New York State Digital Equity Plan

DRAFT FOR PUBLIC COMMENT

ConnectAll Office

Empire State Development

State of New York

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This document is a draft of the New York State Digital Equity Plan and is being released for public comment in advance of its submission by New York State's ConnectALL Office (CAO) to the National Telecommunications and Information Administration (NTIA).

All are welcome to submit comments regarding the draft document. Comments regarding the draft should be submitted via http://bit.ly/nys-sdep by 5:00pm EST on December 6, 2023.

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Acronyms

ACP	The FCC's Affordable Connectivity Program, which provides subsidies for low-income and Tribal households to access home broadband subscriptions and/or internet-enabled devices.
ACS	The American Community Survey is an annual demographic survey conducted by the U.S. Census Bureau.
AHCP	ConnectALL's Affordable Housing Connectivity Program (AHCP) will provide owners of affordable housing with new or upgraded broadband infrastructure so tenants can access high-quality home internet at affordable monthly rates.
BAP	DPS's Broadband Assessment Program for broadband data collection and analysis, which resulted in the creation of the State's interactive broadband map and publication of annual reports on broadband availability and affordability in New York.
BEAD	NTIA's Broadband Equity, Access, and Deployment Program, which will provide $42.45B nationally for broadband infrastructure planning and implementation.
BOCES	Boards of Cooperative Educational Services provide shared, cost-effective educational programs and services to school districts—serving K-12 school students as well as adults seeking GEDs and high-school equivalency courses—outside of the largest urban areas New York City, Buffalo, Rochester, Yonkers, and Syracuse
BPO	The Broadband Program Office, housed within ESD and the predecessor to CAO; all responsibilities and authorities of were transferred to CAO in 2022.
CAI	Community Anchor Institution, defined by NTIA in the BEAD NOFO "an entity such as a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization, or community support organization that facilitates greater use of broadband service by vulnerable populations."
CAO	The ConnectALL Office, a division of ESD, and the State's designated entity for receiving and administering BEAD Program funds.
DEA	The Digital Equity Act is a federal initiative established as part of 2021's Infrastructure Investment and Jobs Act (IIJA) that provides $2.75 billion to establish grant programs that promote digital equity and inclusion nationwide
DEAPV	Digital Equity Act Population Viewer is an interactive collection of maps created by the NTIA and the U.S. Census Bureau that demonstrate the distribution of covered populations as well as broadband internet availability and adoption statistics by state and county geographies.

DEC	Digital Equity Coalitions are organizations or coalitions of organizations operating in each state region that coordinate efforts across the government, nonprofit, private, and education sectors to end the digital divide.
DETF	The Digital Equity Task Force, an interagency group co-convened by the ConnectALL Office and NYSL, with subcommittees focused on key outcome areas: education, health, workforce development, civic engagement, and the delivery of government services.
DEWG	The Digital Equity Working Group, an interagency group co-convened by the ConnectALL Office and NYSL; the less formal and structured predecessor to the DETF.
DPS	New York State Department of Public Service, responsible for leading ACP outreach, maintaining the State broadband map, and regulating pole attachments in the state, among other responsibilities.
ESD	Empire State Development, New York State's economic development agency and parent agency of CAO.
FCC	The Federal Communications Commission, administrator of the ACP and developer of the National Broadband Map.
IIJA	The 2021 Infrastructure Investment and Jobs Act included the Digital Equity Act.
ISP	Internet Service Provider
NOFO	Notice of Funding Opportunity; specifically, NTIA's Notices of Funding Opportunity for the BEAD and State Digital Equity Planning Grant Programs.
NTIA	The National Telecommunications and Information Administration, administrator of the BEAD Program and State Digital Equity Planning Grant Program.
NYSL	New York State Library, a division of New York State Education Department; co-convener of the DEWG and DETF
OTI	The New York City Office of Technology and Innovation (OTI) is a New York City department that oversees the use of technology in government operations and the use of technology to deliver services to the public.
PSC	The New York State Public Service Commission, a division of DPS, which regulates and oversees electric, gas, water, and telecommunication industries in the state.
SDEP	A State Digital Equity Plan must include specific elements outlined in the statute and the Notice of Funding Opportunity and be submitted to enable a state to access the State Digital Equity Capacity Grant Program.

1.0

Executive Summary

1.0 Executive Summary

Access to the internet, reliable devices, and digital literacy are vital for the economic success, health, and lifelong learning of all New Yorkers. New York's digital equity practitioners have worked for decades to create sustainable digital equity ecosystems on local, regional, and statewide levels. These practitioners overcame conditions of scarcity in the funding landscape, and a lack of understanding of the importance of digital equity initiatives among many policymakers and members of the public, to build a powerful base of programs, partnerships, and coalitions bringing critical services to communities across the state and advocating for policies that better meet New Yorkers' digital needs.

From decades of experience in the field, practitioners know that achieving digital equity in New York State will require long-term investments across sectors to make progress impactful and sustainable. The COVID-19 pandemic exacerbated digital inequities and laid bare the truth that too many New Yorkers lack the technology and skills needed to effectively use the internet and the tools and services it has to offer. The digital divide will continue to widen and disproportionately impact members of historically overlooked and underserved communities without significant investment across sectors and geographic scales.

The Digital Equity Act (DEA) is a federal initiative established as part of 2021's Infrastructure Investment and Jobs Act (IIJA) that provides $2.75 billion to establish grant programs that promote digital equity and inclusion nationwide. These programs aim to ensure that all people and communities have the technology, skills, and capacities needed to reap the full benefits of our digital economy and society. The programs will be administered to states by the National Telecommunications and Information Administration (NTIA).

Other IIJA initiatives, such as the Broadband Equity, Access, and Deployment (BEAD) program, will address the digital divide by expanding broadband access and infrastructure. New York's Digital Equity Capacity Grants, administered by the ConnectALL Office (CAO), will complement broadband deployment initiatives by promoting a diverse array of digital inclusion projects at the State and local level. These initiatives will focus on populations with barriers to access, such as low-income populations, individuals with disabilities, veterans, rural inhabitants, racial and ethnic minorities, aging individuals, and individuals with language barriers.

In the State Digital Equity Plan (SDEP), CAO meets NTIA's statutory and additional requirements as listed in the State Digital Equity Planning Grant Program Notice of Funding Opportunity. In the SDEP, CAO establishes:

- A vision for digital equity in New York State and the strategies and outcome areas that will guide CAO's digital equity investments (Statutory Requirements 2 and 3, Additional Requirement 1).
- A baseline of digital equity data and assets for the state, including an asset inventory and needs assessment (Statutory Requirement 1, Additional Requirements 2 and 3).

- CAO's principles for stakeholder engagement, engagement methods used in development of the SDEP, and implementation strategies moving forward, including continued regional engagement and participatory planning (Statutory Requirements 4 and 5, Additional Requirements 4 and 5).
- How CAO will design its digital equity activities and grant programs around measurable objective areas defined in the DEA (Additional Requirements 6, 7, 8, 9, 10).

1.1 ConnectALL's Vision for Digital Equity

Governor Kathy Hochul established the ConnectALL Office (CAO) in 2022 to transform New York State's digital infrastructure so all residents and businesses have access to high-speed, reliable, and affordable broadband for education, economic growth, and full participation in civic life.

This vision is pursuant to the principles also articulated by the New York State Legislature in the 2022 Working to Implement Reliable and Equitable Deployment of Broadband Act (WIRED Broadband Act), which declares that:

- Access to high-speed, reliable, and affordable broadband is essential for education, economic growth, and full participation in civic life;
- The persistence of the digital divide is a key barrier to improving the general welfare;
- The digital divide disproportionately affects communities of color, lower-income areas, rural areas, and other vulnerable populations, and the benefits of broadband access should be available to all;
- A robust and competitive internet marketplace in New York supports general economic development and benefits New Yorkers with improved internet service and affordability; and
- The State has a responsibility to assist in ending the digital divide, supporting a more robust and competitive internet marketplace, and carrying out other actions to ensure universal access to high-speed, reliable, and affordable broadband."[1]

Per NTIA's guidance, CAO will also take actions to promote the general welfare as it relates to the benefits of broadband access across the following outcome areas:

1. Advancement of economic and workforce development goals, plans, and initiatives;
2. Improvement in the quality and accessibility of educational resources;
3. Improvements in access to and delivery of health services;
4. Increased civic and social engagement; and
5. Delivery of accessible, navigable public resources.

[1] The WIRED Broadband Act added a new Section 16-gg to Section 1 of Chapter 174 of the laws of 1968, constituting the New York State Urban Development Corporation Act. (WIRED Broadband Act, New York State Urban Development Corporation Act § Chapter 174: Section 1: Section 16-gg (2022). https://www.nysenate.gov/legislation/laws/UDA/16-GG*2).

1.2 Strategies & Approach

CAO's strategy considers the limitations of its resources and is driven by the need to identify multipliers that can amplify and sustain past, present, and future investments. CAO must address needs across a population of approximately 20 million people in ten regions, including the largest, most diverse city in the country. The funding available to CAO is onetime, while the digital divide is perpetual, as technologies, threats, and New Yorkers themselves evolve.

Aligning CAO initiatives with existing digital equity efforts in the state is key to CAO's overarching strategy. CAO, through its predecessor the Broadband Program Office (BPO) and in partnership with the New York State Library (NYSL), has convened representatives from State agencies since 2020 to develop strategy, obtain information on existing State programs and resources, and identify partners to support digital equity planning and program implementation. In the SDEP, CAO identifies areas of alignment with existing State initiatives and plans with the digital equity outcome areas.

Building on alignment with these existing efforts to improve outcomes, CAO identified the following strategic pillars, which together will allow CAO to prioritize and streamline activities in pursuit of its mission:

- **Grounding investments in an asset-based approach**, building the capacity of community-rooted and trusted digital equity organizations over the long term.
- **Strengthening networks to share resources and take coordinated action**, investing in ensuring that digital equity organizations and service providers are independently connected, collaborating, and sharing knowledge to achieve shared goals.
- **Building alignment and awareness** across the field and government to advance digital equity policy best practices and standards-setting across programs.
- **Sharpening and socializing CAO's digital equity lens**, incubating new approaches to persistent challenges, measuring impact, and publishing information related to these findings.

In Chapter 2 of the SDEP, CAO uses these strategic pillars to develop a series of measurable objectives for realizing New York's vision for digital equity.

1.3 Current State of Digital Equity

In preparation of this Plan, CAO developed a new and expanded baseline of digital equity data and activities in New York. Chapter 3 of the SDEP offers the resulting evidence base, which will inform the solutions CAO selects to advance digital equity. Evidence is presented in two formats:

1. **Digital Equity Asset Inventory**: A searchable database of more than 900 existing programs, organizations, plans, and other assets currently advancing digital equity

within the state. These assets will be strengthened and built upon through CAO's digital equity investments, and CAO will continue to refine the database.

2. **Needs Assessment**: A catalogue of the needs and barriers to meaningful internet adoption expressed by populations who have been historically left out of digital advancement. The needs assessment builds on administrative data by introducing new findings from CAO's stakeholder engagement activities, including focus groups, listening sessions, and CAO's New York State Internet Access Survey.

To develop the asset inventory and needs assessment, CAO coordinated with regional entities, including Digital Equity Coalitions (DECs) and their partners who hold relationships with covered populations across the state. CAO uses the asset inventory and needs assessment in combination to analyze New York's ecosystem, identify gaps, and ultimately to align efforts towards an empirically defined digital equity roadmap.

1.4 Stakeholder Engagement

CAO worked with DECs in every region of the state to conduct stakeholder engagement events, gather data, and solicit feedback to inform the SDEP planning process. Engagement activities included:

- Over 40 stakeholder focus groups targeting members of historically marginalized groups.
- 15 listening sessions, held in every region and borough of the state, attended by over 1,200 New Yorkers.
- CAO's Digital Equity Survey of New York residents, the first ever comprehensive assessment of the digital divide in New York State, received more than 5,700 responses.

CAO also consulted various local governments and state agencies to ensure recommendations were made in alignment with their existing efforts. CAO's stakeholder engagement plan centers the experience and expertise of covered populations through the implementation of a participatory planning process created through partnerships with the regional DECs. Continuing to develop the capacity and leadership of regional DECs will remain a key priority and will ultimately strengthen the implementation of CAO's digital equity and broadband infrastructure plans.

The SDEP's multifaceted stakeholder engagement strategy, detailed in Chapter 4, reflects the exceptional diversity of New York State residents and leverages the state's mature ecosystem of broadband and digital equity stakeholders. The strategy includes comprehensive public engagement to ensure:

- Full geographic coverage,
- Diverse stakeholders,
- Awareness, outreach, and participation,

- Transparency, and
- Targeted engagement for underrepresented communities.

1.5 Implementation Plan

Using the assets, needs, and gaps identified in the SDEP, CAO aims to align its digital equity investments with the State outcome areas, presented in Chapter 5 as a set of measurable objectives, associated key activities, and proposed impact metrics. Objectives are categorized by the four pillars of CAO's strategic vision:

1. **Strategy #1: Grounding Investments in an Asset-Based Approach**
2. **Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action**
3. **Strategy #3: Building Alignment & Awareness**
4. **Strategy #4: Sharpening & Socializing our Digital Equity Lens**

The sections are organized by the measurable objective areas designated in the Digital Equity Act:

- Broadband Affordability & Availability
- Accessibility of Devices & Device Support
- Digital Literacy
- Privacy & Cybersecurity
- Accessibility & Inclusivity of Public Resources

The activities detailed are not meant to be exhaustive; rather, they represent approaches to meeting needs and filling gaps identified throughout the SDEP. A high-level timeline of CAO's next steps follows the discussion of activities.

CAO looks forward to executing these strategies and deepening our engagement on the many facets of the digital divide across New York's diverse regions. By mobilizing millions of dollars in funding through the Digital Equity Act, CAO is working to end the digital divide in New York, thereby ensuring that all New Yorkers have the technology, skills, and capacities needed to reap the full benefits of our digital economy and society.

2.0

Introduction, Vision, and Objectives

2.0 Unified Vision

Governor Kathy Hochul established CAO in 2022 to transform New York State's digital infrastructure so all residents and businesses have access to high-speed, reliable, and affordable broadband for education, economic growth, and full participation in civic life.

This vision is pursuant to the principles also articulated by the New York State Legislature in the 2022 Working to Implement Reliable and Equitable Deployment of Broadband Act (WIRED Broadband Act), which declares that:

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Per NTIA's guidance, CAO will also take actions to promote the general welfare as it relates to the benefits of broadband access across the following outcome areas:

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[2] The WIRED Broadband Act added a new Section 16-gg to Section 1 of Chapter 174 of the laws of 1968, constituting the New York State Urban Development Corporation Act. (WIRED Broadband Act, New York State Urban Development Corporation Act § Chapter 174: Section 1: Section 16-gg (2022). https://www.nysenate.gov/legislation/laws/UDA/16-GG*2. https://www.nysenate.gov/legislation/laws/UDA/16-GG*2).

2.1 ConnectALL Office

Through CAO, the State of New York will mobilize more than $1 billion in public investments to connect New Yorkers in rural and underserved areas statewide to broadband. Governor Hochul announced five new grant programs as a framework for CAO's public investments:[3]

- **State Digital Equity Plan (SDEP) and grant program** to support New Yorkers' use of the internet to participate in our society, democracy, and economy.
- **Rural Broadband Grant Program** for areas that lack broadband infrastructure ("ConnectALL Deployment Program").
- **Local Connectivity Planning and 21st Century Municipal Infrastructure Grant Program** for municipalities, nonprofits, and other entities to construct open and accessible public broadband infrastructure ("Municipal Infrastructure Program").
- **Affordable Housing Connectivity Program**, a partnership with New York Homes and Community Renewal to retrofit affordable housing with broadband installations as part of the agency's overall housing plan.
- **Connectivity Innovation Grant Program** to develop creative broadband solutions and ensure New York is a global leader in pioneering future breakthroughs.

Governor Hochul included three additional initiatives as part of CAO:

- Promote the federal government's **Affordable Connectivity Program (ACP).**[4]
- **Develop a Broadband Assessment Program and Interactive Map**, administered by the New York State Department of Public Service.
- **Streamline Broadband Construction** by eliminating fees, removing outdated regulations, and leveraging existing state assets.

CAO will invest at least $50 million in the digital equity grant program. Funding allocations will be made in compliance with NTIA's program parameters slated for release in 2024. CAO will make grants in line with the principles, strategy, and objectives detailed below.

2.2 ConnectALL's Planning Process

Comprehensive stakeholder engagement is a key component of CAO's digital equity planning. By leveraging and strengthening an already well-developed ecosystem of broadband and digital equity partnerships and working in collaboration with intergovernmental partners, established community-based organizations and service providers, the private sector, and representatives of covered populations as well as lived

[3] "Governor Hochul Announces New $1 Billion 'ConnectALL' Initiative to Bring Affordable Broadband to Millions of New Yorkers," January 5, 2022. https://www.governor.ny.gov/news/governor-hochul-announces-new-1-billion-connectall-initiative-bring-affordable-broadband.

[4] The Affordable Connectivity Program (ACP) provides eligible New Yorkers a discount of up to $30 a month toward internet service and up to $100 for a new computer or other connected device. (https://www.affordableconnectivity.gov/do-i-qualify/.)

experts themselves, CAO has built an SDEP that is community-informed (see **Chapter 4: Principles for Stakeholder Engagement** for more details on the planning process).

CAO adopted the following five digital equity principles that speak to the purpose of our work. These principles strongly resonated with diverse stakeholders across the state and will be used during the implementation phase to align CAO's activities across its programs and various funding sources.

- **Equity**: All residents and businesses should have the internet, digital literacy, and devices to participate fully in our society, democracy, and economy.
- **Performance:** All internet service should be reliable and of high quality, delivered with excellent customer service and providing safe, rewarding quality jobs.
- **Choice:** All residents and businesses should be able to determine their service
- provider, service plans, and modes of digital engagement.
- **Affordability**: No one should be denied internet service because of an inability to pay.
- **Safety**: All residents should have privacy, security, and dignity online, and our use of the internet should enhance our well-being.

2.3 Alignment with Existing Efforts to Improve Outcomes

CAO aligns its Digital Equity program with the efforts of State agencies across the five outcome areas described in this chapter. CAO, through its predecessor the Broadband Program Office and in partnership with the New York State Library (NYSL), has convened representatives from State agencies since 2020 to develop strategy, obtain information on existing State programs and resources, and identify partners to support digital equity planning and program implementation.

In Spring 2023, CAO and NYSL established the Digital Equity Task Force (DETF) with a subcommittee for each of the five outcome areas. CAO and NYSL identified State agency co-chairs that have expertise in the outcome areas and serve covered populations to lead each subcommittee and convened a town hall for each subcommittee throughout Summer 2023. In total, more than 550 key stakeholders provided targeted input through public town halls for inclusion in New York's State Digital Equity Plan, including the vision for each outcome area presented in **Chapter 2.4.2 Measurable Objectives**.

Through the DETF, CAO reviewed plans from State agencies represented on the Task Force along with supplementary State, regional, county, and local strategic plans. CAO has identified initial findings and areas of alignment in existing State initiatives and plans with the digital equity outcome areas. Across all five outcome areas, public libraries in New York State have played a significant role in bridging the digital divide. The New York State Education Department 2021 report identified the opportunity for both the state and local governments to invest in public libraries to build capacity to provide accessible computer

centers, public internet access and hotspots, and digital literacy training, and as a trusted partner to increase public awareness of affordability broadband service options.[5]

CAO will continue to align its digital equity planning with efforts across the state to ensure New York's investments help further goals in key outcome areas.

2.3.1 Economic and Workforce Development

In her 2023 State of the State: Achieving the New York Dream,[6] Governor Hochul made the following commitments relating to digitally inclusive workforce development:

- Invest $200 million in digital transformation and IT infrastructure across the State university system.
- Invest $75 million for transformational initiatives at campuses that support innovation, to help meet the workforce needs of the future and provide needed support to students.
- Transform Department of Labor Career Centers into "Community Training and Career Centers" with additional professional skills trainers that provide unemployed and underemployed New Yorkers with no-cost training in high-need areas such as digital and financial literacy.
- Retool the Department of Labor CareerZone Platform to specifically help youth, young adults, and Digital Literacy learners explore career paths and develop baseline professional skills required by employers from all sectors.

These commitments align with the following recommendations to improve outcomes in this area from the DETF Subcommittee on Economic and Workforce Development:

- Foster relationships between community organizations and employers to build the necessary bridges and pipelines to jobs, support new employees after they enter employment, and consider the needs of employees in every region across the state.
- Raise awareness around community-based organizations, housing providers, social service agencies, and quasi-governmental actors that offer training and support, and of those that are developing programming in complement to those already in existence.
- Implement strategies for sourcing and retaining diverse talent for digital literacy training programs.

[5] Horrigan, John. "New York's Digital Divide: Examining Adoption of Internet and Computers for the State and Its Library Districts." New York State Library, April 2021. https://www.nysl.nysed.gov/libdev/documents/HorriganReportNY.pdf.

[6] Hochul, Kathy. "2023 State of the State: Achieving the New York Dream," January 10, 2023. https://www.governor.ny.gov/programs/2023-state-state.

- Encourage industry leaders to establish and administer workforce development programs that provide those seeking employment with the vital training, credentials, and certifications needed to sustain employment.

2.3.2 Education

NYSL makes the following recommendations to the State in its report "Achieving Digital Equity in New York: An Outline for Collaborative Change":[7]

- Develop place-based digital equity coalitions and regional/local digital equity plans.
- Shift digital inclusion efforts from building-restricted Wi-Fi and device loaning to household internet and device ownership.
- Develop digital stewardship models to include community members in the development of digital equity solutions.

These recommendations are in alignment with the following digital equity solutions recommended by the DETF Subcommittee on Education to improve educational outcomes across the state:

- Encourage partnerships between government, educators, communities, and corporations to develop a comprehensive and unified vision for digital equity by defining broadband as a fundamental right, ensuring accessibility to all citizens and enabling them to pursue a quality education.
- Foster digital fluency across age groups, subjects, and socioeconomic backgrounds.
- Provide accessible devices and tech support to bridge digital divides and promote equitable learning opportunities, especially for English language learners.
- Raise awareness around the precautions learners can take to ensure their online safety and provide accessible training to empower the public to navigate the internet without major concern of their data privacy.

2.3.3 Health

Governor Hochul's Telehealth Capital Program and the New York State Psychiatric Association's report on "The Future of Telehealth in New York State" exemplify the State's support of the development and deployment of innovative telehealth tools to help close the healthcare equity gap.[8,9] The Governor also announced significant investments to overhaul

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[7] Moore, Lauren. "Achieving Digital Equity in New York: An Outline for Collaborative Change." New York State Library, June 2021. https://www.nysl.nysed.gov/libdev/DigitalEquityNY.pdf.

[8] New York State Office of the Governor. "Governor Hochul Announces $3 Million in New Grants to Expand Access to Telehealth across All New York Regions | Governor Kathy Hochul," November 23, 2021. https://www.governor.ny.gov/news/governor-hochul-announces-3-million-new-grants-expand-access-telehealth-across-all-new-york.

[9] Minot, David. "The NYSPA Report: The Future of Telehealth in New York State." NY State Psychiatric Association (NYSPA), March 31, 2021. https://behavioralhealthnews.org/the-nyspa-report-the-future-of-telehealth-in-new-york-state/.

New York State's mental health care continuum, including requiring payment parity for behavioral health telehealth services.[10] Regarding older adults' access to healthcare, the Governor issued Executive Order 23 in November of 2022 to call for the creation of a Master Plan on Aging, which is currently in development by the NYS Department of Health and NYS Office for the Aging, building on decades of work and partnerships between State agencies, local governments, and other stakeholders.[11]

These activities are in alignment with the following digital equity solutions put forward by the DETF Subcommittee on Health:

- Establish peer-led digital literacy training programs, where individuals who are digitally proficient and from diverse backgrounds can educate and support others.
- Support and encourage partnerships between community institutions such as libraries, community centers, schools, and senior centers towards the creation of hubs for digital health literacy workshops, access points for devices, and spaces for individuals to connect and learn.
- Create mobile units equipped with devices and internet connectivity to reach underserved and rural areas, offering on-site digital literacy training, telehealth demonstrations, and assistance in accessing health resources.
- Develop culturally tailored digital health resources, guides, and tutorials that resonate with different communities.
- Collaborate with government agencies to allocate funds for digital health literacy programs.
- Work closely with healthcare providers to integrate digital health literacy training into patient care.
- Create user-friendly online platforms that offer a variety of digital health literacy courses covering topics ranging from basic device usage to navigating telehealth appointments and managing health records.
- Launch campaigns to raise awareness about the importance of digital health literacy.

2.3.4 Civic Engagement

During the planning process, CAO identified a lack of New York State services and initiatives explicitly related to civic engagement. The civic engagement outcome area is central to CAO's theory of change, represented by the multiplier activities under "Developing Networks

[10] New York State Office of the Governor. "Governor Hochul Announces Details of $1 Billion Plan to Overhaul New York State's Continuum of Mental Health Care | Governor Kathy Hochul," February 2, 2023. https://www.governor.ny.gov/news/governor-hochul-announces-details-1-billion-plan-overhaul-new-york-states-continuum-mental.

[11] New York State Office of the Governor. "Governor Hochul Signs Executive Order to Create New York's First-Ever Master Plan for Aging | Governor Kathy Hochul," November 4, 2022. https://www.governor.ny.gov/news/governor-hochul-signs-executive-order-create-new-yorks-first-ever-master-plan-aging.

of Action & Advocacy," detailed in **Chapter 2.4.1 Theory of Change, Strategies and Sample Activities**.

Access to the internet enables civic participation. As more activities related to civic engagement (such as individuals learning about and contacting those who represent them in government, or communities organizing campaigns, demonstrations, and other forms of advocacy) exist increasingly in the digital world, covered populations who already faced structural barriers to civic engagement now face new barriers to participation. Increasing awareness of digital equity services and enabling better service delivery will enable New York State to generate policy priorities that represent the needs of all New Yorkers and allow us to continually innovate to meet those needs.

The NYS Office for New Americans (ONA) is already taking this approach in furthering its mission to assist individuals and families with their civic and economic engagement in the state. Among their many programs, NYS ONA sponsors and implements Cell-Ed, a public-private partnership established by the State. Cell-Ed is a digital tool accessible on any mobile device. The tool hosts a large course catalog, including civics courses to help immigrants pass their U.S. Naturalization Exam.[12] ONA also offers naturalization support, civics test preparation, workshops at Opportunity Centers across the state, and online legal help to apply for citizenship through Citizenshipworks.[13,14] Programs like Cell-Ed, and the resources available to New Americans at Opportunity Centers and through Citizenshipworks, are examples of how vital internet access can be to New Americans' ability to participate in civic life in New York.

The DETF Civic Engagement subcommittee prioritizes future Digital Equity initiatives that:

- Develop policy and advocacy vehicles to highlight and address structural barriers to universal internet access, inclusive of promoting ease of application and eligibility to the ACP.
- Pool resources from community organizations, educational institutions, government bodies, and technology companies to leverage existing community hubs to expand internet access, training, and support.
- Encourage collaboration between schools, community organizations and parents to develop comprehensive youth-centered and age-specific digital literacy programs, inclusive of online safety and mentorship opportunities.

[12] New York State Department of State. "Cell-Ed." Accessed October 13, 2023. https://dos.ny.gov/cell-ed.

[13] New York State Department of State. "Opportunity Centers - Civics." Accessed October 13, 2023. https://dos.ny.gov/opportunity-centers-1.

[14] Citizenships. "Portal - Citizenshipworks." Accessed October 13, 2023. https://www.citizenshipworks.org/Campaign/nys-ona.

2.3.5 Delivery of Government Services

Efficiently connecting New Yorkers to critical benefits and services is a priority for the State. Governor Hochul announced a plan in January of 2023 to streamline access to government agencies, shorten processing times, and improve access to childcare assistance, tax credits, and critical food benefits. As digital access and skills are increasingly required to interact with and navigate public resources, the effectiveness of these initiatives will rely on continued investment in digital literacy services and thoughtful design around the needs of covered populations. The Office of Children and Family Services, NYS Office of Information Technology Services, Department of Health, Department of Taxation and Finance, Department of Motor Vehicles, and others will be involved in this multi-agency initiative.

Additionally, the New York State Council on Developmental Disabilities (CDD) has several programs aimed at improving digital services for people with developmental disabilities, including two 2-year projects creating digital training resources for people with developmental disabilities and providing specific funding for accessible information and plain language training.[15,16] The NYS DDPC championed several digital equity initiatives in the report "Digital Equity for People with Developmental Disabilities," including:[17]

- Support and expand resources to provide digital literacy training for people with developmental disabilities.
- Plan for the unique needs of people with disabilities as part of infrastructure planning.
- Consider the unique needs of people with developmental disabilities, as well as their families and service providers, especially in rural and underserved communities.

The DETF Accessibility of Government Services subcommittee prioritized the following activities as they pertain to the outcome area:

- State investment towards ensuring all government service websites operate on user-friendly and ADA-compliant platforms and include interactive videos and multilingual support. Investment should include funding mechanisms to audit and update sites regularly and to provide 24/7 customer and technical support.
- Incorporate tailored digital literacy trainings into public computing center programming such as libraries' existing Digital Navigator programs to address the specific needs of populations like aging individuals, individuals with disabilities, individuals with language barriers, formerly incarcerated individuals, and veterans.

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[15] CDD. "CDD Funded Projects, TechknowledgeMe." Council on Developmental Disabilities. Accessed October 13, 2023. https://cdd.ny.gov/techknowledgeme.

[16] CDD. "CDD Funded Projects, Accessible Information and Plain Language Training." Council on Developmental Disabilities. Accessed October 13, 2023. https://cdd.ny.gov/accessible-information-and-plain-language-training.

[17] CDD. "Digital Equity for People with Developmental Disabilities." Council on Developmental Disabilities. Accessed October 13, 2023. https://ddpc.ny.gov/system/files/documents/2023/02/digital-equity-policy-paper-final-2.15.23.pdf.

- Encourage ongoing collaboration between private organizations, Community Anchor Institutions, and government agencies to strategize outreach campaigns targeted towards specific populations to increase awareness of available resources.

2.4 Strategy and Objectives

2.4.1 Theory of Change, Strategies and Sample Activities

New York's State Digital Equity Plan and CAO's programs are grounded in a theory of change which informs the State's strategies and objectives in alignment with the vision and principles detailed earlier in this chapter.

The mission of CAO is to build New York State's digital infrastructure to connect all New Yorkers to internet service and ensure they can benefit from the opportunities afforded by being online. In pursuit of this mission, CAO has been granted authority by the federal government via its infrastructure funding and Governor Hochul's prioritization of broadband and digital equity issues via the WIRED Broadband Act, which mandates CAO to take actions to "assist in ending the digital divide, supporting a more robust and competitive internet marketplace, and carrying out other actions to ensure universal access to high-speed, reliable and affordable broadband."[18] CAO's efforts also benefit from New York's robust digital equity ecosystem, anchored in nearly every region of the state by Digital Equity Coalitions (DECs) that coordinate efforts across the government, nonprofit, private, and education sectors to end the digital divide. Additional data demonstrating the depth and breadth of this ecosystem is presented in **Chapter 3.1 Asset Inventory**. For more information on how CAO has collaborated with regional coalitions, see **Chapter 4 Principles for Stakeholder Engagement**.

The authority granted to CAO and the ecosystem CAO will build on are immense assets in the effort to end the digital divide in New York, but the digital equity needs New Yorkers shared through our planning process are also significant (**Chapter 3.2 Needs Assessment**). Without knowing the sum that will be allocated to New York through the Digital Equity Capacity Grant Program, CAO has committed to making at least $50 million in digital equity investments—a sum that must stretch across geography (the entire state), populations (all of New York's 20 million people), and time (at least five years). The latter dimension, time, is particularly challenging given that the federal and State funds are one-time commitments, whereas the digital divide is ever evolving. Just as connectivity technologies become ubiquitous and obsolete, so too do certain devices, digital literacy and capacities, and cybersecurity protocols and privacy needs.

[18] The WIRED Broadband Act added a new Section 16-gg to Section 1 of Chapter 174 of the laws of 1968, constituting the New York State Urban Development Corporation Act. (WIRED Broadband Act, New York State Urban Development Corporation Act § Chapter 174: Section 1: Section 16-gg (2022). https://www.nysenate.gov/legislation/laws/UDA/16-GG*2).

For these reasons, CAO's theory of change is driven by the need to identify multipliers that can amplify and sustain any financial investments we make, especially upstream and downstream from the physical infrastructure built via BEAD, the Department of Treasury Capital Projects Fund, and State investments. The sample activities proposed in **Chapter 5 Implementation** each correspond to the following multiplier strategies; examples of initiatives we would pursue to further these strategies are also provided.

CAO will pursue activities in line with the strategic pillars detailed below, that are consistent with the conditions, principles, and vision described in this chapter.

1. **Grounding Investments in an Asset-Based Approach**
    - Rather than starting from deficits, CAO will seek to build the capacity of community-rooted and trusted digital equity organizations over the long term.
    - CAO will do this by filling in gaps, strengthening, and scaling what is working well across existing assets, creating new assets only where necessary. CAO will also make structural changes to increase access to these assets.

CAO will explore methods to execute this strategy including:

- **Invest in physical and digital accessibility across New York's public library system.** As highlighted throughout this plan, libraries are a key partner in the fight to close the digital divide, so their buildings and websites need to be accessible to all covered populations for CAO to effectively partner with them in identifying and scaling programs as part of the Capacity Grant Program.
- **Consider allocating a portion of capacity grant resources toward the creation of a participatorily budgeted and governed fund** so local digital equity and lived experts can steward capacity grant funding as they see fit. This will also support Strategy 3, in solidifying trust between CAO and the public.

2. **Strengthening networks to share resources and take coordinated action**
    - CAO will invest in ensuring that digital equity organizations and service providers and the communities they serve are independently connected, collaborating, and sharing knowledge, which will ensure the long-term sustainability of digital equity efforts beyond the life of the federal funding currently available.
    - Organizations, service providers, and community members in organized networks will power civic engagement on digital equity issues (and, ideally, on a suite of social issues) in New York. Advocacy, community organizing, and campaigns are strengthened by the ability to identify points of solidarity, mobilize collective action, and increase participation in democratic processes—both online and offline.

CAO will explore methods to execute this strategy including:

- **Continuing to support the capacity and sustainability of regional DECs.** CAO aims to ensure coalition longevity and growth as key anchors in the state's ecosystem, as by facilitating knowledge-sharing and partnership among coalitions and convening them semi-frequently to strengthen their connections.
- **Integrating alternative approaches into the traditional digital equity toolkit or transitioning existing models where appropriate, including base-building, community-organizing, and community ownership and stewardship models.** These approaches can serve as a launchpad for communities to self-determine their internet and infrastructure futures. This will also support Strategies 3 and 4 by promoting wider public education across digital equity issues and beyond and potentially generating novel approaches to ending the digital divide, respectively.

3. **Building Alignment & Awareness:**
    - CAO will aim to organize expertise and resources across the field and government (at the State, regional, county, and municipal levels) to advance digital equity policy innovation and standard-setting across social programs.
    - CAO will also promote standout programs to the public to broaden awareness and adoption of best practices; inherent in this effort is the need to build, deepen, and in some cases repair trust between government and the communities it serves.
    - By aligning the force of the government behind insights from the field and making government efforts more known to the public, CAO can create a virtuous circle whereby the best practices identified through our asset-based approaches and network development are mutually reinforced by all stakeholders and can have greater impact through wider audiences.

CAO will explore methods to execute this strategy including:

- **Further developing the Digital Equity Task Force (DETF) infrastructure**, which was crucial during the ConnectALL planning process. DETF brings to bear a diversity of expertise—from government and digital equity practitioners and experts across the state who serve covered populations—on digital equity issues; expanding the mission to include implementation, policy development, and performance measurement functions going forward will continue to amplify CAO's reach and impact.
- **Creating and maintaining a publicly available online asset inventory that functions as a statewide digital equity services directory.** This also furthers Strategies 2 and 4, by cataloguing unconventional programs and services under a digital equity umbrella and elevating best practices in a transparent and accessible format, respectively.

- **Coordinating public education campaigns on an ongoing basis across** digital equity issues that are critical to CAO achieving its mission. These are distinct but would ideally complement the grassroots campaigns of Strategy 2.

4. **Sharpening & Socializing our Digital Equity Lens**
    - Because the digital divide is ever-evolving, CAO will incubate new approaches to persistent challenges, measure its own impact and the work of others, and publish its findings.

CAO will explore methods to execute this strategy including:

- **Creating and resourcing communities of practice across outcome areas to facilitate joint problem solving and participatory program design.** These structures would support CAO's grants management and communications efforts through the implementation process and further Strategy 2 by building another kind of network of engaged stakeholders.
- **Releasing data CAO collects publicly as mechanism for transparency and accountability,** supporting Strategies 2 and 3 by allowing communities to independently understand and act on the data, respectively.

Together, these strategic pillars will allow CAO to prioritize and streamline activities in pursuit of its mission, even as one-time funding is deployed. This theory of change is also responsive to the goals that stakeholders communicated during CAO's planning process, including:

- Supporting existing organizations who have already built trust with communities and covered populations.
- Building the capacity of these organizations and the people they serve to design their own solutions to promote digital equity.
- Coordinating existing resources and efforts in government to build strategic redundancies and ensuring those best situated to solve a certain dimension of the digital divide can embrace their strategic advantages.
- Continuing to innovate, which is required to bridge the digital divide in New York once and for all.

2.4.2 Measurable Objectives

Through the theory of change and strategic pillars outlined above along with activities elaborated in **Chapter 5 Implementation**, CAO expects to achieve the following measurable objectives toward realizing New York's vision for digital equity. CAO's plans to track progress on these objectives are also described in Chapter 5.

The baseline needs from which these objectives are derived is presented in the Chapter **3.2.3 Digital Equity Needs, Barriers, and Assets Gap Analysis**.

1. **Broadband Affordability & Availability**
    - **Increase the number of households statewide with broadband internet connections at home**, especially households living in subsidized affordable housing and rural households. Covered populations, especially in low-income and rural communities, report lower rates of access to broadband internet connection. Successful rollout of CAO's Affordable Housing Connectivity and Rural Broadband Grant Programs will provide infrastructure connectivity, and partnerships with Digital Equity providers can improve adoption rates.
    - **Increase the share of locations in each region that have more than one Internet Service Provider (ISP) option.** New Yorkers are concerned about a lack of choice among ISPs leading to lower quality of service at higher prices. By prioritizing consumer choice both in CAO's infrastructure and digital equity investments (through expanding existing public access networks and supporting consumer education campaigns to increase the visibility and transparency of bundled service terms), all New Yorkers can benefit from greater internet affordability and more transparent and predictable pricing.
    - **Increase the share of locations in each region that have options for unbundled, affordable broadband service.** CAO identified service bundling as a challenge for consumers seeking to minimize the cost of broadband service. CAO will work through its various grant programs to increase the number of households that can purchase unbundled broadband service, lower the cost of high-speed internet service (symmetric one gigabit per second),[19] and lower the average cost of internet service in each region or county.[20] For example, as part of its BEAD middle-class affordability plan, CAO will require prospective subgrantees to offer at least one unbundled broadband product with a transparent price (i.e., no hidden fees) and certify that it will continue to provide this option to middle-income households for six years.
    - **Increase adoption of affordability programs.** Many eligible New Yorkers are not aware of the ACP subsidy, and some New Yorkers who are aware of the subsidy cannot or do not use it. By investing in proven models to expand ACP outreach and supporting public education and awareness campaigns so consumers better understand the ACP program, CAO expects to continue to increase New York's nation-leading ACP enrollment. CAO will also continue to ensure all ISP grantees provide affordable service options in every region of the state.

[19] A symmetric one gigabit per second threshold was established in the NYS BEAD 5-Year Action Plan as part of BEAD primary criteria (NYS ConnectALL Office. "Five-Year Action Plan Broadband Equity, Access, and Deployment (BEAD) Program." NYS Empire State Development. 2023.) and the New York State Wired Act (Webb. S.B. S5165. New York State Senate. https://www.nysenate.gov/legislation/bills/2023/S5165.)

[20] 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.

2. **Accessibility of Devices & Device Support**
    - **Increase the number of New York households that have internet-enabled devices at home.** New Yorkers belonging to covered populations struggle to afford internet-enabled devices at home—particularly those with specific needs like assistive technology or non-English language services. CAO can reduce the device gap in New York by scaling successful existing device donation, refurbishment, lending, and ownership programs, and partnering with government and non-governmental entities on raising awareness about these programs and creating effective distribution channels.
    - **Increase access to assistive technology** that meets the needs of people with disabilities.
    - **Decrease the number of New Yorkers reporting challenges maintaining or troubleshooting their own devices.** New Yorkers that already have devices or participate in programs to procure them lack the technical support needed to maintain and troubleshoot them. CAO can increase the number of people who have the skills to provide technical support, especially among communities that report challenges with maintenance. This approach can benefit those individuals with potentially employable technical skills and benefit those communities that need readier access to technical support. In December 2022, Governor Hochul signed the Digital Fair Repair Act into law granting consumers and technicians new rights to obtain parts and information from original equipment manufacturers to be able to independently repair their own devices.[21] The law, which went into effect in July 2023, will further lower barriers for device repair and maintenance for all New Yorkers.
    - **Increase options for proper device disposal, recycling, and refurbishment.** Ongoing equipment refresh is an essential component of digital equity. As CAO expands the number of New York households that have internet-enabled devices at home, there will be a corresponding need to educate households on the right time to upgrade and to connect them to device disposal options that protect their privacy and the environment. There will also be an ongoing opportunity to refurbish and redistribute usable equipment.

3. **Digital Literacy**
    - **Increase New Yorkers' awareness of available digital literacy programs.** Covered populations—especially aging individuals, incarcerated individuals, low-income households, individuals with language barriers, and individuals with disabilities report lower confidence in overall digital literacy than average New Yorkers. Where programs already exist to meet the needs of these populations,

[21] "Governor Hochul Signs the Digital Fair Repair Act Into Law," December 29, 2022. https://www.governor.ny.gov/news/governor-hochul-signs-digital-fair-repair-act-law.

CAO will build awareness through partnerships with trusted messengers for specific populations.

- **Increase covered populations' access to digital literacy programming aligned to their specific needs and interests.** CAO can build capacity to meet the specific needs of covered populations in each region where such programs are not currently available. CAO can scale capacity of existing programs that are aligned to local needs and interests but are not currently able to meet demand. CAO can increase the accessibility of key facilities where trainings are offered. CAO can facilitate program offerings through connections to relevant resources and assets in other regions or nationally.
- **Increase coordination among training providers.** During the ConnectALL planning process, providers of digital literacy programs frequently raised a lack of consistent curricula and training standards that align with industry standards as barriers to effectively scaling their work. By strengthening alignment on these issues, CAO can smooth the delivery and ensure the impact of digital literacy programs for New Yorkers that need them. CAO will facilitate collaboration among providers to achieve consistent and industry-aligned training standards for skills programs across the state, particularly for youth education, workforce, or small business audiences. CAO will also deepen coordination within regions so training program providers more consistently refer members of covered populations to other assets that are aligned with their evolving needs and interests—for example, as people progress through education and into the workforce.

4. **Privacy & Cybersecurity**
    - **Increase the number of assets providing privacy & cybersecurity training to New Yorkers,** especially to members of covered populations like individuals with disabilities, individual with language barriers, racial and ethnic minorities, and youth. Covered populations reported almost universal concern over stolen data, scams, and surveillance. The New York State Asset Inventory suggests a need to scale existing and develop new approaches to delivering such content that meets the specific programmatic needs of various covered populations.

5. **Accessibility & Inclusivity of Public Resources**
    - **Collaborate on the design and implementation of universal accessibility standards across State government websites**. Covered populations report lower confidence in accessing online public resources than average New Yorkers, which is especially problematic as many are eligible for and in need of public benefits. Through the DETF, State agencies can coordinate and marshal resources to achieve better accessibility outcomes for online resources. CAO can work with these partners to improve the confidence covered populations

feel in accessing online public resources, as by engaging members of those populations in the design of those online services and by making various public websites more consistent for the people they are intended to serve.

- **Develop outreach campaigns to increase covered populations' trust in online public resources.** Covered populations are less likely than other groups to interact with online government resources—less because of a lack of awareness or ability, and more due to a lack of trust in the accuracy and safety of these systems—based on data collected by CAO during the planning process. CAO can promote greater online participation in essential government services by building trust in these systems via outreach activities and by developing meaningful processes to gather continuous feedback from users in the community.

3.0

State of Digital Equity in New York

3.0 State of Digital Equity in New York

Due to the passage of the Digital Equity Act (DEA) of 2021, states are taking on a central role in both collecting vital data on digital equity and creating infrastructure and policy to advance digital equity goals. Building from the baseline of the U.S. Census Bureau's American Community Survey (ACS), which provides nationwide information about home broadband and device adoption, the DEA provides states with the opportunity to build a new and expanded baseline regarding the needs of specific covered populations, as well as a range of digital inclusion activities that can address those needs.

This chapter offers the resulting evidence base, which will inform effective policy and long-term solutions to build and advance digital equity over the next half-decade. The chapter begins with the *asset inventory*: an organized database to categorize and understand the wealth of community resources, knowledge, and expertise that are already advancing digital equity in New York State. Such an approach is inherently solution-oriented and recognizes that solutions already exist that can be strengthened and further expanded with a firm foundation.

The comprehensive *needs assessment* follows: a catalog of the needs and barriers to meaningful internet adoption expressed by populations that have been historically left out of digital advancement.

To develop the asset inventory and needs assessment, CAO partnered with regional entities, including Digital Equity Coalitions (DECs) and their partners who hold relationships with covered populations across the state. CAO has used the asset inventory and needs assessment in combination to analyze New York's ecosystem, identify gaps, and ultimately to align efforts towards an empirically defined digital equity roadmap, which is described in **Chapter 5 Implementation**.

3.1 Asset Inventory

CAO worked in partnership with community organizations, Community Anchor Institutions, and other stakeholders to compile a searchable digital equity asset inventory with data on more than 900 existing programs, organizations, plans, and other assets currently advancing digital equity within the state.

The asset inventory is an evolving database which CAO will continue to refine beyond the publication of this State Digital Equity Plan (SDEP) and throughout the BEAD process. The current Asset Inventory can be viewed here or click at this address: https://bit.ly/NYS-DE-Asset-Inventory

The asset inventory includes programs related to digital literacy training, including workforce development and basic skills programs; technical assistance programs aimed at supporting digital inclusion; and partnerships and coalitions that work toward digital equity.

3.1.1 Digital Inclusion Assets by Covered Population

The New York State Digital Equity Asset Inventory catalogs over 900 assets that advance broadband accessibility and affordability, accessibility of devices and device support, digital literacy, online privacy and cybersecurity, and the accessibility and inclusivity of public resources, as well as the State outcome areas, for covered populations that face disproportionate barriers to digital equity and inclusion.

CAO has organized assets according to the NTIA five measurable objective categories, per guidance from the NTIA Asset Mapping Guide: "Asset mapping information should be organized into sections and fields according to common types of digital equity work."[22]

1. Broadband Affordability & Availability
2. Accessibility of Devices & Device Support
3. Digital Literacy
4. Privacy & Cybersecurity
5. Accessibility & Inclusivity of Public Resources

Within each category, CAO has sampled representative assets that collectively meet the following criteria:

1. Service to all covered populations.
2. Inclusion of example "network assets" that operate statewide or across regions (e.g., schools, libraries, non-governmental organizations, etc.)
3. "Innovative or portable assets" that operate pilots or mature programs worthy of scaling up with more funding.

3.1.1.1Assets Advancing Broadband Affordability & Availability

Over 400 assets advance broadband affordability and availability across the state by investing in infrastructure and internet access in buildings, delivering high-speed wireless internet in publicly accessible spaces, advocating for equitable broadband investment.

Unique assets operate in different regions across the state and meet the needs of specific covered populations. Some of these assets are sampled in *SDEP Appendices Part II*: the Adirondack North Country Association, Albany Housing Authority, Allegany County Telecommunications Development Corporation, Big Apple Connect, Bridgehampton Child Care and Recreational Center, City of Syracuse, Claryville Volunteer Fire Department, Community Development Corporation of Long Island, General Business Course at Elmira Correctional Facility, Great Lakes Connect, LinkNYC, Mohawk Valley Resource Center for Refugees, New York State Association for Affordable Housing (NYSAFAH), North Country

[22] NTIA. "Asset Mapping Guide: Data Equity Gathering Best Practices." NTIA, September 2022. https://broadbandusa.ntia.doc.gov/sites/default/files/2022-09/Asset_Mapping_Guide.pdf.

Broadband Alliance, Nubian Directions II, Silicon Harlem, STEM Alliance, Sunset Park Digital Inclusion Group, Tioga County Rural Ministry, and Westhab.

In addition, networks of assets deliver similar broadband affordability and availability services across multiple regions or the entire state. A sample of networked assets is summarized below:

- **Boards of Cooperative Educational Services (BOCES).** 37 BOCES provide shared, cost-effective educational programs and services to school districts within the state outside of the largest urban areas New York City, Buffalo, Rochester, Yonkers, and Syracuse.[23] BOCES generally provide free internet access on premises, free access to online subscription services, group classes and workshops on digital literacy and cybersecurity, individual assistance on digital literacy and cybersecurity, access to devices on premises, and device loans.
- **Community Action Agencies (CAA).** CAAs are local nonprofit organizations that deliver Community Action Program (CAP) services that broaden communities' access to public services, such as the Affordable Connectivity Program (ACP), Low-Income Home Energy Assistance (LIHEAP) grants, and Weatherization Assistance Program (WAP) grants and case management.
- **Community centers**. Community centers—such as YMCAs, YWCAs, Boys & Girls Clubs—commonly provide access to high-speed internet on premises within communities where residents have low rates of reliable connectivity at home.
- **Universities.** Institutions of higher education**—**including City University of New York (CUNY) and State University of New York (SUNY)—campuses and programs extend access to broadband internet to students, workers, and members of the community.
- **Libraries.** Over 260 public libraries, operating within regional and statewide library networks, facilitate access to high-speed wired and wireless internet across the state. These libraries also serve as centers for accessing digital devices and digital literacy programming, as discussed below.
- **United Way.** United Way organizations across the state have funded digital equity studies and reports as well as pilots and projects that extend access to broadband to covered populations.

3.1.1.2 Assets Advancing Accessibility of Devices & Device Support

Over 380 assets provide access to internet-enabled devices or technical device support across the state. Many assets that lend or provide devices pair device access programs with training and digital literacy programming to ensure beneficiaries can make the most of the devices they have are using for work, school, or other purposes.

Unique assets operate in different regions across the state and meet the needs of specific covered populations. Some of these assets are sampled in *SDEP Appendices Part II*:

[23] BOCES. "About BOCES." https://www.boces.org/about-boces/.

AccessCNY, Bronx Community Foundation, Healthy Communities Alliance, Livingston County Workforce Development Office, Mission: Ignite, Mohawk Valley Community College, New York City Housing Authority (NYCHA), OLA of Eastern Long Island, On Point for College, Ontario County Youth Court, Open Doors English, RSVP Suffolk, SAGE USA , Shift2, Southern Adirondack Independent Living, Suffolk Regional Information Center, Syracuse Northeast Community Center, Technology for Families in Need, and the Shore Foundation.

In addition, networks of assets deliver devices and device support across multiple regions or the entire state. A sample of networked assets is summarized below:

- **Libraries:** At least 240 of these assets are public libraries, which allow access to connected devices on their premises. Some library systems offer loan programs that lend laptops and Wi-Fi hotspots and feature assistive technology on premises, which increases the accessibility of websites for individuals with disabilities.
- **NYC Public Computing Centers (PCCs):** A public computing center (PCC) is a public facility offering computers with internet access, and it may also offer other devices, services, and digital literacy programming. A PCC may be funded in whole, or in part, with public dollars in order to provide a public service (i.e., access to digital inclusion resources). There are 455 PCCs in New York City, which are overseen by six separate entities: the three public library systems, Brooklyn Public Library (BPL), New York Public Library, and Queens Public Library; and three City agencies, New York City Department for the Aging (DFTA), New York City Department of Parks & Recreation (NYC Parks), and New York City Department of Youth & Community Development (DYCD).

3.1.1.3 Assets Advancing Digital Literacy

About 700 assets—the majority of assets in the state—deliver digital literacy programming to the general public or deliver programming adapted for and targeted to specific covered populations. Some of this programming covers topics related to online privacy and cybersecurity, which is covered separately below.

Unique assets operate in different regions across the state and meet the needs of specific covered populations. Some of these assets are sampled in *SDEP Appendices Part II*: ATTAIN, CanCode Communities, Center for Community Alternatives, Center for Self Advocacy, City of Long Beach, Cornell Cooperative Extension- Orleans County, DOROT, First Tech Fund, Inc, Goodwill of the Finger Lakes, Green Worker Cooperatives, Knowledge House, Lifting Up Westchester, Literacy CNY, Make the Road New York, Older Adults Technology Services (OATS), Inc., Schoharie Economic Enterprise Corp (SEEC), Suffolk County Sheriff START Center, and the Yates County Office of Aging.

In addition, networks of assets deliver devices and digital literacy programming across multiple regions or the entire state. A sample of networked assets is summarized below:

- **Boards of Cooperative Educational Services.** 37 BOCES provide shared, cost-effective educational programs and services to school districts—serving K-12 school students as well as adults seeking GEDs and high-school equivalency courses—outside of the largest urban areas New York City, Buffalo, Rochester, Yonkers, and Syracuse.[24] These resources include group classes and workshops on digital literacy and cybersecurity and individual-level assistance on digital literacy and cybersecurity.
- **County Offices of Aging.** County Offices for/of Aging—e.g., Broome County, Tompkins County, Yates County—provide digital literacy programming adapted for the needs of aging individuals, often delivered in partnership with local digital equity institutions.
- **Libraries**. Over 300 libraries statewide deliver digital literacy courses and materials to the public on a regional and local level. A given library network serving a given county or region tends to offer standardized programming across the network.
- **The New York City Office of Technology and Innovation (OTI) Connected Communities Initiative** provides digital literacy and employment resources to historically underserved areas, serving thousands of New Yorkers annually. NYC Connected Communities delivers devices, software, mobile hotspots, and over 24,000 hours annually of digital literacy programming to over 100 public sites. The initiative includes partnerships with NYC Parks, the Department for the Aging (DFTA), the New York City Housing Authority (NYCHA), and the city's three library systems.[25]
- **Regional/County Offices of Workforce Development.** Offices of workforce development deliver digital literacy training adapted to prepare youth and adults for employment in professions requiring technical computer and internet use skills.

3.1.1.4 Assets Advancing Privacy & Cybersecurity

Almost 200 assets deliver programming and resources that focus on cybersecurity and safe and private use of the internet. Although a smaller share of assets explicitly focusses on helping New Yorkers maintain their Privacy & Cybersecurity on the internet, much of the digital literacy programming summarized above—offered by libraries, workforce development offices, BOCES and schools, and other institutions—does include content on safe and secure internet usage.

Unique assets operate in different regions across the state and meet the needs of specific covered populations. Some of these assets are sampled in in *SDEP Appendices Part II*: AARP, Boys and Girls Club of Rochester, EPIC (Every Person Influences Children), FEARLESS of the Hudson Valley, InterFaith Works, Knowb4, NY Metro InfraGard, and SUNY Cobleskill College of Agriculture and Technology.

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[24] BOCES. “About BOCES.” https://www.boces.org/about-boces/.

[25] NYC Office of Technology and Innovation. “Services for New Yorkers: Broadband.” 2023. https://www.nyc.gov/content/oti/pages/broadband.

3.1.1.5 Assets Advancing Accessibility & Inclusivity of Public Resources

About 400 assets connect individuals to public resources and services online. These assets include libraries, community-based organizations, community centers and recreation centers, and advocacy organizations. Assets that specialize in expanding access to public resources online tend to focus on benefits enrollment—including ACP enrollment, healthcare benefits enrollment and navigation, and enrollment and participation in other means-tested programs (e.g., SNAP, LIHEAP, weatherization, etc.).

Unique assets operate in different regions across the state and meet the needs of specific covered populations. Some of these assets are sampled in *SDEP Appendices Part II*: Adirondack Health Institute, Catholic Charities of Cortland County, Community Access, Inc., Computers 4 People, Exodus Transitional Community, Herkimer County Office for the Aging, Immigration Advocates Network, Older Adults Technology Services (OATS), New York State Developmental Disabilities Planning Council (DDPC), New York Statewide Senior Action Council, Rural Health Network of South Central NY, South Bronx Rising Together (SBRT), The Viscardi Center, Veterans Integration to Academic Leadership.

3.1.2 Existing Digital Equity Plans

The New York State Digital Equity Asset Inventory features 44 plans, resources, or reports that either provide data on some aspect of the digital divide in New York State or provide recommendations on how to bridge the digital divide and increase equity. The plans were identified through the engagement work of DECs. These reports have been authored by a variety of organizations including libraries, municipal governments, and nonprofits. Each author addresses a unique aspect of digital inequity in the state, focusing on distinct geographies or populations and providing a unique lens from the perspective of the authoring organization. Together, they produce a clear picture of the multifaceted work that organizations across the state have been engaged in to define and address digital inequity.

Plan contents and recommendations are detailed *SDEP Appendices Part II*.

3.1.2.1 Federal and New York State Plans, Resources, and Reports

- "ACP Enrollment and Claims Tracker." Universal Service Administrative Company. (2023)
- "Audit: New NY Broadband Program." NY State Comptroller. (2022)
- "Indicators of Broadband Need." United States Department of Commerce, National Telecommunications and Information Administration (NTIA). (2020)
- "New York State Digital Equity Portal Final Report." New York State Education Department, Cornell University School of Industrial and Labor Relations (ILR), John R. Oishei Foundation, Central New York Digital Inclusion Coalition, Community Tech New York (CTNY), New York Public Library. (2021)
- "New York State Public Service Commission (PSC) Broadband Map." New York State Public Service Commission. (2023)

- "Report On the State of Broadband Access in New York's 22nd Congressional District." 22nd Congressional District. (2020)
- "Report: Making Strides on Broadband Affordability." NY State Comptroller. (2023)
- "Report: Understanding Broadband Challenges in New York State." NY State Comptroller. (2021)
- "The Digital Divide in New York State." New York State Council on Children and Families, New York Kids Count. (2022)

3.1.2.2 County and Municipal Plans, Resources, and Reports

- "Broome County Office for Aging Plan for Services 2022-2023." Broome County Office for the Aging. (2021)
- "Community Access Plan and Funding Strategy for Broadband." Monroe County. (2023)
- "Community Needs Survey for Steuben County Office for the Aging 2022." Steuben County Office for the Aging. (2022)
- "Tompkins County Office for the Aging Needs Assessment, Summary Report." Tompkins County Office for the Aging. (2019)

3.1.2.3 Libraries and Schools Plans, Resources, and Reports

- "2022 Digital Inclusion Toolkit." New York State Library. (2022)
- "Achieving Digital Equity in New York: An Outline for Collaborative Change." New York State Library. (2021)
- "Annual Statistical Report of Member Libraries - STLS." Southern Tier Library System. (2022)
- "Creating Healthy Digital Equity Ecosystems in NYC: Maximizing the Benefits of the Internet Master Plan." Columbia School of International and Public Affairs (SIPA). (2021)
- "Digital Divide Index." Purdue Center for Regional Development. (2021)
- "East New York's Digital Access Needs." Brooklyn Public Library (BPL). (2017)
- "Leverage Libraries to Achieve Digital Equity for All." American Library Association. (2022)
- "New York's Digital Divide: Examining adoption of internet and computers for the state and its library districts." Technology Policy Institute, New York Public Library. (2021)
- "NYS ARPA digital equity program/awards." New York State Library (NYSL). (2022)

3.1.2.4 Resources by Nonprofits, Philanthropies, and Community Based Organizations

- "Child & Family Well-being in New York State: Addressing Barriers to More Equitable Opportunities." Citizens' Committee for Children of New York. (2023)
- "Closing the Digital Skills Divide." National Skills Coalition. (2023)

- "Closing the Latino Digital Divide." Hispanic Federation. (2022)
- "Connecting Rural Older Americans with Technology: Lessons from Senior Planet." Older Adults Technology Services (OATS), Inc. (2020)
- "Digital Equity Roadmap." John R. Oishei Foundation, Community Tech New York (CTNY). (2021)
- "Digital Navigators of the Hudson Valley." Digital Navigators of the Hudson Valley. (2023)
- "Fly Like an Eagle: Measuring Transformational Social Outcomes Among Seniors Using Technology." Older Adults Technology Services (OATS), Inc. (2022)
- "Homeless Need Internet Access to Find a Home." City Bar Justice Center's (CBJC) Legal Clinic for the Homeless (LCH). (2020)
- "Immigrant Health Care Options." Academy of Medical and Public Health Services.
- "Increasing Digital Inclusion for Older Adults in New York's North Country." Older Adults Technology Services (OATS), Inc. (2020)
- "Investing in Quality: A Blueprint for Adult Literacy Programs and Funders." Literacy Assistance Center. (2017)
- "No Home Left Offline: Accelerating Affordable Connectivity Program Adoption." Education Superhighway. (2022)
- "Orleans Digital Literacy Initiative Final Report." United Way of Orleans County. (2021)
- "Southern Tier Digital Equity Regional Needs Assessment." Southern Tier Digital Equity Coalition (STDEC). (2023)
- "Westchester County - 2022 Digital Access Survey and Report." Westchester Children's Association / Pace University. (2022)

3.1.3 Existing Digital Equity Programs Operated by New York State Government

New York State agencies, counties, and municipalities currently operate a variety of broadband and digital equity programs.

DECs across the state have recorded 25 counties or specific county agencies doing work to bridge the digital divide for their communities. Similarly, the statewide Digital Equity Asset Inventory includes 9 municipal governments and multiple planning and economic development agencies furthering this work. These public agencies are working to identify broadband and digital equity needs in their communities, develop strategies to connect constituents to existing federal and State resources, and plan for the deployment of new resources, including fiber and broadband infrastructure, to meet additional community needs.

Other programs focused on the equitable delivery of physical broadband infrastructure are summarized in the BEAD Five-Year Action Plan.[26]

[26] "Five-Year Action Plan Broadband Equity, Access, and Deployment (BEAD) Program." Supra.

Table 1: Current and Recent New York State Broadband Equity Activities

Activity name	Description	Intended outcome(s)
Statewide Digital Equity Plan and grant program	Development of the SDEP through a statewide data collection and community engagement process; implementation of a statewide grant program to fund programs that will support individuals to have the information technology capacity needed for full participation in society and the economy.	The SDEP reflects the needs and priorities of diverse communities across New York; all residents benefit from funded programs and can use the internet to participate in society, democracy and the economy.
ConnectALL Affordable Housing Connectivity Program	Funding to deploy high-speed broadband infrastructure to affordable housing properties, as well as to upgrade in-building wiring and equipment to support high-speed service to individual residential units.	Residents in affordable and public housing have access to affordable, reliable, high-speed internet.
ConnectALL Connectivity Innovation Grant Program	Grants, seed funding, and matching funds to develop, pilot, and deploy innovative models and technologies for the delivery of broadband service to meet the needs of rural, low-income, and other areas that would otherwise not see investment.	Deployment of innovative and new broadband solutions, business models, and technologies; increased private sector investment and entrepreneurship to drive equity and innovation in the broadband marketplace; a thriving research, development, and manufacturing ecosystem to support connectivity innovation in New York.
Affordable Connectivity	The Department of Public Service (DPS) leads an interagency promotional effort	Eligible New York households subscribe to the Affordable Connectivity Program at rates

Activity name	Description	Intended outcome(s)
Program public awareness	to increase awareness of, and enrollment in, the federal Affordable Connectivity Program.	as high as any state in the country.
New NY Broadband Program	Established in 2015, this precursor program to CAO (administered by the Broadband Program Office) provided New York State grant funding to support projects that deliver high-speed internet access to unserved and underserved areas of the state.	Approximately 90% of program funds addressed areas without any terrestrial high-speed broadband option, connecting these locations for the first time. New NY resulted in the deployment of over 21,000 miles of fiber optic cable and supported over 120 individual projects with 32 different companies, the majority (56%) of which were either family-owned or nonprofit cooperatives.

Central to digital equity ecosystems across the state, digital equity coalitions work to coordinate and amplify efforts and build advocacy power between organizations with a stake in increasing equitable internet access, whether or not digital equity is core to their mission. Below are 12 coalitions actively operating across the state. More information on each coalition can be found here: https://bit.ly/NYS-DE-Asset-Inventory-Coalitions

Table 2: Digital Equity Coalitions

Region(s)	Organization
Capital Region	Capital Region Digital Equity Coalition
Central New York	Central New York Digital Inclusion Coalition
Finger Lakes	Finger Lakes Digital Inclusion Coalition
Long Island	Long Island Digital Inclusion Coalition

Region(s)	Organization
Long Island, Capital Region, Central New York, Finger Lakes, North Country, Southern Tier, Mid-Hudson, Western New York	New York State Digital Equity Network
New York City	New York City Alliance for Digital Equity
New York City	Sunset Park Digital Inclusion Group
New York City	Queens Digital Inclusion Coalition
New York City	The Bronx Digital Equity Coalition
North Country	North Country Digital Inclusion Coalition
Southern Tier	Southern Tier Digital Equity Coalition
Western New York	Western New York Digital Equity Coalition

3.1.4 Broadband Access, Affordability, and Adoption Statewide

Information above and content in *Part II of the SDEP Appendices* describe broadband access, affordability, and adoption assets statewide.

Chapter 3.2 Needs Assessment describes existing conditions in broadband adoption, the population of high-speed internet users estimated to engage in meaningful use, and existing conditions in broadband affordability.

3.1.5 Broadband Affordability

Chapter 3.2 Needs Assessment describes existing conditions in broadband affordability.

3.1.5.1 Affordable Connectivity Program (ACP) Uptake

The federal ACP subsidy helps lower the cost of broadband subscriptions for eligible low-income households. In part due to a 2022 multi-agency outreach effort as part of the ConnectALL initiative, New York became one of the leading states in the nation for ACP

enrollment. 1,600,045 New York State households are enrolled in the ACP as of October,[27] representing nearly half of the estimated number of households eligible in the state.[28]

3.1.5.2 Efforts to Increase ACP Program Enrollment

New York State has led substantial outreach to increase ACP program enrollment. Sample efforts include:

- **Office of Temporary and Disability Assistance** directed social service agencies to share outreach materials with clients and contracted service providers and has conducted outreach through its social media channels.
- **Office of Children and Family Services** includes ACP information in newsletters and promotes the broadband subsidy through social media and local departments of social services, childcare providers and licensors, foster care and voluntary agencies, community multi-services offices, the statewide partnership for households of juvenile-justice-involved youth, runaway and homeless youth shelter operators, and domestic violence shelter operators.
- **Department of Motor Vehicles** broadcasts information about ACP on monitors in State-operated DMV offices in New York City, Long Island, and Albany, Westchester, Rockland, and Onondaga counties, and has mailed out mailing approximately five million informational inserts throughout the year along with drivers' licenses.
- **Office for the Aging** partnered with the **Department of Public Service** to provide materials to 59 county offices for use at meetings, picnics, health fairs, senior centers, social adult day sites, and naturally occurring retirement communities. They have also distributed a training recording to more than 1,200 community-based organizations and have created and released a public service announcement, e-newsletter, and social media assets.
- **Digital Equity Working Group (DEWG),** a precursor to the Digital Equity Task Force co-led by **CAO** and the **New York State Library**, brought together representatives from several State agencies, who have helped to disseminate information about the ACP to their constituents via email, newsletters, social media, and other channels.
- **The New York State Library's Digital Equity Roundtables** also engaged nonprofit organizations as well as public and school libraries in ACP outreach and enrollment.
- **Empire State Development** shares information on the ACP through the Regional Economic Development Councils, the New York State Association of Counties, the Association of Towns, local Digital Equity Coalitions, and CAO's roster of ISPs.

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[27] "ACP Enrollment and Claims Tracker," Universal Service Administrative Company. Accessed Nov 3, 2023. https://www.google.com/search?q=%E2%80%9Cacp+enrollment+and+claims+tracker&rlz=1C1RXQR_enUS1035US1035&sourceid=chrome&ie=UTF-8.

[28] "Affordable Connectivity Program Dashboard." Institute for Local Self Reliance. Accessed Nov 3, 2023. https://acpdashboard.com/.

In addition, nonprofit and community-based organizations make vital contributions to ACP program enrollment. As demonstrated in the asset inventory, libraries consistently offer ACP enrollment support across their networks statewide. Certain organizations, namely community action agencies and organizations that support specific covered populations' access to public services (e.g., veterans, individuals with disabilities, aging individuals, formerly incarcerated individuals), include ACP program signups as part of a suite of benefit eligibility and signup support.

Under the Federal Communications Commission (FCC) Affordable Connectivity Outreach Grant Program (ACP Outreach Grant Program), ten New York-based nonprofit organizations received competitive federal funding to facilitate the promotion and awareness of and participation in the Affordable Connectivity Program (ACP) among eligible households: Albany County Opportunity; City of Jamestown, NY; International Rescue Committee; Iris House; Journey's End Refugee Services; Livingston County, NY; Mission: Ignite Powered by Computers for Children; National Urban League; New York Public Library, Astor, Lenox, and Tilden Foundations; NYS Community Action Association.

3.1.5.3 Other Broadband Affordability Programs

Internet Service Providers (ISPs) provide assistance programs for consumers with limited incomes.

- Additional ISP affordability and means-tested discount programs include the Spectrum Internet Assist Plan, RCN's Internet First Program, Optimum Advantage Internet, Maxsip Telecom free service to ACP-qualifying households.
- The public and private sectors have collaborated to provide discounts or low-cost service to ACP-qualifying households. Examples include Big Apple Connect for New York City Housing Authority (NYCHA) developments, Hudson Valley Wireless in the Capital Region, and Connect Orleans in the Finger Lakes region.
- CAO maintains an online database—the "affordable internet options database"—of internet providers that offer low-cost plans, searchable by county.[29]

[29] ConnectALL Office. "Find Affordable Internet Options in NYS." Accessed October 13, 2023. https://broadband.ny.gov/find-affordable-internet-options-nys.

3.2 Needs Assessment

While broadband and digital equity leaders and communities have long understood and have already been working to overcome familiar barriers to internet adoption and digital equity, this needs assessment is the first comprehensive, evenly distributed dataset for the entirety of New York State and includes new and important findings.

The needs assessment synthesizes survey and focus group data to develop an evidence-based understanding of needs and barriers to full adoption and internet use faced by those most impacted by digital inequity. Results demonstrate the needs for and barriers to realizing each NTIA measurable objective category—statewide and with respect to covered population (**Chapter 3.2.1**) and region (**Chapter 3.2.2**).

This introduction summarizes general existing conditions across the state by drawing on administrative data (U.S. Census American Community Survey, Federal Communications Commission data, and Census DEA Population Viewer data) as well as responses to the New York State Internet Access Survey. It uses the NTIA measurable objective categories as a framework for presenting findings statewide.

The New York State Internet Access Survey (referred to as "The Survey") resulted in 5,781 responses. The covered populations accounting for the largest shares of responses were racial minorities (35%), aging individuals (24%), low-income households (13%) and rural inhabitants (13%). To address over or under sampling, this study weighted survey responses from the full response sample, and from each population subgroup, to better reflect overall US Census enumerated state population distribution. The methodology for survey distribution, data cleaning and weighting, and analysis is incorporated in **Chapter 7 Appendices Part 1**.

Broadband Affordability & Availability

According to the New York State Broadband Map, launched in 2022 and updated in June 2023, 97% of New York State address locations are served by high-speed broadband service, 0.1% are underserved, and 2.5% are unserved.[30]

Service categories for New York's Broadband map were defined by the State Legislature in the Comprehensive Broadband Connectivity Act (2021), which considers a served location to have at least two ISPs with one or more providers offering service of at least 100 Mbps download and at least 10 Mbps upload (100/10 Mbps). Underserved locations have fewer than two ISPs or have available internet download speeds of at least 25 Mbps but less than

[30] "New York State Broadband Map." NYS PSC. Accessed August 2, 2023. https://mapmybroadband.dps.ny.gov/.

100 Mbps. Unserved locations are locations where there are no fixed wireless service or internet speeds of 25 Mbps download or less are available.[31,32]

A large majority of New Yorkers have broadband internet available at their homes, yet it is still not accessible to everyone, due to affordability barriers or a lack of internet-enabled devices at home.

While most locations are considered served according to the NYS Broadband Map, over 10% of New Yorkers do not subscribe to reliable broadband internet.

- Nearly 1 million New York households—13% of all households—lack access to broadband internet of any type per the U.S. Census Bureau American Community Survey (2017-2021). This percentage is in line with the national average of 13%.[33]
- The New York State Internet Access Survey results suggest a smaller proportion of New Yorkers—only 11%—lack access to broadband internet, which may in part reflect selection bias in the Survey and additional broadband investments made since the 2017-2021 five-year averaged ACS results.[34]
- According to speed tests that respondents performed while completing the New York State Internet Access Survey, the median download and upload speed for New York State is 89/11 Mbps, which falls short of the FCC's "served" standard at 100 Mbps for download speeds.[35]

Covered populations are generally less likely to have access to broadband internet at home.

- Lower-income households were more likely to lack broadband access. According to U.S. Census data (2021), approximately 29% of households earning less than $35,000 annually do not subscribe—compared to just 5% of households earning $75,000 or more. [36]

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[31] The Act amended the Public Service Law (PSL) by adding a new §224-c; https://assembly.state.ny.us/leg/?default_fld=&leg_video=&bn=A06347&term=2021&Summary=Y&Text=Y.

[32] This definition is similar to the FCC's definitions for served locations (speeds above 100/20 Mbps), underserved locations (speeds below 100/20 Mbps but above 25/3 Mbps), and unserved locations (speeds below 25/3 Mbps), but it specifies a different minimum upload speed for served locations and provides alternative guidance around using a minimum number of internet service providers to classify locations. Under the BEAD Program, any location with speeds of 100/20 by technology that meets the definition of Reliable Broadband Service is considered served.; High-Speed Internet definitions from NTIA, https://www.ntia.gov/category/high-speed-internet.

[33] American Community Survey Five-Year Estimates, 2017-2021; "S2801–Types Of Computers And Internet Subscriptions," U.S. Census Bureau, https://data.census.gov/table?t=Computer+and+Internet+Use&g=040XX00US36&tid=ACSST5Y2021.S2801. ACS refers to the following as broadband at home: cellular data plan, cable, fiber optic, satellite, or DSL.

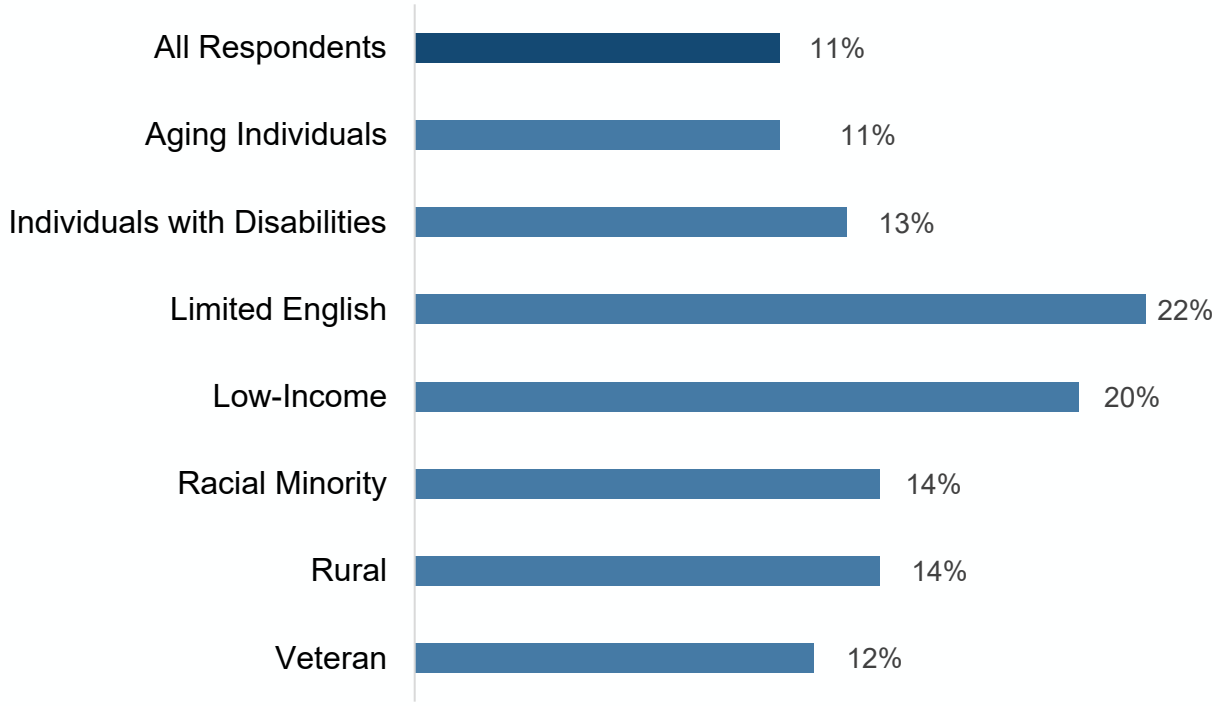
[34] More information can be found in Chapter Survey Data Analysis Methodology

[35] New York Internet Access Survey (2023).

[36] American Community Survey Five-Year Estimates, 2017-2021.

- Individuals with language barriers language ability were also significantly less likely to have broadband internet access, according to Survey results.

Figure 1: Percentages of Respondents Who Do Not Have Broadband Internet at Home, Statewide and by Covered Population

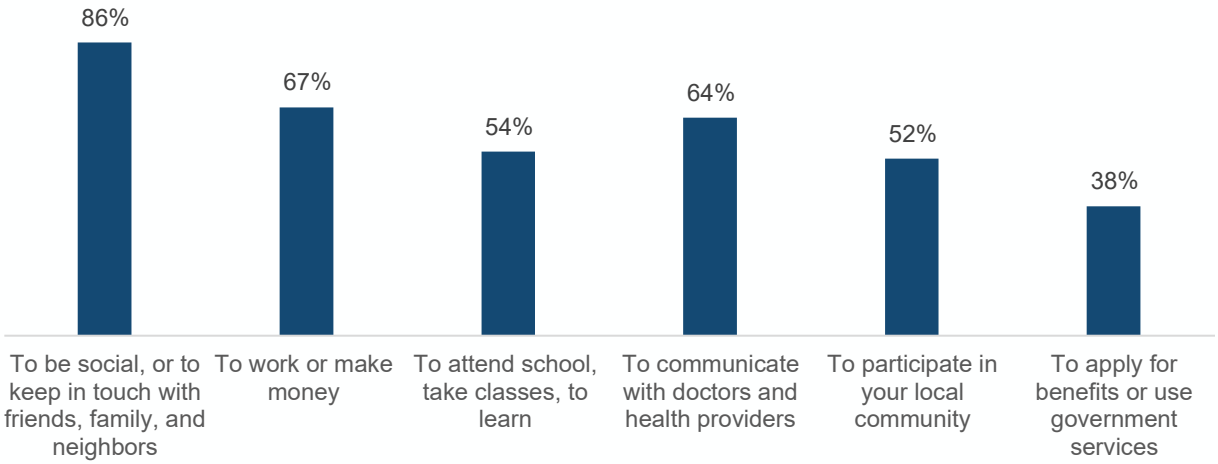


**In the bar chart above, "all respondents" includes New Yorkers in covered populations and New Yorkers not in covered populations.*

The NTIA defines "meaningful use" of the internet to be "how an individual uses their digital literacy skills to enhance educational and employment opportunities."[37] The Survey asked New Yorkers, "What do you use the internet for mostly?" 67% of New Yorkers surveyed used the internet "to work or make money" and 53% of New Yorkers surveyed used the internet "to attend school, take classes, or learn." New Yorkers surveyed also use the internet for a wide variety of other purposes. Individuals reported the highest use of the internet for social connection such as keeping in touch with friends, family, and neighbors.

[37] "What does Digital Inclusion mean?" Broadband USA. NTIA. https://broadbandusa.ntia.doc.gov/about-us/frequently-asked-questions/what-does-digital-inclusion-mean.

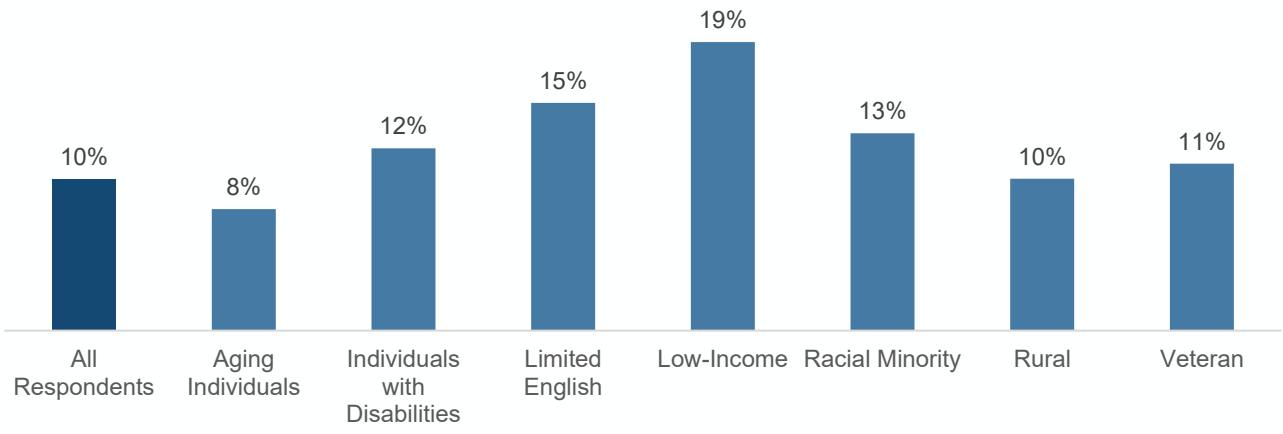
Figure 2: How Survey Respondents Say They Use the Internet Most Frequently



Accessibility of Devices and Device Support

9% of all New Yorkers surveyed do not have access to the internet-enabled devices they need at home. Among covered populations surveyed, low-income households, respondents with language barriers, racial minorities, and individuals with disabilities have less access to internet-enabled devices—such as laptops, smartphones, and desktop computers—than other New Yorkers.

Figure 3: Percentages of Respondents Whose Households Do Not Have Access to the Internet-Enabled Computer Devices They Need, Statewide and by Covered Population



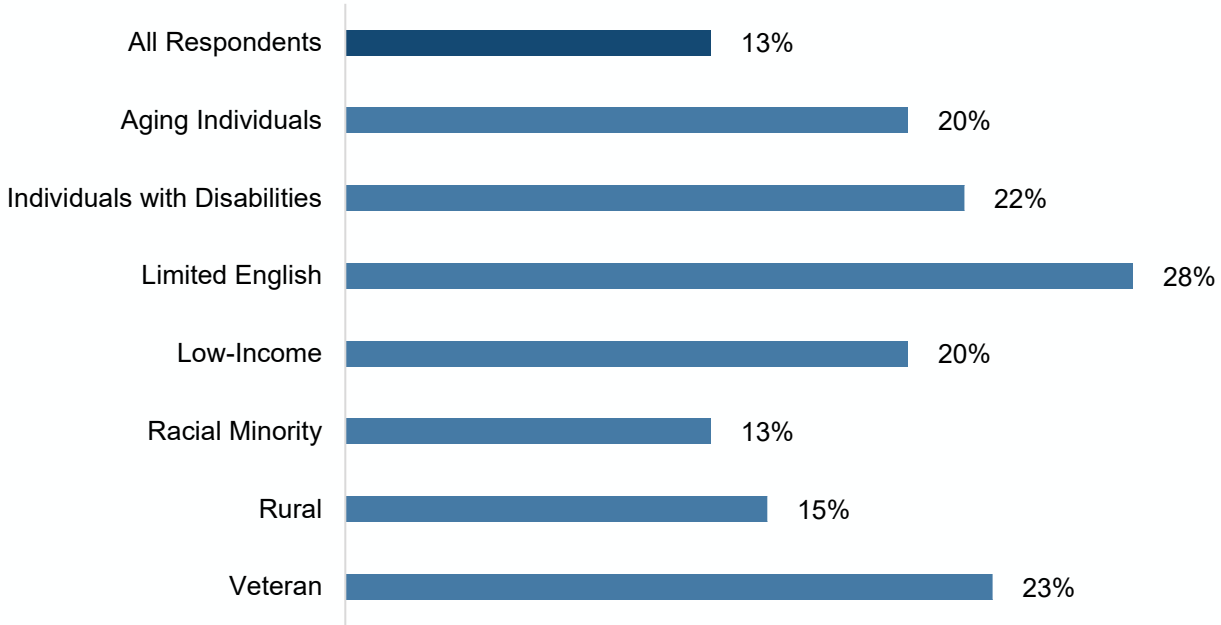
**In the bar chart above, "all respondents" includes New Yorkers in covered populations and New Yorkers not in covered populations.*

Digital Literacy

13% of New Yorkers surveyed find it difficult to navigate the internet to meet their needs. Certain covered populations are more likely to struggle than other New Yorkers.

- For individuals with language barriers and individuals with disabilities, focus groups noted that although these residents could access services online, online content is not accessibly designed (e.g., content is incompatible with screen readers or illegible). Representatives also reported a lack of digital equity and literacy services with adequate accessibility accommodations (e.g., ASL interpretation, braille materials).
- Focus groups also shared that digital literacy was a specific challenge for aging individuals and veterans, who may have difficulty keeping up with evolving technologies and be reluctant to engage with online tools due to higher-than-average concerns about cybersecurity and privacy (see below).

Figure 4: Percentages of Respondents Who Find It Difficult (i.e., Somewhat Difficult or Very Difficult) to Navigate the Internet To Do What They Need, Statewide and by Covered Population

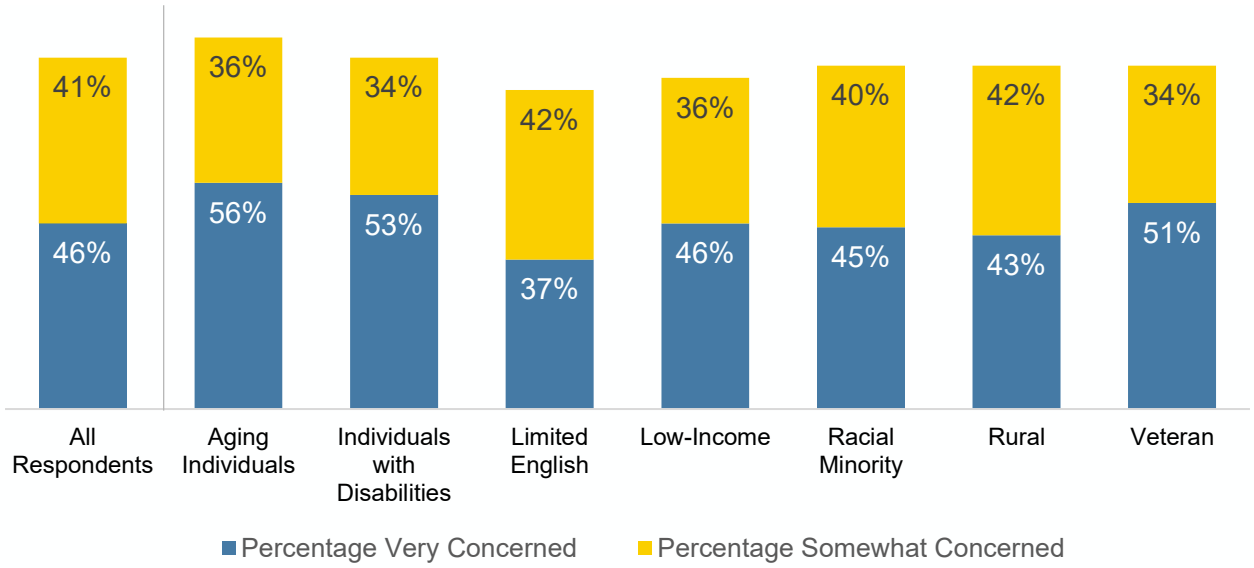


**In the bar chart above, "all respondents" includes New Yorkers in covered populations and New Yorkers not in covered populations.*

Online Privacy & Cybersecurity

New Yorkers are universally concerned about their safety and security online. 87% of New Yorkers surveyed are either somewhat concerned or very concerned about their online safety, with covered populations roughly on par with this level of concern. A 2022 poll of 4,000 U.S. adults determined that a similar share of all Americans (84%) say that they are at least "somewhat concerned" about the safety and privacy of the personal data that they provide on the internet.[38]

Figure 5: Percentages of Respondents Who Are Somewhat Concerned and Very Concerned About Internet Safety, Statewide and by Covered Population



**In the bar chart above, "all respondents" includes New Yorkers in covered populations and New Yorkers not in covered populations.*

Although respondents are emphatically concerned about their safety online, responses exhibit less clarity about the specific nature of those concerns. The survey offered four areas of concern for respondents to select among:

- My data could get stolen or used without my consent.
- I or a loved one could get scammed or tricked.
- I could be tracked or surveilled.
- I or a loved one could be harassed or abused online.

Overall, Survey respondents reported general discomfort regarding online safety and a lack of confidence in online safety skills, but many did not respond to the follow-up question to

[38] Newall, Mallory. "A majority of Americans are concerned about the safety and privacy of their personal data." Ipsos. https://www.ipsos.com/en-us/news-polls/majority-americans-are-concerned-about-safety-and-privacy-their-personal-data.

indicate any particular category of concern. In an exception, respondents with disabilities reported higher than average concern about online harassment and online abuse.

In focus groups, aging individuals reported that they had experienced or learned about online scams and tricks through programming or news sources; and immigrants and refugees shared that some individuals might avoid engaging with online services and tools due to cybersecurity and privacy concerns. Focus groups conveyed a range of hard-to-categorize experiences of risks and harms as referenced in **Chapter 3.2.1**.

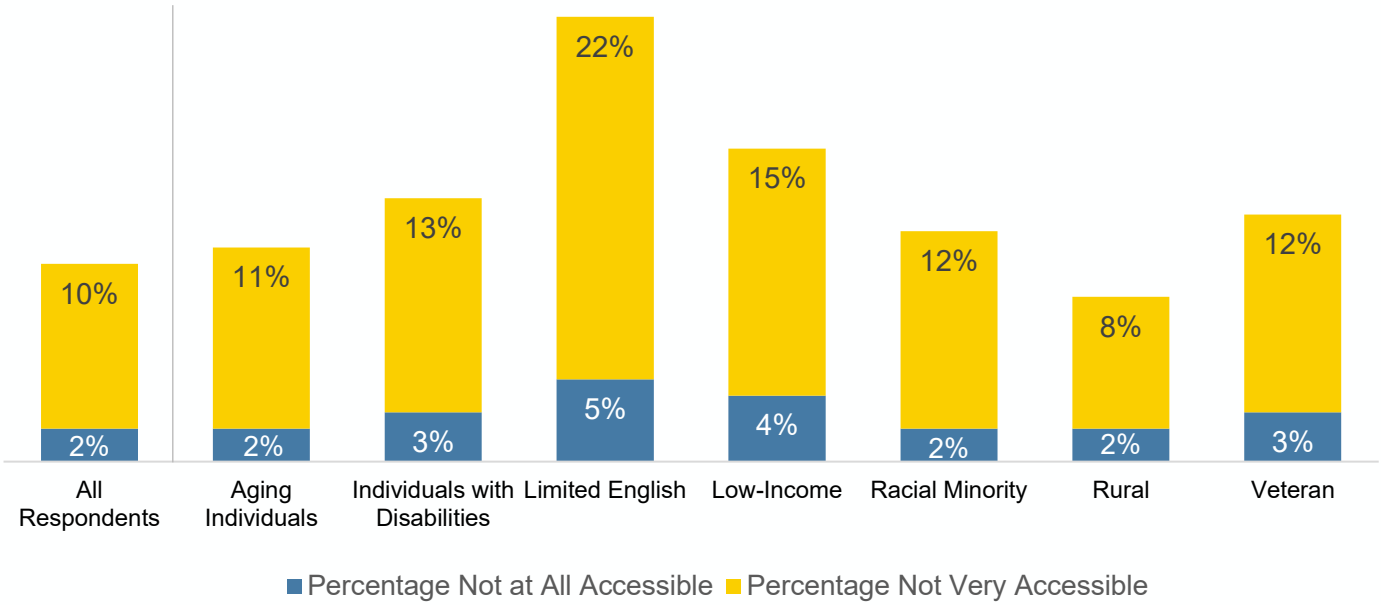
Accessibility of online essential resources and services

Covered populations are almost universally more likely than other New Yorkers to struggle to access online public resources. One focus group reported “many public resources online are not user-friendly for those with disabilities, specifically the blind, visually impaired, deaf, hearing-impaired, and cognitively impaired community members.”

Of all covered populations, individuals with language barriers found online public resources least accessible. In focus groups, representatives from organizations working with English learners and people with low levels of literacy noted that even when internet service is available, inaccessibly designed websites and online services (e.g., those that do not have translations available) can prevent residents from accessing content and completing tasks online. As noted previously (see “Digital Literacy” above), many existing digital literacy programs are only offered in English, which compounds these individuals’ disproportionate difficulty.

Focus groups also reported concerns among immigrant and refugee communities about making personal information accessible to government agencies.

Figure 6: Percentages of Respondents Who Said Online Public Resources Were Not Very Accessible and Not at All Accessible, Statewide and by Covered Population



**In the bar chart above, "all respondents" includes New Yorkers in covered populations and New Yorkers not in covered populations.*

3.2.1 Existing Conditions by Covered Population

The Needs Assessment compared New York State Internet Access Survey responses from covered populations to the average responses statewide. Focus group data was used to deepen and add nuance to survey findings.

New York State Regions. Each assessment includes a map of the distribution of the covered population across the ten regions of New York State: Capital Region, Central New York, Finger Lakes, Long Island, Mid-Hudson, Mohawk Valley, New York City, North Country, Southern Tier, Western New York.

Figure 7: Map of the Regions of New York State

Separately, a set of regional snapshots are available that capture digital equity trends at the level of ten regions of New York as well as the five boroughs within the New York City region.

Intersectionality. Using the U.S. Census PUMS (Public Use Microdata Sample) tool, ConnectALL analyzed the prevalence of overlap between covered populations. Data found in PUMS data is based on individual census questionnaire responses rather than aggregated data with predetermined parameters, allowing analysis of demographics for individuals who are part of more than one covered population.

Covered populations with the highest intersectional demographics:

- 2.4 million New Yorkers or 12% of the state population consists of individuals that are both a racial or ethnic minority and live in a low-income household.
- 1.6 million New Yorkers or 7% of the state population are both aging and living with a disability.
- 1 million New Yorkers or 5% of the state population are individuals with language barriers and racial or ethnic minorities.[39]

Detailed analysis of the degree of intersectionality between covered populations is available in **Chapter 7.1.4**.

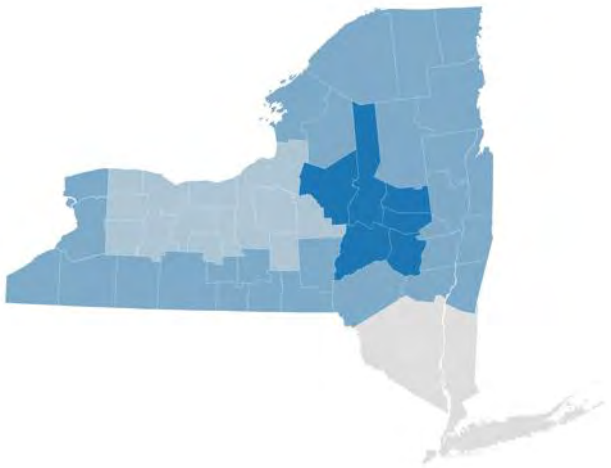
[39] "ACS 2021 Public Use Microdata Sample (PUMS)." U.S. Census Bureau. https://www.census.gov/programs-surveys/acs/microdata.html.

3.2.1.1 Aging Individuals

Aging Individuals are defined as individuals aged 60 or above. Aging individuals comprise 23% of the state population.

- 8% of the state population is both aging and a racial or ethnic minority;
- 7% of the population is both aging and living with a disability;
- 2% of the population is aging and a veteran.[40]

Figure 8: Map of the Concentration of Aging Individuals by State Region



Percentage of population constituted by aging individuals (Source: ACS, 2017-2021)

20% 24% 26% 27% 29%

Broadband Affordability & Availability

- 6% less likely than other New Yorkers to use an internet subsidy, according to the Survey.
- 4% less likely to be satisfied with their internet speed.
- Less likely than other New Yorkers to identify home internet as “very difficult” to pay for, but this may vary for aging individuals who are part of other covered populations including low-income households.
- More likely to use the internet to communicate with doctors and health providers; socialize with friends, family and neighbors; participate in their local community; and apply for or use public resources.

[40] Id.

Quotation from a focus group from the Finger Lakes region:

"I have internet at home; the price is ridiculous… It was a senior rate, but after the pandemic, it doubled. Trying to figure out now, do we want to keep it or not? Is there something else we can use?... We pay $180. We only use it for TV and internet."

Accessibility of Devices & Device Support

- 12% more likely to access the internet using a desktop computer. Conversely, 13% less likely to use the internet through a smartphone or laptop.
- Less likely to be able to troubleshoot technical challenges without some external technical support.
- Noted that regular one-on-one assistance via digital navigator or other tech support programs was helpful in building confidence and literacy.
- Focus groups noted a need for devices offering assistive technology (e.g., voice-enabled tablets).
- Focus groups also noted that regular one-on-one assistance was helpful in building confidence and literacy.

Quotation from a focus group from the Finger Lakes region:

"It's one thing to train people on all this, but most of us learn through frequency and repetition. It requires one-on-one [support]… [We] need to create a culture of internet support and companionship…"

Digital Literacy

- In various measures of digital literacy, 9-24% less likely to feel confident in their capabilities.
- Least likely to feel confident with skills related to using video chat and social media. Less likely than other New Yorkers to feel "completely confident" using video chat services (24%); email (15%); word processing applications (19%); banking (16%); and online shopping (19%).
- One focus group participant from the North Country region noted that one of the greatest benefits of the internet for them was *"being able to Zoom with family and friends during COVID shutdown."*
- Another focus group noted that: "Technophobia was stated when it came to doing important business online such as paying bills or signing up for important services."

Privacy & Cybersecurity

- Less likely to have concerns around online harassment; but almost 7% more likely to have concerns around stolen data and almost 5% more likely to have concerns around scams.
- 13% reported feeling "very concerned" about online security.
- Aging individuals in focus groups shared personal stories of themselves or their loved one getting scammed.

Quotation from a focus group from the Finger Lakes region:

"I stopped my husband one day... He got an alert that [he had owed] $1,000 and he [had not paid]… I ran into the room 'Scam, Scam!' If I hadn't been there, he would have clicked on that and called. I don't know what would have happened after that."

Accessibility & Inclusivity of Public Resources

- Less likely to be aware of the ACP or utilize internet subsidies, even though certain ISPs provide discounts for aging individuals. Aging individuals participating in focus groups noted that they would appreciate more information on affordability programs.
- Less likely to use accessibility features within government websites.

Quotation from a focus group from the Finger Lakes region:

"There was an FCC Lifeline program... A lot of people are not aware of these discounts. My godmother was able to get it simply based on zip code — I don't know how many people are aware. I was not."

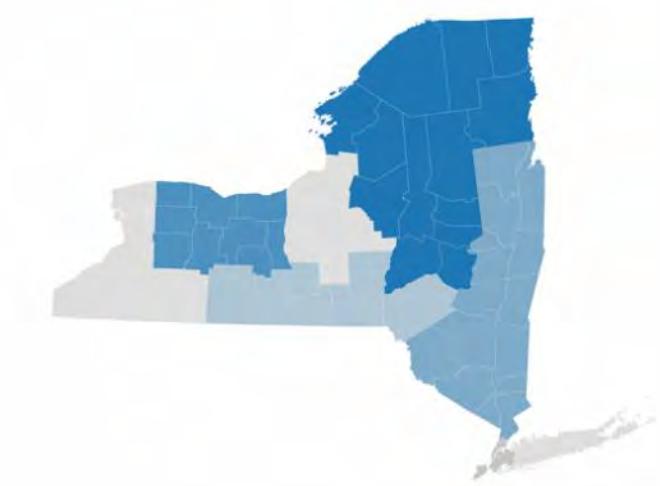
3.2.1.2 Formerly Incarcerated Individuals

Formerly incarcerated individuals are defined as individuals who were at any point in a carceral setting (e.g., prison, immigration detention center, jail, or juvenile detention) and are now released. According to the Bureau of Justice Statistics, approximately 30,300 individuals were imprisoned under the jurisdiction of state or federal correctional in 2021 and an estimated 28,000 were released in 2020 and 2021 combined.[41]

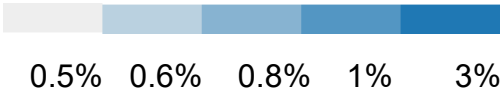
Upstate New York, including some of the least populous counties, has disproportionately high state prison incarceration rates—including people who lived elsewhere in the state prior to incarceration. Some of the least populous counties—Montgomery, Fulton, Genesee, Yates, and Franklin—have the highest imprisonment rates in the state.[42]

Barriers summarized below, which originate from focus groups, generally become more severe the longer a person's period of incarceration. (The NYS Survey did not result in a sample size of incarcerated individuals sufficient to make comparisons between this population and statewide averages.)

Figure 9: Map of the Concentration of Incarcerated Individuals by State Region



Percentage of population constituted by incarcerated individuals (Source: DEAPV)



[41] Carson, Ann E. "Prisoners in 2021 – Statistical Tables." Bureau of Justice Statistics, December 2022. https://bjs.ojp.gov/library/publications/prisoners-2021-statistical-tables.

[42] Widra, Emily, and Nick Encalada-Malinowski. "Where People in Prison Come from: The Geography of Mass Incarceration in New York." Prison Policy Initiative, June 2022. https://www.prisonpolicy.org/origin/ny/2020/report.html.

Broadband Affordability & Availability

- Individuals in jails and prisons lack reliable access to broadband internet, as do their visitors, such as families and loved ones. After exiting the criminal legal system, access to the internet and devices is strictly monitored for certain formerly incarcerated individuals.

Accessibility of Devices & Device support

- Incarcerated individuals and formerly incarcerated individuals want to use up-to-date technology, including up-to-date smartphones, rather than the lowest-cost or second-hand devices commonly accessible to them through some existing device accessibility programs.

Digital Literacy

- While in jail or prison, individuals do not have access to training on internet or device usage.
- Incarcerated individuals in focus groups said that they feel it is especially challenging to understand technology and internet-related vocabulary, due to the speed with which such terms develop and change.

Privacy & Cybersecurity

- Individuals who have not had access to internet and digital literacy skill-building while incarcerated re-enter a society without the necessary skills to protect themselves online.
- Unsafe or scam job solicitations are targeted at formerly incarcerated individuals, who already face barriers to employment. Targeted scams make it difficult to discern which opportunities are safe to respond to.

Accessibility & Inclusivity of Public Resources

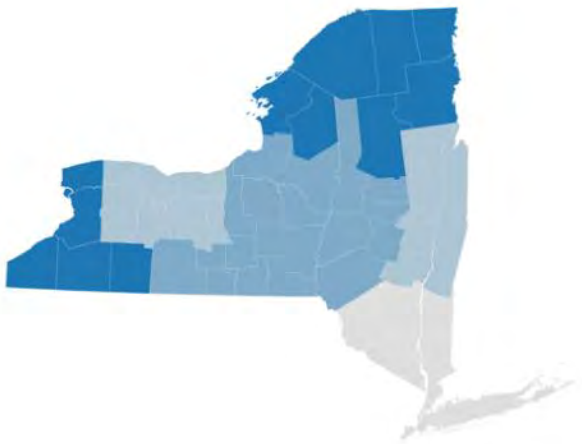
- Lack of adequate digital literacy maintained or learned while incarcerated contributes to challenges filling out government forms and services upon re-entry.

3.2.1.3 Individuals with Disabilities

Individuals with disabilities are defined as individuals who have difficulties related to hearing, vision, cognition, walking, self-care, or independent living.[43] Individuals with disabilities comprise 12% of the state population.

- 7% of the state population lives with a disability and is aging.
- 5% of the population lives with a disability and is a racial or ethnic minority.[44]

Figure 10: Map of the Concentration of Individuals with Disabilities by State Region



Percentage of population constituted by individuals with disabilities (Source: ACS, 2017-2021)

[43] "Disability Status." U.S. Census Bureau. https://www.census.gov/quickfacts/fact/note/US/DIS010221.
[44] "ACS 2021 Public Use Microdata Sample (PUMS)." Supra.

Broadband Affordability & Availability

- 3% less likely than other New Yorkers to have any kind of internet at home.
- 13% more likely to use the internet to communicate with healthcare professionals and access online public resources.
- Those without internet access reported that they would like to use the internet to interact with healthcare professionals, the local community, social media, and public resources.
- One focus group participant stated she is particularly fond of telehealth. She utilizes it regularly for behavioral health and orthopedic services. It is particularly helpful to her because she often faces transportation barriers when accessing healthcare services in person.

Accessibility of Devices & Device support

- 8% more likely to live without a laptop.

Digital Literacy

- 6-16% less likely to feel completely confident in various digital literacy skills evaluated in the Survey. Less confident with word processing applications (16%), resumes (15%), online learning (14%), e-commerce (13%), and online banking (13%).

Privacy & Cybersecurity

- 8% more likely to be very concerned with online safety. 5% more likely to be concerned with online harassment.

A quotation from the focus group from the Southern Tier region:

“I don’t know a lot about online security or privacy. We feel like we are going to places we shouldn’t, but we need to visit them for information or news. The internet can be scary when it comes to security or safety.”

Accessibility & Inclusivity of Public Resources

- 5% more likely to report public services as inaccessible.
- 12% more likely to use internet subsidies and be aware of ACP.

A quotation from a focus group from the North Country region:

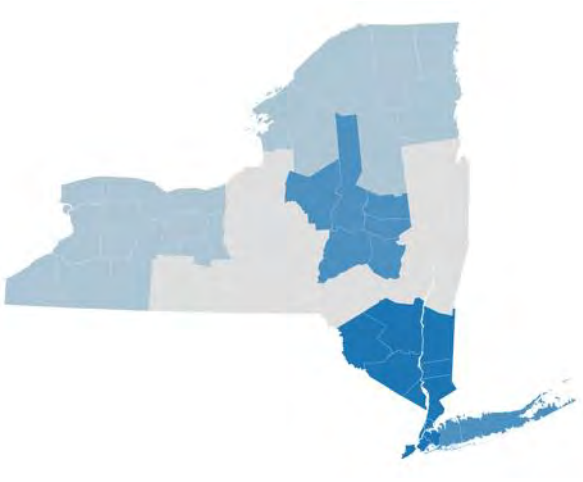
“They go by the majority. They don’t go by the people that need help…It’s one size fits most."

3.2.1.4 Individuals with Language Barriers

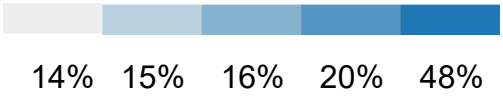
Individuals with language barriers are individuals who have difficulty communicating in English or individuals with low English language literacy. Individuals with language barriers comprise 26% of the state population.

- 6% of the state population has language barriers and is a racial or ethnic minority.[45]

Figure 11: Map of the Concentration of Individuals with Language Barriers by State Region



Percentage of individuals with language barriers (Source: DEAPV)



Broadband Affordability & Availability

- 7% less likely to have internet at home and 12% less likely to have broadband internet access at home.
- 12% more likely to say that paying for internet is very difficult and 9% more likely to say that the internet service they do have is unreliable.
- Focus group participants mentioned several barriers to accessing the internet: having to share the internet and devices with many family members, or having to pay for limited amounts of data that is quickly used up and then "*the internet no longer works.*"

[45] "ACS 2021 Public Use Microdata Sample (PUMS)." Supra.

Quotation from a focus group from the Mid-Hudson region:

"[I] don't have a Social Security Number or other documentation required to purchase an Internet plan on my own."

Accessibility of Devices & Device Support

- 4% more likely than other New Yorkers to access the internet through a smartphone; 7% less likely than others to access the internet through a laptop.
- More likely to seek technical support from user support services, friends, and family than other New Yorkers. However, 5% more likely to report not being able to fix their device.
- Focus group participants noted that cost is a barrier to having sufficient devices.

Digital Literacy

- Across the various digital literacy skills evaluated, 7-25% less likely to feel "completely confident" in their capabilities, including building resumes (25% less likely to feel "completely confident"), using word processing systems (22% less likely), online shopping (21% less likely), and using email (20% less likely).

Quotation from a focus group from the Southern Tier region:

"language barrier[s] exists for non-English speakers AND for those that are not tech savvy —jargon is a barrier."

Privacy & Cybersecurity

- Focus group participants noted that virtual scams can be concerning, especially when related to jobs and housing. One participant shared information about false job advertisements online; another shared her family members' concerns over being targeted and tracked due to their immigration status.

Accessibility & Inclusivity of Public Resources

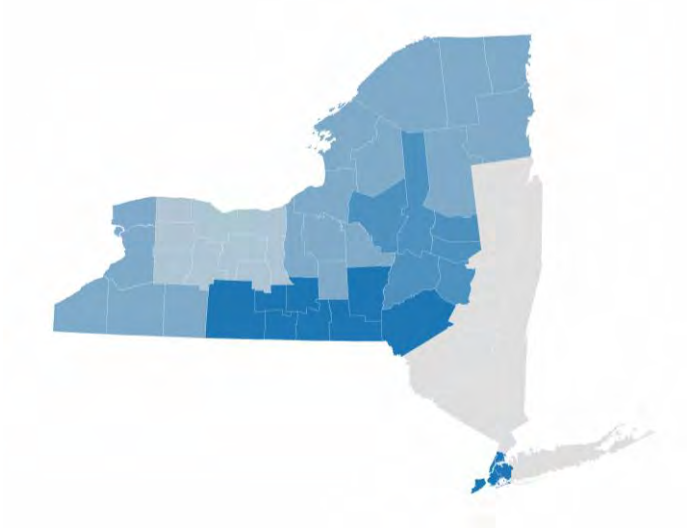
- 3% less likely to report having a good experience with public resources such as benefits portals, DMV services, or paying for permits or tickets.
- 14% more likely than others to use internet subsidies.
- Focus groups conveyed that government websites are hard to navigate, include inaccessible language like government jargon, and do not consistently offer non-English language options, all of which hinders the ability to apply for benefits or services. On some sites where language translation was available, the translated text was unreliable or introduced glitches on the site.

3.2.1.5 Low-income Households

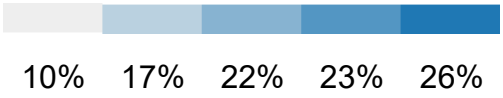
Low-income households are defined as households making at or below 150% of the poverty level, which is calculated by factoring in household size, number of children, and annual income per household.[46] Low-income households comprise 20% of the state population.

- 12% of the state population lives in a low-income household and is racial or ethnic minority;
- 4% of the population lives in a low-income household and is aging (over age 60);
- 4% of the population lives in a low-income household and lives with a disability.[47]

Figure 12: Map of the Concentration of Low-Income Households by State Region



Percentage of households with incomes below 150% of the federal poverty line (ACS, 2017-2021)



Broadband Affordability & Availability

- 9% less likely than other New Yorkers to have internet at home and 6% less likely to have broadband internet at home.
- Less likely to report reliable internet service and 17% more likely to report finding it very difficult to pay for internet each month.

[46] U.S. Department of Education. "Federal TRIO Programs Current-Year Low-Income Levels." Policy Guidance; Programs; Guides. US Department of Education (ED), February 3, 2023. https://www2.ed.gov/about/offices/list/ope/trio/incomelevels.html.

[47] "ACS 2021 Public Use Microdata Sample (PUMS)." Supra.

Quotation from a focus group from Long Island:

"All noted that the monthly internet bills are exorbitant. Internet service, routers, boxes, taxes. Bill for one respondent is $195/month. Internet access is priced like entertainment and not a utility. Participants indicated that the internet service providers sell services in bundled packages, making it impossible to access affordable basic internet service separate from entertainment packages for various television channels."

Accessibility of Devices & Device Support

- 7% less likely to access the internet through a desktop and 20% less likely to access the internet through a laptop.
- When reporting seeking support, were most likely to find technical support through user support services, family and friends, and community organizations.

Digital Literacy

- Less likely to report "complete confidence" in all digital literacy skills surveyed, including using the internet to build resumes (23% less likely), bank online (19% less likely), online shop (19% less likely), and use word processing applications (20% less likely).

Privacy & Cybersecurity

- Low-income households were as likely as other New Yorkers to be concerned with online security or harassment.
- However, several focus group participants mentioned concerns about online scams that advertise jobs and affordable housing. One participant noted that she responded to an advertisement for affordable housing requiring an immediate online deposit, but the advertiser then disappeared with the money.

Accessibility & Inclusivity of Public Resources

- Low-income households were 22% more likely to use internet subsidies than other New Yorkers and 14% more likely to be aware of ACP.
- Low-income households, who were also more likely to face language barriers, conveyed in focus groups that government websites were hard to navigate, included inaccessible language such as government jargon, or did not offer non-English language options which hinders the ability to apply for benefits or services.

Quotation from a focus group from the Mohawk Valley region:

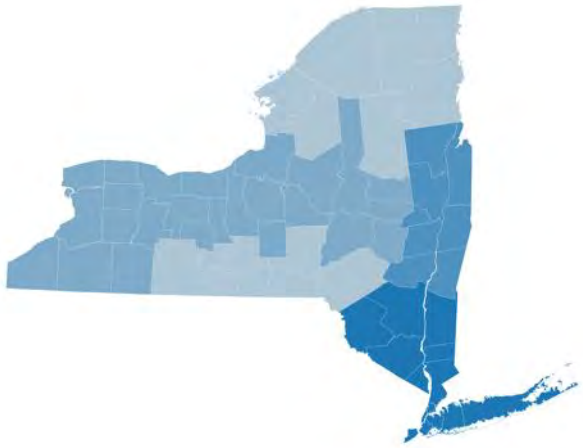
"Some feel they [government websites] are too complicated to navigate and people stop trying and don't apply because they get frustrated—IRS, public health, DMV, recreational info, assistance programs and benefits, government docs, etc."

3.2.1.6 Racial and Ethnic Minorities

Members of racial and ethnic minority groups are defined as individuals who identify as a member of a race other than white, or who identify as Hispanic or Latino. Racial and ethnic minorities comprise 45% of the state population.

- 12% of the state population is a racial or ethnic minority and lives in a low-income household;
- 8% of the population is a racial or ethnic minority and aging (over age 60);6% of the population is a racial or ethnic minority and has language barriers.[48]

Figure 13: Map of the Concentration of Racial and Ethnic Minorities by State Region



Percentage of population constituted by racial and ethnic minorities (Source: ACS, 2017-2021)

Broadband Affordability & Availability

- 6% less likely than other New Yorkers to have internet at home, and 5% less likely to have broadband internet.
- 8% more likely to report internet bills are very difficult to afford.
- More likely to connect to the internet at spaces outside the home, such as workplaces, school, or community institutions. Focus group participants repeatedly mentioned going to the library to access the internet.

[48] "ACS 2021 Public Use Microdata Sample (PUMS)." Supra.

Accessibility of Devices & Device Support

- More likely to access the internet through smartphones and tablets than others and less likely to access the internet through a desktop or laptop.
- 8% more likely to leverage user support services when facing technical difficulties.
- According to several focus group participants, cost and languages offered for repair services or customer support is a barrier when seeking assistance.

Digital Literacy

- Less likely to report “complete confidence” in a variety of digital literacy skills including using word processing applications (8% less likely), banking online (8% less likely) and building resumes (6% less likely).
- Several focus group participants noted daytime timing of digital literacy classes hinders their ability to learn if they are working during the day.

Quotation from a focus group from the Mid-Hudson region:

"Free computer classes have to be during the night because most of them are during the day while people are working, or on Saturday.”

Privacy & Cybersecurity

- 4% more likely to report concerns about harassment online.
- Focus groups expressed concern over information being stolen; almost all members of a single focus group experienced issues paying with credit cards online or having had their banking information compromised online.

Accessibility & Inclusivity of Public Resources

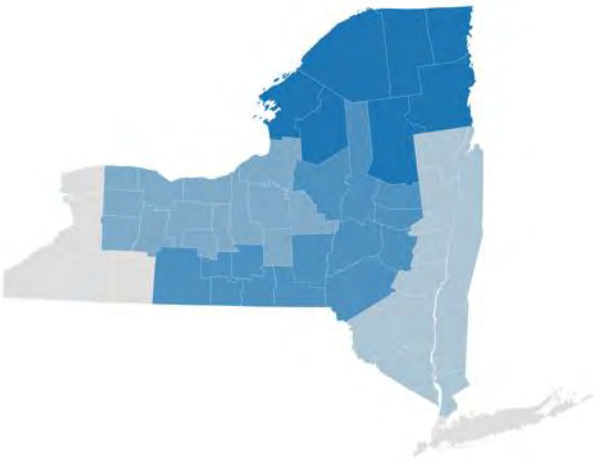
- 14% more likely to use internet subsidies and 6% more likely to be aware of the ACP.
- Racial and ethnic minorities, who were more likely to also face language barriers, noted in focus groups that some websites needed Spanish language translation. On some sites where Spanish language translation was available, the translated text was unreliable or introduced glitches on the webpage.

3.2.1.7 Rural Inhabitants

Rural inhabitants are defined, for the purposes of the SDEP, as people living in a county designated as rural by the New York State Department of Labor MSA designations; the rationale for this definition is described in **Appendices Part 1 Methodology**.

Rural-classified counties are Allegany, Cattaraugus, Cayuga, Chautauqua, Chenango, Clinton, Columbia, Cortland, Delaware, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Lewis, Montgomery, Otsego, Schuyler, Seneca, Steuben, St. Lawrence, Sullivan, and Wyoming County.

Figure 14: Map of the Concentration of Rural Inhabitants by State Region



Percentage of population living in rural counties (Source: ACS, 2017-2021)

Broadband Affordability & Availability

- While internet access was in line with that of other New Yorkers, New Yorkers from rural areas were 13% less likely to have internet service at high speeds. This lack of broadband internet is further corroborated by FCC data. Rural inhabitants must turn to less reliable, slower connections like legacy satellite and DSL services.
- Less likely to use the internet for healthcare and accessing public resources.

Quotation from a focus group from the Finger Lakes region:

"I completed my master's degree online. Online access was almost impossible. I had to move from Branchport to Prattsburgh to complete any online activity."

Accessibility of Devices & Device Support

- When facing technical difficulties, less likely to seek technical support through user support services or a community-based organization.

Digital Literacy

- Did not demonstrate many significant digital literacy deficiencies compared to other New Yorkers. 5% less likely than the others to report feeling completely confident with video chat.

Privacy & Cybersecurity

- Did not demonstrate significant fears around cybersecurity compared to other New Yorkers.

Quotation from a focus group from the Capital region:

"We don't have internet here and we have to go use public Wi-Fi. We expose ourselves to greater risk of online scams or identity theft."

Accessibility & Inclusivity of Public Resources

- 2% less likely to report having a satisfactory experience with government service such as benefits portals, DMV services, or paying for permits or tickets than other population groups.

Quotation from a focus group from the Southern Tier region:

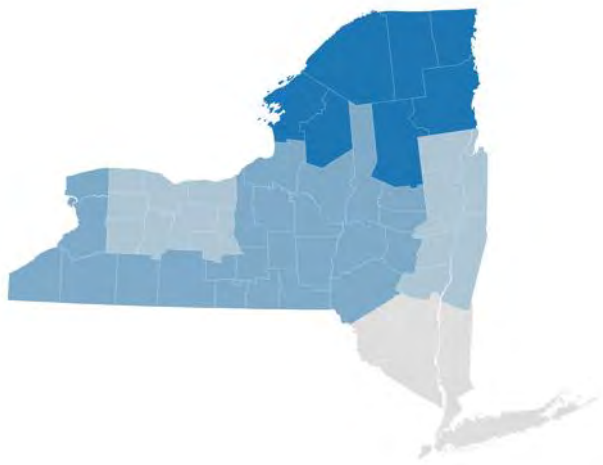
"Many agencies are trying to force people online to complete certain activities and people get left behind."

3.2.1.8 Veterans

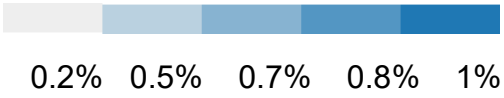
Veterans are defined as individuals who served on active duty in the U.S. Armed Forces, Reserves, or National Guard.[49] Veterans comprise 3% of the state population.

- 2% of the state population is a veteran and aging (over age 60).
- 1% of the population is a veteran and living with a disability.[50]

Figure 15: Map of the Concentration of Veterans by State Region



Percentage of population constituted by veterans of the US Armed Forces (ACS, 2017-2021)



Broadband Affordability & Availability

- While internet access was in line with the that of other New Yorkers, veterans were 9% less likely than others to have access to high-speed internet.
- 24% less likely than others to use the internet for work and 12% less likely to use the internet for education. 7% less likely than others to use the internet to socialize.

Accessibility of Devices & Device Support

- 10% more likely than others to access the internet using a desktop computer.
- Conversely, 12% less likely to access the internet using a smartphone and 12% less likely to access the internet using a laptop.

[49] U.S. Census Bureau. "American Community Survey (ACS) Topic Information: Veterans." https://www.census.gov/content/dam/Census/topics/population/veterans/guidance/acs-topic-information-veterans.pdf.

[50] "ACS 2021 Public Use Microdata Sample (PUMS)." Supra.

Digital Literacy

- In every measure of digital literacy, at least 5% less likely to feel "completely confident" in their capabilities. Less likely to report "complete confidence" with skills related to using video chat (17%), social media (15%), online shopping (17%), and word processing applications (15%).
- Focus group participants reported that they rely on friends and younger family member to help them overcome digital literacy issues such as basic troubleshooting and hardware issues.

Quotation from a focus group from Long Island:

"Another participant in a focus group who works for a skilled nursing and adult day care facility for veterans estimated that 70% of the patient population could not benefit from telehealth offerings during COVID due to lack of access, devices, and/or digital literacy."

Privacy & Cybersecurity

- Demonstrated fears around cybersecurity at levels similar to other New Yorkers.
- Focus group participants noted they feared their information would be stolen online, noting identify theft, getting hacked, and/or scammed as specific concerns. One shared falling victim to Medicare fraud and another discussed having had their identity stolen.

Quotation from a focus group from the Capital Region:

"Veterans are a group that is quite frequently by scammers, we work in close collaboration with SEC and NY Attorney General to crack down, veterans have been warned not to clink on things, they have been told to be secure."

Accessibility & Inclusivity of Public Resources

- 5% less likely to utilize ACP than other New Yorkers.
- Focus groups noted reluctance to use the internet for activities such as filing a benefits claim: "I don't want you to file a claim for me if it is going on the computer," but would rather mail "a physical copy" because they don't trust the internet with their information. This causes a "delay in receiving services."

3.2.1.9 Other Communities

While Survey and focus group data were collected and analyzed for the 8 specific covered populations as defined by NTIA, CAO engaged other populations and communities via the planning process that are also disproportionately impacted by digital inequity. The needs and barriers to full adoption and meaningful use of broadband internet faced by these populations are summarized below.

Native American & Tribal Nations

CAO engaged with the Saint Regis Mohawk Tribe (SRMT) and Seneca Nation (SNI) through a formal Tribal consultation process. Through these engagements, representatives from the two tribal nations shared insights on the state of broadband and digital equity in their respective communities.

Regarding the availability and affordability of broadband internet, SRMT owns its own broadband enterprise, Mohawk Networks, LLC, which provides internet services to over 1,500 homes on the territory, with about 25% of those households participating in ACP. For those citizens of SRMT without internet, there are some citizens that purposefully do not adopt because they do not want it. Others cite affordability as a barrier to adoption, as well as the difficulty of enrolling in ACP. As for SNI, about 50% of members have adopted internet, leaving roughly 600 households unconnected. SNI also sees challenges with the accessibility of devices and would like to establish central, accessible computer labs or other internet-enabled device centers for those who do not have personal devices or internet at home.

Regarding digital literacy, SRMT has seen success with public community centers that provide digital literacy training. Despite the success of this program and positive impacts on internet adoption, the program has exhausted current funding. SNI also voiced a need for more digital literacy training and programs. Consultations with both tribes elevated telehealth as a shared challenge due to clients' lack of internet and personal devices, a lack of healthcare professionals to provide digital care, and a lack of funding to support telehealth adoption programs.

Immigrants & Refugees

CAO collected qualitative data on the needs and barriers that hinder immigrants and refugees from full and meaningful adoption of the internet, via focus groups and based on the input of DECs.

Affordability is a significant barrier for refugees and immigrants accessing both at-home internet service and internet-enabled devices. Many immigrants and refugees cannot access mainstream employment due to a lack of documentation, and some earners are financially committed to support extended family both in the U.S. and in their country of origin. For immigrants and refugees that do subscribe to an internet plan, the financial burden makes them more likely to subscribe to the lowest-cost plans that do not provide service at sufficient speeds. With regard to internet-enabled devices, programs do exist to provide devices to this population (see Asset Inventory 3.1.1); however, these resources are limited, and focus groups noted that the quality of devices is low.

Language barriers are a challenge for this population to access online public resources, including applying for ACP to alleviate internet costs. It is often overlooked how truly diverse the refugee and immigrant population is in New York State; a regional partner in the Mohawk Valley said that this population hails from dozens of different countries and speaks over 40 different languages.

Immigrants and refugees are particularly concerned about online surveillance due to experiences with conflict, government violence, and/or persecution, or due to a lack of legal citizenship documentation. Immigrants and refugees are also disproportionately vulnerable to scams that exploit their unfamiliarity with U.S. public resources or fear of making mistakes that could lead to deportation.

Youth

CAO learned about the challenges that youth face in full, meaningful internet adoption through listening sessions, Digital Equity Task Force meetings, and via the input of DECs. A participant in a DETF Education meeting underscored the importance of internet access and affordability for youth in school: "You can't make it in New York schools without internet access [because] every teacher is required to post course content, learning, and grades online." Schools and libraries have been important places to access the internet for youth who lack broadband internet at home, but these institutions are not available 24 hours a day or on weekends; as a result, some youth sit in school parking lots to access Wi-Fi or depend on smartphones at home for all of their education needs. Fortunately, school districts and other institutions have been effective in providing internet-enabled devices to youth (see 3.1 Asset Inventory). In addition, youth face unique levels of vulnerability to cyberbullying, online harassment, and potential negative mental health effects associated with use of social media.

Affordable Housing Residents

Initiatives addressing broadband access and adoption needs and barriers for affordable housing residents are in alignment with CAO's goals and measurable objectives. CAO recognizes the intersectional identities of covered populations living in affordable housing and understands that affordable housing developments are important delivery partners for digital equity programs and services to covered populations: 28% of affordable housing residents live with disabilities, 76% are racial or ethnic minorities, and 52% are older adults (over age 60).[51] CAO's Affordable Housing Connectivity Program (AHCP) will provide owners of affordable housing with new or upgraded broadband infrastructure so tenants can access high-quality home internet service at affordable monthly rates. In addition to the deployment of these funds, CAO plans to deliver on-site digital equity services with the support of local and regional partners. CAO will seek opportunities to amplify the impact of the AHCP with further investments into digital equity initiatives for affordable housing residents.

[51] HUD Office of Policy Development and Research. "Assisted Housing: National and Local: Picture of Subsidized Households," 2022. https://www.huduser.gov/portal/datasets/assthsg.html.

Table 3: Intersection between Affordable Housing Residents and Covered Populations[52]

Region	Median Household Income		Racial and Ethnic Minorities		Individuals with Disabilities		Older Individuals (Age 60+)	
	Affordable Housing Residents	Region Average	Affordable Housing Residents	Region Average	Affordable Housing Residents	Region Average	Affordable Housing Residents	Region Average
Capital Region	$16,988	$64,400	45%	17%	32%	15%	48%	27%
Central New York	$15,150	$62,600	45%	12%	27%	16%	46%	25%
Finger Lakes	$16,183	$62,300	56%	13%	34%	15%	45%	26%
Long Island	$22,943	$119,000	63%	38%	24%	8%	64%	24%
Mid-Hudson	$21,525	$86,400	63%	30%	17%	12%	49%	24%
Mohawk Valley	$15,013	$59,300	35%	12%	33%	17%	46%	28%
New York City	$21,092	$74,000	89%	65%	28%	12%	53%	21%
North Country	$15,196	$59,200	8%	11%	38%	18%	46%	27%
Southern Tier	$14,885	$58,100	27%	11%	34%	17%	44%	27%
Western NY	$15,015	$56,300	58%	14%	29%	18%	44%	27%

[52] Id.

3.2.2 Regional Needs Assessment

The Needs Assessment processed New York State Internet Access Survey responses by region to produce reports, or "snapshots," capturing broadband and digital equity findings in the ten distinct regional geographies of New York State: Capital Region, Central New York, Finger Lakes, Long Island, Mid-Hudson, Mohawk Valley, North Country, Southern Tier, and Western New York. Each of New York City's five boroughs—the Bronx, Brooklyn, Manhattan, Queens, and Staten Island—also has a separate snapshot.

Each snapshot contains the following information:

- Demographic information from the region to help compare regional covered populations to the broader composition of the state.
- Selected Survey data across five broadband and digital equity areas: Broadband Affordability & Availability, Accessibility of Devices & Device Support, Digital Literacy, Privacy & Cybersecurity, and the Accessibility & Inclusivity of Public Resources.
- Significant findings from focus groups, where applicable, to provide nuance and further depth on challenges affecting covered populations in specific regions.

NYS REGIONAL SNAPSHOTS

New York State

New York State is home to a diverse population with uneven experiences accessing and using the internet. In surveys and focus groups, residents noted gaps in high-quality broadband options, digital literacy training, and a sense of safety online. New Yorkers statewide celebrated libraries as trusted public stewards of digital equity.

Digital Equity Act Covered Populations

Population	New York State (NYS)	
Veterans	**4%**	800K
Aging Individuals	**23%**	4.6 Million
Low-Income Households	**21%**	4.1 Million
Individuals with Language Barriers	**26%**	5.1 Million
Individuals with Disabilities	**12%**	2.4 Million
Rural Residents	**20%**	3.9 Million
Racial and Ethnic Minorities	**45%**	8.7 Million

New York State Snapshot

20.1 million people

7.5 million households

87% of households have any type of broadband internet (ACS).

$75,200 median household income.

29% of households earning under **$35k/year** do not have internet,

while **13%** of households earning **$35k-75/year** do not have internet,

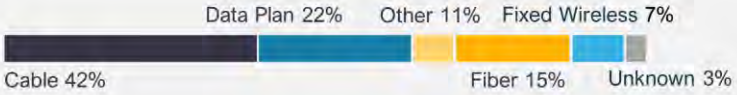
and **4%** of households earning over **$75k/year** do not have internet.

Nearly 50% of eligible households enrolled in the Affordable Connectivity Program (1.6m).

The median household spends **$80/month** on internet, compared to **$75-90/month** statewide.

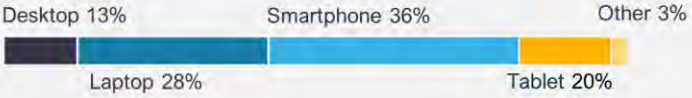
Internet | Broadband Affordability & Availability

In New York, **4%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **13%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



Devices | Accessibility of Devices & Device Support

8% of households do not have a computer and **8%** only have a smartphone (ACS). **91%** of respondents stated everyone in their household has access to the devices they need. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

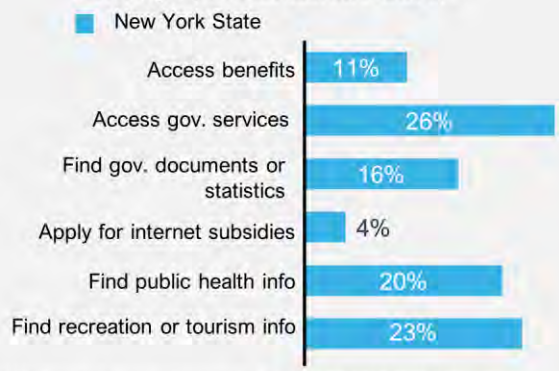
Focus groups across the state highlight a need for training around protecting privacy online. New Yorkers were most confident in online banking and applying for jobs online.

Privacy & Cybersecurity

87% of New Yorkers are concerned or very concerned about digital safety. Survey respondents mention the following concerns:

Accessibility of Public Resources

32% of New Yorkers rated past experiences with online government services as fair or poor. Of all online services, New Yorkers were likeliest to access government services.



CITATIONS: All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database. ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002). Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.
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NYS REGIONAL SNAPSHOTS

The Capital Region

The Capital Region contains a higher share of rural residents than other parts of the state. In surveys and focus groups, residents noted the region generally lacks high-quality broadband options and shared that many residents are not adequately served. Residents reported the lack of satisfactory internet speed hinders them from meeting their needs online.

Digital Equity Act Covered Populations

Population	Capital	NYS
Veterans	**6%**	4%
Aging Individuals	**25%**	23%
Low-Income Households	**16%**	20%
Individuals with Language Barriers	**14%**	26%
Individuals with Disabilities	**13%**	12%
Rural Residents	**42%**	20%
Racial and Ethnic Minorities	**19%**	45%

Capital Region Snapshot

1,105,100 people

451,900 households

$76,100 median household income

30% of households earning under **$35k/year** do not have internet,

while **13%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

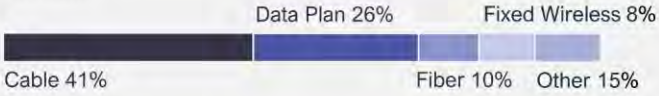
87% of households have access to any broadband internet, compared to **87%** in NYS (ACS).

47% of eligible households (75,700) enrolled in Affordable Connectivity Program.

The median household spends **$80/month** on internet, compared to **$75-90/month** statewide.

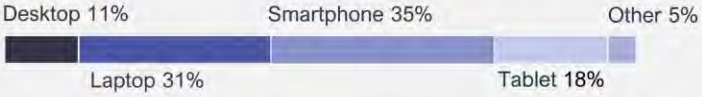
Internet | Broadband Affordability & Availability

In the Capital Region, **5%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **13%** of households do not have any type of broadband internet (ACS). Among households that do have internet, surveyed respondents primarily rely on cable.



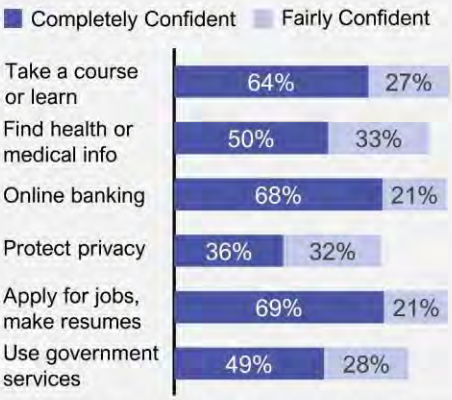
Devices | Accessibility of Devices & Device Support

7% of households lack a computer and **6%** are smartphone-only internet subscribers (ACS). **6%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups highlighted challenges navigating websites, since layouts sometimes change over time. Respondents were most confident in learning, online banking, and applying for jobs / making resumes online.



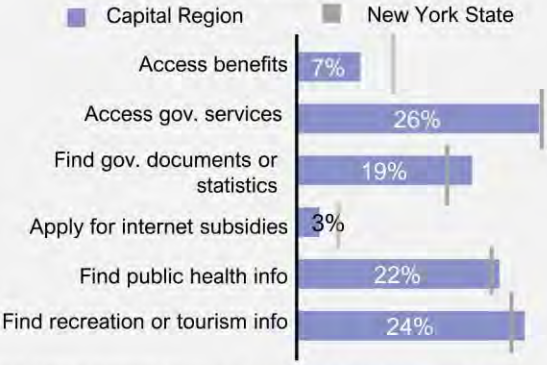
Privacy & Cybersecurity

88% of residents in the Capital Region are concerned or very concerned about digital safety. Focus group participants noted that users of public Wi-Fi felt at higher risk of scams or data theft. Survey respondents noted the following concerns:

Accessibility of Public Resources

31% of Capital Region residents rated past experiences with online government services as fair or poor. Focus group participants found it challenging to find information about services spread across different government websites.

In the last year, residents used the internet to….



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NYS REGIONAL SNAPSHOTS

Central New York

Central New York has a larger share of rural residents than other regions of the state. Residents in focus groups valued libraries and community centers as valuable places to learn digital skills through trainings, community events, and other programs.

Digital Equity Act Covered Populations

Population	Central NY	NYS
Veterans	**6%**	4%
Aging Individuals	**24%**	23%
Low-Income Households	**21%**	20%
Individuals with Language Barriers	**15%**	26%
Individuals with Disabilities	**14%**	12%
Rural Residents	**44%**	20%
Racial and Ethnic Minorities	**17%**	45%

Central New York Region Snapshot

784,700 people

310,700 households

$64,300 median household income

32% of households earning under **$35k/year** do not have internet,

while **13%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

85% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

50% of eligible households enrolled in the Affordable Connectivity Program (71,200).

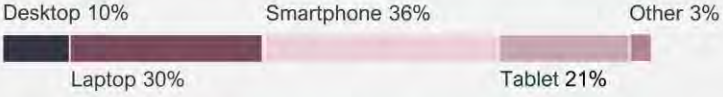
The median household spends **$75-85/month** on internet, compared to **$75-90/month** statewide.

Internet | Broadband Affordability & Availability

In Central New York, **4%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **15%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.

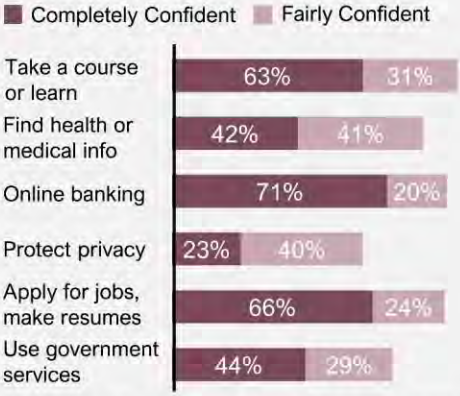
Devices | Accessibility of Devices & Device Support

9% of households lack a computer and **7%** are smartphone-only internet subscribers (ACS). **5%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups highlighted that compared to other activities, they used the internet less for government services. Respondents were most confident in learning and banking online.

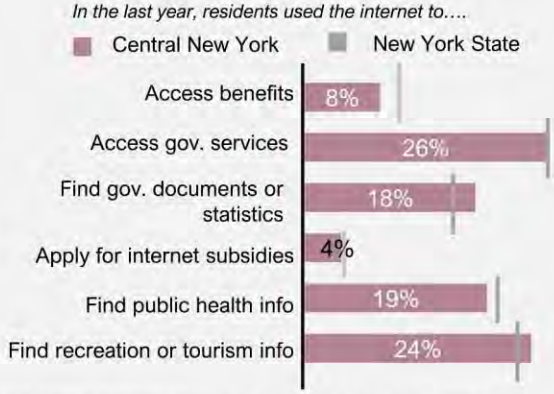


Privacy & Cybersecurity

90% of residents in Central New York are concerned or very concerned about digital safety. Focus group participants noted theft of banking information online. Survey respondents mentioned the following concerns:

Accessibility of Public Resources

32% of Central New York residents rated past experiences with online government services as fair or poor. Focus groups highlighted that many websites are not easy to translate or navigate.



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NYS REGIONAL SNAPSHOTS

The Finger Lakes

The Finger Lakes has a larger share of rural residents than other regions of the state. In focus groups, residents felt that local government needed to build more awareness of digital literacy services available. Libraries with digital skills programming could be expanded and better advertised to residents.

Digital Equity Act Covered Populations

Population	Finger Lakes	NYS
Veterans	**5%**	4%
Aging Individuals	**24%**	23%
Low-Income Households	**20%**	20%
Individuals with Language Barriers	**16%**	26%
Individuals with Disabilities	**15%**	12%
Rural Residents	**40%**	20%
Racial and Ethnic Minorities	**22%**	45%

Finger Lakes Region Snapshot

1,221,300 people

499,000 households

$65,400 median household income

29% of households earning under **$35k/year** do not have internet,

while **12%** of households earning **$35k-75/year** do not have internet,

and **4%** of households earning over **$75k/year** do not have internet.

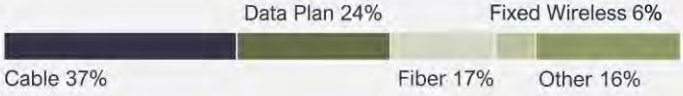
87% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

51% of eligible households enrolled in the Affordable Connectivity Program (106,200).

The median household spends **$75-80/month** on internet, compared to **$75-90/month** statewide.

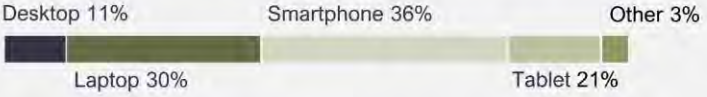
Internet | Broadband Affordability & Availability

In the Finger Lakes, **4%** have internet speeds lower than 100/20 Mbps available (FCC). **13%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



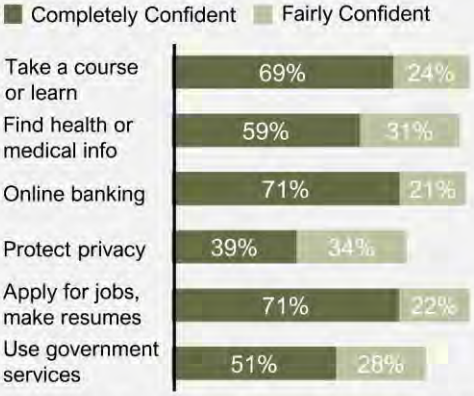
Devices | Accessibility of Devices & Device Support

8% of households lack a computer and **7%** are smartphone-only internet subscribers (ACS). **6%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups celebrating existing programming at libraries on digital literacy while requesting more trainings overall. Respondents were most confident in applying for jobs and online banking.



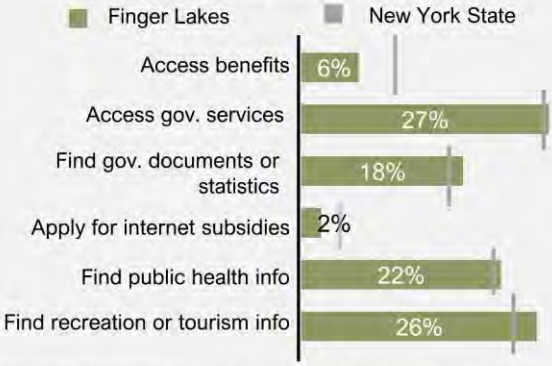
Privacy & Cybersecurity

87% of residents in the Finger Lakes are concerned or very concerned about digital safety. Focus group participants noted experiences with identity and credit card theft. Survey respondents mention the following concerns:

Accessibility of Public Resources

29% of Finger Lakes residents rated past experiences with online government services as fair or poor. Focus groups highlighted language barriers and challenges navigating services that transitioned online during the pandemic.

In the last year, residents used the internet to….



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NYS REGIONAL SNAPSHOTS

Long Island

The Long Island region has the highest median household income of any region in the state. In surveys and focus groups, residents shared concerns about their privacy and cybersecurity online and expressed that service quality varies greatly across eastern Suffolk County.

Digital Equity Act Covered Populations

Population	Long Island	NYS
Veterans	**4%**	4%
Aging Individuals	**24%**	23%
Low-Income Households	**10%**	20%
Individuals with Language Barriers	**20%**	26%
Individuals with Disabilities	**10%**	12%
Rural Residents	**2%**	20%
Racial and Ethnic Minorities	**36%**	45%

Long Island Region Snapshot

2,914,700 people

959,100 households

$118,700 median household income

26% of households earning under **$35k/year** do not have internet,

while **13%** of households earning **$35k-75/year** do not have internet,

and **4%** of households earning over **$75k/year** do not have internet.

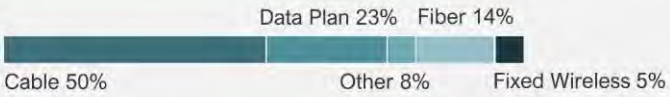
91% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

29% of eligible households enrolled in the Affordable Connectivity Program (60,400).

The median household spends **$90-100/month** on internet, compared to **$75-90/month** statewide.

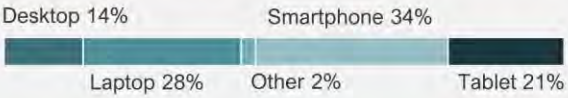
Internet | Broadband Affordability & Availability

On Long Island, **3%** of broadband-serviceable locations have internet speeds of at least 100/20 Mbps available (FCC). **9%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



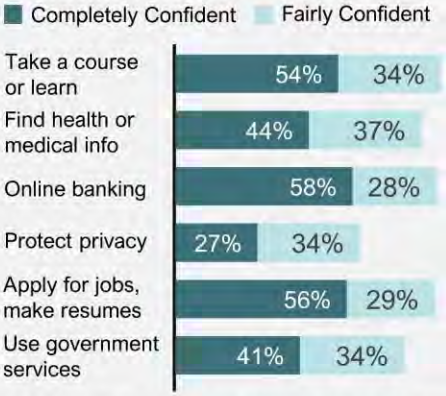
Devices | Accessibility of Devices & Device Support

5% of households lack a computer and **4%** are smartphone-only internet subscribers (ACS). **5%** of survey respondents said that their household does not have all the devices it needs. Residents used a variety of devices to access the internet at home at comparable rates.



Digital Literacy

Focus groups highlighted public computer labs in libraries and community centers as very helpful to digital literacy. Respondents were most confident in banking, learning, and applying for jobs online.



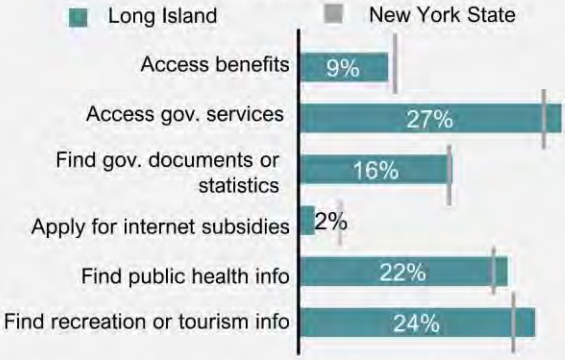
Privacy & Cybersecurity

92% of residents on Long Island are concerned or very concerned about digital safety. Focus group participants noted that online scams were growing harder to identify. Survey respondents mentioned the following concerns:

Accessibility of Public Resources

28% of Long Island residents rated past experiences with online government services as fair or poor. Focus groups highlighted that local and NYS government online resources should be standardized for better accessibility.

In the last year, residents used the internet to….



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NYS REGIONAL SNAPSHOTS

Mid-Hudson

The Mid-Hudson region has a larger share of rural residents than other regions. In focus groups, residents said they needed more reliable, affordable internet service options, and they requested an increase in the number and variety of community organizations offering free or low-cost digital literacy training and Wi-Fi.

Digital Equity Act Covered Populations

Population	Mid-Hudson	NYS
Veterans	**4%**	4%
Aging Individuals	**22%**	23%
Low-Income Households	**17%**	20%
Individuals with Language Barriers	**21%**	26%
Individuals with Disabilities	**12%**	12%
Rural Residents	**60%**	20%
Racial and Ethnic Minorities	**31%**	45%

Mid-Hudson Region Snapshot

1,388,800 people

481,400 households

$87,300 median household income

28% of households earning under **$35k/year** do not have internet,

while **14%** of households earning **$35k-75/year** do not have internet,

and **4%** of households earning over **$75k/year** do not have internet.

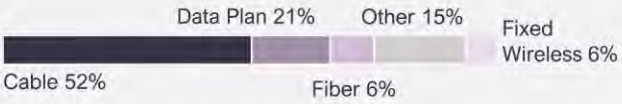
88% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

42% of eligible households enrolled in the Affordable Connectivity Program (72,800).

The median household spends **$80-85/month** on internet, compared to **$75-90/month** statewide.

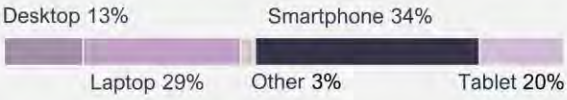
Internet | Broadband Affordability & Availability

In Mid-Hudson, **5%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **12%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



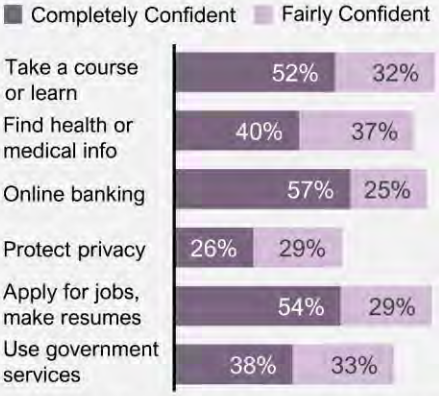
Devices | Accessibility of Devices & Device Support

8% of households lack a computer and **6%** are smartphone-only internet subscribers (ACS). **7%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups highlighted that training should free and tailored to meet the needs of specific audiences. Residents were most confident in banking, learning, and applying for jobs online:



Privacy & Cybersecurity

90% of residents in Mid-Hudson are concerned or very concerned about digital safety. Focus group participants noted that more trainings for online safety are needed. Survey respondents mentioned the following concerns:

Accessibility of Public Resources

36% of Mid-Hudson residents rated past experiences with online government services as fair or poor. Focus group highlighted that public resources on phone applications were more user-friendly than websites on desktop computers.

In the last year, residents used the internet to….

CITATIONS: All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database. ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002). Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.

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NYS REGIONAL SNAPSHOTS

Mohawk Valley

Mohawk Valley has larger shares of rural residents and aging individuals than other regions of the state. In focus groups, residents noted that internet options, especially bundled services, were too expensive. They recommended that discounts be offered to apartment-dwelling households.

Digital Equity Act Covered Populations

Population	Mohawk Valley	NYS
Veterans	**4%**	4%
Aging Individuals	**22%**	23%
Low-Income Households	**17%**	20%
Individuals with Language Barriers	**21%**	26%
Individuals with Disabilities	**12%**	12%
Rural Residents	**60%**	20%
Racial and Ethnic Minorities	**31%**	45%

Mohawk Valley Region Snapshot

484,600 people

190,500 households

$60,000 median household income

32% of households earning under **$35k/year** do not have internet,

while **13%** of households earning **$35k-75/year** do not have internet,

and **6%** of households earning over **$75k/year** do not have internet.

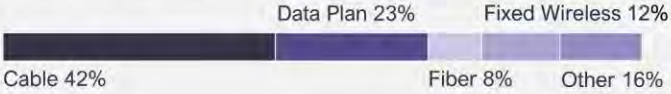
84% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

57% of eligible households enrolled in the Affordable Connectivity Program (62,900).

The median household spends **$80-90/month** on internet, compared to **$75-90/month** statewide.

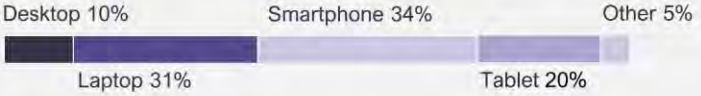
Internet | Broadband Affordability & Availability

In the Mohawk Valley, **7%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **16%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



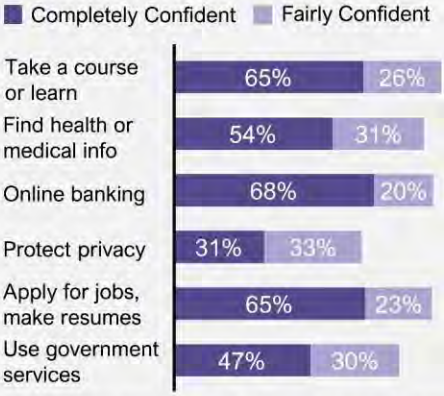
Devices | Accessibility of Devices & Device Support

10% of households lack a computer and **8%** are smartphone-only internet subscribers (ACS). **8%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus group participants wanted training to help them combat online scams. Respondents were most confident in learning, using government services, and banking online.



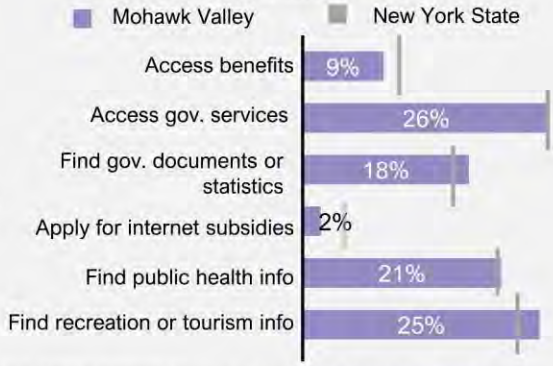
Privacy & Cybersecurity

86% of residents in the Mohawk Valley are concerned or very concerned about digital safety. Focus group participants expressed a desire for the government to protect the public more from online scams. Survey respondents mentioned the following concerns:

Accessibility of Public Resources

34% of Mohawk Valley residents rated past experiences with online government services as fair or poor. Focus groups highlighted they had issues navigating and understanding government websites.

In the last year, residents used the internet to….



CITATIONS: All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database. ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002). Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.

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NYS REGIONAL SNAPSHOTS

North Country

North Country has larger shares of rural residents, veterans, and aging individuals than other regions of the state. Focus groups expressed the need for centralizing online services and information and better targeting these resources to those with basic digital literacy. Residents also desired more affordable service provider options.

Digital Equity Act Covered Populations

Population	North Country	NYS
Veterans	**8%**	4%
Aging Individuals	**23%**	23%
Low-Income Households	**23%**	20%
Individuals with Language Barriers	**16%**	26%
Individuals with Disabilities	**17%**	12%
Rural Residents	**95%**	20%
Racial and Ethnic Minorities	**12%**	45%

North Country Region Snapshot

423,800 people

165,300 households

$58,200 median household income

28% of households earning under **$35k/year** do not have internet,

while **14%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

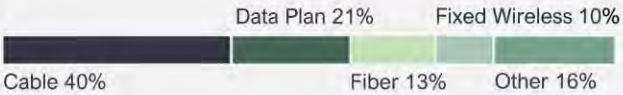
85% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

45% of eligible households enrolled in the Affordable Connectivity Program (29,200).

The median household spends **$80-90/month** on internet, compared to **$75-90/month** statewide.

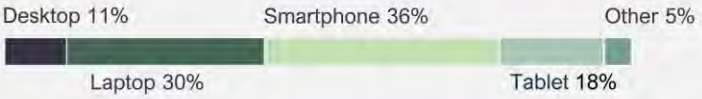
Internet | Broadband Affordability & Availability

In North Country, **12%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **15%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



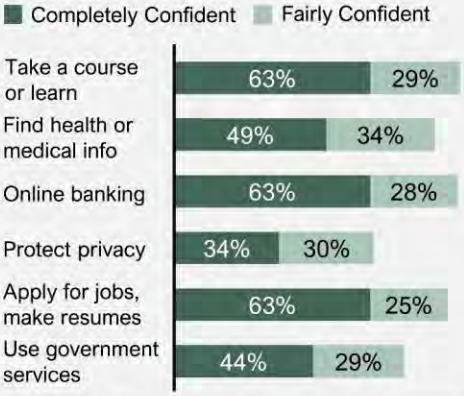
Devices | Accessibility of Devices & Device Support

9% of households lack a computer and **7%** are smartphone-only internet subscribers (ACS). **4%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus group participants noted fear of scams during certain activities. Respondents were most confident in learning and banking online.



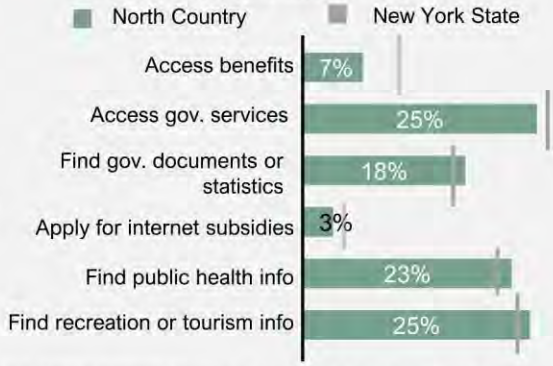
Privacy & Cybersecurity

89% of residents in North Country are concerned or very concerned about digital safety. Focus group participants noted that centrally-located trainings for online safety would be helpful. Survey respondents mentioned the following concerns:

Accessibility of Public Resources

33% of North Country residents rated past experiences with online government services as fair or poor. Focus groups highlighted issues with fake government websites and a lack of website accessibility.

In the last year, residents used the internet to….



CITATIONS: All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database. ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002). Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.

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NYS REGIONAL SNAPSHOTS

New York City

New York City has the largest share of racial and ethnic minorities, low-income households, and individuals with language barriers of any region. Focus groups expressed that internet and devices are unaffordable and that home internet can be too unreliable and slow to meet everyday needs. Individuals with language barriers shared challenges they have accessing online public services.

Digital Equity Act Covered Populations

Population	The Bronx	NYS
Veterans	**2%**	4%
Aging Individuals	**20%**	23%
Low-Income Households	**27%**	20%
Individuals with Language Barriers	**37%**	26%
Individuals with Disabilities	**11%**	12%
Rural Residents	**0%**	20%
Racial and Ethnic Minorities	**69%**	45%

NYC Region Snapshot

8.7 million people

3.26 million households

$74,100 median household income

30% of households earning under **$35k/year** do not have internet,

while **13%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

86% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

41% of eligible households enrolled in the Affordable Connectivity Program (676K).

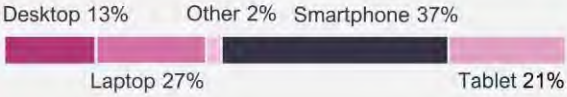
The median household spends **$65-99/month** on internet, compared to **$75-90/month** statewide.

Internet | Broadband Affordability & Availability

In New York City, **1%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **14%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.

Devices | Accessibility of Devices & Device Support

8% of households lack a computer and **9%** are smartphone-only internet subscribers (ACS). **13%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups noted a lack of digital literacy resources that serve English language learners and minorities. They highlighted libraries as helpful resources and desired more training on accessing services that went online during the pandemic.

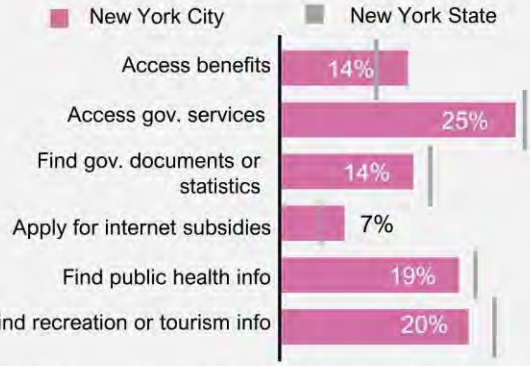
Privacy & Cybersecurity

84% of residents in New York City are concerned or very concerned about digital safety. Focus groups demonstrated a lack of digital skills drives fear of scams. Survey respondents mention the following concerns:

Accessibility of Public Resources

36% of residents rated past experiences with online government services as fair or poor. Focus groups highlighted challenges navigating online services, especially for aging individuals and individuals with disabilities or language barriers.

In the last year, residents used the internet to….



CITATIONS: All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database. ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002). Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.

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NYS REGIONAL SNAPSHOTS

NYC | The Bronx

The Bronx has the largest share of racial or ethnic minorities of any region, and it contains greater shares of low-income households and individuals with language barriers. Focus groups were concerned about the affordability and quality of internet and devices, with existing options both unaffordable or of insufficient quality for everyday needs.

Digital Equity Act Covered Populations

Population	The Bronx	NYS
Veterans	**2%**	4%
Aging Individuals	**18%**	23%
Low-Income Households	**39%**	20%
Individuals with Language Barriers	**48%**	26%
Individuals with Disabilities	**16%**	12%
Rural Residents	**0%**	20%
Racial and Ethnic Minorities	**92%**	45%

The Bronx Region Snapshot

1,468,300 people

521,300 households

$43,700 median household income

30% of households earning under **$35k/year** do not have internet,

while **12%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

82% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

52% of eligible households enrolled in the Affordable Connectivity Program (203,000).

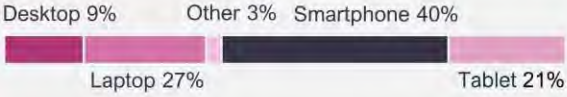
The median household spends **$70-119/month** on internet, compared to **$75-90/month** statewide.

Internet | Broadband Affordability & Availability

In the Bronx, **3%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **18%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.

Devices | Accessibility of Devices & Device Support

9% of households lack a computer and **17%** are smartphone-only internet subscribers (ACS). **18%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups expressed desire for expanded training on online activities that began during the pandemic. Respondents were most confident in learning and applying for jobs / making resumes online.

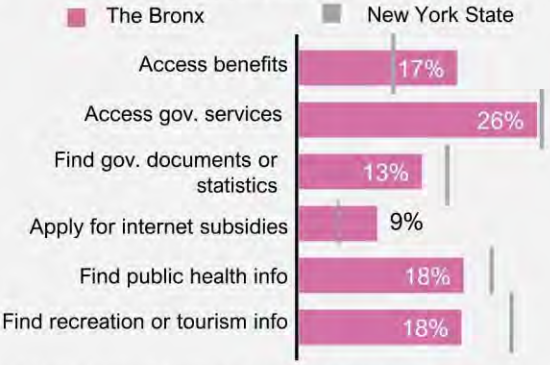
Privacy & Cybersecurity

82% of residents in the Bronx are concerned or very concerned about digital safety. Focus groups expressed concerns with a variety of cybersecurity issues, but especially with respect to the vulnerability of older adults. Survey respondents mention the following concerns:

Accessibility of Public Resources

34% of Bronx residents rated past experiences with online government services as fair or poor. Focus groups highlighted accessibility concerns with websites providing critical services, especially for seniors and individuals with disabilities.

In the last year, residents used the internet to….



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NYS REGIONAL SNAPSHOTS

NYC | Brooklyn

Brooklyn has larger shares of racial or ethnic minorities, low-income households, and individuals with language barriers than other regions. Focus groups expressed a desire for better and more affordable internet service at home, particularly in neighborhoods perceived to be at risk of being left out of infrastructure deployment.

Digital Equity Act Covered Populations

Population	Brooklyn	NYS
Veterans	**1%**	4%
Aging Individuals	**19%**	23%
Low-Income Households	**30%**	20%
Individuals with Language Barriers	**37%**	26%
Individuals with Disabilities	**10%**	12%
Rural Residents	**0%**	20%
Racial and Ethnic Minorities	**64%**	45%

Brooklyn Region Snapshot

2,712,400 people

985,100 households

$67,800 median household income

31% of households earning under **$35k/year** do not have internet,

while **14%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

85% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

42% of eligible households enrolled in the Affordable Connectivity Program (224,000).

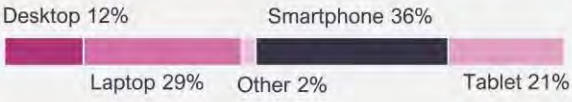
The median household spends **$70-90/month** on internet, compared to **$75-90/month** statewide.

Internet | Broadband Affordability & Availability

In Brooklyn, **1.5%** of broadband serviceable locations have internet speeds below 100/20 Mbps available (FCC). **15%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.

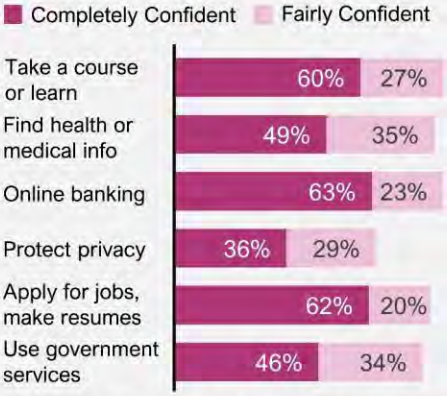
Devices | Accessibility of Devices & Device Support

10% of households lack a computer and **8%** are smartphone-only internet subscribers (ACS). **9%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups described uneven experiences with digital literacy, especially for those with limited English skills. Respondents were most confident in online banking and applying for jobs / making resumes.



Privacy & Cybersecurity

88% of residents in Brooklyn are concerned or very concerned about digital safety. Focus groups were concerned about the security risks that older adults face online, noting a need for more training. Survey respondents mention the following concerns:

Accessibility of Public Resources

36% of Brooklyn residents rated past experiences with online government services as fair or poor. Focus group participants expressed that government sites are difficult to navigate, particularly for those with limited English skills.

In the last year, residents used the internet to….

CITATIONS: All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database. ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002). Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.

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NYS REGIONAL SNAPSHOTS

NYC | Manhattan

Manhattan has larger shares of racial or ethnic minorities and low-income households than other regions of the state. Focus groups expressed concerns about the inconsistency of internet service quality and training programs across the city, especially for those struggling to afford service or with language barriers.

Digital Equity Act Covered Populations

Population	Manhattan	NYS
Veterans	**2%**	4%
Aging Individuals	**22%**	23%
Low-Income Households	**22%**	20%
Individuals with Language Barriers	**27%**	26%
Individuals with Disabilities	**11%**	12%
Rural Residents	**0%**	20%
Racial and Ethnic Minorities	**53%**	45%

Manhattan Region Snapshot

1,669,100 people

767,200 households

$94,000 median household income

28% of households earning under **$35k/year** do not have internet,

while **12%** of households earning **$35k-75/year** do not have internet,

and **3%** of households earning over **$75k/year** do not have internet.

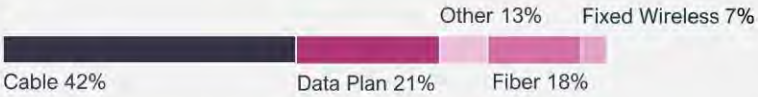
89% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

55% of eligible households enrolled in the Affordable Connectivity Program (167,200).

The median household spends **$65-80/month** on internet, compared to **$75-90/month** statewide.

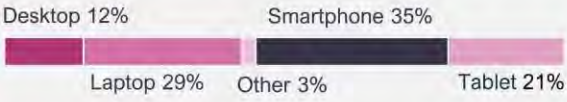
Internet | Broadband Affordability & Availability

In Manhattan, all broadband serviceable locations have internet speeds above 100/20 Mbps available (FCC). **11%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



Devices | Accessibility of Devices & Device Support

7% of households lack a computer and **6%** are smartphone-only internet subscribers (ACS). **14%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus group participants expressed concerns over the availability of resources for English learners and people of color. Respondents were most confident in online banking and applying for jobs / making resumes.

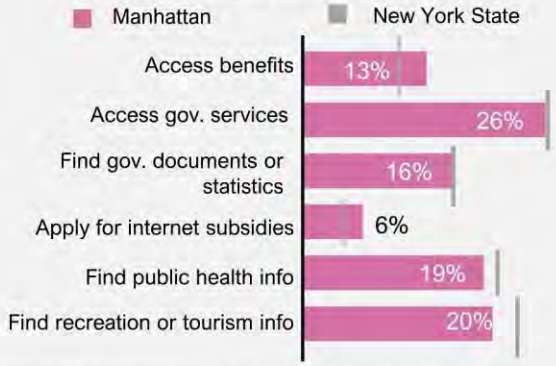
Privacy & Cybersecurity

88% of residents in the Manhattan are concerned or very concerned about digital safety. Focus groups noted a lack of confidence in digital skills driving fear of scams and limiting usage of the internet. Survey respondents mention the following concerns:

Accessibility of Public Resources

39% of Manhattan residents rated past experiences with online government services as fair or poor. Focus groups were concerned about unequal access to resources, with vulnerable communities unaware of resources in their area.

In the last year, residents used the internet to….



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NYS REGIONAL SNAPSHOTS

NYC | Queens

Queens has larger shares of racial or ethnic minorities and individuals with language barriers than other regions of the state. Focus groups highlighted barriers to using the internet, including high prices for unreliable home internet service and website accessibility concerns for older adults and people with language barriers.

Digital Equity Act Covered Populations

Population	Queens	NYS
Veterans	**2%**	4%
Aging Individuals	**22%**	23%
Low-Income Households	**21%**	20%
Individuals with Language Barriers	**41%**	26%
Individuals with Disabilities	**10%**	12%
Rural Residents	**0%**	20%
Racial and Ethnic Minorities	**76%**	45%

Queens Region Snapshot

2,393,100 people

807,500 households

$75,900 median household income

28% of households earning under **$35k/year** do not have internet,

while **12%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

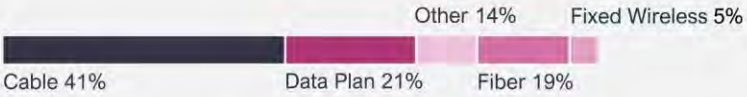
88% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

53% of eligible households enrolled in the Affordable Connectivity Program (187,200).

The median household spends **$60-90/month** on internet, compared to **$75-90/month** statewide.

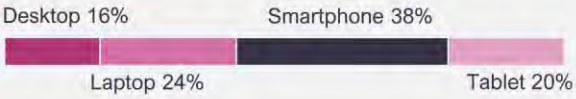
Internet | Broadband Affordability & Availability

In Queens, nearly all broadband serviceable locations have internet speeds of at least 100/20 Mbps available (FCC). **12%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



Devices | Accessibility of Devices & Device Support

7% of households lack a computer and **10%** are smartphone-only internet subscribers (ACS). **16%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups noted libraries as good resources for learning computer skills. Respondents were most confident in learning online and least confident in protecting their privacy online.

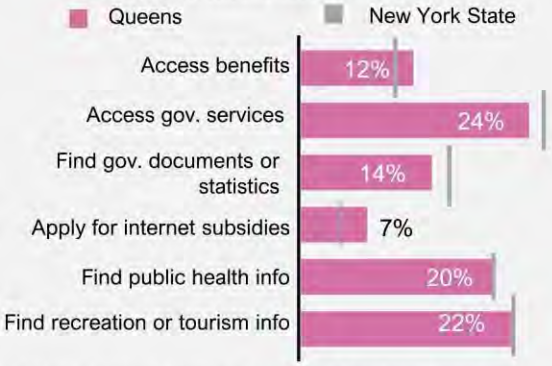
Privacy & Cybersecurity

80% of residents in Queens are concerned or very concerned about digital safety. Focus groups were concerned about online safety skills among both older adults and young people. Survey respondents mention the following concerns:

Accessibility of Public Resources

34% of Queens residents rated past experiences with online government services as fair or poor. Focus groups highlighted inconsistent navigability of government websites, particularly for individuals with disabilities or limited English skills. .

In the last year, residents used the internet to….



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NYS REGIONAL SNAPSHOTS

NYC | Staten Island

Staten Island has smaller shares of covered populations than other regions. Low-income households within the region have a lower rate of adoption of internet than households with comparable incomes in other parts of the state. Survey respondents noted significant concerns over privacy and safety online.

Digital Equity Act Covered Populations

Population	Staten Island	NYS
Veterans	**3%**	4%
Aging Individuals	**22%**	23%
Low-Income Households	**17%**	20%
Individuals with Language Barriers	**24%**	26%
Individuals with Disabilities	**10%**	12%
Rural Residents	**0%**	20%
Racial and Ethnic Minorities	**39%**	45%

Staten Island Region Snapshot

493,200 people

169,500 households

$89,400 median household income

35% of households earning under **$35k/year** do not have internet,

while **16%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

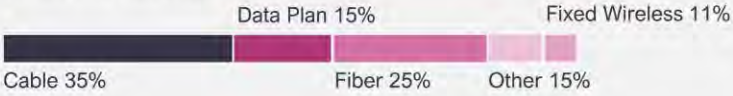
86% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

56% of eligible households enrolled in the Affordable Connectivity Program (32,400).

The median household spends **$60-120/month** on internet, compared to **$75-90/month** statewide.

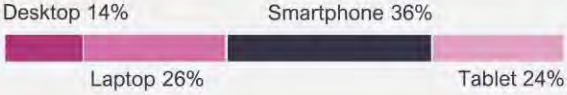
Internet | Broadband Affordability & Availability

On Staten Island, nearly all broadband serviceable locations have internet speeds of at least 100/20 Mbps available (FCC). **14%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



Devices | Accessibility of Devices & Device Support

7% of households lack a computer and **6%** are smartphone-only internet subscribers (ACS). **9%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

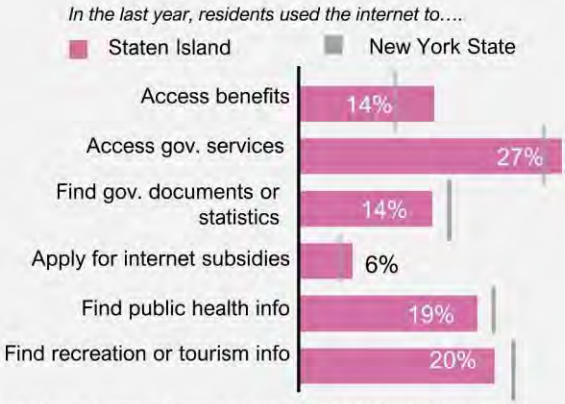
Respondents were most confident in online banking and least confident in protecting their privacy.

Privacy & Cybersecurity

83% of residents in Staten Island are concerned or very concerned about digital safety. Survey respondents mention the following concerns:

Accessibility of Public Resources

37% of Staten Island residents rated past experiences with online government services as fair or poor.



CITATIONS: All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database. ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002). Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.
NOTE: Monthly internet bill data expresses median unbundled plan costs first and bundled (i.e., internet packaged with cable TV) median plan costs second; when the costs are the same, one number is expressed . Under "Internet: Availability & Affordability," "Other" includes community Wi-Fi, dial-up, DSL, and satellite internet.

NYS REGIONAL SNAPSHOTS

Southern Tier

The Southern Tier has larger shares of rural residents and individuals with disabilities than other regions of the state. Residents in focus groups desired more internet service provider options in the region. They recommended that public housing residents should have free internet.

Digital Equity Act Covered Populations

Population	Southern Tier	NYS
Veterans	**7%**	4%
Aging Individuals	**26%**	23%
Low-Income Households	**23%**	20%
Individuals with Language Barriers	**15%**	26%
Individuals with Disabilities	**16%**	12%
Rural Residents	**85%**	20%
Racial and Ethnic Minorities	**13%**	45%

Southern Tier Region Snapshot

641,400 people

262,900 households

$57,900 median household income

29% of households earning under **$35k/year** do not have internet,

while **13%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

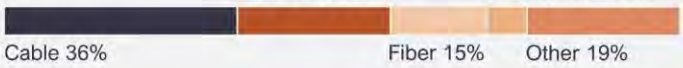
85% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

42% of eligible households enrolled in the Affordable Connectivity Program (56,900).

The median household spends **$75-80/month** on internet, compared to **$75-90/month** statewide.

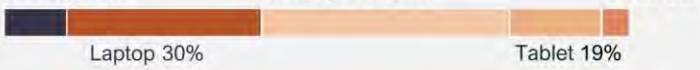
Internet | Broadband Affordability & Availability

In the Southern Tier, **8%** have internet speeds lower than 100/20 Mbps available (FCC). **15%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



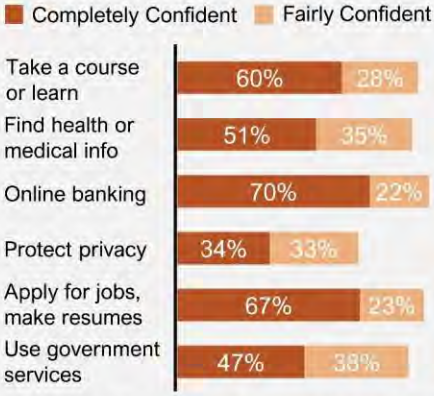
Devices | Accessibility of Devices & Device Support

9% of households lack a computer and **7%** are smartphone-only internet subscribers (ACS). **9%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups highlighted turning to public libraries and resources for help learning digital skills. Respondents were most confident in banking and applying for jobs online.



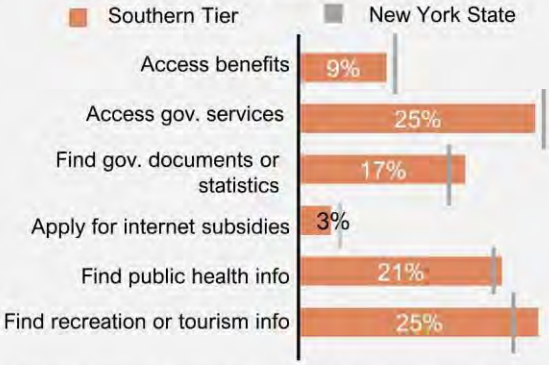
Privacy & Cybersecurity

88% of residents in the Southern Tier are concerned or very concerned about digital safety. Focus group participants noted discomfort entering their financial information online. Survey respondents mentioned the following concerns:

Accessibility of Public Resources

33% of Southern Tier residents rated past experiences with online government services as fair or poor. Focus groups highlighted challenges completing forms on smartphones and understanding language and jargon used online.

In the last year, residents used the internet to....



CITATIONS: All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database. ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002). Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.

NOTE: Monthly internet bill data expresses median unbundled plan costs first and bundled (i.e., internet packaged with cable TV) median plan costs second; when the costs are the same, one number is expressed . Under "Internet: Availability & Affordability," "Other" includes community Wi-Fi, dial-up, DSL, and satellite internet.

NYS REGIONAL SNAPSHOTS

Westchester County

Westchester County has the second highest median income in the state. In focus groups, residents wanted more internet service providers as well as service options that better support households where multiple people use the internet at once. Residents noted that awareness of ACP needed to increase.

Digital Equity Act Covered Populations

Population	Westchester	NYS
Veterans	**3%**	4%
Aging Individuals	**23%**	23%
Low-Income Households	**14%**	20%
Individuals with Language Barriers	**24%**	26%
Individuals with Disabilities	**10%**	12%
Rural Residents	**3%**	20%
Racial and Ethnic Minorities	**47%**	45%

Westchester County Region Snapshot

999,700 people

364,400 households

$105,400 median household income

28% of households earning under **$35k/year** do not have internet,

while **14%** of households earning **$35k-75/year** do not have internet,

and **4%** of households earning over **$75k/year** do not have internet.

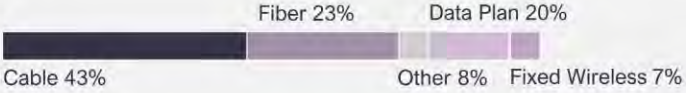
90% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

34% of eligible households enrolled in the Affordable Connectivity Program (36,000).

The median household spends **$80-100/month** on internet, compared to **$75-90/month** statewide.

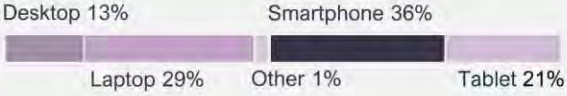
Internet | Broadband Affordability & Availability

In Westchester, **6%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **10%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.



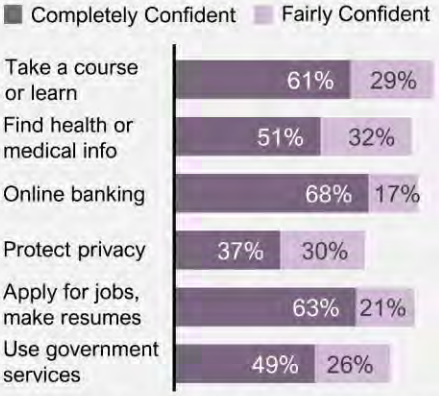
Devices | Accessibility of Devices & Device Support

6% of households lack a computer and **6%** are smartphone-only internet subscribers (ACS). **6%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Residents were most confident in banking and applying for jobs / making resumes online. Westchester survey respondents were more confident in online banking than other parts of the state.



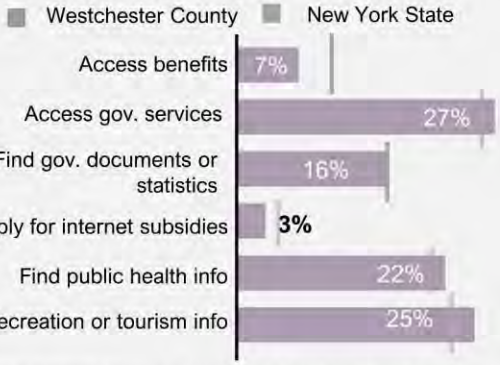
Privacy & Cybersecurity

87% of residents in the Westchester are concerned or very concerned about digital safety. However, focus group participants said were generally able to identify email scams. Survey respondents noted the following concerns:

Accessibility of Public Resources

29% of Westchester residents rated past experiences with online government services as fair or poor. Focus groups highlighted how easy it is to find information about restaurants or things to do, while some struggled with language barriers.

In the last year, residents used the internet to….



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NOTE: Monthly internet bill data expresses median unbundled plan costs first and bundled (i.e., internet packaged with cable TV) median plan costs second; when the costs are the same, one number is expressed. Under "Internet: Availability & Affordability," "Other" includes community Wi-Fi, dial-up, DSL, and satellite internet.

NYS REGIONAL SNAPSHOTS

Western New York

Western New York has a larger share of individuals with disabilities than other regions. In focus groups, residents needed more alternatives to DSL and satellite, which they said tend to be expensive. They reported periodic increases to internet prices and advertising that prioritizes expensive, bundled service options.

Digital Equity Act Covered Populations

Population	Western NY	NYS
Veterans	**6%**	4%
Aging Individuals	**25%**	23%
Low-Income Households	**22%**	20%
Individuals with language barriers	**16%**	26%
Individuals with Disabilities	**14%**	12%
Rural Residents	**29%**	20%
Racial and Ethnic Minorities	**20%**	45%

Western New York Region Snapshot

1,414,400 people

594,100 households

$60,500 median household income

31% of households earning under **$35k/year** do not have internet,

while **13%** of households earning **$35k-75/year** do not have internet,

and **5%** of households earning over **$75k/year** do not have internet.

85% of households have any type of broadband internet, compared to **87%** in NYS (ACS).

50% of eligible households enrolled in the Affordable Connectivity Program (138,800).

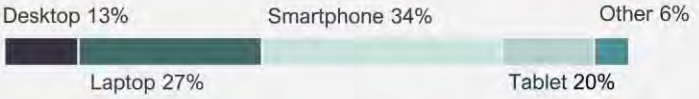
The median household spends **$75-93/month** on internet, compared to **$75-90/month** statewide.

Internet | Broadband Affordability & Availability

In Western New York, **3%** of broadband serviceable locations have internet speeds lower than 100/20 Mbps available (FCC). **15%** of households do not have any type of broadband internet (ACS). Among households that do have internet access, surveyed respondents primarily rely on cable.

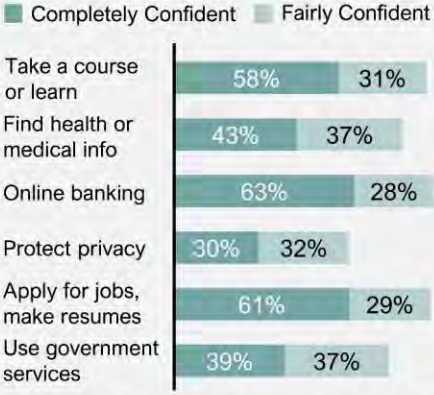
Devices | Accessibility of Devices & Device Support

10% of households lack a computer and **8%** are smartphone-only internet subscribers (ACS). **5%** of survey respondents said that their household does not have all the devices it needs. When asked what device they used most often for internet at home, respondents most often said smartphones.



Digital Literacy

Focus groups highlighted the need for more training in online safety. Respondents were most confident in banking and applying for jobs / making resumes online.



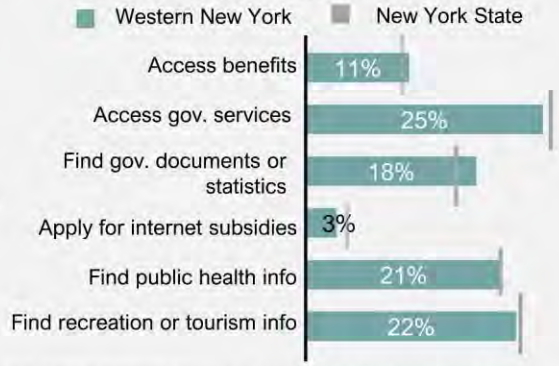
Privacy & Cybersecurity

88% of residents in Western New York are concerned about digital safety. Focus group participants felt that more training would be helpful for maintaining their safety online. Survey respondents mentioned the following concerns:

Accessibility of Public Resources

37% of Western New York residents rated past experiences with online government services as fair or poor. Focus groups highlighted challenges with online services like social security, health insurance, and public health information.

In the last year, residents used the internet to….



CITATIONS: All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database. ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002). Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.

NOTE: Monthly internet bill data expresses median unbundled plan costs first and bundled (i.e., internet packaged with cable TV) median plan costs second; when the costs are the same, one number is expressed. Under "Internet: Availability & Affordability," "Other" includes community Wi-Fi, dial-up, DSL, and satellite internet.

Regional Snapshots Notes

Sources

- All demographic and telecommunications data was sourced from the NTIA/U.S. Census Digital Equity Act Population Viewer, the U.S. Census American Community Survey (ACS 2017-2021 5-Year Series), and the FCC Broadband database.
- ACP data for statewide enrollment current as of October 30, 2023; ACP data on enrollment by county current as of August 2023. ACP data is from Universal Service Administrative Co. (USAC).
- ACS refers to the following as "broadband at home": cellular data plan, cable, fiber optic, satellite, or DSL (Table B28002).
- Unless otherwise noted, other results on internet access come from survey and focus group data and anecdotes sourced from stakeholder engagement efforts conducted in 2023 by the NYS ConnectALL Office.

Notes

- Monthly internet bill data states median **unbundled** plan costs first and **bundled** (i.e., internet packaged with cable TV) median plan costs second; when the costs are the same, one number is expressed. Monthly internet bill data comes from the survey.
- Under "Internet: Availability & Affordability," "Other" includes community Wi-Fi, dial-up, DSL, and satellite internet.

Survey Questions

Internet | Broadband Availability and Affordability

If you have internet service in your home, what kind is it? (Select all that apply)
a. A data plan for a smartphone, hotspot, or tablet
b. Cable internet
c. Fiber optic internet
d. DSL internet
e. Fixed wireless internet
f. Satellite internet
g. Dial-up internet
h. Community Wi-Fi (such as free Wi-Fi provided by a community organization)
i. I don't know

Internet | Devices

Which of the following devices do you use most of the time to connect to the internet? (Select all that apply)
a. Cell phone
b. Desktop computer
c. Laptop computer
d. Tablet (or similar device)
e. I don't know
f. I don't have a device that can connect to the internet
g. Other (please specify) _____

Digital Confidence

How confident do you feel with doing the following activities online? (Completely confident / Fairly confident / Slightly confident / Not confident)
a. Search for and apply for jobs, including creating and submitting a resume
b. Find trustworthy information about a health or medical question
c. Take a course or find learning materials
d. Access online banking or financial services
e. Access or apply for government services
f. Use a video chat service, such as Zoom, for work, school, or telehealth
g. Use a word processing application, such as Google Docs or Microsoft Word, to create a document
h. Find ways to protect the privacy of your personal data
i. Use email
j. Use social media
k. Online shopping

Online Privacy & Security

What are you most concerned about?
(Select all that apply)
a. That my data could get stolen or used without my consent
b. That I or a loved one could get scammed or tricked
c. That I could be tracked or surveilled
d. That I or a loved one could be harassed or abused online
e. Other (please specify)

Use of Online Public Benefits

In the past year, have you used the internet to do any of the following?
(Select all that apply)
a. Find information about government services or resources (e.g., voter registration, DMV, property information/building permits)
b. Search for government statistics or documents
c. Access recreational or tourist information (e.g., information about visiting state parks or cities)
d. Find information about public health issues
e. Apply for or manage government benefits (e.g., SNAP, TANF, Social Security)
f. Enroll in Internet subsidy programs (e.g., Affordable Connectivity Program)

3.2.3 Digital Equity Needs, Barriers, and Assets Gap Analysis

To inform program design and funding strategies in alignment with the State's Measurable Objectives (outlined in **Chapter 2.4.2 Measurable Objectives**), the State synthesized findings regarding the needs of covered populations within each measurable objective category. This process allowed the State to compare needs against Assets already working to advance digital equity and strategically close remaining gaps in service, as well as to identify where additional resources may be needed.

3.2.3.1 Broadband Affordability & Availability

New Yorkers belonging to covered populations have less access to high-speed internet at home and are more likely to struggle to afford high-speed, reliable internet at home. A lack of choice among ISPs, costly bundled service packages, and a lack of awareness of the ACP also contribute to lower affordability.

A diverse set of assets operate programs to close these gaps: expanding broadband access among covered populations, advocating for greater consumer choice, and helping New Yorkers access the ACP subsidy.

Table 4: Broadband Affordability & Availability Gap Analysis

Need	Sample Assets and Programs	Measurable Objective
Covered populations, especially in low-income and rural communities, report lower rates of access to broadband internet connection. • 11% of New Yorkers do not have broadband of any type at home (Survey). • 20% of low-income households and 14% of rural households do not have broadband of any type at home (Survey).	Organizations including but not limited to **Adirondack North Country Association**, **OEConnect**, and the **Hope Program** currently work to increase broadband access for rural and low-income New Yorkers by highlighting areas of high need, assisting household enrollment in ACP, and providing household support for internet service technology.	Increase the number of households statewide with broadband internet connections at home, especially for those residing in affordable housing units or in rural areas.
New Yorkers are concerned about a lack of choice among ISPs, leading to lower quality of service at higher prices. *Quotation from a focus group from the Finger Lakes region:* *"Trying to figure out now, do we want to keep it or not? Is there something else we can use?... We pay $180. We only use it for TV and internet."*	Organizations including but not limited to **public libraries statewide**, **Community Tech NY, LinkNYC,** and **Nichols Fiber** are providing alternatives to traditional internet service and offering public internet alternatives.	Increase the share of locations in each region that have more than one ISP or alternative option, particularly in regions with higher concentrations of covered populations.

Need	Sample Assets and Programs	Measurable Objective
Service bundling, which combines internet service with other subscriptions such as cable television, is a challenge for consumers seeking to minimize the cost of broadband service; if the price goes up on long-term bundled plans and customers can no longer pay, this can also affect eligibility for subsidized plans, including ACP. • According to the Survey, the median household bundled internet monthly service cost was $90/month; the median household unbundled internet monthly service cost was only $75/month.[53] *Quotation from a focus group from Long Island:* *"Participants indicated that the internet service providers sell services in bundled packages, making it impossible to access affordable basic internet service separate from entertainment packages for various television channels."*	Organizations including but not limited to the **Benton Institute for Broadband & Society, OLA of Eastern Long Island**, and the **Western New York Digital Equity Coalition** raise awareness, publish studies, and advocate for policy changes to increase consumer choice and mitigate the higher costs associated with bundled service packages.	Increase the share of locations in each region that have options for unbundled, affordable broadband service.

[53] Analysis relies on self-reported cost data from the New York State Internet Access Survey and excludes outliers.

Need	Sample Assets and Programs	Measurable Objective
Many eligible New Yorkers are not aware of the ACP subsidy, and some New Yorkers who are aware of the subsidy cannot or do not use it. • 48% of eligible households statewide (1.28 million) were enrolled in ACP as of September 2023. *Quotation from a focus group from the Finger Lakes:* *"There was an FCC Lifeline Program... A lot of people are not aware of these discounts. My godmother was able to get it simply based on zip code — I don't know how many people are aware. I was not."*	Organizations including but not limited to the **Broome County Office for the Aging**, **Computers 4 People**, and **Education Superhighway** work to promote ACP awareness, assist households enrolling in the subsidy, and advocate for the continuation of internet cost assistance amongst other activities.	Increase awareness and adoption of affordability programs.

3.2.3.2 Accessibility of Devices and Device Support

New Yorkers among covered populations are less likely to have internet-enabled devices at home, and individuals with disabilities face particular challenges in accessing devices that meet their needs. Many New Yorkers struggle to maintain, update, and resolve technical issues with the devices they do have, and few safely dispose of devices they no longer need.

A diverse set of assets statewide operate programs to close these gaps, including programs to lend or permanently give away free devices, provide technical support with devices at home, offer classes and training on how to use devices, and refurbishment programs to keep older but functional devices in circulation. Some assets provide specialized support to individuals with disabilities, including specialized device distribution programs that deliver assistive technology and specialized training on how to use assistive technology.

Table 5: Accessibility of Devices and Device Support Gap Analysis

Need	Existing Assets	Measurable Objective
Covered populations, especially in low-income communities, are less likely to have internet-enabled devices at home. • 10% of New Yorkers reported lacking sufficient internet-enabled devices in their homes. • Low-income households are 20% less likely than other New Yorkers to access the internet through a laptop, and 7% less likely to do so through a desktop.	Organizations including but not limited to **public libraries statewide, Community Action Programs Cayuga/Seneca,** and **On Point for College** offer device-lending programs, initiatives for obtaining free devices, and assistance with device use and connectivity at home.	Increase the number of New York households that have internet-enabled devices at home, especially among low-income communities.
Individuals with disabilities face challenges accessing and utilizing the internet-enabled devices they need. • Individuals with disabilities are 8% more likely to live in homes without a laptop, and their specialized device needs include assistive technology such as screen readers and voice-to-text accessories. • Focus group participants criticized the “one size fits most” approach that results in many devices being inaccessible to those with disabilities.	Organizations including but not limited to the **Viscardi Center**, **TechKids Unlimited,** and **Elizabeth B. Pert Reading Center** offer accessibility compliance services, targeted computer skills classes for youth with disabilities, access to assistive technology on-site as well as through device loaning initiatives, and other programs.	Increase access to assistive technology that meets the needs of people with disabilities.

Need	Existing Assets	Measurable Objective
Many New Yorkers struggle to maintain, troubleshoot errors with, or make updates to their internet-enabled devices. ▪ 24% of New Yorkers reported recently being able to fix a device on their own when it stopped working. ▪ 21% of New Yorkers reported not being able to fix a device on their own or with any other resources, such as device technical support, friends and family, online resources, or local experts or community resources. ▪ 76% of New Yorkers reported relying on friends, family, tech support, or other sources of assistance when their devices stopped working properly. *Quotation from a focus group from the Finger Lakes region:* *"It's one thing to train people on all this, but most of us learn through frequency and repetition. It requires one-on-one [support]… [We] need to create a culture of internet support and companionship..."*	Organizations including but not limited to the **Albany Housing Authority**, **SUNY Ulster,** and the **various public libraries** offer device training sessions, computer classes for continuing education credits, and assistance through trained staff members, among other programs to support device usage.	Decrease the number of New Yorkers reporting challenges maintaining or troubleshooting their own devices.

Need	Existing Assets	Measurable Objective
Many New Yorkers are not aware of how to properly dispose of devices when upgrading to newer technologies.	Organizations including but not limited to the **Mission: Ignite**, **Mohawk Valley Community College**, and **Shift2** offer refurbishment and redistribution of devices, new software installations to keep up with advancing technology, and collection of e-waste.	Increase options for proper device disposal, recycling, and refurbishment.

3.2.3.3 Digital Literacy

New Yorkers among covered populations are generally less likely to feel confident in digital literacy, and certain New Yorkers—including incarcerated individuals, racial and ethnic minorities, and New Yorkers with language barriers—struggle to make use of the digital literacy programming that is already provided in the state. A lack of standards for digital literacy programming, including standards aligned with industry needs, make it more difficult for existing programming to scale to meet the needs of New Yorkers, employers, and educational institutions.

A diverse set of assets statewide operate programs to provide digital literacy training and coaching, increase the accessibility of training and coaching, and establish standards that will enable these programs to more effectively serve more New Yorkers. Certain assets intentionally target covered populations that would struggle to access programming by bringing the programming to where covered populations live and making support available after work hours and during weekends.

Table 6: Digital Literacy Gap Analysis

Need	Existing Assets	Measurable Objective
Covered populations—especially aging, incarcerated individuals, low-income households, individuals with language barriers, and individuals with disabilities—report lower confidence in digital literacy than other New Yorkers. 13% of New Yorkers struggle to use the internet to meet their needs; covered populations are all more likely to struggle: • 28% of individuals with language barriers; • 23% of veterans; • 22% of individuals with disabilities; • 20% of aging individuals; • 20% of low-income households.	Organizations including but not limited to **public libraries, the Hispanic Federation, Older Adults Technology Services,** and the **End New Jim Crow Action Network** offer one-to-many digital literacy classes, one-on-one skills coaching, and freely accessible curriculum materials to help New Yorkers build their digital literacy.	Increase New Yorkers' awareness of available digital literacy programs.
Covered populations—especially formerly incarcerated New Yorkers, racial and ethnic minorities, and individuals with language barriers—lack adequate access to digital literacy programming. • While in jail or prison, incarcerated individuals do not have access to training on internet or device usage. Rocus group participants also noted that existing digital literacy programming is not as accessible to those with language barriers.	Organizations including but not limited to **public libraries statewide, Thrive Collective,** and **Catholic Charities of Cortland County** support formerly incarcerated individuals with digital skill building, plan weekend programming for diverse audiences, and organize digital navigation trainings	Increase covered populations' access to digital literacy programming aligned to their specific needs and interests.

Need	Existing Assets	Measurable Objective
Quotation from a focus group from the Mid-Hudson region: *"Free computer classes have to be during the night because most of them are during the day while people are working, or on Saturday."*	and other digital literacy programming.	
Providers of digital literacy programs frequently raised a lack of consistent curricula and training standards that align with industry standards as barriers to effectively scaling their work. • Participants of the DETF Workforce Development Town Hall expressed the need for improved coordination and data-sharing between workforce development organizations to provide a clearer picture of available training programs, as well as the need for improved marketing and outreach strategies to promote awareness of available programs and resources	Organizations including but not limited to **BOCES, Literacy Partners**, and **Silicon Harlem** work to develop standards for digital literacy programming, promote useful planning materials for skills trainings, and support organizations with curriculum development.	Increase coordination among training providers.

3.2.3.4 Privacy & Cybersecurity

Almost all New Yorkers are concerned about their online safety and privacy online, citing concerns about the security of their data and vulnerability to scams and surveillance.

Assets across the state operate programs focused on giving New Yorkers the skills and technology to be more secure and private online. Programs include digital literacy programming and materials focused on personal cybersecurity best practices as well as offerings to test and monitor hardware and equipment to identify vulnerabilities.

Table 7: Privacy & Cybersecurity Gap Analysis

Need	Existing Assets	Measurable Objective
New Yorkers universally report concern about stolen data, scams, and surveillance online. • Over 90% of New Yorkers are either somewhat concerned or very concerned about their online safety.	Organizations including but not limited to the **Knowb4, Adirondack Techs, FEARLESS of the Hudson Valley**, and **public libraries** offer cyber security courses, monitoring of hardware and equipment to protect it from viruses or hacking, distribution of digital safety checklists or scam prevention materials, and other programs.	Increase the number of assets providing privacy & cybersecurity training to New Yorkers, especially to members of covered populations.

3.2.3.5 Accessibility & Inclusivity of Public Resources

New Yorkers struggle to access public resources online due to navigational issues, the use of inaccessible language, and the inconsistency of accessibility offerings. Certain covered populations—namely individuals with disabilities, individuals with language barriers, and residents of rural communities—struggle the most with accessing public resources online.

Assets across the state work to close this gap by promoting accessibility standards and best practices and advocating for their adoption, as well as providing courses and materials to help New Yorkers, including members of covered populations that struggle most to access online government resources.

Table 8: Accessibility & Inclusivity of Public Resources Gap Analysis

Need	Existing Assets	Measurable Objective
Collaborate on the design and implementation of universal accessibility standards across State government websites. • Focus groups conveyed that government websites are hard to navigate, include inaccessible language like government jargon, and do not consistently offer non-English language options, all of which hinders the ability to apply for benefits or services. • One participant stated that many public resources online are not user-friendly for those with disabilities; specifically, the blind, visually impaired, deaf, hearing-impaired, cognitively impaired, and ESL community members: *"Are websites truly ADA accessible? Overall, no."*	Organizations including but not limited to **NY Metro InfraGard**, **Literacy Partners**, and the **Viscardi Center** promote accessibility standards and industry practices, review the quality of online public resources, and advocate to improve the accessibility of government resources online.	Improve the quality and consistency of online public resources.

Need	Existing Assets	Measurable Objective
Covered populations are less likely to interact with online government resources. ▪ Individuals with disabilities were 5% more likely than others to report online public services as either not very or not at all accessible. ▪ New Yorkers with language barriers were 3% less likely to do so. ▪ Rural New Yorkers were 2% less likely to do so. ▪ Rural New Yorkers were the only covered population less likely to use public resources online—7% less likely to do so.	Organizations including but not limited to **Ulster County Citizens Committee on Digital Inclusion**, **Midtown Utica Community Center,** and **Rise Up Kingston** publish information on navigating government resources in multiple languages, provide digital accessibility training for staff members, and run advocacy campaigns for improving access in covered populations.	Develop outreach campaigns to increase covered populations' trust in online public resources.

4.0

Stakeholder Engagement

4.0 Principles for Stakeholder Engagement

Comprehensive stakeholder engagement is a key component of ConnectALL's (CAO) digital equity planning. By leveraging and strengthening an already well-developed ecosystem of broadband and digital equity partnerships and working in collaboration with intergovernmental partners, established community-based organizations and service providers, the private sector, and representatives of covered populations, CAO has built a State Digital Equity Plan (SDEP) that is community-informed. CAO has also ensured that its parallel planning for the Broadband, Equity, Access, and Deployment (BEAD) Program is driven by digital equity. The engagement plan leverages existing relationships, builds new partnerships between New York State government agencies and between government and community, and will provide capacity and resources for new partnerships among community and service providers. Specifically, CAO's strengthened relationships with Digital Equity and Inclusion Coalitions and regional entities has enabled the Office to gather data that is representative of the needs and assets of all regions in the state, leading to a plan reflecting this regional and participatory approach. Continuing to develop capacity and leadership of regional coalitions will remain a priority and strengthen the implementation of CAO's broadband and digital equity infrastructure plans.

ConnectALL's multifaceted stakeholder engagement strategy reflects the exceptional diversity of New York State residents and leverages the state's mature ecosystem of broadband and digital equity stakeholders. The strategy includes comprehensive public engagement to ensure:

- Full geographic coverage
- Diverse stakeholders
- Awareness, outreach, and participation
- Transparency, and
- Targeted engagement for underrepresented communities.

In addition to addressing all the engagement approaches detailed below, CAO utilized the core principles that structure the office's broader planning and development work to guide stakeholder engagement:

- **Equity**: Improved access to the internet, digital literacy, and devices will allow all New York residents to fully participate in our society, democracy, and economy.
- **Performance**: All New York residents should have access to high-quality connections, fast speeds, and reliable service.
- **Choice**: All New York residents should have a choice of internet providers, plans, and modes of digital engagement.
- **Affordability**: Quality service should be available at prices that all New York residents can afford.

- **Safety**: New York's online environments should ensure privacy, security, and digital well-being.

Forging successful partnerships with governmental and nongovernmental stakeholders to close the digital divide has been a guiding principle of CAO since its creation. Outreach and engagement have been both thoughtful and intentional, and as a result, the State puts forth a truly inclusive broadband access and adoption strategy for the benefit of all New Yorkers.

4.1 Engagement Methods

CAO led, co-hosted, or instigated a variety of events and data collection campaigns to gather input from key constituencies towards the ConnectALL planning process. CAO took this approach to empower local coalitions and covered populations to drive the collection of inputs based on their knowledge of their communities, as opposed to a top-down approach.

An overview of these engagements is provided in the table below. A short description of each engagement type follows the Crosswalk. For more details on each engagement, including a full list of organizations with which CAO collaborated in developing the Plan, see *SDEP Appendices Part II*.

Table 9: Crosswalk of Stakeholders and Engagement Methods

	Broadband Deploy-ment Advisory Committee	Digital Equity Task Force	New York State Internet Access Survey	Industry and Stakehold er Forums	Tribal Nation Engagement	Market Sounding and Interviews	Engagement of Incarcerated Individuals	Counties, Municipalities, and Regional Planning Council Interviews	Digital Equity Listening Sessions	Digital Equity Focus Groups	Regional Data Gathering
	Statewide Engagement					Regional Engagement & Participatory Planning					
Local, County, and Regional Government Entities				X		X		X	X		X
State Agencies	X	X			X				X		X
Tribal Leadership	X				X				X		X
ISPs and Other Private Partners	X			X		X			X		
Utilities						X			X		
Affordable Housing Property Owners	X					X			X		

	Broadband Deploy-ment Advisory Committee	Digital Equity Task Force	New York State Internet Access Survey	Industry and Stakeholder Forums	Tribal Nation Engagement	Market Sounding and Interviews	Engagement of Incarcerated Individuals	Counties, Municipalities, and Regional Planning Council Interviews	Digital Equity Listening Sessions	Digital Equity Focus Groups	Regional Data Gathering
	Statewide Engagement					Regional Engagement & Participatory Planning					
Large Employers				X		X			X		
Affordable Housing Residents									X		X
Small Businesses						X			X		
Marginalized & Covered Populations		X			X		X		X	X	X
Digital Equity Coalitions		X					X		X	X	X
Libraries and Community Anchor Institutions		X		X					X		X

	Broadband Deploy-ment Advisory Committee	Digital Equity Task Force	New York State Internet Access Survey	Industry and Stakehold er Forums	Tribal Nation Engagement	Market Sounding and Interviews	Engagement of Incarcerated Individuals	Counties, Municipalities, and Regional Planning Council Interviews	Digital Equity Listening Sessions	Digital Equity Focus Groups	Regional Data Gathering
	Statewide Engagement					**Regional Engagement & Participatory Planning**					
Regional Planning/Eco-nomic Development Organizations						X		X	X		X
Education, Health, Housing, Workforce, Labor, Civil Rights Organizations	X	X		X					X	X	X
Nonprofits and Community-Based Organizations		X					X		X	X	X

4.2 Statewide Engagement

4.2.1 Broadband Deployment Advisory Committee

In April 2022 the New York State Legislature passed the New York State WIRED Act, legislatively creating the Broadband Deployment Advisory Committee (BDAC). The BDAC will be led by CAO and the Office of Governor to advise on CAO program design/implementation and policy changes to promote broadband expansion and development, intergovernmental cooperation and partnership with the private sector, issues and policies related to increasing consumer choice, industry competition, open-access deployment, wireless and cellular deployments, and updates to the Department of Public Service's annual broadband reports. The BDAC will have 16 members, four appointed by the Governor serving three-year terms, and State Agency representatives from the departments of Public Service, Labor, Transportation, General Services, Economic Development, Homeland Security and Emergency Services, Housing and Community Renewal, Education, and Budget, as well as the New York Power Authority, the New York State Senate, and the New York State Assembly. There will also be representatives from telecommunications unions, Tribal affairs, and Internet Service Providers.

4.2.2 Digital Equity Task Force

Shortly following the formation of the office, CAO solidified a partnership with the New York State Library (NYSL) to co-convene an interagency Digital Equity Working Group (DEWG), leveraging NYSL's existing expertise and longtime involvement in the digital equity space. Through the DEWG, CAO solicited planning feedback, obtained information on existing State programs and resources, and identified partners to support digital equity planning and program implementation. In Spring 2023, CAO and NYSL officially transitioned the DEWG to a more formal Digital Equity Task Force (DETF), with subcommittees focused on five key outcome areas: **education, health, economic and workforce development, civic and social engagement, and delivery of government services**. The transition from the DEWG to the DETF organized State agency partners, community institutions, private partners, and covered populations around the measurable objectives and key outcome areas and solidified coordination among State agencies and partnerships between the State and external partners on digital equity programs. Each DETF subcommittee was co-chaired by a state agency representative and external experts in the outcome area. See *Part II of SDEP Appendices* for details on each Task Force meeting held thus far.

CAO held public Town Hall meetings for each DETF subcommittee, convening more than 550 key stakeholders, subject-matter experts, and members of the general public to discuss issues related to each outcome area and provide targeted input for inclusion in the State's BEAD and Digital Equity Plans. Input gathered through these meetings has driven the development of the needs assessment and measurable objectives included in this Plan. The DETF has

additionally provided feedback on concepts included in this draft Plan and of the State's draft BEAD Initial Proposal in parallel. Moving forward into implementation of the Plan, the DETF will continue to support the State.

In addition to CAO and NYSL, the current DETF includes State representatives from Department of Labor, Office of Children and Family Services, Department of Health, Department of State, Education Department, Office for the Aging, Department of Financial Services, New York State Council on Developmental Disabilities, Department of Public Service, Office of Temporary and Disability Assistance, Council on Children and Families, Office for People with Developmental Disabilities, Homes and Community Renewal, and Department of Civil Service.

The DETF is and will continue to be a key feature of CAO's coordinated engagement as it brings a diversity of perspectives and government expertise to digital equity issues. In the planning phase, the DETF advised on the development of CAO's vision for digital equity for all outcome areas and overall development of the SDEP. Beyond the planning phase, the DETF will:

- Provide feedback on the draft SDEP and BEAD Initial Proposal during and after the public comment periods.
- Continue to provide information to CAO about ongoing State agency initiatives and priorities.
- Guide, evaluate, assess, and support the development, implementation, and sustainability of future/ongoing broadband and digital equity initiatives.
- Review resources published by CAO relating to digital equity.
- Facilitate partnerships with and among external experts and community leaders.

Continuing the DETF's role in implementation, policy development, and the evaluation of performance indicators will amplify CAO's reach and impact.

Table 10:Digital Equity Task Force Committee Summary Information

DETF Committee	Co-Chairs or Members	Town Hall Date
Steering Committee	CAO New York State Library Department of Labor Office of Children and Family Services Department of Health	

DETF Committee	Co-Chairs or Members	Town Hall Date
	Department of State Education Department Office for the Aging Department of Financial Services Developmental Disabilities Planning Council Department of Public Service Office of Temporary and Disability Assistance Council for Children and Families Office for People with Developmental Disabilities Homes and Community Renewal Department of Civil Service	
Education	Lauren Moore, New York State Library Paul Cardettino, New York State Education Department Monique Tate, CommunityTechNY Dale Breault, Franklin Essex Hamilton BOCES	May 31, 2023
Workforce Development	Orville Abrahams, New York State Department of Labor Rachel Sheridan, CanCode Communities Diana Caba, Hispanic Federation	June 29, 2023
Health	Crystal Collette, New York State Office for the Aging	July 13, 2023

DETF Committee	Co-Chairs or Members	Town Hall Date
	Andrew Lebwohl, New York State Department of Health Becky Preve, Association on Aging in New York Elana Kieffer, New York Academy of Medicine Ann Cunningham, OASIS Laura Palmer, Healthcare Association of New York State	
Civic and Social Engagement	Camilla Campisi, New York State Office for New Americans Lauren Moore, New York State Library Natalie Henderson, Cell-Ed Dr. Anael Alson, My Brother's Keeper	July 31, 2023
Accessibility of Government Services	Jackie Hayes, New York State Council on Developmental Disabilities Benjamin Pomerance & Shannon MacColl, New York State Department of Veterans' Services Mike Rogers, Self-Advocacy Association of New York Laurie Wheelock, Public Utility Law Project	August 3, 2023

4.2.3 New York State Internet Access Survey

CAO, in partnership with regional Digital Equity Coalitions, secured over 5,700 New York State Internet Access Survey responses. The survey gathered information about needs, barriers,

and opportunities from New York State residents. Response rate targets for the Survey were developed based on regional population demographics to ensure that all covered populations and regions would be equitably represented in statewide survey data. Digital Equity Coalitions each created their own specific outreach plan targeted toward reaching their unique communities and partners.

4.2.4 Industry and Stakeholder Forums

CAO launched a virtual forum series to provide ISPs and other key stakeholder groups with regular program updates, technical assistance, and to solicit input on program design and planning. Over 170 ISP representatives and over 180 other stakeholders have attended these forums. ISP forums to date have included the following topics:

- Federal Program Overview
- Working with Empire State Development (ESD): Supplier Diversity and Capital Assistance
- Climate Resiliency and Cybersecurity
- ConnectALL's Affordable Housing Connectivity Program

The Forums for other stakeholder groups have included:

- Broadband Funding Opportunities for Community Anchor Institutions (CAI)
- Updates for Counties, Large Municipalities, and Regional Planning Councils
- ConnectALL's Affordable Housing Connectivity Program for Property Owners, Trade Associations and Advocacy Coalitions

Following each Forum, surveys and/or data requests were sent to participants to support the SDEP and BEAD planning processes. CAO is in the process of posting all forum recordings. See *SDEP Appendices Part II* for details on each Industry and Stakeholder Forum held thus far.

4.2.5 Tribal Nation Engagement

CAO engaged the leadership of Tribal Nations through formal and informal channels to understand the specific and unique needs of each of the eight Federally recognized Nations in New York State as well as one Tribal Nation not recognized by the Federal government. CAO sought to incorporate their needs as well as existing plans, programs, and resources into this Plan. CAO sent requests in writing for formal consultations with each Nation and followed up via phone, email, and through State agency partners. CAO held one in-person formal consultation with the Seneca Nation and Saint Regis Mohawk Tribe and attended a Tribal Broadband Bootcamp hosted by Mohawk Networks, along the US-Canada border in Akwesasne, New York.

CAO conducted parallel outreach through State agencies to Tribal Nation contacts and community organizations working directly with Tribal communities. Engagement with Tribal

Nations was also conducted through market-sounding interviews. Outreach has continued throughout the planning phase encouraging Native Nations to discuss challenges and visions for digital equity, supporting efforts to improve enrollment in ACP, and offering assistance with broadband infrastructure plans underway.

4.2.6 Incarcerated Individuals Engagement

Since the perspectives of covered populations are driving digital equity planning, targeted outreach strategies have been essential for ensuring inclusion. CAO has been working with the Fortune Society to conduct additional focus groups with people who are formerly incarcerated and family members of people who are incarcerated to gather information for the Needs Assessment and Asset Inventory relevant to this historically marginalized underserved group.

4.2.7 Market Sounding and Stakeholder Interviews

CAO conducted an in-depth market sounding including over 40 interviews with potential deployment partners including ISPs, electric co-ops, middle mile infrastructure owners, and others. The purpose of these meetings was:

1) to solicit feedback on preliminary CAO program design,

2) to proactively identify potential market hurdles and concerns ahead of grant program launch,

3) to identify incentives and strategies that can move the needle on encouraging market participation in CAO programs, and

4) to collect input from private sector entities and utilities on program design.

CAO conducted 40 additional interviews towards the same purposes with other key stakeholders including counties, municipalities, affordable housing property owners, and workforce development organizations. These interviews have informed the development of this Plan, the BEAD Initial Proposal, program design for CAO's grant programs, and a statewide broadband workforce strategy focused on how universal broadband access and digital literacy development can improve workforce outcomes for historically underserved New Yorkers. See *SDEP Appendices Part II* for a detailed list of partners consulted.

4.3 Regional Engagement & Participatory Planning

To both honor and leverage New York's incredible diversity, CAO has ensured unique geographic needs and differences are a cornerstone of the broadband and digital equity planning process through a regional approach to stakeholder engagement. Discussion of covered populations' barriers to access will surface insights to inform deployment planning while discussion of existing broadband planning efforts will inform digital equity planning. The regional engagement strategy- the creation and strengthening of partnerships between organizations in the same region – are critical for ensuring the broadband infrastructure and digital equity work are coordinated and inextricable.

CAO's stakeholder engagement plan centers the experience and expertise of covered populations through the implementation of a participatory planning process created through partnerships with regional DECs. These partnerships fostered relationship building within the region to host events, support CAO's statewide needs assessment and asset inventory, and support distribution of CAO's statewide survey. These regional coalitions also partnered with Regional Planning Councils and Regional Economic Development Councils on the activities below, particularly planning the listening sessions. Federally funded Community Action Agencies partnered on regional participatory planning activities as well, including focus groups, asset inventory creation, and survey distribution in some regions. The value of this strategy is evident and has already led to the development of new coalitions and activities, for instance a coalition led by the Mohawk Valley Economic Development District and Mohawk Valley Community College and a needs assessment and asset inventory in Central New York led by the Central New York Regional Planning and Development Board.

Table 11: Digital Equity Coalitions & Other Organizations Serving as Regional Partners

Region(s)	Organization
Capital Region	Capital Region Digital Equity Coalition
Central New York	Central New York Digital Inclusion Coalition
Finger Lakes	Finger Lakes Digital Inclusion Coalition
Long Island	Long Island Digital Inclusion Coalition
Mid-Hudson	Southeastern NY Library Resources Council
Mohawk Valley	Mohawk Valley Community College
New York City	Older Adults Technology Services from AARP
North Country	North Country Digital Inclusion Coalition
Southern Tier	Southern Tier Digital Equity Coalition
Westchester County	The STEM Alliance
Western New York	Western New York Digital Equity Coalition

4.3.1 Counties, Municipalities, and Regional Planning Councils (RPCs)

CAO hosted several rounds of meetings with over 50 county government and 10 Regional Planning Council representatives through a series of 11 county meetings in February 2023 to understand local infrastructure and digital equity challenges. Many of these meetings centered on strategizing to mobilize local resources to submit challenges to the FCC's National Broadband Map. CAO convened a series of three webinars to educate stakeholders on the FCC challenge process and mobilize them to gather evidence for challenges if locations within their areas were misrepresented on the map. Following the webinars, CAO conducted "office hours" sessions with challenge process participants, fielded dozens of questions, and provided guidance via one-on-one calls with several counties. This engagement was ongoing for the period of initial challenge submissions (December 2022-January 2023); following submissions, CAO then conducted a series of follow-up meetings with each Regional Planning Council and their member counties and municipalities to understand the findings and key takeaways that each community had from its participation in the process. See *SDEP Part II Appendices* for a detailed list of stakeholders consulted. CAO continues to conduct interviews or one-on-one meetings as needed and on an ongoing basis.

ConnectALL also worked closely with the New York City Office of Technology and Innovation (OTI) to develop recommendations throughout the planning process. OTI solicited feedback on digital equity barriers and opportunities from City agencies serving covered populations and shared the consolidated insights, which ConnectALL incorporated into this Plan.

CAO partnered with Digital Equity Coalitions (DECs) and community groups to host hybrid in-person and virtual listening sessions in every region in New York, in addition to each Borough of New York City. These listening sessions solidified regional partnerships, introduced CAO leadership, launched regional engagement activities, and provided updates on digital equity planning. DECs supported the ConnectALL planning process through structured baseline data collection directly from covered populations. Thousands of New York State residents have participated in the digital equity planning process through these sessions.

The listening sessions informed:

- CAO's statewide broadband and digital equity Needs Assessment by facilitating discussion on barriers to broadband access and digital equity.
- CAO's statewide broadband and digital equity Asset Inventory by facilitating discussion on existing digital equity programs, organizations, and leaders, as well as existing local, county, and regional broadband deployment and digital equity planning and data-collection efforts.
- CAO's approach to ecosystem development, by creating an opportunity for local government representatives, regional Planning and Economic Development Councils, community-based organizations, and ISPs to enter into a dialogue with one another and understand barriers to broadband access and digital equity within their region.

4.3.2 Digital Equity Focus Groups

DECs conducted focus groups with covered populations throughout their region for more in-depth and population-specific discussion of challenges and barriers to broadband access and adoption. DECs across the state conducted 47 focus groups, engaging 708 individuals. CAO developed population targets for each region based on regional population demographics to ensure that all covered populations were engaged through dedicated focus groups: aging individuals (6), individuals with language barriers (5), low-income New Yorkers (8), racial minorities (7), rural inhabitants (7), veterans (4), individuals with disabilities (6), and formerly incarcerated individuals (4). The purpose of these focus groups was to add further nuance, color, and depth to the data being collected via the New York State Internet Access Survey. The questions in the script were intentionally aligned with those in the survey, but with more time allocated to hear anecdotes and capture nuance and sentiments from participants who might not otherwise be represented in the survey or who might have multiple, overlapping barriers to completing the full survey.

4.3.3 Regional Data-Gathering for the Needs Assessment and Asset Inventory

Digital Equity Coalition partners led community-based efforts to submit regional contributions to CAO's needs assessment and asset inventory, ensuring the focus on gathering regionally specific data across covered populations throughout the State. These resources will help the State to establish a baseline from which to measure progress and success for ongoing and future initiatives.

4.4 Implementation Phase Engagement Strategy

CAO used the engagement methods detailed in this chapter to draft the SDEP because they are sustainable and flexible structures that subsequent efforts can build upon. Partnerships and relationships built through the ConnectALL planning process will be strengthened as CAO transitions into the implementation phase. Strategies CAO will employ to collaborate with key stakeholders in the state include:

- Utilizing the Needs Assessment and Asset Inventory to support the full digital equity ecosystem with network building, resource identification, and public outreach.
- Building new DETF subcommittees geared toward implementation or focused on intergovernmental collaboration through the core State agency representatives.
- Hosting ISP and other stakeholder forums based on questions and issues that arise and continuing to develop materials and technical assistance for these audiences.
- Building strategic partnerships with Digital Equity Coalitions, Regional Planning Councils, Regional Economic Development Councils, Tribal Nation leaders and organizations, and community organizations to disseminate information, receive ideas

and feedback, and maintain a coordinated but geographically tailored digital equity engagement approach throughout New York State.
- Consulting with the Broadband Deployment Advisory Committee to advise on CAO program design/implementation and policy changes to promote broadband expansion and development.
- Leading external affairs to build coalitions to strengthen economic and workforce development efforts essential for achieving digital equity.
- Targeting key strategic partnerships for further exploration through engagements such as those illustrated in *SDEP Appendices Part II*.

4.4.1 Public Comment

CAO will employ the following strategies for presenting the SDEP to the public and gathering feedback on the draft SDEP through the public comment period. CAO will create an accessible online form, which will serve as the collection mechanism across the below strategies:

- **Awareness Events:** CAO will create awareness for the public comment period prior to its opening by publicizing the opportunity for feedback at several events in the month leading up to the opening of public comment.
- **Digital Equity Task Force Town Halls**: The DETF will host multiple town hall meetings geared toward receiving and discussing public comments. Each meeting will have facilitated outcome area breakout sessions hosted by the outcome area subcommittee co-chairs.
- **Regional Approach:** Leveraging the strategic partnerships and diversity of the state, CAO will support feedback sessions led by the state's Digital Equity Coalitions.
- **Virtual Forums**: CAO will host forums dedicated to public comment from ISPs and other regional stakeholders.
- **Other Event and Conference Presentations:** CAO staff will facilitate live public comment sessions as a part of public speaking engagements and conference sessions scheduled during the public comment period.

5.0

Implementation

5.0 Implementation

To connect CAO's digital equity investments with the State's outcome areas, the following sections present the measurable objectives CAO will use to measure impact, based on needs identified in Chapter 3. A set of associated activities CAO will pursue to achieve its objectives are then listed, organized by the four pillars of CAO's strategic vision:

- **Strategy #1: Grounding Investments in an Asset-Based Approach**
- **Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action**
- **Strategy #3: Building Alignment & Awareness**
- **Strategy #4: Sharpening & Socializing our Digital Equity Lens**

The sections are organized around the measurable objective areas designated in the Digital Equity Act, including:

- Broadband Affordability & Availability
- Accessible Devices & Device Support
- Digital Literacy
- Privacy & Cybersecurity
- Accessibility & Inclusivity of Public Resources

The activities detailed here are not meant to be exhaustive; rather, they represent approaches to meeting needs and filling gaps identified in Chapter 3.

5.1 Implementation Strategy & Key Activities

ConnectALL has prioritized measurable objectives based on New Yorkers' broadband affordability and availability needs and tied the objectives to activities that further each pillar of our strategy.

5.1.1 Broadband Affordability & Availability Strategy

Identified Need (A)	Measurable Objective
Covered populations—especially rural communities—report lower rates of access to broadband internet connection. Those living in rural areas, especially individuals with language barriers, veterans, and low-income households, also experience slower speeds and unreliable connections.	Increase the number of households statewide that report broadband internet connection at home.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Invest public funding and facilitate private investment to deliver last-mile connections to households in New York. Expand and improve broadband infrastructure in areas over reliant on DSL and Satellite service and places where there are gaps in availability or aging infrastructure, primarily through BEAD programs, as discussed in the BEAD 5-Year Action Plan.[54]
  - Invest in high-quality internet infrastructure in low-income areas, including in housing where service is slow, unreliable, or not available.

Proposed Impact Metrics

- Refer to survey data on broadband access and program data on delivery of infrastructure.
- Audit grant awardees to ensure that buildout, availability, and speed commitments are met.

[54] "Five-Year Action Plan Broadband Equity, Access, and Deployment (BEAD) Program." New York State Empire State Development: ConnectALL Office, 2023. https://broadband.ny.gov/system/files/documents/2023/09/nys-bead-5-year-action-plan.pdf.

Identified Need (B)	Measurable Objective
New Yorkers are concerned about a lack of choice among ISPs, leading to lower-quality of service at higher prices.	Increase the share of locations in each region that have more than one ISP option.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Invest public funding and facilitate private investment to create a robust and competitive internet marketplace in New York via CAO's Affordable Housing Connectivity and Municipal Infrastructure Programs, as described in the BEAD 5-Year Action Plan.[55]
- Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action
  - Invest in civic engagement campaigns and programs aiming to increase awareness and action around issues related to internet choice.

Proposed Impact Metrics

- Refer to published data on the number of ISPs operating in each region.
- Monitor delivery of programs for cases where choice and competition are increased.

[55] Id.

Identified Need (C)	Measurable Objective
New Yorkers with bundled services that combine internet with other media are generally exposed to greater price volatility and higher prices.	Increase the share of locations in each region that have options for unbundled, affordable broadband service.

Key Activities

- Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action
  - Raise public awareness of the risks associated with accessing internet via service bundles.
- Strategy #3: Building Alignment & Awareness
  - Explore approaches to subsidy or funding programs to limit bundled service and ensure previous payment issues with bundled plans are not cause for consumer ineligibility.
  - Promote provisions to ensure costs from bundled services are not hidden from consumers.

Proposed Impact Metrics

- Audit ISPs to ensure commitments regarding pricing transparency and unbundled service for consumers are met.
- Refer to survey data on consumer take-up of bundled and unbundled services.

Identified Need (D)	Measurable Objective
Eligible New Yorkers are not aware of the ACP subsidy, and some New Yorkers who are aware of the ACP subsidy cannot or do not use it.	Increase awareness and adoption of internet affordability programs.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Invest in outreach efforts in target languages/ethnic media accessible to individuals with language barriers.
  - Fund existing efforts to better reach aging individuals, veterans, and others with limited mobility.
- Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action
  - Support coordinated awareness-building campaigns such as programming in covered population community spaces, advertising, and organizing.
- Strategy #3: Building Alignment & Awareness
  - Work with program administrators within and outside of government to align ACP eligibility and enrollment processes with other means-tested programs.
- Strategy #4: Sharpening & Socializing our Digital Equity Lens
  - Identify ways that public, nonprofit, ISP, and other private resources can better complement ACP subsidies to make internet more affordable for low-income households.

Proposed Impact Metrics

- Monitor data on ACP eligibility and enrollments.

5.1.2 Accessible Device & Device Support Strategy

ConnectALL has prioritized measurable objectives based on New Yorkers' needs for accessible devices and device support and tied the objectives to activities that further each pillar of our strategy.

Identified Need (A)	Measurable Objective
New Yorkers—especially low-income households, individuals with disabilities, individuals with language barriers, and racial/ethnic minorities—struggle to afford internet-enabled devices at home.	Increase the number of New York households that have internet-enabled devices at home.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Expand existing programs that are focused on distributing new and refurbished internet-enabled devices to New Yorkers, with a preference for developing pathways for device ownership (rather than rentals) where possible.
  - Expand funding to assets and explore direct partnerships with device manufacturers so that assets can afford to obtain and distribute newer and unused devices to eligible New Yorkers.
- Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action
  - Link households that participate in device distribution programs with convenient programs to safely recycle or dispose of electronic waste.
  - Deploy the NYS Digital Equity Asset Inventory as a "digital directory" that points users to digital devices programs in their region that meet their specific needs.

Proposed Impact Metrics

- Refer to survey data on access to devices.
- Require sub-grantees to report on the number and types of devices distributed to New Yorkers as well as methods of procurement (e.g., refurbished or new devices) and plans for recycling.

Identified Need (B)	Measurable Objective
Aging individuals, veterans, and individuals with disabilities need specialized assistive devices to effectively use the internet.	Increase access to assistive technology that meet the needs of people with disabilities.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
    - Identify the assistive technology (e.g., screen magnification devices, eye-tracking mouses, etc.) deemed most cost-effective by assets that work with these covered populations and support the distribution of such devices by trusted asset partners in New York. Partners can deploy these devices onsite in public spaces and directly to eligible New Yorkers.

Proposed Impact Metrics

- Require sub-grantees to report on the number and type of assistive technology devices distributed to people with disabilities.

Identified Need (C)	Measurable Objective
New Yorkers that already have devices, and those that receive or borrow new or refurbished devices from existing assets, lack easily accessible technical support to maintain the devices and troubleshoot challenges.	Decrease the number of New Yorkers reporting challenges maintaining or troubleshooting their own devices.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Fund existing and new programs that provide technical support to New Yorkers experiencing technology challenges with their devices.
  - Help assets create or expand the availability of virtual/video/screenshare technical support to reach New Yorkers that cannot or would prefer not to receive in-person technical assistance. (This will only help New Yorkers with a reliable internet connection).
- Strategy #3: Building Alignment & Awareness
  - Engage with stakeholders to align on set of technical assistance program specifications needed particularly to improve health outcomes and the accessibility and inclusivity of public resources.
- Strategy #4: Sharpening & Socializing our Digital Equity Lens
  - Collect and publish best practices in effective technical support that increases New Yorkers' ability to care for their own devices after a technical support interaction.
  - Evaluate the impact of assets whose programming includes inter-generational skill-sharing (e.g., youth supporting aging individuals with technology challenges) and expand successful programs. Target aging individuals and other adults that live alone or without caregivers.

Proposed Impact Metrics

- Refer to survey data on New Yorkers' access to technical support and troubleshooting.

Identified Need (D)	Measurable Objective
More New Yorkers having devices at home corresponds to a need for device upgrading, disposal, recycling, and refurbishment in the future to ensure that New Yorkers' digital needs are met as technology evolves, while protecting their privacy and the environment.	Increase options for proper device disposal, recycling, and refurbishment.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Fund existing and new programs that provide device upgrading, disposal, recycling, and refurbishment services to New Yorkers.
- Strategy #3: Building Alignment & Awareness
  - Engage with State agencies to streamline State activities and investment at the intersection of cybersecurity and equipment recycling.
- Strategy #4: Sharpening & Socializing our Digital Equity Lens
  - Understand and share best practices emerging from implementation of NYS Electronic Equipment Recycling and Reuse Act.[56]

Proposed Impact Metrics

- Regularly update the State's Digital Equity Asset Inventory to measure the availability of device disposal, recycling, and refurbishment options.
- Require sub-grantees to report on their delivery of options for device disposal, recycling, and refurbishment.

[56] Electronic Equipment Recycling and Reuse Act, Article 27 Title 26 Environmental Conservation Law § (2010). https://www.dec.ny.gov/docs/materials_minerals_pdf/ewastelaw2.pdf.

5.1.3 Digital Literacy Strategy

ConnectALL has prioritized measurable objectives based on New Yorkers' digital literacy needs and tied the objectives to activities that further each pillar of our strategy.

Identified Need (A)	Measurable Objective
Covered populations—particularly aging individuals, incarcerated individuals, individuals with language barriers, individuals with disabilities, and low-income households—report lower confidence across all digital literacy skills. New Yorkers are also prevented from (re)joining the labor force because of their lack of digital literacy.	Increase New Yorkers' awareness of available digital literacy programs.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Fund expansions and replication of the highest-performing digital literacy-building job training programs. Investments should be made in partnership among community-based organizations, educational institutions, local workforce development offices, employers, and government to design comprehensive digital inclusion initiatives to provide training, mentorship, and other resources to underserved communities.
- Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action
  - Coordinate the field to create a directory of vetted digital skill-building job training programs to increase the value of credentials in the perspective of industry and market this directory to industry.
  - Improve marketing efforts, including multilingual campaigns and partnerships with community-based organizations, to raise awareness of programs and empower individuals to pursue digital literacy training.

Proposed Impact Metrics

- Collect reports from partners on program usage, especially among covered populations.
- Evaluate outreach effort effects on program attendance to ensure that effective strategies are being used to increase awareness.

Identified Need (B)	Measurable Objective
New York's small business owners are unable to grow their businesses because of a lack of digital literacy. Rural and aging New Yorkers distrust telehealth services that could improve their health outcomes.	Increase covered populations' access to digital literacy programming aligned to their specific needs and interests.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Fund existing efforts that provide digital literacy training, especially those focused on skills for aging individuals, formerly incarcerated, and low-income New Yorkers, and New Yorkers with language barriers and disabilities.
  - Pilot customizable training models that allow New Yorkers some self-direction.
  - Provide access to digital literacy training classes and modern technology to incarcerated individuals within State prisons.
  - Provide financial incentives and support during training for underserved and underrepresented populations to increase successful participation and address barriers to training program participation like financial insecurity that hinder recruitment. Provide wraparound services, including childcare, transportation assistance, access to devices, and stable internet access to trainees to ensure success.
- Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action
  - Deploy the NYS Digital Equity Asset Inventory as a "digital directory" that points users to digital literacy programs in their region that meet their needs.
  - Follow up with ACP subsidy subscribers and share digital literacy and skill-development offerings.
- Strategy #4: Sharpening & Socializing our Digital Equity Lens
  - Compile and consolidate best practices in digital literacy and digital job skills training at the regional- and state-levels and disseminate among partners to support strong programming statewide.

Proposed Impact Metrics

- Regularly evaluate the effectiveness of digital literacy programming, including by surveying the communities they serve.
- Measure traffic to directories and resources that the State publishes to ensure New Yorkers are accessing them and develop strategies to increase awareness.

Identified Need (C)	Measurable Objective
Inconsistencies across existing curricula and a lack of alignment with industry-desired credentials reduces the potential impact of digital literacy programming.	Increase coordination among training providers.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Recognizing the vital role educators play in teaching foundational digital literacy and integrating digital fluency across all subjects for K-12 as well as college and adult education programs, support education and training for educators. Develop robust digital fluency programs for educators across all education levels.
- Strategy #3: Building Alignment & Awareness
  - Convene key stakeholders to align on standardized and portable credentials that reflect evolving industry needs and indicate job readiness to employers.
- Strategy #4: Sharpening & Socializing our Digital Equity Lens
  - Explore needs for tech and digital literacy education in K-12 schools and confirm the extent of existing digital literacy assets within and connected to schools (including assets that offer programming in multiple languages).
  - Evaluate the strategies and impact of existing assets that provide career-oriented digital literacy support to New Yorkers, particularly youth. The analysis should assess the degree to which existing programs offer credentials recognized and valued by industry.

Proposed Impact Metrics

- Measure and report on the availability of educational programs adhering to the standardized credentials valued by industry. Develop strategies for increasing credential rates among training providers.

5.1.4 Privacy & Cybersecurity Strategy

ConnectALL has prioritized measurable objectives based on New Yorkers' Privacy & Cybersecurity needs and tied the objectives to activities that further each pillar of our strategy.

Identified Need (A)	Measurable Objective
Most New Yorkers are concerned about their online safety. Covered populations reported universal concern over stolen data, scams, and surveillance. Individuals with disabilities, racial and ethnic minorities, and youth were more likely to report concern over online harassment than other New Yorkers.	Increase the number of assets providing Privacy & Cybersecurity training to New Yorkers.

Key Activities

- Strategy #1: Grounding Investments in an Asset-Based Approach
  - Fund programs providing online safety training to help New Yorkers protect themselves against stolen data, scams, surveillance, and online harassment.
- Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action
  - Follow up with ACP subsidy subscribers and share digital cybersecurity and internet safety resources.
  - Explore methods of shifting the burden of protection away from individuals and toward communities, as well as online platforms and content providers.
- Strategy #3: Building Alignment & Awareness
  - Ensure school districts are consistently aware of safety and data privacy measures and that educators have a defined role in fostering online safety.
- Strategy #4: Sharpening & Socializing our Digital Equity Lens
  - Publish guidance on key elements to digital safety that should be incorporated into digital literacy programming backed by research on common vulnerabilities. Guidance should be developed in partnership with existing assets with the greatest expertise in this area.
  - Explore establishing a Trust & Safety community of practice for ongoing collaborative problem-solving on related issues.

Proposed Impact Metrics

- Measure enrollment in and attendance to cybersecurity-oriented programming to assess the effectiveness of outreach.

5.1.5 Accessibility & Inclusivity of Public Resources Strategy

The Needs Assessment and Gap Analysis determined that New Yorkers face the following gaps with respect to the accessibility of essential resources and services online.

Identified Need (A)	Measurable Objective
Covered populations frequently cited inconsistent accessibility standards as a primary frustration in engaging with government resources online.	Collaborate on the design and implementation of universal accessibility standards across State government websites.

Key Activities

- Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action
  - Conduct targeted outreach to better understand the scope and impact of inconsistent accessibility standards for government resources with both field and lived experts.
  - Engage field and lived experts in a codesign process to create updated standards.
- Strategy #3: Building Alignment & Awareness
  - Conduct outreach via Digital Equity Task Force to determine State agency needs around updating and maintaining website accessibility, especially for use cases related to benefits access for covered populations.
- Strategy #4: Sharpening & Socializing our Digital Equity Lens
  - Confirm existing State and local government ability and tools to enforce or guide standard-setting for State and local government websites.

Proposed Impact Metrics

- Continue to survey the public on experiences with and opinions on the accessibility of government websites and services.
- Measure enrollment in and the attendance of programming concerning accessing public resources.
- Evaluate government websites to ensure that accessibility changes are made and maintained as required.

Identified Need (B)	Measurable Objective
Covered populations reported a lack of trust, rather than access, as the primary reason they were less likely to access government services online.	Develop outreach campaigns to increase covered populations' trust in online government services.

Key Activities

- Strategy #2: Strengthening Networks to Share Resources & Take Coordinated Action
  - Conduct targeted outreach with field and lived experts on accessing government resources online to better diagnose roots of mistrust among covered populations.
  - Engage field and lived experts in a codesign process to create new and augment existing outreach strategies that engender greater trust in online government resources.
  - Fund public education strategies by trusted messengers to increase covered populations' trust in accessing online government resources.
- Strategy #3: Building Alignment & Awareness
  - Conduct outreach via Digital Equity Task Force to better understand state agency experiences around public mistrust of online resources and codesign solutions that are applicable across agencies and programs.
- Strategy #4: Sharpening & Socializing our Digital Equity Lens
  - Document and share best practices for developing trust among covered populations in online government services.
  - Explore establishing a Trust & Safety community of practice for ongoing collaborative problem-solving on related issues.

Proposed Impact Metrics

- Continue to survey the public on experiences with accessing public resources.

5.2 Implementation Timeline

This high-level timeline provides estimates as to when CAO expects to make investments in the digital equity activities mentioned in this chapter. CAO will further develop this timeline after New York's grant allocation and Digital Equity Capacity Grant Program guidelines are released by the federal government.

Table 12: Implementation Timeline

Period	Activities
2023 Quarter 4	▪ Release Draft State Digital Equity Plan for public comment. ▪ Engage stakeholders soliciting feedback on the plan.
2024 Quarter 1	▪ Revise Plan in response to public comment. ▪ Submit Final State Digital Equity Plan to NTIA for approval.
2024 Quarter 2	▪ NTIA releases Digital Equity Capacity Grant Program NOFO. ▪ CAO submits application for Digital Equity Capacity Grant funding.
2024 Quarter 3 - 4	▪ CAO opens Digital Equity Capacity Grant Program applications to organizations in New York.
2025	▪ CAO administers Digital Equity Capacity Grant funding to selected grant applicants.
2026	▪ CAO launches updated New York State Internet Access Survey to track statewide progress toward measurable objectives.

6.0

Conclusion

6.0 Conclusion

ConnectALL is working to end the digital divide in New York, thereby promoting more equitable access to economic opportunity, public services, healthcare, education, and civic participation for all New Yorkers. The work of CAO is guided by five core principles of broadband equity, performance, choice, affordability, and safety. These principles have guided the State's broadband and digital equity planning process and are reflected in the diverse strategies presented in this report to end the digital divide. Through robust engagement with community groups and individuals across the state, CAO has developed this plan to address digital inequity through targeted strategies that support ongoing and successful community-led work in this space.

Through multiple methods of engagement, the New York State Digital Equity Plan has identified clear gaps in broadband affordability and availability, device and device support accessibility, digital literacy, privacy & cybersecurity, and the accessibility of government resources across the state—especially among covered populations. While these gaps are of concern, experienced and innovative assets already operate programs across the state to help close the digital divide by increasing broadband accessibility and affordability, accessibility of devices, digital literacy, and more. CAO will continue to refine its understanding and documentation of these resources within the Digital Equity Asset Inventory.

Based on an understanding of the broadband and digital equity gaps facing New Yorkers, CAO has developed strategies to ensure every New Yorker has equal opportunity to safely reap the benefits of the digital world. The New York State Digital Equity Plan is a first step to ensure that the funding available through the Digital Equity Act creates a meaningful and sustainable impact across New York State. As grant funding becomes available in 2024, CAO will continue to work with partners across the state to fulfill the strategies outlined in this plan and evaluate the State's progress over time towards its measurable objectives, all to the ultimate objective of ending the digital divide in New York.

7.0

Appendices

PART 1

7.0 Appendices Part 1

7.1 Methodology

7.1.1 Survey Distribution Methodology

CAO, in partnership with Digital Equity Coalitions (DECs), as described in *4. Stakeholder Engagement*, secured 5,781 New York State Internet Access Survey responses (after non-valid or incomplete responses were removed, as described below).

Surveys were supplemented by focus groups, listening sessions, and town hall meetings to build a mixed-methods approach to understanding needs and barriers among covered populations. The responses reflect the diversity of the population of New York State due to a careful focus on and outreach to historically underrepresented, marginalized groups. To achieve this level of representation, CAO pursued two strategies:

1. **Survey distribution and response targets.** CAO collaborated with DECs to distribute surveys across each of New York State's ten regions and established response targets—by region and by estimated covered population in each region—that would ensure unweighted survey responses reflected the diversity of residents in each region. This approach is further described in this section, below.
2. **Survey data weighting.** After closing the survey, CAO weighted survey responses to increase the degree to which the sample matched the census-recorded distribution of covered populations by region in New York State. This approach is further described in **Chapter 7.1.2: Survey Data Analysis Methodology**.

The survey instrument is included in *SDEP Part II Appendices*.

Survey Sample

CAO developed target response rates for the Survey based on regional population demographics from American Community Survey (ACS) 2021 5-Year Estimates to ensure that all covered populations (statewide and by region) and regions would be equitably represented in statewide survey data.

Due to the efforts of DECs described in **Chapter 4**, the number of Survey responses by region successfully exceeded targets established by region and by covered population within each region.

Table 13: Survey Sample (Unweighted) Descriptive Statistics: Regions

Region	Target	Target Percentage	Actual Total	Actual Percentage
Capital Region	110	6%	181	3%
Central NY	78	4%	593	10%
Finger Lakes	121	6%	259	4%
Long Island	290	15%	476	8%
Mid-Hudson	138	7%	473	8%
Mohawk Valley	48	2%	597	10%
North Country	42	2%	837	14%
NYC - Bronx County (Bronx)	146	7%	456	8%
NYC - Kings County (Brooklyn)	270	14%	190	3%
NYC - New York County (Manhattan)	166	8%	282	5%
NYC - Queens County (Queens)	238	12%	364	6%
NYC - Staten Island (Richmond County)	49	2%	70	1%
Southern Tier	64	3%	433	7%
Westchester County	99	5%	188	3%
Western NY	141	7%	281	5%
Unknown*	NA		101	2%
Statewide	2000		5,781	

"Unknown" region respondents did not provide a zip code or county but did affirm they lived in New York State. Regional data in **Chapter 3.2.2 Regional Needs Assessment does not include Unknowns, but the snapshot for the overall state does incorporate respondents whose region was unknown.*

Table 14: Survey Sample (Unweighted) Descriptive Statistics: Covered Populations

Covered population*	Target	Actual Survey Total	Actual Total Percentage
Aging Individuals	468	2,261	39%
Individuals with Language Barriers	116	550	10%
Individuals in Low Income Households	267	673	12%
Racial and Ethnic Minorities	869	1,590	28%
Rural Inhabitants **	230	859	15%
Veterans	87	380	7%
Individuals with Disabilities	243	847	15%
Not in a Covered Population	N/A	1,700	30%

**The covered population question was a check-all question, allowing individuals to select more than one population. Therefore, totals do not add up to 5,781 individual responses.*

***2,939 respondents self-reported as living in a rural area. However, survey analysis applied a systematic approach to designating respondents as either rural or urban by assigning their zip codes to urban or rural-classified counties based on NYS DOL classifications (see 7.1.2). For respondents in zip codes that straddled multiple counties, statistical analysis split respondents into separate observations for the purposes of linear regression analysis in a manner described in 7.1.2. However, exclusively for the purposes of the table directly above, respondents in counties that straddled one or more urban and rural counties were allocated to the county in which the zip code had the highest residential address ratio (per the HUD USPS Zip Code Crosswalk).*[57]

Limitations

- **Incarcerated Individuals:** The survey did not include a question about a respondent's status as a formerly incarcerated individual, due to the vulnerability and privacy of that

[57] HUD Office of Policy Development and Research. "HUD USPS ZIP Code Crosswalk Files." Accessed October 13, 2023. https://www.huduser.gov/portal/datasets/usps_crosswalk.html.

population. Focus groups were used to gather information about the unique broadband and digital equity needs and barriers of formerly incarcerated individuals.

- **Individuals with Language Barriers:** Although both digital and paper versions of the survey were made available, most announcements about the survey were made in digital or physical print, and it was not possible to complete the survey orally unless the respondent knew to use the text reading functionality made available in the online version of the survey. This design limitation likely led to fewer limited-literacy individuals completing the survey.

To mitigate this concern about under-sampling, focus groups were used to gather additional information about the unique broadband and digital equity needs and barriers of New Yorkers with language barriers.

7.1.2 Survey Data Analysis Methodology

This section describes the approach used to clean survey results to ensure validity, weight remaining results to ensure the survey sample was representative of the state's actual population, and accurately classify respondents as either urban or rural based on zip code, with "rural" population classification derived from the New York State Department of Labor. The section also describes limitations to the survey data and weighting methodology.

Cleaning Methodology

To ensure analysis only considered valid survey results, the following steps were used to remove invalid response:

Table 15: Survey Data Cleaning Methodology

Cleaning Step	Responses Removed
Remove observations where the respondent answered "No" to "Do you reside in New York and are you 18 or older?"	67 responses
Remove observations where the respondent answered "Under 18" or did not provide an answer to "What is your age?"	29 responses
Remove observations with zip codes outside of New York	61 responses

Cleaning Step	Responses Removed
Remove observations where the submission was not completed	2,873 responses
Remaining responses	5,781 responses

Weighting Methodology

In order to compare survey results for covered populations and regions with statewide responses and administrative data for the state, it was necessary to achieve a survey response sample that was as representative as possible of the state's population—with respect to covered population and regions. Response targets were set by identifying population shares of covered populations per County and aggregating to the regional level. Successful fulfillment of response rate targets (described above) resulted in a representative sample of responses generally within 1-5% of actual population distribution by region and by covered population, with the exception of aging individuals, incarcerated individuals, racial and ethnic minorities, and individuals with language barriers (due to the specific, systematic sampling limitations discussed above).

To ensure a survey sample that was more representative of the state's population, "statistical raking" was used to calculate sampling weights that conformed distribution to the marginal distribution for selected variables.[58] In other words, when the sample size for a covered population or region deviated significantly (more than 5%) from the actual proportion of that covered population or region relative to the overall population according to ACS 2020 data (and a separate, custom definition of "rural inhabitants" described below), then the sample was weighted to better conform to these actual population distributions. Weighting did not refer to DEAPV data on covered populations because it was published after the Survey data analysis was completed.

Weighting entailed the following steps:

- Assign a county to each respondent based on their zip code reported compared to county geography using the Department of Housing and Urban Development's USPS Zip Code Crosswalk.[59] Most zip codes fell within a single county. However, if a zip code spanned multiple counties, the respondent was split into one observation per county.

[58] "Raking" describes a process by which an analysis identifies a set of variables where the population distribution is known (e.g., the distribution of covered populations per census data) and then iteratively adjusts the weighting for each sample until the sample distribution aligns with the known population for those variables.

[59] "HUD USPS Zip Code Crosswalk Files." Supra.

Split observations for a single respondent each had a different weighting factor that added up to the total weight assigned to the respondent during the weighting process.

- Using 2020 ACS data, calculate the proportion of each county's covered populations as a percentage of the total New York state population.
- Aggregation of county-level results to regional geography.
- Use *R* package *anesrake*, rake the data on aging individuals, racial minorities, and individuals with language barriers, and regions. Assign weights to the data based on raking results. Confirm the multiplied weights add up to the original observation count of the survey data. (The remaining covered populations had survey proportions within 5% of the ACS population proportions and were not raked.)

Ultimately, weighting brought the survey sample distribution for covered populations into alignment with covered population distributions measured by the Digital Equity Population Viewer with four exceptions:

1. Formerly incarcerated individuals: the survey did not ask individuals to identify themselves as members of this covered population, as discussed above.

2. Individuals with language barriers: Analysis relied on ACS 2020 census data to establish regional response targets by covered population in advance of the Digital Equity Act Population Viewer (DEAPV) being made publicly available.

   The response rate for individuals with language barriers was calculating using ACS 2021 5-Year (2016-2020) estimates of the population of English-language learners by region, but the response rate did not include people with low English literacy (which the DEAPV later imputed using 2017 Program for the International Assessment of Adult Competencies (PIAAC) data and 2012/2014/2017 PIAAC State and County Small Area Estimates of Adult Skills on Literacy and Numeracy (for low literacy) from the National Center for Education Statistics).[60] Therefore, survey response targets under-weighted New Yorkers with low English literacy.

   Furthermore, the design of the survey made it difficult to evaluate the representativeness of the sample of individuals with language barriers. The survey asked whether a respondent was a member of the "language barriers" category by asking "Do you or anyone in your household have difficulty with reading, writing, or speaking in English?" However, survey respondents did not differentiate between having limited English *speaking* proficiency and limited English *literacy*.

[60] U.S. Census Bureau. "File Layouts for Total Covered Populations." https://www2.census.gov/programs-surveys/demo/technical-documentation/community-resilience/total_covered_pop_file_layout.pdf.

3. Racial and ethnic minorities: moderate under-sampling led to a weighted sample that approached DEAPV distributions but did not close the gap, reflecting the fact that the survey did not reach enough racial and ethnic minorities.

4. Rural inhabitants: An alternative approach to rural classification resulted in a different, lower estimate of the rural population in the state based on NYS DOL rural classifications in alignment with 2020 ACS census data (12.6%) discussed immediately below.

Table 16: Comparison Between Weighted Survey Responses and Digital Equity Act Population Viewer Populations

Sample/ Population	Weighted Survey Responses	Weighted Responses Percentage	DEAPV Population	DEAPV Percentage	Difference
All Respondents	5,781		19,453,561		
Aging Individuals	1,404	24.3%	4,381,353	22.5%	1.8%
Individuals with Disabilities	775	13.4%	2,361,518	12.1%	1.3%
Individuals with Language Barriers	351	6.1%	5,116,163	26.3%	-20.2%
Low-Income Households	1,182	20.4%	4,121,851	21.2%	-0.7%
Racial and Ethnic Minorities	2,036	35.2%	8,688,507	44.7%	-9.4%
Rural Inhabitants	730	12.6%	3,876,346	19.9%	-7.3%
Veterans	296	5.1%	705,924	3.6%	1.5%
Individuals not in a Covered Population	1,667	29%	3,723,561	19.1%	10.1%

**Digital Equity Act Population Viewer is an interactive collection of maps created by the NTIA and the U.S. Census Bureau that demonstrate the distribution of covered populations as well as broadband internet availability and adoption statistics by state and county geographies.*

Determining Rural versus Urban Respondents

The State used the New York State Department of Labor's rural classification system to classify respondents as rural or urban in a consistent manner. NYS DOL classifies the state's sixty-two counties into Metropolitan Statistical Areas (MSA), which are defined as continuous regions anchored by at least one urban core with at least 50,000 residents. The New York-Northern New Jersey-Long Island, NY-NJ-PA Metropolitan Statistical Area also includes two subdivisions: the Nassau-Suffolk Metropolitan Division as well as the Putnam-Rockland-Westchester Labor Market Area.

If a respondent's reported home zip code was located within an MSA or the MSA subdivisions defined above, it was considered **urban.**[1] If the zip code fell in a county that does not form part of an MSA or the subdivisions, it was classified as **rural.** This designation results in 85% of New Yorkers being classified as urban, and **15% as rural**. This distribution of survey respondents corresponds closely to 2020 ACS census classifications, which classify 87.4% of the state's population as urban and 12.6% of its population as rural.61

For refence, the Digital Equity Act Population Viewer defined rural areas using ACS 2019 1-Year Estimates. This resulted in a higher estimate of the state's rural population at 19%.[62]

Statistical Analysis Methodology

For the purposes of comparing (i) a given covered population or region with (ii) all other respondents (**Chapter 3.2.1**), linear regression in Stata was used to measure how much covered populations or regions differed from all other respondents. The linear regression tests whether an independent variable—either (i) classification as a member of a covered population or (ii) residency in a certain region—predicts a dependent variable, such as likelihood of access to broadband at home, internet-enabled devices at home, etc.

To reject the "null hypothesis" that there is no predictive relationship between the independent variable and dependent variable and that the covered population or region is similar to the rest of the state, analysis used a 95% confidence interval as a threshold for determining whether the two variables had a linear, predictive relationship.

The linear regression considered 5,781 survey respondents. For those respondents whose zip codes straddled multiple counties, the regression analysis considered those respondents as a set of separate observations, one for each overlapping county. When this occurred, the data points each had a different weighting factor that added up to the total weight assigned to the respondent during the weighting process. Stata regression analysis uses these individual observations (including multiple observations assigned to one respondent split across county

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[61] "State-level Urban and Rural Information for the 2020 Census and 2010 Census." U.S. Census Bureau. https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html.

[62] U.S. Census Bureau, NTIA. "Digital Equity Act Population Viewer." https://mtgis-portal.geo.census.gov/arcgis/apps/webappviewer/index.html?id=c5e6cf675865464a90ff1573c5072b42.

lines) to calculate the results and used these results to draw conclusions about the 5,781 respondents.[63]

Survey Data Analysis Limitations

The survey distribution strategy introduces inherent limitations into the data, although CAO undertook efforts to minimize these limitations and ensure the representativeness of the sample (described above).

- Sampling Error: Survey responses under-sampled aging individuals, formerly incarcerated individuals, individuals with language barriers, and racial and ethnic minorities. Survey analysis used statistical raking described above to mitigate but not entirely eliminate this sampling limitation, as discussed above. For groups that remain significantly under-sampled—specifically formerly incarcerated individuals and individuals with language barriers—focus groups were intended to generate more qualitative data about the experiences of and needs of these populations.
- Format variety: the State distributed the survey in multiple formats (online, paper, multiple languages) in order to increase the accessibility of the survey. However, the majority of completed surveys (98%) were completed online, suggesting a potential bias toward respondents with access to the internet at home or at a local organization or asset.
- Selection bias: those who chose to take the survey or participate in focus groups might not be representative of the population intended to be analyzed. Furthermore, outreach to potential respondents was not randomized.
- Survey Fatigue: The State and local school boards introduced several surveys to gauge the state of broadband and digital equity throughout the COVID-19 Pandemic. Being surveyed multiple times on the same issues might have reduced the pool of respondents. In addition, people might have accessed the survey but could not spend the estimated 10-15 minutes on survey completion.

[63] This approach to weighted regression analysis across multiple observations for a single respondent is described here: DuMouchel, William H., and Greg J. Duncan. “Using Sample Survey Weights in Multiple Regression Analyses of Stratified Samples.” Journal of the American Statistical Association 78, no. 383 (1983): 535–43. https://doi.org/10.2307/2288115.

7.1.3 Focus Group Methodology

The DECs that CAO partnered with, as described in **Chapter 4: Stakeholder Engagement**, conducted focus groups with covered populations throughout their region for more in-depth and population specific discussion of challenges and barriers to broadband access and adoption. DECs across the state conducted 47 focus groups engaging 708 individuals. Department of Youth & Community Development worked closely with OATS to gather data in New York City.

Table 17: Count of Focus Groups Conducted by State Region

Region	Focus Group Total
Capital Region	4
Central NY	3
Finger Lakes	3
Long Island	3
Mid-Hudson	5
Mohawk Valley	5
North Country	3
New York City	10
Southern Tier	3
Westchester County	3
Western NY	5
Statewide	47

Table 18: Count of Focus Groups Conducted by Covered Population

Covered population	Focus Group Total
Aging Individuals	6
Individuals with Language Barriers	5
Low Income Households	8
Racial and Ethnic Minorities	7
Rural Inhabitants	7
Veterans	4
Individuals with Disabilities	6
Formerly Incarcerated Individuals	4

CAO developed population targets for each region based on regional population demographics to ensure that all covered populations were engaged. This methodology prioritized: 1) covered populations with an outsized share relative to the state, with a hypothesis that focus groups with concentrated population would produce robust findings; 2) covered populations with an undersized share relative to the state, with the hypothesis that these groups would be underrepresented in survey data from the region; and 3) the experience and track record of DECs in working with specific covered populations or organizations serving specific covered populations in order to ensure that recruitment and facilitation was viable. The purpose of these focus groups was to add further nuance, color, and depth to the data being collected via the New York State Internet Access Survey, especially with regard to covered populations who might be underrepresented in survey responses. The questions in the script were intentionally aligned with those in the survey, but with more time allocated to hear anecdotes and capture nuance and sentiments from participants who might have multiple, overlapping barriers to completing the full survey.

The focus group notes were analyzed using a codebook that was initially developed based on the five measurable objectives found in the NTIA's Digital Equity Act Notice of Funding Opportunity (NOFO). The five measurable objectives were further broken down into the following "parent" categories:

- Internet availability
- Internet affordability
- Device availability

- Device affordability
- Technical support
- Digital literacy
- Internet safety
- Accessibility of state online services
- Digital equity assets & strategies

The development of the codebook was an iterative process, with new child codes being added after finding recurring themes that the initial codebook did not capture. These additions to the codebook were then applied in a second round of review and coding of the focus group notes.

The table below shows examples of “parent” and “child” codes that were used to analyze the focus group data:

Table 19: New York State Focus Group Codebook Examples

Parent Code	Child Code	Definition
Internet availability	Data caps limit access	Periodic caps (e.g., monthly wireless data plans) limit the ability for people to consistently access internet or meet the needs of their households
Device availability	Smartphone only	Residents only have access to smartphones
Technical Support	Need for multilingual support	There is a need for technical support available in multiple languages
Digital Equity Assets & Strategies	Community centers provide internet	People go to local community centers/institutions (e.g., public libraries) in order to access the internet

7.1.4 Intersectionality of Covered Populations

Using the U.S. Census' PUMS (Public Use Microdata Sample) tool, we analyzed the prevalence of overlap between covered populations. Data found in PUMS is based on individual responses rather than aggregated data with predetermined parameters, allowing us to analyze demographics for individuals who may fall under more than one covered population.

Since PUMS is a sample and not a full census, the data contains sampling errors. Any estimates derived from PUMS data, especially from small subpopulations, may have a larger margin of error. Additionally, defining 'rural' is complex. While many methods, including the methodology used in the report, use county-based definitions (discussed above), PUMS data is aggregated at the level of geographies called Public Use Microdata Areas (PUMA s). Due to these complexities and the lack of a clear 'rural' designation in PUMS, we've chosen to exclude this category from our PUMS demographic analysis.

Each row of the matrix represents a distinct category, such as 'aging' or 'individuals with disabilities,' with corresponding values indicating the percentage of individuals that fall into that category. For instance, if we look at the 'aging' row in the Covered Population Matrix table and find the value 8%, this tells us that 8% of the total NYS population are individuals who are both aging and a racial or ethnic minority.

Table 20: Analysis of Two-Way Intersectionality Among Covered Populations in New York State (excluding incarcerated individuals)

	Aging Individuals	Racial or Ethnic Minorities	Low Income Households	Veterans	Individuals with Disabilities	Individuals with Language Barriers
Aging Individuals	23%	8%	4%	2%	7%	2%
Racial or Ethnic Minorities	8%	45%	12%	1%	5%	6%
Individuals Living in Low-Income Households	4%	12%	20%	0%	4%	3%
Veterans	2%	1%	0%	3%	1%	0%
Individuals with Disabilities	7%	5%	4%	1%	12%	1%
Individuals with Language Barriers	2%	6%	3%	0%	1%	7%

PUMS demographic categories:

- Aging (AGEP): We classified respondents as 'aging' if they were aged 60 or above.
- Racial/ethnic minority (HISP, RAC2P): Individuals were identified as a racial or ethnic minority if their self-reported race or ethnicity was anything other than non-Latino white.
- Low-Income Status (POVPIP): Respondents falling at or below 150% of the poverty line were labeled as 'low-income'.
- Veteran Status (VPS): Any respondent who served in the military, with any type of “Veteran period of service.”
- Disability Status (DIS): Any respondent who reported they have a disability.
- Individuals with Language Barriers (LNGI): any respondent who indicated that “No one in the household 14 and over speaks English only or speaks English 'very well'”.

Unfortunately, PUMs data does not capture the portion of New Yorkers that have limited English literacy as a subset of individuals with language barriers. Therefore, the table and analysis above under-reports the portion of New Yorkers with language barriers (26% per the DEAPV) and the portions of New Yorkers that have language barriers and are also members of other covered populations.