The New York City Digital Equity Roadmap

March 2025

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Cover Photo: Margaret Knoerzer, New York City Department of Parks and Recreation

Letter from the Mayor

My Fellow New Yorkers:

In the 21st century, the internet is essential for finding a job, filling a prescription, and applying for child care. When we came into office in 2022, between 30 and 40 percent of New York City's public housing residents lacked this basic necessity. That's why, in the first year of our administration, we delivered a solution by launching Big Apple Connect — the nation's largest municipally-subsidized broadband program.

Today, 330,000 New Yorkers living in 220 New York City Housing Authority sites enjoy free high-speed internet and cable thanks to Big Apple Connect. But we know that our efforts to bridge the digital divide must extend beyond internet access.

Across the five boroughs, we supply students, working-class families, older adults, and jobseekers with a broad array of community-based programs that provide critical access to devices and digital skills training. With the release of our Digital Equity Roadmap, we are building on this robust foundation and doubling down on our commitment to build a more equitable, connected city for all 8.3 million New Yorkers.

The Digital Equity Roadmap — produced by the Office of Technology and Innovation — features new programs and capital investments designed to prioritize the immediate needs of communities that need internet access the most. By creating a Digital Equity Working Group and hiring a chief digital equity officer, we are also taking the necessary steps to ensure our ability to identify and address future challenges.

I am proud of the great strides we have made over the past three years, and we will continue to narrow the digital divide through the measures outlined in this report.

Eric Adams
Mayor

Letter from the CTO

My Fellow New Yorkers:

The Adams administration's myriad efforts to democratize technology access are changing the lives of students, jobseekers, families, and older adults throughout our city's historically under-connected communities. We provide free high-speed internet to more residents than any other city in the nation; offer free use of digital devices at more than 450 public computer centers; and supply digital skills training through our Connected Communities initiatives at more than 100 sites and state-of-the-art Gigabit Centers in every borough. These impactful efforts serve as the foundation for the next phase of our work ahead.

As part of our longer-term commitment to close the digital divide, the New York City Digital Equity Roadmap combines new actions and expanded initiatives to address immediate digital needs and create the conditions for long-term success. This Roadmap features a coordinated cross-agency approach designed to ensure residents, regardless of background or zip code, possess the tools and knowledge to fully participate in our modern society.

I look forward to this Roadmap paving the way for a more connected, equitable future for New Yorkers.

Matthew C. Fraser
Chief Technology Officer

Introduction

Internet use is essential to participation in contemporary life. For education, work, healthcare, entertainment, social connection, civic engagement, and more, digital tools are indispensable. This means that those who lack full access and use of these tools are fundamentally excluded from critical aspects of our society.

Ensuring safe and equitable access to broadband internet service, and the skills and support to use it, is a key priority of the Adams administration. In recent years, the city has delivered tangible, results-oriented initiatives across a range of agencies and impact areas – from service access and affordability programs to social and technical supports, and digital skills training efforts.

These efforts have had real impact. Hundreds of thousands of New Yorkers have received new or improved services, programming, and supports. However, there are still significant gaps and challenges for the city to address. Approximately 30 percent of New York City households or nearly 2.5 million residents lack the combination of mobile and home broadband service required for full connectivity.[1] Nearly ten percent of residents lack a computer at home.[2] Support and skills training programs are unevenly resourced across the city. And there is opportunity to align and coordinate more across city efforts, to support efficacy and impact, and ensure robust, holistic planning going forward.

This document presents a set of 11 initiatives the city will undertake in the coming months to augment the existing pipeline of actions, foster coordination across efforts to boost impact, and create key pathways for the city's ongoing planning and work.

Defining Broadband and Digital Equity

"Broadband" refers to high-speed internet connections that help users access online content and services quickly. Since 2015, the Federal Communications Commission (FCC) has defined "broadband internet" as connectivity with a download speed of 25 megabits per second and an upload speed of 3 megabits per second (25 Mpbs/3 Mpbs). In March 2024, in recognition of rising bandwidth needs, the FCC raised this benchmark to 100 Mpbs/20 Mbps – a four-fold increase from 2015.[3]

"Digital equity" refers to a long-term change in conditions - social, economic, and technological - wherein individuals and communities, especially those most in need, can fully participate in our digital society and economy.[4] In practice, this means that everyone has the resources, devices, skills, and supports to make high-speed internet connectivity work for them – to achieve their goals and meet their needs safely and securely. Achieving digital equity means addressing long-standing, structural inequities, and putting marginalized communities at the center of our efforts.

Photo: Michael Appleton, New York City Mayoral Photography Office

City Efforts to Date

The Adams administration's commitment to closing the digital divide is showcased by the wide range of broadband and digital equity initiatives implemented across city government in recent years. These efforts provide New Yorkers with access to internet, devices, digital skills training, and more. Below is a summary of this work.

Access and Affordability

Big Apple Connect

In September 2022, the city launched Big Apple Connect (BAC), the largest municipally subsidized broadband program in the nation to immediately address critical gaps in access. The program provides free in-home internet and basic cable TV to New York City Housing Authority (NYCHA) residents across the five boroughs. By August 2023, the program had expanded to offer access to 330,000 people at 220 NYCHA sites – exceeding Mayor Adams' promise to reach 200 developments by the end of 2023. To date, about 80 percent of eligible households have subscribed. The city coordinates Big Apple Connect public awareness efforts with the participating service providers, including direct engagements with residents via door-knocking, mailers, posting of flyers, and on-site enrollment events.[5]

2022 launch event for the Big Apple Connect program
Photo: Ed Reed, New York City Mayoral Photography Office

Link5G

OTI launched the Link5G initiative in 2022 to provide fast and free public Wi-Fi to under-connected communities and to support the broader expansion of 5G wireless connectivity across the city. Link5G's equity-focused rollout requires that 90 percent of new kiosks be deployed in traditionally under-connected neighborhoods above 96th Street in Manhattan and in the outer boroughs.[6]

LinkNYC

Link5G builds on the longer-standing LinkNYC initiative which also delivers free public Wi-Fi, free nationwide calling, mobile device charging, and access to 911 and 311 across the city.[7] The LinkNYC program prioritizes installation of new kiosks in areas that lack other broadband options, have lower median annual income, and have high levels of pedestrian and street traffic. As of January 2025, 2,204 LinkNYC kiosks have been installed in total across the city, providing free internet connectivity for over 16 million Wi-Fi subscribers and enabling over 30 million free phone calls.[8]

Affordable Connectivity Program Enrollment

OTI, NYC Schools, the Mayor's Public Engagement Unit (PEU), and the city's three library systems partnered between 2021 and 2024 to support enrollment in the federally funded Affordable Connectivity Program (ACP), which until recently offered eligible households internet service discounts up to $30 per month.[9] The city's various awareness and outreach efforts about the program resulted in New Yorkers' subscriptions to the subsidy increasing by 230 percent in less than two years. Activities included:

- NYC Schools supplying backpack flyers about free and low-cost internet options public school families[10]
- Targeted outreach at green markets in under-enrolled zip codes
- Public service announcements via LinkNYC kiosks and 311 audio-holds
- In-person street outreach efforts led by PEU with the support of more than 100 student interns from the City University of New York (CUNY)
- The distribution of a multilingual ACP consumer tip sheet
- Library-hosted ACP enrollment hotlines
- Coordinated participation in national days of action with partners such as Black Churches for Digital Equity, Civic Nation's Online for All, and more.[11]

The Federal Communications Commission (FCC) wound down funding for ACP in June 2024. At that time, 1 million New Yorkers—over 4 percent of ACP subscribers nationwide—were receiving monthly subsidies due to the city's awareness efforts.[12] New York Senator Kirsten Gillibrand has since introduced legislation with bipartisan co-sponsorship to renew the program under the Secure and Affordable Broadband Extension Act.[13]

Library Access Services

The city's three library systems have delivered a variety of access-oriented services from loaning internet hotspots for residents to the extension of Wi-Fi services beyond library walls, and in some cases, to nearby households—all to support residents' access in novel ways.[14]

HPD Broadband Design Guidelines

Affordable multifamily housing developments present opportunities to close the digital divide and improve the socioeconomic outcomes of many of the city's most vulnerable populations. HPD created the Broadband Design Guidelines that outline the requirements for the installation of fast and reliable broadband for all HPD-assisted multifamily new construction projects currently in HPD's development pipeline. These Guidelines have directly led to greatly reduced prices for internet service for low-income households living in HPD-financed developments.[15]

Wi-Fi at Homeless Shelters

During the height of the Covid-19 pandemic in 2020, the city launched an initiative to install Wi-Fi at all New York City family shelters, most of which were not wired for cable or Wi-Fi. As of September 2024, the city wired the private quarters of almost 240 family shelters with Wi-Fi. Over 12,100 families have access to remote learning, work opportunities, and more as a result of this effort.[16]

Devices, Digital Skills, and Support

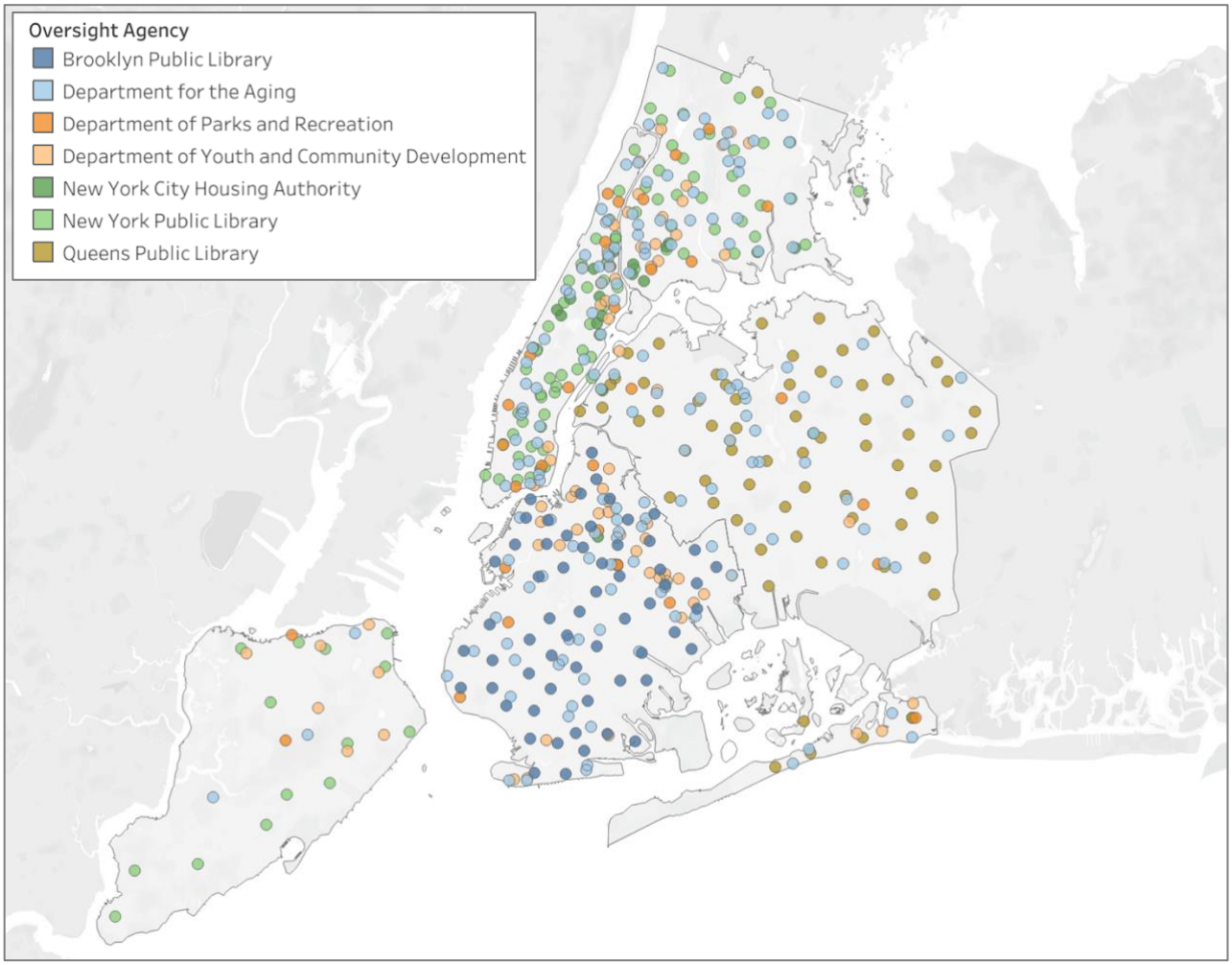
Public Computer Centers

New York City boasts a rich ecosystem of digital inclusion programs across the public and private sectors, tailored to specific community needs and run by trusted community anchor institutions. Among these, the city features the largest network of "Public Computer Centers" (PCCs) in the country, with over 500 sites across the five boroughs that serve New Yorkers in libraries, older adult centers, community centers, and recreation centers.[17] These sites are operated by the Brooklyn, Queens and New York Public Libraries, the NYC Department of Youth and Community Development (DYCD), NYC Aging, NYC Housing Authority (NYCHA), and NYC Parks. These centers offer residents no-cost access to devices and the internet, and deliver thousands of hours of creative classes, workshops, events, one-on-one support, in addition to targeted device lending.[18] Programming throughout the city's PCCs is diverse, and managing organizations leverage deep knowledge of their communities to tailor offerings to local needs and interests, from computer basics to online privacy, coding, digital media production, and more.[19] OTI supports a portion of this network through its Connected Communities program, which enables New Yorkers to participate in high-quality digital literacy

and digital skills programs at over 100 sites located in under-connected neighborhoods and ensures that programming in these communities remains resourced.[20]

Figure 1: Map of Citywide Public Computer Centers

Source: 2023 City Administrative Data, based on inventory conducted by the Office of Technology and Innovation. For the full dataset, see: https://data.cityofnewyork.us/Social-Services/Citywide-Public-Computer-Centers/sejx-2gn3



Gigabit Centers

OTI has teamed with LinkNYC partner CityBridge and community-based organizations to launch a state-of-the-art Gigabit Center facility in each borough. The Gigabit Centers are located at Silicon Harlem in Manhattan, the Andrew Freedman Home in the Bronx, the Allen Community Senior Citizens Center in Queens, the La Colmena Workers Center on Staten Island, and the Major R. Owens Health & Wellness Community Center in Brooklyn. These centers offer an array of services to local residents, including access to free high-speed internet, devices, and digital skills programming on topics such as coding and app design.[21] The organizations running the centers are embedded in the neighborhoods they serve and offer a range of holistic services for their constituents—including policy advocacy, worker and immigrant protections, social and education services, and other essential resources. This allows their digital inclusion work to naturally integrate into their broader, community-centered approaches to equity.

NYCHA Digital Vans and Youth Tech Corps

NYCHA operates a set of mobile computer labs called Digital Vans that travel to developments and community events, and offer access to computers, internet, printing, and individualized technological support.[22] The Public Housing Community Fund, NYCHA's non-profit partner also works with NYCHA to scale resident engagement by connecting NYCHA residents to its Youth Tech Corps, a program at participating NYCHA developments that engages youth in learning technology skills, provides a free Chromebook and pathways to career opportunities.[23]

NYCHA Digital Van
Photo: Francesco Cavaleri, New York City Housing Authority

DYCD Digital Programs

DYCD partners with company Hats & Ladders to support nearly 100,000 youth with work readiness training, while its Cornerstone programs connect communities through technology, including inter-generational tech learning opportunities for younger and older adults.[24] DYCD also supports the Digital Inclusion and Literacy Initiative in each of the city's 51 Council Districts by funding computer-based training, technical skill development, internet access, and free public streaming services through a range of local community organizations with a $4.2 million annual budget.[25]

NYC Schools Digital Programs

NYC Public Schools loans devices to families, offers technical supports, and provides an array of digital literacy and digital citizenship resources and programs for students, families, and educators**,** across the system.[26]

Civic Hall

Civic Hall at Union Square, operated by The Fedcap Group in partnership with RAL and the New York City Economic Development Corporation, is an 85,000- square-foot, newly built training center, collaborative workspace, and conference venue. With a mission to catalyze innovation, education, and collaboration, it serves as the nucleus for entrepreneurial growth and educational advancements in the heart of New York City's bustling tech community. Civic Hall offers digital skills programs and partners with training providers to form a robust network of education opportunities for individuals – primarily from underserved communities—where they learn next to emerging tech entrepreneurs, tech and innovation leaders, and leading tech firms. Civic Hall creates sustainable opportunities for tech talent to gain skills and knowledge, expand networks, showcase learnings, and develop professional experiences in a centrally located, accessible, and state-of-the-art space. Through the lens of digital equity, Civic Hall is a space that values learning goals and signals an investment in student success.

Coordination and Advocacy

The city works with local, state and federal government partners to advocate for broadband and digital equity. In 2021, the federal government made historic financial commitments of $65 billion under the Infrastructure Investment and Jobs Act ("IIJA") to support the expansion of broadband and digital equity programming.[27] Within this legislation are several targeted funding programs to support digital equity and the meaningful adoption of internet across "covered populations" identified in the law.[28] The city submitted public comments to shape allocations and digital equity program designs, and worked closely with the State's ConnectALL Office to inform the New York State Digital Equity Plan through aggregated city agency survey data and co-sponsorship of an NYC-based Digital Equity Listening Session for key community stakeholders such as libraries, ISPs, and the public.[29] Further, the city

contributed to the State's growing asset inventory of public computer centers and digital literacy programs to support a funding strategy that enables affordable access, as well as connected devices, digital skills development, and technical support for covered populations.[30] Finally, the city reviews FCC-led Broadband Data Collection datasets, local and national dashboards, and internal reporting data to highlight targeted needs for improved investments.[31]

Photo: Michael Appleton, New York City Mayoral Photography Office

Current Gaps and Challenges

New York City has achieved real growth in digital access in recent years, but significant gaps and challenges still exist. Approximately 30 percent of New York City households or nearly 2.5 million residents lack the combination of mobile and home broadband service required for full connectivity.[32] Nearly 17 percent of households or nearly 1.4 million residents have only a mobile subscription, while nearly nine percent of households or over 700,000 residents have no mobile or home broadband subscription.[33] These disparities continue to disproportionately affect low-income New Yorkers, older adults, people with disabilities, and communities of color – populations that often overlap and experience compounded harms.[34]

While there is no single standard for broadband affordability, the FCC published guidelines in 2016 defining an affordable household broadband subscription as capped at two percent of annual income.[35] The cost of monthly broadband service in New York City is relatively high.[36] For New Yorkers at or below the city's poverty threshold, a two-percent cost for broadband services should amount to approximately $29 per month.[37] According to a 2023 survey conducted by the New York State ConnectALL office, 44 percent of the state's urban respondents indicated difficulty paying for connectivity.[38] When the monthly cost of broadband service is not affordable, households face a critical calculation to balance essentials such as utilities, groceries, medication, and transportation against the preservation of reliable access to digital life.[39]

Adding to these challenges, almost 10 percent of households, or nearly 800,000 city residents, lack a computer at home.[40] Disparities in device access largely mirror those in broadband subscriptions, disproportionately impacting low-income residents, older adults, and people with disabilities.[41] Supportive programs and services – while varied and available in communities across the city – are also unevenly resourced today. Programming and staffing levels, facilities, and equipment can vary greatly across locations, for example, as providers face ever-increasing operating costs.[42] Such trusted community anchor institutions are integral to addressing evolving community needs and require a more consistent, holistic approach to funding and investments across the city.

Moreover, New Yorkers' needs are constantly evolving as technologies and society move forward. These ongoing developments, if not managed correctly, can deepen the digital divide, and add new dimensions to it. For example, the local technology sector has seen massive growth in recent years, and the city is now the world's second-largest tech hub.[43] The New York City Economic Development Corporation has reported that "between 2010 and 2021, the city's tech sector added 114,000 jobs – seven times greater than the city's overall job growth."[44] These kinds of shifts to the local economy and labor market bring new urgency to the need for digital skills and resources across a range of populations. The Covid-19 pandemic also spurred an acceleration of digital transformation across sectors. For example, the city, like the U.S. more broadly, has experienced widespread growth in online healthcare delivery, and New Yorkers increasingly rely on digital tools for telehealth appointments and remote health monitoring.[45] And New Yorkers are interacting with technology in new ways and require new knowledge and skills to achieve safe, positive outcomes.[46] As city government itself undergoes

a broader digital transformation, and access to services and benefits moves increasingly and rapidly online, residents need easier access to digital tools and the requisite skills to use them.[47] Finally, broadband technologies themselves, and the wide range of digital technologies and tools that rely on the internet, are also constantly evolving.

Against this complex and ever-changing landscape, the city must take a long view, as conditions and needs evolve – to plan for sustainable, future-ready solutions, today. At each stage, a recognition of the unique needs and barriers faced by the city's diverse populations must be at the center of the city's approach.

Figure 2: Citywide Gaps in Access

Source: *2023 American Community Survey 1-Year Public Use Microdata Samples.* Figures represent percentages with or without a mobile and/or home broadband subscription.

Households Citywide

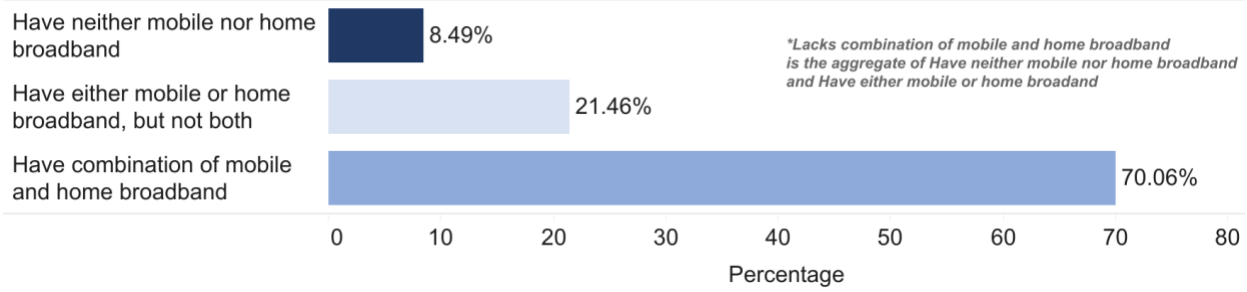
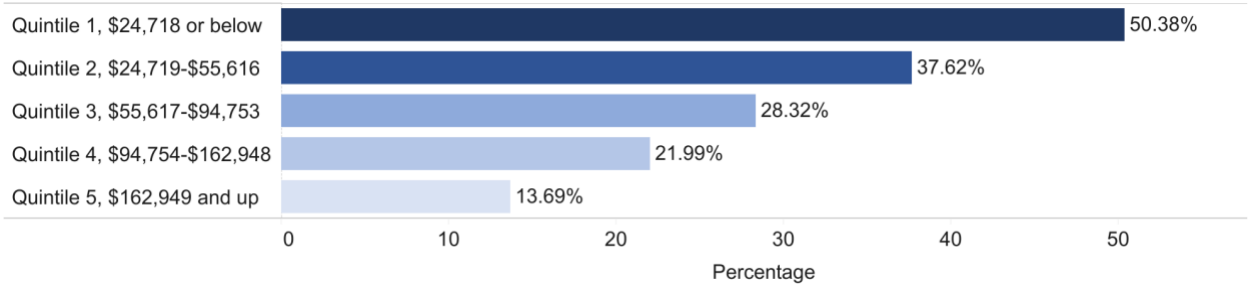


Figure 3: Gaps in Access by Demographic Group

Source: *2023 American Community Survey 1-Year Public Use Microdata Samples (*except Disability, which uses 2021 *American Community Survey 1-Year Public Use Microdata Samples*). Figures represent percentage of population without a mobile and/or home broadband subscription.

Income*

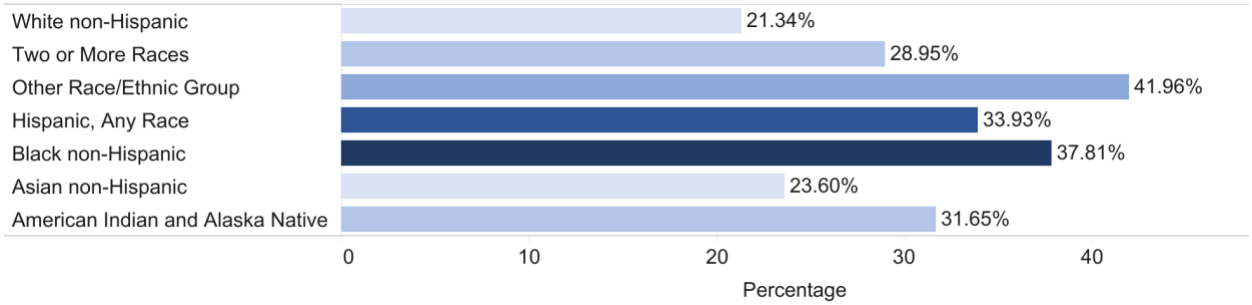
% Lack Combination of Mobile and Home Broadband



**Note: Income figures have been rounded, and are approximate*

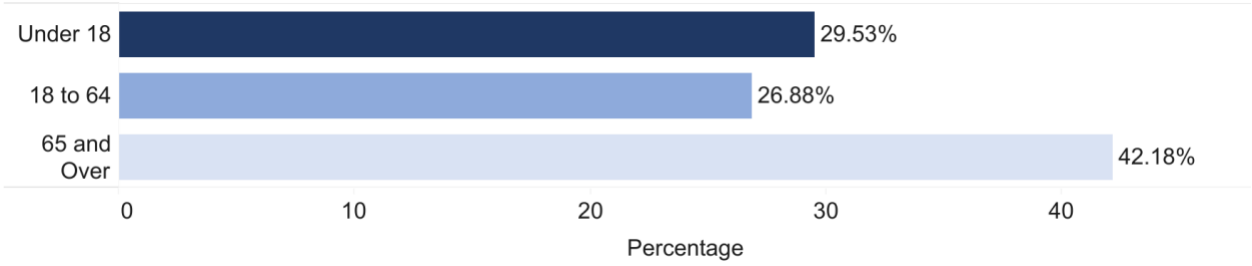
Race

% Lack Combination of Mobile and Home Broadband



Age

% Lack Combination of Mobile and Home Broadband



Disability

% Lack Combination of Mobile and Home Broadband

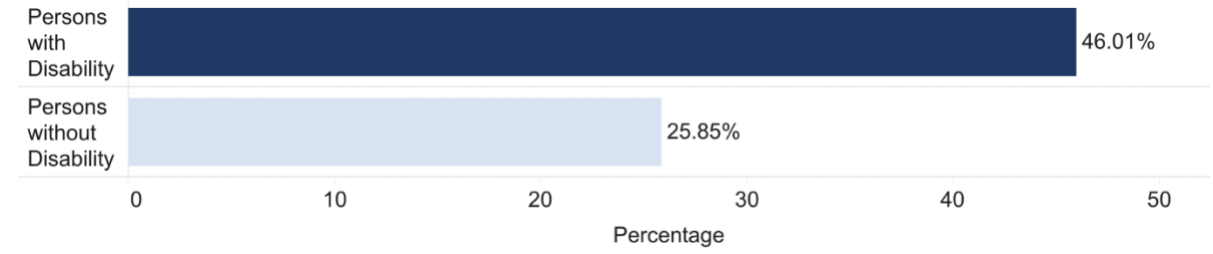


Photo: Edwin J. Torres, New York City Mayoral Photography Office

Guiding Values for Future Work

To steer the work ahead, the city has outlined a vision for digital equity that acknowledges that all New Yorkers need access to affordable broadband - both wired connectivity at home and wireless connectivity on the move. This roadmap recognizes that internet alone will not bridge the digital divide; New Yorkers must have equitable access to resources and tools that empower them, including digital literacy training, affordable devices, digital privacy tools, and technical support and guidance.[48] This holistic approach, sometimes described as "meaningful connectivity," is essential to achieving the city's goal of building a connected city.[49] Five core values underpin this vision, and inspire the city's work going forward:

Equity & Inclusion: Access to digital tools, skills, and supports should be equitably available to all New Yorkers. Vulnerable populations who lack this access today should be prioritized in the city's efforts, in order to immediately address critical gaps.

Quality: New Yorkers should have access to high-quality connections, services, and tools. This means connections that are reliable and have fast enough speeds to meet their needs on an ongoing basis, devices that are capable of performing the tasks they need them to, and supportive resources and programs that are responsive to their diverse skills, abilities, and circumstances.

Affordability: All New Yorkers should be able to afford a high-quality broadband connection, and a device that meets their needs.

Sustainability: The city's solutions should be designed to meet New Yorkers' needs on an ongoing basis, as needs and technologies evolve. Broadband infrastructure should be maintained and developed to meet future needs and be resilient to a changing environment.

Privacy & Safety: New Yorkers should be supported to participate in digital life without fear of compromising their privacy, safety, security, or well-being.

New Efforts and Next Steps

In the coming months, the city will move forward with a range of new actions that build on existing efforts and establish important foundations for the next phase of work. These include, broadly:

- Expanding home access for New Yorkers in affordable and public housing, and taking steps to enhance public Wi-Fi availability and other services in the public realm
- New efforts to strengthen the supports, services, and programming available to New Yorkers to foster their safe and equitable use of the internet, and
- Establishing new capacity for strategic coordination and planning across agency efforts

Details on each individual initiative are included by impact area, below.

Access and Affordability

As described above, New Yorkers face a variety of challenges to accessing quality, affordable broadband service today. To address these needs, the city will take a range of actions that leverage existing programs and resources for immediate impact.

Initiative 1: Launch Internet Network Pilot

HPD has launched a pilot program to construct a wireless internet network to provide free internet access to households receiving Section 8 rental assistance in the Bronx and Upper Manhattan. The pilot program will focus on bringing this free critical resource to buildings that have large populations of Section 8-assisted households. The buildings are primarily owned and operated by not-for-profits who are typically unable to cover the cost of internet service for their tenants.

Timeframe: Winter 2024/25 announcement

Initiative 2: Promote Big Apple Connect and the NYS Affordable Broadband Act

Big Apple Connect (BAC) has provided access to free high-speed internet to over 150,000 NYCHA households. Ongoing enrollment drives will focus on outreach to the remaining NYCHA households who have yet to enroll. To further the goals of BAC, OTI will: coordinate enrollment drives, scope and wire identified common spaces in need of connectivity and explore releasing a survey to assess residents' satisfaction with BAC and learn more about connectivity needs.

The New York State Affordable Broadband Act (ABA) is a new, ground-breaking New York law that requires internet service providers to offer qualifying low-income households broadband service at $15 per month for 25 Mbps service or $20 for 200 Mbps service.[50] OTI will work with city agencies and external partners to facilitate awareness of this law and provider offers, and to support New Yorkers' enrollment.

Timeframe: Initiate within 3 months

Initiative 3: Leverage Existing Public Assets to Support Equity

Through the LinkNYC program, the city has shown how out-of-date infrastructure can be repurposed to provide public internet and other helpful services to New Yorkers. Through additional solicitations for ideas, designs, and prototypes, the city will further investigate the role that its public infrastructure can play for improving digital equity outcomes – whether to create more Wi-Fi access in public spaces across the city, enhance infrastructure for home broadband service, or layer in new features that meet the needs of New Yorkers and visitors.

Timeframe: Initiate within 6 months

Initiative 4: Connect Older New Yorkers

Older Adult Centers (OACs) managed by NYC Aging are located throughout the five boroughs and provide healthy meals, in-person and virtual activities, digital literacy classes, fitness programs, and social services. OTI will invest capital funds to retrofit select city-owned OAC locations with the latest technology to support specific learning experiences for older New Yorkers, as well as internet access for families in need.

Timeframe: Complete within 12 months

Devices, Digital Skills, and Support

New Yorkers must have access to quality devices, digital skills training, and support, in addition to affordable internet service, to safely and equitably navigate digital life. As described above, the city offers a wide array of programs to address these needs, primarily through its network of PCCs. The following initiatives expand on these efforts.

Initiative 5: Deliver Refurbished Devices Where They are Needed

Every year, city agencies retire thousands of computers, mobile devices, and related equipment that have reached the end of their useful life for city business but are still usable and

operational. Through the Department of Citywide Administrative Services' (DCAS) landmark device donation process, the city will now pursue donating this equipment to eligible organizations in need, prioritizing device access for under-connected communities.[51] OTI will coordinate with DCAS to establish new procedures across city agencies and provide support to create partnerships for donating equipment.

Timeframe: Initiate within 3 months

Initiative 6: Invest in Public Computer Centers, and Support Awareness of their Services

Public computer centers (PCCs) are a critical resource for supporting public access to the internet and digital tools, social and technical support for residents, and wide-ranging digital skills programming. As noted, the city operates over 500 PCCs across the city, over 100 of which are currently supported by OTI through funding from the Connected Communities program. To further these efforts, OTI will allocate new capital funding to PCCs across the city to contribute to addressing the gaps in resources and programming that currently exist, beginning with a set of investments in New York Public Library (NYPL) branches. OTI will continue its support and partnership with community-based organizations on how these centers are being used.

Further, a key challenge with the city's PCC network is that information about resources and services offered across organizations and locations is not currently centralized – which can limit the visibility of these critical programs and services for those in need of them. OTI will launch a centralized website to support awareness of PCC locations, resources, and services offered.

Timeframe: Phased implementation, complete within 12 months

Initiative 7: Expand Digital Navigation Support

HPD is partnering with all three public library systems to expand the reach of the libraries' best-in-class tech support and training programs by launching a pilot program to deploy teams of digital navigators in affordable housing developments with large populations of households receiving Section 8 rental assistance. This service will offer support on navigating online social services; connecting with family, friends, teachers, and case workers; avoiding digital scams; creating accounts and recovering passwords; and finding reliable information online. The libraries will hire community members to staff the program and deliver one-on-one support to residents.

Timeframe: Winter 2024/25 announcement

Initiative 8: Grow the Reach of NYCHA's Digital Vans

NYCHA's Digital Vans initiative has brought connectivity and internet access directly to NYCHA residents since 2012. These vans serve as mobile hubs equipped with computer stations and printers, facilitating access to essential digital resources. OTI will invest capital funds to launch a new Digital Van to expand NYCHA's ability to serve its developments with these resources. The vans have also been available at JobsNYC Hiring Halls to help New Yorkers with job search activities and resume printing.

Timeframe: Complete within 12 months

Coordination and Advocacy

The city recognizes that engagement in and out of government will be essential to designing and implementing effective solutions toward addressing the digital divide for all New Yorkers. Coordination of planning and implementation across city agencies is a key component of this work – toward maximizing efficacy and impact. The city must also continue to pursue advocacy efforts at the state and federal levels, with the goal of ensuring that existing and new efforts from those levels of government address the needs of our complex urban environments, including the appropriate allocation of funding to address affordability and adoption-related barriers.

Initiative 9: Establish a Digital Equity Working Group

City agencies continually advance critical digital equity work to serve their constituents, but each agency may not be aware of parallel efforts underway by city agencies. Through the creation of an interagency Digital Equity Working Group, the city can create greater cooperation and cohesion for citywide digital equity work, including advocating for important funding opportunities. Stewarding the Digital Equity Working Group, OTI will drive coordination and efficiency across city agencies to promote digital equity initiatives, support information sharing across city agencies, and mobilize existing and leverage new resources to invest in digital equity work.

Timeframe: First convening of working group in Winter 2025

Initiative 10: Create a Chief Digital Equity Officer Role

At the helm of the Digital Equity Working Group, a new chief digital equity officer at the Office of Technology and Innovation will bring agencies together to collaborate and coordinate on digital equity-focused work. The role will prioritize coordination for funding opportunities and laying the foundation for longer-term planning.

Timeframe: Initiated in Winter 2025

Initiative 11: Assess Ongoing Capital Needs for Digital Equity Work

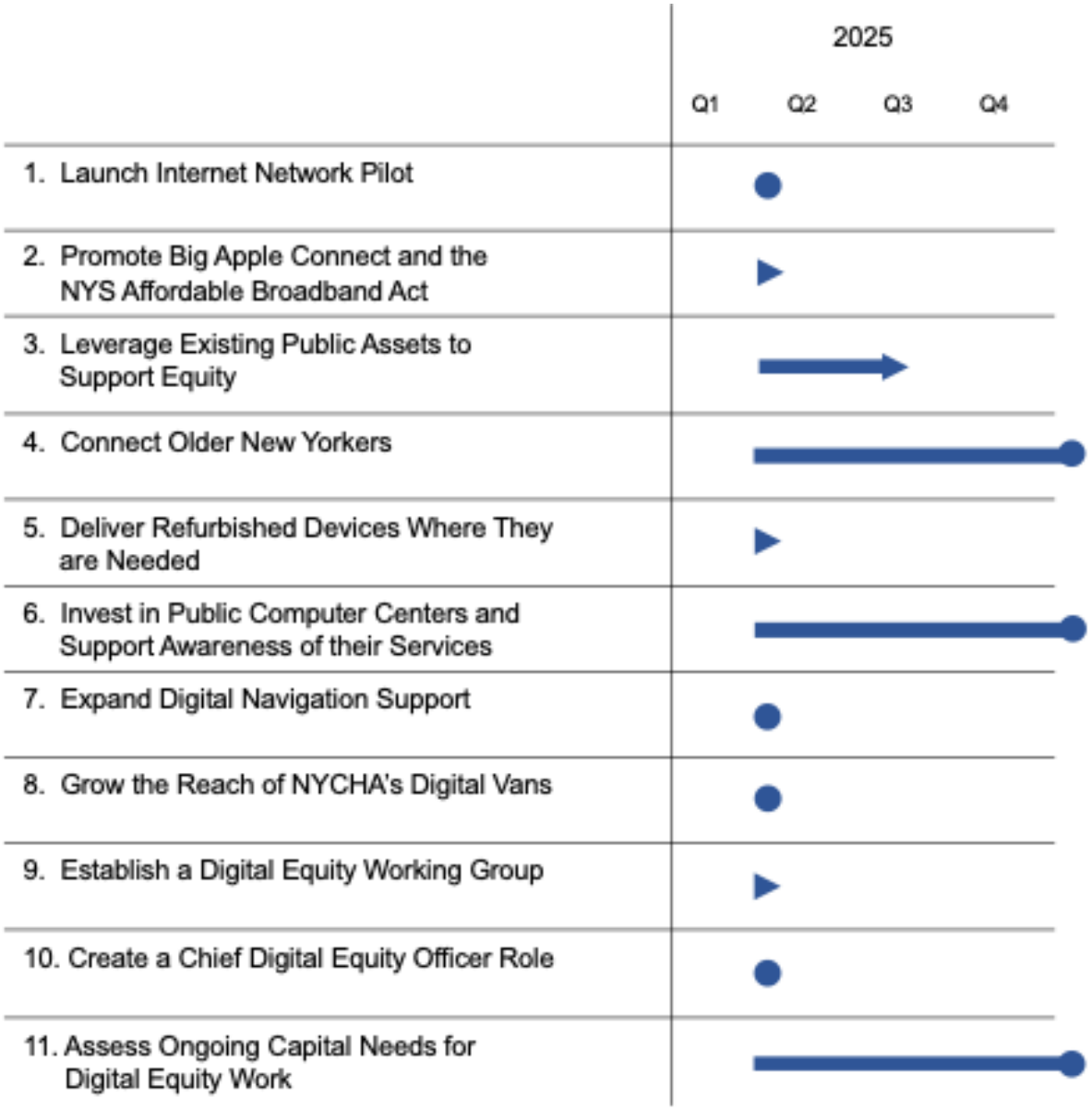
To address the ongoing capital funding needs of digital equity efforts, the city will conduct a comprehensive survey to assess those needs and identify additional opportunities to provide support. Leveraging the Digital Equity Working Group, the city will expand outreach to determine where capital investment will yield the biggest impact and commit to fund more projects in the upcoming Capital plans. This may include further investments in citywide public computer centers, access and affordability-related efforts, such as wiring adult shelters, or other digital equity programming work.

Timeframe: Complete within 12 months

Photo: Michael Appleton, New York City Mayoral Photography Office

The Road Ahead

The city will immediately begin implementation of the initiatives outlined in this Roadmap. Below is a summary timeline for that work. As the city moves ahead, there will be more to do to address the full scope and scale of challenges facing New York City. Ongoing planning and implementation on the topic of digital equity will be required, as the landscape continues to evolve. The city looks forward to providing further updates on these efforts as they progress.



In order to ensure the city is accountable to the vision and values outlined in this Roadmap, and that its efforts are poised for impact, the city will additionally work, under the portfolio of the new chief digital equity officer, to outline and track key metrics for success going forward. This will include ongoing monitoring of the varied data points referenced in this Roadmap, including both citywide and program-specific data. The city will additionally explore establishing a broader set of measures, to account for the multifaceted challenges in addressing digital equity now and in the future, and support the development of robust, holistic solutions.

Notes

[1] United States Census Bureau, *2023 American Community Survey 1-Year Public Use Microdata Samples,* available at https://www.census.gov/programs-surveys/acs/ . These statistics very likely *overestimate* the levels of access, as the Census category for "broadband" includes technologies that may not meet the FCC's speed standards. Compared to 2017 5-Year estimates from the American Community Survey, these 2023 figures represent a 10% drop in the percentage of households that lack the combination of mobile and home broadband, and an approximate 8% drop in the percentage of households that lack both types of service. It is important to note that the end of the federal Affordable Connectivity Program may have impact on these rates of access as well.

[2] *Ibid.* Here, the city uses the "laptop or desktop" category from the American Community Survey as a definition of a "computer."

[3] For more on this benchmark, see: https://docs.fcc.gov/public/attachments/FCC-24-27A1.pdf . Notably, the FCC additionally set a "long-term fixed broadband speed goal" of 1 Gbps/500 Mbps in this document.

[4] Definition adapted from the National Digital Inclusion Alliance's definition, available at https://www.digitalinclusion.org/definitions/

[5] For more on the Big Apple Connect program, see: https://www.nyc.gov/assets/bigappleconnect/

[6] Specific locations selected for deployment are: Hunts Point and Longwood in the Bronx, Bushwick, Brownsville, and Ocean Hill in Brooklyn, Inwood and Washington Heights in Manhattan, Rockaway, Jamaica, and Hollis in Queens, and Port Richmond, St. George, and Stapleton in Staten Island. For more on this project, see: https://www.nyc.gov/content/oti/pages/linknyc

[7] For more on this initiative, see: https://www.nyc.gov/content/oti/pages/linknyc

[8] Administrative data from city program implementation tracking.

[9] For more on the program, see: https://www.fcc.gov/acp . The program closed as of June 1, 2024, however there have been varied efforts to allocate funding to sustain it.

[10] For more on ongoing efforts to provide information on free and low-cost services to public school families, see: https://www.schools.nyc.gov/learning/digital-learning/ipads-and-laptops/free-and-low-cost-internet-options

[11] For more on the varied city efforts described here, see, e.g., https://www.bklynlibrary.org/use-the-library/home-internet-access#:~:text=How%20It%20Works,participating%20internet%20and%20mobile%20providers , https://www.nypl.org/spotlight/affordable-connectivity-program , https://www.nyc.gov/site/mayorspeu/resources/affordable-connectivity-program.page , https://cdn-blob-prd.azureedge.net/prd-pws/docs/default-source/default-document-library/affordable-connectivity-program-letter.pdf?sfvrsn=ff4e948d_2#:~:text=You%20may%20be%20eligible%20to,%2C%20desktop%20computer%2C%20or%20tablet . For more on the Black Churches for Digital Equity, see: https://www.blackchurches4digitalequity.com/events . For the Civic Nation Online for All campaign, see: https://onlineforall.org/

[12] Center for an Urban Future, "Preparing for the End of the Affordable Connectivity Program," available at: https://nycfuture.org/data/preparing-for-end-of-acp-nyc

[13] See: https://www.gillibrand.senate.gov/news/press/release/gillibrand-announces-legislation-to-renew-the-affordable-connectivity-program-provide-low-cost-internet-to-nearly-two-million-new-york-households/

[14] See, e.g., https://www.nypl.org/spotlight/nypl-wireless and https://www.bklynlibrary.org/media/press/brooklyn-public-library-72

[15] For more on these efforts, see: https://www.nyc.gov/site/hpd/services-and-information/broadband-development-projects.page

[16] Figures based on 2024 city administrative data. For more on this effort, see, e.g.: https://citylimits.org/2022/05/25/nyc-installs-wifi-at-every-family-homeless-shelter-following-legal-settlement/#:~:text=More%20than%20240%20family%20homeless,thousands%20of%20school%2Daged%20children

[17] See the results of the city's 2023 inventory of these centers at: https://data.cityofnewyork.us/Social-Services/Citywide-Public-Computer-Centers/sejx-2gn3 . Results of prior 2019 inventory are at https://data.cityofnewyork.us/Social-Services/Citywide-Public-Computer-Centers-FY2019-/cuzb-dmcd
[18] OTI administrative data from Connected Communities program reporting (2022).
[19] *Ibid.*
[20] For more on the Connected Communities program, see: https://www.nyc.gov/site/nycha/about/connected-communities.page. As noted above, a full inventory of city public computer centers can be found at: https://data.cityofnewyork.us/Social-Services/Citywide-Public-Computer-Centers/sejx-2gn3
[21] For more on the Gigabit Centers, see: https://www.nyc.gov/content/oti/pages/new-yorkers and https://www.nyc.gov/content/oti/pages/press-releases/mayor-cto-announce-staten-island-gigabit-center
[22] For more on this program, see: https://www.nyc.gov/site/nycha/residents/digital-van.page
[23] For more on this effort, see: https://www.communityfund.nyc/youth-tech-corps
[24] For more on programming at DYCD Cornerstone sites, see https://www.nyc.gov/site/dycd/services/after-school/cornerstone.page . For more on Hats & Ladders and DYCD Workforce Initiatives, see for more on SYEP, Hats & Ladders, and DYCD Workforce initiatives, visit https://www.nyc.gov/site/dycd/services/jobs-internships.page .
[25] The Fiscal Year 2025 allocation of $4.3 million to DYCD for this program can be found at: https://council.nyc.gov/budget/wp-content/uploads/sites/54/2024/03/260-DYCD.pdf
[26] See, e.g., https://www.schools.nyc.gov/learning/digital-learning/ipads-and-laptops and https://www.schools.nyc.gov/school-life/school-environment/digital-citizenship .
[27] For more on the National Telecommunications and Information Administration's (NTIA's) Digital Equity Act Programs, see https://broadbandusa.ntia.doc.gov/funding-programs/digital-equity-act-programs .
[28] Under the Infrastructure Investment and Jobs Act, PUBLIC LAW 117–58, § 60302(10) (Nov. 15, 2021), "covered populations" refers to: 1) individuals who live in low-income households, 2) aging individuals, 3) incarcerated individuals, other than individuals who are incarcerated in a Federal correctional facility, 4) veterans, 5) individuals with disabilities, 6) individuals with a language barrier, including individuals who are English learners and have low levels of literacy, 7) racial and ethnic minorities, 8) rural inhabitants (§ 60302(1), (8), (7), (3), (22), (13) & (20) of IIJA (infra fn. 1).
[29] See City of New York, Digital Equity Act of 2021, Request for Comments, National Telecommunications and Information Administration, (NTIA-2023-0002; FR Doc # 2023-04242), at https://www.regulations.gov/comment/NTIA-2023-00002-0196 (sub. May 1, 2023). The State Digital Equity Plan is a statutorily required process by which States propose to allocate federal IIJA monies to implement broadband adoption actions and initiatives. The Plan functions as a policy roadmap for investment. For more information about the New York State Digital Equity Plan, and the role of the ConnectALL Office, see https://broadband.ny.gov/new-york-state-digital-equity-plan . For more on the Digital Equity Listening Session, which took place in June 2023, through a partnership between OTI and non-profit, Silicon Harlem, see https://broadband.ny.gov/connectall-events
[30] The New York State ConnectALL Office has developed a Digital Equity Asset Inventory, which will be a publicly searchable database of more than 900 existing programs, organizations, plans, and other assets addressing digital equity across the state. The results of this inventory effort can be found at https://airtable.com/appxZLVxV9u8aArMk/shrz4Gjd8OFG1kGlt/tblb75BRb4mwtTRey
[31] For more on this FCC program, see https://www.fcc.gov/BroadbandData
[32] United States Census Bureau, *2023 American Community Survey 1-Year Public Use Microdata Samples,* available at https://www.census.gov/programs-surveys/acs/ . As noted above, these statistics very likely *overestimate* the levels of access, as the Census category for "broadband" includes technologies that may not meet the FCC's speed standards. Compared to 2017 5-Year estimates from the American Community Survey, these 2023 figures represent a 10% drop in the percentage of households that lack the combination of mobile and home broadband, and an approximate 8% drop in the percentage of households that lack both types of service. It is important to note that the end of the federal Affordable Connectivity Program may have impact on these rates of access as well.
[33] *Ibid.*

[34] *Ibid*.
[35] Federal Communications Commission, In the Matter of Lifeline and Link Up Reform and Modernization (WC Docket No. 11-42); Telecommunications Carriers Eligible for Universal Service Support (WC Docket No. 09-197); Connect America Fund (WC Docket No. 10-90): THIRD REPORT AND ORDER, FURTHER REPORT AND ORDER, AND ORDER ON RECONSIDERATION, https://docs.fcc.gov/public/attachments/FCC-16-38A1.pdf (adopted Mar. 31, 2016). See also: Kathryn de Wit and Colby Humphrey, https://www.pewtrusts.org/en/projects/broadband-access-initiative/meet-the-team "Is Broadband Affordable for Middle-Class Families? Maps show that the availability of low-cost options varies across the U.S.," Pew Charitable Trusts, September 28, 2023, available at https://www.pewtrusts.org/en/research-and-analysis/articles/2023/08/30/is-broadband-affordable-for-middle-class-families
[36] As of 2019, a city analysis of available ISP pricing for service data suggested that pricing for service in New York City that met or exceeded the FCC-proposed 100 Mbps / 25 Mpbs broadband speed ranged from $50.00 to $265.99 per month). Obtaining updated pricing data is an upcoming action outlined in this Plan, an effort that will build on forthcoming federal action to mandate "nutrition labels" from service providers to support greater transparency for consumers (more on this effort below). However, there clear are indications elsewhere that pricing continues to be high in the city. For example, the New York State Public Service Commission published an analysis of availability, reliability, and cost of high-speed service at the county level in 2022, which found that Bronx and Kings counties faced particularly high costs for broadband - at an average of approximately $60 per month (see: New York State Public Service Commission, "2022 Report on the Availability, Reliability and Cost of High Speed Broadband Services in New York State," *NYS Broadband Assessment Program,* 2022, available at https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={94520887-43D6-45D4-B140-https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B94520887-43D6-45D4-B140-A5CF72CBF708%7D . Additionally, in a 2022 Consumer Reports study of internet pricing nationally, New York City's three major providers, Altice, Charter, and Verizon, were found to have among the highest average monthly cost, at $90, $78, and $83, respectively (see: Schwantes, Jonathan, "Broadband Pricing: What Consumer Reports Learned from 22,000 Internet Bills," *Consumer Reports*, November 17, 2022, available at: https://advocacy.consumerreports.org/wp-content/uploads/2022/11/FINAL.report-broadband.november-17-2022-2.pdf
[37] The New York City poverty measure is adapted to the realities of the city's economy, including housing costs that are higher than the national average. According to this measure, a 4-person household with two children with annual income of approximately $38,337 is defined as being in poverty. The average household income below poverty is $16,876; 2% of that mean income is approximately $29 a month. For more on the NYC poverty measure, see https://www.nyc.gov/site/opportunity/poverty-in-nyc/poverty-measure.page ; and https://www.nyc.gov/assets/opportunity/pdf/NYCgovPoverty2023_2020DATA_Digital_Final_d3.pdf
[38] For full results of this survey, see https://broadband.ny.gov/system/files/documents/2023/09/nys-bead-5-year-action-plan.pdf
[39] According to a 2023 United Way report, "half of working-age households in New York City do not make enough money to cover basic needs," with the Bronx disproportionately facing financial insufficiencies. The report notes further that "people of color are disproportionately likely to lack adequate income," and "households with children have a greater risk of not meeting their basic needs," underscoring structural and racial inequalities also reflected in lack of access. See United Way, "2023 NYC True Cost of Living Report," April 25, 2023, available at https://unitedwaynyc.org/True-Cost-Of-Living . Following a 2022 vote in which New Yorkers adopted three ballot proposals putting racial equity at the center of local government, the city is positioned to assess and define affordability through an assessment of "the true cost of living" -- a measure of the "actual cost in New York City of meeting essential needs, including housing, food, childcare, transportation, and other necessary costs, and without considering public, private, or informal assistance..." For more on these measures, see https://www.nyc.gov./equity
[40] United States Census Bureau, *2023 American Community Survey 1-Year Public Use Microdata Samples,* available at https://www.census.gov/programs-surveys/acs/ . The city's analysis uses the "desktop and laptop" category from the American Community Survey as a definition of "computer" here.

[41] *Ibid.*
[42] See the results of the city's 2023 inventory of these centers at https://data.cityofnewyork.us/Social-Services/Citywide-Public-Computer-Centers/sejx-2gn3 . Results of prior 2019 inventory are at https://data.cityofnewyork.us/Social-Services/Citywide-Public-Computer-Centers-FY2019-/cuzb-dmcd . Insights also gathered from OTI agency interviews, conducted between April and June, 2023.
[43] See https://edc.nyc/industry/emerging-tech
[44] *Ibid.*
[45] OTI agency interviews, conducted between April and June, 2023. For more on the broader national trend, see, e.g., Andino, Juan, et al, "Overview of telehealth in the United States since the COVID-19 public health emergency: a narrative review," Mhealth 2023; 9:26, July 15, 2023, at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10364039/
[46] As a member of the Cities Coalition for Digital Rights, New York has signed on to a range of principles aimed at "...promoting and defending digital rights in urban context through city action, to resolve common digital challenges and work towards legal, ethical and operational frameworks to advance human rights in digital environments." For the details of these principles, and broader information about the global coalition, see https://citiesfordigitalrights.org/
[47] A number of agencies have introduced new ways to interact with government digitally in recent years. One notable recent example is the MyCity portal, a "one-stop shop for city services and benefits" which launched its initial phase in March 2023. For more on this tool, see: https://www.nyc.gov/office-of-the-mayor/news/217-23/mayor-adams-launches-first-phase-mycity-portal-easily-help-new-yorkers-check-eligibility-#/0 and https://mycity.nyc.gov/s/?language=en_US&LanguageCode=en_US
[48] For many cities around the world, a digital rights framework encompasses skills to get online and stay safe. As a member of the Cities Coalition for Digital Rights, New York recognizes that residents need both digital literacies and privacy awareness in order to adopt connectivity as a digital right. For more about the global coalition, see: https://citiesfordigitalrights.org
[49] See, e.g., https://broadbandcommission.org/annual-fall-meeting-2023-press-release
[50] For more on the New York State Affordable Broadband Act, see https://www.governor.ny.gov/news/governor-hochul-announces-major-digital-access-initiatives-launch-affordable-broadband-act-and
[51] This process is mandated under Local Law 81 of 2023. For more on this law, see: https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=5839384&GUID=008B5B01-AED7-4838-980E-5B2C3AC5F202&Options=ID|Text|&Search=664