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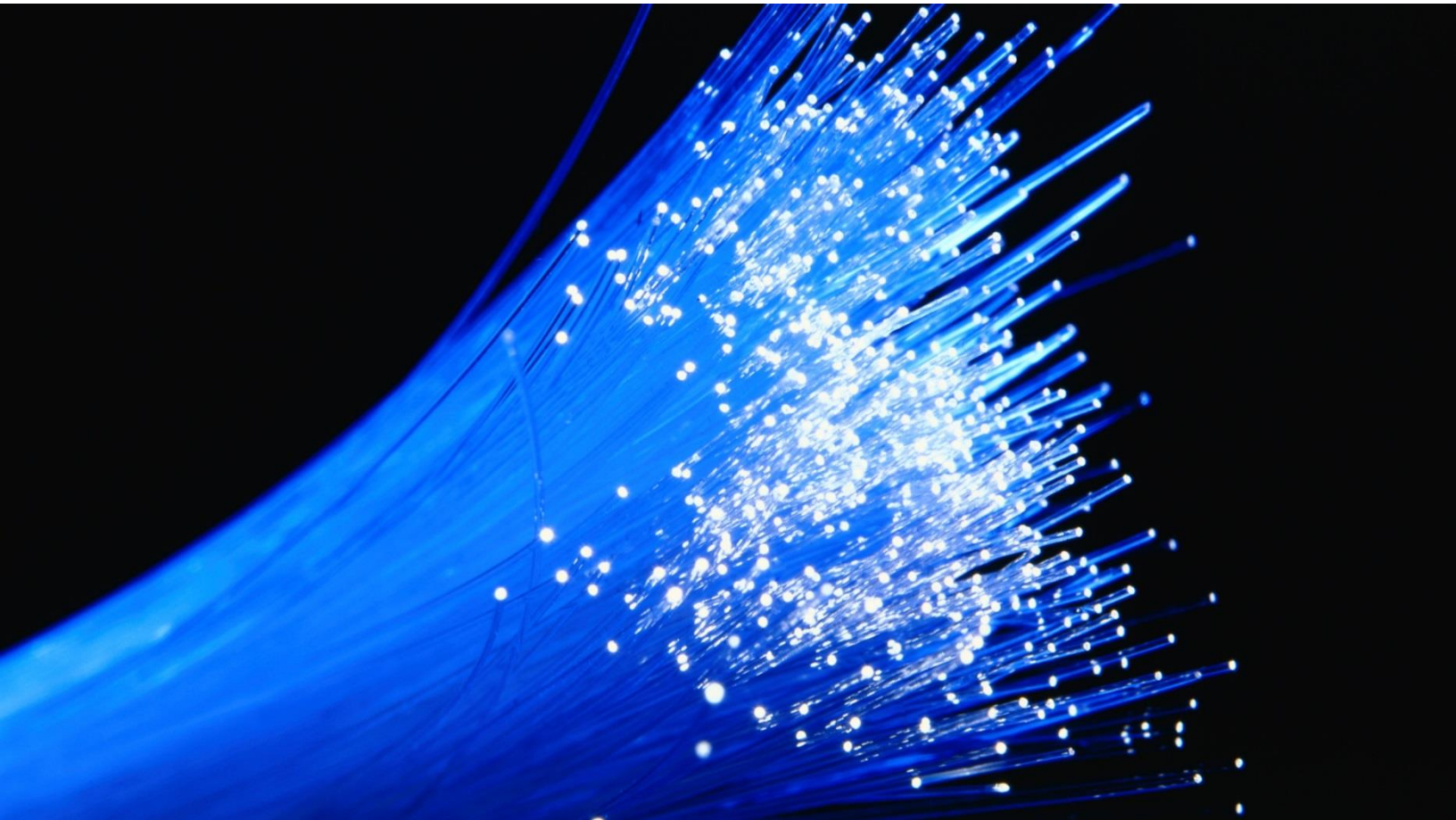engineering & business consulting

MBI | MASSACHUSETTS BROADBAND INSTITUTE | at the MassTech Collaborative

Municipal Digital Equity Plan
Prepared for the City of Lynn, Massachusetts
January 2024

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1 Executive summary

The City of Lynn commissioned CTC Technology & Energy (CTC) to engage in a study to document gaps in digital equity—a condition in which all residents have access to adequate broadband service and devices and possess the skills to use these resources—and develop strategies to bridge these gaps. This report presents findings and recommendations to the City. This project was funded by the Massachusetts Broadband Institute (MBI) at the MassTech Collaborative under its Municipal Digital Equity Planning Program. Funding came from State and Local Fiscal Recovery Funds provided under the American Rescue Plan Act (ARPA). This report will also be considered by MBI as it develops strategies for addressing digital equity gaps under the Massachusetts State Digital Equity Plan.[1]

1.1 Project overview

- This report presents findings (see Section 2) and recommendations (see Section 3) informed by the following tasks CTC performed over a six-month period: Analysis of the availability of broadband service, competition, and pricing in Lynn. See Section 4.

- Examination of enrollment in the Affordable Connectivity Program (ACP), which offers a $30 monthly subsidy toward broadband bills, and estimation of the gap in utilization by eligible households. See Section 4.2

- Interviews with 21 stakeholders from 19 entities in several meetings and follow-up interviews to further illuminate gaps, existing programs, and the ability of stakeholders to start or expand programs. This information was entered into MBIs Asset Inventory portal. See Section 5 and Appendix B.

- Facilitation of a "Digital Equity 101" public session to inform Lynn residents about the Municipal Digital Equity Plan and provide a brief background on broadband access and digital equity in the city. See Section 5.5.

- Promotion of MBI's statewide residential digital equity survey and reporting on Lynn-specific findings. See Section 6 and Appendix A.

- Development of recommendations with respect to strategies and activities designed to address gaps using potentially available funding. See Section 7

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[1] The Digital Equity Act is a $2.75 billion federal program that, in part, funds state planning processes to establish a vision for digital equity that will guide overarching strategies and goals. The first draft of MBI's "Massachusetts State Digital Equity Plan" (SDEP) was released for public comment on November 13, 2023, and can be viewed here: https://broadband.masstech.org/news/mass-broadband-institute-announces-municipal-digital-equity-planning-program-participants. The SDEP report was in the process of being finalized for submission to the NTIA at the time this report was provided to the City.

The City is well-served by broadband providers (see Section 4.1), with near-ubiquitous Comcast cable service, widespread coverage from Verizon Fios fiber service, and some coverage from other providers. The digital equity gaps in Lynn are not caused by a lack of infrastructure but result from residents' inability to afford service or devices; attain the necessary skills to maintain and effectively use these resources; and protect their online privacy and security.

Many entities within the City are already engaged in a variety of efforts to close gaps in digital equity. Funding for some of these efforts has come from MBI and the Essex County Community Foundation (ECCF). Partnerships have been fostered through ECCF's regional digital equity ecosystem and coalition.

But significant gaps remain, as these examples illustrate.

- My Brother's Table, the soup kitchen in downtown Lynn serving 1 million meals annually to homeless and low-income residents, identified significant connectivity, skills, and tech support gaps for the populations it serves, but was unable to get funding to start a program to address these issues.

- Lynn Community TV provides digital skills training services and computer access to large numbers of low-income, Hispanic, and disabled members of the Lynn community. But cable license revenue is shrinking, and it is not clear it can continue—much less meet the growing need for—these services.

- North Shore Community College, which offers free tuition to graduates of Lynn's public high schools, had 150 applicants to its Technical Support IT program over the past three years—but only had resources to accept 33 of these applicants into the program.

- Lynn Community Health Center serves 40,000 patients annually, most of them low-income. LCHC received funding through ECCF for a digital navigator—but it has a much greater need for support to assist patients in subscribing to telehealth services and obtaining the necessary broadband access and devices to access online resources critical to public health.

These and many other organizations that are either based in Lynn or provide services to Lynn residents are well positioned to start and/or expand digital equity programs and solutions at scale. Through the coordination and stewardship of a central entity such as the Lynn Economic & Industrial Development Corporation (EDIC), along with the regional ecosystem support by ECCF, MBI has a potential pathway to deploying funds to a network of trusted and experienced organizations to address these gaps in Lynn.

1.2 Digital equity funding landscape

To implement strategies recommended in this report, the City and its stakeholders can potentially leverage various funding sources. Section 7 discusses the grant and funding landscape, including programs stemming from multiple COVID-19 relief efforts and the federal Infrastructure Investment and Jobs Act and its Digital Equity Act. Additional support through the Federal Communications Commission's E-Rate program may also be available as discounts on eligible internet access, telecommunications services and related equipment to eligible schools and libraries. These programs will create opportunities for state and local entities to strengthen digital equity and inclusion within their communities. While the exact level of funding that will be available for programs in Massachusetts is unknown, it is likely that millions of additional funding dollars will be available in the state over the next five years to help the City close digital equity gaps.

In Massachusetts, these programs include MBI's Broadband Innovation Fund, a $50 million fund that will support grants under the Digital Equity Partnerships Program and the Municipal Digital Equity Planning Program. This American Rescue Plan Act (ARPA) funding will support qualified organizations to work as partners to implement a suite of digital equity projects in six key issues areas to bridge the digital divide and will support municipalities to develop local digital equity plans (such as this plan).

The City can also leverage upcoming opportunities for federal funding to support digital equity programs under the Digital Equity Act. Congress appropriated $2.75 billion for digital equity planning and programming. This funding will support two large grant programs administered by the National Telecommunications and Information Administration (NTIA).[2] These programs will require states to distribute their federal digital equity grant awards over a five fiscal-year period. These grants will support a wide variety of state and local organizations and create projects that will advance digital equity goals throughout the state, including in Lynn. However, this level of funding is unlikely to be sufficient to meet all needs.

To support its planning efforts to maximize the effectiveness of future digital equity funding, MBI may consider the findings of this and other studies in devising grant programs. NTIA will also review digital equity planning documents from each of the states as it launches its own grant programs, likely starting in the second half of 2024. After the NTIA finalizes the program design for a $1.44 billion Digital Equity Capacity Building Grant Program, it will invite states to apply for grants based on a set amount of funding allocated to each state. NTIA is expected to launch this program in the second half of 2024 and allocate funding over five years. In Massachusetts, at

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[2] Digital Equity Act Programs: NTIA, https://broadbandusa.ntia.doc.gov/funding-programs/digital-equity-act-programs.

least some of its allocation is expected to flow to local entities in the form of subgrants through MBI.

It is anticipated that in 2025, NTIA will launch its nationwide direct competitive grant program—the Digital Equity Competitive Grant Program— where individual entities will apply for a portion of an additional $1.25 billion. If state and federal funds are not adequate to meet local needs, the City could consider developing a modest funding source for targeted digital equity programs.

2   Key findings

The following are key findings.

2.1   Broadband infrastructure is ubiquitous, and wired broadband competition is robust but not ubiquitous in Lynn

Comcast wired service is nearly ubiquitous and fiber from Verizon Fios is largely present, although Verizon has not built fiber to every address in Lynn. Approximately 1,833 addresses in the City can only get high-speed service from one wired provider: Comcast. Lack of competition leaves consumers without the ability to choose a potentially lower-cost service or continue to enjoy low promotional pricing. Mitigating this is that both T-Mobile and Verizon offer fixed wireless home services called 5G Home Internet in some areas of the City.

2.2   The cost of broadband subscriptions is a major challenge for lower-income Lynn residents

Affordability is a major issue for many residents of Lynn. According to the U.S. Census Bureau's American Community Survey (ACS), 92.5 percent of Lynn households making more than $75,000 subscribe to residential broadband, but only 77.7 percent of households making less than $75,000 subscribe. And of all the households lacking an internet subscription, 80 percent earn less than $75,000, suggesting a significant gap in affordability or interest. Findings from the MBI survey echoed these data.

2.3   Enrollment in the FCC's Affordable Connectivity Program (ACP) is relatively strong in Lynn, likely thanks to existing programs, but there is still room for increased enrollment to close access gaps

About 15,500 households in Lynn are eligible for the $30 monthly ACP subsidy, and all internet providers in Lynn participate in the program. As of October 1, 2023, based on FCC reports of enrollment by zip code, roughly 7,300 Lynn households, or 47 percent of the eligible number, were receiving the benefit. ACP enrollment in Lynn is significantly higher than the state figure of 29 percent and the national figure of 38 percent and likely reflects the success of existing digital equity programs in the City. Still, there is additional room to grow and this points to the continuing need for enrollment support in the ACP—or any successor programs and ISP low-cost programs—for potentially thousands of additional Lynn households.

2.4   Lack of devices also represents a major challenge to low income Lynn residents

According to ACS data, 30.3 percent of households in Lynn do not own a desktop or laptop computer device—which presents an obvious barrier to internet adoption. Efforts are underway; as one example, ECCF and Tek Collaborative have distributed 600 refurbished devices to 11 nonprofit and municipal partners across the North Shore, including in Lynn. And Tech Goes Home

has partnered with several entities in Lynn to provide training and devices, as described later in this report. But more funding is needed to meet the needs of Lynn residents.

2.5 Many entities in Lynn are currently running programs that are helping thousands of residents achieve digital equity but there are still significant gaps in home broadband subscriptions, access to devices, and skills

Digital education and literacy classes are offered by several stakeholder organizations, with some offering a free device with their services. Classes can range from how to pay bills or enroll in state and federal benefits online, to how to promote your business online. Additionally, a number of nonprofits are engaged with Lynn entities to disseminate devices and enhance digital access and literacy. Stakeholders offering digital equity programs suggested that their class capacities, current staffing, and funding fall short of meeting the need. Stakeholders suggested that more devices are needed to disseminate to all Lynn residents who cannot afford to purchase one on their own. Many stakeholders suggested the populations they serve rely on smartphones using cellular data plans and public hotspot and cannot afford broadband subscriptions at home. Additionally, it became clear during the process that not all stakeholders are aware of each other's efforts, suggesting a need for greater coordination.

2.6 Across the income spectrum, Lynn residents are very concerned about privacy and security online

Lynn residents who participated in the MBI residential survey expressed deep concerns about online safety privacy, and these sentiments held across the income spectrum. Some 83 percent of respondents are either somewhat concerned or very concerned about their online safety. Additionally, 85 percent of respondents stated their main concern online is having personal data stolen or used without their consent. As one example of efforts to address this issue, North Shore Community College has required all staff members to take an online cybersecurity course at no cost to the participant called "KnowBe4" and wishes to extend this to free course to all students. These kinds of programs to protect users and organizations from cybersecurity and privacy threats should be included as part of skills training efforts offered by all organizations offering digital equity programming in Lynn.

2.7 Lynn respondents to the MBI survey who had household income of less than $60,000 reported significantly lower confidence in performing common online tasks and paying monthly broadband bills

With respect to skills, for example, 84 percent of respondents with household income above $60,000 reported that using telehealth services was "easy," but only 54 percent of the respondents from lower income households said so. Similar results were found on answers to other questions about skills. Paying monthly broadband bills is also a challenge for low-income Lynn residents. The average monthly cost of home internet service for all Lynn residents who

participated in the MBI survey is $126 for bundled service, and $67 for unbundled service. Of respondents from households with income lower than $60,000 per year, 73 percent said it was somewhat hard or very hard to pay their internet bill each month, compared to 40 percent of respondents with household income of more than $60,000 per year. Given that all Lynn broadband providers participate in the ACP and offer their own low-cost programs, this finding underscores the need for wider enrollment support among low-income Lynn residents.

More detail on these findings and supporting data can be found in Sections 4, 5, and 6.

3 Recommendations

CTC recommends the City and its stakeholders explore the following strategies and pursue available funding sources to help close digital equity gaps in Lynn. Most recommendations involve work that established, proven, and trusted community partners could perform.

The City of Lynn, potentially in concert with Economic Development & Industrial Corporation (EDIC) and the Essex County Community Foundation (ECCF), can play an important convening role to bring together key community partners and stakeholders in a collaborative process to ensure that evolving funding opportunities are pursued in most effective and efficient way. In addition, EDIC could serve as a coordinator and conduit for state or federal grant funds that need to be targeted to support local organizations and programs to meet community needs.

The table and following subsections summarize the major recommendations of this report.

It is important to note that this table and associated recommendation language does not reflect a full list of all deserving entities. Section 5 of this report contains additional budgetary amounts and statements of need not included in this table. The first recommendation—for setting up a digital equity coalition—would create an entity within Lynn comprised of local stakeholders, the EDIC, the ECCF and any other local philanthropies charged with facilitating coordination, setting priorities, and guiding funding decisions to the full range of entities engaged in addressing digital equity gaps in Lynn.

Table 1: Summary of recommendations

Recommendation	Access and affordability	Devices	Skills	Privacy/ security	Potential annual cost
Convene a digital equity coalition and facilitate annual or biannual meetings	X	X	X	X	N/A
Set up a modest City grant fund that could leverage existing community-serving to offer digital skills training, ACP signup assistance, digital navigation assistance, or devices in addition to their current offerings	X	X	X	X	Start with $25,000
Explore funding Lynn Community TV to provide digital skills programs for 500 Lynn residents	X		X	X	$85,000

Recommendation	Access and affordability	Devices	Skills	Privacy/ security	Potential annual cost
Explore funding permanent digital navigators to assist some of the 40,000 mostly low-income patients at Lynn Community Health Center	X		X	X	$80,000 per navigator
Explore funding to My Brother's Table in its efforts to launch an access and skills training effort to help some of its 10,000 clients	X	X	X	X	$42,000
Support current sites and expansion of Tech Goes Home to provide low-cost devices and training through the Council on Aging and other organizations		X	X	X	$1,500 per learner
Explore funding digital navigators based at the Lynn Public Schools and Lynn Public Library	X	X	X	X	$80,000 per navigator
Explore funding to support 10 IT Technical Support Specialist students at North Shore Community College			X	X	$60,000
Pursue MAPC program to provide potential capital and operating support for Wi-Fi in housing authority buildings	X				No cost first year; TBD for subsequent years
Support the New American Association of Massachusetts with device purchases		X	X		$42,250
Explore cybersecurity programming/partnership opportunities				X	TBD based on MBI programs

3.1 Form a Citywide Digital Equity Coalition and convene annual or biannual meetings to harmonize efforts and support outreach to funders

City government is well suited to implementing some solutions, especially with respect to infrastructure, staffing, and certain kinds of programs, but it cannot address all challenges related to digital equity: connecting residents with subsidy programs, providing devices, assisting with device maintenance and updates, and helping people develop better computer skills.

But an important role the City of Lynn or the EDIC could play is in forming a Digital Equity Coalition to convene the many organizations already providing or planning to provide services in Lynn. Already, entities including North Shore Community College, Lynn Community Health Center, My Brother's Table, Latino Support Network, Lynn Community TV, Pathways Lynn, and several others are already engaged in various digital equity efforts, some of them covering overlapping populations. A coalition meeting annually or biannually—with the structure to encourage members of the Coalition to distribute timely and relevant information and opportunities throughout the rest of the year—would help inform a holistic programmatic strategy and make recommendations to funders and philanthropies.

The EDIC was the main convenor for all stakeholder engagement throughout the course of this project and has a history of supporting local organizations with Covid relief funds as detailed in Section 3.2. With this background, the EDIC has the experience and capacity to start this coalition building today. Once the coalition is formed, one early role could be to determine what existing City staff position can take on the role of evaluating and operationalizing recommendations that the City is in a position to fund or implement.

Such coalitions are critical to engage stakeholders and drive change. The ECCF has served in this role on the North Shore and would be a logical partner. Another model in Massachusetts is the Alliance for Digital Equity, established in 2021 by Baystate Health and the Community Foundation of Western Massachusetts to address broadband affordability, access, and digital literacy for all residents of Berkshire, Hampden, Hampshire, and Franklin Counties of Western Massachusetts. Elsewhere in the county, the Digital Inclusion Alliance in San Antonio, Texas, is cultivating and promoting public policies and initiatives that prioritize digital equity and the City of San Jose, California created the Digital Inclusion Partnership with a statewide organization that has deep expertise in digital equity work to coordinate digital inclusion programming for local nonprofits that are trusted in the communities they serve.

As resources permit, including the gap funding program discussed below, the City could expand the Coalition and incorporate a broader set of organizations that serve the residents of Lynn with critical support services but are not currently directly engaged in this effort. By working with MBI, EDIC, the Essex County Community Foundation, and other larger regional entities the City could

expand partnerships with libraries, senior/aging groups, social services distribution agencies, and public health entities to coordinate efforts.

3.2   Establish the EDIC as the central point of contact and distributor of state grant funds within Lynn, and consider augmenting state and federal funds with a City grant program

The Lynn EDIC was established in 1977 as a non-profit corporation and functions as the City of Lynn's development bank, with the goal of strengthening Lynn's economy by encouraging and expanding businesses and commerce in the city.[3] Throughout the Covid-19 pandemic, EDIC distributed Covid Relief Funds to 508 businesses within the City of Lynn – 434 of them minority and/or women owned. These grant payments ranged from $3,000 to $8,000 per business. EDIC developed the application, reviewed all submissions, distributed payment, and maintained reporting for this grant program until all monies were disseminated to awarded recipients.

As such the EDIC is well positioned to understand the relationships between local organizations, track progress of local initiatives, and serve as a liaison and communications channel with MBI and other state and federal agencies working on digital equity issues.

The structure and landscape of federal and state digital equity funding is evolving. MBI is currently developing the State Digital Equity Plan, and federal agencies are crafting rules for federal grant programs that will distribute $2.69 billion nationwide. EDIC would be an appropriate and experienced local organization to serve as a conduit for distributing federal and state digital equity funds to local organizations, if such an opportunity arises. (The exact role of local nonprofits and government agencies in the administration of this funding is currently unclear.)

Additionally, and especially given the uncertainty at the state level, EDIC, along with the City of Lynn and local philanthropies would benefit from using their own local resources to create a grant fund to address specific gaps in digital equity and inclusion within the City. The City or EDIC could consider creating a modest initial grant fund of perhaps $25,000, with awards of approximately $5,000 to $10,000 to local nonprofits and community organizations to support existing programs provide seed funding for new ones. To be clear, it is likely that far more than this will be needed to address all of the identified needs. EDIC can consider reevaluating the total grant fund amount each year as funding allows.

For example, Pathways Lynn, a long-standing adult education program serving thousands of students, identified that it would need only $7,000, to run an eight-week, 16-session computer class for 15 people as a valuable and meaningful complement to its existing suite of programs.

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[3] "About EDIC," EDIC Lynn, https://ediclynn.org/wp/template/.

Another possibility is to use these small grants to fund existing organizations and programs discussed below to encourage them to expand their efforts into education and enrollment efforts for affordability programs and digital navigators to support adoption efforts.

A simple grant application, organized and managed by EDIC, could allow local organizations serving Lynn to provide specific proposals for training, enrollment support for affordability programs, or device subsidy and assistance programs. EDIC could develop metrics and reporting on timelines, financial accountability, and program results that will demonstrate the effectiveness of the use of these awarded funds and how they help meet digital equity goals and objectives created by MBI.

3.3 Increase efforts to enroll Lynn residents in the Affordable Connectivity Program or providers' low-cost programs

The digital navigator roles described in other recommendations should include enrollment support for the available subsidy and low-cost programs as a core function. Although Lynn is doing better than the state as a whole in terms of the percentage of eligible households who are enrolled in the ACP, as many as 8,200 potentially eligible households remain unenrolled. Some of these households may not wish to subscribe or are covered by other means, but accelerating enrollment efforts in the ACP (and, if the ACP expires, in the low-cost programs offered by Lynn's broadband providers) will help close the enrollment and affordability gap and reinforce all digital equity programmatic efforts.

The FCC recently completed its distribution of $80 million in funding from its ACP Outreach grant program to tribal, non-government and government entities to support enrollment in ACP. While future funding under this outreach program is uncertain, the City of Lynn and other stakeholders should monitor the status of this program and consider applying for funding to support ACP outreach through these navigators during any future rounds.

Beyond enrollment in ACP, the navigators potentially can help residents learn how to access competitive and lower-cost solutions by educating consumers about switching from Verizon's expensive and slower DSL service to other options available in the City and working with owners of apartment buildings to allow the City's fiber competitor, Verizon, to complete its fiber buildout into apartment buildings and compete with Comcast more completely.

3.4 Fund Lynn Community TV with an annual grant to support digital skills programs

Lynn's population suffers from significant broadband and digital skills gaps. Lynn Community TV is a trusted and proven community partner that provides digital skills training around creating, promoting, and hosting content online. Additionally, Lynn Community TV provides fast Wi-Fi, a meeting space with a computer lab, and printing services—and serves significant numbers of

Lynn residents for whom English is a second language (some programs are geared to Hispanic audiences). And some shows are produced by people with disabilities.

But Lynn Community TV's annual budget is facing pressure as the cable providers' commitments to fund local community TV stations are declining. The current budget is about $620,200, which covers staff and programming. But operating costs inevitably are rising even as funds from cable license fees are decreasing. And the needs are increasing.

According to Lynn Community TV, an $85,000 annual grant directed at the development of digital skills training materials, Wi-Fi technical support, and computer lab upgrades would support unlimited access to its digital skills services for 500 Lynn residents. Sessions can include not just video production, but social media for producers, podcasting and many other topics tailored to participants' needs—providing an important source of digital skills training for diverse segments of the Lynn community. It is likely that funding for digital skills training and computer access would be useful at other community TV stations around the Commonwealth for similar reasons.

3.5   Fund digital navigators to assist developing telehealth and other digital skills at Lynn Community Health Center

The Lynn Community Health Center (LCHC) is a community anchor institution that serves 40,000 patients per year, 86 percent of whom live at or below 200 percent of the federal poverty level. LCHC plays a critical role providing healthcare and a range of other services to low-income diverse segments of the Lynn community. Recognizing that digital skills enable low-income residents to access healthcare and related services, the Essex County Community Foundation, via MBI, provided a grant to the FQHC Telehealth Consortium[4] in November 2021 that allowed LCHC to hire a digital navigator for a two-year period, which began in early 2022. This staff position was funded with half of a $226,600 grant from MBI and the Commonwealth's Partnerships for Recovery initiative in Essex County, including Lynn, Salem, Peabody, and Gloucester.

The funding for this staff position has expired, but the need has not. Among other things, LCHC was able to enroll 100 patients in LCHC's telehealth platform during a nine-month period with the navigator's help but would benefit from a continuation and an expansion of this digital navigator staff role. Two or more multilingual digital navigators integrated into LCHC's team structure funded by MBI could facilitate telehealth signups at patient intake and potentially assist in promote enrollment in the ACP or low-cost broadband programs, improve skills and ability to

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[4] FQHC Telehealth Consortium was founded by Community Care Cooperative (C3) and the Massachusetts League of Community Health Centers in 2020.

access information which could in turn promote health indicators like connections to jobs, housing, and nutrition information.

On December 5, 2023, MBI announced that it was awarding $3.7 million to the Massachusetts Leage of Community Health Centers for the expansion of telehealth services for community health centers across the state.[5]

3.6 Continue and expand partnership with Tech Goes Home at Latino Support Network, Council on Aging, and New American Association of Massachusetts

Lynn residents lag both the state and the nation in computer device ownership. ACS data show that 30.3 percent, or approximately 11,000 households, lack a desktop or laptop. Tech Goes Home (TGH) is an organization that partners with schools, healthcare providers and community organizations to provide curated technology-based support through device distribution, internet access, digital literacy, and education. TGH is a long-standing partner with MBI and Essex County Community Foundation, who have partnered to fund and connect TGH with community-based organizations across the North Shore. In Lynn, TGH supported 214 learners through Latino Support Network, Council on Aging[6], New American Association of Massachusetts and four other sites at a cost of $321,000, which includes laptops. These TGH partnerships have been successful, but demand for devices and class enrollment exceeds what is currently provided.

Continued funding of the classes through Latino Support Network, Council on Aging and New American Association of Massachusetts would cost $1,500 per learner. With increased funding, LSN would like to continue to offer two classes in Spanish: a general education and small business program and another class in English for young entrepreneurs and small businesses. Additionally, LSN would like to create a computer lab to provide the space for class attendees to use computers, print, connect, and share ideas.

Tech Goes Home could expand their programming to include Centerboard and LEO, Inc to help these organizations reach their goal of increased device distribution and frequency of digital literacy classes.

3.7 Hire digital navigators to assist students and their families and library patrons

There is a broad need for technical and skills assistance for Lynn's students and their families. During the pandemic, Lynn Public Schools provided enrollment support for families to Comcast's

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[5] "Healey-Driscoll Administration Awards $20 Million to Boost Digital Equity", MBI, https://broadband.masstech.org/news/healey-driscoll-administration-awards-20-million-boost-digital-equity.
[6] In October 2023, Lynn Council on Aging was awarded the Executive Office of Elder Affairs' Digital Literacy Grant for Older Adults.

low-cost Internet Essentials Program, and a tablet with a Verizon internet subscription for families. The Lynn Public Schools more recently developed a hotspot distribution program in partnership with T-Mobile. These hotspots cost $15 per month to LPS. Approximately 550 hotspots have been distributed since 2022.

The schools are facing a new workload in providing technical support and troubleshooting for the hotspots, and for many other broadband-related matters and would benefit from additional staff. A digital navigator could provide support in this area, and with other enrollment support efforts and digital skills development as needed for students and their families.

3.8 Support IT education at North Shore Community College for technical support jobs for IT workforce development

North Shore Community College (NSCC) can play a role in preparing students to work in computer security and IT support jobs related to digital privacy and security. NSCC is currently offering an IT Technical Support Specialist program through the school's Corporate and Professional Education Division. The program prepares students with IT industry skills, including corporate and personal cybersecurity, and certifies each student through examinations required for standard IT positions.

Currently, tuition and supplies are free for every student accepted into the program, yet NSCC's budget for this program only allows for 11 students to be accepted into the program each year. Since 2021, 33 students have been enrolled in this program so far, but more than 150 people have applied for this program since its first year. NSCC lacks the budget to increase its rate of acceptance. A budget of $60,000 would be required to allow NSCC to accept 10 additional students per year, most of whom are coming from Lynn Public Schools.

3.9 Explore funding a digital skills program at My Brothers' Table, which serves 1 million meals to homeless and low-income Lynn residents each year

My Brother's Table (MBT) is a busy soup kitchen in Lynn that in 2022 served almost 1 million meals to approximately 10,000 Lynn residents, many of them homeless or recent immigrants. MBT has recognized that the people they regularly serve access the internet through smartphones, but the high cost of data and minutes limits internet access. What's more, many devices are not functional and are too costly to fix. The U.S. Census Bureau's American Community Survey found that 12.5 percent of Lynn households are exclusively relying on smartphones. Additionally, the MBI survey conducted in Lynn found that 73 percent of Lynn respondents with household income of less than $60,000 per year reported it is somewhat hard or very hard to pay for their internet bill each month.

To address these issues, MBT applied for a grant from Blue Cross Blue Shield of Massachusetts (BCBSMA) Foundation's Special Initiatives grant program. The MBT application sought $41,300 to address digital inequities in access to health services including telehealth, health apps, digital health monitoring, and virtual translation services, by providing increased access to Wi-Fi, the purchase of free charging stations, and a train-the-trainer program offered by the New Lynn Coalition where individuals learn digital literacy skills and receive a device at the end of their training, and in turn, teach what they have learned to family and friends.[7] MBT was not awarded the grant, but the need remains. MBT has produced a detailed budget and project plan that, if funded, could start right away.

3.10 Pursue MAPC program to provide potential capital and operating support for Wi-Fi in housing authority buildings

Low-income Lynn residents subscribe to broadband at lower rates than the population as a whole. Representatives from the Lynn Public Schools and North Shore Community College noted that students often do not have adequate connectivity at home. The Lynn Housing Authority also expressed a desire to have greater Wi-Fi access in its facilities.

A new opportunity to do just that is available. MBI has partnered with the Metropolitan Area Planning Council (MAPC) to provide procurement support, capital expense funding, and funding for the first year of operating expenses to provide free Wi-Fi access to residents of public and affordable housing in Massachusetts. The effort targets residents most likely to face barriers to connectivity—those experiencing housing insecurity who have access to broadband but cannot afford it.[8] Details by municipality are yet to be determined. (CTC previously provided the City with information about the program and sent the City the application link wherein the City or Housing Authority can express interest.)

The anticipated size of the grant program is $5.6 million, with plans to address roughly 2,400 housing units. The MAPC will initially lead project management and procurement for apartment Wi-Fi projects. Operational expenses for year two and beyond are expected to be assumed by local partners, including municipalities, public housing authorities, and community development corporations. Efforts to provide reliable connectivity at home would ensure academic continuity for students and help bridge the digital divide for all residents.

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[7] This community-based train-the-trainer program was developed by the New Lynn Coalition and is called Community Education Program (CEP). CEP is a bi-lingual community run adult education program provided in local public schools in the evenings. My Brothers Table hoped to leverage New Lynn Coalitions CEP programming with this grant and combine its curriculum with the Public Library Association's DigitalLearn program (digitallearn.org) so that educators could provide instruction at community provider locations like the Medical Respite.

[8] "Smart Growth and Regional Collaboration: Apartment Wi-Fi," MAPC, https://www.mapc.org/our-work/expertise/digital-equity/apartment-wi-fi/ (accessed November 17, 2023).

3.11 Support the New American Association of Massachusetts with funding to purchase new and refurbished devices for refugees and migrants

The New American Association of Massachusetts (NAAM) is a nonprofit based in Lynn that each year serves approximately 900 people, including refugees, political asylees and migrants across the North Shore. NAAM is an important and leading force in the community providing such services.

As part of those services, NAAM offers free adult ESL and digital literacy classes and includes a free Chromebook or tablet to attendees. The NAAM device distribution program was funded by the Massachusetts Office for Refugees and Immigrants and ECCF in 2022 and 2023. With greater numbers of migrants and refugees arriving in Massachusetts, NAAM's resources are stretched thin. For 2024, NAAM estimates that it will need at least 100 Chromebooks at $229 per device, and 150 tablets at $129 per device for a total of $42,250.

3.12 Explore cybersecurity programming/partnership opportunities

Concerns about online safety and privacy in Lynn are significant, with 83 percent of Lynn respondents to the MBI survey stating they are either somewhat concerned or very concerned about their online safety, and 85 percent of Lynn respondents saying their main concern online is having personal data stolen or used without their consent. MBI's draft state digital equity plan (SDEP) states that a future action to address online safety will include the development of a statewide cyber security curriculum. Additional actions will include training existing digital navigators, so they support, protect, and inform clients about their online safety, and embedding cyber security awareness into youth digital literacy programming.

In the near term, Lynn stakeholders could scale NSCC's programming efforts by informing local stakeholders of the "KnowBe4" curriculum, or programs similar to it. Additionally, Lynn stakeholders can leverage the resources of MassTech Collaborative's MassCyberSecurity online safety initiatives. As part of this, there is also a timely opportunity to apply for a state grant to enhance cybersecurity awareness grant for anyone using City or other government networks.[9]

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[9] "About the Municipal Cybersecurity Awareness Grant Program," Mass.gov, https://www.mass.gov/info-details/about-the-municipal-cybersecurity-awareness-grant-program#how-to-apply-.

4 Broadband availability conditions and participation in the ACP in Lynn

This report provides an analysis of current broadband conditions in the City of Lynn related to infrastructure availability, level of competition, uptake of services (and of available subsidies) by residents, and device ownership. Data is based on publicly available information from the U.S. Census Bureau, the American Community Survey (ACS), and the Federal Communications Commission (FCC).

Key findings in this report include the following:

Competition among high-speed wired internet service providers (ISPs) is not present in all parts of the City. Although wired service is nearly ubiquitous from Comcast—and fiber from Verizon Fios is largely present—Verizon has not built fiber to every address in Lynn. Approximately 1,833 addresses in the City can only get high-speed service from one provider: Comcast.

Lack of competition leaves consumers without the ability to choose a potentially lower-cost service or continue to enjoy low promotional pricing. The incomplete availability of Verizon Fios is noteworthy. Solutions could include working with owners of apartment buildings to allow the fiber competitor (Verizon) into buildings, and/or to educate consumers about upgrading inferior DSL service to fiber.

Fixed wireless services add a new dimension to the market. Both T-Mobile and Verizon offer fixed wireless home services (leveraging the networks previously used only for mobile service), and the startup Starry also provides some fixed wireless service. These services provide a more affordable option, but with the significant caveat that performance of these networks is dependent on individual subscribers' distance from wireless facilities, and—in the case of Verizon or T-Mobile—the data speeds may be lowered (or "throttled") during times of congestion.

The cost of broadband subscriptions is a major challenge. Affordability is very much an issue for many residents of Lynn. According to the ACS, 92.5 percent of households making more than $75,000 subscribe to residential broadband, but only 77.7 percent of households making less than $75,000 subscribe. And of all the households lacking an internet subscription, 80 percent earn less than $75,000, suggesting a significant gap in affordability or interest.

Enrollment in the FCC's Affordable Connectivity Program (ACP) is low but exceeds state averages, reflecting the effectiveness of existing interventions. The ISPs in Lynn all participate in the ACP,[10] which pays a $30 monthly subsidy for broadband service for eligible low-income

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[10] While T-Mobile does not participate in ACP, Lynn residents that qualify for ACP can sign up for fixed wireless service through T-Mobile's affiliate, Metro by T-Mobile, https://www.metrobyt-mobile.com/benefits/affordable-connectivity-program?icid=MTPR_MTW_P_MTAFRDCONP_SAHLTAE6STVBV1K5V34941.

residents. About 15,500 households in Lynn are eligible for the ACP subsidy; as of October 1, 2023, estimates (based on FCC reports of enrollment by ZIP code) suggest that roughly 7,300 Lynn households, or 47 percent of eligible households, were receiving the benefit.

Though this reflects a significant gap, ACP adoption is significantly higher than the statewide average of 29 percent and the national figure of 38 percent. The enrollment rate in Lynn likely could be boosted with enhanced efforts to help residents navigate the cumbersome application process.

Lack of devices also represents a major challenge. According to ACS data, 30.3 percent of households in Lynn do not own a desktop or laptop computer device—which presents an obvious barrier to internet adoption.

4.1 Lynn has robust and ubiquitous high-speed broadband coverage, but competition is not fully present, limiting options for some consumers

CTC reviewed FCC data, researched websites of broadband providers operating in Lynn, and engaged in phone conversations with representatives of ISPs to collect market data on residential broadband pricing, availability, and level of competition in Lynn.

There are two wireline broadband providers[1] in Lynn, as well as three fixed wireless services (distinct from mobile service), which are inferior to wireline services in terms of availability and capacity. On the wireline side, Comcast is the dominant provider. Because the City negotiated buildout requirements in the City's cable franchise agreement, high-speed residential internet service is available everywhere in the City.

Verizon provides fiber (Fios) service in much but not all of the City. In terms of fixed wireless coverage, both Verizon and T-Mobile offer new residential services leveraging their existing networks, and Starry, a startup that is now going through a reorganization following a bankruptcy filing, reports service to some addresses.

In much of Lynn, Verizon Fios provides competition to Comcast with symmetrical seeds (upload the same as download). According to FCC data, 1,833 addresses in Lynn only have one high-speed wireline option—which means Comcast.

Table 2 shows the state of broadband service in Lynn; although it shows that a handful of addresses (11) are served only by a fixed-wireless provider or are underserved or unserved, these are likely not residential addresses or reflect errors in the data. These numbers reflect addresses; buildings with two or more apartments are still counted as one address.

Table 2: State of high-speed broadband competition in Lynn per FCC data

Availability of Broadband Service		Addresses *(may include two or more housing units per address)*
Served addresses where 100 Mbps download, 20 Mbps upload (100/20) or greater wireline service is available	From two or more providers (usually both Comcast and Verizon Fios, though RCN/Astound is available at 54 addresses)	16,759
	From only one wireline provider (Comcast)	1,833
Addresses served <u>only</u> by licensed fixed wireless		4
Underserved addresses—meaning they cannot receive 100/20 service but can get at least 25/3 (wireline or licensed fixed wireless)		3
Unserved addresses—meaning that cannot get 25/3 (wireline or licensed fixed wireless)		4
Total locations		**18,603**

Figure 1 shows at a high level the locations where Verizon provides fiber service. Because CTC does not have access to address-level data from the FCC's National Broadband Map, the figure below only shows approximate locations, where each dot represents five addresses and is plotted randomly within census blocks.

Verizon may not be providing Fios at some locations because the company could not get access to apartment buildings (multiple-dwelling units or MDUs) for construction. Additionally, though the company no longer markets DSL service in Lynn (and thus pricing information for DSL could not be obtained), some customers also may still be using this inferior legacy DSL service, which relies on copper phone lines. Others may have access to Verizon's 5G Home Internet fixed wireless service, discussed in the next subsection.

The incomplete availability of Verizon Fios is noteworthy and reflects a gap in the competitive high-speed broadband dynamic in Lynn. It suggests a need to work with MDU owners to allow a fiber competitor in the building and/or to educate consumers about canceling relatively inferior DSL service and upgrading either to cable or to Fios, where available.

In Figure 1, poverty level by census block is superimposed and shows that the highest-income areas tend to have relatively more competition from Fios, but the lower income areas are more likely to have gaps in competition. This may be because lower-income areas have a higher concentration of MDUs, which Verizon could not access.

Figure 1: Verizon Fios (fiber) availability in Lynn
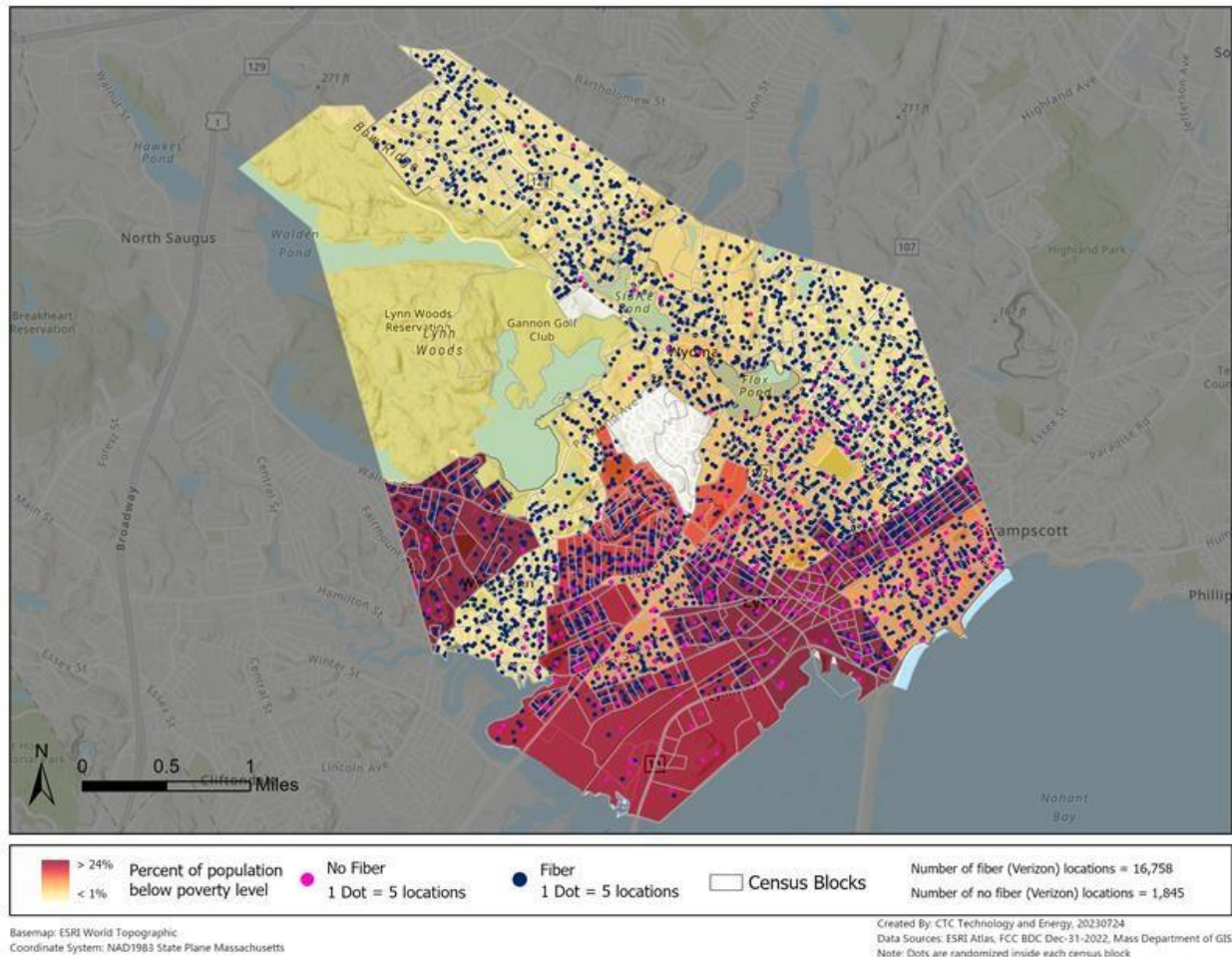
Some residents have the option to subscribe to residential fixed wireless service from Verizon, T-Mobile or Starry. These are known as "licensed fixed wireless" or LFW because they use licensed spectrum under the exclusive control of the respective companies and cannot be used by others.

(Fixed wireless services are not to be confused with mobile services. The residential survey will likely reveal exclusive reliance on mobile service by some residents of the City. The FCC has repeatedly noted that mobile service is an inadequate substitute for fixed broadband services,[2] but an estimated 15 percent of U.S. adults continue to rely on their smartphones as the only source of home broadband connectivity[3]—a trend that is more common among young adults and low-income households.[4] Most smartphones can be used as wireless hotspots to connect other computing devices to the internet.)

These new services from Verizon and T-Mobile in Lynn are "fixed wireless" services to dedicated hotspots in the home. The speeds will vary by location, and these plans come with the risk that the carriers will throttle or limit available speeds during times of congestion. The FCC notes that

mobile wireless providers have been making these offerings an increasingly attractive alternative to fixed services with more competitive pricing,[5] yet these services remain a complement of, and not a full replacement to, widespread fixed broadband availability. Starry is only in the fixed wireless business; it does not offer a mobile service.

Figure 2 shows reported coverage levels by fixed wireless providers. T-Mobile claims the largest footprint in Lynn, followed by Verizon and Starry. This coverage may be overstated in terms of how many premises can actually receive this service or do so at adequate speeds.

Figure 2: Reported fixed wireless coverage in Lynn
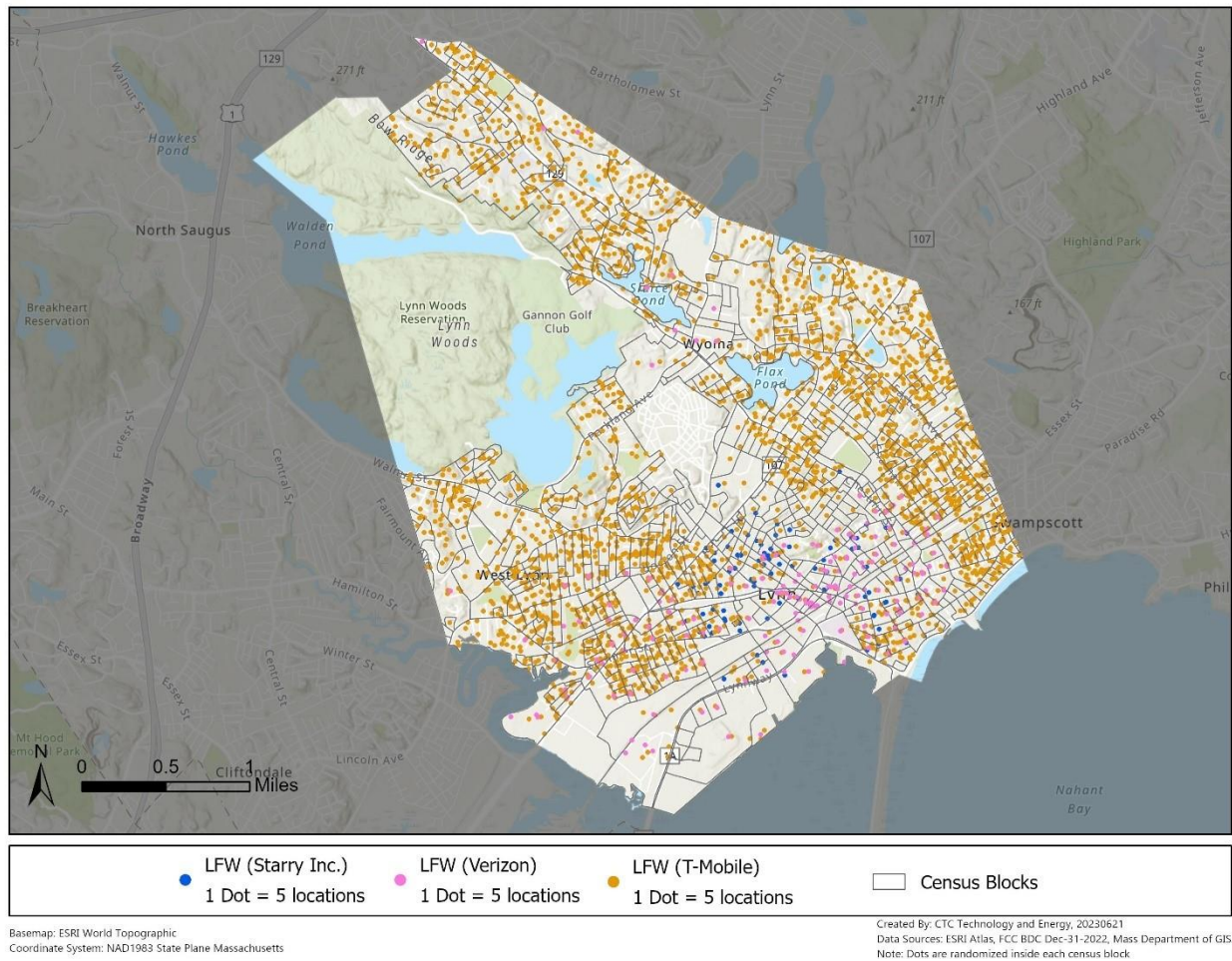
4.2   Approximately 47 percent of eligible Lynn households participate in the ACP program, exceeding state and national adoption rates

The ACP, which provides a monthly subsidy toward home internet subscriptions, presents an opportunity for many low-income residents to purchase a quality broadband subscription more affordably.[11] However, the ACP is known to be chronically undersubscribed nationwide.

As of October 1, 2023, estimates based on FCC zip code reported enrollment suggests that roughly 7,300 Lynn households were receiving the ACP subsidy—which is about 47 percent of the estimated 15,500 eligible households in the City.[6] This enrollment rate is higher than the statewide average of 29 percent (as shown in Table 2) and the national figure of 38 percent.

Lynn has seen an significant increase in enrollment in the ACP as of late, with approximately 1,400 new households enrolling in the program since April 1, 2023. This likely reflects the results of programming and advocacy efforts already underway in the City.

While Lynn outperforms the state and national averages, there are still an estimated 8,200 households eligible for the ACP that have yet to enroll. This might be ascribed to a lack of awareness of the program and a challenging sign-up process; many eligible residents may need to go to a library or other location with internet access to even start the registration process, and they may also need personalized assistance. As a result, many local governments and other digital divide stakeholders conduct active outreach to candidate populations to make them aware of the program and assist in the sign-up process.

While outreach may increase enrollment in some areas, some eligible residents will be uninterested or unwilling to participate. This may be the case if a household cannot afford internet even if it receives the ACP, feels no need to use the internet, receives satisfactory service from a cellular provider, receives free internet access through a communal source, or does not want to apply for a federal subsidy program.

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[11] A household is eligible for the Affordable Connectivity Program if the household income is at or below 200% of the Federal Poverty Guidelines, or if a member of the household meets at least one of the criteria: (1) Participates in certain assistance programs, like SNAP, Medicaid, Housing Choice Voucher (HCV) Program (Section 8 Vouchers), Project-Based Rental Assistance (PBRA)/202/811, Public Housing, SSI, WIC, or Lifeline; (2) Participates in the Free and Reduced-Price School Lunch Program or School Breakfast Program, including at U.S. Department of Agriculture (USDA) Community Eligibility Provision schools; (3) Received a Federal Pell Grant during the current award year; (4) Participates in Tribal specific programs, such as Bureau of Indian Affairs General Assistance, Tribal TANF, Affordable Housing Programs for American Indians, Alaska Natives or Native Hawaiians, or Food Distribution Program on Indian Reservations; or (6) Meets the eligibility criteria for a participating provider's existing low-income internet program. ["Affordable Connectivity Program Consumer FAQ," FCC, https://www.fcc.gov/affordable-connectivity-program-consumer-faq.]

Table 3: ACP enrollment in Lynn as of October 1, 2023

	Eligible households enrolled	Enrolled households	Eligible households	Unenrolled eligible households
Lynn	47%	7,300	15,500	8,200
Massachusetts	29%	339,115	1,156,300	817,185
United States	38%	21,166,936	55,179,000	34,012,064

4.3 Lynn residents can obtain a range of high-speed service offerings which can be free with the ACP benefit, but initial prices rise sharply after promotional periods end

All of the broadband providers in Lynn participate in the ACP, which is available to eligible low-income residents, and both Comcast and Verizon offer low-cost programs; together, the programs enable low-income residents to receive no-cost service. Mobile plans are also ACP-eligible, but each household can only use ACP once—so if a household is using the benefit for a mobile plan, they cannot get the benefit again for a home internet plan.

Lynn residents who choose Comcast and do not enroll in ACP can obtain initial pricing of $25 per month, but these prices rise sharply following the promotional period. Those who do not have the option of switching to Verizon are left paying at least $77 for basic service, not including router rental—highlighting the affordability challenge for Lynn residents over the long term and the importance of the available low-cost programs if residents can navigate them.

The tables below list the service options by provider. Options for eligible low-income residents that would be free with the $30 ACP benefit are shaded green.

Table 4 shows Comcast's pricing; Table 5 shows Verizon Fios service plans and costs.

Table 4: Comcast (Xfinity) advertised service plans in Lynn with low-income programs noted in green

Package	Internet speed	Monthly cost	Notes
Internet Essentials	50/10 Mbps	$9.95 (free with ACP subsidy)	Available to eligible low-income customers following an application process and subject to certain conditions. Internet Essentials also includes added benefits; customers can purchase a refurbished computer for $149.99.[7]
Internet Essentials Plus	100/20 Mbps	$29.95 (free with ACP subsidy)	Available to eligible low-income customers following an application process and subject to certain conditions. Internet Essentials also includes added benefits; customers can purchase a refurbished computer for $149.99.

Package	Internet speed	Monthly cost	Notes
Connect More	200/5 Mbps	$25 for the first 24 months, then $77 plus $15/mo. router rental fee	Pricing guaranteed for 24 months. No term contract. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account. Discount is $5/mo. when using a stored credit card.
Fast	400/10 Mbps	$35 for the first 24 months, then $92 plus $15/mo. router rental fee	Pricing guaranteed for 24 months. No term contract. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account. Discount is $5/mo. when using a stored credit card.
Superfast	800/10 Mbps	$60 for the first 24 months, then $97 plus $15/mo. router rental fee	Pricing guaranteed for 24 months. No term contract. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account. Discount is $5/mo. when using a stored credit card.
Gigabit	1000/20 Mbps	$70 for the first 24 months, then $102 plus $15/mo. router rental fee	Pricing guaranteed for 24 months. No term contract. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account. Discount is $5/mo. when using a stored credit card.
Gigabit Extra	1200/35 Mbps	$80 for the first 12 months, then $107 plus $15/mo. router rental fee	Pricing guaranteed for 24 months. No term contract. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account. Discount is $5/mo. when using a stored credit card.
Gigabit X2	2,000/2,000 Mbps	$120 plus $15/mo. router rental fee	This is a non-promotional rate. No term contract. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account. Discount is $5/mo. when using a stored credit card.

Table 5: Verizon Fios advertised fiber service plans in Lynn with low-income program shaded in green

Package	Internet speed	Monthly cost	Notes
Fios 300 (Verizon Forward Program)	300/300 Mbps	$49; free for eligible low-income households	The $30 ACP subsidy and Verizon discount brings the cost to $0[8]
Fios 300	300/300 Mbps	$49.99	Pricing guaranteed for 24 months. No term contract. Router included. Possible $99 set up fee, location dependent.

Fios 500	500/500 Mbps	$69.99	Pricing guaranteed for 36 months. No term contract. Router included. Possible $99 set up fee, location dependent.
Fios 1 Gig	940/880 Mbps	$89.99	Pricing guaranteed for 48 months. No term contract. Router included.

The fixed wireless options in Lynn are more affordable but come with the significant caveats that they are not universally available, speeds at individual locations can vary widely, and these services are subject to throttling in times of network congestion.

Error! Reference source not found. shows pricing for T-Mobile's 5G Home Internet plan at $50/month for 5G Home Internet-only service. T-Mobile will provide 5G Home Internet at $30/month if it is bundled with a cellular plan that costs between $60 and $100 per month for a single line.[12] T-Mobile prices its 5G Home Internet plans regardless of provided speeds.

T-Mobile does not participate in ACP directly for either its 5G Home Internet or mobile data plans. Only T-Mobile affiliates – Metro by T-Mobile and Assurance Wireless – participate in ACP and offer discounts on mobile data plans. Lynn residents who qualify for ACP must sign up with prepaid provider Metro by T-Mobile for 5G Home Internet and can apply the ACP discount to the bundled 5G prepaid mobile plan. Metro by T-Mobile offers a 5G Home Internet plan and a mobile prepaid voice and data plan for $50 a month without the ACP discount and $20 with the ACP discount. Assurance Wireless does not offer 5G Home Internet

Table 6: T-Mobile's advertised home internet service plan in Lynn

Package	Internet speed	Monthly Cost	
5G Home Internet	75/20 Mbps*	$30 mo. for T-Mobile 5G Wireless customers; $50 mo. for home internet service only	Pricing includes a $5/mo. autopay discount. $30 service is only available to customers with a T-Mobile 5G phone and plan offered between $60-100/mo., plus the cost of a handset. Gateway router provided at no charge but one-time $35 device connection charge at sign up.

* Speeds are estimated and rounded. Quoted download speeds were 76-245 Mbps with claims that 50% of customers experience speeds in this range and the remaining customers could receive service faster or slower than this range. Upload speeds were quoted as 21-40 Mbps.

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[12] See T-Mobile Home Internet webpage, https://www.t-mobile.com/home-internet/plans?INTNAV=tNav%3APlans%3AHomeInternetPlan (accessed November 19, 2023).

Table 7 shows Verizon's home internet fixed wireless service plans. Unlike T-Mobile, Verizon does not require users to subscribe to Verizon Wireless mobile plans to get these home internet options. These plans include a "Verizon Forward" program which can provide 300/300 Mbps service that is free to eligible low-income households with the ACP and Verizon discounts.

Table 7: Verizon Wireless fixed broadband service plans with low-income program noted in green

Wireless home service plans	Advertised maximum download/ upload speeds	Monthly price (non-promotional)	Monthly bundled price with 5G phone
LTE Home	25/4 to 50/4 Mbps	$60	$25
5G Home Internet	85/10 to 300/20 Mbps	$60	$25
5G Home Internet (Verizon Forward Program)	85/10 to 300/20 Mbps	Free with ACP and Verizon discounts	
5G Home Plus	5G Ultra Wideband	$80	$35

Table 8 shows Starry's service plan options. Of particular note is that Starry offers a $15 low-cost program for eligible low-income residents, which includes all residents of public housing, even if they are not enrolled in the ACP. And the faster $30 service also would be free with the ACP subsidy. However, Starry's availability in Lynn is limited.

Table 8: Starry services and pricing with low-income programs noted in green

Service offering	Monthly cost
Starry Gigabit 1,000/500 Mbps	$80
Starry Pro 500/250 Mbps	$65
Starry Plus 200/100 Mbps	$50
Starry Select 100/50 Mbps	$30 (free with ACP)
Low-cost Plan (Starry Connect) 30/30 Mbps	$15 (free with ACP)

4.4 American Community Survey data reveal that Lynn residents face gaps in subscriptions and device ownership that are lower than state and national averages

Data on internet adoption and device ownership is important to fully understanding the nature of the digital divide in Lynn. While the residential survey is still being conducted as of the date of this report, the ACS shows that Lynn lags behind state and national averages in internet adoption and device ownership. And though high-speed wireline broadband services are available throughout Lynn, data show that many households do not subscribe nor own devices necessary to fully use these services—and that those lacking subscriptions or devices are largely in lower-income households.

The ACS is conducted yearly by the US Census Bureau. However, it includes a five-year sampling period (2016–2021)[9] that may not accurately illustrate most recent trends. The survey includes three questions about broadband-related topics.

A preliminary analysis of the available ACS data found that in Lynn:

- 30.2 percent of households lack a wireline internet subscription.

- 80 percent of households that lack a wireline internet subscription earn less than $75,000 yearly.

- 30.3 percent of households do not own a desktop or laptop computer device.

4.5 Lynn lags state and national adoption rates for residential internet subscriptions

According to ACS data, 84.1 percent of Lynn households subscribe to residential internet services. Further, most of these subscriptions are via a reliable wireline technology; 69.8 percent of Lynn households receive wireline internet service. The City lags both the state and nation in these respects, as shown in Figure 3.

Figure 3: Internet subscription rates in Lynn compared to the state and nation
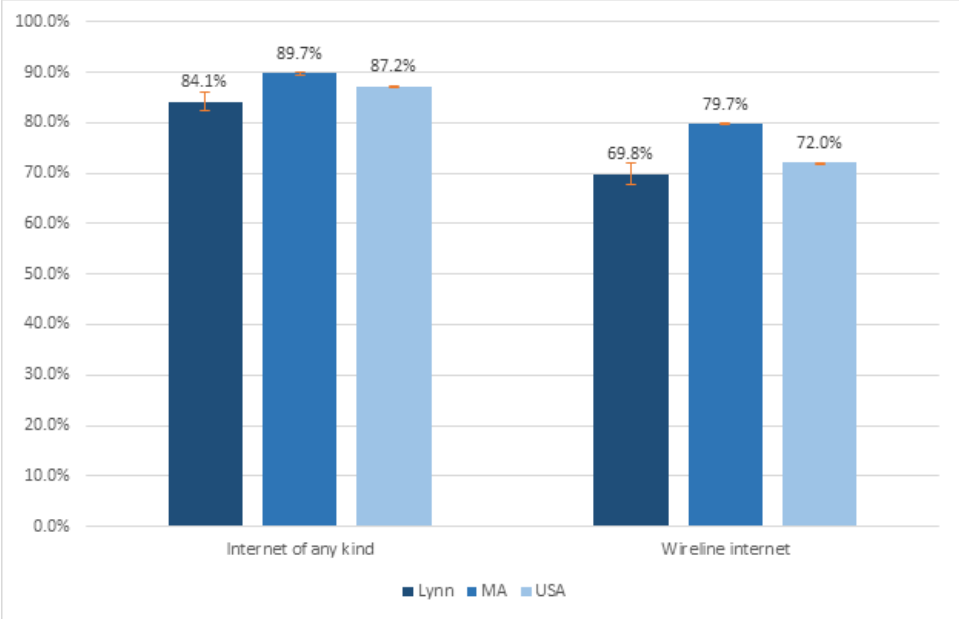
An estimated 10,974 households (or 30.2 percent) lack residential wireline internet service. Of those households without wireline service, 4,432 are solely using a cellular internet service from their homes. Figure 4 shows these figures. Lower income households sometimes choose to use their cellular connection and smartphone in lieu of a more robust connection. However, this may not fully enable all members of a household to participate in online activities, because of data caps and the potential for the service to be throttled in times of mobile network congestion.

Figure 4: Residential wireline subscription rates in Lynn compared to the state and nation
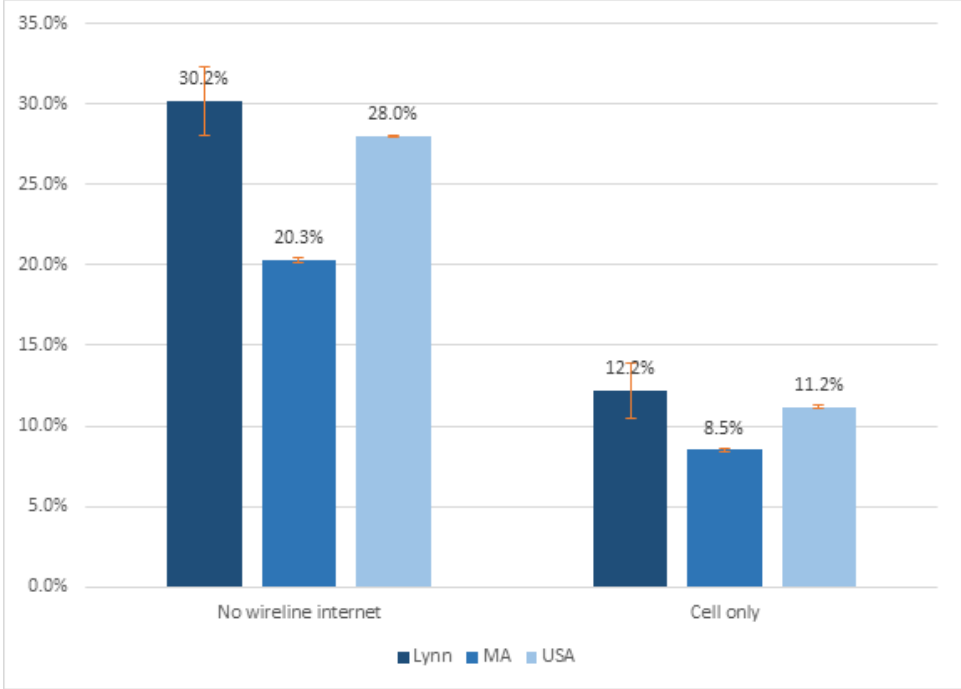
4.6 Low-income households subscribe to wireline internet service at lower rates than higher income households

In Lynn, most of the households lacking an internet subscription are lower-income households. Whereas 92.5 percent of households making more than $75,000 subscribe to wireline internet services, only 77.7 percent of households making less than $75,000 do so.[10] The subscription rates are even lower for households making less than $20,000, at 67.4 percent. After accounting for the number of households in these income brackets, an estimated 80 percent of households that lack wireline internet access earn below $75,000 per year. Figure 5 shows subscription rates by income bracket.

Figure 5: Wireline internet subscription rates by income level
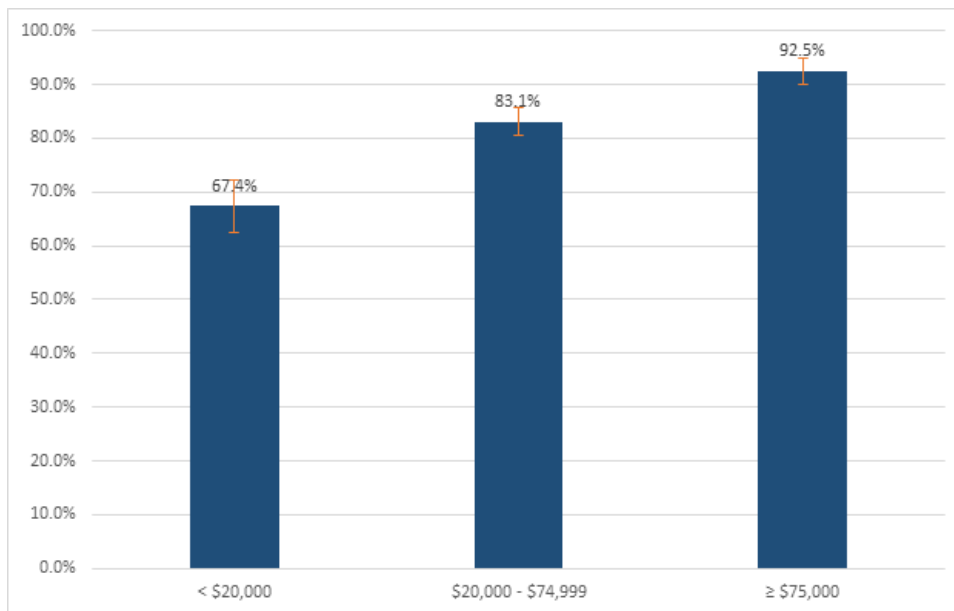
4.7 Device ownership in Lynn lags state and national device ownership rates

ACS data show that 89.5 percent of households in Lynn own one or more computer devices, a level that slightly lags both the state and nation. This disadvantage extends through a variety of different types of devices, including desktop, laptop, smartphone, and tablet ownership, as shown in Figure 6.

Figure 6: Device ownership rates in Lynn compared to the state and nation
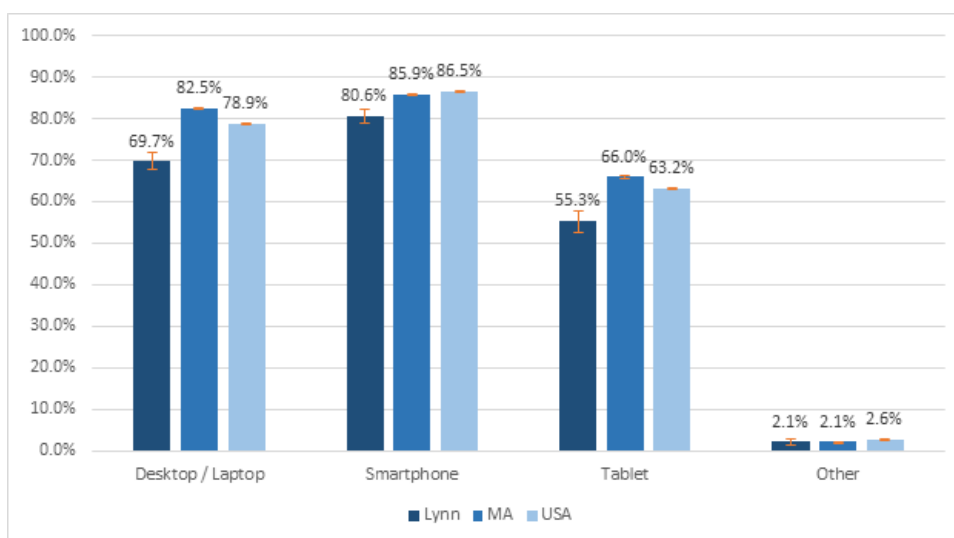
While only 10.5 percent of Lynn households lack a device, 30.3 percent lack a desktop or laptop, which are required for many of today's digital applications. The device gap in Lynn is greater than state and national figures, as shown in Figure 7.

Figure 7: Device ownership in Lynn compared to the state and nation
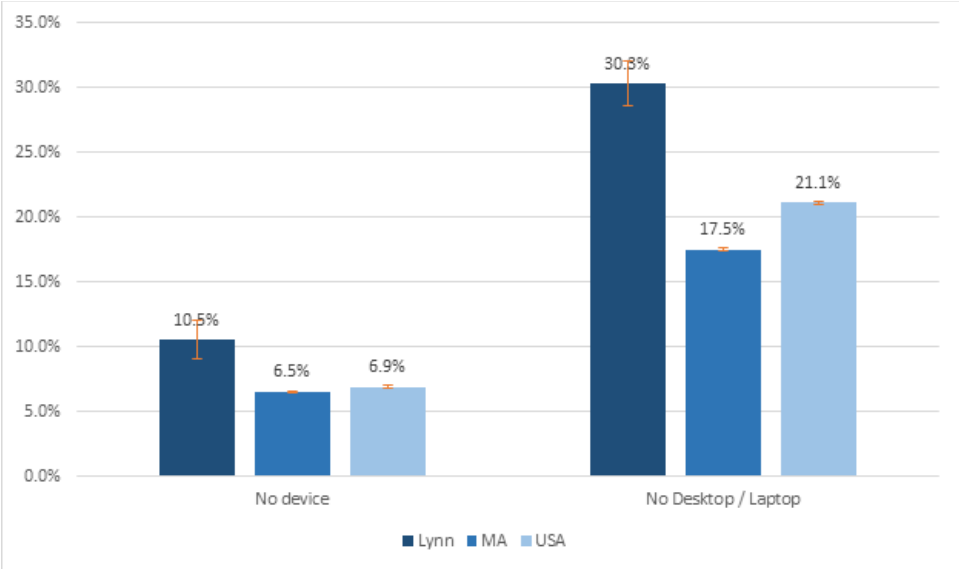
Additional barriers may exist even after device ownership numbers are improved. For example, for households with many individuals, a single desktop or laptop will not deliver sufficient capacity for all members of the household to meaningfully use the internet. Additionally, many households that own computers for the first time are likely to experience trouble in operating the machines and may need tech support, education, and access to repair programs.

5   Lynn stakeholders report significant gaps but also point to successful programs that are having an impact and could be expanded if funding allowed

The City of Lynn and CTC convened and facilitated several stakeholder meetings to gather feedback about the digital needs and challenges in Lynn. CTC also prepared and disseminated an online questionnaire to participants in these meetings. The questionnaire was designed, in part, to facilitate orderly data collection about existing programs underway, the services offered, populations served, existing capacity, remaining gaps, and the potential for expanding these programs.

The stakeholder meetings were organized around the following theme areas, though there was considerable overlap on these themes:

- Higher education and workforce groups
- Business leaders and associations
- Digital training institutions
- Schools and libraries
- Vulnerable populations and seniors

The following subsections—organized by theme and entity—identify the participants and organizations in these meetings and summarize the insights provided by each stakeholder during the meetings and in questionnaire responses (if provided).

The questionnaire is provided in Appendix A. The complete package of online responses to the questionnaire was provided to the City and MBI under separate cover. Recommendations developed from a synthesis of stakeholder data, survey data, and other research performed for this study are provided in Section 3.

5.1   Higher education and workforce entities

The City of Lynn and CTC met with and/or sent questionnaires to the representatives of North Shore Community College and MassHire North Shore Career Center. The following is a list of participants or recipients:

- Nikki Pelonia, chief diversity and equity officer, North Shore Community College
- Paul Ventresca, executive director, MassHire North Shore Career Center
- Denise Dechamps, corporate and professional training grants manager, North Shore Community College

The following is a summary of inputs from each stakeholder.

5.1.1   North Shore Community College

North Shore Community College (NSCC) has a campus in Lynn and offers automatic admission to any graduate of Lynn English, Classical or Voc Tech High Schools.[13] In the 2022-2023 academic year, the NSCC student body consisted of 6,800 credit students and approximately 1,800 non-credit students—1,447 of which were Lynn residents. The following key insights were offered by NSCC.

Workforce development: In 2021, NSCC began offering the IT Technical Support Specialist program through the school's Corporate and Professional Education Division. This curriculum teaches the fundamentals of IT skills and certifies students in Cyber Safety and CompTIA A+, an industry standard set of exams for any IT career. This program is free to all enrolled students, including supplies and services. Although NSCC has received over 150 applications for this program since 2021, only eleven students have been accepted each year due to limited seating capacity, competing demands on lab space and the availability of instructors.

Device support: North Shore Community College provides a program called "Here to Help" to assist students who need financial support for housing, food, and other basic needs. NSCC also provides laptops under this program. In the past year, NSCC provided 125 laptops to students. The year prior, NSCC provided 398 laptops. The program also provides students with local resources such as support with signing up for internet essentials, a program offered through Comcast. In the past, NSCC also provided students with hotspots. NSCC said it would like to expand this program and add a digital skills program for recipients.

Internet security: NSCC rolled out a program for its staff members in November 2021 called "KnowBe4" to help avoid phishing and other online scams. The annual project budget for KnowBe4 Training is $21,000 and was offered to 674 of all 867 full and part-time employees in 2023. However, NSCC has identified a need for students to also receive this training, at a cost of approximately $73,000 for the entire student body.

5.1.2   MassHire North Shore Career Center

MassHire is the Massachusetts state agency providing workforce development and employment resources, including training programs, networking events, apprenticeship programs and youth development. MassHire has a North Shore Career Center that is based in Salem. In Lynn, MassHire operates the North Shore Youth Career Center, and offers services at North Shore Community College's Lynn campus and the Lynn Housing and Neighborhood Development Family Success Center.

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[13] "NSCC offers Lynn High School Grads Direct Admission & Financial Support," NSCC, May 11, 2023, https://www.northshore.edu/news/2023/direct_admission_scholarships_for_lynn_hs_grads.html.

Device gaps: In a pilot program, MassHire recently provided 75 laptops to clients of the career center, but noted demand for devices far exceeded this number. MassHire would like to meet this need but lacks the budget and capacity to provide and support the program.

Internet training gaps: MassHire offers digital skills classes on topics ranging from resume writing to how to use a computer and navigate the internet. Demand for these classes exceeds MassHire's capacity.

5.1.3 Business leaders and associations

The City of Lynn and CTC met with and sent questionnaires to the representatives of EforAll, MassDevelopment, North Shore Latino Business Association, Creative Collective and Greater Lynn Chamber of Commerce. The following is a list of participants:

- Jeremiah Hernandez, executive director, Entrepreneurship for All (EforAll)
- Tristan Foley, transformative development initiative fellow, MassDevelopment
- Frances Martinez, founder and executive director, North Shore Business Association
- Tia Cole, special project manager, Creative Collective
- John Andrews, founder and executive director, Creative Collective

5.1.4 EforAll

Entrepreneurship for All (EforAll) is a nonprofit organization operating at multiple locations across Massachusetts, including Lynn. It provides economic and skills training support to entrepreneurs. Since the organization's inception in 2010, over 1,400 businesses have been started by EforAll alumni, which have provided over 2,100 jobs across five states.

5.1.5 MassDevelopment

MassDevelopment is a state agency that supports businesses, nonprofits, banks, and communities by financing and providing resources for economic growth and resiliency. In 2022, MassDevelopment financed or managed 356 projects, facilitated $1.69 billion of investments into the Massachusetts economy, and created or supported 11,080 jobs across the state.[14]

Digital skills: MassDevelopment is involved in a program to assist local restaurants with website development, Google business listings, and the development of a social media presence. Through this program, the organization has recognized a wide variance in digital access and skills among the small business owners they serve, which has impacted the business owners' knowledge of and ability to apply for grants and other potential funding sources.

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[14] "FY2022 Annual Report," MassDevelopment, https://www.massdevelopment.com/assets/pdfs/annual-reports/MassDev-Annual-Report-2022-V5.pdf.

5.1.6   North Shore Latino Business Association

The North Shore Latino Business Association (NSLBA) is a business association that supports and advocates for Latino entrepreneurs and business owners to grow through education, networking, skills training, and facilitating access to capital resources.[15]

Digital training: The North Shore Latino Business Association offers on-site digital literacy classes called "From the Traditional to the Digital" to its members of various skills levels. Class topics vary from how to use a device, to how to create and foster an online presence for an individual's business online through professional postings and website development. Since these classes began, there have been 43 graduates of its 15-hour training program. The annual budget of this program is $50,000 and is free to all participants. Although these classes are in high demand, NSLBA does not have the resources, space or staffing to scale up this program currently.

5.1.7   Creative Collective

Creative Collective educates entrepreneurs on how to leverage digital tools to support and market their businesses. Creative Collective works with many small businesses that are women and immigrant owned, and that lack an online presence or on-site Wi-Fi connections.

Digital training: Creative Collective offers a program called "Winter Webinar Series", which assists its members in furthering their use and knowledge of current business software and media technology. The annual budget for this program is $2,500, and is free for those accessing it live, but requires membership to access its replay. These webinars have been offered for approximately 32 months, and nearly 250 individuals have participated in total. Creative Collective would like to expand on the success of its Winter Webinar Series by offering additional support to individuals after workshops are over but is currently unable to do so due to limited resources.

5.1.8   Pathways

Pathways is a nonprofit organization in Lynn, MA, that has been operating for over 40 years. The goal of Pathways is to provide a supportive space for adult learners, including non-native English speakers, and encourage and support these students as they enter the regional labor market, postsecondary education or training opportunities. Since its opening, Pathways has served over 15,000 students, representing over 40 different counties.

Adult education: Pathways has helped over 3,000 individuals earn their HiSet/GED over the course of its lifetime, by providing three HiSet/GED Prep class levels in both English and Spanish. Additionally, Pathways has an extensive ESOL (English to speakers of other languages) curriculum, offering morning and evening classes three days a week for level 1 to level 4 English

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[15] 'Who We Are," NSLBA, https://mynslba.com/#about.

learners. Lastly, Pathways provides Career and Education Advisors for students to develop an Individual Education and Career Plan to help students define their interests, skills, and explore career opportunities. To build on the success of these curriculums, Pathways would like to offer computer classes for its student body. The organizations' goal is to build an 8-week curriculum consisting of 16 classes that are two hours each, for 15 individuals at one time. The estimated budget for this program is approximately $7,200. Recommendation 3.2 above suggests one possible way to address this budgetary need.

5.2   Community digital skills programs

The City of Lynn and CTC met with and sent questionnaires to the representatives of Lynn Community TV, Latino Support Network and Essex County Community Foundation. The following is a list of participants:

- Seth Albaum, executive director, Lynn Community TV
- Cardeliz Paez, Latino Support Network
- Kate Machet, director of strategic initiatives and government relations, Essex County Community Foundation

5.2.1   Lynn Community TV

Lynn Community TV provides its members—including a significant number of people who are English learners or disabled—training and access to digital training. The digital skills programs offered by Lynn TV are rooted in its mission as a video training and broadband resources, but now include content creation and promoting and hosting content on LynnTV's website. Additionally, the organization provides fast Wi-Fi, a meeting space with a computer lab, and printing services.

The current annual budget is $620,270, which includes staff and programming—but operating costs are rising even as funds from cable license fees are decreasing as video subscriptions decline. LCTV leadership identified that an $85,000 annual grant would support membership fees ($25 for individuals, $15 for seniors and veterans) of about 500 Lynn residents. The memberships support provision of training sessions—members can attend as many as they want—with sessions about video production, social media for producers, podcasting and other topics tailored to users' needs.

5.2.2   Latino Support Network

Latino Support Network (LSN) is a Lynn-based Community Development Corporation that advocates for the social and economic empowerment of the Latinx community by creating affordable housing and providing education and skills training to support its community.[16]

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[16] Latino Support Network, https://www.latinosupportnetwork.org/about.

Digital literacy and devices: In partnership with Tech Goes Home (see section 3.6 for more information about TGH), LSN offers basic computer literacy and small business technology classes. LSN in 2023 has offered six classes (three for the general population and three for small businesses), and plans to continue to offer these classes in partnership with TGH and ECCF in 2024. This program includes a free laptop and one year of free internet access. This partnership with TGH has been successful, and as a result, LSN is in the process of replicating these efforts to cater a curriculum specifically for the Latinx community in Lynn. LSN will be focusing only on digital literacy training to start and has finished the development of training materials but would like to see it grow to include device distribution in the future.

5.2.3 Essex County Community Foundation

ECCF is a community foundation based in Danvers that inspires philanthropy and works to manage charitable assets, strengthen and support nonprofits, and engage in strategic community leadership initiatives for the communities of Essex County, including Lynn. ECCF has been a leader in advancing digital equity programs in the area and it is clear that ECCF will continue in this role. ECCF leadership met with CTC on several occasions beyond the initial stakeholder meeting to provide input on recommendations detailed in Section 3 and ensure the report correctly reflected ECCF's efforts.

5.3 Schools and libraries

The City of Lynn and CTC met with and/or sent questionnaires to the representatives of Lynn Public Schools, Diverse People United, and the Library at North Shore Community College. The following is a list of participants or recipients:

- Ivette Martinez, welcome center director, Lynn Public Schools
- Rex Krajewski, Director of Library & Learning Services, North Shore Community College
- Kathy Lussier, North of Boston Library Exchange
- Martha Driscoll, North of Boston Library Exchange

The following are summaries from each stakeholder.

5.3.1 Lynn Public Schools

There are 27 schools in the Lynn Public School system with 15,727 students who were enrolled in the 2022/2023 school year. As of April 2023, there are 11,229 students that qualify for Free and Reduced-Price School Lunch.

Internet access: A representative at Lynn Public Schools identified that the most pressing issue affecting students and their families is a lack of access to the internet at home. During the pandemic, LPS offered enrollment support for Comcast's Internet Essentials program to 488

families in the LPS system. For an additional 32 families, LPS provided the families with a tablet that included a Verizon internet subscription.

Hotspot distribution and technical support: Since 2022, LPS has been operating a hotspot distribution program in partnership with T-Mobile and has provided approximately 550 hotspots to LPS families. The cost to operate each hotspot is $15 per month, and this current plan rate is likely to expire in two years. To provide dedicated support for families using these hotspots and to resolve any connectivity issues, LPS would like to hire 10 additional technical support staff to serve the entire district.

5.3.2   North of Boston Library Exchange (NOBLE)

NOBLE is a network of 17 public and seven academic libraries on the North Shore. Through state telecommunications grants, NOBLE has been able to upgrade most of its library network's internet service to 300 Mbps speeds through Comcast subscriptions.

Internet access: In an effort to better equip community anchor institutions with fast internet service on the North Shore, ECCF helped to financially support NOBLE in its effort to make additional internet upgrades at Lynn Public Library, as well as others in the region. These network upgrades increased internet speeds from 300 Mbps to 1 Gbps service. The cost for NOBLE to upgrade a library's internet from 100 Mbps to 300 Mbps is approximately $2,500; the cost of a further increase to 1 Gbps service is approximately $1,000. NOBLE pays for all monthly connection fees with assistance from a grant from the Massachusetts Board of Library Commissioners.

5.4   Vulnerable populations

The City of Lynn and CTC met with and/or sent questionnaires to the representatives of the Lynn Council on Aging, New American Association of Massachusetts, Lynn Housing Authority and Development, Lynn Community Health Center, Centerboard, LEO, and My Brother's Table. The following is a list of participants or recipients:

- Anges Misigah, director of housing, Policy and Practice, Centerboard
- Lilian Romero, Chief Program Officer, LEO
- Natasha Soolkin, executive director, New American Association of Massachusetts
- Jeff Weeden, planning & development specialist, Lynn Housing Authority and Development
- Michel Chamsarian, relationship manager officer, Lynn Council on Aging
- Meaghen Hamill, Senior Director of External Relations & Strategic Communications, Lynn Community Health Center
- Dianne Kuzia Hills, executive director, My Brother's Table

5.4.1 Centerboard

Centerboard is a human services organization that provides support in connecting Lynn residents to employment, education, and social services to reach financial empowerment.

Digital navigation: Centerboard has case managers that provide digital navigation services to individuals, assisting with online government assistance applications, housing applications and bill payments; however, the organization is struggling to recruit enough staff to support this work.

Digital access: Centerboard owns and operates a residential building that houses 33 families in Lynn. This building provides free internet to all residents, but it is not able to reach every unit. If funding is available, Centerboard would like to increase the reach and speed of the internet offered in this building so that everyone can have strong, working internet available in their home.

Device distribution: Centerboard would like to develop a device distribution program for its homeless population and assist them with monthly costs related to digital services. To do this, Centerboard needs technical support and additional funding to acquire and distribute devices.

5.4.2 LEO

LEO Inc. is a Community Action Agency serving the Greater Lynn area offering resources and services that provide opportunities for children, families, and individuals to thrive. LEO provides early education and care to children from birth to age five through the Head Start and Early Head Start programs.[17] LEO's Home Energy Assistance and Community Services programs aid area household in maintaining safe, warm homes in the winter and ensuring resident's most basic needs are met.

Digital literacy: LEO has piloted a technological literacy course for parents and guardians while their children attend Head Start daycare. These classes are held in the same building where children attend Head Start. LEO does not currently have the capacity to meet the scheduling and language needs of participants due to limited funding. The organization would like to increase staffing to satisfy the demand of Head Start parents, and open classes up to the general public as well. LEO would like to hire a bilingual (English/Spanish) staff member to provide instruction both during the school day as well as evening hours.

5.4.3 New American Association of Massachusetts

The New American Association of Massachusetts is a nonprofit based in Lynn, MA, that works with refugees, political asylees and new immigrants in Lynn and its surrounding areas to provide the economic, social, and cultural support necessary for individuals as they navigate their new home in America. In 2022, NAAM served approximately 900 people, and this number is increasing

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[17] Leading through Empowering Opportunities, https://leoinc.org/about/.

each year. NAAM is the only service provider of this kind on the North Shore and receives federal and state funding through the U.S. Office for Refugee Resettlement and Massachusetts Office for Refugees and Immigrants.

Digital training: NAAM offers multiple classes, events, workshops, and forums online, and have developed educational curriculums to enhance digital literacy to their community of English learners, new immigrants, and refugees as they navigate applications and digital communication in the United States. Digital literacy levels vary among participants, and demand for these educational resources is significant. Classes are all offered virtually with a capacity of 20 individuals per class, and those without adequate home internet access are able to participate in classrooms at NAAM's head office in Lynn. In 2022, more than 450 people attended NAAM's adult ESL and digital literacy classes.

Device support: NAAM has a tablet loan program, but does not expect to receive many of these devices back. This program was funded by the Massachusetts Office for Refugees and Immigrants in 2022-2023 but it is uncertain whether such funding will continue. For 2024, NAAM estimates that it will need 250 devices—100 Chromebooks at $229 per device, and 150 tablets at $129 per device—for a total of $42,250.

5.4.4   Lynn Housing Authority and Neighborhood Development

Lynn Housing Authority and Neighborhood Development (LHAND) is the administrator for 176 units of Federally funded Senior/Disabled housing; 279 units of Federally funded Family Housing; 353 units of State funded Senior/Disabled housing; and 38 units of family housing and manages approximately 3,000 mobile state and federal subsidies to residents.[18]

Digital access: LHAND's family housing units offer a centralized location for after school programs for children and provides a place to receive internet access for all tenants; however, this area is not open at all hours of the day, and many families do not have personal routers in their units. To ensure Wi-Fi is available for everyone, LHAND is interested in providing a hotel-style internet system that is accessible in every unit so that individuals can sign in and use the internet for meetings, work, or school at any time in their own apartments.

5.4.5   Lynn Council on Aging

Lynn Council on Aging provides services to residents ages 60+ and disabled elderly. The Council on Aging has a Senior Center that is attended by approximately 65 individuals every day.

Digital literacy: Lynn Council on Aging works with Tech Goes Home (TGH) to disseminate devices to interested seniors; however, many recipients struggle to understand how to properly operate

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[18] "Agency Overview 2019–2020," Lynn Housing Authority and Neighborhood Development (LHAND), https://lhand.org/wp-content/uploads/2021/05/LHAND_AgencyOverview2019_final-1-1.pdf.

these devices once received. Lynn Council on Aging does provide device training, but their classroom limits who can attend, due to its lack of wheelchair access and small capacity. As of June 2023, there were 27 people on the waiting list to take Spanish digital literacy classes, and 40 individuals on the waiting list to take English classes. To meet this demand, the Lynn Council on Aging would like at least one additional Spanish speaking teacher, and one additional English-speaking teacher. The Lynn COA was a beneficiary last year of the state's Enhancing Digital Literacy for Older Adults Grant through partnership with the City of Salem as the lead applicant.[19]

5.4.6   Lynn Community Health Center

The Lynn community Health Center serves a critical role providing healthcare and a range of other services to low-income diverse segments of the Lynn community. Recognizing that digital skills are a key part of helping low-income residents access these services, the Essex County Community Foundation provided a grant that allowed LCHC to hire a digital navigator for a period that ended in September of 2023. This staff position was funded by part of a $226,600 grant from MBI and the Commonwealth's "Partnerships for Recovery" initiative in Essex County, including Lynn, Salem, Peabody, and Gloucester.

According to LCHC, the individual hired as part of this program worked exclusively with one provider (that is, a physician) at the center, shifting all of the provider's patients to remote video visits. This entails setting up the patients on LCHC's "My Chart" and educating the patients on how video visits work. This work was completed for 100 patients in a nine-month period. The Navigator also referred patients to the Affordable Connectivity Program, but no data were available on the level of this enrollment support.

The navigator was most recently scheduling waitlist screenings with behavioral health therapists as part of the Behavioral Health Director's pilot to decrease the therapy waitlist. Most providers prefer video appointment when assessing the patients' needs. The screenings allow the therapists to triage the patients. Sometimes the patients are deemed urgent cases, and sometimes they may not have a need.

LCHC would benefit from more multilingual digital navigators integrated into its team structure. More generally, a digital navigator could also help patients with other digital skills, such as how to access government services, banking, transportation, and a range of other services that support their health and wellbeing more generally.

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[19] "Enhancing Digital Literacy for Older Adults Grant", Mass.gov, https://www.mass.gov/info-details/enhancing-digital-literacy-for-older-adults-grant#:~:text=The%20Enhancing%20Digital%20Literacy%20for%20Older%20Adults%20Grant,COA%20are%20available%20for%20COAs%20in%20Massachusetts%20to%3A.

5.4.7 My Brother's Table

My Brother's Table is a soup kitchen and social service agency located in downtown Lynn that has been in operation since 1982 and is open 365 days a year. In 2022, The Table served just under 1 million meals to approximately 10,000 Lynn residents. The organization also hosts an episodic medical clinic, run by Lynn Community Health Center.

Digital access: My Brother's Table serves many individuals who have low-cost or free phones, but they have very few minutes and little data, and in many instances, devices that frequently do not work. Additionally, there are few places for The Table's community to safely charge a device and few places where they can access free Wi-Fi downtown. In February 2023, My Brother's Table applied for the Blue Cross Blue Shield of Massachusetts (BCBSMA) Foundation's Special Initiatives grant program that provides organizations with a one-time grant of up to $50,000 to pilot or launch a new project over a one-year period. MBT applied for this grant to support their homeless and immigrant populations in receiving equitable and affordable access to internet and devices. The total budget outlined in the application was $41,300, but they did not end up receiving any grant funds. Had the grant application been successful, the organization would have been able to purchase two public access charging stations, 112 smart devices, and three public high speed mobile internet hotspots for individuals in need and hire 12 peer trainers to assist family and community members with digital skills and the use of smart devices.

5.5 Public meeting

On September 12, 2023, CTC and the City of Lynn hosted a "Digital Equity 101" public session. This meeting was held virtually and promoted on the City of Lynn website and by stakeholders. The public session presentation consisted of a digital equity overview, a project overview which included key findings from data gathered during the initial research process, an overview of the broadband funding landscape, a brief history of broadband, and an opportunity for public comment. In total, 14 individuals registered for the event, five attended, and none provided public comment.

6 Results from MBI survey completed by Lynn residents show access, device and skills gaps and major concerns about privacy and security

This report is based on data collected from Lynn residents who responded to a survey instrument created by the Massachusetts Broadband Institute (MBI) and posted online. Paper copies in nine languages were also made available to residents of the City. Both the online and PDF versions were also shared by other means, including at downtown events, at the Lynn Public Library, and through various community groups. More broadly, the survey was made available to anyone who wished to fill it out across the state.

The results presented in this section are based on analysis of information provided in the survey by 297 residents of Lynn. Unless otherwise indicated, the percentages reported are based on valid responses from those who provided an answer and do not reflect individuals who said "don't know" or otherwise did not supply an answer because the question did not apply to them. Key results are noted where appropriate.

The survey sample was self-selected and is not necessarily representative of the larger population. Because lower-income residents were underrepresented, the report separately highlights answers from respondents reporting households earning less than $60,000 (the highest income category respondents could check was "$60,000 or above.")

This report focuses on data collected that is unambiguous as to meaning or accuracy, relevant to the topic of digital equity, and provides insights that are potentially actionable. The full survey instrument is posted in Appendix A.

6.1 Residential internet service

Respondents were asked about internet connection types and providers. This information provides valuable insight into residents' need for various internet and related communications services.

6.1.1 Internet access

Though most Lynn respondents (93 percent) report having either a home internet or mobile subscription, only 72 percent said they have wireline internet service in the home. Respondents with an annual household income below $60,000 (58 percent of respondents) and those with a less than four-year college level of education (60 percent) are less likely to have a home broadband subscription. Table 9 highlights the saturation of home internet subscriptions by key demographic groups.

**Table 9: Home internet subscriptions by key demographics**

	Percent having a home internet subscription	*Count*
TOTAL	**93%**	*297*
Respondent Age		
Less than 45	62%	*85*
45 to 59	70%	*44*
60 or older	83%	*99*
Income		
Less than $60,000	58%	*108*
$60,000 or more	93%	*81*
Education		
Less than a 4-year degree	60%	*114*
4-year college/university/bachelor's degree	87%	*63*
Postgraduate or professional degree	91%	*43*
Race/Ethnicity		
White, non-Hispanic	85%	*117*
Racial/ethnic minority	60%	*78*
Household Size		
One HH member	73%	*40*
Two HH members	89%	*61*
Three + HH members	66%	*128*
Children in Household		
No children in HH	86%	*134*
Children in HH	55%	*93*
Gender Identity		
Man	86%	*56*
Woman	70%	*162*
Other gender identity	60%	*5*
Other demographics		
Identify as person with disability	79%	*53*
Member of LGBTQIA+ community	72%	*18*
Serve on active duty in US Armed Forces	57%	*7*
Live in affordable housing	46%	*24*

6.1.2 Questions for those with home internet service

Respondents subscribing to home internet service were asked a series of questions about their service, including provider used and price paid.

- **Home internet service provider:** The leading providers used by households with wireline internet service are Comcast/Xfinity (45 percent) and Verizon (44 percent). A small percentage of households use another provider, such as T-Mobile (3 percent) and AT&T (1 percent). The AT&T reference can only be to mobile service, however.

- **How well home internet service works:** Most internet subscribers (71 percent) said their service is good enough to meet their household's needs, but 27 percent said it is not good enough and two percent said they do not know. The results were fairly consistent across home internet providers.

- **Internet service cost:** Respondents were asked to give the cost of their home internet service, as well as indicate whether or not they bundle internet with TV and/or phone service. Overall, 56 percent of subscribers bundle their internet service. Respondents pay an average of $126 per month for bundled internet service and an average of $67 per month for unbundled internet service (see Figure 8). Nearly six in 10 of those with bundled service pay at least $100 per month, compared with 21 percent of those with internet-only service.

Figure 8: Monthly price for internet service
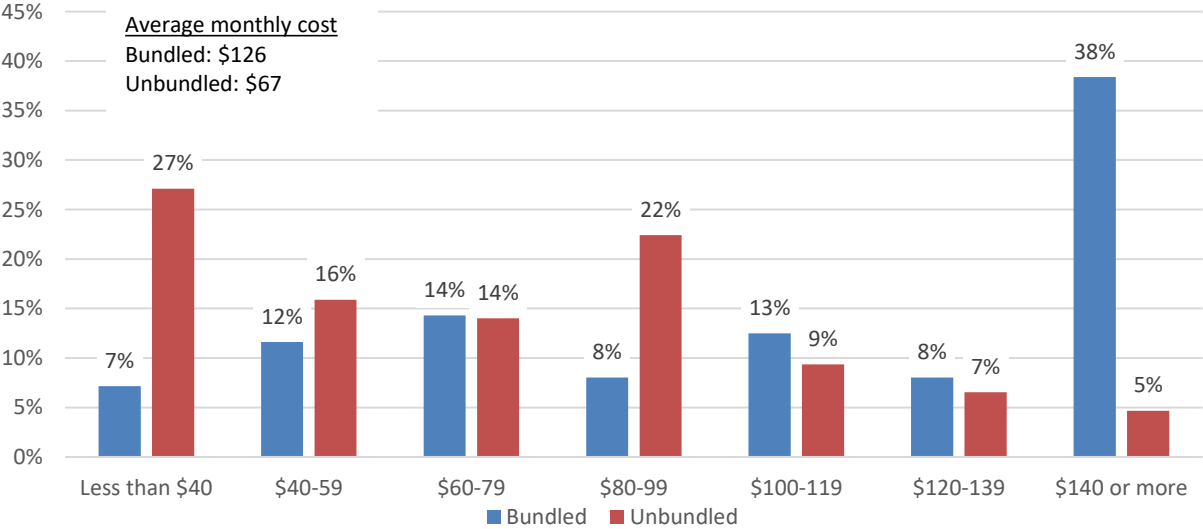
- **Service affordability:** Respondents were also asked how hard it is to pay their internet bill. Many subscribers said it is somewhat hard (42 percent) or very hard (17 percent) to pay, as illustrated in Figure 9. One-fifth of subscribers said it is not at all hard, and one-fifth said it is not too hard.

Figure 9: How hard is it to pay internet bill
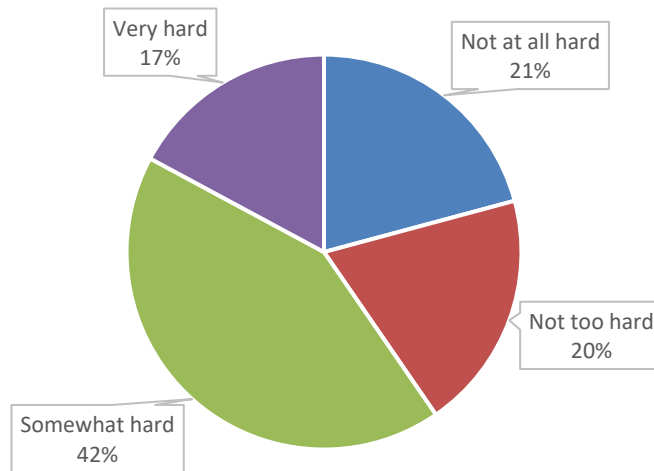
As may be expected, respondents in lower income households were more likely than those in higher income households to say it is somewhat or very hard to pay their internet bill (see Figure 10). Specifically, 73 percent of those earning less than $60,000 per year said paying their bill was "somewhat hard" or "very hard." This data contributes to our finding that affordability is a significant concern for lower-income residents of Lynn.

Figure 10: How hard is it to pay internet bill by household income
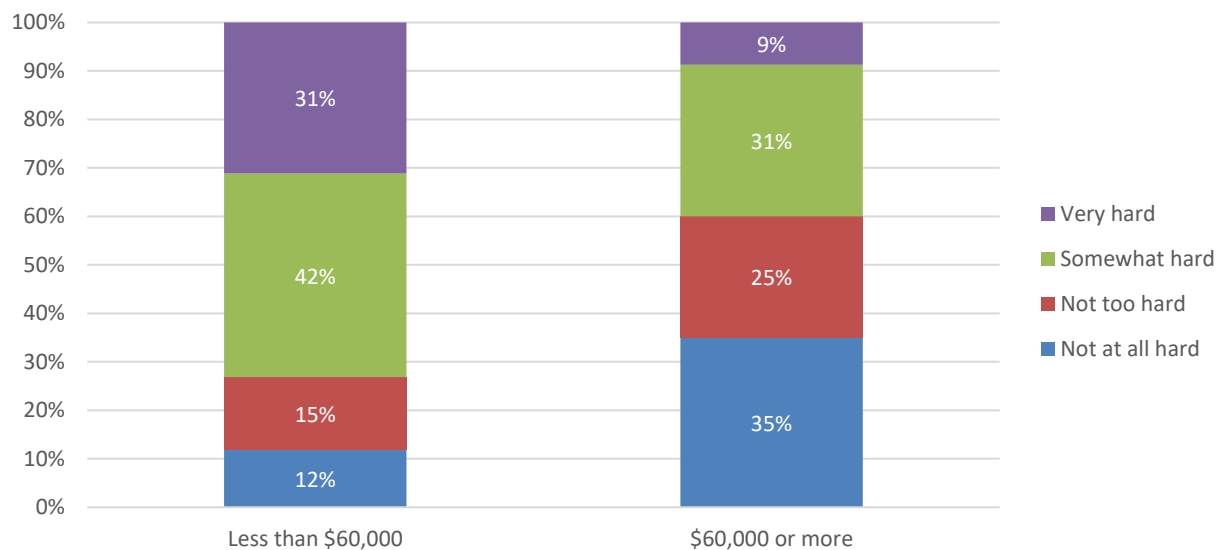
6.1.3 Questions for those without any home internet service—subscription or smartphone

Respondents without internet services were asked to indicate the various reasons for this. The survey asked this question only of the very small people who lack any kind service (neither a home subscription nor a smartphone), not the larger number who, while they might have a smartphone, do not have home internet subscriptions specifically. As such, this report will use American Community Survey data on this point.

Given that only 20 people who responded lack either a home subscription or mobile subscription, the sample is too small to analyze. Twelve of the 20 cited the high expense as the barrier. Nine out of 20 respondents without mobile or home internet service go to a friend's or family member's home, and seven visit a library or community center to use the internet. Other locations used include a workplace (five respondents), a school, college, or university (four respondents), a business (four respondents), a public space (two respondents), and public transit (two respondents).

6.1.4 Internet subsidy programs

All respondents were asked if they had heard of the Affordable Connectivity Program (ACP), which is available to eligible low-income households. As shown in Figure 11, only about four in 10 respondents with an annual household income of less than $60,000, and who thus might be in a position to take advantage of the ACP, are aware of this program. This data point informs our recommendation that enrollment support efforts be expanded in Lynn.

**Figure 11: Aware of the Affordable Connectivity Program by household income**
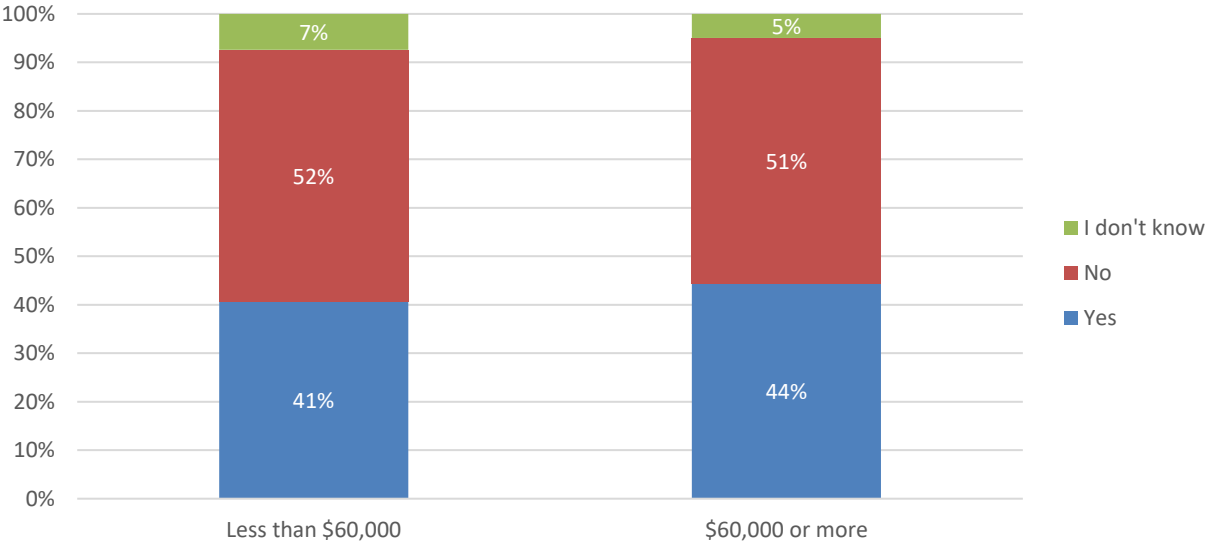
6.1.5 Computing devices used in household

Respondents were asked a series of questions about access to computing devices and types of
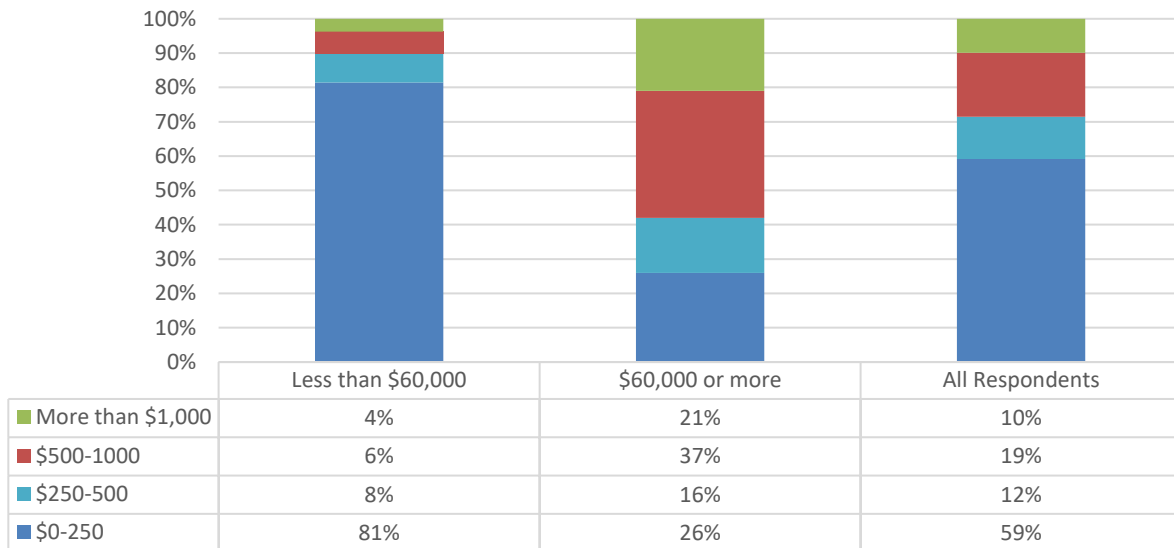
devices used. Most respondents (85 percent) said everyone in their household has access to the computing devices necessary to meet their everyday needs for internet use. However, those with an annual household income under $60,000 are less likely than those in higher income households to use a laptop computer to connect to the internet (see Figure 12). This informs our recommendation that device access programs for low-income residents of Lynn be expanded.

Figure 12: Devices used most of the time to connect to the internet by household income
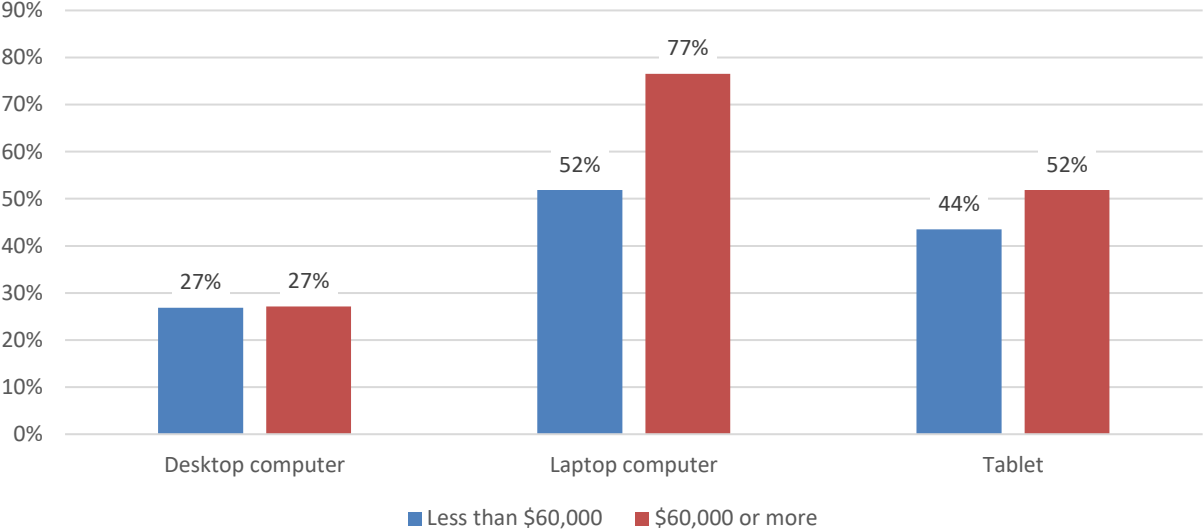
As shown in Figure 13, most respondents would be able to pay $1,000 or less (90 percent) for a laptop or desktop computer. Eight in 10 respondents earning under $60,000 per year could pay only $250 or less for a computer, compared with 26 percent of those earning $60,000 or more per year. Again, this informs our recommendation that device access programs for low-income residents of Lynn be expanded.

Figure 13: Amount able to pay for laptop or desktop computer

	Less than $60,000	$60,000 or more	All Respondents
■ More than $1,000	4%	21%	10%
■ $500-1000	6%	37%	19%
■ $250-500	8%	16%	12%
■ $0-250	81%	26%	59%

6.2 Digital skills

Respondents were asked a series of questions on how skilled they are using the internet in general and for specific activities. This information provides valuable insight into where there may be gaps in abilities and opportunities to educate residents. Most (81 percent) respondents said using the internet for general searching is easy, as shown in Figure 14. Approximately two-thirds or more respondents said it is easy to use the internet for healthcare or telehealth services (70 percent), searching and applying for a job (69 percent), transportation information (67 percent), and participating in their local community (65 percent). More than one-half (56 percent) of respondents said it is easy to use the internet for searching and applying for benefits or resources.

Figure 14: Difficulty in using the internet for various tasks
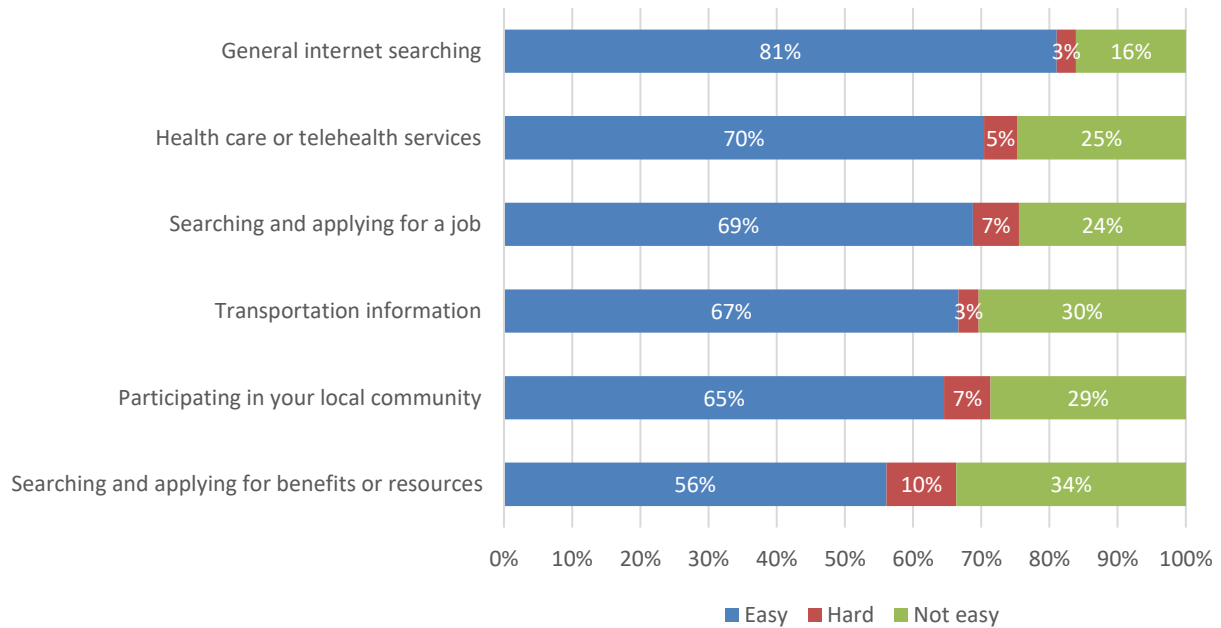
However, as shown in Figure 15, respondents with a household income of less than $60,000 were less likely than those in higher-income households to say using the internet for various tasks is easy, demonstrating that lower-income residents are most in need of skills programs. This informs our recommendation that skills programs for low-income residents of Lynn be expanded.

Figure 15: Ease in using the internet for various tasks by household income
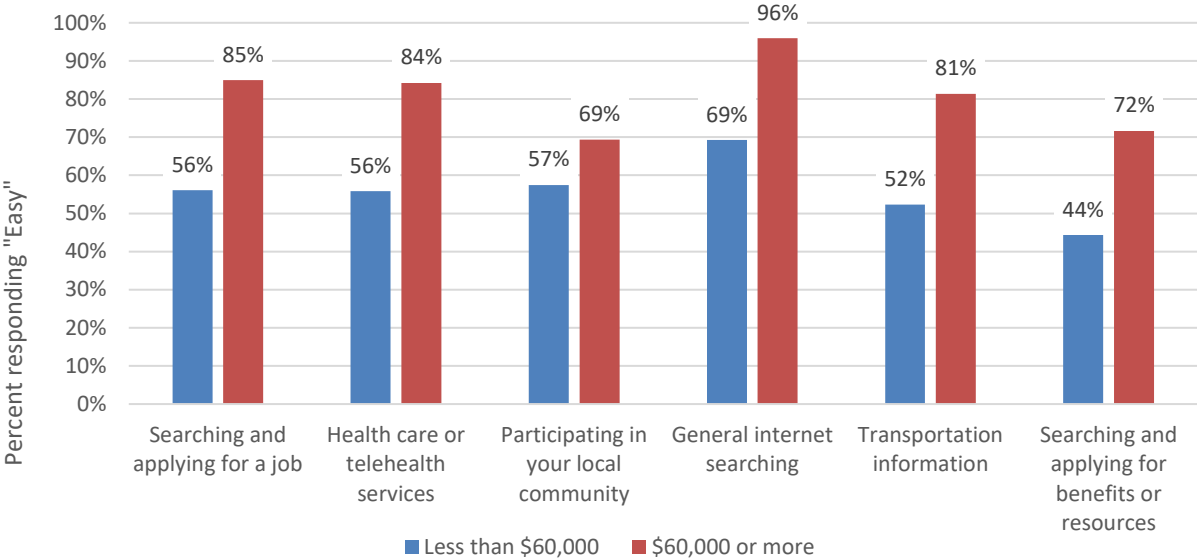
Nearly three-fourths of respondents were able to indicate the type of digital skills support they would be most interested in. Among this segment of respondents, 38 percent said they would be most interested in a do-it-yourself training module, and 35 percent would be most interested in online classes (see Figure 16).

The question did not provide respondents with the opportunity to say they were not interested in taking any kind of class. In other jurisdictions, CTC has found that significant numbers of people, even those lacking skills, are not interested in attending classes. As such, these results should not be taken to mean that Lynn needs to expand skills-training programs at the levels indicated here.

Figure 16: Digital skills support most interested in

6.3 Internet safety

Lynn residents across the income and other demographic categories have significant concerns about online safety and privacy. Respondents were asked a series of questions pertaining to individual awareness of, and the use of, measures to secure online privacy and internet safety. Most respondents are either somewhat concerned (34 percent) or very concerned (49 percent) about online safety (see Figure 17). Concern is high across all demographic groups.

Figure 17: Concern about online safety
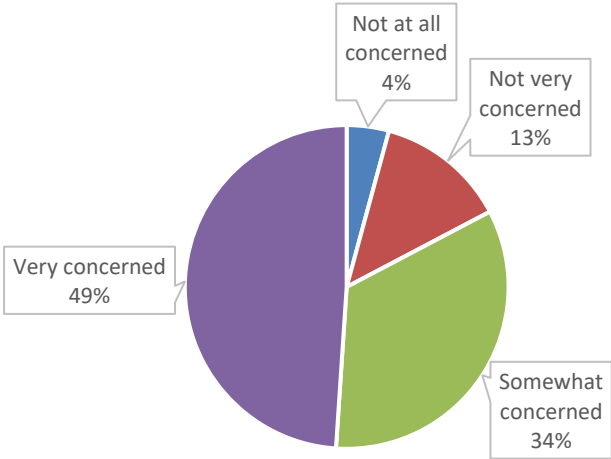
Respondents are most concerned about their data being stolen or used without their consent, cited by 85 percent (see Figure 18). Two-thirds (66 percent) are most concerned they or a loved one could get scammed or tricked, and 63 percent are most concerned they could be tracked or

surveilled. They are somewhat less likely to be most concerned about being harassed or abused online (43 percent).

Figure 18: Most concerned about in regard to internet safety
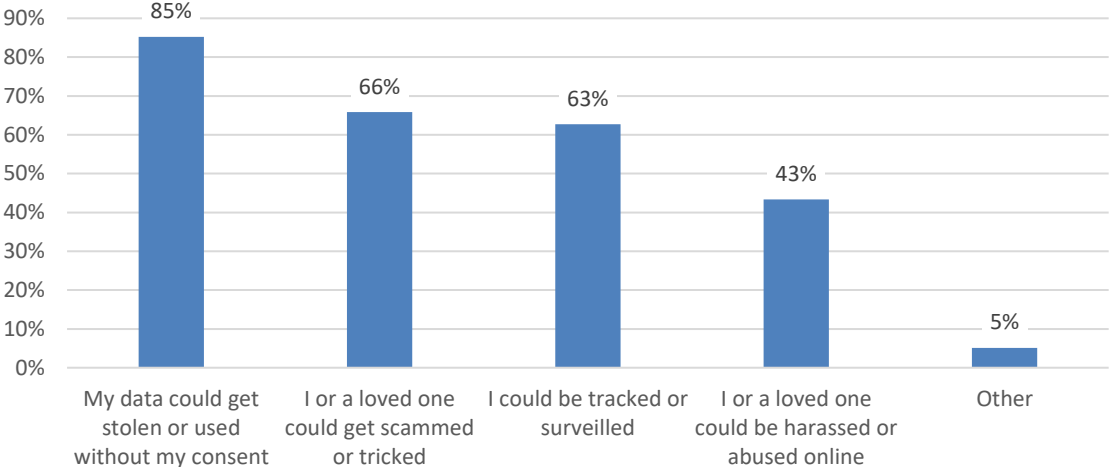
Twenty of 39 respondents who were asked said they have the tools and resources they need to stay safe online (see Figure 19). (This question was asked only of those who reported they were not at all concerned, or not very concerned, about internet safety.) Another 19 respondents said they do not know of any tools or resources to stay safe online.

Figure 19: Aware of tools or resources respondents can use to stay safe online
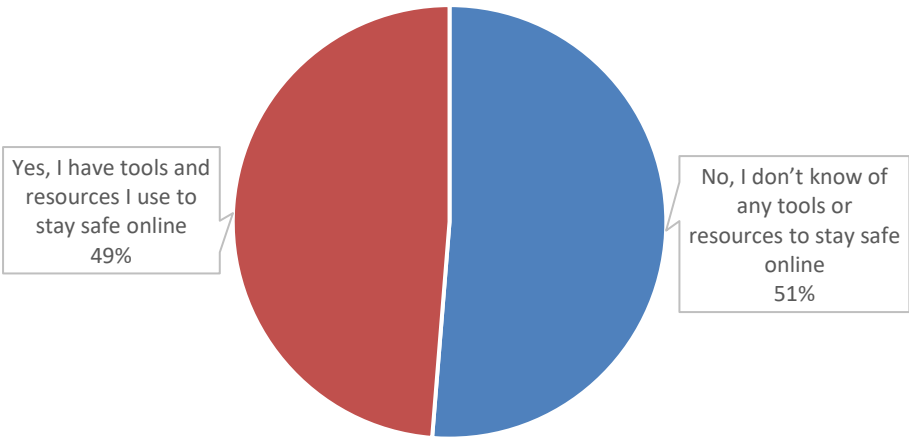
Number of respondents (out of 39 respondents)

6.4 Online accessibility and inclusivity

Respondents were asked questions related to online accessibility and inclusivity of public resources and services. Most respondents said online government services are somewhat accessible (46 percent) or very accessible (37 percent), as shown in Figure 20.

Figure 20: Accessibility of online government services
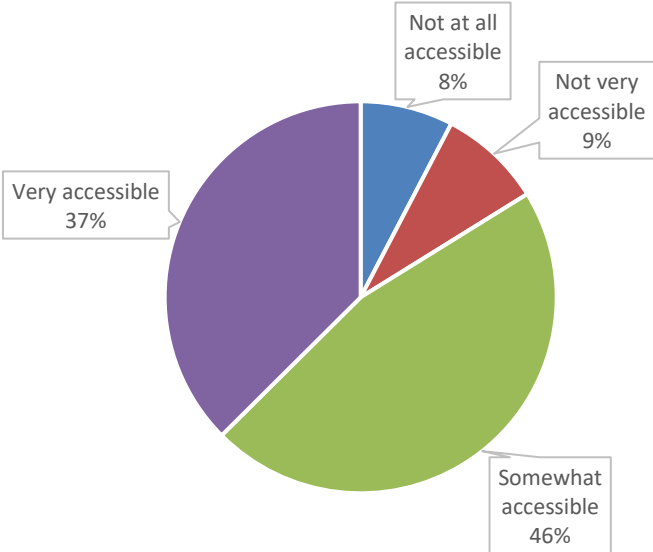
Eight in 10 respondents said online government services have worked somewhat well (46 percent) or very well (34 percent), as shown in Figure 21. Online government services are assessed highly across demographic groups.

Figure 21: How well online government services have worked
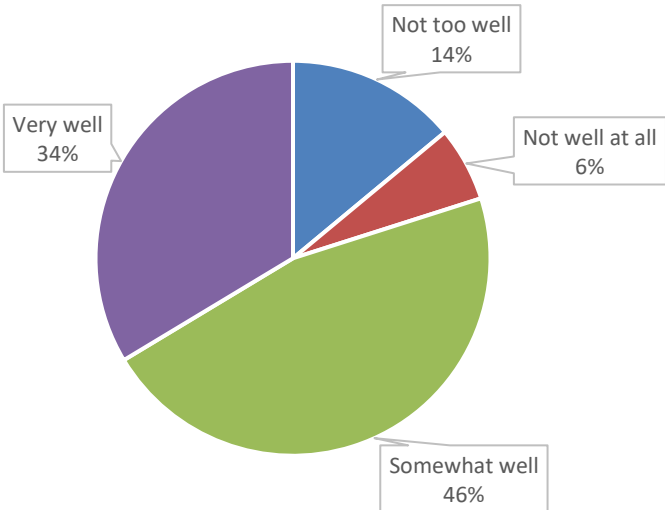
## 6.5   Respondent information

Basic demographic information was gathered from survey respondents and is summarized in this section. Several comparisons of respondent demographic information and other survey questions were provided previously in this report. As shown in Figure 22, 37 percent of respondents are under age 45, 19 percent are ages 45 to 59 years, and 43 percent are ages 60 or older.
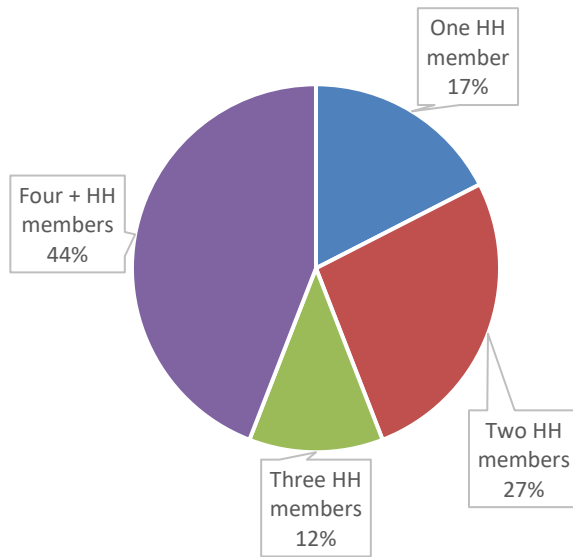
Figure 22: Age of respondents
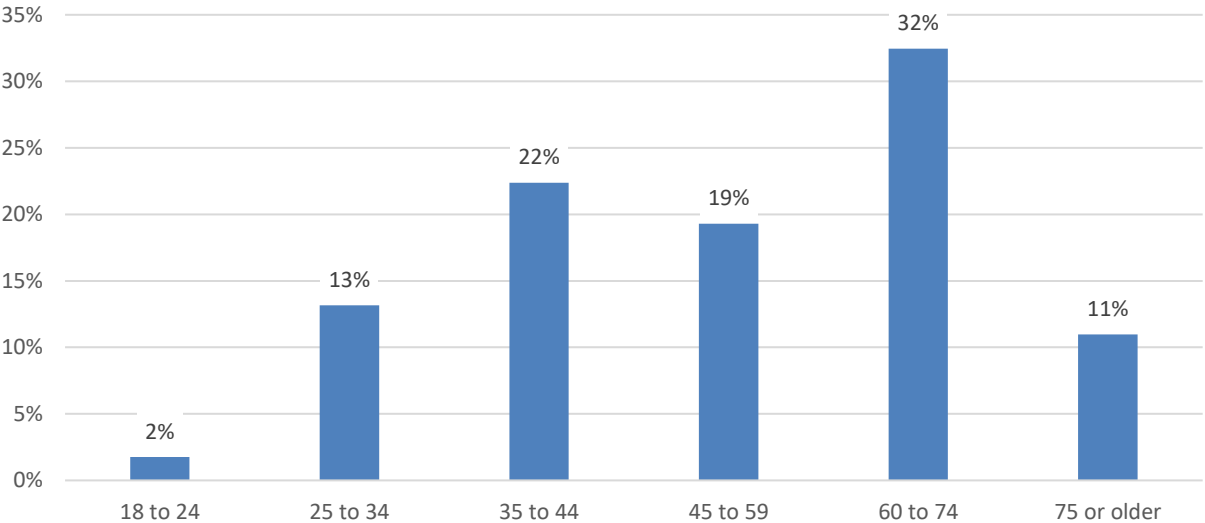
Sixty-four percent of respondents identify as a woman, and 33 percent identify as a man (see Figure 23). Three percent of respondents have another gender identity.

Figure 23: Gender identity
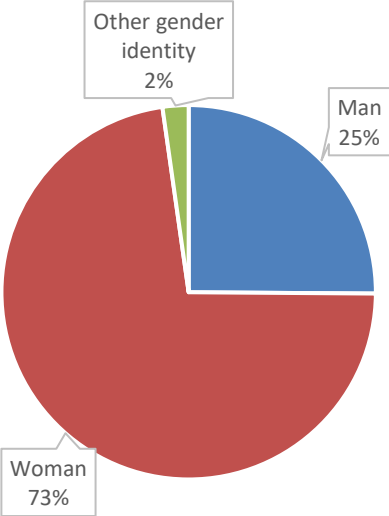
Respondents were asked to indicate the number of adults and children in their household. More than one-fourth of households have two members, and 56 percent have three or more members. Just 17 percent of respondents live alone (see Figure 24). Approximately six in 10 respondents have children living in the household (see Figure 25).

Figure 24: Total household size

**Figure 25: Number of children in household**
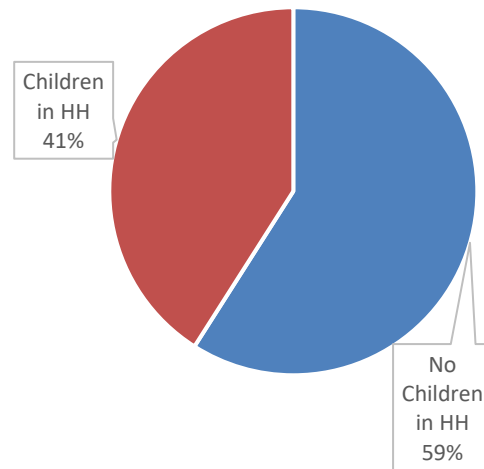
The respondents' highest level of education attained is summarized in Figure 26. Approximately one-third of respondents have a high school education or less, and 17 percent have a two-year associate degree. Another three in 10 respondents have a four-year college degree, and one-fifth have a postgraduate or professional degree.

Figure 26: Education of respondent
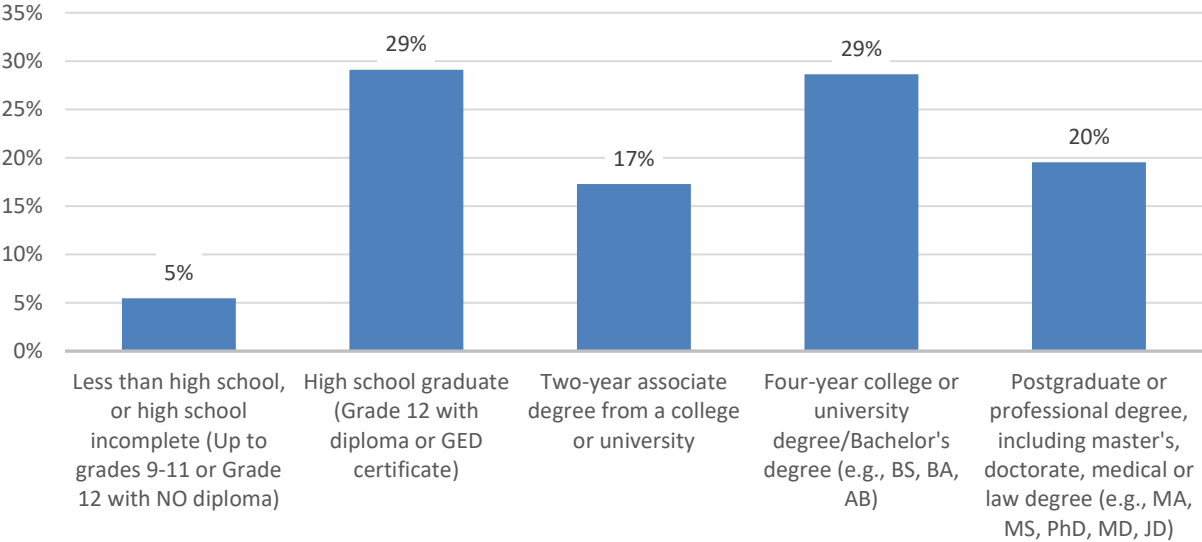
Respondents were asked to indicate what categories best describe their race (see Figure 27). Nearly one-half of respondents are White or Caucasian, while 13 percent are Black or African American.

Figure 27: Race/ethnicity grouped
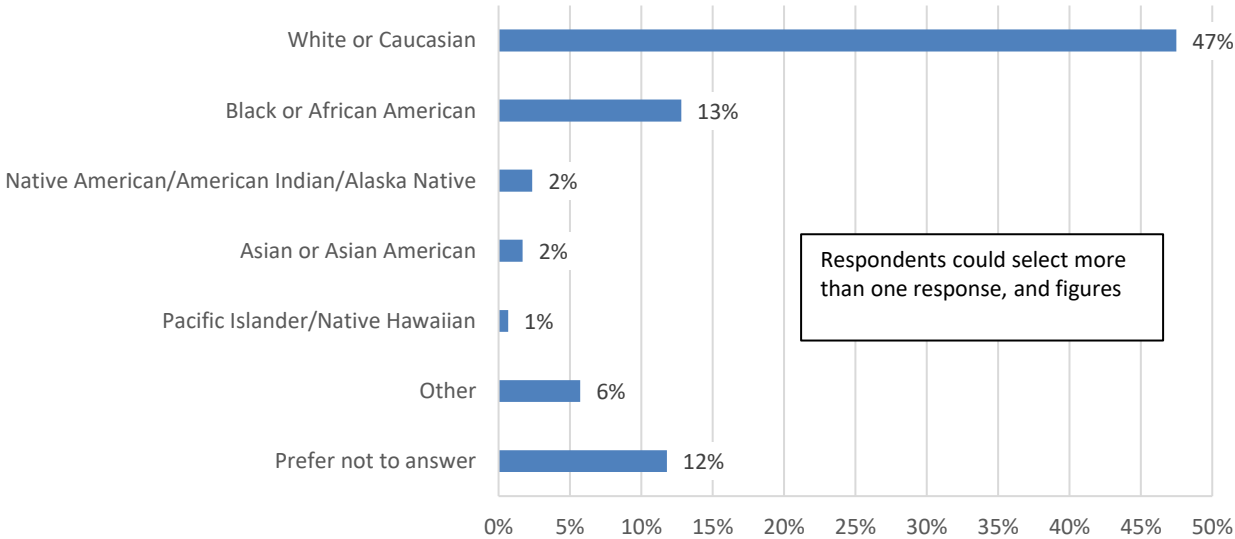
Respondents were also asked to indicate their ethnicity and if they belonged to a North American Indigenous, Native, or Tribal Group. Three in 10 of those who responded said they are of Hispanic, Latino, or Spanish origin. Two percent belong to a North American Indigenous, Native, or Tribal Group. Among those who responded to both the race and ethnicity questions, six in 10 are White, non-Hispanic, and four in 10 belong to a racial or ethnic minority group (see Figure 28). Keep in
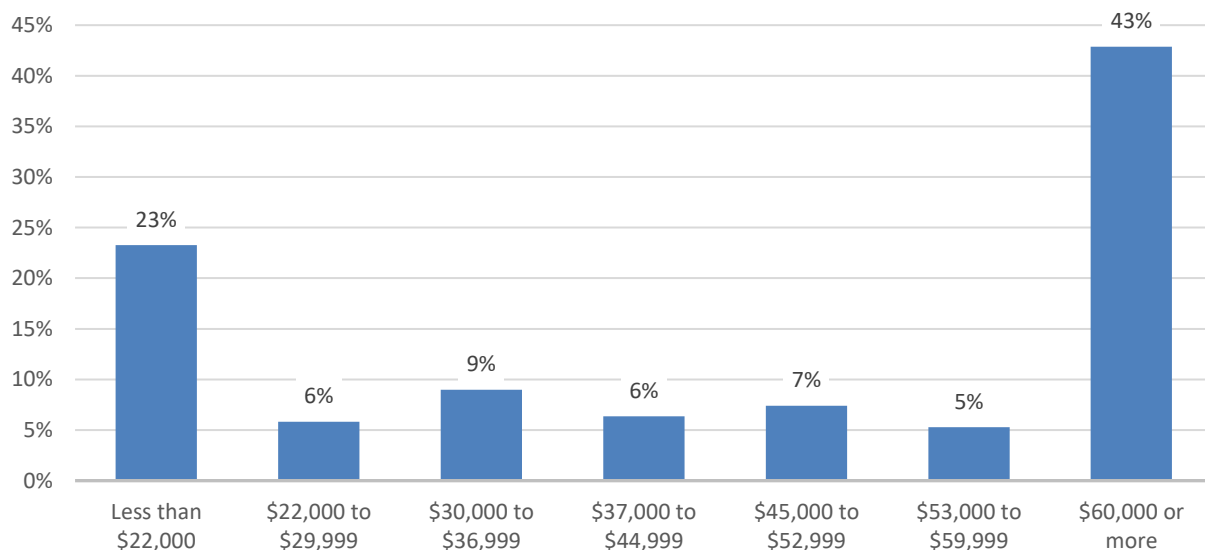
mind that 34 percent of respondents cannot be classified (i.e., did not respond to race and/or ethnicity questions).

Figure 28: Race and ethnicity
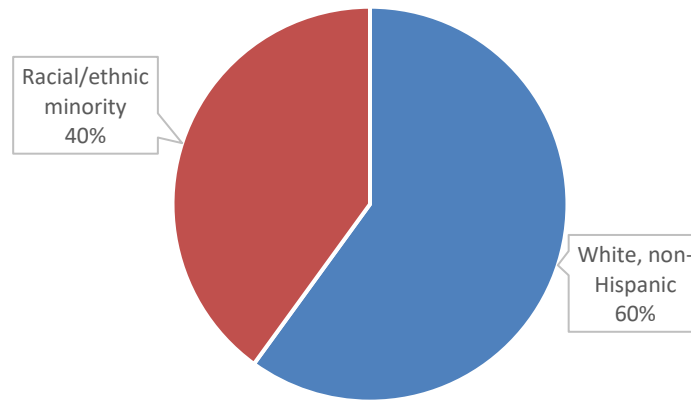
As illustrated in Figure 29, 57 percent of respondents have an annual household income of less than $60,000, and 43 percent earn $60,000 or more per year.

Figure 29: Annual household income

Respondents were asked if they belonged to certain other demographic groups. Twenty-four percent of those who responded said they identify as a person with a disability, and 11 percent of respondents reside in affordable housing (see Figure 30). Additionally, eight percent identify

as a member of the LGBTQIA community, and three percent serve on active duty in the U.S. Armed Forces.

Figure 30: Respondent belongs to particular demographic groups
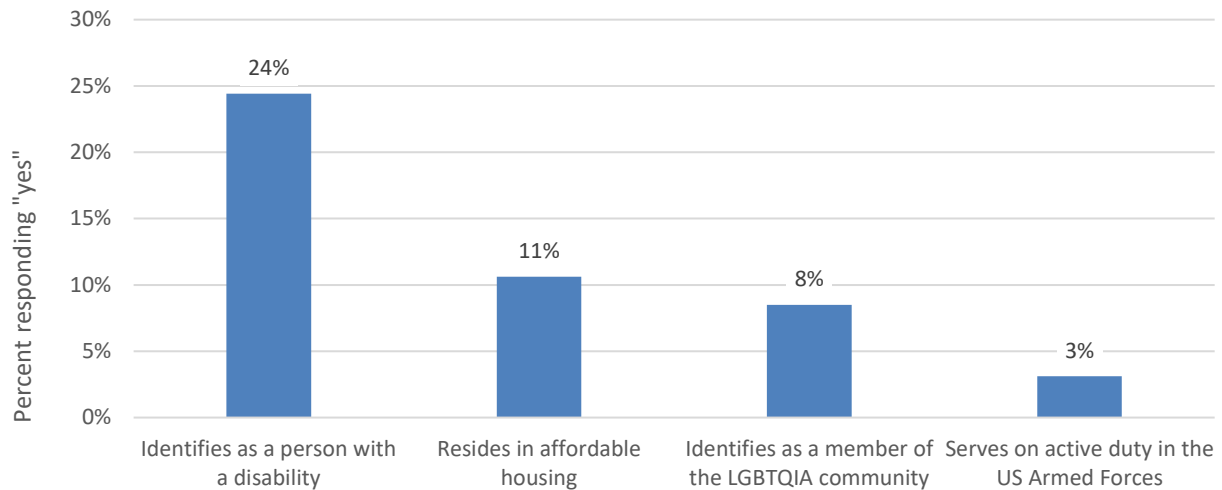
Additionally, respondents were asked if they faced difficulty in a variety of areas, as shown in Figure 31. More than eight in 10 respondents did not indicate any areas of difficulty. A small segment of respondents does face difficulties, such as with walking or climbing steps (9 percent), seeing even if wearing glasses (5 percent), and remembering or concentrating (5 percent).

Figure 31: Respondent has difficulty in various areas
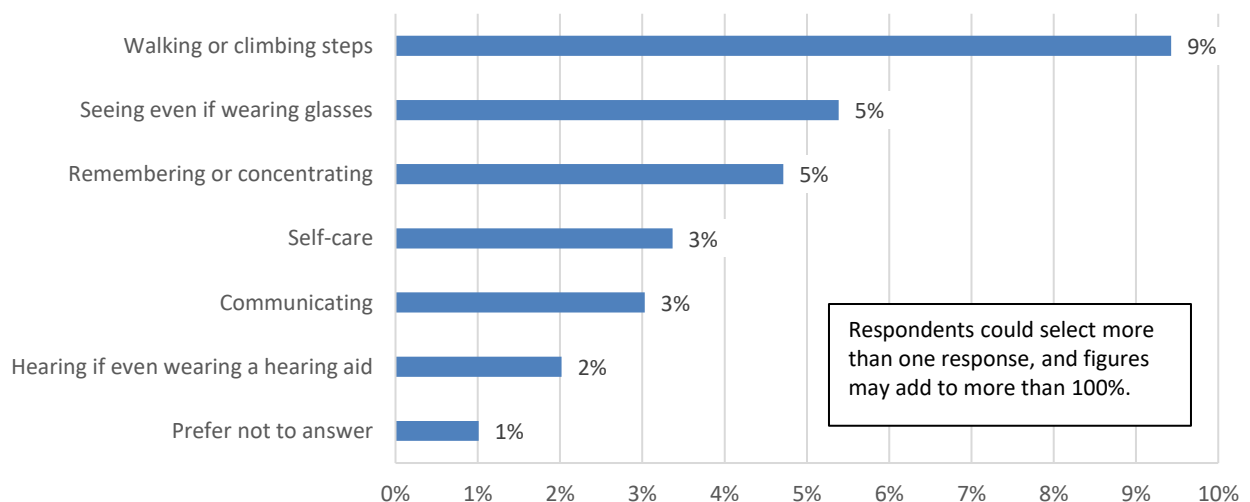
Respondents learned about the survey through a variety of sources, including 33 percent who heard about it from a government website, email list, flyer, or other outreach (see Figure 32).

Figure 32: Where respondents heard about survey

Respondents could select more than one response, and figures may add to more than 100%.
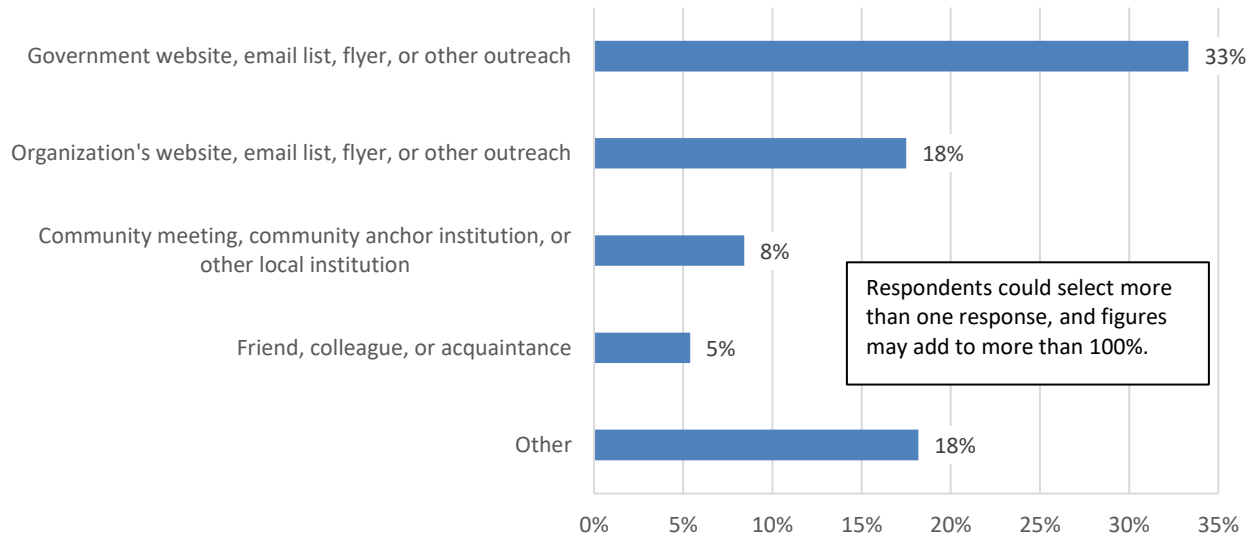
7 Federal funding will be a long-term resource to advance digital equity goals in Lynn

The City's digital equity and inclusion priorities will be supported by the federal funding and programs stemming from the Infrastructure Investment and Jobs Act and its Digital Equity Act. The Digital Equity Act allocates $2.75 billion in federal funding to support three national programs intended to create opportunities for state and local entities to strengthen digital equity and inclusion within their communities.

7.1 The Digital Equity Act and the state plan

The Digital Equity Act allocates $60 million for planning grants for states, territories, and Tribal governments to develop State Digital Equity Plans. MBI is the lead agency for Massachusetts and is responsible for conducting the planning process and drafting the state Plan with a $1 million federal grant under this program. At the time this report was provided to the City, the Plan was in the process of being finalized for submission to the NTIA.

These state plans incorporate extensive outreach, partnerships, data collection and needs assessments to identify solutions to expand digital inclusion and promote the adoption and use of high-speed broadband services. The state plans will also analyze and incorporate any digital equity plans developed by local or regional jurisdictions in the state as a source of local information and input to develop larger state goals.

Each state's planning and recommendations will be directed especially toward ensuring that underrepresented and high-needs "covered populations" have the skills, capacity, and tools to connect, including the aging, formerly incarcerated, veterans, racial and ethnic minorities, people with disabilities, low-income households and those living in rural areas. MBI conducted a grant program using a portion of these planning funds to distribute targeted funding to nonprofits across the state to support outreach and planning for the state's digital equity plan.

The state digital equity plans set the stage for the $1.44 billion Digital Equity Capacity Building Grant program. NTIA has not finalized the rules or timeline for the Capacity Grant program, however it is expected to open in early 2024 and allocate funding over the course of several years. Under this program, states will apply for funding to support the implementation of their digital equity plans. States will receive funding based on a legislatively mandated allocation formula. Once received, states will have five years to use this federal funding to develop their own digital inclusion projects, including competitive grant programs for activities by state agencies, local governments, non-profits, and others.

Following the Capacity Grant program, NTIA will implement the $1.25 billion Digital Equity Competitive Grant program in 2025. This direct funding program will award individual grants to eligible entities, including state and local governments and agencies, Tribal entities, nonprofits,

and community anchor institutions. Rules and funding priorities are still being developed, but these grants will likely focus almost exclusively on the needs of underrepresented "covered populations" to connect through digital equity and inclusion programs. Funding likely will support programs that address affordability of services and devices, provide education and tools to increase privacy and cyber security while on-line, develop digital literacy and technical skills for personal and professional growth, and provide technical support and training for repair and updates to devices.

7.2 MBI also administers several programs funded by the American Rescue Plan Act (ARPA).

The ARPA State and Local Fiscal Recovery funds went to both the State of Massachusetts and directly to local jurisdictions. Through MBI, the state has allocated $75 million in state ARPA funding to digital equity and directed $50 million to grants through its Broadband Innovation Fund (Digital Equity Partnership & Municipal Digital Equity Planning). There are no grant programs under ARPA that are currently accepting funding applications for implementation grants, but the City should monitor state and local opportunities for future ARPA grant programs, including those that MBI may release.[20]

These opportunities could support the recommendations above, including digital literacy training, device distribution programs, and subsidies for low-income households for services. The City could consider taking advantage of future opportunities through a direct application for funding, or, as part of it convening activities, work with local organizations and EDIC to encourage them to apply for projects that will benefit Lynn residents.

The state also has $175 million in Capital Projects Fund resources from ARPA. The state will focus this funding on broadband infrastructure construction and deployment.

7.3 The U.S. Economic Development Agency has opportunities for distressed communities.

The Economic Development Administration (EDA) of the U.S. Department of Commerce administers Local Planning and Technical Assistance Programs as well as federal Public Works and Economic Adjustment Assistance Program funding opportunities for a wide variety of projects with a current allocation of $161 million nationwide.[21] These programs are designed to

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[20] The Municipal Digital Equity Planning Program is still open and accepting applications for additional cities and towns in Massachusetts.

[21] U.S. Economic Development Administration, Public Works and Economic Adjustment Assistance Programs, Notice of Funding Opportunity, at p. 10 (EDA was appropriated $121.5 million for the Public Works funding program), https://www.grants.gov/search-results-detail/346815; U.S. Economic Development Association, Planning and Local Technical Assistance Programs, Notice of Funding Opportunity, pg. 7 (U.S. EDA was appropriated $43.5 million for these programs),

address needs in economically distressed areas, and projects must meet specific criteria to show the project area is economically distressed. While this federal agency does not receive many broadband applications, communities that can show broadband is needed as an element of their economic development plan may have a strategic advantage.

Grants made under these programs will help communities plan, build, innovate, and put people back to work through infrastructure construction or non-construction projects designed to meet local needs. EDA encourages applicants to present "new ideas and creative approaches to advance economic prosperity in distressed communities" [22] and will consider projects that incorporate priorities related to equity, entrepreneurship, and workforce development. Several of the recommendations and projects discussed above could be eligible for funding under the program.

Lynn must apply the "distress criteria"—high unemployment rates or low per capita income relative to the national average—to identify areas and neighborhoods that can take advantage of this opportunity. [23] It is also helpful to consider that projects with a significant showing of "distress" through extremely high unemployment or low per-capita income will generally have the lowest match requirements, and thus more flexibility in how it designs its projects. Lynn should further review the requirements for this program to determine if it will be an applicable source of funding, but it also may encourage other partners to also apply.

7.4 The Federal Communications Commission's E-Rate program can bring discounted services to schools and libraries in the area

The Federal Communications Commission's E-Rate program was created in 1996 to enhance access to advanced telecommunications and information services for all public and nonprofit elementary and secondary school classrooms and libraries.[24] E-Rate is one of four programs comprising the Universal Service Fund (USF) and is funded by fees paid by telecommunications companies to fulfill the Congressional goals of universal service.

Currently, E-Rate is a $4.27 billion federal funding program managed by the Universal Service Administrative Company (USAC) that approves and provides subsidy discounts for telecommunications and information services for schools and libraries. In late 2023, the FCC made the latest addition to the list of eligible services by approving subsidies for Wi-Fi services

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https://www.eda.gov/sites/default/files/filebase/files/programs/eda-programs/FY21-23-Planning-and-LTA-NOFO_FINAL.pdf

[22] U.S. EDA Planning and Local Technical Assistance NOFO. at p. 5 and U.S. EDA Public Works and Economic Adjustment Assistance Programs NOFO at p. 4.

[23] U.S. EDA Planning and Local Technical Assistance NOFO. at p. 11.

[24] Universal Service Administrative Co., E-Rate, https://www.usac.org/e-rate/

on school buses as an eligible program expense to help close the "homework gap" for students with limited broadband access at home.

Eligible schools and libraries identify goods or services they need and submit a request for competitive bids to USAC who then posts these requests on its website for vendors to bid on. After reviewing the vendors' bids, the school or library selects the most cost-effective eligible products and services using price as the primary factor. It then applies to USAC for approval for the desired purchases.

Funds are awarded as discounts ranging from 20 to 90 percent of the eligible costs and discount levels are based on the poverty level of the schools. Rural schools and libraries may also receive a higher discount. Recipients must pay a portion of the service costs. Often, schools and libraries will form consortia to centralize and manage the E-Rate application, reporting, and budgeting processes within a central point of contact.[25]

Eligible schools and libraries in Massachusetts received $10.1 million in E-rate disbursements in 2023.[26] The Massachusetts Board of Library Commissioners[27] tracks E-Rate participation by libraries and library networks and provides information and resources about the program. The Department of Elementary and Secondary Education's Office of Digital Learning provides similar outreach and education for schools.[28] While Massachusetts does not manage a state-wide consortium, several of the State's library networks and school districts participate in E-Rate, including the Lynn School District.

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[25] Universal Service Administrative Co., E-Rate, Consortia, https://www.usac.org/e-rate/applicant-process/before-you-begin/consortia/

[26] Universal Service Administrative Co., E-Rate FRN Status Tool FY2016+, https://opendata.usac.org/E-Rate/E-Rate-FRN-Status-Tool-FY2016-/8xzh-ytkh

[27] E-rate in Massachusetts Libraries, https://mblc.state.ma.us/programs-and-support/e-rate/index.php

[28] Technology Planning and Sustainability, E-Rate, https://www.doe.mass.edu/odl/planning-funding/E-rate/

Appendix A: MBI survey

MBI ◢

MASSACHUSETTS
BROADBAND INSTITUTE | at the MassTech
Collaborative

Massachusetts Statewide Digital Equity Survey

The Massachusetts Broadband Institute (MBI) wants to hear from you about your experiences with getting and using internet service! This survey is completely anonymous and should be completed by one individual per household. **Your feedback is vital to understand barriers to internet access, affordability, and adoption to help close the digital divide.** Thank you for your time and participation.

Section 1: Please answer the following questions.

1. What is your zip code? _____
2. Which Massachusetts municipality do you live in? _____

Do you have internet service in your home?

☐ **YES** – Please proceed to Section 2 below

☐ **NO** – Please skip to Section 3 (flip this page over)

Section 2: Please answer the following questions only if you CAN connect to the internet from home.

3. Who is your internet service provider? _____
4. What kind of internet service do you have at home? Please check all that apply.

☐ A data plan for a smartphone, hotspot, or tablet ☐ Dial-up internet

☐ Home wireline connection (cable, fiber, DSL, etc.) ☐ Satellite internet

5. How well does your home internet service work?

☐ Good enough to meet my household's needs ☐ I don't know

☐ Not good enough to meet my household's needs

6. Is your home internet service bundled with other services such as telephone or TV?

☐ Yes

☐ No

7. How much do you pay for the internet every month? $_____
8. How hard is it for you to pay your internet bill?

☐ Very hard ☐ Not too hard

☐ Somewhat hard ☐ Not at all hard

9. Have you heard about the Affordable Connectivity Program (ACP) that provides discounted internet service for low-income households?

☐ Yes ☐ I don't know

☐ No

For more information and to find out if you qualify for ACP, call the Federal Communication Commission's ACP Support Center: 877-384-2575.

When complete, skip to section 4 below.

Section 3: Please answer the following questions only if you CANNOT connect to the internet at home.

10. If you do not have internet service in your home, what is the reason?
    - ☐ 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
    - ☐ I can't afford or access a device to use the internet
    - ☐ I don't want / don't use the internet.
    - ☐ Other (please specify): _____

11. If you do not have internet at home, where do you go to use the internet? Please check all that apply.
    - ☐ 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
    - ☐ On public transit
    - ☐ I do not regularly access internet in these or any other spaces
    - ☐ Other (please specify): _____

When complete, proceed to section 4 below.

Section 4: All respondents should answer these questions.

12. Does everyone in your household have access to the computer devices they need to meet their everyday needs for internet use? (Computers, smartphones, tablets, or other internet enabled devices)?
    - ☐ Yes
    - ☐ No

13. Which of the following devices do you use most of the time to connect to the internet? (Check all that apply)
    - ☐ Cellphone
    - ☐ Desktop computer
    - ☐ Laptop computer
    - ☐ Tablet (or similar device)
    - ☐ Other (please specify): _____

14. How much would you be able to pay for a laptop or desktop computer?
    - ☐ $0-50
    - ☐ $50-100
    - ☐ $100-150
    - ☐ $150-250
    - ☐ $250-500
    - ☐ More than $1,000

15. Are you able to regularly use the internet for online activities?
    - ☐ Yes
    - ☐ No

16. Please rank the level of difficulty for what you use the internet for. (Easy, Not easy, Hard)

	Easy	Not easy	Hard
Searching and applying for a job	☐	☐	☐
Health care or telehealth services	☐	☐	☐
Participating in your local community	☐	☐	☐
General internet searching	☐	☐	☐
Transportation information	☐	☐	☐
Searching and/or applying for benefits or resources for you or your family	☐	☐	☐

17. If you do not have regular access to the internet, what would most like to use it for if you could?

- ☐ Searching and applying for a job
- ☐ Health care or telehealth services
- ☐ Participating in your local community
- ☐ General internet searching
- ☐ Transportation information
- ☐ Searching and/or applying for benefits or resources for you and your family
- ☐ Something else
- ☐ I don't want to use the internet regularly

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

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

19. How concerned are you, if at all, about internet safety?

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

20. What are you most concerned about? (Select all that apply)

- ☐ 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

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

- ☐ Yes, I have tools and resources I use stay safe online
- ☐ No, I don't know of any tools or resources to stay safe online
- ☐ I know of tools or resources to stay safe online, but they don't work for me
- ☐ Other (please specify) : _____

22. How accessible are online government services like benefits portals, RMV services, or paying for permits or tickets to you?

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

23. When you have used online government services like benefits portals, RMV services, or paying for permits or tickets, how well did they work for you?

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

When complete, proceed to section 5 below.

3

Section 5: All respondents should answer these questions. *We collect demographic information so that we can make sure we are representing all neighborhoods, towns, cities and groups across the Commonwealth.*

24. What is your age?
☐ 18 to 24
☐ 25 to 34
☐ 35 to 44
☐ 45 to 59
☐ 60 to 74
☐ 75 and older
☐ Prefer not to answer

25. What is your gender identity?
☐ Woman
☐ Man
☐ Non-binary
☐ Gender fluid
☐ Other
☐ Prefer not to answer

26. How many people, including yourself, currently live in your household? *(Note: A household is defined as all the people who currently occupy the housing unit where you live).*
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8 or more
☐ Prefer not to answer

27. How many children under age 18, currently live in your household? *(Note: A household is defined as all the people who currently occupy the housing unit where you live).*
☐ 0
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5 or more
☐ Prefer not to answer

28. What is the highest level of school you have completed or the highest degree you have received?
☐ Less than high school, or high school incomplete (Up to grades 9-11 or Grade 12 with NO diploma)
☐ High school graduate (Grade 12 with diploma or GED certificate)
☐ Two-year associate degree from a college or university
☐ Four-year college or university degree/Bachelor's degree (e.g., BS, BA, AB)
☐ Postgraduate or professional degree, including master's, doctorate, medical or law degree (e.g., MA, MS, PhD, MD, JD)
☐ Prefer not to answer

29. Are you of Hispanic, Latino, or Spanish origin, such as Mexican, Puerto Rican, or Cuban?
☐ Yes
☐ No
☐ Prefer not to answer

30. Which of the following best describes your race? (Select all that apply)
☐ White or Caucasian
☐ Black or African-American
☐ Asian or Asian-American
☐ Native American/American Indian/Alaska Native
☐ Pacific Islander/Native Hawaiian
☐ Some other race (please specify) _____
☐ Prefer not to answer

31. Do you belong to a North American Indigenous, Native, or Tribal group?

☐ Yes ☐ Prefer not to answer

☐ No

32. What is your total annual household income from all sources, and before taxes?

☐ Less than $22,000 ☐ $45,000 to $52,999

☐ $22,000 to $29,999 ☐ $53,000 to $59,999

☐ $30,000 to $36,999 ☐ $60,000 or more

☐ $37,000 to $44,999 ☐ Prefer not to answer

33. Do you identify as a person with a disability? *(Note: Disability is defined as physical, emotional, or mental health conditions that result in limitations of activities or restrictions to full participation at school, at work, at home, or in the community).*

☐ Yes

☐ No

☐ Prefer not to answer

34. If you identify as a person with a disability, do you have difficulty in any of the following areas? Please check all that apply.

☐ Seeing even if wearing glasses ☐ Communicating, for example understanding or being understood

☐ Hearing even if using a hearing aid

☐ Walking or climbing steps ☐ Prefer not to answer

☐ Remembering or concentrating ☐ I do not identify as a person with a disability

☐ Self-care

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

☐ Yes

☐ No

☐ Prefer not to answer

36. Did you serve on active duty in the U.S. Armed Forces?

☐ Yes

☐ No

☐ Prefer not to answer

37. Do you live in affordable housing? *(Note: Affordable housing is defined as housing subsidized by a housing authority, paid for through a voucher, or in a building run by a private developer.)*

☐ Yes

☐ No

☐ Prefer not to answer

38. Where did you hear about this survey? Please check all that apply.

☐ From a government website, email list, flyer, or other outreach ☐ From an organization's website, email list, flyer, or other outreach

☐ From a friend, colleague, or acquaintance ☐ Other (Please specify) _____

☐ From a community meeting, community anchor such as a library or school, or other local institution

Thank you for taking the survey!

Your response will help shape Massachusetts's policies and future funding allocations to close the digital divide for all its residents. If you would like to learn more, please visit **https://broadband.masstech.org/.**

5

Appendix B: Stakeholder Questionnaire

MBI   **ctc technology & energy**
engineering & business consulting

City of Lynn Digital Equity Program Questionnaire

The City of Lynn is undertaking a study of local broadband needs under the Massachusetts Broadband Institute's Municipal Digital Equity Program, in collaboration CTC Technology & Energy, a consulting firm with offices in Massachusetts.

Digital equity programs promote computer skills, internet access, and access to computing devices. Please fill out this questionnaire to the best of your ability. The goal of this questionnaire is to understand the active programs and initiatives currently facilitated by organizations located in or that serve Lynn, and to understand capacity for expanding existing efforts or starting new ones.

1. Which category best describes your organization? Please select all that apply.

- [ ] Public School
- [ ] Community colleges and other institutions of higher education
- [ ] Library
- [ ] Medical and health care providers
- [ ] Municipal government
- [ ] Public housing authority
- [ ] Community organization
- [ ] Workforce development organization

- [ ] Adult literacy organization
- [ ] Internet Service Provider (ISP)
- [ ] Non-profit organization that represents individuals with disabilities
- [ ] Non-profit organization that represents veterans
- [ ] Non-profit organization that represents aging individuals
- [ ] Non-profit organization that represents incarcerated individuals
- [ ] Non-profit organization that represents English learners

- [ ] Other (please specify)

2. Has your organization created a broadband and/or digital equity plan?

- ( ) Yes
- ( ) No

3. Please provide the information for a point of contact in your organization.

Name	
Organization name	
Email address	
Phone number	

City of Lynn Digital Equity Program Questionnaire

Digital Equity Programs Introduction

Digital equity programs aim to ensure that communities, our residents and visitors to Lynn have the skills, technology, and capacity to use broadband to its fullest extent. Examples of digital equity programs include those that promote computer skills, internet access, and computing device access.

4. What do you believe are the most pressing challenges associated with digital equity and access in Lynn, and for whom?

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* 5. Does your organization offer digital equity programs?

○ Yes

○ No

City of Lynn Digital Equity Program Questionnaire

Program Details

We want to collect data on all digital equity **programs you currently provide**. Please record as many details as you can about the program you offer. If your organization has more than one active digital equity program, there is an opportunity for you to answer the same questions for a second program.

6. What is the name of the project?

Project name [   ]

7. What aspects of digital equity does the program address? Check all that apply.

☐ Availability and affordability of internet

☐ Digital literacy

☐ Cybersecurity

☐ Devices and technical support

☐ Online accessibility and inclusivity

8. Please describe the program in a few sentences:

[   ]

9. Does the program focus on certain populations? Check all that apply.

☐ Individuals with disabilities

☐ Veterans

☐ Aging individuals (60 and above)

☐ Incarcerated individuals

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

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

☐ Individuals whose household income is lower than 150% of the poverty level

☐ No particular focus on a population

☐ Other (please specify)

_____

10. What is the annual project budget?

Cost in dollars   _____

11. How much does the program cost to each participant?

Cost in dollars   _____

12. What is the cost per participant served?

Cost in dollars   _____

13. Please give us a sense of the geography you serve.

◯ Municipal-wide

◯ Neighborhood-wide

◯ Other (please specify)

_____

14. How long has the program been active, in months?

Program length
in months

15. How many people were served by the program in the last fiscal year?

○ Under 25 people

○ 26 to 50 people

○ 51 to 100 people

○ More than 100 people

○ Other (please specify)

16. How many participants do you expect to serve over the life of the program?

○ 1 to 50

○ 51 to 100 people

○ 101 to 250 people

○ 251 to 500 people

○ More than 500 people

17. If you had the resources, would you want to scale the project to serve more people?

○ Yes

○ No

* 18. Does your organization have another digital equity program?

○ Yes

○ No

City of Lynn Digital Equity Program Questionnaire
Digital Equity Program #2

19. What is the name of the project?

Project name [   ]

20. What aspects of digital equity does the program address? Check all that apply.

☐ Availability and affordability of internet

☐ Digital literacy

☐ Cybersecurity

☐ Devices and technical support

☐ Online accessibility and inclusivity

21. Please describe the program in a few sentences:

[   ]

22. Does the program focus on certain populations? Check all that apply.

☐ Individuals with disabilities

☐ Veterans

☐ Aging individuals (60 and above)

☐ Incarcerated individuals

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

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

☐ Individuals whose household income is lower than 150% of the poverty level

☐ No particular focus on a population

☐ Other (please specify)

[   ]

23. What is the annual project budget?

Cost in dollars   [   ]

24. How much does the program cost to each participant?

Cost in dollars   [   ]

25. What is the cost per participant served?

Cost in dollars   [   ]

26. Please give us a sense of the geography you serve.

○ Municipal-wide

○ Neighborhood-wide

○ Other (please specify)

[   ]

27. How long has the program been active, in months?

Program length
in months

28. How many people were served by the program in the last fiscal year?

○ Under 25 people

○ 26 to 50 people

○ 51 to 100 people

○ More than 100 people

○ Other (please specify)

29. How many participants do you expect to serve over the life of the program?

○ 1 to 50

○ 51 to 100 people

○ 101 to 250 people

○ 251 to 500 people

○ More than 500 people

30. If you had the resources, would you want to scale the project to serve more people?

○ Yes

○ No

31. Does your organization have another digital equity program?

○ Yes

○ No

City of Lynn Digital Equity Program Questionnaire

Planned Programs

We would like to collect information on any digital equity programs your organization is currently in the process of planning but has not yet implemented. Please record as many details about the upcoming program as possible.

* 32. Is your organization in the process of developing a digital equity program?

○ Yes

○ No

City of Lynn Digital Equity Program Questionnaire

Planned Programs

33. What kind of digital equity program(s) is your organization developing? Please select the categories that best fit the program type.

○ Digital skills and literacy

○ Data privacy and cybersecurity

○ Devices (Laptops, computers, tablets)

○ Technical support

○ Digital navigators

○ Broadband access

○ Creating accessible and inclusive internet content

34. What is the annual budget need?

35. What else do you need to launch the program?

36. What work (if any) has already been completed to launch the new program?

City of Lynn Digital Equity Program Questionnaire

Future Programs

We would like to hear about any interest your organization has in developing a project in the future to address current gaps in digital equity. Please fill this section out if you have interest in digital equity programming but have not yet started the process of planning for that program.

37. Does your organization want to develop a digital equity program?

○ Yes

○ No

38. What kind of digital equity program(s) is your organization interested in developing? Please select the categories that best fit the program type.

☐ Digital skills and literacy

☐ Data privacy and cybersecurity

☐ Devices (Laptops, computers, tablets)

☐ Technical support

☐ Digital navigators

☐ Broadband access

☐ Creating accessible and inclusive internet content

39. What are the most pressing needs you are trying to address?

40. What do you need to launch the program?