total.

Berkshire Medical Center

Berkshire Medical Center (BMC) served 10,526 Medicaid patients in zip codes 01201 and 01202 between January 1 and December 31, 2023, all of whom, assuming they are adults, would be eligible for the Affordable Connectivity Program, No data on telehealth use by BMC patients is available to be able to model potential telehealth savings to the hospital (see https://srbwihealthcalculator.com/). Future coordination with BMC leadership could help identify potential cost savings to the hospital from deeper adoption of telehealth. The National Committee for Quality Assurance (NCQA) found that "telehealth facilitates access to healthcare for individuals who might otherwise skip or avoid important services. It also allows care delivery more quickly and efficiently in lower-cost settings. The TTP found evidence that telehealth can help reduce more costly urgent and emergency department (ED) care, as well as the use of costly and often overused services such as imaging."
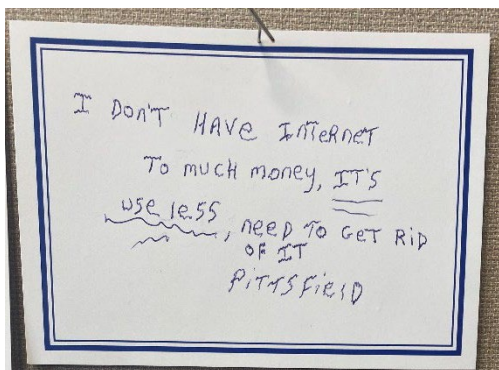

Photo: Wylie Goodman, BRPC

Affordable Housing, Public Housing, and Shelters

Pittsfield has been a U.S. Department of Housing and Urban Development Community Development Block Grant (CDBG) entitlement community since 1974 and receives an annual formula allocation of CDBG funds from HUD that aims to achieve three broad goals:

- provide decent, safe, affordable housing to low- and moderate-income people, including supportive housing for people with special needs and access to job opportunities;

- provide a suitable living environment with access to public/private facilities and services that reduce the isolation of income groups; restore and preserve historic/aesthetic quality of housing; and conserve energy;

- offer expanded economic opportunities, including job creation and retention, financing, and capital opportunities, and projects that promote empowerment and self-sufficiency for low-income persons.

In the city's most recent Consolidated Action Plan (CAP) and Annual Action Plan, the city noted it intends to:

- create approximately 75 units of affordable housing including permanent supportive housing for chronically homeless individuals; and

- a housing resource center to provide case management services, lockers, showers, and a commercial kitchen that will help people transition to secure living situations, offer support for those experiencing housing instability and human service programs, and other infrastructure improvements.

Pittsfield also has a Public Housing Authority (PHA) that funds and manages 695 units of rental housing: 164 units of federal public housing and 604 units of State-assisted housing to extremely low-, very low-, and low-income families, seniors, and households with people with disabilities (PWD). PHA serves over 200 families and more than 400 individual tenants. PHA and the nonprofit Berkshire Housing together provide 580 and 750 HUD Section 8 housing vouchers, respectively, to this population. Berkshire Housing funds and manages 328 units at state and federal public developments while in the most recent fiscal years, the emergency shelter run by ServiceNet served on average 80 to 100 people a year and the Elizabeth Freeman Center which serves domestic violence survivors supported 50 to 75 people. In fall 2024, Berkshire Housing, in partnership with the Zion Lutheran Church, will open a Housing Resource Center that will be an ideal setting for digital navigator support. The chart below shows the largest affordable housing properties in Pittsfield by capacity. **Appendix G provides a more detailed list, including scattered site Section 8 housing and mobile home communities.**

Table 5: Top 10 Largest (by Capacity) Affordable Housing Properties in Pittsfield

Address	Owner/Manager	Units	Capacity	Income Requirement	Populations Accepted
40 / 41 April Lane	Berkshire Housing	100	584	30%-60% AMI	Multi-Family
379 North	Berkshire Housing	68	270	50% AMI	Seniors
55 Spring	Berkshire Housing	45	246	30%-60% AMI	Multi-Family
171-191 Ashland	Berkshire Housing	43	238	50%-60% AMI	Multi-Family
193 Elberon	Pittsfield Housing Authority	154	154	30% of Income	Seniors/PWD
350 West	Berkshire Housing	39	130	50% AMI	Seniors
379 East	Pittsfield Housing Authority	103	103	30% of income	Seniors/PWD
65 Columbus	Pittsfield Housing Authority	91	91	30% of income	Seniors/PWD
335 Wahconah	Pittsfield Housing Authority	68	68	30% of income	Seniors/PWD
253 Wahconah	Pittsfield Housing Authority	50	50	30% of income	Family

Source: City of Pittsfield, Pittsfield Housing Authority, Berkshire Housing

Community Engagement

The City of Pittsfield, BRPC, and partner organizations conducted extensive outreach from June 2023 to February 2024 to learn about community members' internet and technology needs, starting with administering MBI's 54-item survey. By December 2023, Pittsfield had the third-highest survey response rate among municipalities across the state.

BRPC staff also met with residents at events such as Third Thursday, First Friday ArtsWalk, and the YMCA Wellness Fair; canvassed North Street to speak one-on-one with people about their digital needs and concerns; volunteered at First United Methodist Church's food pantry to hear from unhoused individuals; and attended the annual Ralph Froio Senior Center picnic to speak with older adults. The team presented to the City Council, city boards and commissions, and schools, and shared information with more than 175 CBOs. Additionally, **BRPC engaged a local community engagement consultancy, R3SET Agency, to host a conversation with African-American community members, culminating in an ID3A Jam attended by 12 participants; the results of which are noted in the report and included in full in Appendix H.**

Separately, the city created a dedicated Digital Equity page under the auspices of the Department of Diversity, Equity, and Inclusion focused on community engagement and resource sharing. The city's Information Technology Department also hosted Speed Test Day (11/1/23*), encouraging residents to verify their home internet speed to ensure they were getting the upload and download rates ISPs promised, along with a helpful online guide to help residents improve performance. *The Speed Test Day page remained open for three weeks.*

To ensure outreach extended beyond data-gathering, the city and BRPC co-hosted a Digital Resource Fair at the Berkshire Athenaeum in October 2023 at which local organizations offered one-on-one support on such topics as online job searching, digital literacy and skill-building, cybersecurity awareness, and Affordable Connectivity Program enrollment.

To identify organizations appropriate for the State's Digital Equity Asset Map, BRPC staff emailed, called, and visited CBOs supporting Covered Populations to assess their digital navigator and related support capacity and ensure they were well-positioned to apply for future funding.

Finally, BRPC facilitated in-person and virtual focus groups in partnership with CBOs serving the Covered Populations.

Survey Results

In total, 500* Pittsfield residents completed the MBI *Internet for All* survey. Outreach efforts sought to ensure fair representation across the Covered Populations and the results closely align with the city's demographics; *102 *survey responses were eliminated due to suspicious irregularities such as exorbitantly high internet costs and naming ISPs that do not exist in Pittsfield.* **A summary of MBI *Internet for All* Survey results can be found in Appendix I.**

Internet Access

Nearly 90 percent of survey respondents reported being able to access the internet at home with 85 percent identifying Spectrum as their ISP, followed by AT&T (4.9%), Verizon (2.6%), and T-Mobile (.82%). Home wireline (cable, fiber, DSL, etc.) was the primary way people connected to the internet, followed by a data

plan for a smartphone, hotspot, or tablet. For those without home internet, the library and community centers were preferred locations for going online.

Internet Affordability

For Pittsfield residents lacking internet service, cost is the most inhibiting factor cited by more than 50 percent of respondents, followed by lack of confidence navigating the internet, and inability to afford a device. The median monthly cost respondents reported paying for Internet service was $80; Statewide it is $75.

Figure 6: Price Paid for Internet by Pittsfield Residents
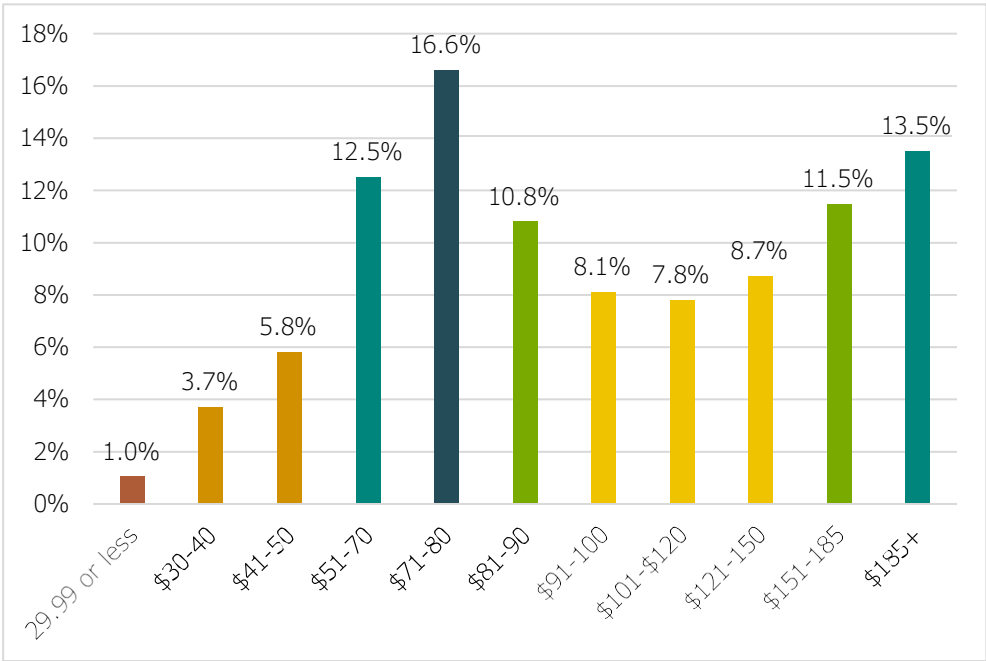
Source: MBI *Internet for All* Survey

Fifty-six percent of respondents said paying their monthly bill was "very" or "somewhat" hard. Just over half (60%) knew about the Affordable Connectivity Program. ACP is slated to end in April 2024 impacting more than 6,000 Pittsfield households.

Nearly 73 percent of respondents felt their Internet service was "good enough to meet their needs," 24 percent said it was "not good enough;" and three percent "did not know."

Computer Access

Although 87 percent of respondents said they can use the internet for online activities, slightly fewer (85%) reported having enough computer devices for everyone in their household. About 20 percent reported a cellphone being the device they use most to go online while nearly 11 percent relied on one device but not a cellphone, such as a desktop (3.79%); tablet (2.74%). or laptop (.84%).

Computer Affordability

The devices people use to go online can be as if not more important than the internet speed or service they receive. Only 26 percent of respondents said they could afford a computer costing $250 to $500 such as a Chromebook, while a smaller percentage (11%) could afford a typical laptop ($1,700). While middle- and upper-class individuals may see devices as essential to daily life, households with limited income are likely to view them as luxuries, making it more challenging for them to learn advanced skills (e.g., Excel, PowerPoint, Adobe Suite) or participate in remote work.

Figure 7: Affordability of Computer Devices: Prices Pittsfield Survey Respondents Can Pay
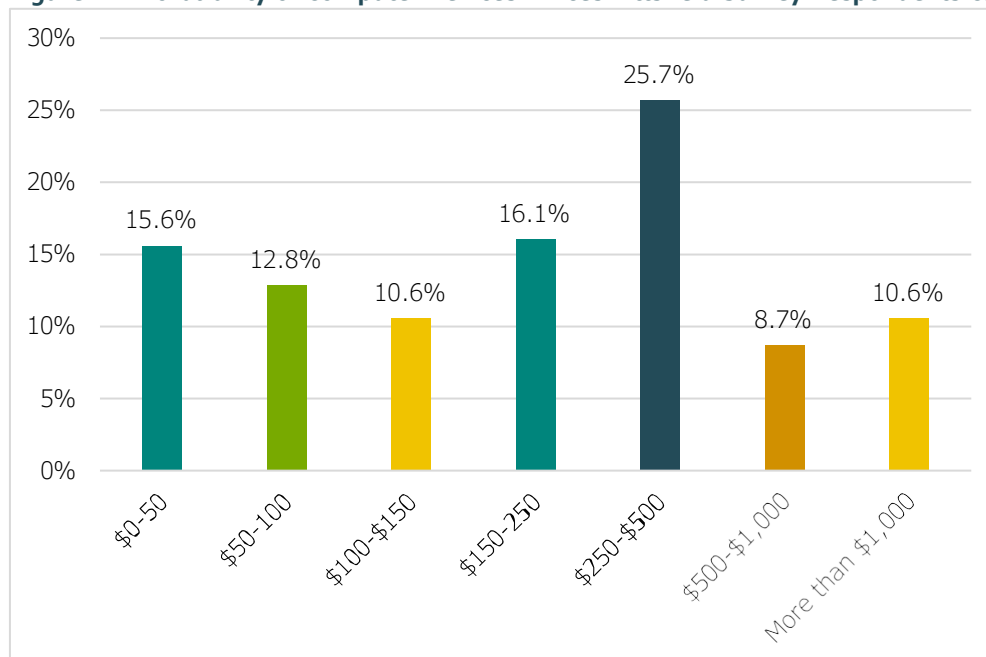
Source: MBI *Internet for All* Survey

Digital Literacy and Skills

Most people who completed the survey reported being able to use the internet comfortably for general searching, but some found it hard or not easy to use it for more complex tasks. **To improve their skills, respondents were evenly divided across learning methods with Do-It-Yourself methods (32.9%) and online classes (27.6%) preferred.** From a policy perspective, this could mean having the city provide funds to CBOs to pilot programs such as Northstar, which residents can use on their own (with a proctoring option available for advanced certifications), and connecting older adults with free online resources such as AARP's Senior Planet from the Older Adults Technology Services to supplement in-person learning (e.g., Cyber-Seniors and CanCode).

Cybersecurity

Even with just over half of respondents (57%) reporting having the tools and resources to stay safe online, nearly 86 percent reported being very or somewhat concerned about internet safety. Major concerns included having data stolen or used without people's consent; loved ones being scammed or tricked; and being tracked or surveilled. This suggests the need for broad as well as targeted education and awareness-building around cybersecurity, potentially starting with at-risk populations like youth, seniors, and people with disabilities. Because a large percentage of respondents (82%) rated most government websites as "very" or "somewhat" accessible, the city and partner agencies may wish to leverage their trusted online platforms to provide more cybersecurity information and resources.

Covered Population Responses

While people who self-identified as belonging to specific Covered Populations generally responded to the *Internet for All* survey questions nearly identically to their peers, the following items were noted as small differences that the city may wish to consider before making policy or program investments.

Older Adults…

Photo: Andrew McKeever, BRPC

- reported slightly higher rates of being "very" concerned about internet safety than younger respondents (59% vs. 51%).
- were more likely to report having good enough internet service (81% vs. 73%).
- had a more favorable opinion of government websites and their ability to apply for benefits online.
- reported slightly more difficulty applying for jobs online and conducting general internet searching but less accessing healthcare services.
- demonstrated a greater desire to use the internet for telehealth and general internet searching if they lacked internet access

People with Disabilities…

- reported all categories of internet use — job hunting, accessing telehealth, general internet searching, accessing transportation information, and applying for benefits — as more difficult than non-disabled respondents.
- were more likely to report their internet service as not good enough to meet their needs (32% vs. 24%).
- demonstrated a greater concern for internet safety and a slightly greater preference for online digital literacy classes (38% vs. 31%).

Veterans…

- found it hard to search for and apply for benefits (24% vs. 13%).
- were more likely, if they had applied for benefits online, to experience government websites as working "very well" or "somewhat well" (91% vs. 81%).
- preferred online digital literacy courses (45% vs. 31%).
- reported healthcare, participating in the community, general internet searching, and accessing transportation as more difficult but applying for jobs easier.
- were slightly more willing to pay more than $250 for a laptop or desktop (46% vs. 41%).
- noted a greater concern for internet safety (63% vs. 51%).

BIPOC residents…

- were more likely to report that paying their internet bill was "very" or "somewhat" hard (66% vs. 56%).
- were more aware of the Affordable Connectivity Program (52% vs. 41%).
- were less likely to report having the devices they need (79% vs. 85%).
- found it "not easy" or "hard" to search for and apply for jobs (34% vs. 29%), access healthcare (41% vs. 37%), conduct general internet searching (25% vs.18%), and locate transportation information (43% vs 37%).
- were more likely to want to use the internet, if they did not have it, to apply for jobs (33% vs. 21%).
- reported a greater preference for online rather than in-person digital literacy classes (54% vs. 31%).

- rated government service and benefit portals as working "not too well" or "not well at all" ((24% vs. 19%).

Immigrants / English Language Learners...

- were significantly less likely to report their internet service as being "good enough to meet their needs" (52.5% vs. 73%).
- reported fewer reasons for not having internet service (too expensive; did not want; service not available) rather than fears about safety or lack of confidence using it.
- were less likely to access the internet in public spaces.
- were more likely to report everyone in their household having the devices they need.

LGBTQIA+...

- were more likely to have heard of the Affordable Connectivity Program.
- were more likely to report that everyone in their household had the device they needed.

Focus Groups

BRPC and its partners conducted nine focus groups with members of Covered Populations between October 2023 and February 2024 with support from the following organizations:

- 2nd Street, Second Chances
- AdLib
- Berkshire Community College
- Berkshire Pride
- Elizabeth Freeman Center

- Pittsfield Council on Aging
- R3SET Enterprise, Inc.
- Roots, Dreams, and Mustard Seeds
- Soldier On

In the section below, we summarize key takeaways from these conversations and call attention to issues heard across all or nearly all groups as well as unique challenges the city and its stakeholders should take into consideration when engaging different audiences.

Universal Themes

While most groups said their current service was sufficient for their needs, the lack of service provider options and price of service was a shared frustration among groups. Several participants also said their internet service fares poorly during storms and that wires to their homes need upgrading. Digital literacy was a shared concern, even among participants who self-describe themselves as being technologically skilled. Group members across populations expressed a desire for more educational services to help them navigate the internet.

Specific Challenges

- People with disabilities noted the need for assistive technology and more accessible website designs.
- Victims of crime noted higher internet safety concerns and a need for support for more free public access locations.
- Formerly incarcerated participants expressed a greater desire for assistance applying for jobs.
- Recent immigrants noted a need for higher-quality devices and translation services.

Focus Group Summaries

Team R3SET is the consulting arm of R3SET Enterprise, Inc. and provides transformative products and programs for community and economic development agencies and passionate leaders, entrepreneurs, artists, innovators, and community members to build a better future. The organization held a focus group with 12 members of Pittsfield's Black community, including neighborhood leaders, local Black business owners, and graduates of the Blackshires Leadership Program Academy.

Participants expressed frustration with the lack of ISP competition and feeling "price gouged." The group discussed municipally owned internet as an option to provide competition. The group identified issues such as poor-quality service and expressed their support for expanding public Wi-Fi to the Morningside and West Side neighborhoods. Some noted that unreliable internet impedes access to telehealth.

Participants noted a need for community-based digital literacy education including intergenerational models. The participants noted a desire for in-person classes to build community trust. Many focus group attendees cited the cost of purchasing computers as the reason people frequently use only a cell phone.

Team R3SET set forth a series of recommendations to assist the city address digital equity that includes:

- conducting a city-wide equity analysis and audit of technology to identify if "digital redlining" exists;
- increasing access to subsidized internet and device distribution programs;
- providing digital skills classes;
- supporting re-enrollment in the Affordable Connectivity Program;
- revisiting the 2020 municipally-owned fiber feasibility study;
- expanding partnerships;
- creating educational pipelines to technology careers for BIPOC youth;
- funding Black-led organizations to do community outreach and education;
- improving public awareness about digital resources;
- ensuring BIPOC representation in technology planning and digital access on city boards and commissions.

———————————

Soldier On operates a 165-bed shelter and 71-bed transitional living facility at the Gordan Mansfield Veterans Community in Pittsfield. The organization assists unhoused veterans with social and life skills as part of a comprehensive approach toward helping these former soldiers return to the workforce and re-engage in community and civic life. Seven clients of Soldier On participated in a focus group to provide feedback on improving digital equity and services.

The participants shared stories about how the evolution of technology left many behind, particularly when it comes to modern devices that they have not been trained to use. The participants noted that digital natives are much savvier at navigating internet services.

The veterans noted that internet frauds and scams are barriers preventing them from utilizing the internet. Some participants noted that many are afraid of technology because of these scams and, therefore, choose not to participate in some online activities.

The participants noted cost as a barrier and voiced support for increased competition and programs that subsidize internet subscriptions.

Pittsfield Council on Aging is dedicated to the interests and needs of older adults. The Council enriches and maintains

"I am so unsophisticated you wouldn't believe, but I am going to learn everything, and I'm going to be so smart when I leave here."

– Focus Group Participant, Ralph Froio Senior Center

the quality of life of aging adults by offering programming and services at the Ralph Froio Senior Center. The Senior Center hosted a focus group with six participants. Following the focus group, BRPC's ACC Fellow provided a demonstration of Northstar, which the Senior Center is piloting, and staff from the Information Technology Department provided one-on-one technical assistance.
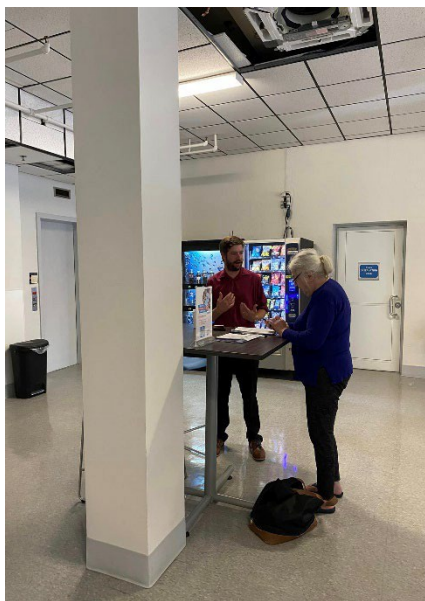

Older adults voiced concerns about internet safety, lack of digital skills, and internet affordability. Attendees told stories about getting new devices but being unfamiliar with how to use them. Some discussed wanting to use newer devices but not being confident enough to set them up, referring to newer devices as overly complicated. Participants voiced significant concerns about banking and identified fraud as keeping them from using the internet to its fullest.

Participants said the internet service they have is sufficient for their needs, but that cost is a barrier. Most participants did not have complaints about the service provider but said they needed the skills to better use it.

Many participants initially reported using the internet in a limited capacity and voiced fears about using its features. However, as the group discussed new topics, they realized they used the internet for health and economic benefits that they hadn't previously considered.

Photo: Andrew McKeever, BRPC

The Elizabeth Freeman Center's mission is to offer hope, help, and healing to all experiencing or affected by domestic and sexual violence. The organization provides free, accessible, and confidential services throughout Berkshire County and works to end cycles of violence. The organization provides counseling, emergency shelter, food, transportation, safety planning, and advocacy. The organization held a focus group with seven clients.

Participants noted that people who are reskilling or going back to school are "playing catch up" and that survivors of domestic and sexual violence were often kept from utilizing the internet by abusive partners. The participants also shared privacy concerns with the government having access to personal information.

The group raised concerns about the high cost of internet service. The group supported a government-operated internet option so that consumers are not limited to the services provided by private companies. The group expressed support for free Wi-Fi in affordable housing units but was concerned that there would be no incentives for landlords at scattered site Section 8 housing to make such investments.

Participants expressed a desire for homeless shelters, community centers, and food banks to have internet access and support free digital literacy education. The group also wanted government sites to be more user-friendly.

Roots, Dreams, and Mustard Seeds seeks to empower vulnerable community members through economic opportunities. The organization provides community members' basic needs including food and wellness services and social, educational, and artistic programming. Eight people who recently migrated to the U.S. participated in a focus group, which also included a demonstration of Northstar.

The group noted a language barrier preventing people from fully utilizing the internet. The participants mostly used the internet through smartphones, citing cost as a preventing issue from obtaining higher-end devices. The lack of quality devices makes it difficult for participants to assist their children with schoolwork or communicate with educators.

The group mostly agreed that the internet service and the response from internet or cellphone providers is of a quality that supports their needs. However, the group collectively agreed that the price was too high. Participants all said they are confident using the internet but are "somewhat concerned" about safety.

AdLib assists people with disabilities to live independently. The nonprofit provides skills training, peer counseling, transition services, information and referrals, and advocacy. AdLib hosted two focus groups, one in September and another in December, with a total of 13 participants.

The groups discussed having limited access to the internet because of the cost of assistive technology and internet service itself. They also identified that devices and websites are often not designed to support people with disabilities.

"My brother also has additional costs related to his disability which can make it harder to afford internet service. In addition, with his disability, he may have limited access to the places where they can use the internet."

– Focus Group Participant, AdLib

People with disabilities said the cost of internet access is higher for them because they also must purchase accessible devices. Participants praised AdLib, UCP, and Easter Seals for providing assistive technology but noted compatibility issues between the devices and online services they are trying to access.

Participants noted a need for digital literacy support. One said that the Commission for the Blind provides impactful one-on-one support, but that due to limited staff capacity, scheduling time can be a challenge. Beyond UCP, Easter Seals, and the Commission for the Blind, the group finds support from the Adult Learning Center, MassHire, local repair shops, and Assurance Wireless.

Most participants said their internet service was sufficient to meet their needs, but others noted a loss of service during poor weather. Another noted that she has bandwidth issues and consulted an IT professional who told her the wiring to her home needed to be upgraded.

People with disabilities reported having limited income to put toward connectivity and are concerned about their personal medical information being stolen.

Berkshire Community College held a focus group with five students representing several types of learners.

Participants said their internet services are "barely adequate" to meet their educational needs and voiced frustration at having only one internet provider whose cost for service they felt was too expensive. Despite the costs, most participants agreed the internet is a necessity they cannot do without. One participant did not have home internet and said it was because of the cost.

Most participants have computer skills but recognize that they are often the go-to person to fix issues for other people. Students said they noticed a barrier between people who lack digital knowledge and those providing support because those needing support struggle to articulate their problems and/or cannot understand the solution.

The students said they had used Chromebooks in the past for school but that these devices were unable to meet the technology demands of their current classes, with some teachers instructing students using Chromebooks that they will be incompatible with learning demands. A BCC

"It is a necessity. It needs to be more of a utility like our water, our sewer and power."

– Focus Group Participant, Berkshire Community College

representative said the college has pivoted away from Chromebooks and opted to provide students with higher-quality laptops. Students voiced concerns about the security of their personal data.

Berkshire Pride organizes and provides the LGBTQIA+ community with safe spaces and events. The nonprofit has a downtown Pittsfield office and organizes opportunities for the LGBTQIA+ community to live and thrive as their authentic selves. Berkshire Pride held a focus group with eight community members. Participants noted how integral the internet is to all aspects of their lives and expressed concern for the ramifications of large-scale internet outages. The group also recognized that unhoused people are at a greater disadvantage because they do not have access to the internet when the library is closed. Participants recalled times when they did not have service and said they used libraries and coffee shops to access service.

Participants all had internet at home but noted that service will drop during windy weather and that some participants live in homes where wiring to the home needs to be upgraded. Participants felt the devices they own are sufficient for their needs, although one noted that the Berkshires have limited local device suppliers.

Most participants said they were "very concerned" about internet safety, particularly their family members being harassed or targeted, personal information or data being stolen for nefarious purposes, deep fake technology, artificial intelligence, voice emulators, and online scams. Participants voiced concerns about school-age children not having the devices and access needed for online learning.

2nd Street, Second Chances held a focus group with seven formerly incarcerated individuals. The group discussed the challenge of reintegrating into the community after being in prison, noting their increased dependency on internet access for economic opportunities. Participants expressed a desire for additional help applying for jobs online, while also noting that MassHire is a resource they turn to for assistance.

The group expressed a desire for more digital literacy. One participant praised Northstar, adding that he obtained 15 Digital Literacy Certifications while incarcerated which is now allowing him to pursue higher education.

Participants noted challenges with internet quality while living in shared living facilities where internet speeds are insufficient when multiple people are accessing the internet at once. Attendees were not in favor of hotspots because they used data too quickly. Others noted that the internet is slow when only using a phone.

Recommendations

Using information from the 2017-2021 American Community Survey and publicly available data; survey results; focus groups; interviews with municipal and CBO leaders; and research into best practices regionally and nationally, the city has identified a set of recommendations it aims to pursue in collaboration with partners over the next one to five years that fall within four categories.

Coordinate: Form a Multi-Sector Coalition that Leads Digital Equity Efforts
Successful programming and advocacy for digital equity, inclusion, literacy, and skill-building requires participation by all sectors (public, nonprofit, and for-profit). City leaders and CBOs will organize and lead a coalition to demonstrate to residents and other communities that closing the digital divide is not merely aspirational but achievable.

Access: Expand Affordable Options for Digital Services
Affordable internet service is essential for education, telehealth, remote work, and social-emotional support. Pittsfield residents across nearly every demographic group report that commercial internet rates in the city are too high and that they lack an alternative option for service without sacrificing speed or quality of service. The city and its partners must work together and advocate for affordable digital services for all.

Educate: Provide Digital Literacy and Cybersecurity Training for All Ages
Analysis of Massachusetts Department of Elementary and Secondary Education (DESE) data, along with interviews with school leaders, supports the need for strategic and informed digital literacy and skill education to ensure the next generation of Pittsfield youth are prepared for an increasingly complex and fast-evolving technological world. This need is equally seen as people age. Up to 37 percent of respondents to the *Internet for All* survey reported it was "hard" or "not easy" to use the internet to search for a job, conduct a telehealth appointment, or participate in the community. Focus group respondents mirrored that sentiment, expressing feelings of frustration over a lack of digital literacy, skills, and devices. The city's Consolidated Action Plan similarly prioritizes digital support.

Include: Connect with People Where They Are
Digital equity requires being inclusive with the resources the city creates and supporting residents to participate. This means updating both the city's resources to make them accessible and expanding the city's presence to remove barriers. When 86 percent of *Internet for All* survey respondents reported that a cell phone is among their primary devices for connecting online, the city recognizes that it has a responsibility to meet people where they are.

Recommendations

Form a Multi-Sector Coalition that Leads Digital Equity Efforts

Expand Affordable Options for Digital Services

Provide Digital Literacy and Cybersecurity Training for All Ages

Connect with People Where They Are

Multi-Sector Coalition

Action	Outcome	Partner	Timeline	Cost
Build the city leadership team	A broader-based team will have a larger impact and share the responsibility and workload	City departments	2024	$
Expand the coalition to include a broad range of sector representatives	The city team will recruit and engage in expanded membership	1Berkshire, BCC, BIC, BMC, CBOs, Banks/Credit Unions, General Dynamics, Milltown Capital, PERC, United Way	2025	$
Explore organizational models that members find meaningful to their work and the community	Berkshire County organizations and the clients they serve can more directly benefit from statewide or national digital equity efforts	Alliance for Digital Equity, National partners	2025-2026	$$
Ensure Pittsfield is represented at statewide and national digital equity coalitions and participates in NDIA activities	The city keeps pace with Commonwealth and national digital equity best practices	All partners	ongoing	$$$

Affordable Options

Action	Outcome	Partners	Timeline	Cost
Follow, support, and educate the public on the work of the Joint Committee on Advanced Information Technology, the Internet, and Cybersecurity	Residents will be informed of current programs and legislation and can work with state leadership to craft policies to better meet their needs	CBOs, media and communication partners, State delegation	ongoing	$
Support feasibility studies for buildings to extend opportunities such as the Residential Retrofit and Apartment Wi-Fi Grants from MBI and MAPC	Low-income residents will benefit from faster speed and lower-cost services	Affordable housing providers, MBI	2024-2025	$
Provide wayfinding, signage, and promotion of free Wi-Fi networks	More residents and visitors will know where free Wi-Fi is available	1Berkshire, CBOs	2024-2025	$
Encourage ISPs to participate in MBI's Gap Network Program	The city will demonstrate its commitment to addressing inequities by ensuring all addresses across the city are served	ISPs, MBI	ongoing	$
Enhance the offerings of the Housing Resource Center to improve its ability to provide digital services	Those lacking access to digital services will have an alternate internet option	Berkshire Housing Development, Zion Lutheran Church	2025	$$

Action	Outcome	Partners	Timeline	Cost
Expand the downtown Wi-Fi network to additional neighborhoods	City Wi-Fi will expand to the Morningside, Westside, and Northern neighborhoods	ISPs, MBI	ongoing	$$$
Advocate to lower the cost of the MB123 network for Community Anchor Institutions (CAIs) and support CAIs with navigators, as needed	CAIs not currently taking service will reconnect to the fiber network at lower rates	Local Linx, MBI, State Delegation	ongoing	$$$

Educate All Ages

Action	Outcome	Partners	Timeline	Cost
Support the school district's implementation of DESE Digital Literacy and Computer Science (DLCS)	Educators become models of positive and effective use of technology	CSforMA, DESE, School Leadership, Teachers	2024	$
Provide digital navigator support, making efforts to ensure to engage organizations trusted by Black, Hispanic, Immigrant, and Senior communities	Covered populations will receive support that is not available to them through a DIY program, including support and training at partner organizations and at home	AmeriCorps, COAs, CBOs (Particularly Elder Services and AdLib)	2025	$$
Provide opportunities for internships, apprenticeships, and micro-credentialing	A pipeline of prospective workers with the skills to staff technology companies will emerge	1Berkshire, CBOs, MassHire, Private Sector	2025-ongoing	$$$
Provide coordinated digital literacy support and training	Coalition members will collaborate to share resources rather than compete with programming	1Berkshire, Banks/Credit Unions, BCC, BIC, BMC, COAs, CBOs, General Dynamics, Milltown Capital, PERC, United Way	2025-ongoing	$$$

Connect with People

Action	Outcome	Partners	Timeline	Cost
Investigate opportunities for a mobile city hall	Create a plan for a mobile city hall that includes capacity for delivering digital resource delivery	CBOs, Health Systems Partners	2024	$
Implement a mobile city hall	Procure and build a mobile city hall that includes capacity for delivering digital resource delivery	CBOs, Legislative Delegation	2025	$$
Require all city web pages to comply with Web Content Accessibility Guidelines (WCAG2) from the World Wide Web Consortium (W3C) and include built-in language/translation access.	All residents will be able to access resources and information more easily	Commission on Disabilities	2024	$$$
Engage multilingual interpreters who can help English-language learners navigate the city's online services	A language barrier will be reduced with English-language learners and greater trust will be built with local government	Berkshire Immigrant Center, Berkshire Medical Center, Literacy Volunteers of Berkshire County	2024-2025	$$$
Coordinate and expand cybersecurity education programs that can be delivered to wider intended audiences	People feel safer using the internet and are less likely to be victimized	CBOs, MA Attorney General	2025-ongoing	$$$

Future Funding

To support the recommendations in this plan, BRPC has identified a sample of potential funding sources to address some of the needs addressed in this plan — from affordable internet to telehealth. Where possible funding has been linked to recommendations. These grants are not exhaustive and do not include grants that have already passed such as the AARP Community Challenge, which could be pursued next year. The city and its partners are advised to stay apprised of updates from Berkshire Funding Focus and to learn how to use Candid/Foundation Directory Online at Berkshire Athenaeum to search for grants using key words geared toward their specific work.

Funding Recommendations

Federal

Program	Description	Applicant(s)
ConnectHomeUSA	An unfunded program that creates a platform for community leaders, local governments, nonprofits, and private industry stakeholders to join together and produce locally tailored solutions for narrowing the digital divide for HUD-assisted residents living in CHUSA-designated communities. The program could support device access programs, assist in connecting homes, provide digital literacy programs, and help affordable housing managers lower internet costs for low-income tenants.	City of Pittsfield, Pittsfield Housing Authority, Berkshire Housing
Rural Healthcare Connect Program	This program seeks to improve the quality of healthcare available to patients in rural communities by ensuring eligible healthcare providers have access to telecommunications and broadband. BMC could apply for this grant to address the social indicators of health using telehealth.	Berkshire Medical Center

Funding Recommendations

State

Program	Description	Applicant(s)
MBI Digital Equity Implementation Program	Municipalities participating in MBI's municipal planning program are eligible to apply for up to $100,000 to implement the digital equity recommendations identified during the planning process.	City of Pittsfield
Residential Retrofit	This MAPC/MBI Grant Program seeks to deploy state-of-the-art broadband infrastructure at Affordable Housing properties across Massachusetts. MBI intends to increase low-income residents' opportunity to access high-quality, reliable, and affordable broadband by addressing deficient wiring and infrastructure through grants for fiber optic cabling to the unit to qualified ISPs. Housing Agencies can utilize the grant to provide free internet service to the low-income populations they serve.	Affordable Housing Managers
MassLINKS — Adult Education Virtual School (DESE)	The grant will recruit, intake, orient, enroll, instruct, assess, advise, offer supportive services to, and post-exit follow-up for adult learners not served by programs currently funded by ACLS and/or whose need for services are not met by programs currently funded by ACLS. All services must be delivered virtually. This grant could be accessed to address the needs of out-of-school adult learners.	Local educational agencies; Community-based or Faith-based organizations; Volunteer literacy organizations; Institutions of higher education; Public or private nonprofits

Funding Recommendations

Philanthropic

Program	Description	Applicant(s)
Amelia Peabody Charitable Fund Trust	This Mass-based foundation has made grants to 221 organizations, nearly all in the state since 2018. Among their foci are health, human services, and public safety. They have made no grants in the Berkshires but 12 in neighboring counties totaling over $1.7M.	Nonprofits/CBOs
Donald C Mcgraw Foundation Inc.*No website	This funder has awarded 36 grants in Berkshire County since 2018, including to Hillcrest Educational Centers, Berkshire Education and Correction Services, and Berkshire Medical Center. They can be approached for telehealth grants.	Berkshire Education and Correction Services, Berkshire Medical Center, Hillcrest Education Centers
Feigenbaum Foundation	Based in Pittsfield, they have awarded 303 grants in Berkshire County since 2018, including to The Berkshire Museum, Berkshire Taconic Foundation, and Community Access to the Arts. Among their foci are education, arts, and human services. This funder could support youth digital literacy through the arts.	Berkshire Museum, Berkshire Taconic Foundation
Fidelity Investments Charitable Gift Fund	A Boston-based philanthropy that has awarded 321 grants in the Berkshires since 2018, including 18 Degrees, Berkshire United Way, and Berkshire Taconic. Among their foci are education and human services, which dovetail into digital equity.	Nonprofits/CBOs
Greylock Federal Charitable Giving	Provides support through grants and sponsorships to 501(c)(3)s and schools in communities in which Greylock has a physical location or large concentration of members. Foci related to digital equity include education, financial literacy, Health, human services, and economic development.	Nonprofits/CBOs

Resources

Affordable Internet

Resource	Audience	Description
Broadband Now	individuals	Shows internet service providers available in an area. Some pay BroadbandNow for the customers that reach out through their links but customers pay the same price regardless of whether they find the plan through BroadbandNow or not.
NDIA Free + Low-Cost Internet Plans	individuals	Provides links to plans that provide home internet service for $30 per month or less, which are effectively free for households participating in ACP. Most plans have eligibility requirements linked to income or program enrollment.

Assistive Technology + Related Services

Resource	Audience	Description
Massachusetts Rehabilitation Commission, Assistive Technologies	individuals	MRC's assistive technology services connect people with disabilities with the technology they need to live more independently.
United Cerebral Palsy of Western Mass	individuals	Helps individuals with disabilities become more productive and independent in everyday activities. UCP offers free use of durable medical equipment (DME) through REquipment, an assistive technology library through MassMATCH, and a radio reading service through Berkshire Talking Chronicle over WRRS 104.3 to support children and adults with disabilities. They also offer Computer Fundamentals Educational Webinars to begin or advance computer knowledge and skills.

Resources

Cybersecurity

Resource	Audience	Description
[Be Internet Awesome](#)	individuals, families, schools	A website to empower kids to be safe, confident explorers of the online world. The resources offered are for everyone and are designed to best serve families, educators, and kids. Interland has been particularly well-received by kids ages 7-12 but can be enjoyed by older and younger kids.
[Berkshire District Attorney's Office](#)	individuals, families, schools	Online Safety Resources from a Cyber Tip Line to educational resources for adults, kids, and seniors.
[Mass Attorney General: Computer and Online Privacy](#)	individuals	
[Mass Attorney General: Cyber Crimes](#)	individuals	Tips from the Cyber Crimes Division of the Massachusetts Attorney General's Office ensure people know what to look out for and how to avoid cybercrime.

Resources

Digital Equity And Inclusion (National)

Resource	Audience	Description
Benton Institute	community members and leaders	A philanthropy that provides the only free, reliable, and non-partisan daily digest that curates and distributes news related to universal broadband, connecting communications, democracy, and the public interest.
Education Superhighway	affordable housing providers, community members, educators, nonprofit advocates	A national nonprofit with a mission to close the digital divide. They provide support and resources to expand broadband adoption.
EveryoneOn	community members, national, state, and regional nonprofit partners	**For individuals**: Help to find low-cost internet service plan offers, Lifeline enrollment assistance **For organizations**: introductory digital inclusion workshop for nonprofits, K-12-serving organizations, public housing agencies, and others to introduce them to the digital divide and provide training to staff.
National Digital Inclusion Alliance	nonprofit leaders, government agencies	A natl. advocacy organization that advances digital equity by supporting community programs and equipping policymakers. **For organizations and city leaders**: Access to a free community of digital inclusion practitioners and a monthly newsletter. Become an affiliate for free and join on the third Friday of every month for Community Calls to hear about national resources and on-the-ground strategies for providing digital inclusion services.

Resources

Free + Low-Cost Computer Devices

Resource	Audience	Description
Alliance for Technology Refurbishing and Reuse / Digitunity	individuals, corporations, nonprofits	**For individuals**: Donate a computer. **For corporations**: Donate a computer. **For nonprofits**: Get pre-qualified to receive a computer donation. A nationwide consortium of 90 nonprofit technology refurbishers supporting working groups, matching corporate donors with recipient refurbishers, sharing opportunities, and advocating for policy that advances device ownership.
Computers 4 People	individuals, nonprofits	Not yet in Berkshire County, this regional nonprofit works to bridge the digital divide by repurposing e-waste into educational tools and ensuring equal access to technology. is looking to expand here. They provide free computers to individuals and nonprofits; free refurbished laptops to college-bound students in financial need; and PC Teen Building Classes and Digital Skills Classes for all ages.
Computdopt	individual	A national nonprofit that refurbishes donated computers, operates a computer giveaway program, provides low-cost internet, and offers free tech education to youth and adults.
PCs 4 People	individuals	A national nonprofit connecting people with low-cost computers and internet services that recycles and refurbishes computers.
Tech Soup Refurbished Computers Program for Nonprofits	nonprofits	A nonprofit that provides discounted deals on devices and technology to nonprofits.

Resources

Digital Skills: Youth

Resource	Audience	Description
Code.org	students, schools	A nonprofit dedicated to the vision that every student in every school has the opportunity to learn computer science as part of their core K-12 education. They expand access to computer science in schools with a focus on increasing participation by young women and students from underrepresented groups.
DESE Digital Literacy and Computer Science Implementation	educators	Implementation resources to assist schools and districts analyze their current digital literacy and computer science programming and then design and implement a comprehensive program to prepare students for a career in the 21st century.
DLCS Parent and Guardian Resources	students, educators, parents	Department of Education support website for parents related to digital literacy and computer science with access to MassCORE and school report cards.
Girls Who Code	students, schools, after-school programs	A nonprofit on a mission to close the gender gap in technology and change the image of what a programmer looks like and does.

Resources

Digital Skills: Adults

Resource	Audience	Description
Digital Learn	individuals	An online hub for digital literacy support and training from the Public Library Association. Included is a collection of self-directed tutorials for users to increase their digital literacy. Modules are video-based with narration, typically 6 to 22 minutes long, and written in plain language at an elementary to middle school reading level for English and Spanish speakers.
GCF Global	individuals	This free program has helped millions around the world learn the essential skills needed to live and work in the 21st century from Microsoft Office and email to reading, math, and more. The site offers more than 300 topics, including more than 6,000 lessons, more than 2,000 videos, and more than 50 interactive exercises and games.
Senior Planet - Free online classes from AARP	individuals – older adults	Free online classes including digital skills aimed at older adults through the American Association of Retired Persons (AARP).
Senior Planet - Tech Hotline	individuals – older adults	An AARP Resource that allows older adults to speak with a technology trainer from 9:00 am – 8:00 pm EDT, Monday to Friday by phone for free by calling 888-713-3495.
Tech Goes Home	Individuals, nonprofi	Tech Goes Home empowers communities to access and use digital tools to overcome barriers and advance lives. They bring computers, internet, and training to those without so students can do homework, adults can find jobs and manage finances, seniors can connect with loved ones, and all can lead healthy lives.
Tech Boomers	individuals – older adults	A free educational website featuring tutorials that teach older adults and inexperienced technology users how to use the most popular and trusted websites and internet apps. They currently offer over 60 free courses packed with video and article tutorials tailored for those with limited computer skills. The site is written in easily understood, non-technical language, providing context through real-world parallels.
William Stickney Adult Learning Center	individuals	Part of the Pittsfield Public School system. The center offers Adult Basic Education (ABE); GED: Adult Diploma Program; Pre-GED; English for Speakers of Other Languages; Basic Math; and Distance Learning. Available to those 16+; out of school; for ADP 18+.

Resources

Municipal Broadband + Related

Resource	Audience	Description
Connect Humanity	municipal leaders	Provides tailored investments, strategic advice, and technical guidance to help underserved communities build the internet infrastructure needed to thrive.
Internet Society	municipal leaders	A membership-based organization promoting the development of the internet as a global technical infrastructure, advancing the development of technologies, and advocating for policies that support the use of the internet as a positive tool to benefit people.
Mass Digital Services	municipal leaders	This statewide agency is designed to help its partners use the best technology, design, and data to make every interaction with the Massachusetts government simpler, faster, and more meaningful. Mass Digital is part of the Executive Office of Technology Services and Security (EOTSS).
US Ignite	municipal leaders	A nonprofit partner that creates next-generation Internet applications to benefit the public using new technology. US Ignite works closely with HUD's ConnectHome's key ISP stakeholders.
Vernonberg Group	municipal leaders	A consulting firm based in Georgia that works with businesses, organizations, and governments providing expertise on digital equity programming, large-scale broadband studies, fundraising, mapping, and policy.

Resources

Small Business + Workforce

Program	Audience	Description
LinkedIn, Microsoft, GitHub	individual	Free learning paths mapped to in-demand jobs, discounted Microsoft certifications to validate skills, and best practices for job searching and interview prepping, so you can put your best foot forward.
MA Adult Literacy Hotline	individual	Provides referrals to over 300 adult education programs that offer one-on-one tutoring, small-group or classroom instruction to adult learners. They provide information about basic reading, math, adult basic education, English language training, family literacy, High School Equivalency Test preparation, or testing sites. The Hotline # is 1-800-447-8844.
MassMEP	individual	The MassMEP "MACWIC" Applied Manufacturing Technology Pathway is an advanced manufacturing certification and credentialing system. Dedicated to supporting manufacturing growth initiatives, this evaluation process enables employers to match candidates with the right competencies for each position – and reduce hiring costs in the process.
Optic Path Apprenticeship	individual	With today's high-speed fiber optic networks providing the bandwidth required for working remotely, distance learning, and medical monitoring, it is the role of the professional fiber optic technician to provide the quality workmanship required for these networks. This course provides future technicians with the knowledge and skills required while potentially opening the door for a professional career with organizations such as telecommunications service providers, Internet service providers, and contractors.
Telecommunications Industry Registered Apprenticeship Program	individual	WIA/TIRAP Apprenticeship programs offer former military professionals a structured pathway to earn income while learning the skills to pursue a meaningful career in the telecom sector.
Verizon Innovative Learning / Digital Promise	individual	A program to expand digital access, support small businesses, protect the climate, and prepare people for jobs of the future.

Glossary

Bandwidth

The rate at which a network can transmit information. Higher bandwidth is typically more desirable. The amount of bandwidth available can determine whether a user can download a photo in two seconds or two minutes.

Broadband Equity

A condition in which all people and communities can access and use affordable, high-speed, reliable internet that meets their needs. Broadband can be delivered over wire (i.e., fiber or cable) or wirelessly (i.e., cellular). The FCC recently set the new speed of high-speed broadband at 1100 Mbps download and 20 Mbps upload. Some fiber providers have proposed even higher speeds of 100/100 symmetrical Mbps.

Digital Divide

The gap between those who have affordable access, skills, and support to effectively engage online and those who do not. As technology evolves, the digital divide prevents equal participation and opportunity in all parts of life, disproportionately affecting people of color, Indigenous people, low-income households, people with disabilities, people in rural areas, and older adults.

Digital Equity

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, life-long learning, and access to essential services. Equity acknowledges the systemic barriers that must be dismantled before achieving equality for all.

Digital Inclusion

Refers to the activities necessary to ensure all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs) including five elements: 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 must evolve as technology advances. Digital Inclusion requires intentional strategies and investments to reduce and eliminate historical, institutional, and structural barriers to access and use of technology.

Digital Inclusion Ecosystem

A combination of programs and policies that meet a geographic community's unique and diverse needs. Coordinating entities work together in an ecosystem to address all aspects of the digital divide, including affordable broadband, devices, and skills.

Digital Literacy

The ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.

Digital Navigator

Trusted guides who assist community members around internet adoption and use of computing devices. Digital navigation services include ongoing assistance with affordable internet access, device acquisition, technical skills, and application support.

Digital Redlining

Discrimination by internet service providers in the deployment, maintenance, or upgrade of infrastructure or delivery of services based on income, race, or ethnicity.

Digital Subscriber Line (DSL)

The technology used to provide high-speed internet using telephone networks.

Fiber Optic

A system that uses glass or plastic to carry light that is used to transmit information. Typically, each side of a fiber strand is attached to a laser that sends light signals. When the connection reaches capacity, the lasers can be upgraded to send more information along the same strand. Fiber technology has been used for decades and will remain the dominant method of transmitting information for the near future.

Fixed Wireless

A connectivity model that uses stationary wireless technology to bridge the "last mile" between the internet backbone and subscriber.

Hotspot

A physical location that offers internet access over a wireless local area network (LAN) through use of a router connected to an internet service provider.

Gap Network

A network — usually fixed wireless or Long-Term Evolution (LTE) — deployed quickly and at comparatively low cost to address immediate connectivity in a small area. Many gap networks were launched at the start of the COVID-19 pandemic.

Internet Service Provider (ISP)

An Internet Service Provider is a company that provides services to access and use the internet.

Last Mile

The final leg of a connection between an internet service provider and the customer. In DSL and cable systems, this is the most frequent bottleneck and most expensive to resolve. An ISP may run a faster fiber-optic network into the neighborhood but deliver the last mile (which may be far away) with a phone line that cannot sustain fast speeds.

Megabits (Mbps)

A measure of speed in which 8 Mbps means that 8 million bits of information are transferred each second. Using an 8 Mbps connection, it would take one second to transfer a 1 Mbps file such as a photo. More Mbps are faster. One Kbps (Kilobits) is less than 1 Mbps, which is less than 1 Gbps (Gigabits).

Middle Mile

The network connection between the last mile and the broader internet. For instance, in a rural area, the middle mile connects the town's network to a larger metropolitan area where it connects with major carriers.

Wi-Fi

Networking technology that allows computers and other devices to access the internet using a wireless signal.

Appendix A

New ISP Rates in Massachusetts for Affordable Connectivity Program Enrollees

Provider	Plan	Monthly Service Cost	Cost w/ ACP Benefit	Speed (Download/Upload)	Service Type
AT&T	Access From AT&T	$30	$0	100/100	Fiber, DSL
Comcast	Internet Essentials Plus	$29.95	$0	100/10	Cable
	Internet Essentials	$9.95		50/10	
Cox Communications	ConnectAssist Package	$30	$0	100/3	Cable
	Connect2Compete	$9.95		100/3	
Spectrum (Charter Communications)	Spectrum Internet 100	N.A.	$0	100/10	Cable
	Spectrum Internet Access	Location Dependent (minimum $17.99)		100/10	
Starry	Starry Select	$30	$0	100/50	Fixed Wireless
	Starry Connect	$15		30/30	
Verizon	Fios Forward 300	N.A.	$0	300/300	Fiber

Source: Mass Law Reform Institute

Appendix B

Berkshire Community College ESOL Participation FY24

The ESOL Program run by Berkshire Community College in Great Barrington provided the data below capturing their current student population for zip code 01201:

ESOL Student Status FY 24	# of Students from Zip Code 01201
Enrolled	66
Waitlist	61
Left	23
Removed from Waitlist	4
TOTAL	154

Source: Coordinator of the Adult ESOL Program Berkshire Community College

Literacy Volunteers of Berkshire County at Berkshire Athenaeum

Literacy Volunteers has completed 166 student intake interviews over the past 24 months. The nonprofit has about 60 people on its waitlist and is currently working with about 70 active matches (March 2024). Other students have left the program permanently or temporarily. Many of Literacy Volunteers' tutors are older adults who need assistance with digital skills. A significant percentage of students lack large-screen devices, and some do not have internet access at home, according to the program's director.

Student Primary Language	# of Students Interviewed by LV 2022-2024
Spanish	134
Dari	9
French	8
Portuguese / Thai	3 each
Haitian Creole	2
Ukraine	2
Arabic, Italian, Japanese, Russian, Twi	1 each

Source: Executive Director, Literacy Volunteers of Berkshire County

Appendix C

City of Pittsfield
Digital Equity Planning

Households without an
Internet subscription

< 125
125 - 150
150 - 200
200 - 300
> 300
Parks
Wards

Source: US Census American
Community Survey
2017-2021 Table S28901
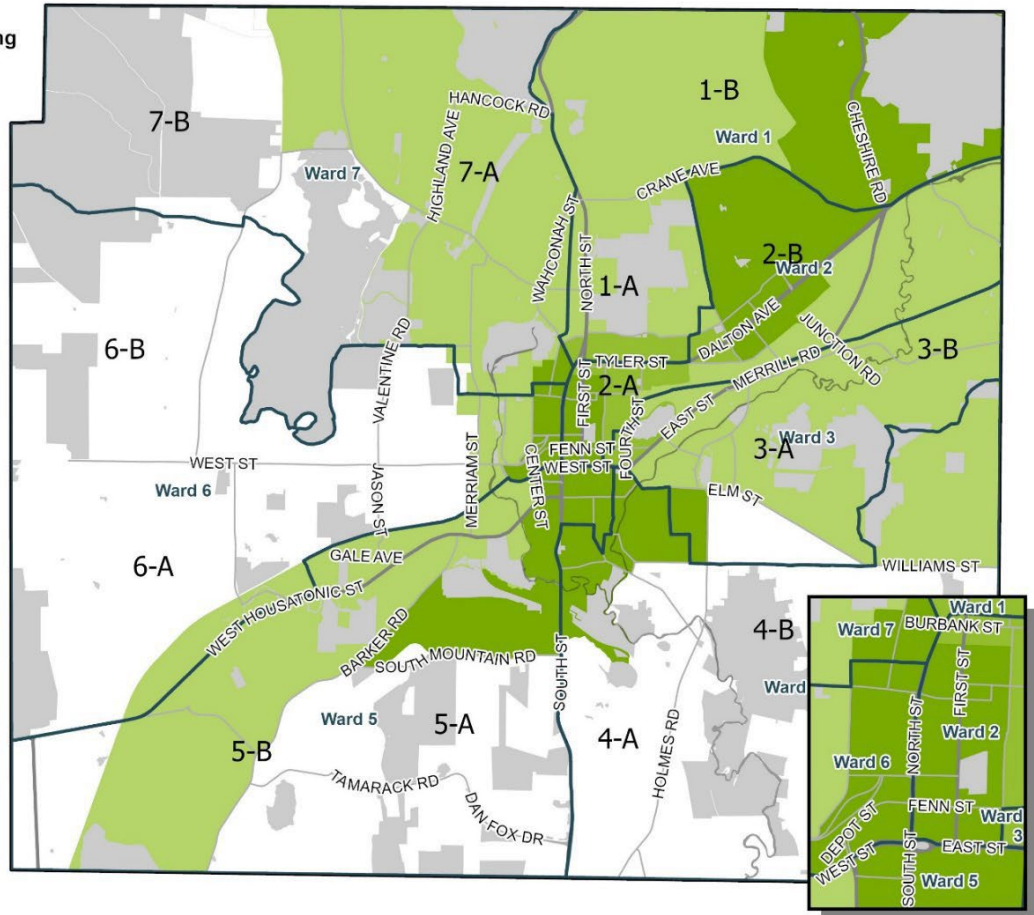
Source: American Community Survey, 2017-2021

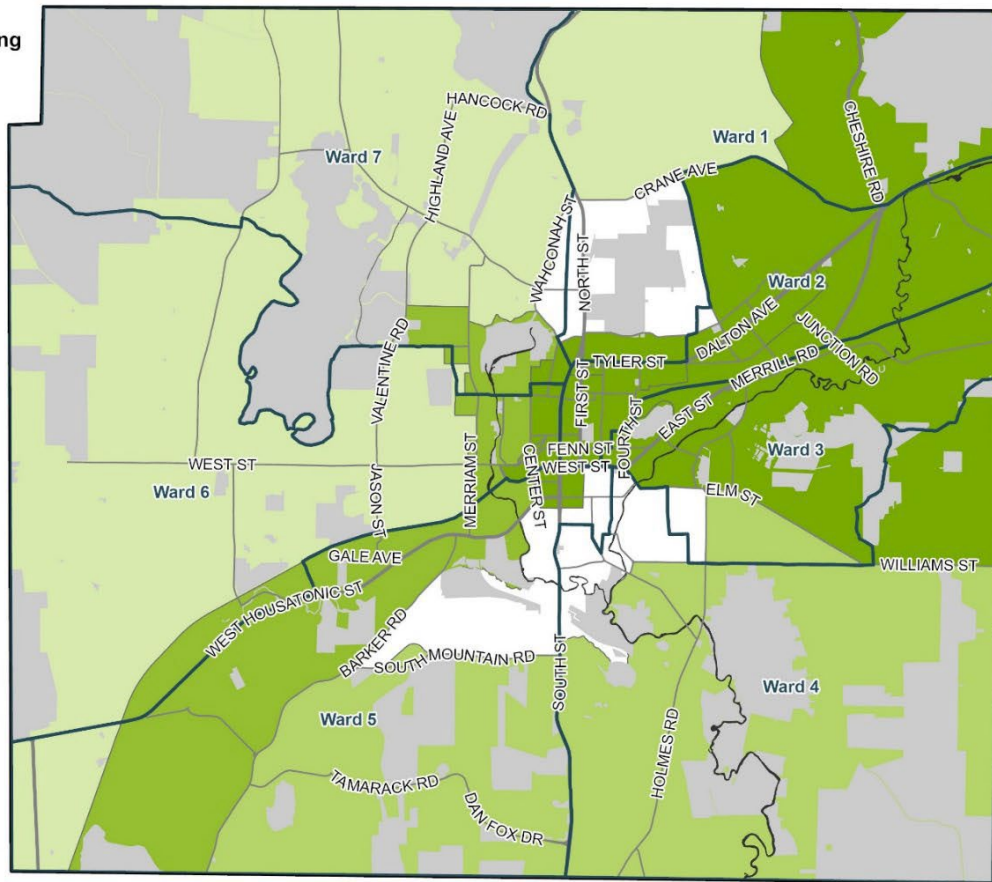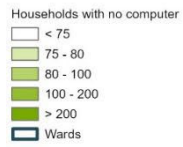**City of Pittsfield
Digital Equity Planning**

Households with no computer
- < 75
- 75 - 80
- 80 - 100
- 100 - 200
- > 200
- Wards

Source: US Census American Community Survey 2017-2021 Table S2801

Source: American Community Survey, 2017-2021

Appendix D

From the Top 30 Fastest Growing Occupations in Berkshire County (2020-2030) Those Most Likely to Require Digital Skills

Occupation	Predicted Employment by 2030	Typical Education Needed for Entry	2022 Mean Annual Wage
General and Operations Managers	1,894	Bachelor's degree	$113,430
Registered Nurses	1,469	Bachelor's degree	$94,794
Office Clerks, General	924	High school diploma or equivalent	$43,401
First-Line Supervisors of Retail Sales Workers	888	High school diploma or equivalent	$52,575
Bookkeeping, Accounting, and Auditing Clerks	854	Some college, no degree	$50,081
First-line supervisors of Office and Administrative Support	695	High school diploma or equivalent	$62,965
Elementary School Teachers, Except Special Education	687	Bachelor's degree	$68,930
Secretaries and Administrative Assistants, Except Legal, Med	595	High school diploma or equivalent	$45,716
Software Developers and Software Quality Assurance Analysts	542	Bachelor's degree	***

Source: https://lmi.dua.eol.mass.gov/lmi/LongTermOccupationProjections/LTOPResultRank?A=15&GA=000001&Cmd=Go&Type=long&Dopt=TEXT

Appendix E

MassHire Berkshire Workforce Board: Computer and Career Services Provided: July 1, 2023 - February 29, 2024		
Services Provided	**Year To Date**	**Year-To-Date Visits**
Individual Customers Using Career Center	2,445	6,782
Customers Using Resource Room (RR) Computers	890	1,697
Staff-Assisted Job Search Assistance in RR	1,277	3,046
Customer Age Range	# Customers Served	
18 and Under	154	
19-21	129	
22-45	1,230	
46-54	371	
55 and over	561	

Source: MassHire Berkshire Workforce Board has eight desktop computers in its resource room and a computer lab with 10 computers.

Appendix F

Ookla Speed Test Data

The Massachusetts Broadband Institute prepared speed test data sets from Ookla. Pittsfield residents took the tests between December 2021 and November 2022.

Jitter	Latency	
> 50 ms	> 100 ms	> 500 ms
714	86	14

Source: Massachusetts Broadband Institute

# With SPEEDS BELOW	# With SPEEDS AT LEAST
25/3 Mbps	
489	11,766
50/10 Mbps	
1,248	9,658
100/20 Mbps	
3,871	3,088
100/100 Mbps	
0	77

Source: Massachusetts Broadband Institute

Appendix G

Affordable Housing Data

Manager	Tract	Year Built	Development	Type	Funder	# of Units	AMI
Pittsfield Housing Authority	9004	1949	Wilson Park	Family	State	127	80% or lower
Privately Developed and Managed (Others)	9006	1972/20	Berkshire Peak	Family	State	120	50% or lower
Privately Developed and Managed (Others)	9001	2009	New Amsterdam	Mixed	Federal/ State	67	60% or lower
Pittsfield Housing Authority	9004	1978	Dower Square	Family	Federal	50	80% or lower
Berkshire Housing Services, Inc.	9002	2012	Rice Silk Mill	Mixed	Federal/ State	45	5 units 30% 40 units 60% or lower
Berkshire Housing Services, Inc.	9001	2003	YMCA	Individual	Federal/ State(22/22)	44	60% or lower
Berkshire Housing Services, Inc.	9001	1992	Redfield	Family	Federal	24	30% or lower
Pittsfield Housing Authority	9006	1980	Christopher Arms	Family	State	24	80% or lower
Pittsfield Housing Authority	9006	1972	Jubilee Apartments	Family	Federal	22	80% or lower

Privately Developed and Managed (Others)	9001	1975	Berkshire Town	Seniors	Federal	184	30% or lower
Pittsfield Housing Authority	9011	1960 & 1987	Rose Manor	Seniors	State	152	80% or lower
Pittsfield Housing Authority	9002	1981	Providence Court	Seniors	State	103	80% or lower
Berkshire Housing Services, Inc.	9010	1971/2016	Dalton Apartments	Family	Federal/ State	100	36 units 30% or lower; 61 units 60% or less and 3 market rate units
Pittsfield Housing Authority	9001	1972	Columbia Arms	Seniors	Federal	90	80% or lower
Berkshire Housing Services, Inc.	9001	1973	Capitol	Seniors	Federal	68	50% or lower
Pittsfield Housing Authority	9003	1960	Wahconah Heights	Seniors	State	68	80% or lower
Privately Developed and Managed (Others)	9001	1980	Central Annex	Seniors/PWD	State	62	60% or lower
Privately Developed and Managed (Others)	9004	1975	Oak Hill Family	Family	State	60	Market Rate Units
Pittsfield Housing Authority	9001	1961	Francis Plaza	Seniors	State	40	80% or lower

Berkshire Housing Services, Inc.	9001	1988	Epworth	Seniors	Federal	39	50% or lower
Privately Developed and Managed (Others)	9001	1980	Union Court	Seniors/PWD	State	39	60% or lower
Pittsfield Housing Authority	9006	1988	McGill Court	Family	State	12	80% or lower
Pittsfield Housing Authority	N/A	N/A	Scattered Sites	Family	State	7	80% or lower
Berkshire Housing Services, Inc.	9009	1994	George Street	Mixed	Federal	6	50% or lower
Berkshire Housing Services, Inc.	9002	2012	Cherry Street	Mixed	Federal	2	60% or lower

Appendix H

BIPOC Digital Equity ID3A Jam Report

BRPC — Berkshire Regional Planning Commission
MBI — MASSACHUSETTS BROADBAND INSTITUTE
BLACKSHIRES COMMUNITY CENTER
#R3SET "R3think Everything"

R3SET AGENCY
COMMUNITY & ECONOMIC
DESIGN & DEVELOPMENT

R3SETAgency.com

Executive Summary: Who is R3SET Agency?

R3SET Agency is the consulting arm of **R3SET Enterprises** and provides transformative products and programs for community & economic development. **It also provides** passionate leaders, entrepreneurs, artists, innovators, and community members building a better future, together a hub to share and curate resources, media, events, and education called **Team R3SET**.

Outreach Strategy:

The outreach strategy for the BIPOC digital equity Idea Jam focused on engaging the Black community in the Berkshire region, specifically the Pittsfield area, through email, social media, and a dedicated website information page. Outreach targeted community and neighborhood leaders, local Black businesses, and graduates of the Blackshires Leadership Program Academy. Promotions were also shared on community social media pages such as Westside Legends and Berkshire Black Web. The Idea Jam focus group attracted a total of 15 attendees.

Email Announcement:

Social Media Posts:

Event Details:

We chose the Berkshire Innovation Center because of its ability to utilize the whiteboards and round table style seating, as well as it's central location in Pittsfield and adequate parking.

Digital Equity ID3A Jam
Hosted by: Blackshires Community Empowerment Foundation
Facilitated by: Team R3SET
Sponsored by: City of Pittsfield, MBI (Massachusetts Broadband Institute) and BPRC (Berkshire Regional Planning Commission)
Thursday, October 5th 5:30pm to 7:30pm
Berkshire Innovation Center
45 Woodlawn Ave.

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Pittsfield, MA 01201

Digital Equity: Background Summary:

Digital access and technology literally impacts every aspect of our lives from home internet connectivity and digital equipment such as laptops and cell phones to everyday business such as banking, paying our bills, applying for jobs via online applications, new telehealth initiatives, and starting an online business.

We are in a digital world. Some call it the Fourth Industrial Revolution, Industry 4.0, or 4IR, all of which refer to the current era of connectivity, advanced analytics, automation, and advanced-manufacturing technology that has been transforming global business for years. [1] Whatever you call it, technology & equitable access to technology have never been more important than now.

About The Problem

Some of us in the Black, Indigenous, People of Color (BIPOC) community have been at the forefront of this new digital age. However, a significant number of others have lagged behind and some are struggling to keep up with the rapid pace of expensive new products and slow connectivity to the internet because of where we live, new digital tools, online communication, and concerns about privacy and protecting personal information.

It's time to disrupt this status quo to create sustainable change for all communities.

Scope of ID3A Jam

This gathering aimed to bring together a mix of passionate BIPOC Pittsfield community members, community leaders, and tech innovators to brainstorm and develop actionable steps toward a more equitable digital landscape. The event was not just about discussing problems, it was about creating solutions together.

The community's voice, insight, and commitment to change is what made this initiative so impactful. R3SET is continuously inspired by the energy and dedication of our community members.

[1] https://www.mckinsey.com/capabilities/operations/our-insights/industry-40-reimagining-manufacturing-operations-after-covid-19

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The Goals

Information from the ID3A Jam will inform how millions of federal dollars are directed to expand programs and services that help close the digital divide in our state and city. Examples of information that were discussed at the session included:

- internet and computer access for people who lack either/both
- internet and computer classes
- computer, jetpack, and hotspot lending
- tech support for learning how to use smartphones or computers
- computer labs for after-school programs or employment/job search applicants
- free Wi-Fi access at important spots throughout our city
- affordable computer repairs and access to lower-cost refurbished computers
- telehealth services and support

Lenses/Themes around which we asked Idea Jammers' to ideate included:
Areas of Focus

1. Internet Connection
2. Internet Equipment
3. Digital Literacy and Education
4. Diversity, Equity, and Inclusion
5. Business/Economic Growth and Sustainability

Key Discussion Topics and Takeaways:

Connectivity & Bandwidth

- Participants expressed frustration about only having Spectrum as an internet provider option, which leads to high costs, unreliable service, and a feeling of being "price gouged" without competition.

- The city has previously looked into becoming a municipal internet provider to increase options and affordability. More research may be needed on feasibility. A feasibility study was conducted by the city in 2020 but residents may not be aware of its findings and recommendations; these should be shared more broadly to foster discussion. (see attached).

- Overall, there is a need to improve bandwidth and internet connectivity in the community. Issues like buffering and lagging impede access to activities like online classes, telehealth, and civic participation.

- Public Wi-Fi hotspots downtown were noted, but additional ones are needed in areas like the Morningside and Westside neighborhood.

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Digital Skills & Education

- Many commented on the need for more technology education tailored to different groups (seniors, families, businesses) to help with activities such as accessing devices, using platforms like Zoom, privacy tools, online banking, etc.

- Interest in intergenerational learning models where youth can provide technology assistance was strong. This would also bring the community together.

- Schools provide some technology access, but differences in quality across districts was raised as an equity issue. Some schools may need computer labs, trained teachers, and curriculum. For example…add data re: Title I schools.

- There was a preference expressed for in-person, community-based classes for digital skills versus online methods such as YouTube. Trust is a big issue.

Equipment Access & Affordability

- Cell phones are often used instead of computers due to the high cost of the latter. Subsidies or affordable upgrade programs could help people with accessing laptops, tablets, and devices. The Affordable Connectivity Program appears to have strong enrollment in Pittsfield, but enrollment may not mean that participants are actually taking advantage of the benefit. See: https://acpdashboard.com/.

- Safety and scam concerns were noted as barriers to technology usage. Education again is needed.

- For telehealth, unreliable internet and lack of devices impedes access for underserved groups to connect to online health resources.

Root Causes of Digital Inequities

Systemic Racism & Community Advocacy

- Digital and technology gaps were seen by some attendees as an extension of ongoing systemic racism (e.g., historically under-resourced schools, redlining policies, lack of intergenerational wealth).

- Distrust of government and traditional organizations prevents participation by some members of Pittsfield's BIPOC community. Collaboration with Black-led groups is needed to build trust.

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- To build trust and advocacy, funding is needed for on-the-ground outreach and relationship building within the BIPOC community.

- City/organizations must listen to community needs before making decisions on their behalf. Representation in leadership is needed.

Recommendations

- Perform a Pittsfield city-wide equity analysis and audit of technology access to identify if "digital redlining" exists, such as in the Westside and Morningside neighborhoods.

- Increase funding to subsidize devices/internet and digital skill classes and work with local stakeholders to increase enrollment in existing discount programs such as the Affordable Connectivity Program.

- Share with BIPOC residents Pittsfield's 2020 Fiber Study so that the pros and cons of providing low-cost/free public internet through municipally owned fiber are better understood and can be debated along with other models that could increase competition.

- Partner with community centers to create neighborhood tech hubs that can offer classes, equipment lending banks, and digital support.

- Create pipelines to tech careers for BIPOC youth through schools and workforce development.

- Fund Black-led organizations to do outreach and community technology education.

- Improve the city's digital communication strategies to increase awareness and accessibility of resources so that they reach more residents.

- Ensure BIPOC community representation in technology planning and on digital access boards/commissions.

Summary

The "Digital Equity ID3A Jam" meeting highlighted significant digital access and equity challenges faced by Pittsfield's BIPOC community. As our society grows increasingly technology-dependent, pervasive digital inequality threatens to exacerbate systemic

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discrimination against communities of color. Urgent action is required to ensure digital inclusion and empowerment.

Key Problems:

Digital Redlining

Anecdotle evidence pointed to digital redlining. Just as discriminatory policies like redlining have historically deprived minority neighborhoods of investment, "digital redlining" practices by internet providers may have restricted broadband infrastructure upgrades in lower-income areas of Pittsfield. This could entrenche racial disparities in internet speeds, connection reliability, and affordability. The Berkshire NAACP redlining study points a way forward for further investment to investigate whether it's a digital infrastuture problem as well. Comprehensive digital equity mapping is needed to reveal the scope of community technology gaps and to understand more concretely.

Monopoly Pricing

With Spectrum as the sole cable/internet provider option, residents feel trapped paying excessive fees with no competitive pressure to lower costs or improve services. Municipal broadband has been explored as one potential solution to democratize internet access but residents may not be aware of its findings and why this path has not to date been pursued. Affordability programs like the federal Affordable Connectivity Program must also be widely promoted to increase adoption among eligible households.

Unequal Educational Resources

Research needs to be conducted to determine if there is uneven distribution of technology resources at different schools that might shortchange students in lower-income, predominantly minority areas, of early exposure to digital learning and computer skill development. Lack of computer labs, sufficient devices, trained teachers, and digital skills should be better integrated into the curriculum at earlier ages to improve technology literacy development. Lack of this risks widening achievement gaps and reducing access to digital economy careers for older students. A comprehensive technology equity audit of each school and its resources is imperative to understand differences in performance and digital engagement.

Community Distrust

Deep community distrust of government and institutions due to generations of marginalization depresses civic participation and digital adoption. Culturally-responsive, neighborhood-based outreach is key to rebuilding relationships and co-designing solutions with impacted residents. This must be funded supportively without restrictive expectations.

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Action Steps:

1. **Perform a citywide digital inclusion audit** to identify gaps across income, racial, and geographic lines. Gather neighborhood-level data on broadband speeds, reliability, costs, and availability of public access infrastructure as part of Pittsfield's Municipal Digital Equity Plan.

2. **Increase funding for device and internet subsidies** to make technology universally affordable. Consider covering home broadband costs for all students on school meal assistance; currently the Affordable Connectivity Program lowers the cost to $30 for the families of these students. Partner with community centers to create local tech support hubs providing free skills training, equipment loans, and public internet access.

3. **Work with BIPOC-led organizations as advisors and outreach partners.** Provide multi-year general operating grants that honor their cultural expertise and trust-building role, without top-down restrictions.

4. **Ensure elected bodies like the School Committee and City Council adequately represent Pittsfield's diversity.** Improve transparency and digital accessibility of municipal data, meetings, and services to increase informed civic participation.

5. **Invest in teacher professional development and enhanced digital equity curricula** preparing students for 21st century jobs. Provide equal technology resources across districts. Expose students to careers in tech fields, prioritizing partnerships with local minority colleges and employers.

6. **Help small businesses bridge digital divides through sponsored digital skills coaching and online platform navigation**. Spotlight minority-owned businesses to the community.

7. **Share detailed neighborhood-level digital inclusion data** with internet providers. Advocate for infrastructure upgrades and fair service policies in underserved areas, including potential public alternatives.

With deliberate understanding of past exclusion, innovative policies, and long-term investments centered on the community's vision, Pittsfield can become a leader in digital equity. This will create more just economic opportunities for all residents while honoring the dignity and potential of every neighbor.

References

https://www.mckinsey.com/capabilities/operations/our-insights/industry-40-reimagining-manufacturing-operations-after-covid-19

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Berkshire NAACP Housing Redlining Report
https://www.naacpberkshires.org/wp-content/uploads/2022/03/Westside-Neighborhood-A-Case-Study_-Redlining-in-the-Mill-Towns-of-New-England-1.pdf

Berkshire NAACP Housing Redlining Video Presentation
https://vimeo.com/702220359

Should States Fund Municipal Broadband and Cooperatives?
https://rockinst.org/blog/should-states-fund-municipal-broadband-and-cooperatives/

https://www.pewtrusts.org/en/projects/broadband-access-initiative
https://www.pewtrusts.org/en/research-and-analysis/articles/2022/01/31/broadband-education-and-training-initiative-helps-states-increase-high-speed-internet-access

Slower And More Expensive Sounding The Alarm: Disparities in advertised pricing for fast, reliable broadband
https://static1.squarespace.com/static/6165cb6ecbf6d70401a212f6/t/6345ca9c147af0682276fb3d/1665518251184/Broadband+Pricing+Disparities+Report+-+Oct+2022.pdf

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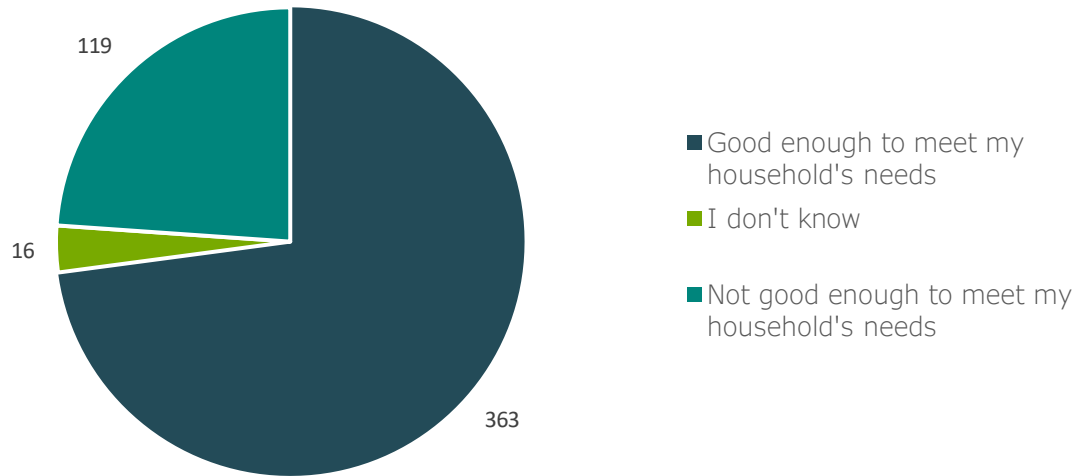DESIGN & DEVELOPMENT

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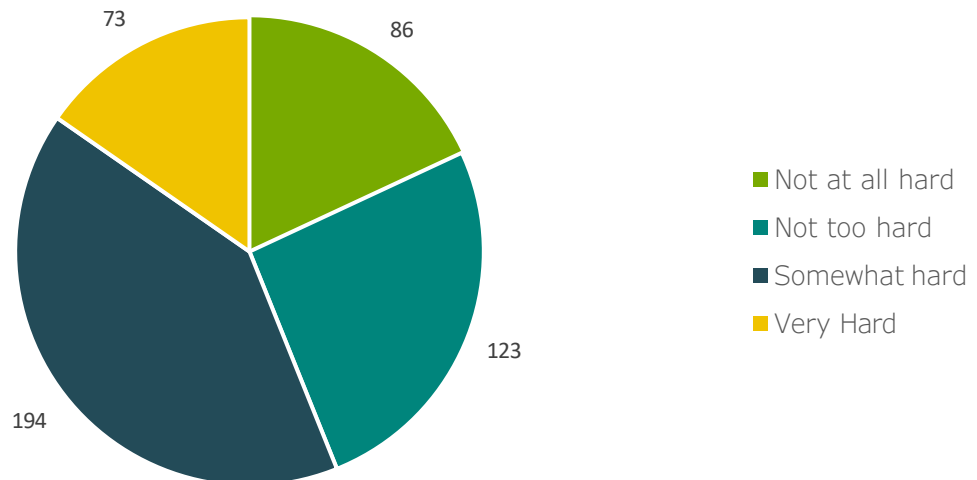
Appendix I

MBI Internet for All Survey Results

Do you have internet service in your home?	Total
No	58
Yes	509
Grand Total	567

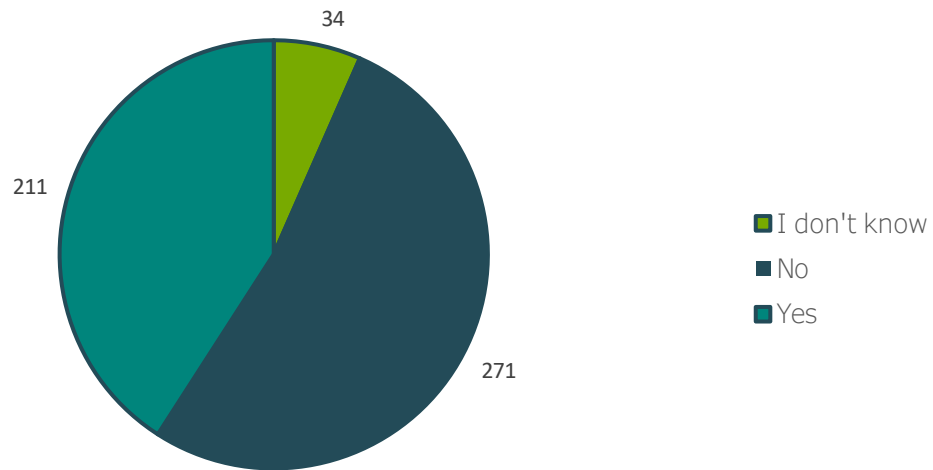| What kind of internet service do you have at home? (Select all that apply)	Total
Home wireline connection (cable, fiber, DSL, etc.)	260
A data plan for a smartphone, hotspot, or tablet. Home wireline connection (cable, fiber, DSL, etc.)	103
A data plan for a smartphone, hotspot, or tablet	44
No internet service of any kind	19
Fixed wireless internet	17
Fixed wireless internet. A data plan for a smartphone, hotspot, or tablet	11
Dial-up internet	7
Fixed wireless internet. A data plan for a smartphone, hotspot, or tablet. Home wireline connection (cable, fiber, DSL, etc.)	5
A data plan for a smartphone, hotspot, or tablet. Home wireline connection (cable, fiber, DSL, etc.). Satellite internet	4
Fixed wireless internet. A data plan for a smartphone, hotspot, or tablet. Home wireline connection (cable, fiber, DSL, etc.). Dial-up internet, Satellite internet	4
A data plan for a smartphone, hotspot, or tablet, Dial-up internet	3
A data plan for a smartphone, hotspot, or tablet. Satellite internet	3
Fixed wireless internet. Home wireline connection (cable, fiber, DSL, etc.). Satellite internet	3
I don't know	3
Fixed wireless internet. A data plan for a smartphone, hotspot, or tablet, Satellite internet	2
A data plan for a smartphone, hotspot, or tablet. Home wireline connection (cable, fiber, DSL, etc.). Dial-up internet	2
A data plan for a smartphone, hotspot, or tablet. Home wireline connection (cable, fiber, DSL, etc.). Dial-up internet, Satellite internet	1
Fixed wireless internet. A data plan for a smartphone, hotspot, or tablet, Dial-up internet	1
Fixed wireless internet. A data plan for a smartphone, hotspot, or tablet, Home wireline connection (cable, fiber, DSL, etc.), Dial-up internet	1
Home wireline connection (cable, fiber, DSL, etc.). Dial-up internet	1
Home wireline connection (cable, fiber, DSL, etc.). No internet service of any kind	1
Satellite internet	1
Grand Total	496

How well does your internet service work?

- ■ Good enough to meet my household's needs
- ■ I don't know
- ■ Not good enough to meet my household's needs

119
16
363

How hard is it for you to pay your internet bill?

- ■ Not at all hard
- ■ Not too hard
- ■ Somewhat hard
- ■ Very Hard

73
86
123
194

Have you heard about the Affordable Connectivity Program?

34
211
271

- I don't know
- No
- Yes

Does everyone in your household have access to the computer devices they need?
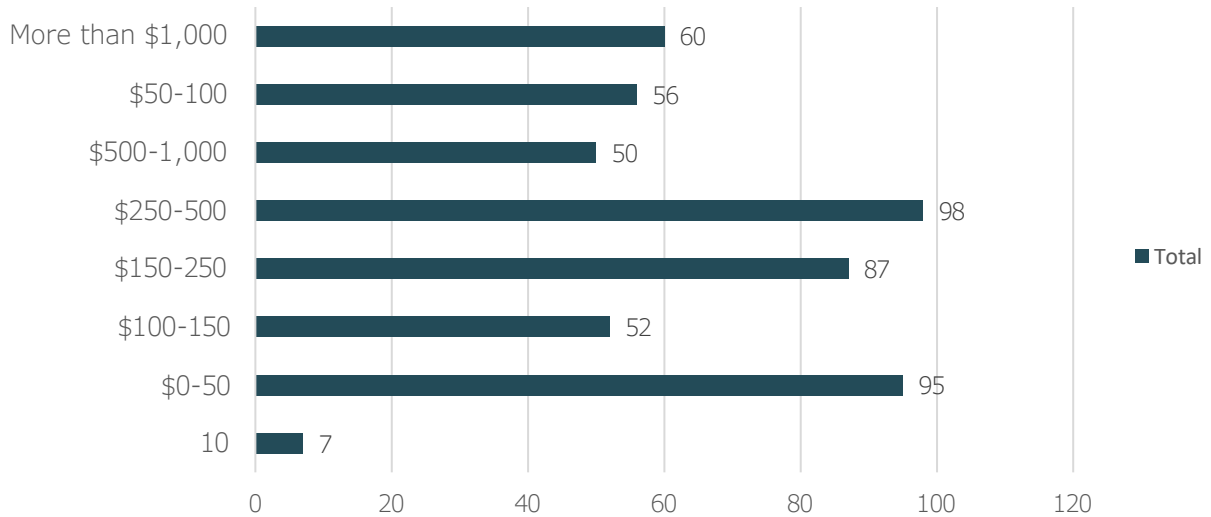

78
442

- No
- Yes
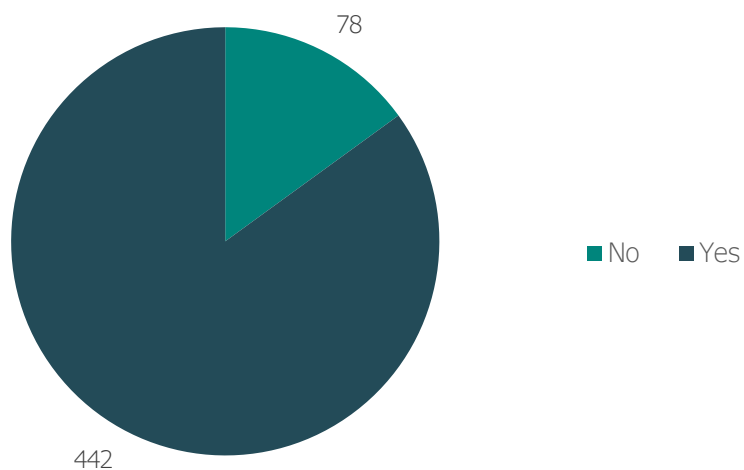
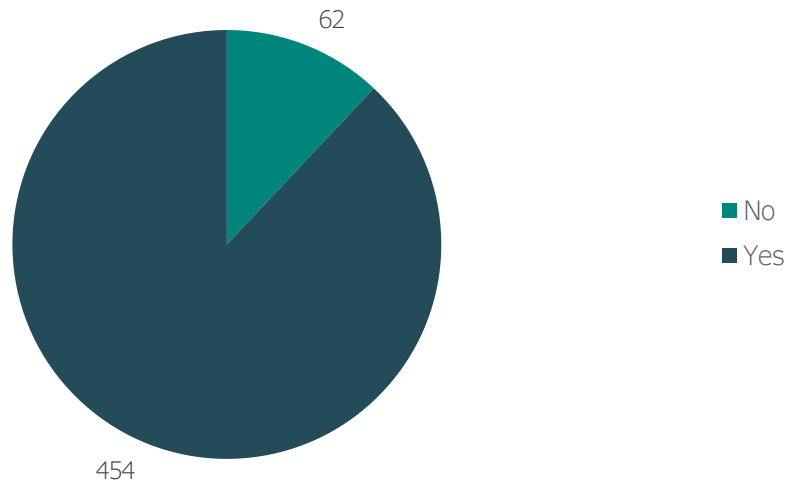| If you do not have internet service in your home, what is the reason?	Total
Service is too expensive	20
I can't afford or access a device to use the internet	5
I don't want/don't use the internet.	4
Service is not available in my area. Service is too expensive. I can't afford or access a device to use the internet	3
I am concerned about online privacy or safety. I don't feel confident navigating the internet or using online tools	2
I don't feel confident navigating the internet or using online tools	2
I am concerned about online privacy or safety	1
I am concerned about online privacy or safety. I don't feel confident navigating the internet or using online tools. I don't want/don't use the internet.	1
I don't feel confident navigating the internet or using online tools, I can't afford or access a device to use the internet. I don't want/don't use the internet.	1
Service is not available in my area	1
Service is not available in my area. Service is too expensive. I am concerned about online privacy or safety. I don't feel confident navigating the internet or using online tools	1
Service is not available in my area. Service is too expensive. I don't feel confident navigating the internet or using online tools. I can't afford or access a device to use the internet	1
Service is too expensive. I can't afford or access a device to use the internet	1
Service is too expensive. I don't feel confident navigating the internet or using online tools, I can't afford or access a device to use the internet	1
Service is too expensive. I can't afford or access a device to use the internet	1
Grand Total	45

If you do not have internet at home, where do you go to use the internet?	Total
A library or community center	15
I do not regularly access internet in these or any other spaces	9
A friend or family member's home	4
A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.)	2
A friend or family member's home, School, college, or university. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.). A public space such as a park or government building	1
A friend or family member's home. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.)	1
A friend or family member's home. School, college, or university. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.)	1
A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.). A public space such as a park or government building	1
A public space such as a park or government building	2
A workplace	2
Other (please specify):	2
School, college, or university	2
A workplace. A friend or family member's home, School, college, or university. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.)	1
A workplace. A library or community center	1
A workplace. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.)	1
I do not regularly access the internet in these or any other spaces. A workplace. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.)	1
On public transit. A friend or family member's home. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.). A public space such as a park or government building	1
On public transit. A library or community center	1
On public transit. A workplace. A friend or family member's home, School, college, or university. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.). A public space such as a park or government building	1
On public transit. A workplace. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.). A public space such as a park or government building	1
School, college, or university. A library or community center. A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.). A public space such as a park or government building	1
Grand Total	51

Which of the following devices do you use most of the time to connect to the internet?	Total
Cellphone	105
Cellphone, Laptop computer, Tablet (or similar device)	83
Cellphone, Laptop computer	57
Cellphone, Laptop computer	47
Cellphone, Desktop computer, Laptop computer, Tablet (or similar device)	45
Cellphone, Tablet (or similar device)	39
Cellphone, Desktop computer	38
Laptop computer	23
Cellphone, Desktop computer, Tablet (or similar device)	17
Cellphone, Desktop computer, Laptop computer	13
Tablet (or similar device)	13
Laptop computer, Tablet (or similar device)	3
Desktop computer, Laptop computer	2
Desktop computer, Laptop computer, Tablet (or similar device)	2
Laptop computer, Tablet (or similar device)	2
Desktop computer, Laptop computer	2
Cellphone, Desktop computer, Laptop computer, Tablet (or similar device). Other (please specify):	1
Cellphone, Laptop computer, Other (please specify):	1
Desktop computer, Laptop computer, Tablet (or similar device)	1
Desktop computer, Tablet (or similar device)	1
Grand Total	508

How much would you be able to pay for a laptop or desktop computer?
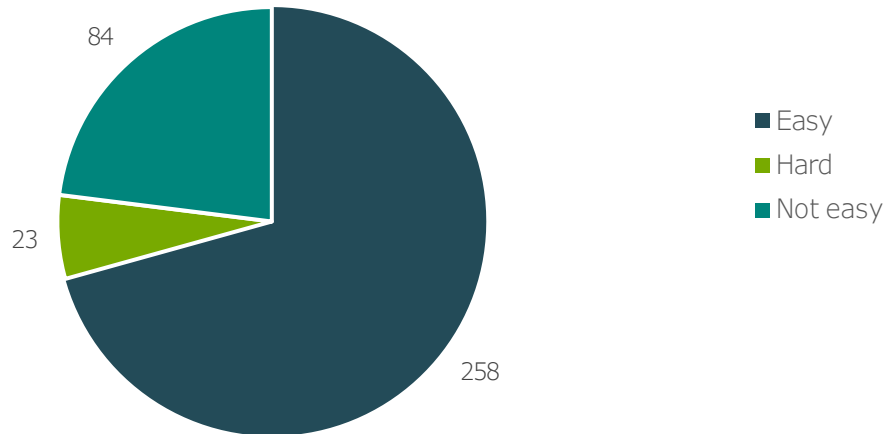
Category	Total
More than $1,000	60
$50-100	56
$500-1,000	50
$250-500	98
$150-250	87
$100-150	52
$0-50	95
10	7

Are you able to regularly use the internet for online activities?

Response	Value
No	62
Yes	454

Please rank the level of difficulty for what you use the internet for: Searching for an applying for a job

84

23

258

- ■ Easy
- ■ Hard
- ■ Not easy

Please rank the level of difficulty for what you use the internet for: Healthcare or Telehealth Services

114

40

262

- ■ Easy
- ■ Hard
- ■ Not easy
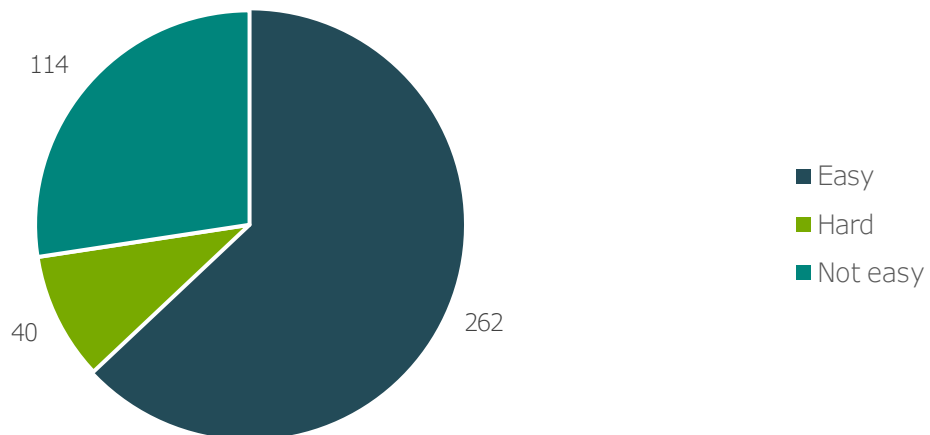
Please rank the level of difficulty for what you use the internet for: Transportation information

120

Easy

Hard

Not easy

250

28
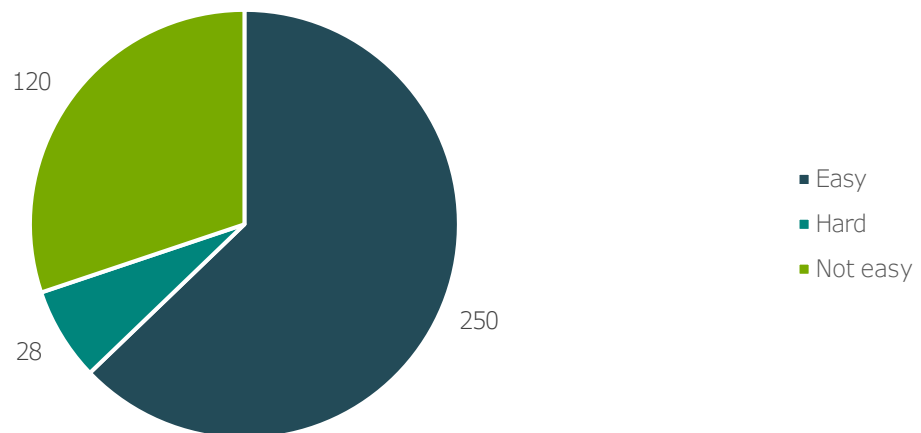
Please rank the level of difficulty for what you use the internet for: General Internet Searching
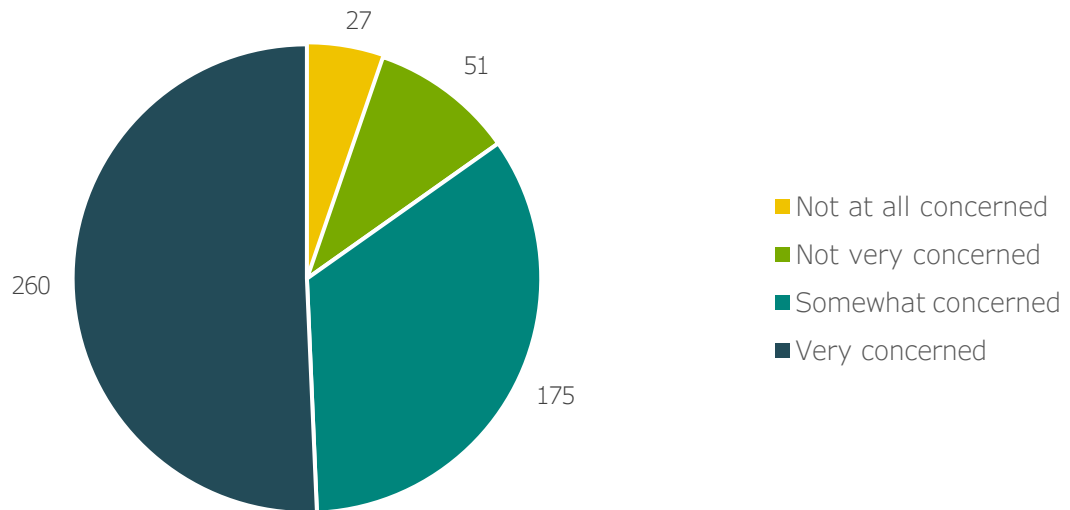
67

13

Easy

Hard

Not easy

354
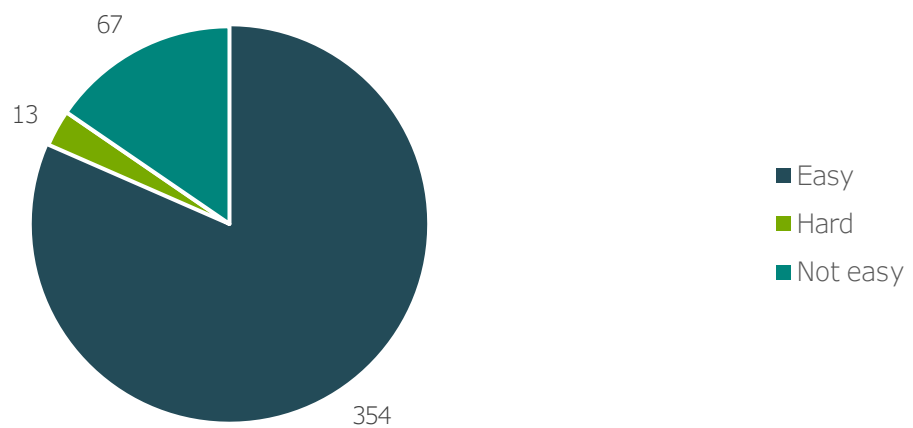
Please rank the level of difficulty for what you use the internet for: Searching and/or applying for benefits or resources for you or your family
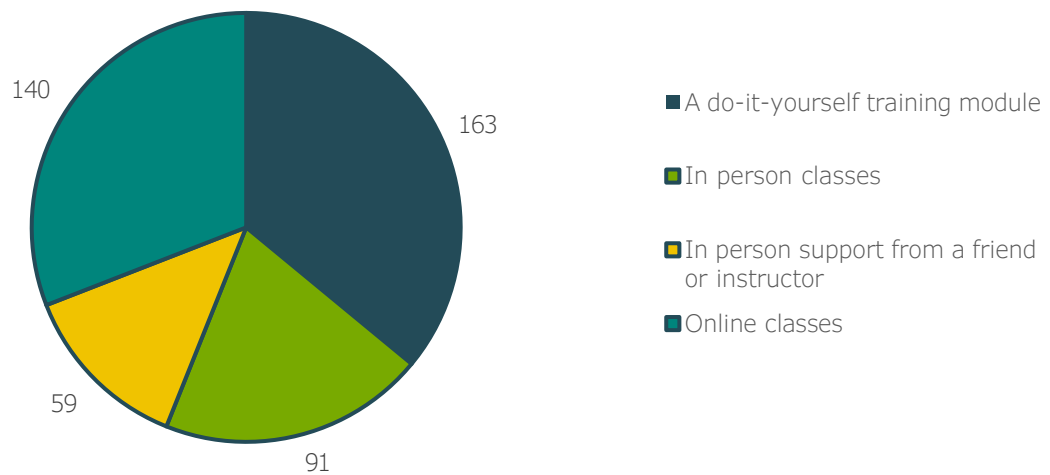

137
216
55

- Easy
- Hard
- Not easy
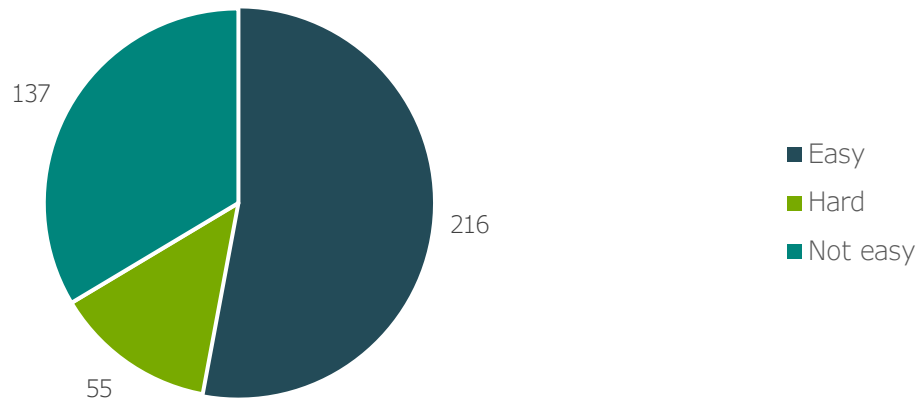
If you do not have regular access to the internet, what would most like to do?	Total
General internet searching	15
Searching and applying for a job	11
Health care or telehealth services	8
I don't want to use the internet regularly	6
Searching and/or applying for benefits or resources for you and your family	5
Something else	5
Participating in your local community	2
Grand Total	52

How concerned are you about internet safety?

27
51
260
175

- Not at all concerned
- Not very concerned
- Somewhat concerned
- Very concerned

What kind of digital skills support would you be most interested in?

140
163
59
91

- A do-it-yourself training module
- In person classes
- In person support from a friend or instructor
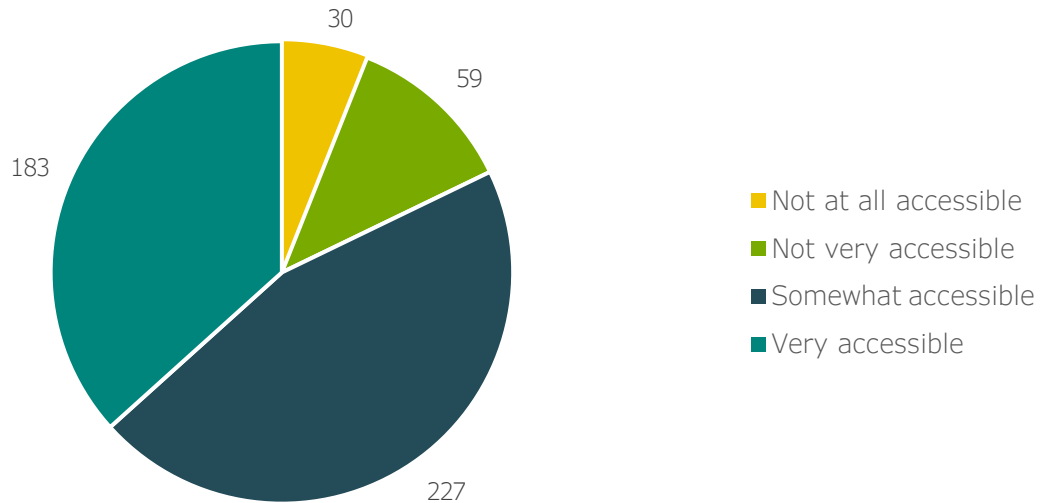- Online classes

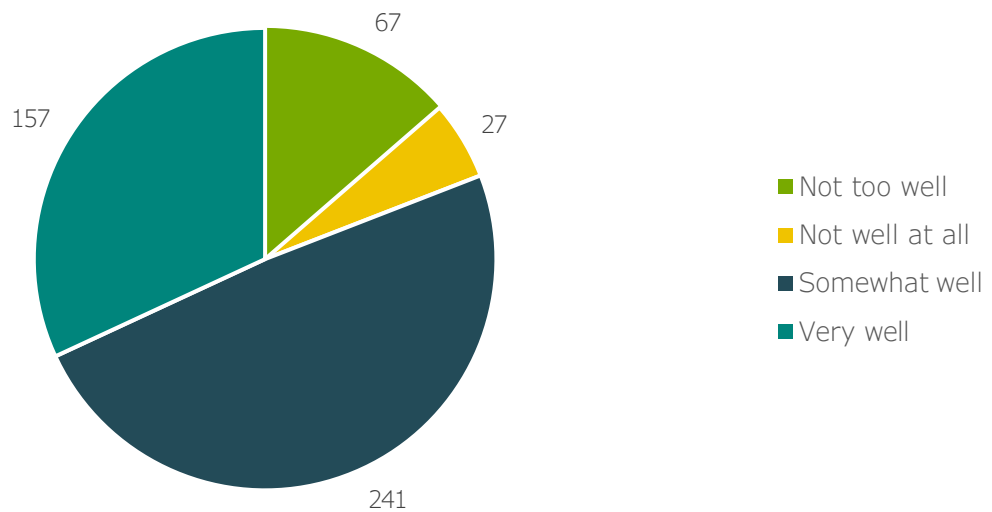| What are you most concerned about? (Select all that apply)	Total
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked. That I could be tracked or surveilled. That I or a loved one could be harassed or abused online	76
That my data could get stolen or used without my consent	74
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked. That I could be tracked or surveilled. That I or a loved one could be harassed or abused online	38
That I or a loved one could get scammed or tricked	26
That my data could get stolen or used without my consent. That I could be tracked or surveilled	17
That I or a loved one could be harassed or abused online	12
That I could be tracked or surveilled	8
That I or a loved one could get scammed or tricked. That I or a loved one could be harassed or abused online	5
That I or a loved one could get scammed or tricked. That I or a loved one could be harassed or abused online	5
That I or a loved one could get scammed or tricked. That I could be tracked or surveilled	4
That I could be tracked or surveilled.	4
That I or a loved one could get scammed or tricked. That I could be tracked or surveilled. That I or a loved one could be harassed or abused online	2
That I could be tracked or surveilled. That I or a loved one could be harassed or abused online	1
That I could be tracked or surveilled. That I or a loved one could be harassed or abused online	1
That I or a loved one could get scammed or tricked. That I could be tracked or surveilled ,That I or a loved one could be harassed or abused online	1
That I or a loved one could get scammed or tricked. That I could be tracked or surveilled.	1
That my data could get stolen or used without my consent. That I could be tracked or surveilled ,That I or a loved one could be harassed or abused online	7
That my data could get stolen or used without my consent. That I or a loved one could be harassed or abused online	3
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked	14
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked. That I could be tracked or surveilled	30
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked. That I could be tracked or surveilled. That I or a loved one could be harassed or abused online.	1
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked. That I or a loved one could be harassed or abused online	17
That my data could get stolen or used without my consent. That I could be tracked or surveilled.	20
That my data could get stolen or used without my consent. That I could be tracked or surveilled. That I or a loved one could be harassed or abused online	4

That my data could get stolen or used without my consent. That I or a loved one could be harassed or abused online	2
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked	20
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked. That I could be tracked or surveilled.	18
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked. That I could be tracked or surveilled. That I or a loved one could be harassed or abused online,8	2
That my data could get stolen or used without my consent. That I or a loved one could get scammed or tricked. That I or a loved one could be harassed or abused online	11
Grand Total	424

Are you aware of tools or resources you can use to stay safe online?

- I know of tools or resources to stay safe online, but they don't work for me
- No, I don't know of any tools or resources to stay safe online
- Other (please specify):
- Yes, I have tools and resources I use stay safe online
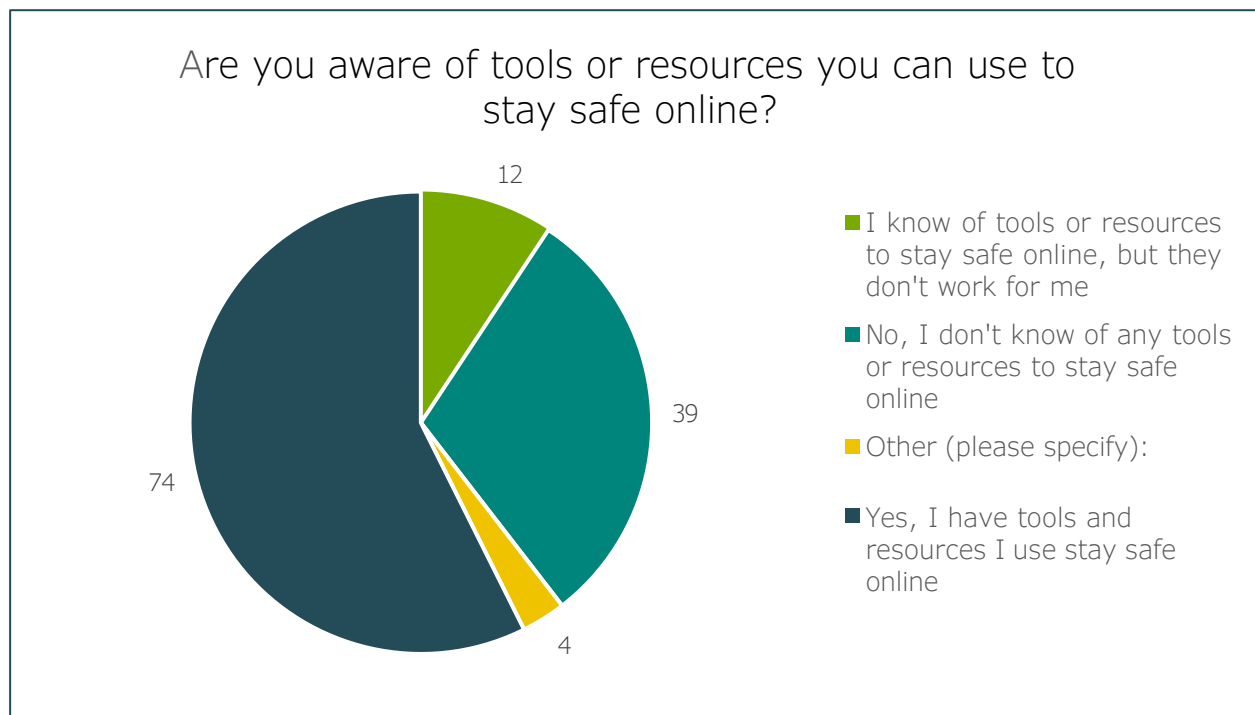
How accessible are online government services like benefits portals?

30
59
183
227

- Not at all accessible
- Not very accessible
- Somewhat accessible
- Very accessible

When you have used online government services like benefits portals, how well does it work for you?

67
27
157
241

- Not too well
- Not well at all
- Somewhat well
- Very well

What is your age?

Age range	Count
18 to 24	14
25 to 34	70
35 to 44	99
45 to 59	129
60 to 74	141
75 and older	43
Prefer not to answer	7

What is your gender identity?
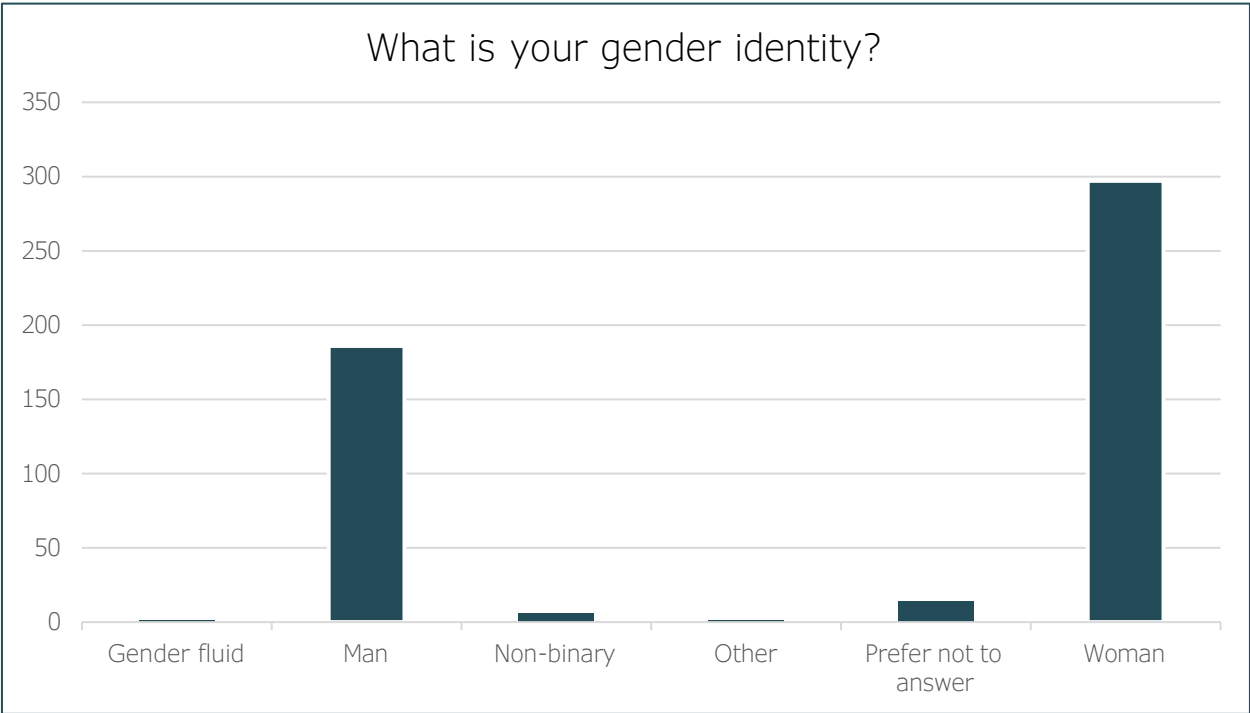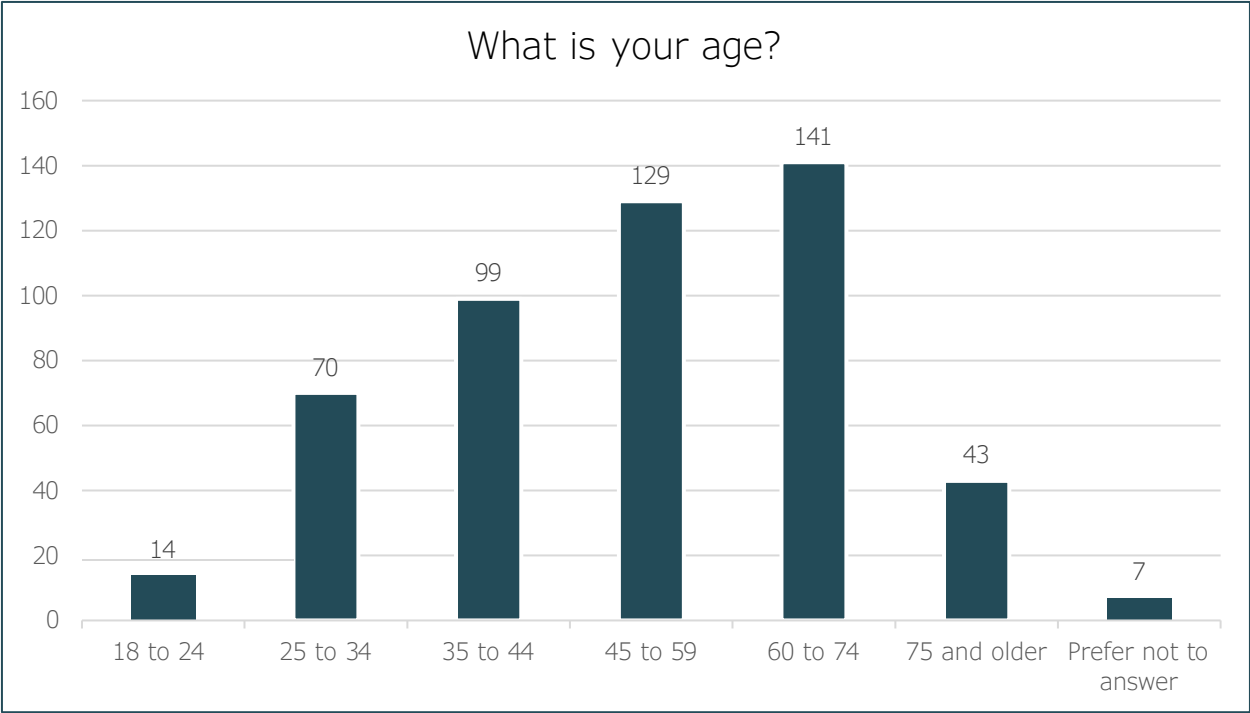
Are you of Hispanic, Latino, or Spanish origin?

Legend:
- No
- Prefer not to answer
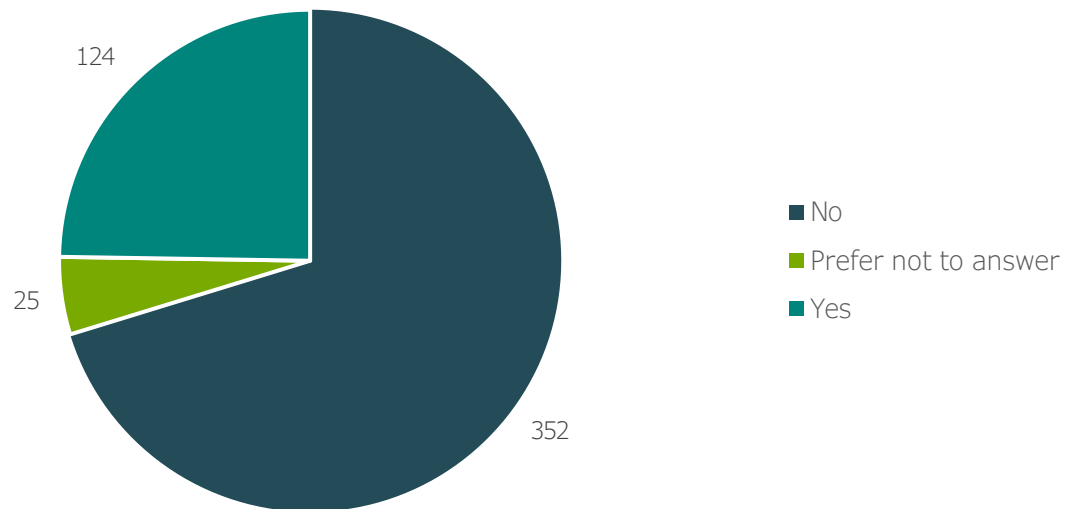- Yes

Pie chart values: 92, 22, 389
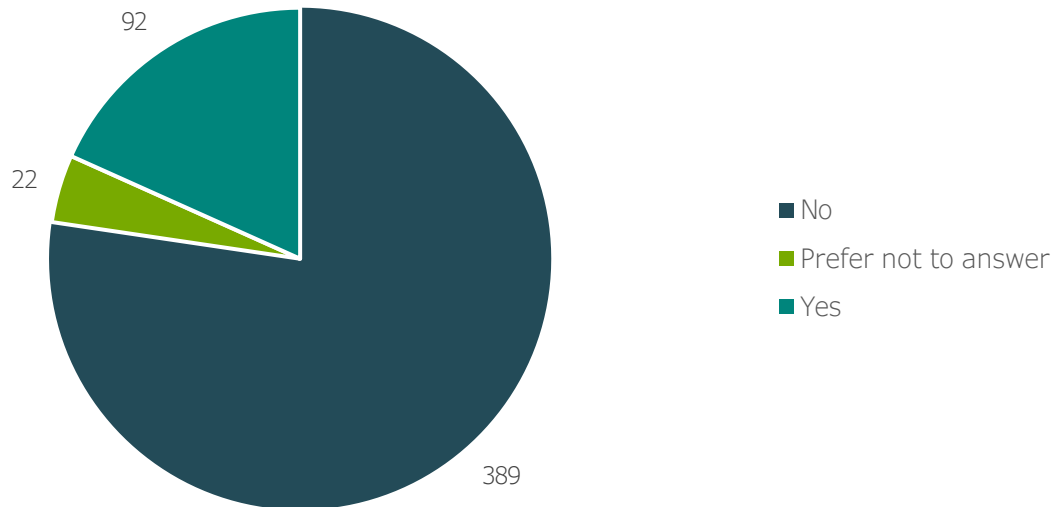
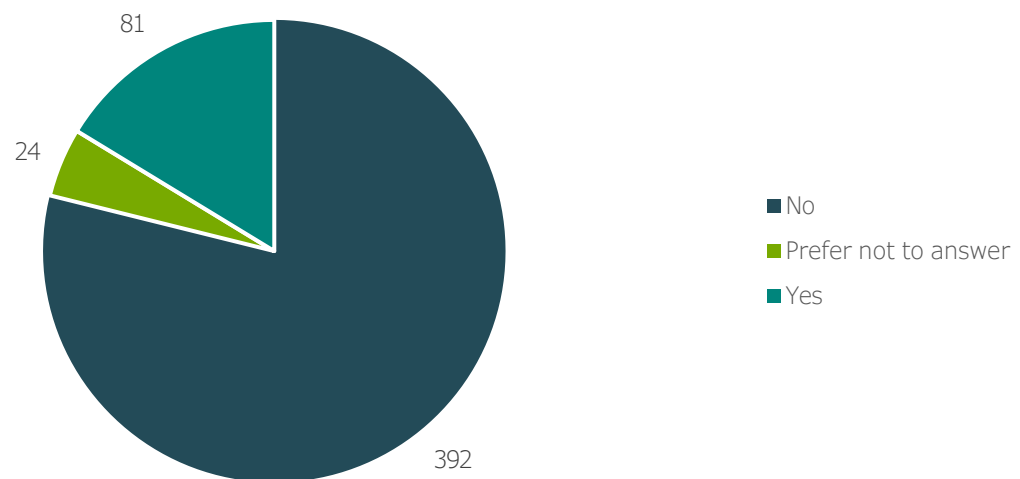| Which of the following best describes your race? (Select all that apply)	Total
White or Caucasian	328
Black or African-American	70
Prefer not to answer	42
Asian or Asian-American	6
White or Caucasian, Black or African-American	5
White or Caucasian, Native American/American Indian/Alaska Native	4
Native American/American Indian/Alaska Native	3
Pacific Islander/Native Hawaiian	3
Other (please specify)	2
White or Caucasian, Pacific Islander/Native Hawaiian	2
Prefer not to answer. White or Caucasian	1
Prefer not to answer. Asian or Asian-American	1
White or Caucasian, Black or African-American, Native American/American Indian/Alaska Native	1
White or Caucasian, Native American/American Indian/Alaska Native, Pacific Islander/Native Hawaiian	1
White or Caucasian. Asian or Asian-American	1
Grand Total	470

Do you belong to a North American Indigenous, Native, or Tribal group?	Total
No	448
Prefer not to answer	26
Yes	23
Grand Total	497

What is your total annual household income from all sources, and before taxes?	Total
Less than $22,000	89
$22,000 to $29,999	56
$30,000 to $36,999	40
$37,000 to $44,999	41
$45,000 to $52,999	34
$53,000 to $59,999	24
$60,000 or more	141
Prefer not to answer	73
Grand Total	498

Do you identify as a person with a disability?

124

25

352

- No
- Prefer not to answer
- Yes

Do you identify as a member of the LGBTQIA+ community?

81

24

392

- No
- Prefer not to answer
- Yes

Do you live in affordable housing?

18

38

443

- ■ No
- ■ Prefer not to answer
- ■ Yes