STATE OF NORTH CAROLINA

DIGITAL EQUITY PLAN

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

In response to the once-in-a-lifetime opportunity presented by the Digital Equity Act, the N.C. Department of Information Technology's (NCDIT) Division of Broadband and Digital Equity (the division) developed the North Carolina Digital Equity Plan. This plan is a comprehensive strategy that aims to ensure all individuals and communities have access to the digital tools, resources, and skills they need to fully participate in the digital environment.

This plan would not be possible without the individuals and communities most affected by the digital divide who contributed their time and input during the planning process. Their feedback is critical to ensuring that this plan is responsive to their needs and addresses the unique challenges they face.

This document specifically responds to the digital inclusion and equity needs of a defined set of covered populations identified by the U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA):

- Aging individuals,
- Incarcerated individuals,
- Individuals who are members of a racial or ethnic minority group,
- Individuals who live in low-income households,
- Individuals who primarily reside in a rural area,
- Individuals with a language barrier, including individuals who are English learners and those with low levels of literacy,
- Individuals with disabilities,
- Veterans, and
- Individuals who identify as LGBTQIA+.

This plan reviews, synthesizes, and combines data, best practices, and dreams yet unrealized into a comprehensive strategy to connect all North Carolinians to each other, the world, education, healthcare, and economic opportunities. The division will submit it to NTIA in January 2024, after the solicitation and incorporation of public input.

Once the plan is approved, the division will apply for Digital Equity Capacity Building Grant funding from NTIA and initiate a five-year implementation period. The division will continually document and evaluate the implementation of this plan and report periodically to the public on the impact, learnings, and refinement of the strategies.

VISION AND MISSION

The work of achieving digital equity is collaborative, and the division continues to learn together with partners. Informed by listening sessions in communities across the state, the division crafted a North Star Vision and mission for digital equity in North Carolina.

> **Vision**: We envision a future where all North Carolinians have access to high-speed internet and the digital tools, resources, and skills to fully and equitably participate in our society, democracy and economy.
>
> **Mission**: The NCDIT Office of Digital Equity and Literacy will partner and collaborate with communities across the state and ensure all North Carolinians have:

- Access to affordable and reliable high-speed internet,
- Computers and digital devices that meet their evolving needs, as well as access to quality and affordable technical support,
- Opportunities for developing digital skills,
- Tools and information to protect themselves online, and
- Online resources that are inclusive for all.

PLANNING PROCESS

The division assembled a strong team of digital equity partners across the state to ensure the plan is data-informed and incorporates the voices of covered populations. The list below provides a snapshot of the planning, data collection, and outreach activities the division completed to create a plan that reflects and responds to the needs of residents.

Phase 1: Identifying Key Partners and Developing an Outreach Plan
Leveraging North Carolina's strong, established network of digital equity partners as well as engaging key organizations serving covered populations was the first priority for the planning process. This network of partners served in an advisory capacity throughout all elements of the planning process.

Phase 2: Community Outreach and Data Collection
To ensure the digital equity plan included all N.C. communities and populations' needs, the division engaged in key activities related to outreach and data collection, including:

- Engaging local digital inclusion planning teams and coalitions
- Hosting eight public regional convenings in each economic prosperity zone culminating in an in-person summit and a virtual convening.
- Engaging state agencies to align priorities.
- Developing an asset inventory of more than 1,300 resources, programs, and initiatives meeting digital needs across the state.
- Deploying a first of its kind Digital Equity Survey, which received more than 6,600 survey responses between May and October of 2023.
- Hosting 23 listening sessions focused on the needs and experiences of covered populations.
- Engaging with Tribal communities to solicit their input and seek ways to collaborate.

Phase 3: Plan Development and Public Comment
The significant outreach and data collection efforts outlined in Phase 2 culminated in the development of this plan. The division knows this plan represents the beginning of efforts to advance digital equity and commits to continued outreach and partnership through public comment and public engagement.

CURRENT STATE OF DIGITAL EQUITY

Assets
Central to understanding the needs of covered populations in North Carolina is identifying the programs, initiatives, and resources available (also known as assets) in the state. The division worked to develop a strong network of organizations that serve the digital needs of the state. Organizations, local governments, anchor institutions, churches, and businesses across the state address digital needs in their community; however, no formal efforts to catalog each entity and its services existed until now.

The division identified 1,343 existing digital inclusion assets in North Carolina and 974 organizations, government, or faith-based institutions providing digital inclusion resources and support, representing assets in all 100 counties. Public devices and internet access were the most common resources (519) available followed by digital skills training and technical support (328). Access to devices (193) and digital navigation support (157) are also available in the state.

Organizations exist focused on meeting digital needs for all covered populations. The division identified the most services available for aging individuals, and the least for individuals who are incarcerated or in re-entry. While many organizations served individuals with disabilities, the division only identified a handful that focused solely on the needs of people with disabilities and provided digital inclusion services. A more specific focus on resources for these covered populations is needed.

A clear asset in North Carolina is the number and quality of local and regional digital inclusion plans and coalitions in the state. A digital inclusion plan is often the first formal step for a community to "reduce the digital divide and prioritize digital equity for their residents." Through partnership with the Institute for Emerging Issues at NC State University, the division analyzed key themes, barriers, and recommendations from the 27 draft and adopted digital inclusion plans in the state and interviewed representatives from each planning team and coalition. These plans represent 48 counties and the Qualla Boundary, home of the Eastern Band of Cherokee Indians.

While the division remains proud of the organizations and resources collected through this initial asset inventory, a sustained effort to identify organizations must continue through an ongoing process.

Digital Equity Barriers and Needs
North Carolina's covered populations are not monolithic – their identities are intertwined. The division's community-driven planning process confirmed that almost every individual identifies within more than one covered population; and their barriers to digital equity may be multiple, overlapping, and reinforcing.

There were several barriers to digital equity raised by multiple covered populations and across the geography of North Carolina. These barriers, when removed, would resolve most of the gaps for all covered populations.

Common needs include:

1. **Access to and affordability of high-speed internet.** North Carolina defines access to high-speed internet as 100/20 Mbps (100 Megabits per second download/20 Mbps upload).
2. **Accessibility and inclusivity of online public resources.** Web accessibility and inclusivity means that websites, tools, and technologies are designed and developed so that people with disabilities and people who speak languages other than English (language access) can use them.
3. **Digital literacy.** Digital literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.
4. **Cybersecurity and privacy.** Ensuring that people know how to keep their data safe and secure online is key to protecting people online and making sure individuals feel safe connecting to the internet and using a device.

5. **Availability and affordability of devices and technical support.** Fully participating in a digital society requires access to reliable devices that meet the needs of users, as well as repair and technical assistance services to address issues with those devices.

STRATEGIES AND IMPLEMENTATION PLAN

To address the barriers and needs of the covered populations outlined above, the division plans to implement strategies to advance digital equity and increase internet access, affordability, devices, repair services, digital literacy, cybersecurity and privacy, and the inclusivity of online services.

The strategies and implementation activities to meet these needs include:

- **Strategy 1:** All North Carolinians have access to high-speed internet and to affordable, low-cost internet services.
  - Implementation Activity 1.1: Support the state's Broadband, Equity, Access, and Deployment (BEAD) program plan objectives and implementation to ensure alignment with North Carolina Digital Equity Plan goals.
  - Implementation Activity 1.2: Support Community Anchor Institutions (CAIs) to improve and expand free, public Wi-Fi locations.
  - Implementation Activity 1.3: Increase awareness of and enrollment in low-cost and subsidized broadband internet programs like the Affordable Connectivity program (ACP).

- **Strategy 2:** Promote practices that support online accessibility and inclusivity of public resources and services.
  - Implementation Activity 2.1: Leverage partnerships within state government, local government and organizations serving covered populations to identify and develop North Carolina standards for online accessibility and inclusivity.
  - Implementation Activity 2.1: Leverage partnerships to train staff in all cabinet-level agencies on online accessibility standards to improve the accessibility and inclusivity of state government websites and expand training and capacity to local governments and beyond.

- **Strategy 3:** Ensure that North Carolinians can acquire the digital skills and understanding to meet their personal needs and the workforce needs of the state.
  - Implementation Activity 3.1: Partner with workforce and education agencies at the state and local levels to identify and adopt high quality digital skills standards, including digital privacy and cybersecurity standards and digital health literacy.
  - Implementation Activity 3.2: Build on lessons learned from existing digital navigator programs to expand services across the state.
  - Implementation Activity 3.3: Leverage digital navigator and digital literacy programs to expand partnerships with organizations serving covered populations to meet their specific digital literacy needs.
  - Implementation Activity 3.4: Leverage existing partnerships with state education agencies to engage students and families in digital literacy programs.

- **Strategy 4:** Promote practices and leverage tools to ensure online privacy and security.

- Implementation Activity 4.1: Partner with workforce and education agencies at the state and local levels to identify and adopt digital skills standards, including digital privacy and cybersecurity standards. (Crossover from Implementation Activity 3.1)
- Implementation Activity 4.2: Integrate cybersecurity and privacy training into curricula implemented by digital navigators and other digital literacy efforts across the state.

- **Strategy 5:** Ensure that North Carolinians have access to digital devices that meet their needs.
  - Implementation Activity 5.1: Increase public access to devices at community anchor institutions.
  - Implementation Activity 5.2: Increase the supply of no-cost and low-cost devices in North Carolina's device distribution system.
  - Implementation Activity 5.3: Develop and sustain a high-volume refurbishment and distribution system that supports the efficient movement of devices throughout the state and matches computing devices with the unique needs of the intended Covered Populations.
  - Implementation Activity 5.4: Utilize trained and qualified partners for device deployment and technical support.

SUSTAINABILITY

All the strategies and activities outlined above should work together to build and strengthen a strong digital equity network (often described as an ecosystem) to meet digital needs of all covered populations. This network will be the backbone of the work, ensuring digital needs are met and that programs are sustainable long after Digital Equity Act funding has been spent. The division commits to sustaining a healthy, robust digital equity network into the future that includes 1) a diverse, inclusive community of digital equity practitioners, and 2) Building capacity across the state to identify and meet local needs.

ALIGNMENT WITH STATE PLANS AND GOALS

This digital equity plan was not created in a vacuum, and it will not be implemented in one. The division's community driven planning process confirmed the interconnectedness of both the challenges covered populations face, and the solutions that will close the digital divide. Alignment with state strategic priorities, including economic and workforce development goals, plans, and outcomes; educational outcomes; health outcomes; civic and social engagement; and delivery of other essential services, is paramount to the division's success in implementing the strategies outlined in this plan.

INTRODUCTION

Overview

In June 2021, Governor Roy Cooper established the Division of Broadband and Digital Equity within the N.C. Department of Information Technology. The division houses two offices – the Broadband Infrastructure Office and the Office of Digital Equity and Literacy, the first office of its kind in the nation. The division works to close the digital divide so all North Carolinians can live better-educated, healthier, wealthier lives filled with purpose and abundance. Doing so means not only providing access to affordable, high-speed internet in every corner of the state but also ensuring that residents can adopt these services and have the tools and skills to participate in the digital economy.

In November 2021, Governor Cooper and the North Carolina General Assembly dedicated more than $1 billion in federal American Rescue Plan Act funds to achieve the following goals:

- Investing $971 million to build critical infrastructure to deliver internet speeds of 100/20 Mbps to 98% of unserved households with the ability to handle future speeds of 100/100 Mbps.
- Investing $50 million to create awareness and support digital literacy and skills training to participate in the digital economy.
- Promoting enrollment in the Affordable Connectivity Program (ACP) to boost ACP enrollment to 1 million North Carolina households by the end of 2023 - currently 870,030 households (as of Nov. 27).

Even before the creation of the NCDIT Division of Broadband and Digital Equity, North Carolina had a long history of supporting digital equity and convening and learning from practitioners in the field for many years. The division is proud to have strong partnerships with state and local government, the university and community college systems, local libraries, senior centers, anchor institutions, and with a network of nonprofits. The work outlined below resulted from many years of partnerships often led by or in partnership with practitioners.

Current Division Programs and Initiatives

The division's existing and legacy programs focused on digital equity are outlined below.

1. **Digital Equity and Inclusion Collaborative**
   Founded in 2017 by the Broadband Infrastructure Office, the N.C. Digital Equity and Inclusion Collaborative (NCDEIC) is a group of leaders of digital equity and inclusion-focused organizations and efforts. NCDEIC members include state and local government agencies, nonprofits, coalitions and individuals working to close the digital divide across the state.

   The NCDEIC works toward a state where all residents have access to the technologies, digital skills, and opportunities necessary to thrive in today's society with the mission of fostering collaboration among digital equity and inclusion leaders to bridge the digital divide in North Carolina.

   To support programs across the state, the collaborative shares best practices and supports partners' digital inclusion efforts. The NCDEIC works to provide feedback to local, state and federal policymakers, design strategies to promote digital equity in the

state and to educate all North Carolinians on the digital divide and the importance of digital equity and inclusion efforts.

2. **Digital Health Equity Project**
   In 2019, the division received an Appalachian Regional Commission POWER grant to create a program to improve digital and health literacy, computer ownership, and broadband adoption among residents in western North Carolina.

3. **Digital Equity Data**
   In 2019, and in collaboration with Roberto Gallardo, Ph.D., a broadband researcher from Purdue University, the division created and published the North Carolina Broadband Indices. Because broadband access and adoption are both important but distinct from each other, two indices, which can be applied at the county- and census-tract levels, were designed:

   - Broadband Availability and Quality Index
   - Broadband Adoption Potential Index

   The division published an update to the indices in 2023. Additionally, the division partnered with Dr. Gallardo and published state, regional, and county-level digital equity profiles available on the division's website.

4. **Digital Inclusion Plan Template and Guide**
   Created in 2020, the Digital Inclusion Plan Template and Guide helps communities create digital inclusion plans to reduce the digital divide and prioritize digital equity for their residents.

5. **Digital Equity Grant Program**
   A first of its kind grant program in the state that aims to develop or expand digital inclusion efforts. The program has two tracks:
   - Interagency Grants and
   - Digital Champion Grants.

   Interagency Grants: $9.9 million program for state agencies and UNC System universities to develop or expand large-scale statewide or regional digital inclusion programs. The program launched in September 2022 and announced eight grantees in January 2023. A list of grantees is available in the Asset Inventory section, page 31.

   Digital Champion Grants: $14 million, three-year grant program that launched in November 2023. Applicants can apply for up to $400,000 per county served with a maximum application request of $1.5 million. Eligible entities include:
   - Local governments (county and municipal), local libraries, and K-12 school systems,
   - Nonprofit organizations,
   - Higher education institutions, and
   - Regional entities (ex., councils of governments).

6. **Digital Navigator Initiative**
   The state's first statewide digital navigator initiative helps connect North Carolinians to services that aid with home connectivity issues, digital device use, digital skills

acquisition, and Affordable Connectivity Program (ACP) enrollment. In May 2023, the office awarded funding to three anchor institutions: the State Library of North Carolina, the N.C. Community College System, and N.C. Cooperative Extension.

7. **Affordable Connectivity Program (ACP) Outreach and Hotline**
   The Affordable Connectivity program is a federal program run through the Federal Communications Commission (FCC) that reduces the cost of internet service for eligible households by $30 per month and $75 per month on tribal lands. The division provides assistance, guidance, and promotional materials for families and community leaders https://www.ncbroadband.gov/ACP. The division seeks to increase public awareness of the program and increase the number of eligible households enrolled to 1 million by December 2023. The Office of Digital Equity and Literacy was one of four grantees in North Carolina to receive an ACP Outreach Grant from the Federal Communications Commission (FCC). The grant enables the office to partner with the N.C. Department of Health and Human Services and the NC Counts Coalition to train staff on ACP enrollment and host enrollment events.

   NC 211 ACP hotline
   The division partners with NC 211 to provide an ACP enrollment hotline. The hotline launched in pilot counties in November 2023 and expects to launch statewide in 2024. The division intends for the hotline to ultimately provide other digital navigation services as well.

8. **Broadband Infrastructure Projects**
   The division's Broadband Infrastructure Office developed some of the most robust broadband infrastructure grants and maps in the nation, including: a legacy state grant program connecting 33,250 locations with wireline or fixed wireless infrastructure, programs for building infrastructure for high-speed connectivity, NC OneMap, which is an open-source, interactive GIS mapping tool; and a “Stop-Gap Solutions" program designed to meet additional infrastructure needs within the state.

   The division's Broadband, Equity, Access, and Deployment (BEAD) Five-Year Plan, which includes feedback received during the public comment period, outlines how NCDIT will invest BEAD funding across North Carolina to deploy broadband infrastructure moving forward. This plan was approved by the National Telecommunications and Information Administration (NTIA) and National Institute of Standards and Technology (NIST) in 2023.

A Vision for Digital Equity in North Carolina

The work of achieving digital equity is a collaborative one, and the division continues to learn with and from its partners. Through programs like the Digital Equity Grant program, the Digital Navigator Initiative, and the Digital Equity and Inclusion Collaborative, the division laid the foundation for a network of digital equity champions, programs, and resources across the state. Together with partners and informed by listening sessions in communities across the state, the division crafted a North Star Vision for digital equity in North Carolina that:

- Accounts for the diverse needs and assets of each community and invests in locally driven solutions to build capacity and sustainability, and

- Ensures solutions are transformational and address how digital equity intersects with all aspects of North Carolina life, including increasing economic and social well-being, health, and education.

North Star Vision: We envision a future where all North Carolinians have access to high-speed internet and the digital tools, resources, and skills to fully and equitably participate in our society, democracy and economy.

Mission: The NCDIT Office of Digital Equity and Literacy will partner and collaborate with communities across the state and ensure all North Carolinians have:

- Access to affordable and reliable high-speed internet,
- Computers and digital devices that meet their evolving needs, as well as access to quality and affordable technical support,
- Opportunities for developing digital skills,
- Tools and information to protect themselves online, and
- Online resources that are inclusive for all.

Planning and Community Outreach Process

The division assembled a strong team of digital equity partners across the state to ensure the plan is data-informed and incorporates the voices of covered populations. The list below provides a snapshot of the planning, data collection, and outreach activities the division pursued to create a plan that reflects and responds to the needs of residents.

Phase 1: Identifying Key Partners and Developing an Outreach Plan

Leveraging North Carolina's strong, established network of digital equity partners as well as engaging key organizations serving covered populations was the first priority for the planning process. This network of partners served in an advisory capacity throughout all elements of the planning process.

- Core Planning Team: This team includes nine individuals representing anchor institutions, state government, local government, and community-based organizations supporting digital inclusion and/or serving covered populations across the state. This group began meeting bi-weekly in October 2022. (A full list of members is available in Appendix B.)

- Working Groups: These volunteers advise staff and consultants on key elements of the Digital Equity Plan. The working groups include a Data and Barriers group, Assets and Promising Practices group, and Device Working group. A more informal group of philanthropic leaders also met regularly. (A full list of members is available in Appendix B.)

In addition to engaging key partners to support plan development, Phase 1 also consisted of an outreach plan - a living document to outline a comprehensive approach to community outreach and public engagement.

- Outreach Plan: BEAD and Digital Equity Plan data gathering began in March 2023. The outreach plan and kickoff webinar are available at ncbroadband.gov/BEAD.

Phase 2: Community Outreach and Data Collection

To ensure the digital equity plan was inclusive of all N.C. communities and populations' needs, the division engaged in key activities related to outreach and data collection.

- Engaged Local Digital Inclusion Planning Teams and Coalitions: North Carolina is a leader when it comes to the quantity and quality of localized digital inclusion planning and implementation. Through partnership with the Institute for Emerging Issues at NC State University, the division interviewed representatives from each planning team and coalition in the state and analyzed key themes from 27 draft and adopted plans representing 48 counties and the Qualla Boundary, home of the Eastern Band of Cherokee Indians. Full analysis can be found in the County and Regional Digital Inclusion Plans section on page 32.

- Hosted Regional Convenings: In collaboration with the Broadband Equity Access and Deployment (BEAD) planning process, the division hosted eight in-person regional sessions in each of the state's Economic Prosperity Zones, and one virtual session, culminating in a May summit in Raleigh, N.C., and a virtual session in June. Attendees included community members as representatives from government, education, resource providers, nonprofits, business, agriculture, and internet service providers. Sessions were interactive and engaged participants to identify challenges to internet access in their community and how they recommended the state uses federal funding to meet community needs.

- Engaged State Agencies: The division strengthened meaningful partnerships with key state agencies, In April and May 2023, the division held interviews with six state government agencies, including the N.C. Departments of Adult Corrections, Commerce (which includes workforce programs), Health & Human Services, Natural & Cultural Resources, Public Instruction, and Transportation to discuss how the BEAD and State Digital Equity plans should align with the strategic plans of those agencies.

- Developed an Asset Inventory: Central to understanding the needs of covered populations in North Carolina is identifying the programs, initiatives, and resources available (also known as assets) in the state. The division developed a comprehensive asset inventory, which will ultimately be a searchable, regularly-updated database for the public of resources available to help North Carolinians get online and use online resources safely. This asset inventory combines assets identified through surveys, listening sessions, regional convenings, and interviews with targeted organizations. The inventory identified more than 1,300 assets as of the publication of this plan. A comprehensive Asset Inventory overview is available in Appendix E.

- Digital Equity Survey: The division deployed a digital equity survey developed using guidance from the National Digital Inclusion Alliance and vetted among the working groups and core planning team. The survey identified the needs of covered populations for each of the key barriers to digital access. The survey was translated into the top six languages used in North Carolina for residents who do not speak English well. The survey was available online, as well as via paper and telephone. By partnering with a wide variety of community groups and larger advocacy organizations, the division received more than 6,600 survey responses between May and October of 2023. (The Digital Equity Survey methodology is available in Appendix D.) Comparing the Digital Equity Survey sample to North Carolina data (American Community Survey 5-Year

Estimates, 2017-2021), most covered populations were oversampled on the survey with aging populations being the largest oversample (+25%). The only covered populations underrepresented in the survey data as of October 1, 2023, include members of the LGBTQIA+ community (-0.34%) and Black/African Americans (-6.93%), Hispanic and Latino (-2.28%), and Asian (-0.25%) populations.

It is important to note that covered population identities are often intertwined, and individuals often belong to more than one group. For example, the 2,476 rural residents who participated in the survey provide a very diverse sample: 73.34% white; 13.68% Black/African American; 3.64% Hispanic/Latino; 2.55% Native American, American Indian, or Alaska Native; 1.07% Asian/Asian American; 0.33% Pacific Islander or Native Hawaiian, and 1.30% identified as some other race/ethnicity.

The survey was distributed using a snowball sampling approach where the division first shared the online survey and access to printable copies with partner organizations across the state involved in digital inclusion efforts (e.g., libraries, health and human services departments, senior centers, community organizations, churches, etc.) and asked that they share the survey broadly within their communities. Sample outreach language, PDFs, and links to the online survey were provided to make sharing the survey easier for partners. The division also provided printed paper copies with self-addressed stamped envelopes when requested for these organizations to share printed surveys directly with the public. The survey opened April 20, 2023, and data were collected through the end of October. The division plans to deploy the survey at two additional timepoints during the implementation phase to measure progress towards the state's digital equity goals. (Survey analysis is in the Needs and Barriers section in Appendix D).

- Listening Sessions: In partnership with the Friday Institute for Educational Innovation, the division conducted 23 listening sessions across the state to capture a representative sample of the needs of North Carolinians. The division partnered with MDC Rural Forward to help identify listening session host organizations that had significant community trust with covered populations. The listening sessions took place between May and September of 2023. (All organizations involved in hosting listening sessions and a comprehensive list of the 23 listening sessions is available in Appendix F).

  Multiple covered populations participated during each session, which helped identify the best ways to overcome barriers to digital equity faced by covered populations and assess the availability and affordability of fixed and wireless broadband technology, digital literacy online security support, and the availability and affordability of technology devices and support in the community. Additionally, the division examined how these barriers affect covered populations' economic and workforce development goals, plans, and outcomes; educational outcomes; health outcomes; civic and social engagement; and delivery of other essential services. The listening sessions largely focused on how best to overcome the identified barriers to replicate and scale best practices.

Activity	Digital Equity Survey Responses* (6,600)	Asset Inventory Assets (1,316 Assets)	Listening Sessions Participants (23 Sessions)
General Population	6,660	114	255
Aging Populations	2,688	127	37
Incarcerated/Formerly Incarcerated	65	33	28
Racial/Ethnic Minorities	1,142	108	169
Low Income	1,103	56	87
Rural Areas	3,863	123	131
Language Barrier/English Language Learners (including immigrants and new Americans)	443	98	71
Low Literacy	161	93	20
Individuals with Disabilities	1,993	72	69
Veterans	642	64	21
LGBTQIA+	220	51	9

**The survey data do not yet reflect the inclusion of paper surveys. These will be incorporated before the final plan is shared.*

- N.C. Telehealth Network Association: The division partnered with the N.C. Telehealth Network Association's Healthcare Broadband Coalition to conduct conversations with telehealth partners around the state. (A list of healthcare providers involved in these conversations is in Appendix B).

- Tribal Engagement: The division held a tribal consultation on May 18, 2023, with the Eastern Band of Cherokee Indians. Based on this engagement, the state gained a better idea of how the tribe plans to provide improved access on tribal lands. The division committed to work with the tribe to find opportunities to use BEAD funding for deployment where needed. Additional discussions followed to coordinate broadband and digital equity strategies.

  In addition, the division presented information about the planning process to the N.C. Commission of Indian Affairs in March 2023 to solicit their input and seek ways to collaborate with the eight state-recognized tribes and four urban Indian organizations represented on the commission. State-recognized tribes include: Coharie, Eastern Band of Cherokee Indians, Haliwa-Saponi, Lumbee, Meherrin, Occaneechi Band of the Saponi Nation, Sappony and Waccamaw Siouan. Members of state-recognized tribes participated in both the regional sessions and the listening sessions in June and July

and shared valuable input about the needs and assets of their communities. The division also partnered with the Waccamaw Siouan tribe and American Indian Mothers Inc. to host a listening session.

Phase 3: Plan Development and Public Comment

The significant outreach and data collection efforts outlined in Phase 2, culminated in the development of this plan. The division commits to continued outreach and partnership including through:

- Public comment: The North Carolina Digital Equity plan will be available for public comment through Jan. 2, 2024.
- Continued engagement of working groups: While many working groups will complete their responsibilities, the division anticipates some will continue in various capacities.
- Continued public engagement: The division plans to release a report annually to update implementation progress. The division will continue to partner with listening session host sites and other partners engaged throughout the process to listen, learn and remain accountable.

CURRENT STATE OF DIGITAL EQUITY IN NORTH CAROLINA

Defining Covered Populations

The planning and outreach process focused on "covered populations," specific groups defined by NTIA as having specific digital equity needs and barriers.

- **Aging individuals:** Individuals aged 60 and older.[1]
- **Incarcerated individuals:** Inmates confined in a prison or jail, other than those in a Federal correctional facility. Most of the data cited in this plan comes from individuals in re-entry about their experience when incarcerated as well as their experience as a returning citizen. This plan honors both experiences.
- **Individuals who are members of a racial or ethnic minority group:** Individuals whose race or ethnicity is non-dominant in North Carolina.
- **Individuals who live in low-income households:** Individuals who live in households with income no greater than 150% of federal poverty threshold.
- **Individuals who primarily reside in a rural area:** residents of any town with less than 50,000 residents and not in an urbanized area next to a town with 50,000 or more residents.
- **Individuals with a language barrier:** Individuals who are English learners (including immigrants and new Americans) and those who have low levels of literacy.
- **Individuals with disabilities:** Individuals with a physical or mental impairment that substantially limits one or more major life activities.
- **Veterans:** Individuals who served in the active military, naval, or air service, and who were honorably discharged or released.

[1] Some of the data cited in this plan refers to individuals aged 65 or older based on data availability and to align with state reports and initiatives.

- **Individuals who identify as LGBTQIA+:** Individuals who identify as lesbian, gay, bisexual, transgender, queer or questioning, intersex, asexual and more.

Demographic profiles and maps for each covered population are in Appendix H.

Asset Inventory

Central to understanding the needs of covered populations in North Carolina is identifying the programs, initiatives, and resources available (also known as assets) in the state. Organizations, local governments, anchor institutions, churches, and businesses across the state have been addressing digital needs in their community; however, no formal efforts to catalog each entity and its services existed previously.

By starting with a comprehensive inventory of available resources, the division took an asset-based approach to planning. Additionally, the asset inventory will be used to develop an interactive, searchable database where residents can identify digital resources and services in their area. The development of this searchable resource is being guided by feedback from several organizations to ensure it is accessible, easy to navigate, and meets the needs of all N.C. residents, including covered populations.

It should be noted that while significant efforts were made to identify all the organizations meeting digital needs in the state, the division continues to learn about more programs every day. The division views this inventory as a living document that will continue to be added to, refined, and utilized for years to come.

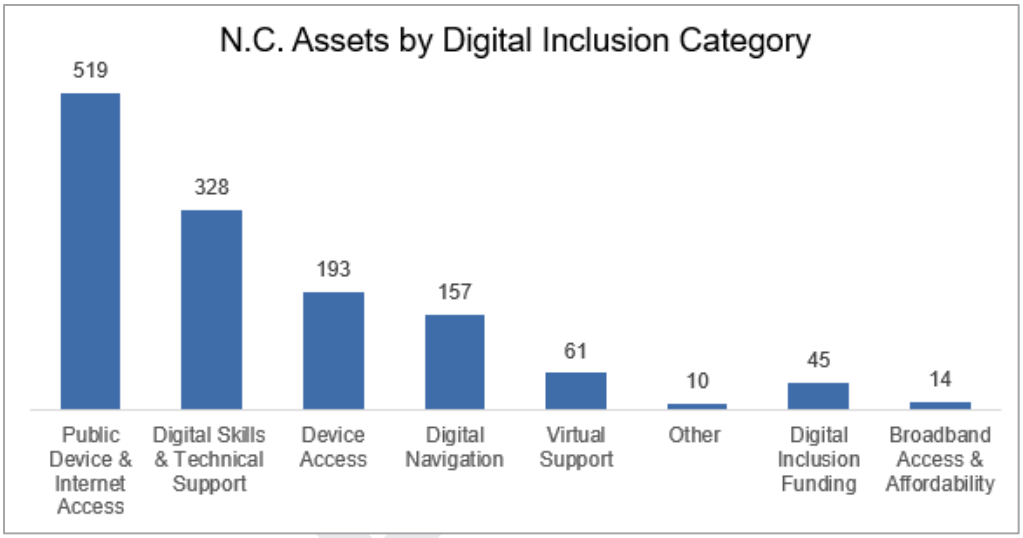
Overview and Development of the Asset Inventory

To develop the Asset Inventory, the division combined the following strategies:

- Developed and deployed an Asset Inventory Survey,
- Analyzed the organizations and resources identified in the 27 adopted or drafted digital inclusion plans covering 48 of the 100 counties in North Carolina and the Qualla Boundary,
- Analyzed survey results from the N.C. Department of Health and Human Services (NCDHHS) Division on Aging and Adult Services Broadband Survey,
- Identified assets through listening sessions and regional sessions, and
- Identified assets through content analysis of organizational websites.

The division identified an existing 1,343 digital inclusion assets[2] in North Carolina and 974 organizations, government, or faith-based institutions providing digital inclusion resources and support, representing assets in all 100 counties. Organizations, on average, provided one to two services or resources. Public devices and internet access were the most common resources (519) available followed by digital skills training and technical support (328). Access to devices (193) and digital navigation support (157) were also available in the state. Other things like virtual support (61), digital inclusion funding (45), and access to broadband access and affordability (14) were also identified as being important resources.

[2] Analysis as of October 2023. More assets are added on a continuous basis.



Below is a summary of the number of entities the division identified through various data collection processes:

- 258 entities filled out the Asset Inventory Survey,
- 571 entities were identified from an initial scan of 27 county and regional digital inclusion plans representing 48 North Carolina counties and the Qualla Boundary,
- 122 entities from the Division of Aging and Adult Services Broadband Survey, and
- 23 entities from a scan of counties not represented after completing the above activities.

Spotlight on model programs and initiatives

As demonstrated above, North Carolina organizations are meeting significant needs across the state. Many statewide and regional organizations are providing digital services available to multiple populations. The table below provides a non-exhaustive list of large-scale organizations available across the state of North Carolina.

Table: Examples of Digital Inclusion Assets Serving the General Population

Asset	Description
Kramden Institute	Kramden Institute's mission is to provide technology tools and training to bridge the digital divide. Since 2003, Kramden has awarded more than 48,000 computers to families across North Carolina. The Kramden Institute is based out of Durham and primarily serves central and eastern North Carolina.
E2D	E2D's goal is to ensure that all North Carolina families have affordable access to essential at-home technology and the digital skills required to support academic success to prepare students for college, careers and beyond as well as job creation and retention for adult members of the household. E2D collects used laptops, refurbishes them in student-led technology labs, and distributes them to student families who don't have a computer at home. Since 2013, E2D distributed 38,500 laptops, serving approximately 123,200 people.

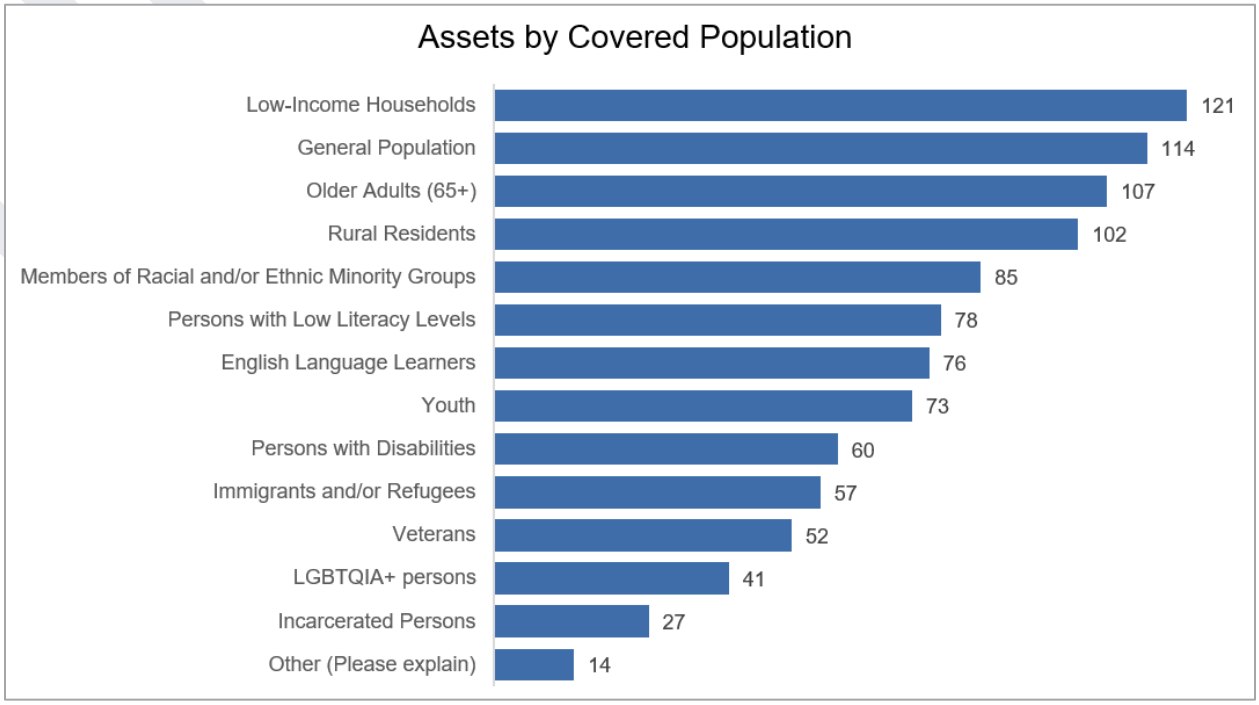
Digital Equity and Inclusion Collaboratives and Planning teams	North Carolina is home to 27 digital inclusion coalitions or planning teams committed to meeting the digital inclusion needs of their communities. Descriptions of their digital inclusion planning efforts are outlined in the County and Regional Digital Inclusion Plans section on page 30. Many of these plans were driven by regional council of governments (COGs) who played a leadership role in digital equity planning at the regional level and are key assets in implementation. Below are examples of some of the more established coalitions: • Digital Durham: Digital Durham promotes digital inclusion throughout Durham, North Carolina by advocating for reliable, affordable internet access and computing devices, along with digital literacy training. • Land of Sky Regional Council: Through the WestNGN Broadband initiative, Land of Sky Regional Council has been leading the way to bring affordable internet service, accessible digital devices and tech skills training to Buncombe, Henderson, Madison, and Transylvania counties. • Digital Bridges Forsyth: Led by WinstonNet Inc. a nonprofit community technology organization, Digital Bridges Forsyth developed the county's digital equity plan and is striving to be a prototype for the nation. Partnering with many of the area's major academic, public, community, and private institutions, they are coordinating resources that strengthen community technology centers services and educational quality to help prepare the workforce for the next generation of network-based computer technologies.
Center for Digital Equity	The Center for Digital Equity (CDE) is the backbone organization for a collective impact strategy bringing together residents, public, and private sector partners to co-create solutions allowing every resident the opportunity to thrive in our modern culture. CDE developed the innovative Digital Navigator service designed to ensure that everyone in Mecklenburg County can find and connect with available digital inclusion resources by calling the local 311 government services hotline.
NC Counts Coalition	NC Counts Coalition is a nonpartisan, nonprofit 501(c)(3) organization committed to building a healthy, just, and equitable North Carolina through cross-sector partnerships that advance systemic solutions for communities facing systemic barriers, including BIPOC communities, LGBTQ+, low wealth, immigrant, and other communities. NC Counts is currently supporting Digital Equity through its Count Me NC program which aims to increase digital access to ensure a fair and accurate census.

Digital Navigator Initiative	The state's first statewide digital navigator initiative helps connect North Carolinians to services that aid with home connectivity issues, digital device use, digital skills acquisition, and Affordable Connectivity Program (ACP) enrollment. Announced in May 2023, the division partnered with three anchor institutions: • **State Library of North Carolina:** Train library staff and provide digital navigation services at libraries by hiring regional digital inclusion facilitators and a digital inclusion coordinator to assist participating public and tribal libraries statewide. • **N.C. Community College System:** Create a Digital Navigator Certificate program in English and Spanish, deploy trained digital navigators at 20 community colleges serving Tier 1 and 2 counties, and recruit adults from communities most impacted by the digital divide to serve as digital navigators. • **N.C. Cooperative Extension:** To hire digital literacy and skills extension agents in participating counties and train existing extension agents to host digital literacy and skills educational opportunities in their communities.
N.C. Business Committee for Education	The N.C. Business Committee for Education (NCBCE) trains school districts to develop technology teams (Tech Teams) to provide free training and paid experience to high school students who can provide technical training for adults and peers and help desk support to their schools and communities.
NC Central University's School of Library and Information Science	NC Central University offers versatile, accredited graduate degrees for students with interests in information systems, data science, information management, network management, school media and digital youth, digital humanities, health informatics, and leading and managing libraries. They have been leaders in digital equity including partnerships with the Durham Housing Authority and Digital Durham. They were also a key partner in development of the Asset Inventory.
North Carolina Telehealth Network Association	The North Carolina Telehealth Network Association (NCTNA) is a dynamic nonprofit that works to connect and empower North Carolina's public and nonprofit healthcare providers. As a telehealth consortium led by industry experts, they specialize in two areas that can be challenging to navigate alone: broadband connectivity and federally funded discounts on broadband for eligible providers.
Digital Equity funders	North Carolina has a strong group of funders committed to investing in digital equity. The Z. Smith Reynolds Foundation has been convening a group of philanthropic leaders around digital equity issues. Other funders have been instrumental in funding digital inclusion plans and investing in digital divide issues including: Dogwood Health Trust, the John M. Belk Endowment, and the Reidsville Area Foundation.

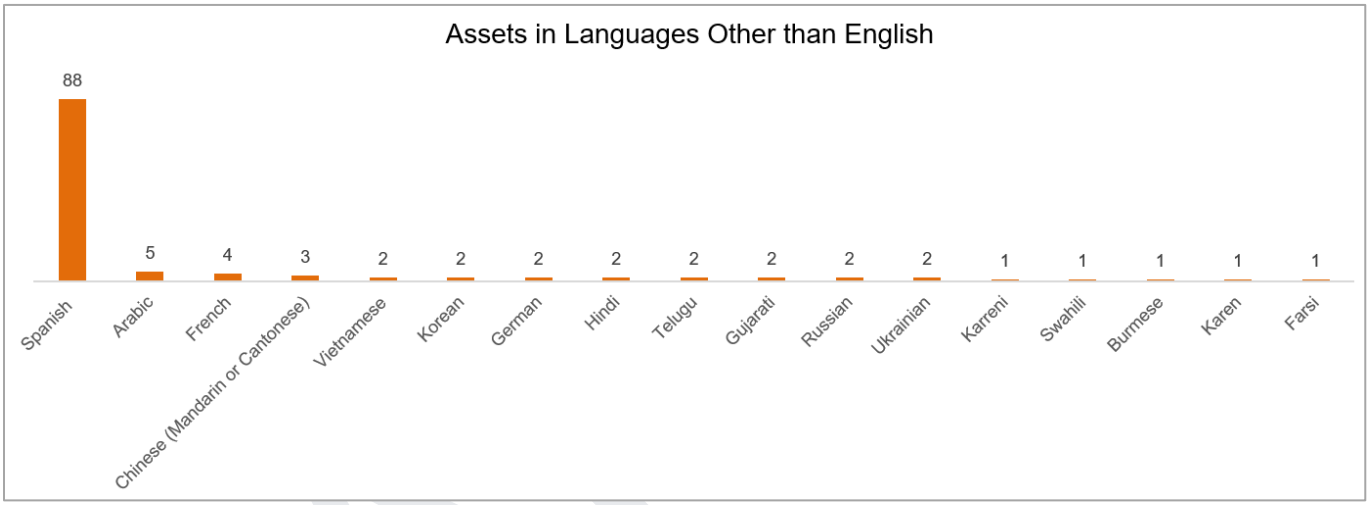
Programs and Initiatives for Covered Populations

The division identified organizations meeting digital needs for all covered populations. For entities that completed the asset inventory survey, the division has a breakdown of covered populations they primarily serve. The division identified the most services for aging individuals, and the least for individuals who are incarcerated or in re-entry, underscoring the need for more focused programs to support both individuals who are currently incarcerated and those in re-entry are needed. While many organizations serve individuals with disabilities, the division only identified a handful that focused solely on the needs of people with disabilities and provided digital inclusion services. Similarly, while 51 organizations serve individuals who identify as LGBTQIA+, and 64 organizations serve veterans, most were community anchor institutions like libraries and community colleges and may be more focused on general needs versus specific needs of these groups.

- 127 entities primarily serve aging individuals
- 93 entities primarily serve individuals with low literacy
- 98 entities primarily serve individuals with a language barrier including immigrants and new Americans
- 123 entities primarily serve rural residents
- 72 entities primarily serve individuals with disabilities
- 56 entities primarily serve low-income households
- 108 entities primarily serve individuals who are members of a racial or ethnic minority group
- 64 entities primarily serve veterans
- 33 entities primarily serve incarcerated individuals or individuals in re-entry
- 51 entities primarily serving LGBTQIA+ individuals



The division also identified assets that were available in languages other than English. Seventy-two percent of these assets were available in Spanish, which highlights the need for assets and resources in other languages.



The Asset Inventory survey and additional data collection efforts also attempted to gather information about specific digital inclusion services offered by the organizations as well as the covered populations served by the organization, where available.

Most services were targeted at low-income (282 services), aging adults (249 services), and rural residents (223 services). Digital skills and technical support were the most frequently cited services provided across all covered populations. Device access and public devices/internet were also identified as common supports for covered populations. Services specifically targeted at supporting incarcerated individuals were least represented (n=84). During program implementation, we will work to gather more information about services offered to support this population.

Broadband access and affordability and virtual support were not categories included in the Asset Inventory survey but were identified through other data collection efforts. They do not reflect the total services offered across the state, and the division will evaluate whether these categories should be added to future iterations of the Digital Equity Survey.

Digital inclusion funding was offered at a lower rate than any of the other categories. Often, organizations offering funding will be nonprofit or philanthropic organizations rather than libraries, senior centers, prisons, etc., which were more represented in the initial asset inventory scan. During program implementation, the division will focus more specifically on identifying organizations that provide funding.

Asset Inventory: Digital Inclusion Services by Covered Population

	Device Access	Digital Skills & Technical Support	Digital Navigation	Public Devices and Internet	Digital Inclusion Funding	Broadband Access & Affordability	Virtual Support	Other	Total Services
Aging Individuals	74	98	20	44	1	5	1	6	249
Incarcerated Persons	21	40	1	17	0	3	0	2	84
Racial/ Ethnic Minority Group	51	89	11	36	2	7	0	5	201
Low Income	88	108	18	50	2	9	0	7	282
Rural	65	87	13	42	2	7	0	7	223
Immigrants and Refugees	53	66	7	28	0	4	0	4	162
Low Literacy	54	87	6	36	1	9	0	4	197
English Language Learners	64	83	9	35	1	4	0	3	199
Disabilities	49	70	7	33	0	8	0	4	171
Veterans	36	60	5	24	0	3	0	4	132
LGBTQIA+	32	53	5	22	0	2	0	2	116
Youth	58	60	8	31	1	5	0	3	166

Note. Individual organizations may be counted multiple times if they serve multiple counties.

Outlined below are organizations providing needed digital inclusion resources to each covered population. The division chose to highlight a diverse group of organizations - large anchor institutions, senior centers, device refurbishers, re-entry councils, libraries, nonprofits, and others to showcase the broad scope of services offered throughout the state. However, because covered populations are not monolithic, most of these organizations provide services to more than one covered population.

<u>Aging Individuals</u>

The state offers aging individuals many resources and services to lead a safe and healthy life, including services to help adults remain at home, to find long-term care housing, to access adult protective services, and to utilize wellness and fitness resources.

Some current digital assets uniquely designed to serve the aging population in North Carolina state are listed in the table below:

Table: Examples of Digital Inclusion Assets for Aging Individuals

Asset	Description
Power Up USA's Digital Seniors Program	Power Up USA's Digital Seniors program provides classes and guidance specifically designed for older adults to help maneuver in the fast-paced digital world. Power Up USA works to close the digital divide in Charlotte and the surrounding areas. In addition to their Digital Seniors program, they also offer programs to support and train disadvantaged youth in robotics, coding, and other technologies.
Randolph Senior Adults Association	Randolph Senior Adults Association (RSAA) is a private, nonprofit organization that has served Randolph County since 1975. It is an organization of individuals who are interested in improving the quality of life for Randolph County residents who are 50 years of age and older and in serving as advocates on their behalf. RSAA provides access information about the information technology services department.
Onslow County Senior Center	Onslow County Senior Services commits to serving older adults through programs designed to enhance their ability to remain independent, preserve their right to self-determination and maintain their social, emotional and physical well-being. The senior center provides access to a computer room as well as computer classes for seniors five days a week.
Watauga County Project on Aging	The Project on Aging serves as the focal point for aging services in Watauga County. The agency encourages independence and promotes educational opportunities by providing supportive services to the county's older adults. The center provides ongoing digital literacy classes focused on teaching seniors how to use digital devices (e.g., smartphones).

Incarcerated Individuals

The state has a handful of strong resources serving individuals who are in re-entry or currently incarcerated. However, many of these services are in urban areas and most counties do not have a re-entry council. Some of the digital inclusion services available to incarcerated individuals and those in re-entry are highlighted below.

Table: Examples of Digital Inclusion Assets for Incarcerated Individuals and Individuals in Re-entry

Asset	Description
Department of Adult Corrections (DAC)	DAC's Education Services is upfitting classrooms in prison facilities with computer labs and devices to increase digital literacy among incarcerated individuals enrolled in education services, and their telehealth services are ensuring offenders have access to specialty care.

OurJourney	OurJourney is a nonprofit organization created by a group of former North Carolina prisoners who met behind the razor wire. From reentry kits to computer skills services, OurJourney is a new approach to freedom, where being released from prison isn't just an occasion to anticipate, but also a journey to join.
City Startup Labs	The ReEntry Entrepreneurship Program (REEP) utilizes the LEARN/BUILD/DEPLOY Model, which marries core competencies, digital-tech service skills, and entrepreneurial training to prepare REEP participants to create business. The program issues digital technology certifications that show participants are keeping pace with today's digital roles and requirements.
Alamance Community College in partnership with Sustainable Alamance	Alamance Community College's College and Career Readiness partners with Sustainable Alamance to offer digital literacy training to individuals in re-entry.
Durham Local Re-Entry Council	It is an organized network of individuals and agencies that provide support and the coordination of services for justice involved individuals. The council is a great help for individuals to access online resources as it provides them with a comprehensive list of where to get the digital services they need.

Low-Income Households

Access to affordable, reliable high-speed internet may assist low-income individuals and households connecting to community resources, job opportunities, educational opportunities, and financial assistance programs. Some current digital assets that are uniquely meant to serve low-income individuals in North Carolina include:

Table: Examples of Digital Inclusion Assets for Low-Income Households

Asset	Description
June10 inc (Roots)	Roots provides a long-term residential community with peer support for women who are homeless, women with children, and pregnant women in Onslow County. They focus on the steps to successfully rebuild lives shattered by abuse, addiction, or poverty, including education, job training, and life skills. Roots offer digital skills classes for women as part of their Employment Preparation & Support services.
Innovate Chatham	The digital inclusion initiative aims at helping lower-income families gain access to the internet and all the opportunities it provides.
HUBZone Technology Initiative (HTI)	HTI helps people by providing free technology for educational and employment opportunities. HTI acquires laptops donated by individuals, organizations, and businesses and converts them to Google Chromebooks for those in need. HTI provides an essential service to underserved communities and aims to reduce the digital divide.

Youth Navigating Toward Opportunity	Youth Navigating Toward Opportunity is a homegrown community organization in Perquimans County that mentors and caters to the needs of young people who are often below or at poverty level and frequently classified at-risk to provide vital aid and resources, such as school supplies, tutoring, public education, and technology training, in an attempt to inspire and provide a safe, productive outlet for the youth within the community.
Peletah Ministries and Institute for Building Resilient Communities	Peletah Ministries convenes an Eastern North Carolina Collaborative that provides resources for families across the region. They have been leaders in promoting the Affordable Connectivity Program and hosting enrollment events. During the pandemic and beyond, they provided access to devices for students engaged in remote learning, operated a 24/7 drive-in Wi-Fi service for those who didn't have internet at home and provided digital literacy classes for parents to better integrate and engage in remote learning.

Individuals with Language Barriers including Immigrants and New Americans

People with language barriers including immigrants and new Americans may encounter further challenges in digital inclusion due to limited English proficiency and linguistic resources. Online resources and information may not be easily available in languages other than English; people with limited English proficiency may face challenges maneuvering and utilizing digital platforms, applications, and online services; and online customer support, helplines, or instructional materials may not be available in languages other than English. Current digital assets that are serving people with language barriers, including immigrants and new Americans in North Carolina state are as follows:

Table: Examples of Digital Inclusion Assets for People with Language Barriers (Immigrants and New Americans)

Asset	Description
AMEXCAN	The Mexican Association in North Carolina was created to promote the active participation of Mexicans and Latinos in their new communities and encourage the appreciation, understanding, and prosperity of the Mexican and Latino community through culture, education, leadership, health, and advocacy. The association provides digital literacy workshops among other educational services.
WinstonNet	WinstonNet's Multilingual Digital Skills Training courses which offers classes in Chinese, Swahili, Arabic, Spanish, and Karenni, and was developed to help immigrants and newcomers navigate community resources using technology.
CityGate Dream Center	CityGate Dream Center partners with community groups, schools, churches, and individuals to provide opportunities and resources. They offer ACC computer classes for students from the Spanish speaking community (among others) to learn more about Microsoft Word, Internet, Email, and much more!

Hispanic Federation, Inc.	Hispanic Federation (HF) is the nation's premier Latino nonprofit membership organization. Founded in 1990, HF seeks to empower and advance the Hispanic community, support Hispanic families, and strengthen Latino institutions through work in many areas. HF provides digital literacy curriculum and support across its network of membership organizations and just launched a mobile lab, which will be operated in partnership with Salud Sin Fronteras. The lab will support outreach by providing services such as digital education workshops, computer literacy training, access to telehealth, and other programs essential to the farmworker community in Eastern North Carolina.

Low Literacy Individuals

Some of the main challenges observed in North Carolina involve individuals who do not have their high school diploma or are not functionally literate and have limited or no access to direct support for employment and accessing supportive services. Digital inclusion is another significant concern for low literacy individuals since access to technology and the internet is crucial for normalcy, education, social connection, and access to resources. Some current digital assets that are uniquely meant to serve low-literacy individuals in North Carolina are as follows:

Table: Examples of digital inclusion Assets for Low Literacy Individuals

Asset	Description
Fill My Cup!	Fill My Cup! serves adults who are residents of Mecklenburg County, age 16 and over, that do not have their high school diploma or are not functionally literate. Those who want to learn to read, improve their reading and obtain needed skills. Fill My Cup also offers training for people to learn new digital skills.
Orange Literacy	Orange Literacy is an independent, community-based, volunteer-driven organization dedicated to making literacy available to all. They provide free, individualized literacy instruction to adults who would like to improve their skills. The organization offers computer classes that teach the basics of using computers and the Internet.
Durham Literacy Center	The adult literacy program serves adults ages 19 and older. Adult learners are matched with trained volunteer tutors or placed in small-group classes taught by program staff. Students receive research-based instruction tailored to their individual needs. They also work toward a wide range of personal goals such as applying for jobs, registering to vote, and managing their finances. Durham literacy center provides computer access and digital skills assistance to their students.

Individuals with Disabilities

People with disabilities may have exceptional challenges in accessing digital resources and participating fully in digital society. Some prevailing challenges include inaccessible websites, lack of assistive technology, limited digital skills, and affordability of internet services and

devices. These challenges can then generate barriers to education, employment, healthcare, and social connections. Some current digital assets that are uniquely meant to serve people with disabilities in North Carolina are as follows:

Table: Examples of Digital Inclusion Assets for Persons with Disabilities

Asset	Description
Disability Rights	Disability Rights North Carolina (DRNC) is a legal advocacy agency that fights for the rights of people with disabilities in North Carolina. They handle cases involving discrimination, abuse and other rights violations. All services are at no cost to North Carolinians with disabilities. DRNC provides information to people with disabilities (or their families and advocates) to access digital services offered by organizations to people with disabilities.
North Carolina Assistive Technology Program	The North Carolina Assistive Technology Program (NCATP) is a state and federally funded program that provides assistive technology services statewide to people of all ages and abilities. NCATP leads North Carolina's efforts to carry out the federal Assistive Technology Act of 2004 by providing device demonstration, short-term device loans, and reutilization of assistive technology. They promote independence for people with disabilities through access to technology.
Regional Centers for the Deaf and the Hard of Hearing	The Division of Services for the Deaf and the Hard of Hearing provides services through its seven North Carolina regional centers. These services are open to Deaf, Hard of Hearing and Deaf-Blind individuals. Family members, professionals, agencies and individuals seeking information or assistance also have access to these services. The centers provide technical assistance, training, and consultation to community and government organizations on communication access. The technology and equipment provided is based on income and specific to accommodation for hearing loss.
N.C. DHHS Division of Services for the Blind	The Division of Services for the Blind provides services to people who are visually impaired, blind and deaf-blind to help them reach their goals of independence and employment. They run several programs including Independent Living Services which provides assistive technologies and Vocational Rehabilitation which provides job readiness courses including digital skills and access to assistive technologies.

Racial and Ethnic Minorities

Digital inclusion challenges are especially significant for racial and ethnic minorities, as they often encounter disparities in accessing internet services and technology. The digital divide can further aggravate existing inequalities and limit opportunities for racial and ethnic minority groups. In North Carolina, various programs and resources are available to help address these challenges. Some current digital assets designed to serve racial and ethnic minorities in North Carolina are as follows:

Table: Examples of Digital Inclusion Assets for Racial and Ethnic Minorities

Asset	Description
American Indian Mothers Inc	American Indian Mothers Inc. (AIMI) is a nonprofit organization committed to serving the diverse needs of the Indigenous communities. AIMI's computer lab is a resource for the community to access devices and the internet.
El Centro Hispano	El Centro Hispano (ECH) is the largest Latino-led/Latino-serving organization in the State and has been working with and on behalf of the Hispanic/Latino community in Durham, Wake, Orange, and neighboring counties since 1992. El Centro Hispano helps adults learn the basics of how to use a computer. They also teach skills such as creating and managing emails, use of documents and spreadsheets, Google Suite, internet, and Zoom.
Waccamaw Siouan Tribe	The Waccamaw Siouan Tribe, Inc is a nonprofit organization empowered to act on behalf of the Waccamaw Siouan Indian Tribe of North Carolina. The Tribe's long-range goals are to identify and seek solutions to problems affecting the social, economic, educational, health, housing and general welfare of their people. They offer a public computer lab and STEAM classes for youth.
Caraway Foundation	The Caraway Foundation provides resources that benefit students with their educational needs and supports those who have experienced and are going through a chronic illness by providing health related resources. They have a public computer lab to provide access to computers for the community.

Rural inhabitants

Digital inclusion, particularly access to high-speed internet, is a substantial challenge in many rural communities. Some current digital assets that are uniquely meant to serve rural inhabitants in North Carolina are as follows:

Table: Examples of Digital Inclusion Assets for Rural Inhabitants

Asset	Description
Appalachian Regional Library	Appalachian Regional Library is a network of libraries across rural northwestern North Carolina, encompassing Ashe, Watauga, and Wilkes counties. The Appalachian Regional Library nurtures individual and community growth through free and equal access to resources such as computer devices and internet access.
Right Here, Right Now Project	Right Here, Right Now Project, is helping to address digital literacy skills in Alamance County, Rockingham County and Chatham County, North Carolina.
Tyrrell County CDC	The Tyrrell County CDC provides needed support and one-on-one digital literacy training to county residents.

NC Tech Paths	NC Tech Paths is a nonprofit operating at the intersection of technology, economic mobility, and rural revitalization. They provide rural neighbors with tech skills training and job placement and companies with an untapped tech talent pool. They have also opened the newest co-working space in Northwest North Carolina. Their mission is LIVE. TRAIN. REMAIN.
Through the Trees	Through the Trees, located in Brevard provides funding to cover expansion fees to bring service lines to new areas, subsidizes monthly internet fees for low/no income households, and provide devices for those who need them.

Veterans

Digital connectivity efforts for veterans must be a priority for North Carolina. Some current digital assets uniquely meant to serve veterans in North Carolina are as follows:

Table: Examples of Digital Inclusion Assets for Veterans

Asset	Description
TJR Life Center	Bridging the Gap Veterans Services are intended to reconnect the veterans that have transitioned from military service to the civilian sector, with life changing entitlements. The center assists veterans by offering access to computer devices and teaching them the digital skills they need to succeed in transitioning.
North Carolina Department of Commerce Division of Workforce Solutions	N.C. Department of Commerce Division of Workforce Solutions' mission is to assist Veterans and their families by identifying needs and connecting them to community partners across North Carolina. Veterans Services of the Carolinas division provides digital assistance for veterans looking for educational and job opportunities.

LGBTQIA+

Digital inclusion, particularly access to resources, can be a challenge to individuals from the LGBTQIA+ community. Some current digital assets that are meant to serve LGBTQIA+ members in North Carolina are as follows:

Table: Examples of Digital Inclusion Assets for LGBTQIA+

Asset	Description
Code the Dream	Code the Dream (CTD) offers free intensive training in software development to people from diverse backgrounds. In CTD Labs, coders work with experienced mentors to hone those skills by building apps and technology platforms for a range of startups, nonprofits and government clients.
Lee County Libraries	The Lee County Libraries offer public use computers to all visitors. Use your library card to sign in or request a guest pass at the desk. The libraries offer

	public computers for all community members. Free Wi-Fi is also available within the building during open hours and outside in the parking lot 24/7! The Library Staff are willing to answer computer questions by phone during work hours.
Cumberland County Public Library	Cumberland County Public Library has a public access computer lab and laptops available for checkout with internet access for use within the library. The library offers equipment and services for customers needing assistance with using computers and the Internet as well. In addition to that, the library offers computer classes and a digital preservation lab where all community members can digitize their media by converting VHS tapes, vinyl records, cassette tapes, photographs, photo negatives, and slides into digital media.

Assets: Other Key Programs and Partnerships

In addition to the assets listed above, there are several key programs across the state that are meeting needs on a large scale, including the Connecting Minority Communities program, and the Digital Equity Grant projects.

Connecting Minority Communities

NTIA created a $268 million grant program for Historically Black Colleges and Universities (HBCUs), Tribal Colleges and Universities (TCUs), and Minority-Serving Institutions (MSIs) for the purchase of broadband service access and eligible equipment or to hire and train information technology personnel. Eight North Carolina HBCU's received grants. A summary of their projects is provided below.

- **Bennett College**: Expanding broadband access and learning opportunities in entrepreneurship, coding and artificial intelligence for Bennett students and women and girls of color in the community and ensure Bennett College has adequate broadband and Wi-Fi capabilities on its campus.
- **Elizabeth City State University**: Bridging the digital divide and amplifying educational opportunities and workforce development to ensure that university students and residents of the surrounding anchor communities have access to the opportunity to compete in today's workforce.
- **Fayetteville State University**: Piloting activities designed to improve broadband utilization, remote learning, learning outcomes in STEM disciplines, entrepreneurship and cybersecurity capabilities for an expanded set of students and small businesses in surrounding underserved, under-resourced anchor communities.
- **Johnson C. Smith University**: Creating a vibrant and connected community that leverages broadband to support economic growth and prosperity within the anchor communities. Through a committed cross-sector consortium of industry, academia, economic development, nonprofit, and minority business organizations, and to increase broadband connectivity, minority business enterprises, access to remote learning and work, digital and technical workforce, and economic mobility.
- **N.C. A&T State University**: This project has two goals. The first is to update the Wi-Fi network and other equipment within the residence halls on campus, which are unable to meet student's bandwidth and security needs. The second goal is to create staff positions to support faculty development to further integrate technology into the teaching and learning process.

- **N.C. Central University**: This project will address the lack of broadband access, connectivity, adoption, and equity at the University and surrounding anchor communities. It also helps residents in the anchor communities who may lack the digital literacy skills needed to seek, obtain, and retain employment, as well as to perform other tasks in daily life.
- **Saint Augustine's University (SAU)**: Increasing internet bandwidth capacity and connectivity at SAU and building digital literacy skills and promoting digital equity within the SAU campus and anchor communities.
- **Shaw University**: Improving the learning capacity and capabilities of students who are currently enrolled at the university. It also aims to enable students to engage in supplemental learning with a hybrid learning model, and low-income students will be able to unlock the potential of digital learning with its own Digital Resources.

Interagency Digital Equity Grant Recipients

The division is partnering with eight state government agencies and universities through the **Digital Equity Interagency Grant Program.** This $9.9 million program launched in September 2023 provides funding for state agencies and UNC System universities to develop or expand large-scale, statewide or regional digital inclusion programs.

Grantees include:

- **East Carolina University:** Train community health workers across 18 counties in the eastern N.C. subregion to provide digital literacy and skills training sessions and partner with libraries to deploy computing devices, hotspots, and internet hubs.
- **N.C. Department of Health and Human Services, Division of Aging and Adult Services:** Train and support digital navigators to serve the digital needs of older adults in all 100 counties.
- **N.C. Department of Adult Corrections Education Services:** Upfit classrooms in prison facilities with computer labs and devices and increase digital literacy among incarcerated individuals enrolled in education services.
- **N.C. State University - Institute for Emerging Issues:** Develop and help implement digital inclusion plans across the state. All counties will be covered by a digital inclusion plan, either at the county or the regional level, by the end of 2024.
- **N.C. Department of Health and Human Services, Office of Rural Health:** Implement a train-the-trainer digital skills and health language program for rural communities across the state, provide technical and capacity building support for organizations, and increase access to affordable internet in migrant housing.
- **N.C. Business Committee for Education, Inc.** Expand technology teams to provide free training and paid experience to high school students who can provide technical training for adults and peers and help desk support to their schools and communities. Partner with Hometown Strong to create digital equity ambassadors to provide digital literacy training and coordinate local digital inclusion initiatives.
- **N.C. Department of Transportation, Office of Civil Rights:** Provide job-specific digital skills training and devices for individuals enrolled in N.C. Department of Transportation workforce training.
- **N.C. Division of Historic Sites and Properties:** Increase the availability and accessibility of online content, develop online offerings that feature various assistive technologies and fund broadband subscription costs for visitors at historic sites and properties.

County and Regional Digital Inclusion Plans

North Carolina is a leader when it comes to the quantity and quality of localized digital inclusion planning and implementation. A digital inclusion plan is often the first formal step for a community to "reduce the digital divide and prioritize digital equity for their residents." This section outlines key themes from 27 draft and adopted plans representing 48 counties and the Qualla Boundary in North Carolina that completed a thorough analysis of their digital inclusion barriers and opportunities.

Several strategic statewide partners helped formulate, fund, and facilitate the digital inclusion planning process at the local and regional levels. NC State University's Institute for Emerging Issues (IEI) started the Building a New Digital Economy in North Carolina (BAND-NC) program in spring 2020 focusing on developing local digital inclusion plans. IEI has been involved in almost all of North Carolina's digital inclusion plans, whether through funding plans via the BAND-NC grant program, providing technical assistance, or reviewing independent plans. A regularly updated map of all the county digital inclusions plans completed or in progress and other information about these plans can be accessed at iei.ncsu.edu/band-nc/resources.

Common Barriers and Assets in Local Digital Inclusion Plans

Many of the finalized local digital inclusion plans identified the same top barriers to digital equity: availability of high-speed internet; the cost-of-service subscriptions; lack of detailed information on what areas are not served or are not served well, lack of affordable devices, skills mismatch, and a lack of information among community members about how and where to get assistance with digital needs.

For several plans, rural issues were paramount, both because of the demographics of the rural area and the lack of high-speed internet service in many rural areas. Likewise, plans in counties with sizable immigrant and English-learner populations emphasized the disconnect of groups that need translation services and culturally appropriate services.

When the local plans were analyzed for commonalities in the digital assets that they identified, they were consistent in identifying local public-school systems, community colleges, and public libraries as sources of free Wi-Fi, loaned devices, instruction, and information about other resources. While business and nonprofit resources were also widely cited, the emphasis on government funded and managed institutions in these local plans may reflect the makeup of the groups that worked on the plans.

When compiling North Carolina's statewide digital inclusion plan, it is important to honor the hard work of community leaders. Their efforts should be reflected in every section of the state plan to provide a path for further digital inclusion partnership.

Barriers to Digital Equity in Local Digital Inclusion Plans

While many of the barriers to digital equity highlighted in the local plans mirror those raised through the Digital Equity Survey and listening sessions organized by the division and partners, several barriers were more frequently raised in local plans than elsewhere.

Discrimination: Several plans discussed the role that historical racial and ethnic discrimination played in creating the unequal circumstances observed today. As the Institute for Emerging Issues so aptly described:

"*Many racial and ethnic populations in North Carolina, especially Black residents and Spanish-as-first-language speakers, face housing, transportation, employment, health, and education challenges that compound and are compounded by broadband disconnection."*

Government and Policy: As much as government-provided assets were touted as important digital assets in communities, government barriers were also frequently raised. Specifically, the three-tiered system by which the state of North Carolina characterizes the relative economic health of counties was mentioned as a barrier, because it targets funding and programs to the counties in Tier 1 and Tier 2. Tier 3 counties, many of which contain the largest urban centers and resort communities, also have pockets of extreme poverty and distress, but are not able to access some programs designed to alleviate those conditions.

Transportation: Transportation was another barrier that was routinely addressed by local plans. The lack of accessible, reliable transportation, particularly in rural areas, was frequently highlighted as a barrier to residents connecting to the services that are already available, such as library and community college programs.

Common Objectives of Local Digital Equity Plans

Local digital equity plans almost universally identified increasing connectivity as a major objective of their plan, with only one out of the 27 plans not emphasizing this objective. The next most common objective was to improve connectivity, both in broadband speed and the reliability of the service. There was considerably less consensus on the next few most cited objectives, which were:

- Improving digital literacy skills,
- Increasing access to affordable, new, or refurbished devices, and
- Incorporating digital inclusion strategies into local and regional community and economic development plans.

Common Strategies of Local Digital Equity Plans

Most of the local plans reviewed proposed to expand publicly available Wi-Fi, with special attention to ensuring that it is accessible to disconnected or underserved populations. Almost all local plans propose to provide additional information about existing subsidy programs for both services and devices. The next three most common implementation strategies were to:

- Provide additional education about subsidy programs,
- Create, promote, and/or expand computer donation and refurbishment programs, and
- Provide support to existing businesses.

Current Local Digital Inclusion Plans in North Carolina as of August 2023

Plan Count(ies)		Plan Name and Profile	Plan Link	Adopted Year
1	Alamance	Alamance County Digital Inclusion Plan: Connecting for Success	Alamance County Digital Inclusion Plan	2022
2	Alexander	Alexander County Digital Access Plan	Alexander-County-Digital-Inclusion-Plan-Gary-H.pdf	2023
3	Bladen	Bladen County Digital Inclusion Plan	Bladen County Digital Inclusion Plan Final .pdf	2021
4	Caldwell	Caldwell County Digital Access Plan	Caldwell DIP.pdf	2023
5	Carteret	Connecting Carteret: A Plan for Digital Inclusion	Carteret County Digital Inclusion Plan	2021
6	Chatham	Chatham Digital Inclusion Plan	Chatham County DRAFT Digital Inclusion Plan (1).pdf	Draft
7	Chowan	Chowan County Digital Inclusion Plan	Chowan County Digital Inclusion Plan Final.pdf	2021
8	Columbus	Columbus County Digital Inclusion	Columbus County Digital Inclusion Plan Final Version.pdf	2021
9	Duplin	Duplin County Digital Inclusion Plan	Duplin County Digital Inclusion Plan Final.pdf	2021
10	Durham	Digital Equity Plan: A Plan for Durham	Durham Digital Inclusion Plan Durham County Digital Inclusion Plan Durham County Digital Inclusion Plan Part 2	2020

11	Forsyth	Connecting Forsyth County	Forsyth County Digital Inclusion Plan.pdf	2021
12	Hoke	Hoke County Digital Inclusion Plan	Hoke County Digital Inclusion Plan Final.pdf	2021
13	Mecklenburg	Center for Digital Equity 5 Year Plan	Mecklenburg County Updated Plan.pdf	2020
14	McDowell	Connecting McDowell County	McDowell Digital Inclusion Plan Final 3.9.pdf	2022
15	Onslow	Onslow County Digital Inclusion Plan	Onslow County Digital Inclusion Plan.pdf	2021
16	Pender	Pender County Digital Inclusion Plan	Pender County Digital Inclusion - Approved November 15, 2021.pdf	2021
17	Perquimans	Perquimans County Digital Inclusion Plan	Perquimans County Digital Inclusion Plan Final.pdf	2021
18	Randolph	Building Connections, Starting at Home: Randolph County Digital Inclusion Plan	Randolph-County-Digital-Inclusion-Plan.pdf	2020
19	Robeson	Robeson County Digital Inclusion Plan	Robeson County Digital Inclusion Plan Final Version.pdf	2021
20	Rockingham	Connecting Rockingham County: Digital Inclusion Plan	Rockingham County Digital Inclusion Plans.pdf	2021
21	Scotland	Scotland County Digital Inclusion Plan	Scotland County Digital Inclusion Plan Final.pdf	2021
22	Stanly	Digital Inclusion: A Framework for Broadband Availability, Access,	Stanly-County-Digital-Inclusion-Plan.pdf	2022

		Affordability and Adoption in Stanly County		
23	Alleghany, Ashe, Avery, Mitchell, Watauga, Wilkes, Yancey	Digital Inclusion for the High Country: Connection and Engagement for all	High Country COG Digital Inclusion Plan.pdf	2023
24	Buncombe, Henderson, Madison, Transylvania	Bridging the Digital Divide: A Digital Inclusion plan to bring affordable internet service, accessible digital devices and tech skills training to the Land of Sky region	Land of Sky Digital Inclusion Plan	2020
25	Polk, Rutherford	Polk & Rutherford Counties Digital Inclusion Plan	Polk & Rutherford Digital Inclusion Plan Final(2.13).pdf	2023
26	Cherokee, Clay, Graham, Haywood, Jackson, Macon, Swain, The Qualla Boundary	Region A Digital Inclusion Plan	Southwestern Commission Digital Inclusion Plan.pdf	Draft
27	Edgecombe, Halifax, Nash, Northampton, Wilson	Upper Coastal Plain Digital Inclusion Plan	Upper Coastal Plain Digital Inclusion Plan.pdf	2021

Barriers and Needs

North Carolina's covered populations are not monolithic - their identities are intertwined. The division's community-driven planning process confirmed that almost every individual identifies within more than one covered population; and their barriers to digital equity may be multiple, overlapping, and reinforcing. It is possible for one North Carolinian to be an aging individual, disabled, low income, a member of a minority group, and live in a rural area. Living in a rural area may affect the availability of services, while cost may be the inhibitor for low-income individuals. For aging populations, there may be resistance to adopting something new, and there could be issues of accessibility for individuals with disabilities.

Some of the common needs the division identified from the N.C. Digital Equity Survey, local digital equity plans, and listening sessions appear below followed by a review of unique barriers to digital equity experienced by covered populations.

Common Digital Equity Barriers and Needs

There were several barriers to digital equity raised by multiple covered populations and across the geography of North Carolina. These barriers, when removed, would resolve most of the gaps for all covered populations.

Common needs as outlined below include:

1. Access to and affordability of high-speed internet,
2. Accessibility and inclusivity of online public resources,
3. Digital literacy,
4. Cybersecurity and privacy, and
5. Availability and affordability of devices and technical support.

Barrier 1: Internet Access & Affordability

Internet Access

Defining Internet Access

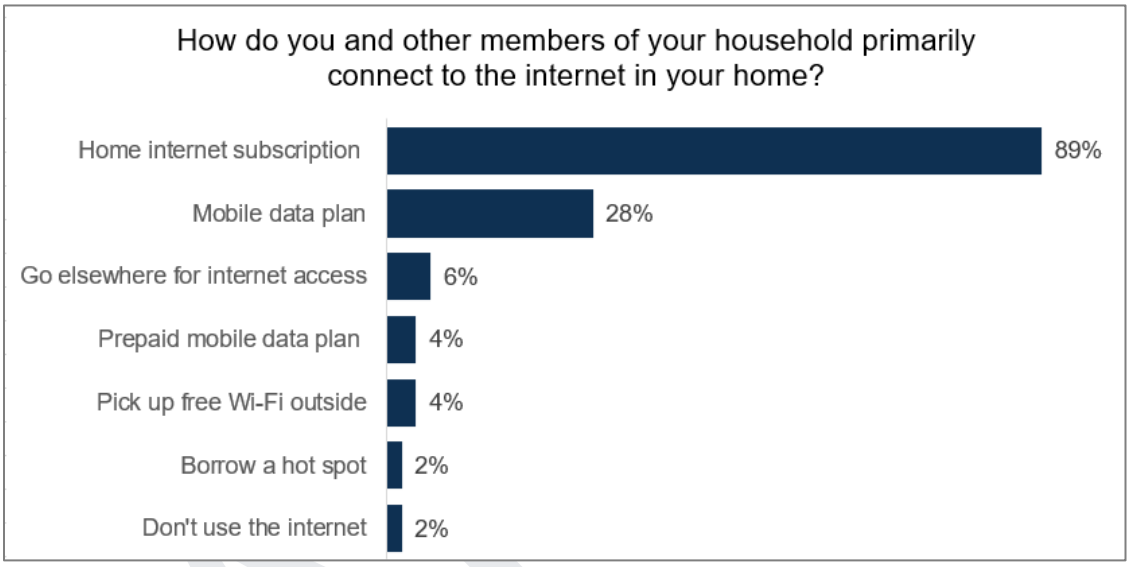
The division defines access to high-speed internet as internet that has a minimum speed of 100/20 Mbps (100 Megabits per second download/20 Mbps upload). This speed ensures North Carolinians have internet service fast enough to meet the needs of their household.

Widely Cited Internet Access Barriers and Needs

The N.C. Digital Equity Survey respondents were asked how they connect to the internet, and 89% (*n*=5,000) noted they had a home internet subscription. However, based on FCC data, the division identified 376,039 unserved Broadband Serviceable Locations (BSLs) and 127,391 underserved BSLs representing a total of 411,258 unserved units (homes and businesses) and 145,205 underserved units (homes and businesses) in the state. Unserved households do not have internet access and underserved do not have internet service considered “high-speed.”

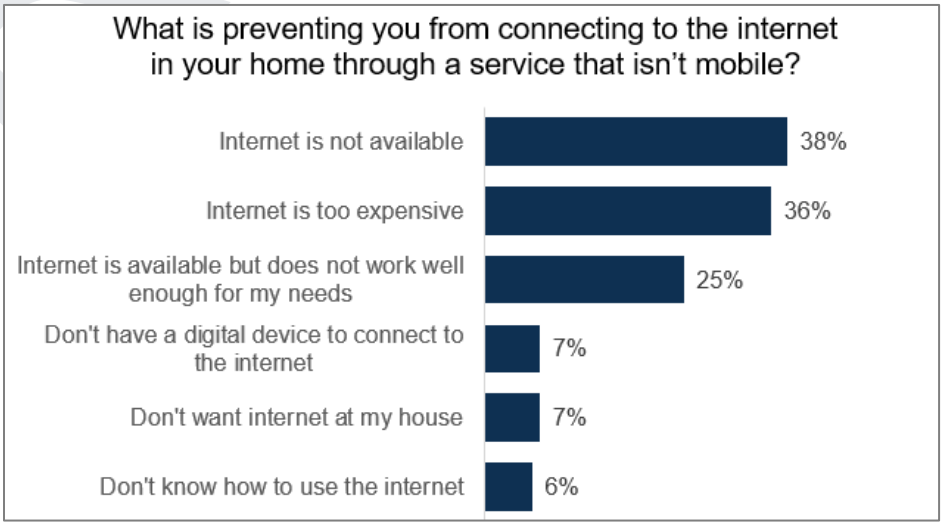
These unserved and underserved households rely on slow dial-up service through telephone lines or on mobile devices (28%); satellite service which is often costly or has poor reliability; or travel to a commercial center or the nearest town where they can use public Wi-Fi at government buildings, public outdoor spaces, or businesses (6%). Others rely on a prepaid mobile phone plan or pick up free Wi-Fi outside (4%) or borrow a hotspot (2%). Only 2% of those surveyed indicated that they do not access the internet at all.

How do you and other members of your household primarily connect to the internet in your home?



Based on the digital equity survey results of individuals who do not have an internet subscription (*n*=715), the largest overall barriers for North Carolinians are availability (38%), affordability (36%), and reliability (25%) of internet service. Only 7% (*n*=40) of respondents who did not have internet service said that they did not want service at their residence.

What is Preventing you From Connecting to the Internet in Your Home Through a Service that Isn't Mobile?

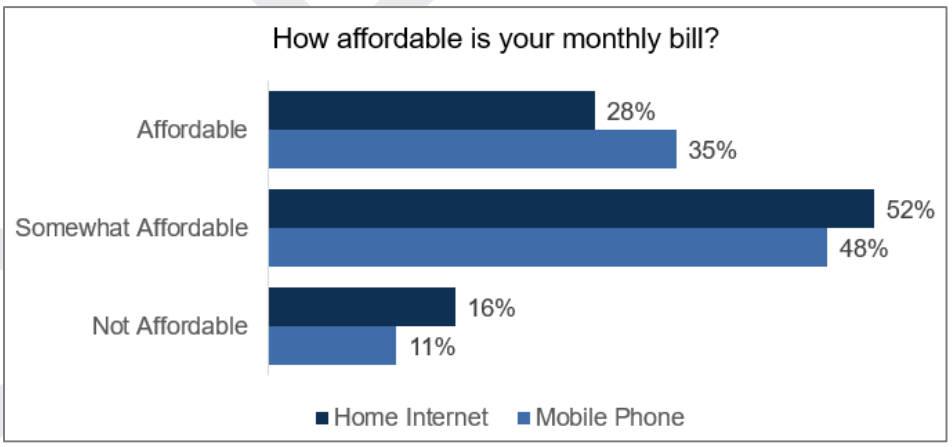


Open-ended survey results of participants indicated that individuals: "*Would like to see internet service be more reliable*" (8%), especially in rural areas. They also noted the need for access to more public Wi-Fi.

"I couldn't work without reliable internet, and my young adult/teen kids would struggle with their work and school. Days when the internet cuts out are really tricky."

Widely Cited Affordability Barriers and Needs

The cost of service was cited as a significant impediment to accessing the internet by several groups. Based on survey results, 36% of those without a home internet subscription cited cost as the main reason. When asked how affordable service plans were, most found the cost somewhat affordable for home internet (52%) and mobile plans (48%). It is significant that 16% of North Carolinians found their monthly internet bill to be unaffordable. These families often must choose between their internet and cellular service and other household expenses (e.g., electric bills, groceries).



"Would like access to affordable and reliable home internet service. My current home internet service frequently buffers at some point while I watch streaming TV apps each evening. I then turn off my television in frustration because I cannot continue viewing my favorite TV entertainment."

Access and Affordability by Covered Populations

The Digital Equity Survey results indicate that most North Carolinians (98%) can access the internet in one or more ways. Most covered populations also subscribe to a home internet service plan (75%-93%). Individuals with low literacy levels were the most likely not to have a home internet subscription (25%). Mobile data plans were also frequently used to get online. Those most likely to go somewhere else to pick up internet service were re-entry (11%) and low income (10%). Less than 10% of the covered populations rely on picking up free Wi-Fi (3%-7%) or borrowing a hotspot (1-6%).

For those without access to a home internet subscription, the majority indicated that internet service for their residence was either too expensive (35%) or not available (39%). Individuals in re-entry were the most likely to note cost as a barrier to accessing internet service at home (67%) while veterans (45%) were most likely to note the lack of available service. Many also indicated that service was available at their residence, but it did not work well enough to meet their needs (16%-27%). Individuals with language barriers (12%), those with low literacy levels

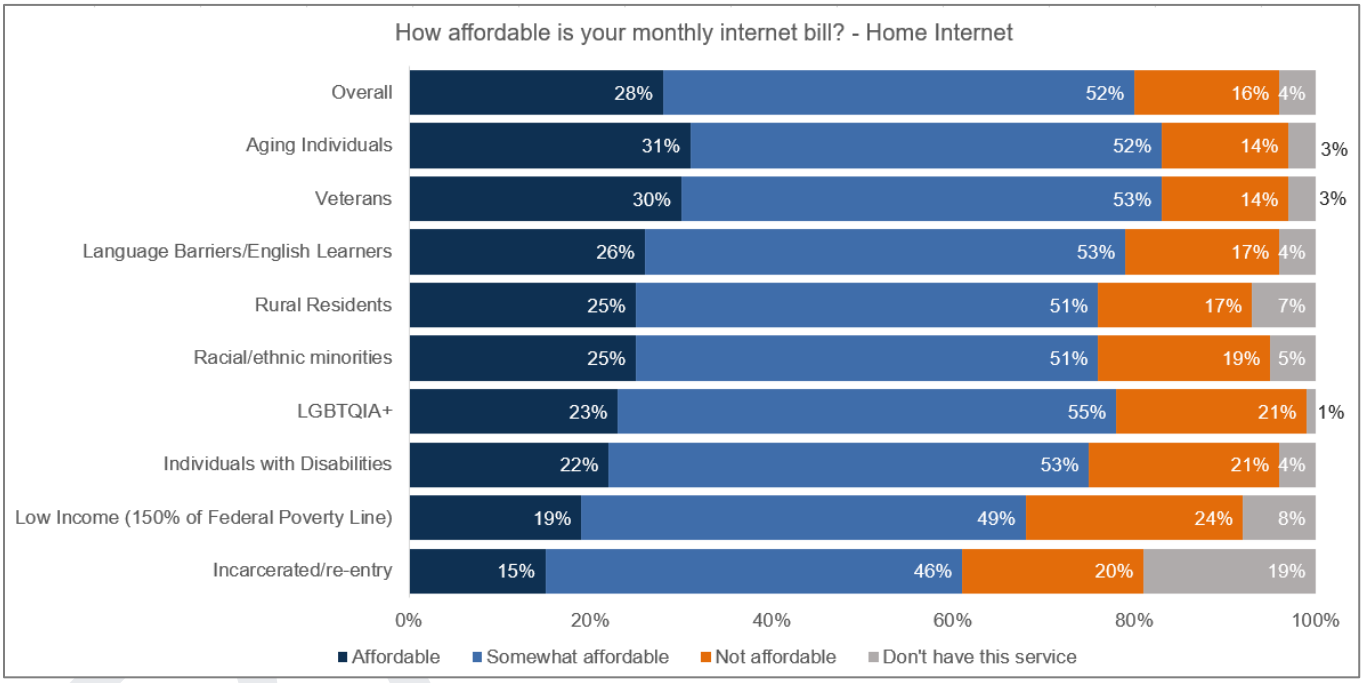
(12%), low-income families (11%), and racial/ethnic minorities (11%) were the most likely to lack access to a digital device. Individuals with low literacy were far more likely than any other group to indicate they did not want internet service (22%) or that they didn't know how to use the internet (27%).

What is preventing you from accessing the internet in the home?

	Internet is too expensive	Internet is not available	Internet is available but does not work well enough for my needs	Don't know how to use the internet	Don't want internet at my house	Don't have a digital device to connect to the internet	Other
Overall	35%	39%	25%	6%	6%	7%	11%
Aging Individuals	34%	28%	19%	11%	13%	9%	11%
Incarcerated/ re-entry	67%	27%	27%	7%	7%	0%	7%
Racial/ ethnic minorities	42%	30%	16%	12%	6%	11%	11%
Low Income (150% of Federal Poverty Line)	49%	30%	19%	11%	10%	11%	9%
Rural Residents	33%	32%	26%	9%	8%	6%	4%
Language Barriers/ English Learners	43%	33%	22%	9%	7%	12%	7%
Low Literacy	39%	17%	7%	27%	22%	12%	7%
Individuals with Disabilities	47%	26%	23%	9%	8%	8%	9%
Veterans	25%	45%	18%	5%	7%	5%	15%
LGBTQIA+	20%	47%	20%	0%	7%	0%	27%

Considering affordability across covered populations, it becomes evident that aging individuals (28%), veterans (30%), and individuals with a language barrier (26%) consider the cost of monthly internet service the most affordable. In contrast, incarcerated and re-entry individuals

were the least likely to have home internet (19%) or find it affordable (20% unaffordable). Those that fell within 150% of the poverty line were the most likely to consider internet service unaffordable (24%).



To access a deeper analysis of internet access and affordability needs by the covered population, click the following link: Internet Access and Affordability.

Barrier 2: Lack of Digital Skills (Digital Literacy)

Defining Digital Literacy

Digital literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills (American Library Association, 2011). Digital skills are specific proficiencies or competencies using digital tools or software applications. Digital skills are task-oriented and relate to the ability to perform specific actions or tasks, including operating software programs, data entry, using spreadsheets, navigating social media platforms, coding, or conducting online research. The National Digital Inclusion Alliance (NDIA) further explains that a person with digital literacy skills:

- Possesses the variety of skills – technical and cognitive – required to find, understand, evaluate, create, and communicate digital information in a wide variety of formats;
- Can use diverse technologies appropriately and effectively to retrieve information, interpret results, and judge the quality of that information;
- Understands the relationship between technology, life-long learning, personal privacy, and stewardship of information;
- Uses these skills and the appropriate technology to communicate and collaborate with peers, colleagues, family, and on occasion, the general public; and
- Uses these skills to actively participate in civic society and contribute to a vibrant, informed, and engaged community.

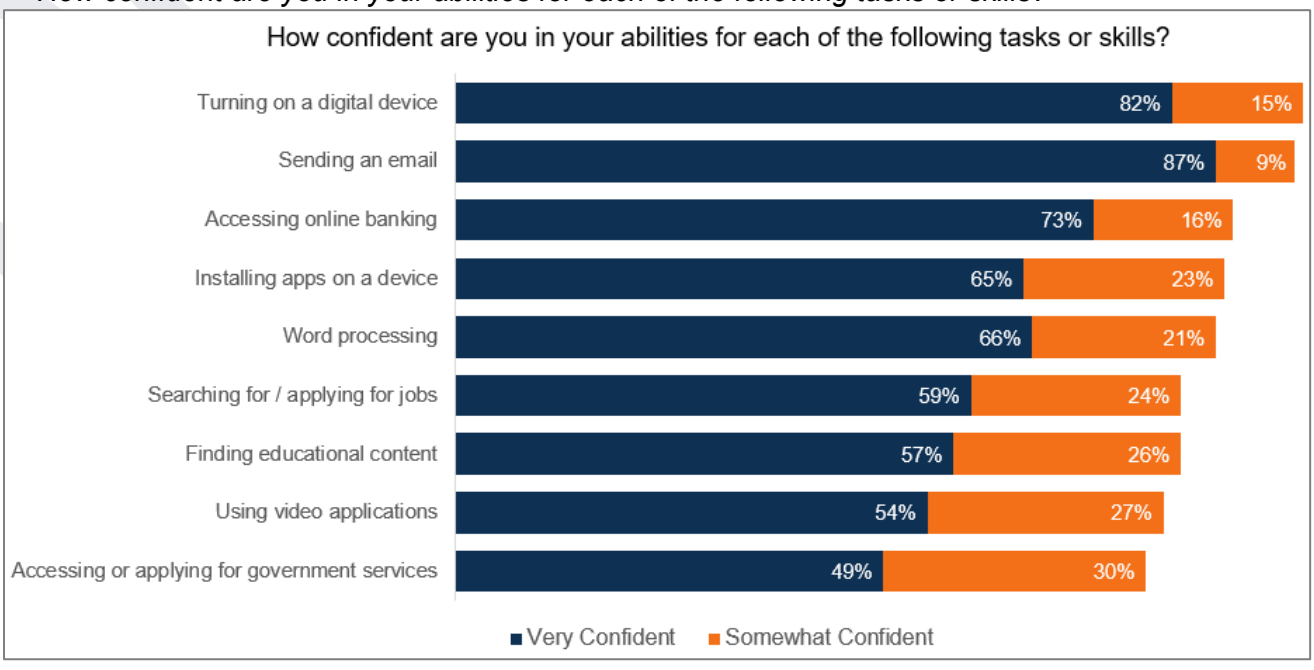
Lack of digital skills to accomplish everyday tasks online and insufficient digital literacy training are the primary barriers outlined below.

While the division uses the term “digital literacy” for this plan, it acknowledges that not all community members agree with the term. NDIA recommends using terms like “digital skills” or “beginner computer training” while conducting community work. They explain that “the word ‘literacy’ and the implication of ‘illiteracy’ can be perceived negatively by communities who need digital inclusion most.” (NDIA, n.d.). Other suggestions from community stakeholders included replacing the term “digital literacy” with “digital fluency.”

Widely Cited Digital Literacy Barriers and Needs

A lack of digital skills is a barrier to the safe and effective use of the internet by many North Carolinians. Nearly all digital equity survey respondents identified feeling either “very” or “somewhat confident” in their ability to engage in basic technology tasks such as turning on a device (97%), sending emails (96%), and installing apps (89%). They were less confident in completing more complex tasks such as accessing or applying for government resources (79%), using video applications (81%), finding educational content (83%), and searching for/applying for jobs (83%), which could have serious, negative consequences. Across many population groups, parents specifically expressed frustration and concern that their lack of digital skills prevented them from assisting their children in completing homework or accessing resources. “As technology advances and more and more services/resources move online, internet access and the ability to successfully navigate the internet have become essential skills (Fernández-Muñoz et al., 2021; Lai & Widmar, 2021). While the younger generation has been deemed ‘digital natives’, research indicates that a significant portion of this population lacks the necessary digital literacy/skills to succeed in the digital economy (Bergson-Shilcock, 2020).” (Davis, Huggins, Ogbo, Yalincaya, Duke, et al., 2023, p.6).

How confident are you in your abilities for each of the following tasks or skills?



Digital Literacy by Covered Population

Nearly all covered populations felt either “very” or “somewhat confident” (80-96%) in their ability to engage in basic technology tasks such as turning on a device, sending emails, and installing apps except for those with lower literacy levels. These individuals felt much less confident in their general (71-79%) and more advanced digital literacy skills (51%-63%) compared to other covered populations. Looking at other covered populations, individuals within 150% of the federal poverty level, those with language barriers, and incarcerated/reentry individuals were the next most likely to lack confidence overall in their digital skills. Rural residents, veterans, and individuals from a racial or ethnic minority group were the most likely to report higher confidence in their overall digital skills. Accessing and applying for government resources continued to be the area where covered populations felt least confident (47-82%), which is important as many of these individuals will likely need to interact with government resources in some capacity.

How confident are you in your abilities for each of the following tasks or skills (Very or somewhat confident)

	Turn on a digital device	Install apps on a device	Send an email	Word processing such as Google Docs or Microsoft Word	Search for / applying for jobs	Access online banking	Access or applying for government services	Find educational content	Use video application such as Zoom or FaceTime
Overall	97%	89%	96%	87%	83%	89%	79%	84%	82%
Aging Individuals	95%	83%	95%	82%	76%	86%	77%	78%	73%
Incarcerated /re-entry	94%	83%	91%	63%	81%	78%	55%	67%	67%
Racial/ ethnic minorities	95%	86%	93%	83%	82%	85%	75%	79%	84%
Low Income	92%	80%	90%	75%	72%	81%	66%	71%	70%
Rural Residents	94%	85%	94%	83%	80%	85%	76%	81%	78%
Language Barriers	93%	84%	90%	79%	77%	83%	67%	78%	86%
Low Literacy	79%	71%	72%	51%	55%	62%	47%	55%	63%
Veterans	96%	88%	95%	84%	79%	89%	82%	82%	74%

Individuals with Disabilities	95%	82%	94%	81%	84%	84%	75%	73%	62%

For a deeper analysis of internet digital literacy needs by covered population, click the following link: Digital Literacy.

Barrier 3: Access to Digital Devices and Technical Support

Defining Access to Digital Devices and Technical Support

Several factors fall under the definition of device access, affordability, and technical support.

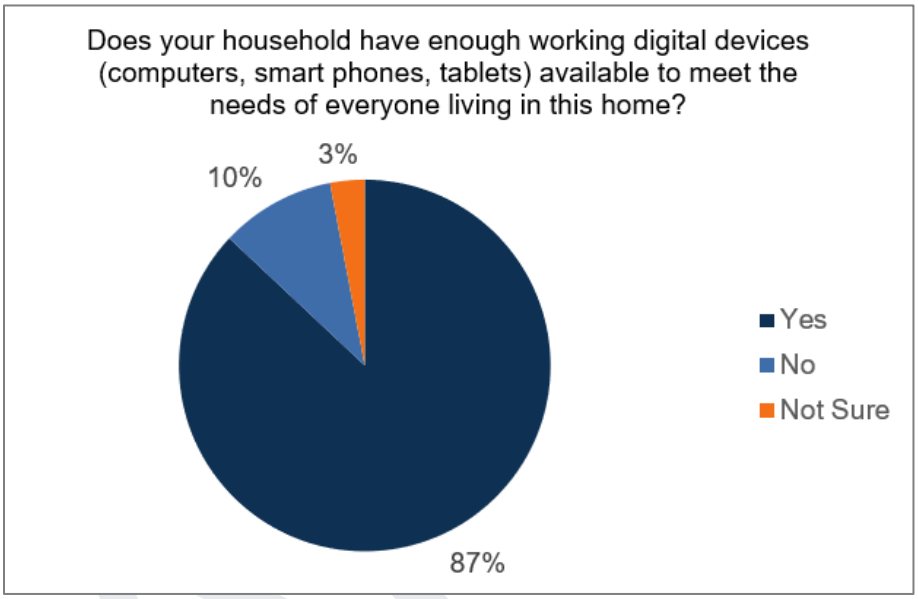
> Device ownership: Personal ownership of a device, distinct from using loaner computers and publicly accessible options such as computer labs. Access to the internet in any form is valuable, but personal device ownership provides additional access and agency over when and how people get online.
>
> Large screen devices: Internet-enabled devices, such as laptops, desktops, Chromebooks, and tablets. Distinct from smartphones and often including a keyboard, large-screen devices are ideal for creating content (such as writing a resume), as opposed to smartphones, which are more suited to content consumption. Smartphones are indeed useful, but not enough for full and equitable participation online for most people.
>
> Technical support: A specialized customer service function that addresses complex technical issues beyond the scope of standard help desk assistance. It plays a crucial role in resolving technical problems, providing hardware repair services, offering warranty support, and troubleshooting intricate hardware-related failures. Technical support professionals are highly skilled individuals with expertise in various technical domains. Their primary responsibility is to assist users in resolving intricate technical challenges and ensuring the smooth operation of their devices.

Widely Cited Digital Device Access and Technical Support Barriers and Needs

Fully participating in a digital society requires access to reliable devices that meet the needs of users as well as repair and technical assistance services to address issues with those devices. Most survey respondents indicated that they had enough working devices to meet the needs of their family in the home; however, 10% did not.

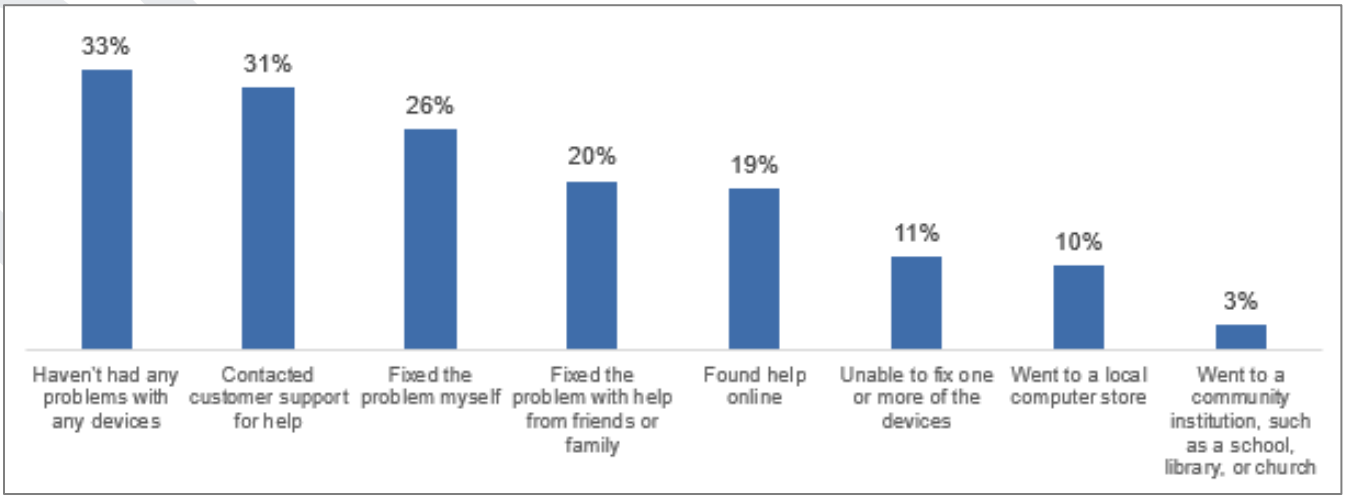
Listening sessions revealed there were several reasons why people did not have access to a device that meets their needs. For many, a new or used device was just too expensive. Others had a device, such as a smartphone; however, they needed access to a tablet or computer to complete tasks for work, school, or personal purposes. Many families indicated that they had access to enough devices for their students during the school year, but over summer break, these devices were returned. Community members, in general, were not aware of the resources and organizations that provided access to free or low-cost devices.

Does your household have enough working digital devices (computers, smart phones, tablets)?



One third (33%) of survey respondents indicated they had not experienced any issues with their devices in the past six months. Most individuals did experience some sort of device problem, and most (89%) were able to resolve their issue. Many contacted customer support (31%), fixed the problem themselves (26%) or with the assistance of friends and family (20%), or found help online (19%).

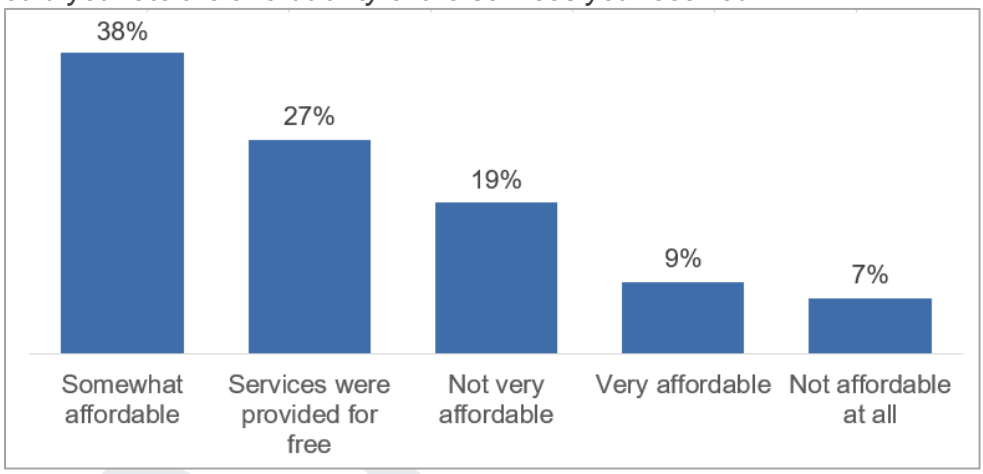
In the past 6 months, if one of your digital devices failed to function or broke, how did you fix the issue?



Many survey respondents and meeting participants raised the issue of the inability to have devices repaired or receive technical assistance, either because the services were not available near them, or the available services were prohibitively expensive. Survey results also indicate that over a quarter (26%) of North Carolinians did not find the technical support they received

affordable. One quarter (27%) had services provided for free, and only 9% found technical support very affordable.

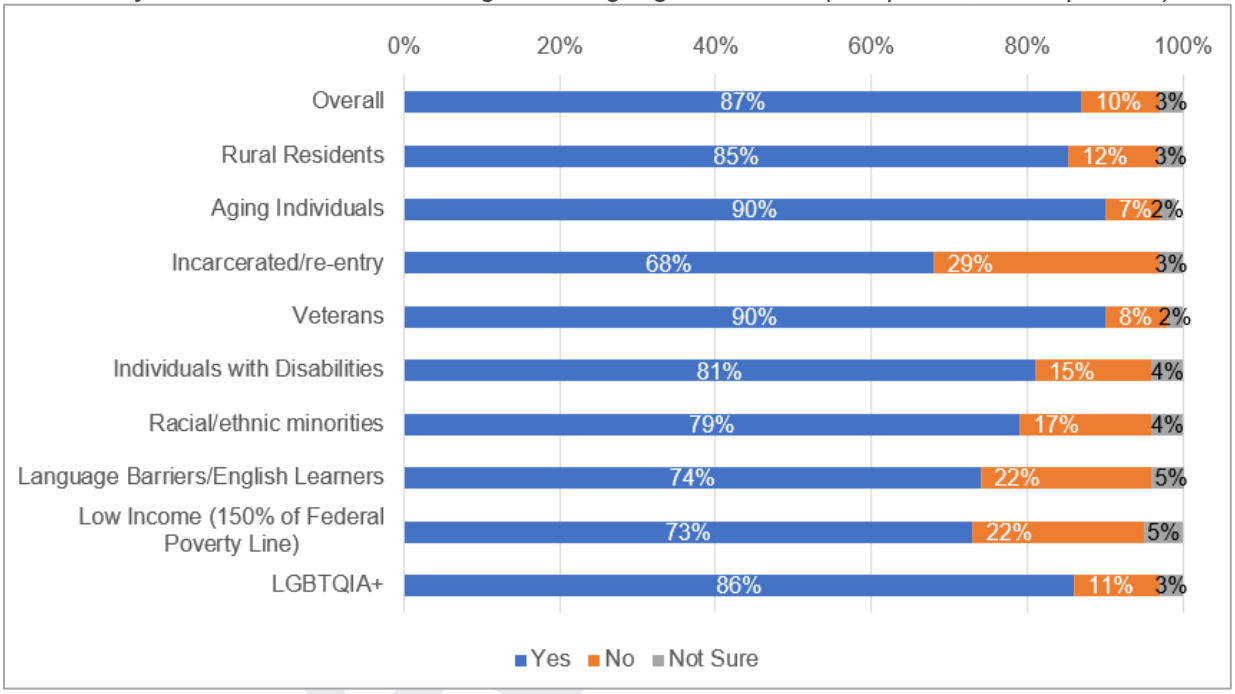
How would you rate the affordability of the services you received?



Digital Device Access and Technical Support by Covered Population

When looking at covered populations, aging individuals and veterans were the most likely to have enough working digital devices to meet the needs of their family (90%). Individuals with a low literacy level (33%), individuals in re-entry (29%), those with language barriers (22%), and low-income households (22%) were the most likely to lack access to enough reliable digital devices. Listening sessions revealed that cost was often the largest barrier to owning reliable devices; however, some unique challenges were also raised by specific populations. For example, incarcerated individuals find getting access to a digital device challenging, and for those that have been in a state for federal facility for an extended amount of time, they may never have engaged with today's technology (e.g., Smartphone). During listening sessions, residents recently released from incarceration often shared the lack of a valid ID inhibited them from getting a mobile phone or devices. Lack of official identification is a problem for many incarcerated individuals when they re-enter communities. However, a new partnership announced in August 2023 between the N.C. Department of Adult Correction and the N.C. Division of Motor Vehicles to provide a state-issued photo identification card to incarcerated individuals due for release will help to reduce this challenge.

Does your household have enough working digital devices (computers, smart phones)?



Across covered populations, 23%-36% indicated that they had not had any issues with their digital devices in the past six months. For those that did have a problem, most contacted customer support or fixed the problem themselves. Very few relied upon churches or libraries to assist them with device support (2-9%). Nearly one third (31%) of incarcerated/reentry individuals were not able to fix one or more devices. Individuals with low literacy (23%), those with a language barrier (18%), and low-income individuals (19%) were also more likely than other covered populations not to be able to fix their devices.

In the past 6 months, if one of your digital devices failed to function or broke, how did you fix the issue?

	Haven't had any problems with any devices	Contact customer support for help	Fix problem myself	Fix problem with help from friends or family	Found help online	Went to local computer store	Went to community institution such as a school library or church	Unable to fix one or more of the devices
Overall	33%	31%	26%	20%	19%	11%	10%	3%
Aging Individuals	34%	32%	23%	21%	18%	11%	2%	9%
Incarcerated/ re-entry	25%	31%	23%	21%	23%	11%	8%	31%
Racial/ethnic minorities	28%	36%	25%	21%	16%	12%	6%	15%

Low Income (150% of Federal Poverty Line)	28%	29%	19%	20%	14%	9%	7%	19%
Rural Residents	32%	31%	2%	20%	17%	12%	3%	11%
Language Barriers/English Learners	28%	27%	25%	18%	15%	11%	5%	18%
Low Literacy	36%	23%	15%	18%	9%	6%	6%	23%
Individuals with Disabilities	27%	33%	23%	24%	18%	11%	4%	17%
Veterans	30%	33%	29%	18%	18%	12%	3%	9%
LGBTQIA+	23%	40%	35%	24%	37%	12%	9%	12%

Similarly, individuals in re-entry (48%), those with low levels of literacy (42%), individuals with a language barrier (33%), and low-income families (36%) were the most likely to report that the services they received to help fix a device were unaffordable. Aging individuals were the most likely to receive services for free (30%); racial/ethnic minorities (52%) and individuals that identify as LGBTQIA+ (51%) were the most likely to indicate the cost of repair was either "very" or "somewhat" affordable.

How would you rate the affordability of the services you received?

	Very affordable	Somewhat affordable	Services were provided for free	Not very affordable	Not affordable at all
Overall	9%	39%	27%	19%	7%
Aging Individuals	10%	35%	30%	19%	5%
Incarcerated/re-entry	11%	26%	23%	28%	13%
Racial/ethnic minorities	11%	41%	17%	23%	8%
Low Income (150% of Federal Poverty Line)	8%	33%	23%	26%	10%
Rural Residents	9%	38%	26%	19%	8%

Language Barriers/English Learners	11%	39%	17%	22%	11%
Low Literacy	19%	23%	18%	23%	19%
Individuals with Disabilities	8%	34%	27%	23%	8%
Veterans	9%	39%	26%	20%	6%
LGBTQIA+	8%	43%	28%	14%	7%

For a deeper analysis of internet digital device access and technical assistance needs by the covered population, click the following link: Digital Device Access and Technical Assistance.

Barrier 4: Cybersecurity and Privacy Training

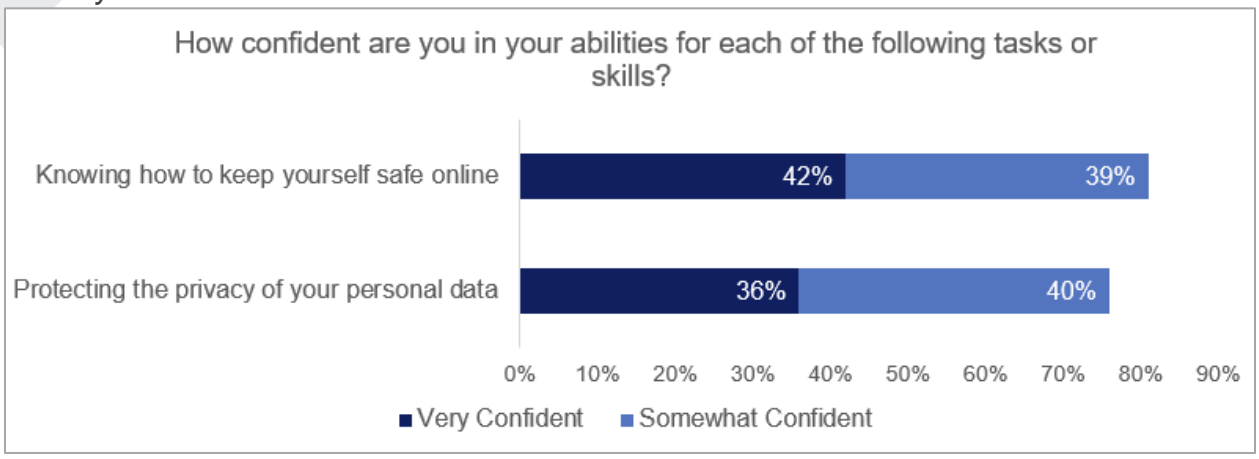
Defining Online Privacy and Cybersecurity

Ensuring that people know how to keep their online data safe and secure is key to protecting people online and making sure individuals feel safe connecting to the internet and using a device. Online privacy refers to how data are "collected, stored, processed and used" (NIST). Keeping your data safe (cybersecurity) can involve protecting any form of personal information, such as photos, videos, drawings, or documents. You cannot maintain your online privacy without keeping your information secure.

Widely Cited Online Privacy and Cybersecurity Barriers and Needs

Survey respondents did not feel particularly confident in their ability to protect themselves online, with 42% feeling very confident in their ability to keep themselves safe online and 36% in protecting their personal data. This issue was also brought up multiple times during the listening sessions. Many residents were concerned about online scams and expressed a desire for more services and support for cybersecurity and privacy training.

How confident are you in your abilities for each of the following tasks or skill?
Very or somewhat confident



Online Privacy and Cybersecurity by Covered Population

When looking at the confidence of covered populations to keep themselves safe online, individuals with low levels of literacy (57%), low-income households (68%), and incarcerated/reentry individuals (68%) are the most vulnerable and least likely to feel confident in their ability to keep themselves safe online. Members of the LGBTQIA+ community (89%) and veterans (81%) felt more confident, on average, than other covered populations.

When considering protecting the privacy of personal data, individuals with low literacy (55%), low income (65%), individuals with a language barrier (65%), and incarcerated/reentry individuals (63%) were the least likely to feel confident. Members of the LGBTQIA+ community (79%) and veterans (76%) also felt more confident, on average, than other covered populations in protecting the privacy of their personal data online.

How confident are you in your abilities for each of the following tasks or skill? Very or somewhat confident

	Knowing how to keep yourself safe online	Protecting the privacy of your personal data
Overall	81%	77%
Aging Individuals	76%	72%
Incarcerated/re-entry	68%	63%
Racial/ethnic minorities	77%	73%
Low Income (150% of Federal Poverty Line)	68%	65%
Rural Residents	78%	74%
Language Barriers/English Learners	73%	65%
Low Literacy	57%	55%
Individuals with Disabilities	72%	67%
Veterans	81%	76%
LGBTQIA+	89%	79%

For a deeper analysis of online privacy and cybersecurity needs by covered population, click the following link: Online privacy and Cybersecurity.

Barrier 5: Improved Access to Public Resources

Defining online accessibility and inclusivity of public resources and services

Web accessibility and inclusivity means that websites, tools, and technologies are designed and developed so people with disabilities (Web Accessibility Initiative) and people who speak languages other than English can use them, also known as language access. Accessing content online is necessary for almost all aspects of everyday life. Inclusive and accessible online content is especially important for government agencies to ensure the public has access to key government resources and services. Several federal laws exist requiring government entities to make content inclusive and accessible, such as:

- The Web Accessibility Guidance under the Americans with Disabilities Act: Discusses a range of topics, including the importance of web accessibility, barriers that inaccessible websites create for some people with disabilities, when the ADA requires web content to be accessible, tips on making web content accessible and other information and resources. The guidance offers plain language and user-friendly explanations to ensure that it can be followed by people without a legal or technical background.
- Section 508 of the Rehabilitation Act: provides accessibility requirements for information and communication technology (ICT).
- The Plain Language Act of 2010: requires federal agencies to write "clear government communication that the public can understand and use."
- Executive Order 13166 Improving Access to Services for Persons with Limited English Proficiency, requires the federal government and recipients of federal funds to make their services available to the populations they serve, regardless of what languages those individuals speak.

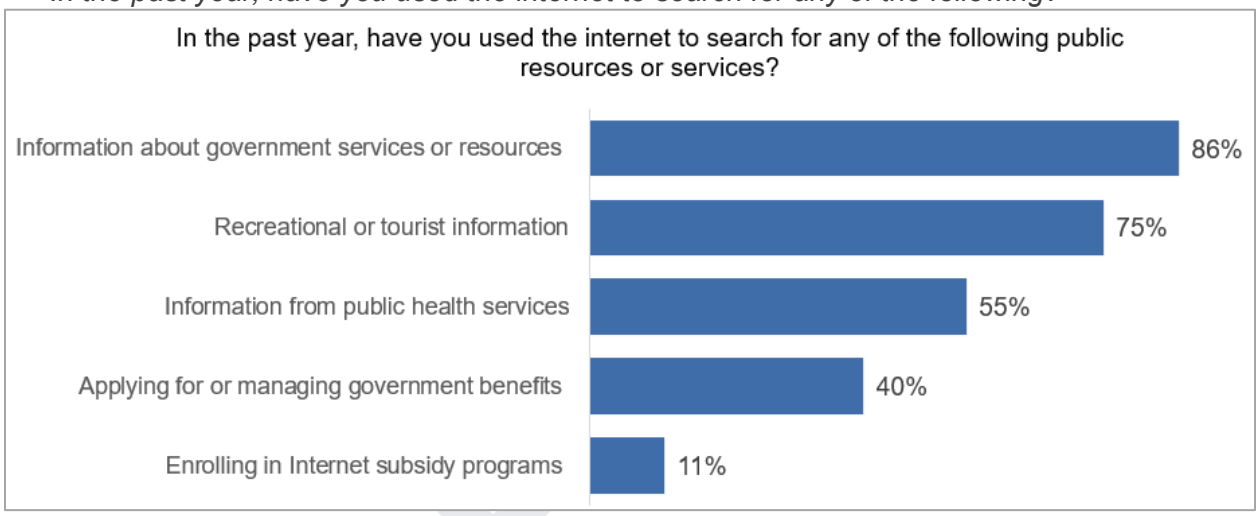
There are also international standards outlined in the Web Content Accessibility Guidelines with a goal of providing a single shared standard for web content accessibility that meets the needs of individuals, organizations, and governments internationally.

Despite these laws and guidelines, conversations with North Carolina state government agencies, local governments, and organizations serving covered populations indicate a lack of understanding, knowledge, and standards to make web content inclusive and accessible. Inaccessible websites directly affect all covered populations but especially individuals with disabilities and individuals with language barriers.

Widely Cited Online Access and Accessibility Barriers and Needs

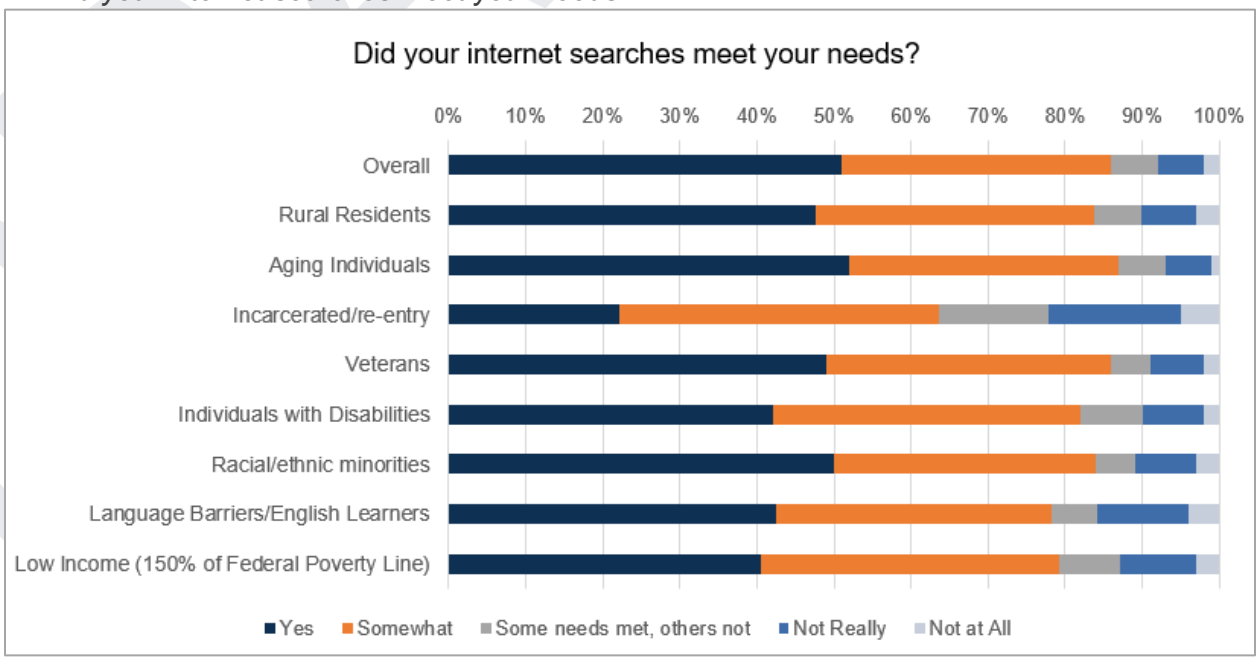
Most surveyed North Carolinians have used the internet to search for public resources and support. The most common searches were for information about government services (86%), recreational or tourist information (75%), and public health (55%). Residents used the internet less for applying for or managing government benefits (40%) and subsidy programs (11%). In listening sessions, some community members noted that they were not aware of these resources, specifically the ACP program. Many were interested in learning more about it and other services and resources that could help them in their everyday lives. Most of these resources must be accessed online (e.g., DMV), which is a tremendous barrier to those without access to reliable devices and internet service. There is a great need to make sure there are more public resources available, that community members know what they are and where to find them, that they are accessible for all community members, and individuals have the tools they need to access them (e.g., internet, device, skills).

In the past year, have you used the internet to search for any of the following?



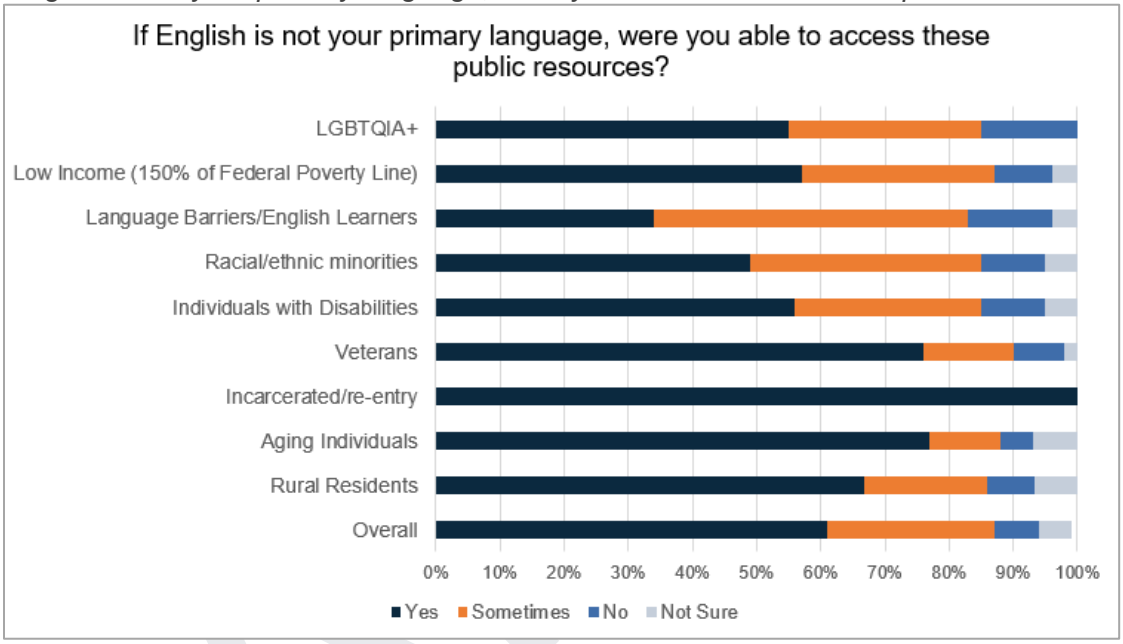
On the N.C. Digital Equity Survey, residents were also asked how well the searches for these resources met their needs. A little over half (51%) indicated that their internet searches met their needs, 8% indicated that they did not, and 41% indicated that their needs were somewhat met.

Did your internet searches meet your needs?



When looking at individuals for whom English is not their first language (*n*=469), 61% indicated that they were able to access public resources in the language of their choice, 7% said that they were not, and 26% indicated that their searches were sometimes successful.

If English is not your primary language, were you able to access these public resources?



Online Access and Accessibility by Covered Population

When looking across covered populations, individuals with low levels of literacy were far less likely to access most public resources than the general population or other covered populations. Conversely, individuals that identify as LGBTQIA+ were more likely than most other covered populations to access most resources. Like the general population, most covered populations accessed information about government services/resources or recreational/tourist information the most frequently and information about enrolling in internet subsidy programs the least.

In the past year, have you used the internet to search for any of the following?

	Information about government services or resources	Recreation or tourist information	Information from public health services	Applying for or managing government benefits	Enrolling in internet subsidy programs	Not sure
Overall	85%	75%	55%	40%	11%	6%
Aging Individuals	86%	72%	53%	46%	9%	6%
Incarcerated /re-entry	70%	52%	48%	37%	27%	8%
Racial/ethnic minorities	78%	64%	55%	37%	18%	9%
Low Income (150% of	75%	55%	52%	47%	24%	12%

Federal Poverty Line)						
Rural Residents	82%	89%	52%	38%	12%	8%
Language Barriers/English Learners	73%	65%	61%	36%	13%	11%
Low Literacy	48%	27%	33%	24%	12%	32%
Individuals with Disabilities	84%	67%	56%	44%	15%	7%
Veterans	88%	74%	54%	45%	11%	5%
LGBTQIA+	95%	89%	78%	46%	16%	1%

Formerly incarcerated individuals were the least likely to engage in searches that met their needs (22%). Aging individuals (52%), racial/ethnic minorities (50%), veterans (49%), and rural residents (48%) were the most likely to indicate that their searches did meet their needs.

Did your internet searches meet your needs?

	Yes	Somewhat	Some needs met, others not	Not Really	Not at All
Overall	51%	35%	6%	6%	2%
Aging Individuals	52%	35%	6%	6%	1%
Incarcerated/re-entry	22%	41%	14%	17%	5%
Racial/ethnic minorities	50%	34%	5%	8%	3%
Low Income (150% of Federal Poverty Line)	41%	39%	8%	10%	3%
Rural Residents	48%	36%	6%	7%	3%
Language Barriers/English Learners	43%	36%	6%	12%	4%
Low Literacy	42%	33%	7%	15%	4%
Individuals with Disabilities	42%	40%	8%	8%	2%
Veterans	49%	37%	5%	7%	2%
LGBTQIA+	48%	36%	6%	8%	1%

When looking at populations that were not native English speakers, most were rural residents (n=318) and the fewest were incarcerated/reentry individuals (n=6). Individuals with language barriers (34%) and racial/ethnic minorities (49%) were the least likely covered populations to indicate that their searches in the language of their choice (other than English) met their needs. The need for more inclusive public and government resources was brought up in many listening sessions by the Spanish speaking community as well as refugees.

Did your internet searches meet your needs? (Non-English Speaking)

	Yes	Sometimes	No	Not Sure	Number
Overall	61%	26%	7%	5%	n=469
Aging Individuals	77%	11%	5%	7%	n=127
Incarcerated/ re-entry	100%	0%	0%	0%	n=6
Racial/ethnic minorities	49%	36%	10%	5%	n=251
Low Income (150% of Federal Poverty Line)	57%	30%	9%	4%	n=159
Rural Residents	67%	19%	8%	7%	n=318
Language Barriers/English Learners	34%	49%	13%	4%	n=188
Low Literacy	55%	38%	8%	0%	n=40
Individuals with Disabilities	56%	29%	10%	5%	n=175
Veterans	76%	14%	8%	3%	n=37
LGBTQIA+	55%	30%	19%	0%	n=27

For a deeper analysis of online access to public resource needs by covered population, click on the following link: Online Access to Public Resources.

Unique Barriers to Digital Equity for Specific Covered Populations

While many of the barriers to digital equity and inclusion are similar and cross many covered populations, there are many unique barriers faced by these groups. The division will need to address these unique challenges in addition to the overarching needs identified previously.

Veterans

A significant issue for veterans that do not have access to, or cannot afford, broadband access and devices is lack of connectivity to community and resources. Broadband serves as a vital means of social cohesion and connection for those living in sparsely populated, rural areas, and the lack of broadband access prevents veterans from accessing mental health resources such as support groups, therapy, and referral services. The social isolation made worse by the digital divide can exacerbate preexisting health concerns, including the risk of substance use disorders and suicidal ideations.

Incarcerated Individuals
To learn more about incarcerated individuals' experience, the N.C. Digital Equity Survey and community outreach data for incarcerated persons were collected through listening sessions with people in re-entry.

People who are confined to state prisons generally have tightly controlled access to communication devices and the internet. Many incarcerated individuals do not have regular access to computers or tablets, even for training or educational purposes. While state prisons have made progress in acquiring sufficient tablets for the incarcerated population in recent years, there continues to be room for improvement in access, affordability, and instruction. Further research will illuminate the extent to which those devices are being used.

When incarcerated individuals are allowed access to the internet for personal use, the cost of connecting to the internet is quite high. A participant in a listening session composed of formerly incarcerated people gave the example of earning approximately $8 to $16 dollars per month in prison but having to pay $15 for 25 hours of internet access. Even if they can afford service, it often does not work well enough for them to complete necessary tasks.

For individuals who have been incarcerated for a significant amount of time, navigating digital tools and the internet may be a completely new experience. In Anson County, one individual shared, "I've been locked up 29 years, and I've seen cell phones, but I've never held one, sent a message, or made a call." This lack of access to devices and to internet connectivity results in individuals who are about to be released having limited ability to prepare to reconnect to the outside world; find resources like housing, employment, and healthcare; and prepare to function in a world that may be technologically very different from when they were first incarcerated.

English Learners and Immigrant Communities
North Carolina residents who are not proficient in English face multiple barriers to digital equity. Research and deep asset scanning identified dozens of community assets that provide services or training in Spanish, but very few offer anything in other languages. Even assistance programs in Spanish are not geographically distributed well. For example, in Pitt County, some residents are willing to pay for digital training but have challenges accessing classes taught in Spanish. One resident voiced, "There are courses we can pay for, but they don't speak our language." In Duplin County, residents emphasized the significance of offering services and training programs in Spanish, which should include childcare support. One resident shared, "I would love for those classes to be [offered] in Spanish, preferably after 5pm when we can all attend. [Additionally], I would love for these courses to provide childcare services because many of us have children and it makes it more difficult to attend [trainings] because of them." For immigrant and refugee communities, the lack of assistance and instruction in their first language hampers their ability to connect to resources and integrate into the community.

Another significant and deeply rooted barrier to access is fear of exposure for undocumented immigrants. For undocumented individuals, the apprehension of revealing their immigration status can be paralyzing, leading to a reluctance to engage in educational opportunities or access vital services. Advocates expressed that undocumented persons may be reluctant to register for digital instruction or attend classes in person unless the instruction or service is provided by a trusted organization, and it has been made clear that immigration status does not matter.

For English learners in foster care, there is often limited access to technology and broadband. These children often "fall through the cracks" when accessing these resources (Workie et al.,

2022). More research and interventions are needed in the foster care system to ensure these children can access digital technologies (Davis et al., 2023).

Low-literacy Population
Residents of North Carolina with low literacy are disproportionately affected by digital equity challenges as their limited reading and writing skills often intersect with barriers to digital inclusion. Access to digital tools and services has become a crucial gateway to education, employment, information, and social engagement that can be very helpful for these individuals. For individuals with low literacy skills, navigating the digital world can be especially challenging and alienating as a lot of online content, applications, and digital interfaces are text-heavy and require written and verbal communication. There are several agencies that target individual literacy instruction for adults. However, there is a crucial need for tailored initiatives that combine both linguistic and digital literacy.

Persons With Disabilities
Persons with disabilities face specific challenges related to the availability and affordability of devices and peripherals (headphones, speakers, text readers, etc.) that allow them to fully utilize technology. They also face unexpected and unintended barriers in accessing spaces where training, technical assistance, and Wi-Fi access are offered. A community-based organization may offer classes in a location that is not ADA compliant. A busy, noisy location may not be a viable place for a person with any number of disabilities to attempt to focus on completing schoolwork or a job application. This covered population is also overrepresented among the rural, aging, and low-income groups.

In addition to the person with disabilities, parents and caregivers of disabled persons often struggle to find information and assistance in getting appropriate devices and instruction for their family members. In at least one community listening session, residents voiced the need for websites and audio to be inclusive for persons with disabilities. Larger font sizes and audio should be available for all internet web pages. This concern includes issues such as websites not being screen-reader friendly for the visually impaired, lack of captioning for deaf or hard-of-hearing users in video content, and the absence of keyboard navigation options for those with mobility impairments.

Affordability and access to assistive technology can be a significant challenge. Many persons with disabilities require specialized hardware and software to interact with digital devices and the internet. However, these tools can be expensive, and insurance coverage or government assistance may not always be sufficient to cover the costs. Moreover, persons with disabilities in low-income or underserved communities may have limited access to high-speed internet, making it difficult for them to take advantage of digital resources and services.

Aging Population
One of the most significant challenges facing aging individuals is acquiring the digital literacy and skills necessary to operate internet-enabled devices and navigate the online world. As one community member aptly put it, "You become proficient in one or two things, but you don’t go much further than that [because] you haven't been taught, are scared, or you don’t have the confidence” when using internet-capable devices such as computers. Aging individuals also frequently expressed a desire to receive assistance from people who they already trust in places with which they are comfortable, such as houses or worship and senior centers.

Related to their lack of digital skills are the concerns about the security of their information online. For instance, older veterans have been found to be hesitant to manage their healthcare

online and participate in telehealth services from Veterans Affairs, which will become more of a hindrance to their care as Veterans Assistance and other healthcare providers move toward more online communication and telehealth visits. In Anson County, one community member shared, “some [seniors] just don’t want anything to do with computers. My dad, who lived almost to 90, told me a couple months before he passed away that the best thing about being 89 years old was that he had managed to go through life without ever having to use a computer. You could have given him a computer and held his hand, but he had no interest. He didn't want to answer his cell phone either.”

Complicating matters, there are situations where vital healthcare devices must be connected to the internet, making the absence of reliable internet access a serious health concern. Furthermore, concerns about internet security when utilizing these devices are widely shared. “I think it’s the fear of scammers, too. A lot of times they’re taking information from elderly and it’s difficult for aging community members to mentally get back on the right track,” said an Anson County resident.

Rural Residents

Rural residents bear a disproportionate burden when it comes to digital equity, with one of the most prevalent obstacles being the absence of dependable internet access. In certain regions of North Carolina, internet quality is subpar, and some areas lack any internet service altogether. In the absence of alternative internet providers in these locales, residents find themselves compelled to accept the services and pricing set by the sole provider available, resulting in a monopolistic situation in rural areas. If there are no internet providers in the area that can affordably service their home, rural residents will drive far distances to access the internet at a local business, post-office, coffee shop, or other areas where there is free Wi-Fi. One Hyde County resident shared, “if you want the internet, you can go to the post office and you might get [service], but as far as really connecting to [the internet] for a length of time, we have to drive 20 miles to a restaurant somewhere and 18 miles to Belhaven to get internet.” Another resident in Duplin County said, “If you live in this county, you have to drive up to 40 minutes so you can get internet access at a library or at a church.”

Agricultural and Farmworker Community

Rural residents also frequently reported using smartphones to connect to the internet. Many participants in listening sessions who work in agriculture voiced their challenges on connecting to the internet, “While I live in the country area it is always really hard to use anything other than my phone”. This is a suboptimal option as all business and schoolwork cannot be completed on a smartphone. It also requires reliable cellular phone service, which can also be a challenge in rural areas.

Migrant farm workers also shared that the devices they brought from their home countries are rarely compatible with service providers in North Carolina. Many are only in the country for a short period of time and would benefit from having short-term cellular contracts and assistance available to them in their native language.

Being an integral part of rural communities, farm workers' access to the internet holds significant importance. Reliable internet connectivity is essential within farm workers' camps as it enables them to access critical and life-saving information. Various extreme weather events, including hurricanes, floods, and extreme heat, as well as the recent challenges posed by the COVID-19 pandemic, underscored the necessity of dependable communication channels for farm workers. The COVID-19 pandemic exposed the vulnerabilities faced by farm workers due to limited

connectivity. In the absence of internet access, farm workers encounter significant barriers in reaching healthcare providers, communicating about outbreaks, requesting outreach services, and staying connected with their families and loved ones. It's important to note that farm worker housing predominantly exists in rural areas with poor cell phone reception, and there is often a lack of available internet connectivity. Notably, North Carolina alone hosts over 1,000 farm workers' camps located in rural regions with limited access to broadband services, which highlights the complexity of finding a one-size-fits-all solution for internet connectivity.

Racial & Ethnic Minorities
Members of racial and ethnic minority groups often face barriers that compound the digital divide. The section below outlines just some of the barriers and needs shared by members of racial and ethnic minority groups.

Black/African American Population

In cities across North Carolina, the available broadband infrastructure often aligns with historical redlining practices, concentrating primarily in districts that were systematically marginalized in the past. This distribution has had a disproportionate impact on the Black/African American community, which constitutes a significant majority in these areas.

During a listening session in Forsyth County, residents shed light on the unique challenges faced by the Black/African American population in the area. Their voices resonated with concerns about the limited access to reliable internet services which hampers the community's ability to fully benefit from the resources intended to enhance digital literacy and participation. Further, their daily engagement with education and career opportunities is impacted. One resident and business owner shared that the public Wi-Fi in her predominantly black neighborhood didn't work well enough for her to do any work.

American Indian Population

Many Native American and American Indian residents in North Carolina live in rural, low-median-income counties where internet service is limited. In Native American/Indian communities, there was some hesitancy to embrace the use of technological devices and the internet. During a listening session in Bolton, Columbus County, members of the Waccamaw Siouan Tribe emphasized the significance of trust in engaging with digital equity programs and services, as well as the importance of maintaining a clear separation between the church and the tribe. They humorously commented, "One thing you need to know about our people, they don't like to mix... anything." This comment underscores the need for many different access points for digital inclusion programs. Some covered populations may prefer receiving services from faith-based organizations (as often indicated by Black and African American participants in listening sessions), while others would prefer to receive services from other types of organizations (as indicated by members of the Waccamaw Siouan Tribe).

Furthermore, members expressed concerns about the lack of suitable space for hosting digital literacy classes, even though they have valuable community resources at their disposal. They shared, "We have resources for people in our community... we just don't have the space." Most of the counties that have a large minority population are rural and lower income counties outside of the urban core that stretches from Charlotte to the Triangle area.

Hispanic and Latino Population

The digital divide significantly impacts the Hispanic and Latino community, presenting a myriad of challenges that extend beyond mere connectivity issues. Geographically, this population is often concentrated in areas characterized by insufficient broadband infrastructure, as highlighted in a recent listening session. A resident emphasized, "Internet service is dependent on the area. Some areas don't have access at all."

As noted previously, language barriers compound the challenges faced by the Hispanic and Latino community. Navigating systems and processes in non-native language poses a significant obstacle. Bilingual services are crucial for facilitating internet access and negotiating contracts with service providers. Moreover, internet access is paramount for translation services, particularly in supporting their children's education. A resident advocated, "Support the parents so the parents can support their kids. In this group, we have a big necessity; we need to learn... we come from different countries."

Living in an English-speaking country, the Hispanic and Latino population expressed a need for comprehensive support services to aid their integration into the digital world. This encompasses a desire for classes taught in Spanish, situated in trusted spaces, and employing modalities that facilitate easy learning. Residents also noted that childcare support is also crucial to enable participation in these classes.

Low-income households

North Carolina residents who are classified as living within low-income households (within 150% of the federal poverty line) grapple with a myriad of challenges in achieving digital equity. Despite the existence of several digital inclusion assets within the communities that are intended to serve low-income individuals and households in North Carolina, a lack of access to reliable internet hampers these community members' effective use of, and connections to community resources, job opportunities, educational opportunities, and financial assistance programs. This is especially highlighted by challenges from students in families experiencing homelessness that may not be able to participate fully or at all in online learning. During community listening sessions, participants consistently highlighted the availability of agencies willing to provide training and devices; however, in the absence of internet access, such support remains ineffectual.

"We're working in a very poor neighborhood where most of the people have subsidized rent, but we are providing computers for them if they attend a class. So, each person that attends the class will receive a laptop. The thing is that then we get the device, but they don't have the internet services to use them. So how do we address that in terms of this very low-resource neighborhood being able to afford those services to access?"

Currently, 30% of low-income households have reported no access to the internet at their place of residence, with an additional 19% indicating that while available, the internet does not function well enough to meet their needs. The foremost barrier to internet access, as underscored by most survey respondents, is affordability, with over half expressing concerns about the feasibility of adding this expense to their already stretched household budgets. An advocate participating in the Forsyth County listening session posed the question, "How can we

overcome the challenge of enabling low-resource neighborhoods to afford the services required for access?"

LGBTQIA+ members
Digital equity challenges intersect with limited resources for North Carolina residents who identify as part of the LGBTQA+ community. Access to digital tools and services has become vital for education, employment, information, and social engagement, presenting significant advantages for these individuals. Navigating the digital world can be particularly isolating for LGBTQIA+ individuals due to difficulties in accessing supportive resources. Disparities in technology access and digital literacy within the LGBTQIA+ community contribute to existing inequalities, with some lacking the resources or knowledge to fully engage in the digital realm, restricting their access to essential services and information. While various agencies cater to the LGBTQIA+ community, there is a critical need for initiatives that are both inclusive and address digital literacy concerns.

MEASURABLE GOALS AND IMPLEMENTATION STRATEGIES

To address the barriers and needs of the covered populations outlined above, the division plans to advance digital equity and increase internet access, affordability, devices and repair services, digital literacy, cybersecurity and privacy, and the inclusivity of online services. The division's strategies will rely on expansions of successful digital equity programming, while other strategies rely on new and innovative ideas to meet the needs of covered populations and create sustainable programs.

The division is committed to ensuring sustainability for the work outlined in this plan. North Carolina's expansive network of digital inclusion assets, state government partners, local and regional digital equity plans, on-the-ground digital equity champions, and strong device refurbishment agencies enables the division the opportunity to support high impact, sustainable programming across the state and embed digital equity into existing state programs and strategies.

Evaluation of the objectives is paramount. The division derived baseline data for the development of these measurable objectives from American Community Survey (ACS) data, FCC Fabric, and responses to the N.C. Digital Equity Survey. The next comprehensive data available from the ACS is expected in 2026 or 2027. The N.C. Digital Equity Survey was first administered in 2023 and will be administered biannually (2025, 2027) to assess progress.

The division will utilize Digital Equity Capacity grant funding from NTIA to implement many of these strategies, though as outlined in the Sustaining Digital Equity in North Carolina' section, page 90, braided funding and partnering with other state agencies and philanthropy will prove critical to meet the goals. The division anticipates launching another round of Digital Equity Grants as noted in the implementation activities.

Overall objectives for key barriers and needs as well as objectives to meet those needs for each covered population are outlined below. The Implementation Plan outlines strategies, activities, and partners to meet each objective.

The objectives address the Common Digital Equity Needs described above in the Barriers and Needs section, page 37.

Digital Equity Barriers and Needs:

1. **Access to and affordability of high-speed internet.** Access to high-speed internet for a home is defined as 100/20 Mbps (100 Megabits per second download/20 Mbps upload).
2. **Accessibility and inclusivity of online public resources.** Web accessibility and inclusivity means that websites, tools, and technologies are designed and developed so that people with disabilities and people who speak languages other than English (also called language access) can use them.
3. **Digital literacy.** Digital literacy[3] is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills (American Library Association).
4. **Cybersecurity and privacy.** Ensuring that people know how to keep their data safe and secure online is key to protecting people online and making sure individuals feel safe connecting to the internet and using a device.
5. **Availability and affordability of devices and technical support.** Fully participating in a digital society requires access to reliable devices that meet the needs of users as well as repair and technical assistance services to address issues with those devices.

The strategies to meet these needs include:

- **Strategy 1:** All North Carolinians have access to high-speed internet and to affordable, low-cost internet services.
- **Strategy 2:** Promote practices that support online accessibility and inclusivity of public resources and services.
- **Strategy 3:** Ensure that North Carolinians can acquire the digital skills and understanding to meet their personal needs and the workforce needs of the state.
- **Strategy 4:** Promote practices and leverage tools to ensure online privacy and security.
- **Strategy 5:** Ensure that North Carolinians have access to digital devices to meet their needs.

[3] While the division uses the term “digital literacy” for this plan, it acknowledges that not all community members agree with the term. NDIA recommends using terms like “digital skills” or “beginner computer training” while conducting community work. They explain that “the word ‘“literacy’” and the implication of ‘“illiteracy’” can be perceived negatively by communities who need digital inclusion most.” Other suggestions from community stakeholders included replacing the term ‘digital literacy’ with ‘digital fluency’. The division may ultimately adopt another term.

Strategy 1: All North Carolinians have access to high-speed internet and to affordable, low-cost internet services.

Measurable Goals for All Covered Populations	Baseline
Long term (2029): 100% of unserved and underserved households have access to high-speed internet ● Near term (2025): 98% Evaluation Measure: Number of units served through BEAD infrastructure grants divided by the total number of unserved and underserved units (FCC Broadband Data Collection)	376,039 unserved Broadband Serviceable Locations (BSLs) and 127,391 underserved BSLs representing a total of 411,258 units (homes and businesses) unserved and 145,205 units (homes and businesses) underserved (FCC Broadband Data Collection – December 2022)
Long term (2028) 80% of eligible households subscribed through low-cost and subsidized internet services ● Near term (2026): 65% Evaluation Measure: Current enrolled households from USAC divided by estimated eligible households	49% of eligible households enrolled in the ACP (https://acpdashboard.com/)
Long term (2028): 90% of households subscribe to high-speed internet (adoption rate) and reduce the disparity across covered populations ● Near term (2026): 87%[4] Evaluation Measure: Number of households with a home internet subscription, American Communities Survey (ACS) 5-year estimates	85% of households have an internet subscription (ACS)

[4] The division had a goal of 80% adoption rate by 2025 (with ARPA funding), which we have already accomplished. This goal is considered an update to that original target.

Long term (2025): 100% of households with children subscribe to high-speed internet (adoption rate)[5] Evaluation Measure: Number of households with children with a home internet subscription, American Communities Survey (ACS)	81% of households with children have an internet subscription (2019 ACS)

Implementation Activity 1.1: Support the state's Broadband, Equity, Access, and Deployment (BEAD) program plan objectives and implementation to ensure alignment with North Carolina Digital Equity Plan Goals.

Potential partners: internet service providers, local governments, K-12 schools, higher education institutions, Community Anchor institutions, workforce development agencies, digital inclusion coalitions, organizations that provide direct digital inclusion services, community-based organizations and organizations that serve covered populations.

Covered Populations: ALL Populations

Description: Access and affordability of high-speed internet are key priorities for achieving digital equity in North Carolina. The primary objective of the state's BEAD Five Year Plan and Initial Proposal is investing BEAD funding to build infrastructure to deliver internet speeds of 100/20 Mbps to the remaining unserved households and 100% of all underserved households, locations in high-cost areas, and community anchor institutions.

Note: This implementation activity connects directly to the BEAD Plan and will be led by the division's Broadband Infrastructure Office with support from the Office of Digital Equity and Literacy.

Key components:

2024:

1. Affordability will be a primary criterion for selecting BEAD subgrantees. The BEAD subgrantee selection process will consider an applicant's commitment to provide the most affordable total price to the customer for 1 Gbps/1 Gbps service in the project area. Doing so will impact affordability across an entire project area.

[5] This goal aligns with the division's goals for ARPA funding.

2. For all BEAD funded infrastructure programs, the division will require subgrantees to offer a low-cost service option available to all eligible households (based on ACP eligibility criteria) for the useful life of the network assets, consistent with the BEAD requirement. In addition, during the application process applicants may qualify for maximum points if they currently have a plan or commit to offering a plan that meets the standard set forth in the state's approved BEAD plan. The scoring criteria will incentivize subgrantees to adopt a $30/month service offering for eligible households. Consistent with the state's ARPA funded grant programs, subgrantees will be required to participate in the ACP.

2026:

3. Encourage prospective BEAD subgrantees seeking funding from broadband infrastructure grant programs to outline how they plan to engage covered populations to inform those populations of low-cost service options, ACP, digital literacy programs and other assistance in their project areas if awarded a grant. The BEAD subgrantee selection scoring rubric assigns points to applicants that provide a letter of support from local governments and federally recognized tribal governments. Local and tribal governments may support one or multiple applications.

4. Embed equity into workforce planning efforts related to BEAD deployment projects. BEAD subgrantee selection will include scoring criteria relating to the subgrantee's enforceable commitments with respect to advancing equitable workforce development and job quality objectives.

Implementation Activity 1.2: Support Community Anchor Institutions (CAIs) to improve and expand free, public Wi-Fi locations.

Potential partners: internet service providers, local governments, K-12 schools, higher education institutions, Community Anchor Institutions, workforce development agencies, digital inclusion coalitions, organizations that provide direct digital inclusion services, community-based organizations, churches and faith-based organizations, and organizations that serve covered populations.

Covered Populations: ALL Populations

Note: This implementation activity connects directly to the BEAD Initial Proposal and will be led by the division's Broadband Infrastructure Office with support from the Office of Digital Equity and Literacy.

Description: CAIs represent a centerpiece for funding in North Carolina's BEAD Five-Year Plan with a stated goal of connecting 100% of all CAIs in the state with fiber optic infrastructure. The characteristics of this technology provide the bandwidth and capacity for robust backhaul to support Wi-Fi connectivity. By providing Wi-Fi, CAIs will allow covered populations without mobile service to access the internet using their own devices and provide access to numerous devices at one time.

Key Components:

2024:

1. Accurately classify and identify CAIs in the BEAD program to ensure access to high-speed internet infrastructure.
2. Collect input from communities to help ensure that all relevant institutions meeting the CAI criteria are eligible for funding.

2025

3. Support the BEAD program efforts to assess network connectivity needs and ensure adequate technology and infrastructure is deployed to CAIs.

2025:

4. Provide or fund technical assistance to help CAIs learn how to leverage their high-speed wireline connection for public Wi-Fi access. This work could be funded through the Digital Equity Grant program offered by the Office of Digital Equity and Literacy.
5. Identify funding sources to support the purchase of equipment and operational costs, including security, to support public Wi-Fi, and ensure Wi-Fi is accessible for covered populations by creating comfortable spaces to connect (e.g., benches and a table in a public park to encourage use). This work could be funded through the Digital Equity Grant program offered by the Office of Digital Equity and Literacy.

Implementation Activity 1.3: Increase awareness of and enrollment in low-cost and subsidized broadband internet programs like the Affordable Connectivity program (ACP).

Potential partners: internet service providers, local governments, K-12 schools, higher education institutions, Community Anchor Institutions, workforce development agencies, digital inclusion coalitions, organizations that provide direct digital inclusion services, community-based organizations, churches and faith-based organizations, and organizations that serve covered populations.

Covered Populations: ALL Populations

Description: Expanding awareness of and enrollment in the ACP or other subsidized internet programs is key to addressing affordable internet access for eligible covered population households. Increasing ACP enrollment is a core activity of the division and significant progress is underway to expand awareness and enrollment.

Key components:

2024:

1. Ensure every North Carolina resident who is eligible for ACP knows it's available and how to enroll.
    a. The division will continue identifying partners as trusted resources to promote and enroll households. These include partnerships between organizations like NC Counts Coalition and NC DHHS (as part of the division's FCC ACP outreach grant) as well as churches, community-based organizations and public benefit programs that work with ACP eligible households such as veterans' assistance, SNAP, and K-12 schools.
    b. The division will continue to leverage high-profile infrastructure announcements (grants, events, etc.) to advertise the ACP.
2. Empower partners across the state to deliver solutions that work for low-income North Carolinians.
    a. The division may develop an ACP peer-network where partners across the state can share challenges and best practices including coordination across FCC ACP Outreach Grant recipients.
    b. The division will advocate for improvements to the program and enrollment process to the FCC and the Universal Service Administrative Corporation (USAC), based on feedback from the peer network and other partners.

2025:

3. Make it easier for eligible residents to enroll in the program and receive benefits.

    a. Evaluate current ACP pilots and programs like the recently launched NC 211 ACP hotline pilot to identify best practices for future funding through the Office of Digital Equity and Literacy.
    b. Continue to fund digital navigator and other best practice programs through the Digital Equity grant program.
    c. Educate internet service providers about the need to train their customer service staff on ACP.

Strategy 2: Promote practices that support online accessibility and inclusivity of public resources and services.

Measurable Goal for All Covered Populations	Baseline
Long term (2028): Increase in confidence to access or apply online for government services. ● Near term (2026): Increase by 5% Evaluation Measure: Data collected from the Digital Equity Survey	89% indicated they were somewhat or very confident in accessing or applying online for government services. The section titled “Digital Literacy by Covered Populations” provides baseline data by covered population.
A. Long term (2028): a. 100% of cabinet-level agencies are trained on accessible website content. b. Train other public entities (ex. local governments) to provide accessible online content. ● Near term (2026): Develop increased state standards for online accessibility and inclusivity. Evaluation Measure: ● Standards developed ● % of cabinet level agencies trained ● % of cabinet level agencies that adopt standards ● # of other public entities trained ● # of public entities that adopt standards	No baseline - working with partner state agencies, the division will support the creation of increased standards that can be deployed across state government and beyond. Baseline will be determined through implementation of the Digital Equity Capacity Building Grant Program.

Implementation Activity 2.1: Leverage partnerships within state government, local government and organizations serving covered populations to identify and develop North Carolina standards for online accessibility and inclusivity.

Potential partners: State agencies, local governments, community-based organizations, N.C. League of Municipalities, N.C. Association of County Commissioners, Regional Councils of Government

Covered Populations: All Covered Populations

Description: The N.C. Department of Information Technology (NCDIT) provides web services to all state agencies and incorporates federally mandated Section 508 compliance standards and best practices recommended by the World Wide Web Consortium's latest Web Content Accessibility Guidelines. Despite these services, conversations with North Carolina state agencies, local governments, and organizations serving covered populations indicate a lack of understanding and knowledge to make web content inclusive and accessible. Some stakeholders also indicated existing standards may be inadequate for ideal accessibility. Some state agencies are making great strides in considering online accessibility and inclusivity: the N.C. Department of Health and Human Services and the Governor's Office of Public Engagement and Inclusion. The division will continue supporting these efforts and provide convening capacity to increase online accessibility and inclusivity as needed.

Key Components:

2024:

1. The division will partner with other personnel within NCDIT, as well as the N.C. Department of Health and Human Services and the Governor's Office of Public Engagement and Inclusion, to convene a working group of state and local government and community partners to design standards for online accessibility and inclusivity. These standards will build off existing work by NCDIT to comply with federally-mandated standards and guidelines.

2025:

2. The working group will develop a set of strong standards for online accessibility and inclusivity and ensure outreach and engagement with members of covered populations to provide feedback on the developed standards.

Implementation Activity 2.1: Leverage partnerships to train staff in all cabinet-level agencies on online accessibility standards to improve the accessibility and inclusivity of state government websites and expand training and capacity to local governments and beyond.

Potential partners: State agencies, local governments, community-based organizations, N.C. League of Municipalities, N.C. Association of County Commissioners, Regional Councils of Government

Covered Populations: All Covered Populations

Description: Development of standards does not ensure compliance and adoption. Training is an essential component of creating accessible and inclusive online content. Training and capacity must be comprehensive and include partners beyond state government.

Key Components:

2026:

1. The Online Accessibility and Inclusivity working group will develop a toolkit for state, local and community partners on how to implement online accessibility and inclusivity standards. This toolkit could include standards for providing accessible webinars/virtual meetings, designing mobile-friendly websites, as well as increasing the accessibility and inclusivity of websites. It could also include requirements that entities that receive technology funding from state agencies are required to comply with online standards.
2. The working group will create on-going training for state government staff and will train staff members representing all cabinet-level agencies.

2027:

3. Expand online accessibility and inclusivity training to local governments and community organizations serving covered populations.
    a. Funding must be prioritized to build capacity for non-state government agencies. The division anticipates future rounds of the Digital Equity Grant program will support this work. Improving accessibility of online content will be an eligible criterion for funding.

Strategy 3: Ensure that North Carolinians can acquire the digital skills and understanding to meet their personal needs and the state's workforce needs.

Measurable Goal for All Covered Populations	Baseline
Long term (2028): Increase in percentage of North Carolinians who are confident using word processing programs, finding educational content, applying for jobs, and communicating with a healthcare provider by 10% • Near term (2026): increase by 5% Evaluation Measure: Digital skills confidence data from Digital Equity Survey	Somewhat or very confident in the following: • Word processing, such as Google Docs or Microsoft Word: 87% • Searching for/applying for jobs: 83% • Finding educational content such as taking a course: 84% • Making an appointment, checking test results, or communicating with a healthcare provider online (ex. Using MyChart). No baseline but noted as a need in listening sessions. Will add to future survey. The section titled "Digital Literacy by Covered Populations" provides baseline data by covered population.
Long term (2028): Increase access to and geographic reach of services that meet individual needs to advance digital literacy by 25% (including digital navigator programs). • Near term (2026): Increase by 10% Evaluation Measure: Evaluating "access" will require a more refined measure. It may include a density metric to understand where programs are in relation to where there is the greatest need by covered population. Consideration of organizational capacity to meet needs is also an element of access. The division will continue to develop and refine this measure.	Available data indicate: • 328 entities offering digital skills training • 157 entities offering digital navigation Table on page 21 displays available assets by covered population. A more robust baseline evaluating "access" will be developed through implementation of the Digital Equity Capacity Building Grant Program.

Potential partners: Education partners (including: N.C. Department of Public Instruction, N.C. Community College System, University of North Carolina System, N.C. Independent Colleges and Universities), workforce partners (N.C. Department of Commerce), the North Carolina State Library, local library systems, N.C. Cooperative Extension and county extension offices, senior centers, organizations and agencies with established digital navigator programs, community-based organizations, digital inclusion coalitions, nonprofits, literacy organizations, regional councils of governments, local governments, community-based organizations serving covered populations, healthcare providers, and faith-based organizations.

Implementation Activity 3.1: Partner with workforce and education agencies at the state and local levels to identify and adopt high quality digital skills standards, including digital privacy and cybersecurity standards and digital health literacy.

Covered Populations: All covered populations

Description: This strategy addresses the need for clear standards for digital skills and literacy across the state to ensure meeting individual and workforce needs. Depending on the sector, different entities are using different curricula with different standards. For example, the N.C. Department of Public Instruction uses ITSE standards while adult education classes often use NorthStar Digital Literacy curriculum and assessments. Based on this analysis, developed standards to align with state strategic education and workforce goals are needed, though global frameworks exist such as the DQ Framework for Digital Literacy, Skills and Readiness.

Key components:
2024:

- The division will partner with workforce and education agencies at the state and local levels to identify and recommend digital skills standards.

2025

- The division will publish a set of digital skills standards, including developing a toolkit and training materials for state and local partners with recommendations for integrating standards into existing training programs (for example job training programs).
- The division will integrate standards into future funding cycles of the Digital Equity grant for applicants developing or expanding digital literacy services.

Implementation Activity 3.2: Build on lessons learned from existing digital navigator programs to expand services across the state.

Covered Populations: All covered populations

Description: Throughout the listening sessions, a key theme identified was the need for individualized digital literacy and skills support. Digital Navigators, guides who assist community members in internet adoption and the use of computing devices, can offer this individual support and attention. Digital navigation services can look different based on community needs. They can include

ongoing assistance with accessing affordable internet like the ACP, device acquisition, technical skills, and application support (NDIA). Depending on the organization and institution, they can provide more one-off support like a help desk at a library or provide more long-term continuum support to meet an individual's comprehensive digital needs. This implementation activity will require 1) Increasing the capacity of current digital navigator programs and 2) developing new programs.

Key Components:

2024:

1. The division will develop a peer network of digital navigators and digital literacy programs to share challenges, best-practices, and coordinate services. One goal of this network will be to improve communication and awareness of digital navigator programs across the state.
2. Partner with organizations supporting telehealth such as the Office of Rural Health to integrate digital health equity training into digital navigation curricula, including their work on connecting farmworkers to digital health literacy resources. As part of the Appalachian Regional Commission Digital Health Equity grant, the Center for Digital Equity developed a Digital Health Literacy Playbook for Rural Communities.

2025:

3. The division will make it easier for people to access digital navigator and digital literacy programs. Increasing the number and geographic reach of high-quality programs in North Carolina is a key priority.
    i. Expanding the capacity and reach of existing programs: North Carolina has several strong and well-established digital navigator programs, like the Center for Digital Equity's 311 digital navigation hotline and newer pilot programs (such as the Digital Navigation Initiative that partners with the state library, N.C. Cooperative Extension, and the N.C Community College System). Through future rounds of the Digital Equity Grant program, the division anticipates funding the expansion of current programs. Ensuring funding can also address other barriers to digital equity (such as transportation costs, childcare, and other wrap-around services) is necessary to ensure programs are expanded in an accessible way.
    ii. Development and creation of new programs: A key theme in the listening sessions was that people want to receive digital skills training and navigation from organizations they already trust (food banks, community centers, churches, and others). Building the capacity of organizations to provide these trainings is critical. Through future rounds of the Digital Equity Grant program, the division anticipates funding capacity building to provide digital skills training and digital navigation. Ensuring funding can also address other barriers to digital equity (such as transportation costs, childcare, and other wrap-around services) is necessary to ensure programs are expanded in an accessible way.

2027

4. The division will work to ensure that all counties have access to digital navigation services through community anchor institutions such as libraries, community colleges, cooperative extension, and senior centers, prioritizing counties with

the fewest existing services. The Digital Navigator curriculum under development by the N.C. Community College system could be deployed to train organizations across the state.

i. The division will partner with state and local government to build digital navigation curricula into essential services (i.e., SNAP, WIC).

Implementation Activity 3.3: Leverage digital navigator and digital literacy programs to expand partnerships with organizations serving covered populations to meet their specific digital literacy needs

Covered Populations: All covered populations

Description: Critical digital literacy needs vary (and sometimes overlap) across covered populations. For example, job training skills for a digital workforce meet the needs of low-income populations (Horrigan, 2018), veterans (National Telecommunications and Information Administration, 2013), and incarcerated individuals (Prison Scholars Fund, 2023), while those with low literacy and the aging adults benefit more from individualized instruction that focuses on basic computing skills (Lee & Kim, 2019). Evidence suggests that an expanded, yet tailored curriculum leads to improved outcomes (Lyons et al., 2019). Therefore, these programs could benefit from allowing families/individuals to customize digital equity services based on their needs (Katz & Levine, 2015).

Key Components:

2025

1. Tailor existing programs to meet the needs of covered populations. As mentioned in Implementation Activity 3.2, North Carolina has several strong, well established digital navigator and digital literacy programs. However, not all programs are equipped to meet the needs of covered populations or have the cultural competency or training to serve them well. Digital Equity Grant funding to expand the capacity of these programs must include strategies to tailor existing programs to the needs of covered populations and foster cultural competency.
2. Build the capacity of organizations serving covered populations to develop digital navigator and literacy programs. One key finding in the listening sessions is that people want to receive digital navigation services from organizations they trust. For example, if they receive food from a food pantry, they would like to connect with a digital navigator at that food pantry. Coupled with this need is a lack of trust in traditional community anchor institutions. Digital Equity grant funding will be available to build the capacity of trusted community organizations to provide digital navigation services or connect people to digital navigators from the community through strategies such as:
    a. Increasing capacity of organizations with community trust to develop digital navigation programs.
    b. Increasing culturally competent programs that are available in multiple languages such as Winston Net's Multilingual Digital Skills Training courses that offer classes in Chinese, Swahili, Arabic, Spanish, and Karenni, which was developed to help immigrants and newcomers navigate community resources using technology.
    c. Increasing programs focusing on the needs of specific covered populations such as but not limited to:

i. Programs for people with disabilities. Digital navigators serving individuals with disabilities must be specifically trained in technologies to meet their needs. For individuals who are deaf and hard of hearing, navigation services must be offered in American Sign Language (ASL).
ii. Programs for incarcerated individuals and those in re-entry to help prepare for reintegration into society.

Implementation Activity 3.4: Leverage existing partnerships with state education agencies to engage students and families in digital literacy programs.

Description: A widely cited concern, particularly from immigrant and new American communities, was the need to better serve families with school-age children to navigate the K-12 school system's digital requirements. Schools are using applications and emails to communicate with parents, which is a barrier for many parents who are not digital natives and for those who do not speak English.

Covered Populations: All covered populations

Key Components:

2025:

1. The division will work with partners to integrate digital literacy into existing training aimed at parents and caregivers. For example, integrating digital literacy concepts into parent academies offered through schools or ESL training at local community colleges. The division will make Digital Equity Grant funding available to support digital literacy of parents and caregivers.
2. The division will leverage lessons learned and expand programs like Tech Teams through the N.C. Business Committee for Education, which provide free training and paid experience to high school students who can provide technical training for adults and peers and help desk support to their schools and communities.

2027:

3. The division will partner with state and local education entities to provide resources on website accessibility and inclusivity standards identified in Strategy 2: Applications and websites are accessible and inclusive.

Strategy 4 Promote practices and leverage tools to ensure online privacy and security

Measurable Goal for All Covered Populations	Baseline
Long term (2028): Improve confidence and ability to protect personal data online by 10% • Near term (2026): increase by 5% Evaluation Measure: Digital safely measures data from Digital Equity Survey	Somewhat or very confident in the following: • Knowing how to keep yourself safe online: 81% • Protecting the privacy of your personal data: 77% The table on pg. 48 in the Online Privacy and Cybersecurity by Covered Population section displays baseline data by covered population.

Potential partners: N.C. Department of Information Technology's privacy and cybersecurity personnel, education partners (including: N.C. Department of Public Instruction, N.C. Community College System, University of North Carolina System, N.C. Independent Colleges and Universities), workforce partners (N.C. Department of Commerce), cybersecurity programs (e.g. Carolina Cyber Network), organizations and agencies with established digital navigator programs, and Community Anchor Institutions (e.g., senior centers, libraries, K-12 schools).

Activity 4.1: Partner with workforce and education agencies at the state and local levels to identify and adopt digital skills standards, including digital privacy and cybersecurity standards. (Crossover from Strategy 3 Activity 1)

Description: As described above, this strategy centers on the need for clear standards for digital skills and literacy across the state to ensure meeting individual and workforce needs. These standards must include online safety training to keep personal data safe and secure. A key theme from focus groups and the digital equity survey was that digital safety was a concern across all covered populations, and many residents do not feel very confident keeping their data safe, private, and secure online.

Covered Populations: All covered populations

Key components:

2024:

- The division will partner with workforce and education agencies at the state and local levels to identify and recommend digital skills standards, including digital safety standards.

2025

- The division will publish a set of digital skills standards, including developing a toolkit and training materials for state and local partners with recommendations for integrating standards into existing training programs (for example trainings already targeting seniors and youth).
- The division will integrate digital safety standards into future funding cycles of the Digital Equity grant for applicants developing or expanding digital literacy services.

Implementation Activity 4.2: Integrate cybersecurity and privacy training into curricula being implemented by digital navigators and other digital literacy efforts across the state.

Covered Populations: All covered populations

Description: As described above, digital navigators can address digital needs in communities and for covered populations. However, cybersecurity and privacy are often an "invisible need," because people do not know where to start or even the right questions to ask. Online safety must be integrated into training curricula for digital navigators and other digital literacy programs, so it becomes embedded into programming. For example, if someone needs help setting up an email account, a digital navigator will also provide insight into how to create a strong password and strategies for keeping the password private.

Key Components:

2025:

1. The division will develop guidance and toolkits to help entities integrate online safety standards into digital navigator training.
    a. Partner with existing digital navigation and literacy programs to ensure alignment, such as the N.C. Community College System's digital navigator certificate and NC 211's digital navigator hotline.
    b. Launch a campaign to increase awareness of safety standards and toolkits.
2. Digital Equity grant funding will be available to train staff members at organizations and anchor institutions on online safety. For example, as learned through the Digital Navigator Initiative, libraries are often on the frontlines of the digital divide, but library staff often lack training to provide support.

Strategy 5: Ensure that North Carolinians have access to digital devices to meet their needs.

Measurable Goals for All Covered Populations	Baseline
Long term (2028): 100% of the population has access to a quality public computer through a community anchor institution. ● Near term (2026): increase by 10% Evaluation Measure: Evaluating access will require a more refined measure. It may include N.C. Asset Inventory analysis of where people can access public devices. Consideration of organizational capacity to meet needs is also an element of access. The division will continue to develop and refine this measure.	519 organizations are providing public devices access and internet access. Table on page 21 displays available assets by covered population including public device access. A more robust baseline evaluating "access" will be developed through implementation of the Digital Equity Capacity Building Grant Program.
95% of North Carolina households will own a working, large-screen (laptop, desktop, or tablet), internet-capable computer that meets their needs. a. Near term: increase by 1% Evaluation Measure: Households with a home desktop or laptop computer data from American Community Survey 5-year estimates	92% of households (ACS 5-year estimates)
Increase in geographic spread of organizations offering low-cost computers and technical support. Evaluation Measure: Geographic analysis of N.C. Asset Inventory	193 organizations provide device access. Of those, there are 4 nonprofit device refurbishers (2 larger regional refurbishers and 2 small, county-based refurbishers) The Asset Inventory displays available resources by covered population and county including public device access.

Potential partners: Education, corporate, and government sectors for device donation, device and technology refurbishers, organizations that serve covered populations, community anchor institutions (e.g., senior centers, libraries, K-12 schools), and housing authorities.

Implementation Activity 5.1 Increase public access to devices at community anchor institutions.

Covered Populations: All covered populations

Description: Many of North Carolina's county-level digital equity plans identified public device access locations and lending programs as important. To truly advance digital equity, the ultimate goal is to move toward universal device ownership among Covered Populations. Public device access and lending programs can serve as a steppingstone toward adoption and ownership. Encouraging and supporting the use of devices in any form can assist with increasing users' confidence and comfort with becoming a device owner themselves.

Key Components:

2025

1. The division will partner with key anchor institutions such as the State Library of North Carolina, the N.C. Community College System, community centers and others to develop strategies to increase public computer labs and device lending programs.
    a. Device lending programs should provide longer-term lending periods to increase ongoing access.
    b. Clear pathways should exist so that those relying only on smartphone use, a loaned device or public access can move to device ownership. The transition can be facilitated by providing clear information to residents on how to access free or affordable devices. Public device access should be considered when developing a pilot of the hub-and-spoke model referenced elsewhere in these recommendations.

Implementation Activity 5.2: Increase the supply of no cost and low-cost devices in North Carolina.

Covered Populations: All covered populations

Description: A consistent supply of devices is critical to effective device distribution. A range of sources including both new and refurbished devices to address a variety of needs and budgets should be considered. Refurbished devices can be leveraged as a result of donations made by individuals and organizations. To keep the overall costs of devices as low as possible, the goal is to encourage or incentivize a larger volume of donated devices for refurbishing. To achieve this goal, new and innovative partnerships will need to be leveraged.

Key Components:

2024:

1. The division will identify, prioritize, and build relationships with public and private entities with a large inventory of computers to be donated and refurbished (education, corporations, and government), expand education around device donation, and simplify the donation process.
2. The division will leverage the Federal Computers for Veterans and Students Act, which intends to direct repairable federal computers to nonprofit technology refurbishing organizations and is expected to be operationalized by the General Services Administration in 2024.

2025:

3. The division will work to improve current state law and policy to encourage and facilitate donations from state and local government, as well as colleges and universities.

Implementation Activity 5.3: Develop and sustain a high-volume refurbishment and distribution system that supports the efficient movement of devices throughout the state and matches computing devices with the unique needs of the intended Covered Populations.

Covered Populations: All covered populations

Description: Preparation[6] and distribution[7] of devices are not linear processes and may be done in tandem within an organization or by different organizations.

> Distribution: The planning and coordination of the movement of devices from sources (donors, manufacturers, resellers of both new or refurbished computers) to preparation sites and ultimately for deployment is essential to meeting the household device ownership goal. By building upon existing assets and bolstering resources and capacity where needed, increased scalability can be achieved.

[6] Preparation: The preparation of computing devices by entities within the ecosystem is a critical process that ensures they are properly configured, customized, and equipped with the necessary components to serve their intended purpose effectively, applicable to both new and refurbished systems. Proper preparation ensures that devices are ready for deployment and meet the specific needs of users.

- For new devices, this process typically involves configuring the hardware and loading software tailored to the intended user population, such as specialized software programs designed for older adults or unique configuration for users with disabilities.
- For used or refurbished devices, preparation includes a comprehensive set of activities such as screening for disposition, data wiping to ensure data privacy, diagnostic testing, repair, refurbishment, configuration, and software loading.
- Additionally, both new and refurbished computers may undergo “kitting,” which involves the assembling of associated peripherals and accessories to be bundled with devices, such as keyboards, mice, headsets, or assistive devices

[7] The logistical pathway and considerations for device movement from the supply source to the preparation partners, and from the preparation partner to deployment sites

Preparation: A range of partners play a pivotal role in preparing devices for the unique needs and intended uses of Covered Populations. Devices must be tailored to the unique needs of recipients, demanding specialized experience and skill in device selection, assessment, and preparation. Partners may include refurbishers, manufacturers, resellers, and workforce development, nonprofit, and community programs. Collectively referred to as **"preparation sites,"** they have the crucial task of customizing and bundling initial devices, whether new or used, for optimal use (see Digitunity's graphic, "Device Essentials for Digital Equity").

Key Components:

2024:

1. The division will evaluate in-state technology refurbishing organizations to examine their capacity to scale operations and their interest in expanding capacity to meet demand for preparing and distributing devices.
2. The division will leverage the significant expertise of North Carolina technology refurbishers to expand their services, including preparation and distribution throughout the state by identifying pilot regional "spokes" that can be upfitted to provide distribution and preparation as part of a "Hub and Spoke" model. This program will be initially funded through existing ARPA funds but is integral to the overall strategy.

2026:

3. Recycling programs: The device distribution system can seamlessly integrate into local, county, and state systems through device recycling programs. The division will review current programs to identify opportunities for obtaining a supply of devices that can be refurbished and directing end-of-life equipment into recycling efforts, creating a sustainable device lifecycle loop.
4. The division will work with partners to expand existing and develop new workforce development programs that train individuals within Covered Populations in technical skills and refurbishment not only to increase device preparation capacity but also to create an in-state pipeline of technology talent.

Implementation Activity 5.4: Utilize trained and qualified partners for device deployment and technical support

Covered Populations: All covered populations

Description: To effectively reach and support Covered Populations, working with trusted community organizations remains critical. The Office of Digital Equity and Literacy will identify and train trusted community "deployment partners" (organizations that serve covered populations) to ensure devices are received by those who need them most. Trained and qualified deployment partners can coordinate with device preparation sites and serve as direct points of contact with Covered Populations. Deployment partners' responsibilities include conducting outreach to Covered Populations, engaging directly with clients including identifying their device

needs and intended uses, providing referrals, and disseminating devices, as well as employing specific criteria for qualifying individuals to receive a device.

Key Components:

2025:

1. The division will develop minimum requirements for device deployment sites encompassing core responsibilities, deliverables, and key criteria for Covered Populations eligible for devices. These requirements should also include specific expectations such as coordinating with device preparation partners, serving as direct points of contact with Covered Populations, conducting outreach to these populations, facilitating direct client contact, offering support referrals, disseminating devices, and implementing recipient vetting and qualification criteria.

2026:

2. Partnering with device refurbishers and other key partners, the division will identify and train trusted community organizations that serve covered populations as “deployment partners.” As noted in Strategy 3, a key finding in the listening sessions is that people want to receive digital inclusion services from organizations they trust, including devices and technical support.

2027:

3. Incorporate into the state’s response and recovery programs community organizations that can provide digital access and technical assistance during and after declared emergencies. Educational materials should be developed for deployment partners that can be customized to local contexts. Materials should offer comprehensive information for effective referrals to technical support, skills training, and affordable connectivity. Templates for communication and outreach materials, designed to reach specific Covered Populations, should also be developed and disseminated to deployment partners.

IMPLEMENTATION TIMELINE

The timeline below summarizes the activities described in detail in the previous section. Most of the implementation strategies are listed in the year in which they will begin, however their implementation will be ongoing throughout the five-year period.

YEAR	IMPLEMENTATION ACTIVITIES	STRATEGY/ACTIVITY
2024		
	Communication, Documentation and Evaluation	
	Jan. 2 - Public Comment Ends	
	Jan. 14 - Final plan sent to NTIA	
	Feb. 28 – Digital Equity Plan officially accepted by NTIA and Planning Period ends	
	Digital Equity Capacity Building Grant Funding applied for and received for plan implementation	
	Implementation Strategies	
	Increase participation in low-cost internet connectivity programs through BEAD program	Strategy 1, Activity 1.1
	Classify and identify Community Anchor Institutions in the BEAD program to ensure access to high-speed internet infrastructure.	Strategy 1, Activity 1.1
	Continue identifying trusted partners to promote and enroll households in ACP and develop peer network	Strategy 1, Activity 1.3
	Convene a working group of government and community partners to design standards for online accessibility and inclusivity	Strategy 2, Activity 2.1
	Develop a peer network of digital navigator and digital literacy programs to share challenges, best practices, and coordinate services	Strategy 3, Activity 3.2
	Partner with organizations supporting telehealth to integrate digital equity into their training and digital navigation programs	Strategy 3, Activity 3.2
	Identify, prioritize, and build relationships with public and private entities or sectors with a large inventory of computers to be donated and refurbished	Strategy 5, Activity 5.2
	Leverage the expertise of North Carolina technology refurbishers to expand their services	Strategy 5, Activity 5.3
2025		
	Communication, Documentation and Evaluation	
	State Digital Equity Grant application process opens and grants are made to Implementation Partners	
	Annual Report to the Public	
	Implementation Strategies	
	Support BEAD program efforts to assess network connectivity needs of Community Anchor Institutions	Strategy 1, Activity 1.2

YEAR	IMPLEMENTATION ACTIVITIES	STRATEGY/ACTIVITY
	Evaluate ACP pilots and programs to identify best practices for future funding	
	The online accessibility and inclusivity working group will develop a set of strong standards for online accessibility and inclusivity	Strategy 2, Activity 2.1
	Publish a set of digital skills standards, including a toolkit and training materials for state and local partners with recommendations for integrating standards into existing training programs	Strategy 3, Activity 3.1
	Tailor existing programs to meet the needs of covered populations	Strategy 3, Activity 3.3
	Build the capacity of organizations serving covered populations to develop digital navigator and literacy programs	Strategy 3, Activity 3.2, and Activity 3.3
	Work with partners to integrate digital literacy into existing trainings aimed at parents and caregivers	Strategy 3, Activity 3.4
	Integrate digital safety standards into future funding cycles of state Digital Equity grants	Strategy 3, Activity 3.1 Strategy 4, Activity 4.1
	Develop guidance and toolkits to help entities integrate online safety standards into digital navigator training	Strategy 4, Activity 4.2
	Partner with key anchor institutions to develop strategies to increase public computer labs and device lending programs	Strategy 5, Activity 5.1
	Work to improve current state law and policy to encourage and facilitate donations from state and local government, as well as colleges and universities	Strategy 5, Activity 5.2
	Develop minimum requirements for device deployment sites encompassing core responsibilities, deliverables, and key criteria for Covered Populations eligible for devices	Strategy 5, Activity 5.4
2026		
	Communication, Documentation and Evaluation	
	Digital Equity Survey deployed	
	Annual Report to the Public	
	Digital Equity Convening	
	Implementation Strategies	
	Embed equity into workforce planning efforts related to BEAD deployment projects	Strategy 1, Activity 1.1
	Working group will develop a toolkit for state, local and community partners on how to implement online accessibility and inclusivity standards	Strategy 2, Activity 2.1
	Create on-going training for state government staff and train staff members representing all cabinet-level agencies	Strategy 2, Activity 2.1
	Work with partners to expand existing and develop new workforce development programs that train individuals within Covered Populations in technical skills and refurbishment	Strategy 5, Activity 5.3

YEAR	IMPLEMENTATION ACTIVITIES	STRATEGY/ACTIVITY
	Partner with device refurbishers and other key partners to identify and train trusted community organizations that serve covered populations as deployment partners	Strategy 5, Activity 5.4
2027		
	Communication, Documentation and Evaluation	
	Annual Report to the Public Incorporating 2025 American Community Survey Data	
	Sustainability Plan Developed	
	Implementation Strategies	
	Expand online accessibility and inclusivity training to local government and community organizations serving covered populations	Strategy 2, Activity 2.1
	Ensure that all counties have access to digital navigation services through community anchor institutions	Strategy 3, Activity 3.2
	Partner with state and local education entities to provide resources on website accessibility and inclusivity	Strategy 3, Activity 3.4
	Incorporate community organizations that can provide digital access and technical assistance, during and after declared emergencies, into the state's response and recovery programs	Strategy 5, Activity 5.4
2028		
	Communication, Documentation and Evaluation	
	Digital Equity Survey Deployed	
	Final Report to the Public	
	Federal Program Closeout	

ALIGNING STATE PLANS AND PRIORITIES

This digital equity plan was not created in a vacuum, and it will not be implemented in one. The community driven planning process confirmed the interconnection of challenges that covered populations face and solutions that will close the digital divide. Alignment with state strategic priorities is essential to the division's success in implementing the strategies outlined in this plan.

Descriptions below outline the clear connection to economic and workforce development goals, plans, and outcomes; educational outcomes; health outcomes; civic and social engagement; and delivery of other essential services. As the division refines the plan and receives public comment, other relevant strategic plans will be added as connections to this plan.

Economic and Workforce Development
The N.C. Department of Commerce is a critical partner and embraced high-speed internet access and adoption as a crucial goal for building a stronger workforce including aligning with the division's goal to expand high speed internet access and lower costs for 98% of North Carolina's households. This ambitious goal is in alignment with Strategy 1 of this plan. Other goals to increase digital skills and engage more North Carolinians in the digital economy connect to this plan's goals to enhance opportunity through increasing digital skills (Strategy 3 and 4).

Education
While K-12 public schools and their students are not a "covered population," they are an essential part of the State's digital equity plan. This plan includes extensive partnerships with the N.C. Department of Public Instruction, local public-school systems, and education advocates to ensure that the digital inequities brought into sharp focus by the COVID-19 pandemic continue to be addressed. Common plan elements include ensuring that schools have reliable, high-speed internet (Strategy 1) and that educators have more than adequate digital resources (Strategy 3 and 4).

Strategic plans for the University of North Carolina system and the N.C. Community College System highlight increasing rural enrollment and online learning options. These focus areas require increased infrastructure to provide digital access in rural and underserved areas, as well as devices and skills for students. North Carolina's Independent Colleges and Universities also have a key role to play; four of the nine Connecting Minority Communities grantees referenced in the Assets section are independent colleges and leaders in promoting digital equity on and off their campuses. Several plans at the college or campus level more specifically focus on digital access and literacy. These institution-level plans will continue to be reviewed and incorporated as implementation plans are refined.

Health
Access to health care and health information are major components of this plan, as they are central to the ability of North Carolina residents to work, learn, and enjoy a high quality of life. This plan aligns with N.C. Department of Health and Human Services' plans to train and deploy digital navigators (Strategy 3); equip healthcare providers with the internet speed, devices, and skills to effectively provide telehealth services (Strategies 1-5); and increase the number of patients, especially, rural, disabled, and elderly, who have high-speed internet service, devices, and skills to connect to health care providers and manage their health care accounts online (Strategies 1-5).

The division also participates a core team member of the N.C. Agriculture Digital Alliance, a collaborative led by the N.C. Office of Rural Health which aims to create a space for partners to learn, share and collaborate to support digital inclusion and equity among the agricultural community inclusive of growers, agricultural workers and their families. As part of the planning process, the division hosted a pilot listening session to better understand the needs of the agricultural community and the organizations that serve them.

Delivery of Essential Services
Under this broad category this plan includes goals to ensure that residents have the necessary skills and access to avail themselves of services offered by state and local agencies, as well as goals to increase the availability and accessibility of essential online services (Strategy 2). These services include health care and health information, training for general education and specific occupations, communicating with family members who are incarcerated, applying for public benefits, and managing accounts.

This category also includes emergency management and disaster recovery. With a population of more than 10 million people living in a diverse geographical and topographical area, including a coastline susceptible to hurricanes and flooding, North Carolina is vulnerable to a wide variety of natural and technological hazards. The state recognizes the vital role of broadband infrastructure and device access to communication during and immediately following natural or manmade disasters (Strategies 1 and 5). Through the N.C. Department of Public Safety's

Division of Emergency Management, the state works closely with communications companies to ensure networks can deliver messages to residents.

Civic and Social Engagement
The plans highlighted below do not directly highlight increased civic or social engagement as an outcome of increasing digital access and inclusion. However, the plans to increase access, affordability, and adoption at home, to improve access in public spaces and anchor institutions, and to increase accessibility and inclusivity of online content will indirectly improve civic and social engagement (Strategies 1-5). North Carolinians will have more opportunities to access information about elections, learn about events in their community, access local news (and reduce the prevalence of news deserts), communicate with teachers and professors, and access knowledge that may be unavailable without high-speed internet.

While not a state agency - the NC Counts Coalition, a nonpartisan, nonprofit organization committed to building a healthy, just, and equitable North Carolina - is partnering with state agencies to advance digital equity to ensure a fair and accurate census in 2030 and beyond.

Links to Strategic Plans and Priorities
The following table includes some of the state agency strategic plans that can be enhanced by the expansion of North Carolina government services and digital equity efforts. These state agencies represent key partners for the division's success in implementing the strategies outlined in this plan.

Agency/ Division	Strategy/Plan/Program	Covered Populations
NCDHHS-Aging and Adult Services AdvaNCing Equity in Aging: A Collaborative Strategy for NC (2023-27)	Create a scalable, master digital health navigator trainer program responsible for supporting digital navigator services and community-based partners across the state that also will enhance the ability to deliver and sustain equitable, usable, and community-centered digital equity training for and with older North Carolinians. This program seeks to address multiple and overlapping "domains of livability" (AARP) for aging adults, including social participation, work and civic engagement, communication and information, access to state and local information about transportation options, and community health services.	Priority: Aging Individuals Other: All other covered populations
NCDHHS-Services for the Deaf and Hard of Hearing Telehealth Resource Center	Telehealth resource center that provides patients, healthcare providers, and American Sign Language interpreters the tools and resources that they need to have a successful telehealth appointment.	Priority: Individuals with disabilities (specifically those who are deaf and hard of hearing) Other: All other covered populations

NCDHHS-Health Benefits Home and Community Based Services (HCBS)	Special Assistance for In Home Assistance: ● ARPA funds available to purchase devices (laptops, cell phones, tablets) ● Purchase software to facilitate socialization. Remote Technology Support: ● Hotspots and devices to beneficiaries to increase access to HCBS. ● Provide technology to support telehealth visits to maintain community placement. ● Strengthen HCBS through collaboration utilizing provided internet	Priority: Aging individuals, individuals with disabilities Other: All other covered populations
N.C. Department of Public Instruction - Information Technology Plan	K-8 Digital Literacy ● Establish convenience contracts for local school systems and charter schools to purchase online digital literacy solutions. ● Collaborate with NCSU-Friday Institute and MCNC to improve student outcomes School Connectivity Initiative ● $32M with $4.5M recurring to ensure all public-school units have equitable access to secure, reliable, high-speed internet. ● Proof of concept initiative to find innovative solutions to close the connectivity gap for students. Digital Learning Initiative ● $2.3M to implement and adopt educator preparedness for digital learning, provide digital resources, and ensure technology access across all schools through transition to open license education materials	Priority: All covered populations (with a focus on youth in the K-12 school system)
N.C. Department of Transportation - Right of Way and Broadband Strategy	Leveraging Right of Way Strategic Plan ● Use controlled access right of way backbone networks to provide NCDOT with broadband connectivity for the deployment of information technology infrastructure ● Support state's digital equity goals through better use of tax revenues	Priority: All Covered populations
N.C. Department of Natural & Cultural Resources Support Rural Communities	Enable collaborative work in distressed counties ● Increase digital access for residents of rural or underserved areas through funding programs and local library projects ● Working with Hometown Strong to bridge work with NCDIT and NCDHHS	Priority: Rural Inhabitants Other: All Covered Populations
N.C. Department of Adult Correction-Prison Strategic Plan	Provide training/education to offenders ● Develop program curriculum for offender use of tablets ● Target offender needs with specificity	Priority: Incarcerated Individuals

		Other: All Covered Populations
N.C. Department of Public Safety-Juvenile Justice	National Center on Institutions and Alternatives Herbert J. Hoelter Vocational Training Center ● Include digital literacy training in programs ● Provide virtual training with online simulators	Priority: Incarcerated Individuals Other: All Covered populations
UNC System 2022 Strategic Plan	Goal 1: Increase access for underserved populations, including military-connected and rural students. Goal 3: make progress on equity gaps by race/ethnicity and income	Priority: Veterans, Rural inhabitants Other: All Covered populations
North Carolina Community College System 2022 Strategic Plan	Goal 2: Increase access and enrollment at North Carolina community colleges to meet the state's educational attainment goal and expand postsecondary opportunities. Goal 3: Provide resources inside and outside the classroom for all students to successfully enroll, persist, and complete a career program of study.	Priority: All Covered Populations
N.C. Department of Commerce	First in Talent: Strategic Economic Development Plan for the State of North Carolina (Goal 3 Strategy 10) ● Tactic 10.1: Support efforts to expand access and lower costs of at least 100:20 Mbps for more than 98 percent of North Carolina households ● Tactic 10.2 Improve awareness and enable North Carolinians to realize the benefits of high-speed internet through digital literacy and upskilling aimed at accessing the digital economy ● Tactic 10.3: Assist small businesses with managerial, workforce, and technical barriers to adopting internet-based technologies to enhance their operations.	Priority: All Covered Populations
Disaster Recovery Framework	The purpose of the North Carolina Disaster Recovery Framework (NCDRF) is to offer direction to the North Carolina Disaster Recovery Task Force in its mission to address the unmet needs of communities affected by a disaster. ● Recovery Support Function - Education: The development of digital learning products that allow students to continue their education while in interim housing outside their school district or while their school facility is closed.	Priority: All Covered Populations

SUSTAINING DIGITAL EQUITY IN NORTH CAROLINA

The goals, strategies and activities outlined above should all work together to build and strengthen a strong digital equity network (often described as an ecosystem) to meet digital needs of all covered populations. This network will be the backbone of the work, ensuring digital needs are met and that programs are sustainable long after Digital Equity Act funding has been spent. Below outlines key elements of a sustainability plan to ensure a healthy, robust digital equity network into the future.

Sustain a diverse, inclusive community of digital equity practitioners

- Continue to identify "assets", organizations that are meeting digital needs and providing resources. Publish an interactive online asset map and invest in regular updates.
- Continue to create opportunities to connect digital equity practitioners to each other for peer learning and collective impact.
    - Integration with government systems: Digital equity should be fully integrated into broader state and local government activities and strategic priorities beyond what has already been identified through this planning process.
    - Digital equity stakeholders: The work of advancing digital equity encompasses a broad range of stakeholders across numerous sectors. Stakeholders, like members of the Digital Equity and Inclusion Collaborative, should span diverse areas, including financial institutions, healthcare providers, educational institutions, and others, and should be encouraged and invited to participate in the ecosystem.
- Align programs and partners identified in the strategies above. The work of digital equity cannot be achieved in a vacuum. Collaboration and partnership between agencies and organizations must be prioritized throughout the implementation process.
    - Evaluate progress: Beyond the measures outlined above, evaluating progress and identifying what's working is vital. Any digital equity funding provided through the division should require evaluation of grantees including key performance indicators (already a requirement of the Digital Equity Grant program).

Build Capacity across the state to identify and meet local needs.

- Continue to support coalitions and planning teams (led by the Institute for Emerging Issues) at the local level to develop and implement digital inclusion plans and programs.
- Identify sustainable funding sources: A healthy, digital equity network requires funding. There are several approaches to funding this work that should be considered, which will contribute to the sustainability of the ecosystem. They include:
    - Braided funding: A significant opportunity lies in exploring funding for digital equity from various federal and state sources such as the Workforce Innovation and Opportunity Act and SNAP Employment and Training programs, among others.
    - Collaborative funding: By working together and sharing the financial burden among many members of the ecosystem, including the philanthropic, government, and corporate sectors, resources can be pooled to ensure reduced pricing (for devices as an example) and that digital needs are met. .
    - Digital equity fund: Drawing both in-state and out-of-state partners into the effort to ensure the sustainability of the ecosystem can allow for additional financial resources to support key functions. One recommended option is the creation of a digital equity fund. This fund could be established at and managed by a community foundation and could serve as a centralized destination for financial

support generated from individual, corporate, or philanthropic donors.

COORDINATION OF SOURCES OF FUNDS FOR IMPLEMENTATION

The Division of Broadband and Digital Equity was created in 2021 to serve as the statewide resource for broadband access, digital inclusion, and digital literacy initiatives the state leads. The Division serves as the lead administrative entity for both the BEAD and Digital Equity Act Planning and State Capacity Grant Programs. During the BEAD and digital equity plan development the Division coordinated activities, including in-person community engagement meetings, enhanced promotion of ACP, a workforce development plan, and approaches to address affordability. The BEAD and digital equity planning teams participated in coordination meetings to discuss alignment of objectives and programs and used a central document filing resource.

This Plan's Strategy 1 establishes an objective to align with the BEAD Five Year Plan and the Initial Proposal where plan objectives overlap on deployment, affordability, and community outreach objectives and strategies. The Implementation Plan section clarifies how the digital equity measurable objectives will align with and support other funded digital equity programs in the State. In addition, that section also uses findings from the asset inventory and stakeholder engagement to identify common initiatives, goals and gaps.

CONCLUSION

The Division of Broadband and Digital Equity is truly grateful for the time, expertise, and inspiration that thousands of North Carolinians put into this plan. The division learned from community members across the state through community input and the identification of assets, through dozens of public meetings, interviews, community-led research, and extensive public surveying. The division also benefited from the work of the many excellent local, regional, and state level plans reviewed.

Outreach efforts and research confirmed what many already believed: access to affordable, reliable, high speed internet service, and the devices and skills to connect to it, are essential for individual and community progress in North Carolina. The process of developing this plan also confirmed that most North Carolina residents know that they need and deserve digital equity, even if they may not have known the term. For students who must sit in coffee shops and fast-food restaurants for hours to use the internet to complete schoolwork; for homebound elders who could benefit from being able to confidently conduct business online; and for recently incarcerated men and women who are returning to a world where daily life requires a smartphone and digital literacy, a lack of digital equity could truly be the difference between success and failure. And because internet access and use are ubiquitous, people who don't have reliable access know that they're missing opportunities. What the state doesn't know is what is missing because some residents aren't connected?

This plan is a living document, meant to be revisited often and improved as new information becomes available. The division will convene partners regularly and survey residents several times to document progress. The division will share accomplishments and learnings with North Carolinians. The division will pursue the strategies described in this plan as though the future of all North Carolinians depends on it, because it does.

APPENDICES

Appendix A. Glossary of Terms

Digital Equity: Digital equity is a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.

Digital Inclusion: Digital Inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs). This includes five elements:

1. Affordable, robust broadband internet service;
2. Internet-enabled devices that meet the needs of the user;
3. Access to digital literacy training;
4. Quality technical support; and
5. Applications and online content designed to enable and encourage self-sufficiency, participation and collaboration.

Digital Navigator: Digital navigators are trusted guides who assist community members in internet adoption and the use of computing devices. Digital navigation services include ongoing assistance with affordable internet access, device acquisition, technical skills, and application support.

Community Anchor Institution: The division defines Community Anchor Institutions (CAIs) to mean a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization (including any public housing agency, HUD-assisted housing organization, or tribal housing organization), or community support organization that facilitates greater use of broadband service by covered populations.

NTIA: National Telecommunications and Information Administration, an agency of the United States Department of Commerce that are awarding the Digital Equity Act and Broadband Equity Access and Deployment (BEAD) funding.

FCC: Federal Communications Commission

ACP: The Affordable Connectivity program (ACP) is a federal program run through the FCC that reduces the cost on internet for eligible households by $30 per month and $75 per month on tribal lands.

Appendix B. Key Partnerships

This plan, and the rich data upon which it is based, would not be possible without the partners engaged during this process.

The William and Ida Friday Institute for Educational Innovation at North Carolina State University (The Friday Institute)
Two teams at the Friday Institute for Educational Innovation at NC State University were involved in supporting the development of the Digital Equity Plan. The Program Evaluation and Educational Research team led data collection and analysis efforts for the Digital Equity Survey, Asset Inventory Survey, and statewide listening sessions. They also provided ongoing data updates to NCDIT, the Core Team, and working groups throughout data collection and writing of the Digital Equity Plan. The Technology Infrastructure Lab led the efforts to create the Digital Equity Survey and related data dashboard.

North Carolina Central University (NCCU)
The division partnered with N.C. Central University (NCCU) to develop a comprehensive asset inventory for the state. NCCU utilized the National Digital Inclusion Alliance's asset survey as a baseline and updated it for these purposes. The division planned a statewide deployment utilizing anchor institutions and partner organizations from working groups.

Institute for Emerging Issues at North Carolina State University (IEI)
The division partnered with the Institute for Emerging Issues (IEI) to review all adopted and draft digital inclusion plans in North Carolina. The review consisted of a literature review of plans and associated asset maps published in the past year through IEI's BAND-NC program and interviews with planning leads for plans published prior to 2022. Interviews were conducted with digital inclusion leads of draft plans.

National Institute of Minority Economic Development (NIMED)
The Research, Policy and Impact Center (RPIC) of the National Institute of Minority Economic Development (NIMED) was engaged to produce this plan document, incorporating the research, public comments, and partner input gathered over a nine-month period by the organizations listed above. The production of this draft plan required the synthesis of the collected data and wisdom of partners with the institutional experience of NIMED in closing opportunity gaps for minorities and women for almost four decades.

Digitunity
Digitunity is a national nonprofit with a mission to make owning a computer possible for everyone. Digitunity was engaged to create a set of recommendations to ensure equitable device ownership for all North Carolinians, inclusive of availability, accessibility, and affordability.

Core Planning Team
This team represents anchor institutions, state government, local government and community-based organizations supporting digital inclusion and/or serving covered populations across the state. This group has been meeting bi-weekly since October 2022.

Name	Organization
Bruce Clark	Center for Digital Equity at Queens University of Charlotte
Christopher Campbell	Inlivian (Charlotte Housing Authority)
Sara Nichols	Land of Sky Regional Council
Merald Holloway	MDC Rural Forward
Kenny Sherin	N.C. Cooperative Extension
Cristina España	North Carolina Governor Roy Cooper's Office of Public Engagement, and Inclusion
Amanda Johnson and Jackie Haske	State Library of North Carolina
Mavis Hill	Tyrrell County Community Development Corporation
Lakisha Jordan	WinstonNet

Assets and Best Practices Working Group
These individuals advised the division on key elements of the Asset Inventory development including the deployment of the asset inventory survey.

Name	Organization
Sara Knapp	AARP
Angela Caraway	Caraway Foundation
Gwenn Weaver	Digital Durham
Martha Allman	Forsyth County Digital Equity Committee
Cari DelMariani	Kramden Institute
Bridget Pfifer	Living a Better Life
Leah Proctor	NC 211 (United Way of North Carolina)
Melanie Morgan	Neuse Regional Library System

Data and Barriers Working Group
These individuals advised the division on key elements of the Digital Equity Survey development including the deployment of the survey.

Name	Organization
Lillian Scott Lee	AARP
Natali Betancur	Center for Digital Equity
Ken Rogerson	Duke University, Sanford School of Public Policy
Adam Hill	Forsyth Futures
Shaun Glaze and Kathleen Perez	Inclusive Data Solutions
Kamela Heyward-Rotimi	Knowledge Exchange Research Group
Jocelyn Romina Santillán-Deras	N.C. Office of Rural Health
Lori Special	State Library of North Carolina
Tianca Crocker	UNC Charlotte

Listening Session Partners and Hosts

Working with MDC Rural Forward, the division identified organizations to host listening sessions. While the Friday Institute for Educational Innovation facilitated each session, hosts were responsible for recruiting individuals, providing space, food, and other accommodations as needed. Some organizations chose to host sessions on their own, while others served more of a coordination role and partnered with more local organizations to host the sessions.

MDC Rural Forward

MDC Rural Forward envisions healthier, more sustainable rural communities with increased capacity to solve their own health problems. The division partnered with MDC Rural Forward to help identify and provide support to organizations as listening session hosts.

The division conducted 23 listening sessions in every prosperity zone in North Carolina, reaching each covered population multiple times. The division engaged with a total of 259 North Carolina residents through these listening sessions.

Date	County	Location Name	Coordinating Partner	Number Attended	Covered Populations
6/23/23	Beaufort	Alpha Life	Disability Rights	10	Aging populations, racial/ethnic minority (Black and Native American), low income, people with special needs, veterans, rural areas
6/27/23	Halifax	ABC2	NC Counts Coalition	10	Aging populations. racial/ethnic minority (Black & Native American), people with special needs, rural areas
6/29/23	Robeson	American Indian Mothers	Disability Rights	12	Aging populations, racial/ethnic minority (Native American & Black), low income, incarcerated individuals, veteran, people with special needs, rural areas
7/9/23	Jackson	Vecinos	Hispanic Federation	11	Racial/ethnic minority (Hispanic/Latino), low-income, language barriers, people with special needs, low literacy levels, aging populations, rural areas, youth
7/13/23	Triangle/ Triad Blend	AMEXCAN	AMEXCAN	12	Racial/ethnic minorities (Hispanic/Latino)
7/17/23	Wilson	Seeds of Hope	AMEXCAN	12	low literacy, racial/ethnic minority (Hispanic/Latino), low income, language barrier

					(Spanish), individuals with special needs, veterans
7/18/23	Burke	Industrial Commons	Industrial Commons	13	Racial/ethnic minority (Hispanic/Latino, Asian or Asian American, Black), low income, language barrier, individuals with special needs, veteran, rural areas
7/19/23	Durham	Wilson Center for Science and Justice at Duke Law	OurJourney	12	Aging populations, ethnic/racial minority (Black, Native American), low income, LGBTQIA+, individuals with special needs, veterans, formerly incarcerated (100%)
7/20/23	Cumberland	The Enclave	NC Counts Coalition	5	Racial/ethnic minority (Hispanic/Latino, Black), low income, language barrier, individuals with special needs, veterans
7/24/23	Wake	Garner Rd. Community Center	NC Counts Coalition	8	Racial/ethnic minority (Black), low income, individuals with special needs, veterans
7/25/23	Columbus	Waccamaw Siouan Tribal Grounds	Disability Rights	7	Aging populations, ethnic/racial minority (Native American), low income, individuals with special needs, rural areas
7/27/23	Mecklenburg / Sampson Blend	Hispanic Federation	Hispanic Federation	12	Aging populations, racial/ethnic minority (Black, Native American), low income, individuals with special needs
7/28/23	Pitt/Greene	James D Bernstein Community Health Center	AMEXCAN	9	Low literacy, racial/ethnic minority (Hispanic/Latino), low income, language barrier (Spanish), individuals with special needs, veterans
7/31/23	Anson	Caraway Foundation	NC Counts Coalition	12	Aging populations, racial/ethnic minority (Black), low income, veterans, currently incarcerated, rural areas

8/2/23	Pasquotank	Sunshine Station	Disability Rights	11	Aging, low-income, racial ethnic minority (Black, Other), Language Barrier (Spanish), individuals with special needs, veterans, formerly incarcerated, rural areas
8/3/23	Henderson	Western NC Worker Center	Hispanic Federation	10	Low literacy, racial/ethnic minority (Hispanic/Latino). low income. language barrier (Spanish), LGBTQIA+, individuals with special needs, rural areas
8/12/23	Forsyth	Other Suns	NC Counts Coalition	18	Aging individuals, racial/ethnic minorities (Black, Native American, Pacific Islander, Hispanic/Latino), low income, language barrier, LGBTQIA+, individuals with disabilities. veterans
8/21/23	Stanley	Glory Beans Coffee Shop	OurJourney	13	Low literacy, racial/ethnic minority (Native American, Black, and Pacific Islander), low income, language barrier, LGBTQIA+, individuals with disabilities, formerly incarcerated, aging, rural areas
8/29/23	Mecklenburg	OurBridge	Hispanic Federation	20	Racial/ethnic minorities, refugees (Afghan and Burmese), low income, language barrier
8/30/23	Alamance	Valores	Hispanic Federation	8	Low literacy, racial/ethnic minority (Hispanic/Latino), low income, language barrier, individuals with disabilities, rural areas
9/12/23	Tyrell	Tyrrell County CDC	Tyrrell County CDC	6	Racial/ethnic minority (Black), aging, rural areas, formerly incarcerated
9/18/23	Pamlico	Youth Navigating Toward Opportunity	Youth Navigating Toward Opportunity	15	Youth, aging populations, low literacy, racial/ethnic minorities (Black, Hispanic/Latino, Native

					American, Pacific Islander), low income, rural areas
9/19/23	Wilkes	NC Tech Paths	NC Tech Paths	13	Racial/ethnic minority (Black). low income. individuals with disabilities, rural areas, aging, language barrier, LGBTQIA+, special needs, veterans, formerly incarcerated, rural areas

N.C. Telehealth Network Association
The division partnered with the N.C. Telehealth Network Association's Healthcare Broadband Coalition to conduct conversations with telehealth partners around the state. Healthcare providers from the following systems were included in the conversations:

- UNC Chapel Hill Healthcare
- Albemarle Regional Health Services
- Kinston Community Health
- Pearson Family Medical Center
- ECU-Health
- Daymark Recovery Services
- Fellowship Hall

Appendix C. Research Questions and Related Data Sources

Key Questions

1. **Availability.** *What digital equity resources, programs, plans, and organizations currently exist in North Carolina?*
    a. To what extent do digital equity resources, programs, plans, and strategies exist in North Carolina related to:
        i. Availability of affordable broadband?
        ii. Accessible and inclusive public resources and services?
        iii. Digital literacy and online security support?
        iv. Availability and affordability of devices and tech support?

2. **Quality.** *To what extent do the existing digital equity resources, programs, plans, and organizations meet the needs of their community?*
    a. How well do existing resources and services meet the needs of the communities where they are offered?
    b. To what extent do the available resources support covered populations' economic and workforce development, educational outcomes, health outcomes, civic and social engagement, and delivery of other essential services?

3. **Barriers.** *What barriers to digital equity and inclusion exist that are faced by covered populations in North Carolina?*
    a. What specific barriers does each covered population face?
    b. How are communities and community members able to overcome those barriers to digital equity and inclusion?

4. **Improvement.** *How can North Carolina improve its digital equity offerings across the state?*
    a. What needs related to digital equity and inclusion do covered populations have in communities across North Carolina?
    b. How feasible is it to meet the needs of covered populations?
    c. What digital equity and inclusion resources, programs, plans, and organizations need to be established to meet the needs of communities in North Carolina?
        i. Specifically for the Covered Populations

5. **Replication and Scale.** *What are the most effective and efficient ways to replicate and scale the digital equity resources, programs, plans, and organizations to meet the needs of all North Carolinians?*
    a. What practices could be replicated and scaled to other areas of the state?
    b. What are the best strategies and platforms for sharing information about digital equity offerings across the state?
    c. What strategy should NCDIT use to maintain and sustain these resources, programs, plans, and organizations over time?

Evaluation Questions	Data Sources						
	Asset Inventory			Review of Digital Inclusion Plans		State Survey	Listening Sessions
	Content Analysis	Survey	Interviews	Lit Review	Interviews		
Availability. *What digital equity resources, programs, plans, and organizations currently exist in North Carolina?*							
Resources, programs, plans, and strategies	X	X	X	X	X	?	X
Quality. *To what extent do the existing digital equity resources, programs, plans, and organizations meet the needs of their community?*							
Meet needs of covered populations		X	X		X	X	X
Support populations' outcomes, engagement, and services			X		X		X
Barriers. *What barriers to digital equity and inclusion exist that are faced by covered populations in North Carolina?*							
Barriers for each covered population		X	X	X	X	X	X
How do they overcome barriers						X	X
Improvement. *How can North Carolina improve its digital equity offerings across the state?*							
Covered populations' needs		X	X	X	X		X
Feasibility of meeting needs	X				X		X
Needed resources, programs, plans and organizations	X	X	X	X	X	X	X
Replication and Scale. *What are the most effective and efficient ways to replicate and scale the digital equity resources, programs, plans, and organizations to meet the needs of all*							

North Carolinians?							
What practices can be replicated and scaled	X	X	X	X	X		X
Best strategies and platforms to share information	X	X	X	X	X		
Strategies to sustain efforts over time	X	X	X	X	X	X	X

Appendix D. Digital Equity Survey

Methodology

The N.C. Digital Equity Survey was designed using guidance from NDIA. Researchers modified the instrument created by NDIA which identified barriers and needs of the general population as well as covered populations for each of the key barriers to digital access: access to and affordability of high-speed internet, accessibility and inclusivity of online public resources, digital literacy, cybersecurity and privacy, availability and affordability of devices and technical support. The instrument was vetted among digital inclusion experts from across the state and revised based on their feedback. The survey instrument was created in Qualtrics, an online survey tool where users can build and distribute surveys, and printable versions were also created. Each was available in the top eight languages in which are spoken less than fluently in North Carolina (See below).

The survey was distributed using a snowballing approach where the division first shared the online survey and access to printable copies with partner organizations across the state involved in digital inclusion efforts (e.g., libraries, department of health and human services, senior centers, community organizations, churches, etc.) and asked that they share the survey more broadly within their communities. Language, PDFs, and links to the online survey were provided to make sharing the survey easier for partners. The division also provided printed paper copies with self-addressed, stamped envelopes when requested for these organizations to share printed surveys directly with the public. The survey opened on April 20, 2023, and data were collected through the end of October. The plan is to deploy the survey at two additional timepoints during the implementation phase of the grant to measure progress towards the state's digital equity goals.

Analysis of the survey included an analysis of overall results as well as an analysis by subpopulation. Other breakout reports were used to identify the specific needs of unique populations beyond covered populations (e.g., the needs of individuals that attended listening sessions and the LGBTQIA+ community). Further analysis will examine trends in the data at different time points.

See Linked Instrument

Appendix E. Asset Inventory

The N.C. Asset Inventory Survey was developed based upon recommendations from NDIA. North Carolina's asset inventory survey is a modified version of their instrument. The survey was created in Qualtrics and uses survey logic to show only applicable questions. Specifically, organizations were only given blocks of questions based on the types of digital inclusion services they provided. See a survey preview here.

Methodology
The goal of the N.C. Asset Inventory was not to identify a comprehensive list of all digital assets in the state, but rather to develop a baseline of known partner organizations in each of the 100 North Carolina counties. Developing a comprehensive list of digital assets will be a key part of program implementation and will consist of very targeted analysis of programs and resources in each North Carolina county for each of the main barriers to digital inclusion: access to and affordability of high-speed internet, accessibility and inclusivity of online public resources, digital literacy, cybersecurity and privacy, availability and affordability of devices and technical support.

The first phase of the asset inventory data collection consisted of a content analysis of all currently submitted digital inclusion plans. These plans were carefully reviewed by a team of graduate students from NC State University to identify all organizations identified within the digital inclusion plans that provide digital services and resources within their local communities. These organizations served as the initial contacts for survey distribution.

With guidance from NDIA, an asset inventory survey was created to identify all the potential programs and resources available across North Carolina. The survey aimed to identify what digital resources and organizations exist and what is needed in communities across the state. This survey was vetted by digital inclusion experts across the state, and their feedback was used to modify the instrument to identify and meet the needs of North Carolina. It was then distributed to an initial list of organizations identified through the digital inclusion plan content analysis. Using a snowballing approach, the division then asked these organizations to share the survey more broadly with other known organizations. Graduate students also conducted a content analysis of potential resources (e.g., local libraries, community organizations, senior centers, prisons) to determine if they offered digital inclusion services. The division also contacted over 100 nonprofit organizations and gathered additional survey data from senior centers.

For Phase 2, staff and graduate students at N.C. Central University (NCCU) conducted a series of in-depth interviews based on the results of the content analysis and survey to determine which digital equity offerings are working well within the state as well as which need improvement. They also worked to identify what features are most important in a publicly available searchable database which will be developed to share the digital assets with the public. They also worked to identify what gaps exist in the state.

Phase 3 will include the development of a searchable digital equity asset tool, which will allow the public to find resources and offerings in their communities. Additionally, a report will be provided summarizing the planning and implementation, key findings and recommendations for improving digital equity services in the state.

See Linked Instrument

Appendix F. Listening Sessions

Methodology
To gather more in-depth information about the specific needs of diverse communities and covered populations across the state, NCDIT partnered with Rural Forward and the Friday Institute to identify sites and community members and conduct a series of 23 listening sessions (19 in-person and four virtual) across the state to capture a representative sample of the needs of North Carolina residents, including all covered populations, related to digital equity and inclusion. Specifically, the listening sessions were used to help identify the best ways to overcome barriers to digital equity faced by covered populations and assess the availability and affordability of fixed and wireless broadband technology, digital literacy online security support, and the availability and affordability of tech devices and support in the community. Additionally, the division examined how these barriers affect covered populations' economic and workforce development goals, plans, and outcomes; educational outcomes; health outcomes; civic and social engagement; and delivery of other essential services. The listening sessions largely focused on how best to overcome the identified barriers to replicate and scale best practices.

To ensure the division captured the voices and needs of residents, researchers worked with DIT and Rural Forward to identify several key partners (e.g., Hispanic Federation, Disability Rights, AMEXCAN, NC Counts, OurJourney, The Industrial Commons, and other local and statewide organizations) to identify representative locations and grassroots organizations to host the listening sessions. The division also utilized the connections and trusted relationships within their communities to enlist these organizations in bringing together small groups of community members (8-12 individuals) to share their experiences, needs, and assets as they relate to digital equity and inclusion. While this approach was somewhat cumbersome, it truly ensured that the voices of North Carolinians were heard and reflected into the plan that was created to address their needs.

The instrument developed was created as a semi-structured protocol. Largely, the groups drove conversations, and facilitators ensured that they touched upon components of digital equity and inclusion that were relevant to their community. While this instrument was used as a guiding tool, the listening sessions provided much richer nuance which supported many of the recommendations that went into this plan.

See Linked Instrument

Appendix G: Deeper Analysis of Barrier and Needs by Covered Population

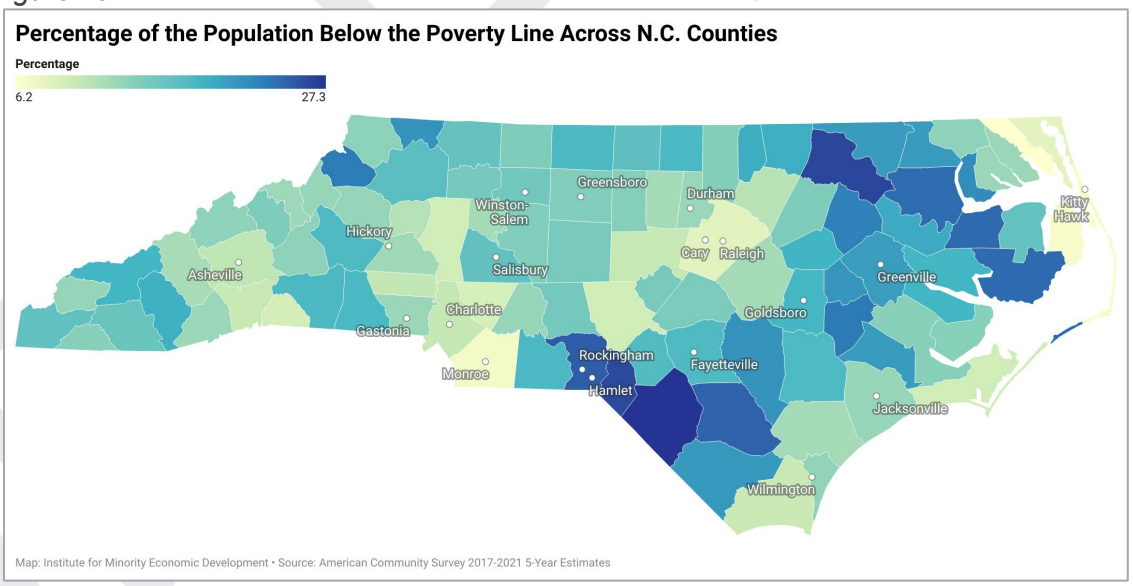
Appendix H: Covered Population Demographic Summaries

Poverty: Individuals who live in covered households (households with income no greater more than 150% percent of federal poverty threshold)

Shares

The average poverty rate among the 100 counties in North Carolina is around 15.9%. Counties with the highest shares of their population with incomes below the federal poverty line tend to be in the southern and eastern parts of the state. Robeson County has the highest poverty rate among counties in North Carolina at 27.3%. Halifax County has the second highest poverty rate at 26.2%. Camden County has the lowest poverty rate among counties in North Carolina at 6.2%. Dare County has the second lowest poverty rate at 6.8%.

Figure 1a

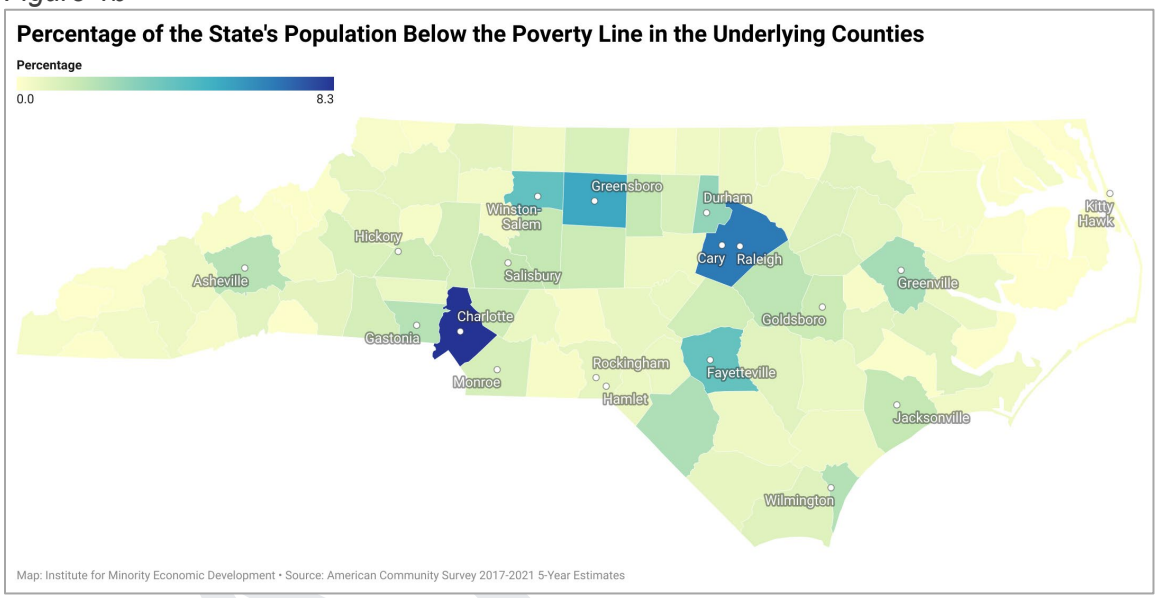


- Link to live interactive map: https://datawrapper.dwcdn.net/rA7Pf/3/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of individuals with incomes below the federal poverty line. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of individuals with incomes below the federal poverty line. Mecklenburg County has around 8.3% of the state's total, while Wake County has around 6.7% of the state's total. Tyrrell County only has around 0.03% of the states total, while Camden County has only around 0.05%.

Figure 1b



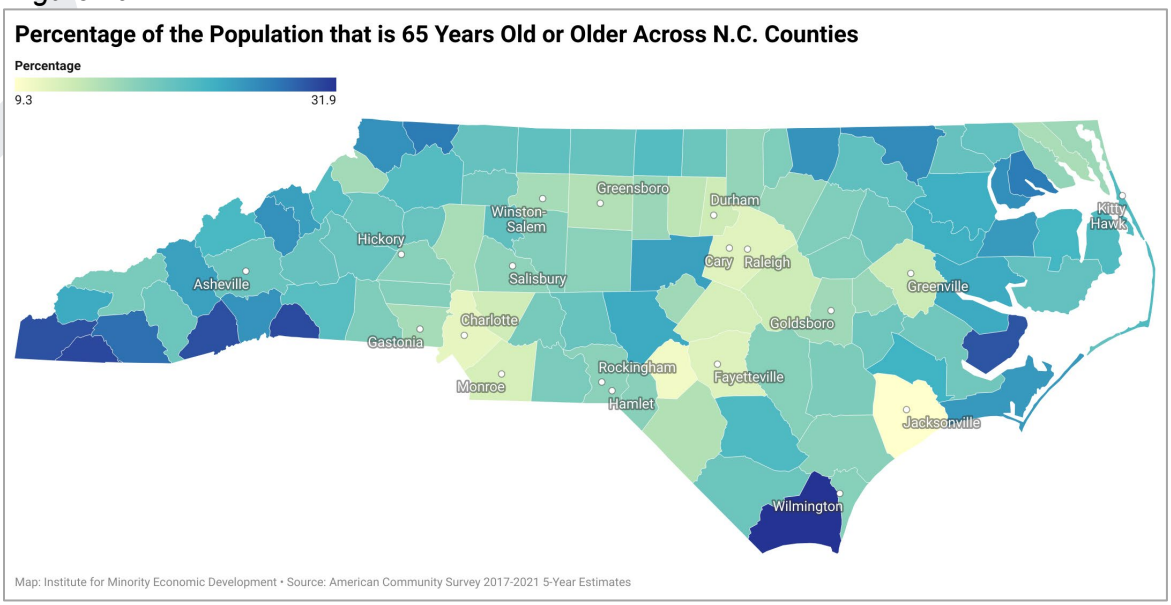
- Link to live interactive map: https://datawrapper.dwcdn.net/bE6s9/1/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Aging individuals

Shares

The average percentage of the population that is 65 or older among the 100 counties in North Carolina is around 20.0%. Counties with the highest shares of their population at least 65 years old tend to be in the western parts of the state. Brunswick County has the highest percentage in North Carolina at 15.2%, while Clay County has the second highest at 17.9%. Onslow County has the lowest percentage among counties in North Carolina at 9.3%, while Hoke County has the second lowest percentage 18.8%.

Figure 2a



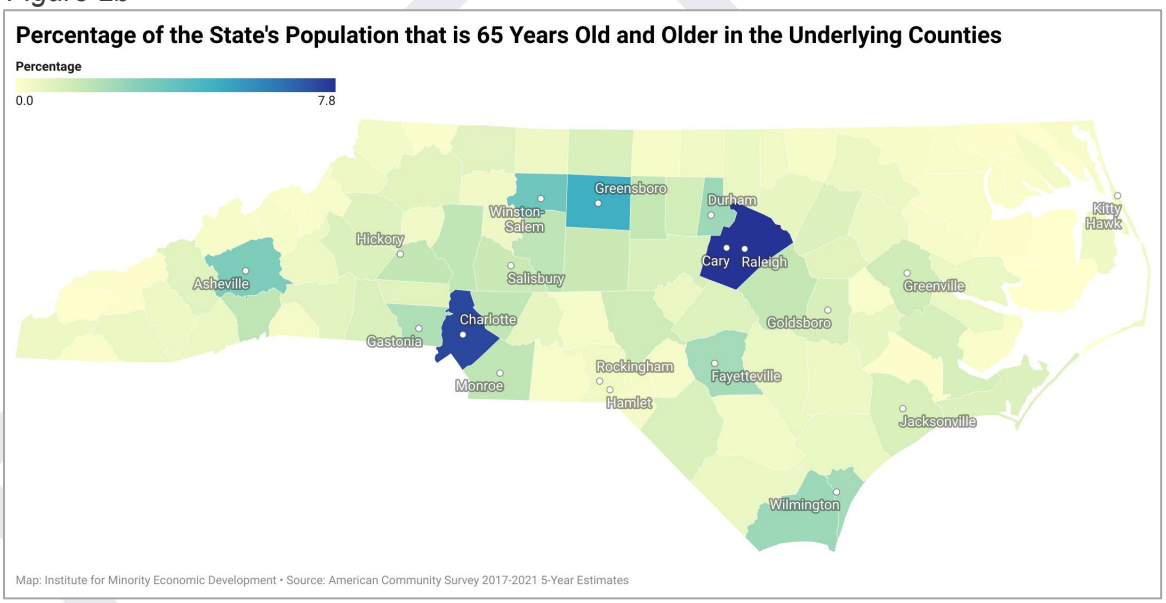
- Link to live interactive map: https://datawrapper.dwcdn.net/5WVGj/3/

- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of aging individuals (65 and up). Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of aging individuals. Wake County has around 7.8% of the state's total, while Mecklenburg County has around 7.4% of the state's total. Tyrrell County only has around 0.05% of the states total, while Hyde County has only around 0.06%.

Figure 2b



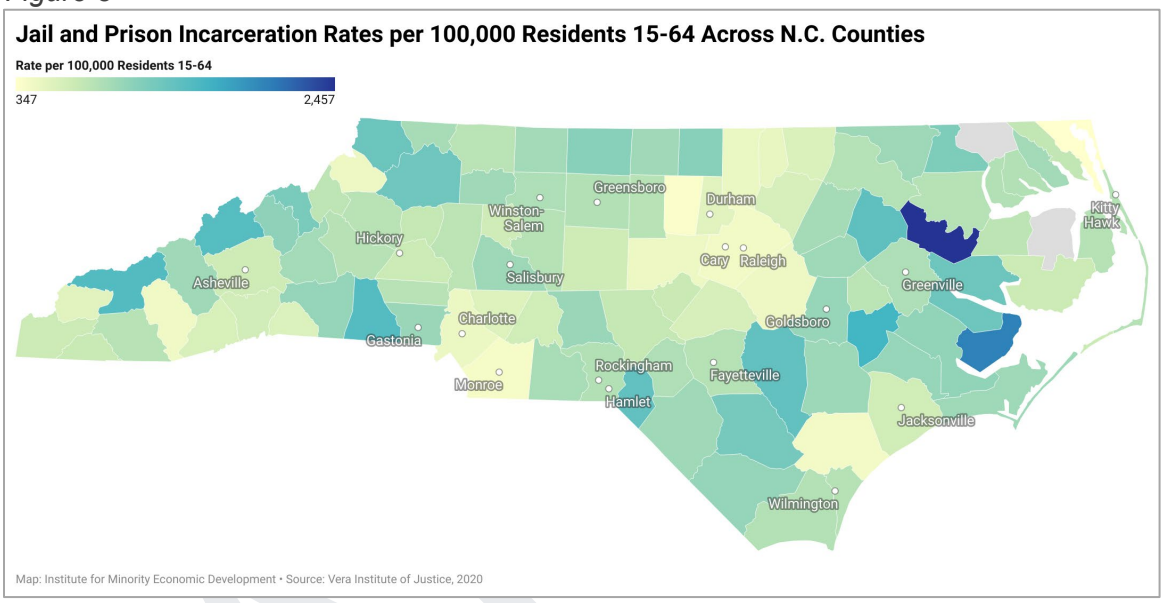
- Link to live interactive map: https://datawrapper.dwcdn.net/EHd6j/3/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Incarcerated individuals, other than individuals who are incarcerated in a federal correctional facility

Rates

The average incarceration rate among the 100 counties in North Carolina is around 917 per 100,000 people (between 15-64 years old). Martin County has the highest rate in North Carolina at 2,457 per 100,000, while Pamlico County has the second highest rate at 2,011 per 100,000. Currituck County has the lowest rate among counties in North Carolina at 347 per 100,000, while Orange County has the second lowest rate 383 per 100,000.

Figure 3

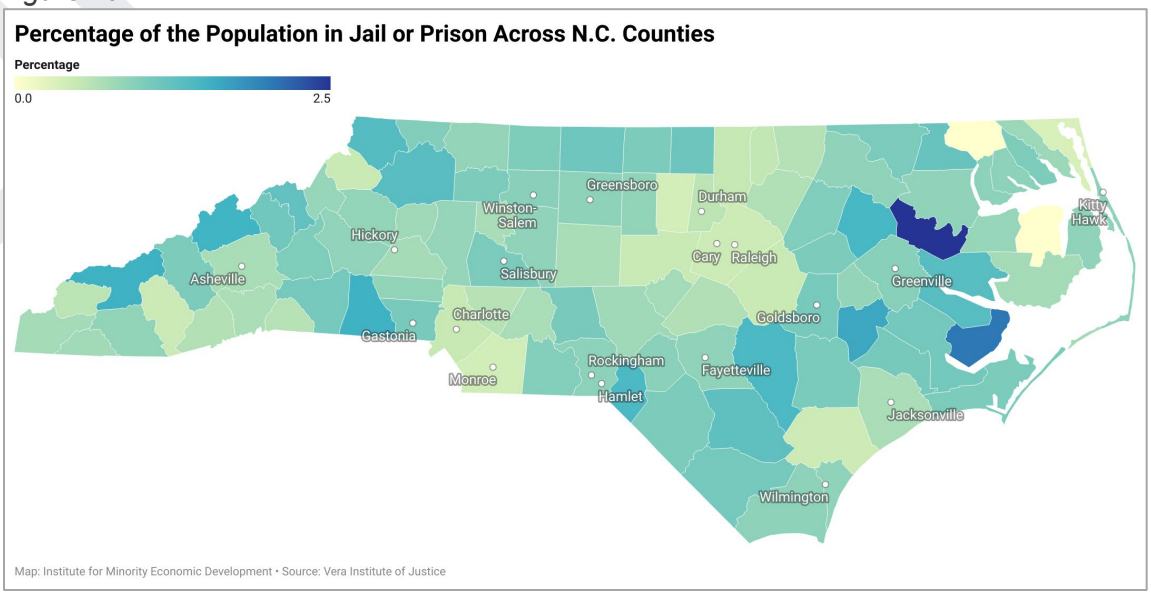


- Link to live interactive map: https://datawrapper.dwcdn.net/8pmze/2/
- Data Source: Vera Institute of Justice
- Downloaded from: Vera Institute of Justice

Share

The average percentage of the population that is incarcerated among the 100 counties in North Carolina is less than 1% at around 0.9%. Martin County has the highest percentage in North Carolina at 2.5%, while Pamlico County has the second highest at 2.0%. Currituck County has the lowest percentage among counties in North Carolina at 0.3%, while Orange County has the second lowest percentage 0.4%.

Figure 4a

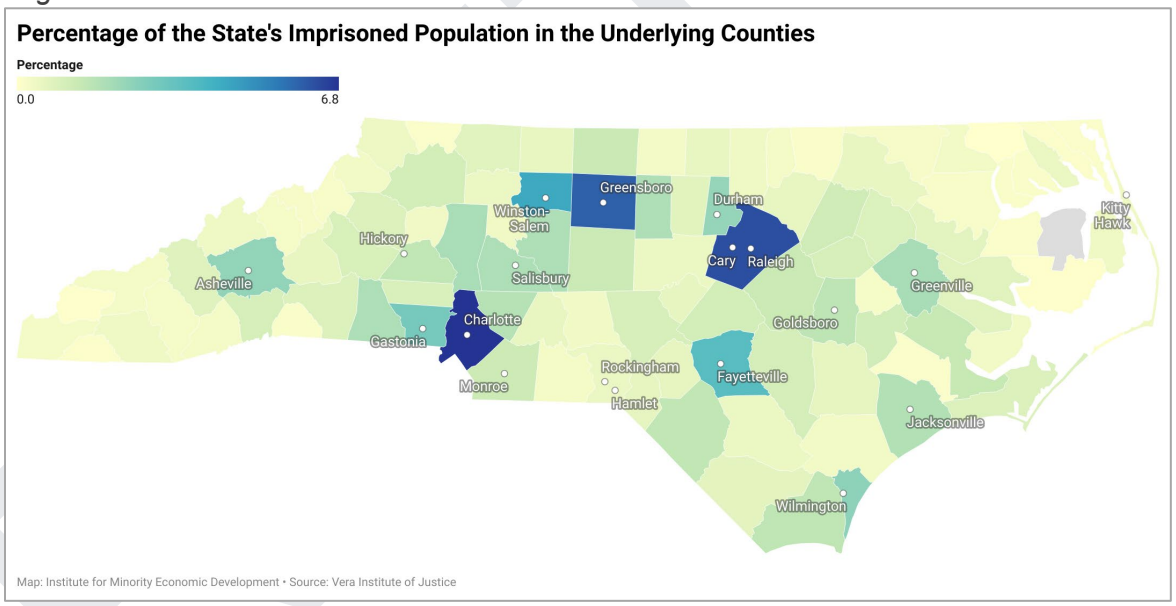


- Link to live interactive map: https://datawrapper.dwcdn.net/7K5pi/3/
- Data Source: Vera Institute of Justice; 2020 Decennial Census
- Downloaded from: Vera Institute of Justice; Integrated Public Use Microdata Series National Historical Geographic Information System

Cluster

The average county in the state contains around 1% of the entire state's population of imprisoned individuals. Counties that contain large cities, like Mecklenburg County, Wake County, and Guilford County tend to have the highest share of the state's total population of imprisoned individuals. Mecklenburg County has around 6.8% of the state's total, while Wake County has around 6.3% of the state's total. Hyde County only has around 0.04% of the state's total, while Graham County has only around 0.06%.

Figure 4b



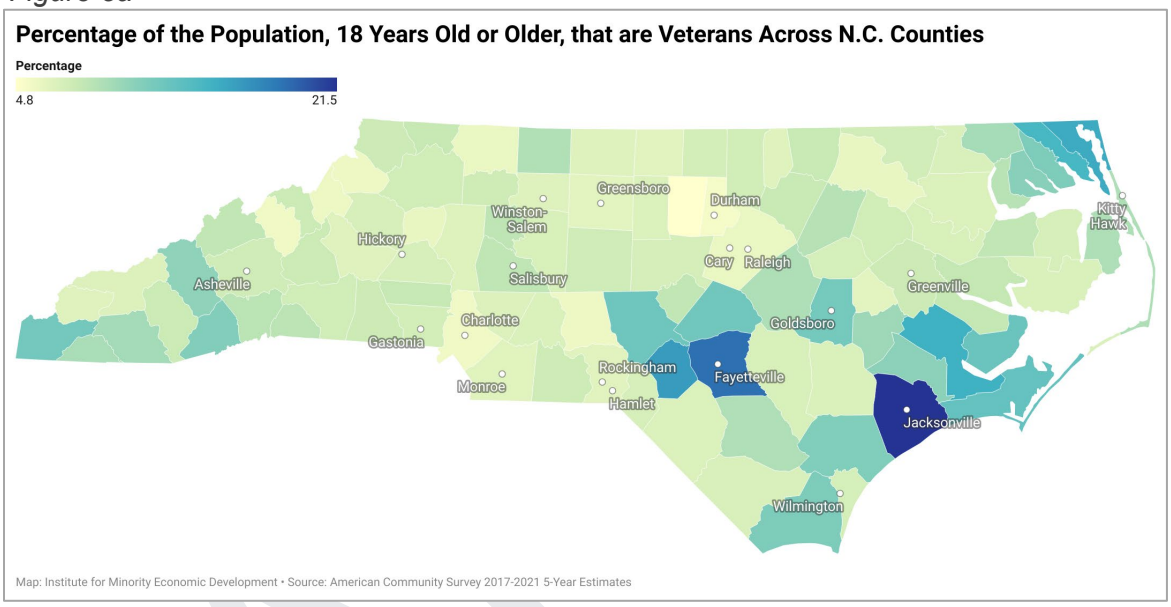
- Link to live interactive map: https://datawrapper.dwcdn.net/BQrw5/3/
- Data Source: Vera Institute of Justice; 2020 Decennial Census
- Downloaded from: Vera Institute of Justice; Integrated Public Use Microdata Series National Historical Geographic Information System

Veterans

Shares

The average percentage of the civilian population (18 and up) comprised of veterans among the 100 counties in North Carolina is around 8.6%. Counties with the highest shares of veterans tend to be located along the coast, especially the southeastern counties along the coast. Onslow County has the highest percentage in North Carolina at 21.5%, while Cumberland County has the second highest at 18.8%. Orange County has the lowest percentage among counties in North Carolina at 4.8%, while Durham County has the second lowest percentage 5.4%.

Figure 5a

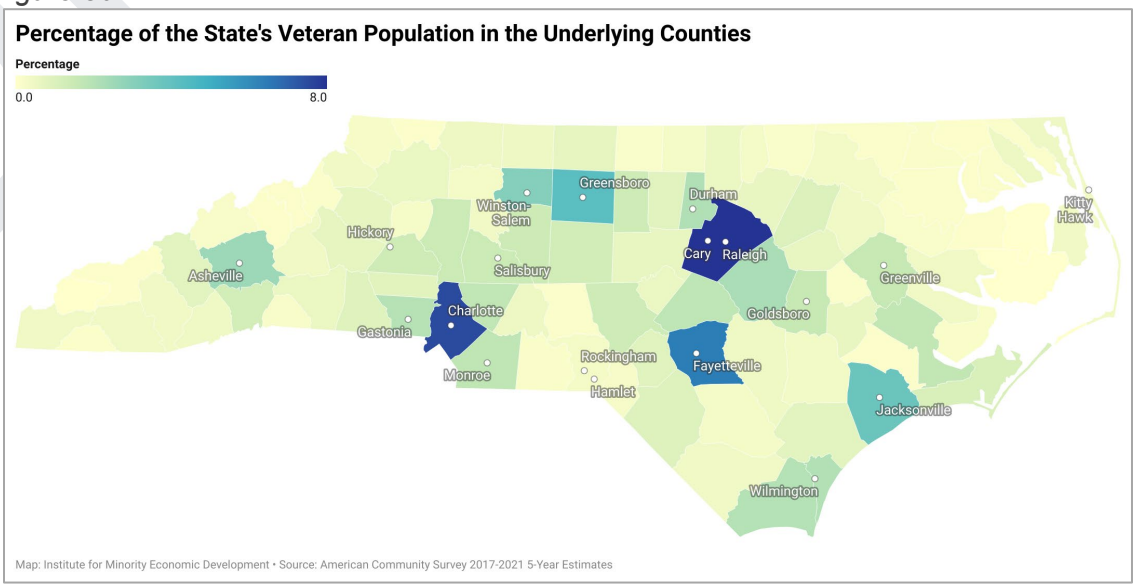


- Link to live interactive map: https://datawrapper.dwcdn.net/NA2zx/4/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of veterans. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of veterans. Wake County has around 8.0% of the state's total, while Mecklenburg County has around 7.6% of the state's total. Tyrell County only has around 0.03% of the state's total, while Hyde County has only around 0.04%.

Figure 5b



- Link to live interactive map: https://datawrapper.dwcdn.net/uhS5r/3/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

LGBTQIA+

The division continues to seek reliable and recent data sources on LGBTQIA+ residents in North Carolina. The division recognizes it is a distinct part of the state's population that has specific needs related to digital equity, particularly related to employment opportunities, healthcare, and connecting to services and community via the internet.

According to the Williams Institute at the UCLA School of Law, a think tank and advocacy organization focused on LGBT people nationwide, approximately 4%, or 428,000, North Carolinians are LGBT. In racial and ethnic composition and educational attainment, the LGBT community mirrors that of the state population as a whole.

Some notable demographic findings include:

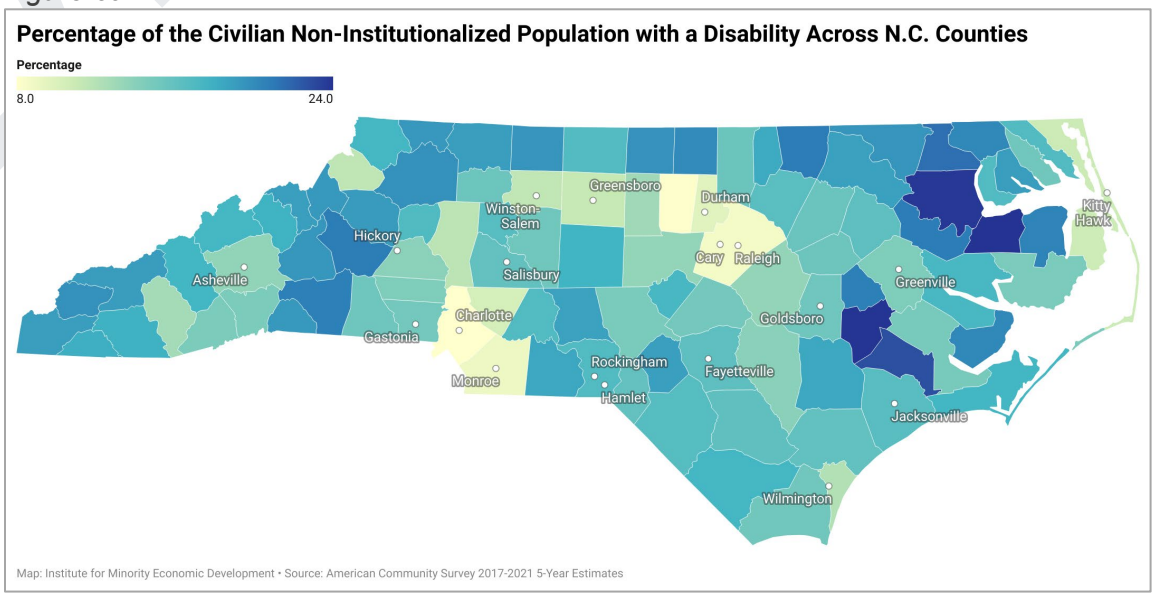
- Higher indicators of socioeconomic distress: LGBT residents of North Carolina are more likely to be unemployed, food insecure, uninsured, and earning less than $24,000 per year than non-LGBT residents.
- High proportion of females: Self-identified females make up 61% of North Carolina's LGBT population, versus 51% of the total population being female, according to the 2020 census.
- LGBT parents: 26% of LGBT adults in North Carolina are raising children.

Individuals with disabilities

Shares

The average percentage of the civilian non-institutionalized population with a disability among the 100 counties in North Carolina is around 16.6%. Counties with the highest shares of the population with a disability tend to be located along the coast in the northeast. Washington County has the highest percentage in North Carolina at 24.0%, while Lenoir County has the second highest at 23.9%. Mecklenburg County has the lowest percentage among counties in North Carolina at 8.0%, while Orange County has the second lowest percentage at 8.1%.

Figure 6a



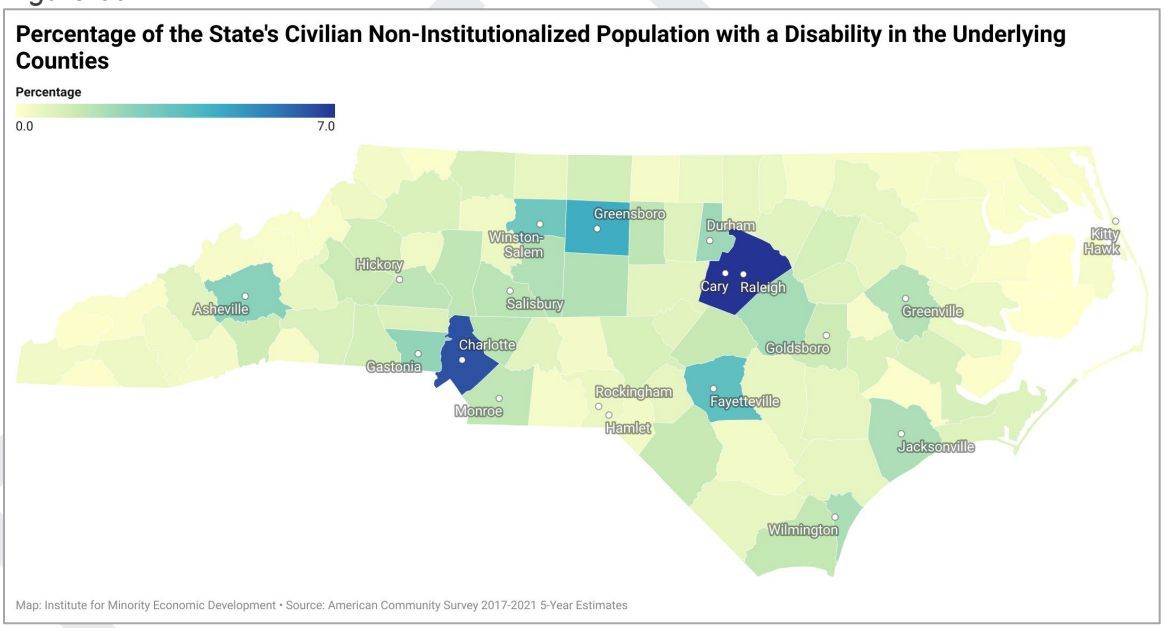
- Link to live interactive map: https://datawrapper.dwcdn.net/ApV7k/6/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021

- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of people with disabilities. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of individuals with a disability. Wake County has around 7.0% of the state's total, while Mecklenburg County has around 6.5% of the state's total. Tyrrell County only has around 0.04% of the states total, while Hyde County has only around 0.05%.

Figure 6b



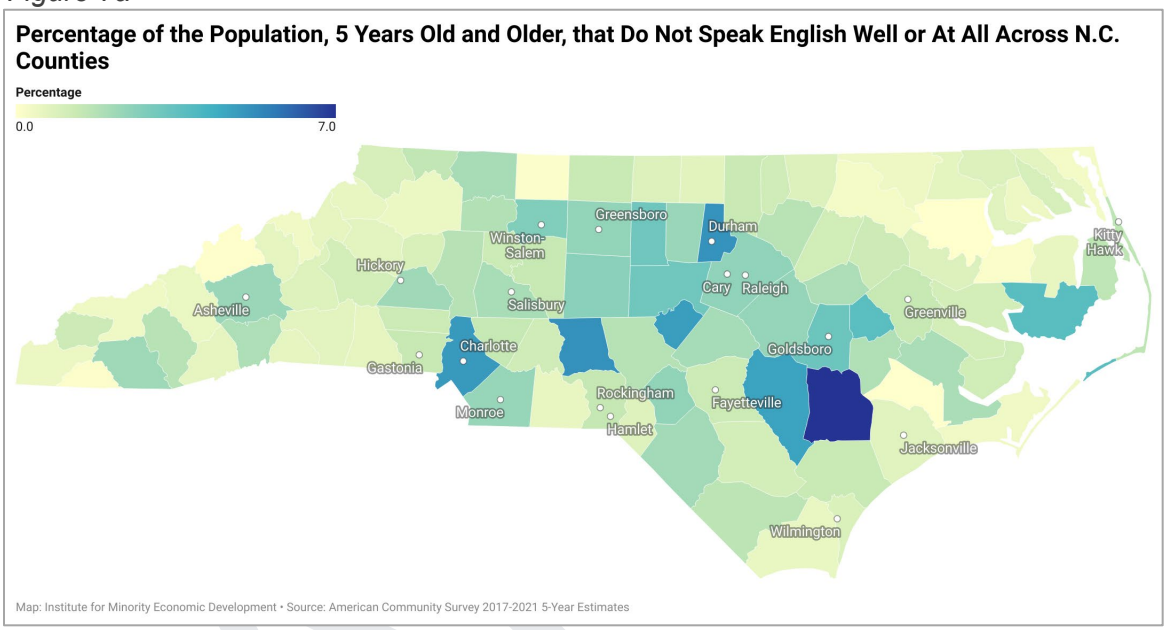
- Link to live interactive map: https://datawrapper.dwcdn.net/X2qWi/7/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

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

Share

The average percentage of the population (at least 5 years old) who do not speak English among the 100 counties in North Carolina is around 1.5%. Counties with the highest shares of the population who do not speak English well tend to be located in counties toward the central part of the state. Duplin County has the highest percentage in North Carolina at 7.0%, while Montgomery County has the second highest at 5.1%. Bertie County has the lowest percentage among counties in North Carolina at 0.02%, while Jones County has the second lowest percentage 0.04%.

Figure 7a

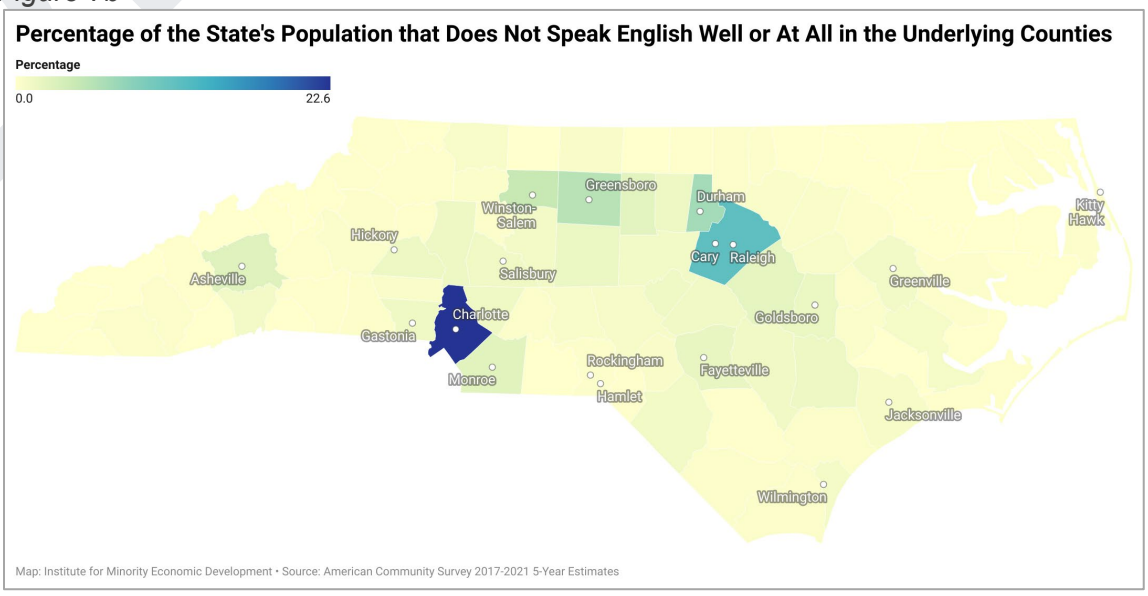


- Link to live interactive map: https://datawrapper.dwcdn.net/OtB80/4/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of people who do not speak English well. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the states total population of individuals who do not speak English well. Mecklenburg County has around 22.6% of the state's total, while Wake County has around 11.7% of the state's total. Bertie County only has around 0.001% of the states total, while Hyde County has only around 0.002%.

Figure 7b



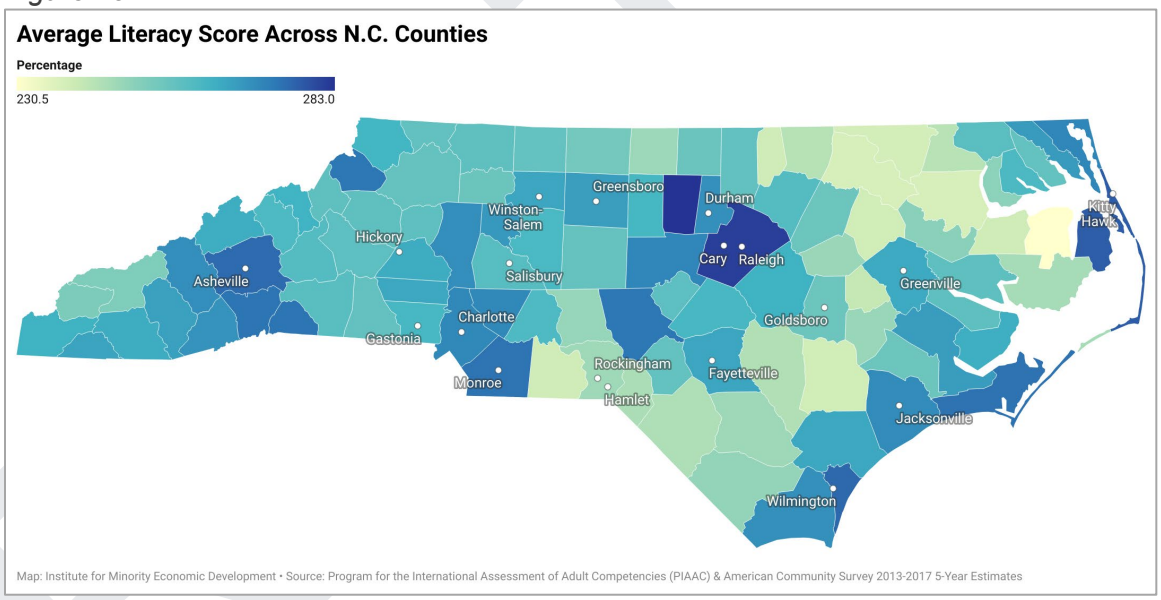
- Link to live interactive map: https://datawrapper.dwcdn.net/m51uk/3/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021

- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Score

The average literacy score among the 100 counties in North Carolina is around 258.5. Counties with the lowest scores tend to be in counties toward the eastern and southeastern part of the state. Orange County has the highest score in North Carolina at 283.0, while Wake County has the second highest at 281.4. Tyrell County has the lowest score among counties in North Carolina at 230.5 while Halifax County has the second lowest at 238.

Figure 7c



- Link to live map: https://datawrapper.dwcdn.net/lnxP7/1/
- Data Source: Program for the International Assessment of Adult Competencies (PIAAC); American Community Survey 5-Year Estimates
- Downloaded from: Institute of Education Sciences' (IES) National Center for Education Statistics (NCES)

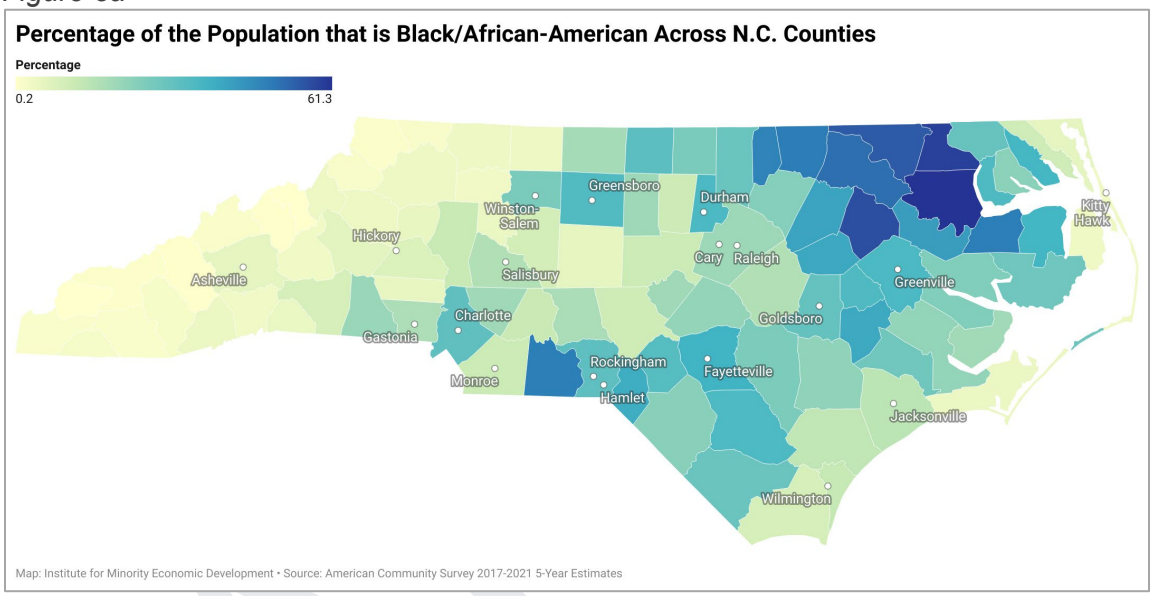
Individuals who are members of a racial and/or ethnic minority group

Black Population

Share

The average percentage of the population comprised of Black residents among the 100 counties in North Carolina is around 20.0%. Counties with the highest shares of the population comprised of Black residents tend to be in counties towards the northeastern corner of the state. Bertie County has the highest percentage in North Carolina at 61.3%, while Hertford County has the second highest at 59.1%. Graham County has the lowest percentage among counties in North Carolina at 0.17%, while Mitchell County has the second lowest percentage 0.30%.

Figure 8a

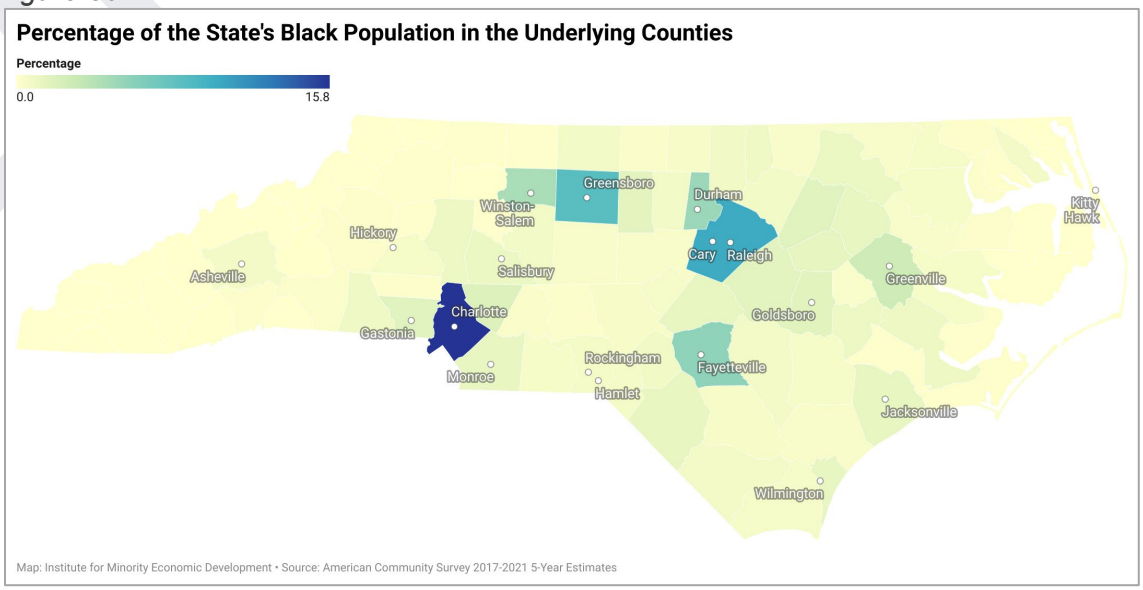


- Link to live interactive map: https://datawrapper.dwcdn.net/6vJ72/8/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of Black residents. Counties that contain large cities, like Mecklenburg County, Wake County, and Guilford tend to have the highest share of the state's total population of Black residents. Mecklenburg County has around 15.8% of the state's total, while Wake County has around 10.1% of the state's total. Graham County only has around 0.001% of the states total, while Hyde County has only around 0.002%.

Figure 8b



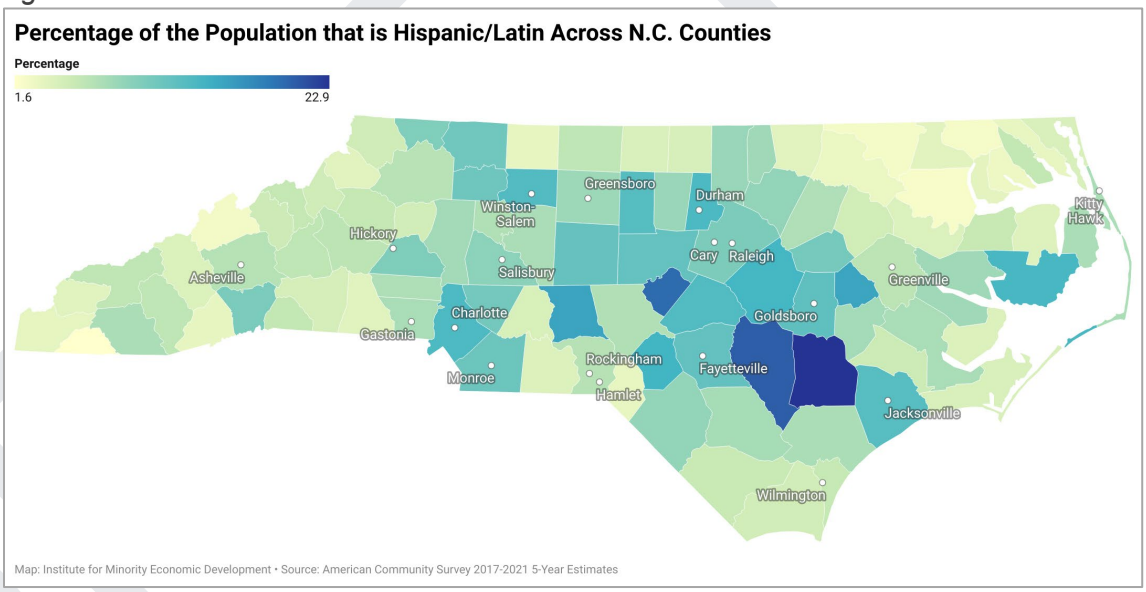
- Link to live interactive map: https://datawrapper.dwcdn.net/In8to/4/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Hispanic Population

Share

The average percentage of the population comprised of Hispanic residents among the 100 counties in North Carolina is around 7.7%. Counties with the highest shares of the population comprised of Hispanic residents tend to be in counties towards the southeastern corner of the state. Duplin County has the highest percentage in North Carolina at 22.9%, while Sampson County has the second highest at 20.5%. Clay County has the lowest percentage among counties in North Carolina at 1.6%, while Bertie County has the second lowest percentage 2.2%.

Figure 9a

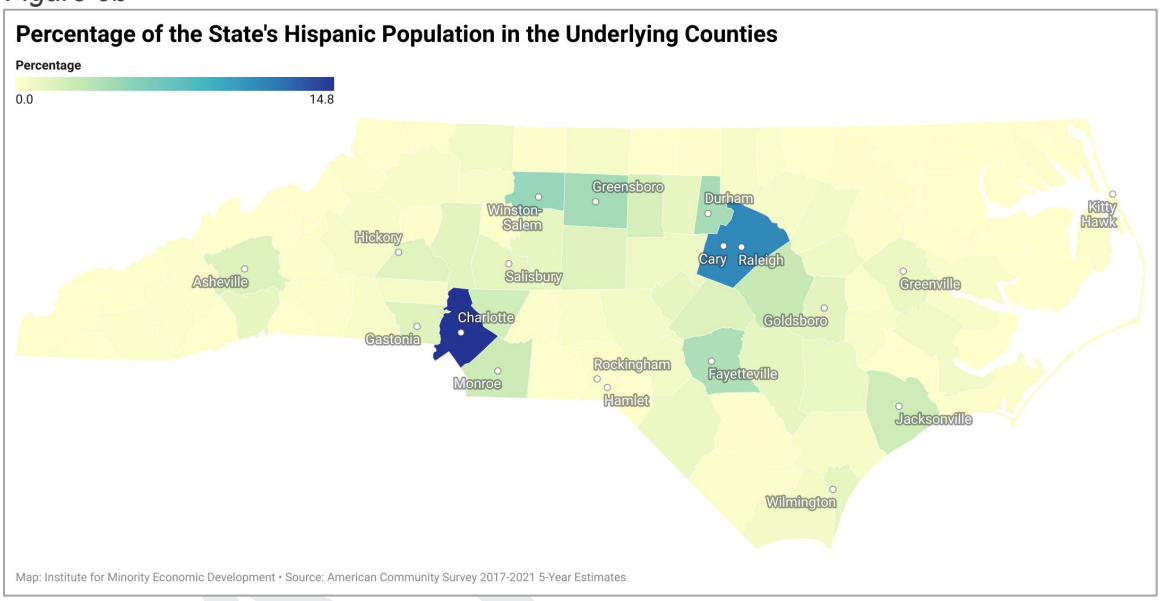


- Link to live interactive map: https://datawrapper.dwcdn.net/i3UqR/4/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of Hispanic residents. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of Hispanic residents. Mecklenburg County has around 14.8% of the state's total, while Wake County has around 11.3% of the state's total. Tyrell County only has around 0.01% of the states total, while Clay County has only around 0.02%.

Figure 9b



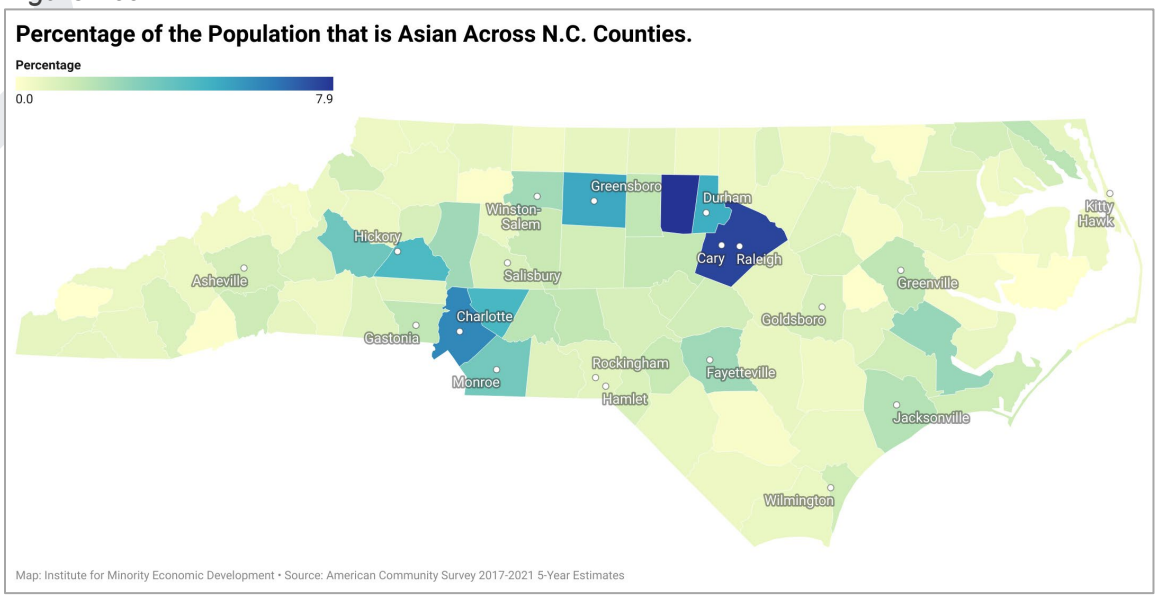
- Link to live interactive map: https://datawrapper.dwcdn.net/a5oBA/7/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Asian Population

Share

The average percentage of the population comprised of Asian residents among the 100 counties in North Carolina is around 1.3%. Counties with the highest shares of the population comprised of Asian residents tend to be in counties toward the central part of the state. Orange County has the highest percentage in North Carolina at 7.9%, while Wake County has the second highest at 7.5%. Graham County has the lowest percentage among counties in North Carolina at 0.0%, while Hyde County has the second lowest percentage 0.0%.

Figure 10a



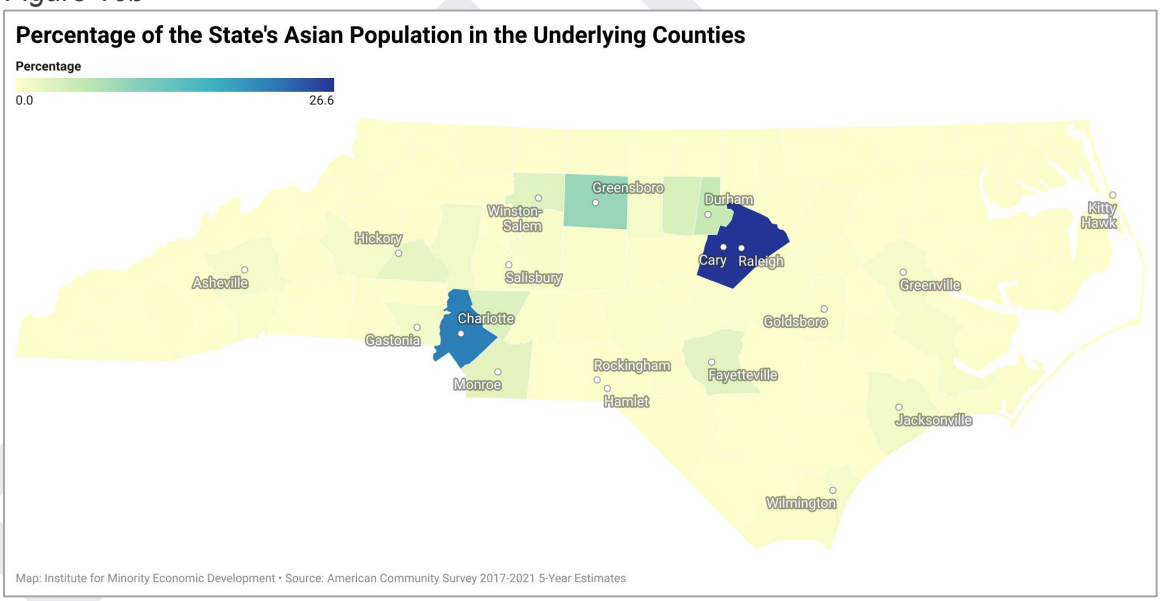
- Link to live interactive map: https://datawrapper.dwcdn.net/zUK2Y/4/

- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of Asian residents. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of Asian residents. Wake County has around 26.6% of the state's total, while Mecklenburg County has around 21.1% of the state's total. Tyrrell County has 0% of the states total, while Clay County also has 0%.

Figure 10b



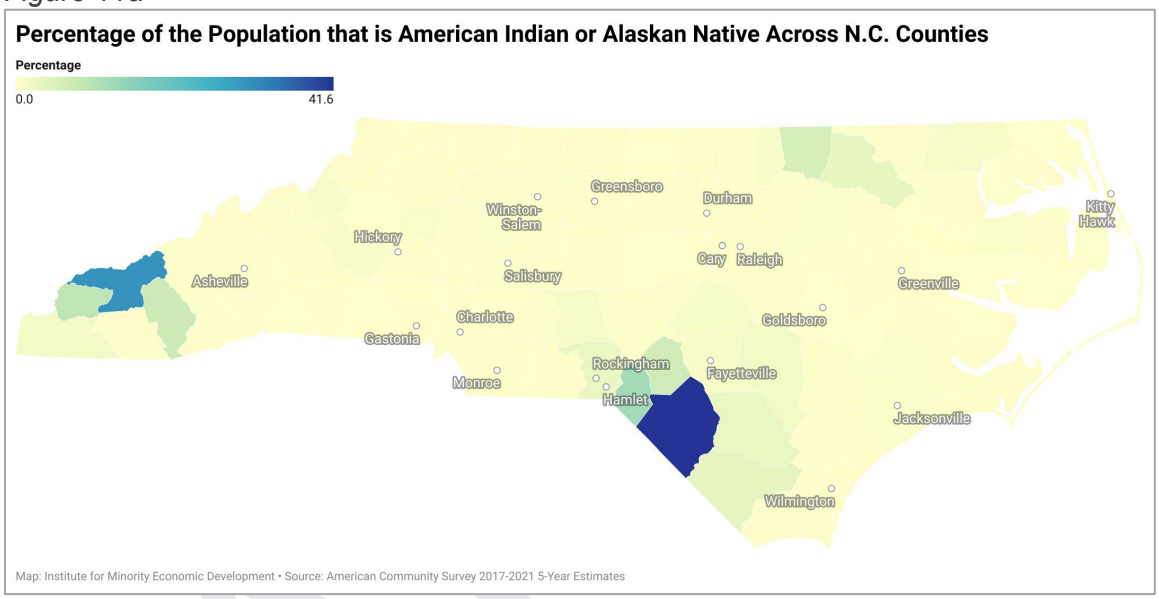
- Link to live interactive map: https://datawrapper.dwcdn.net/v4VdS/3/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

American Indian or Alaskan Native Population

Shares

The average percentage of the population comprised of American Indian and Alaskan Native residents among the 100 counties in North Carolina around 1.7%. In N.C., counties with the highest shares of the population comprised of American Indian and Alaskan Native residents tend to contain tribal lands. Robeson County has the highest percentage in North Carolina at 41.6%, while Swain County has the second highest at 30.3%. Camden County has the lowest percentage among counties in North Carolina at 0.0%, while Beaufort County has the second lowest percentage at 0.04%.

Figure 11a

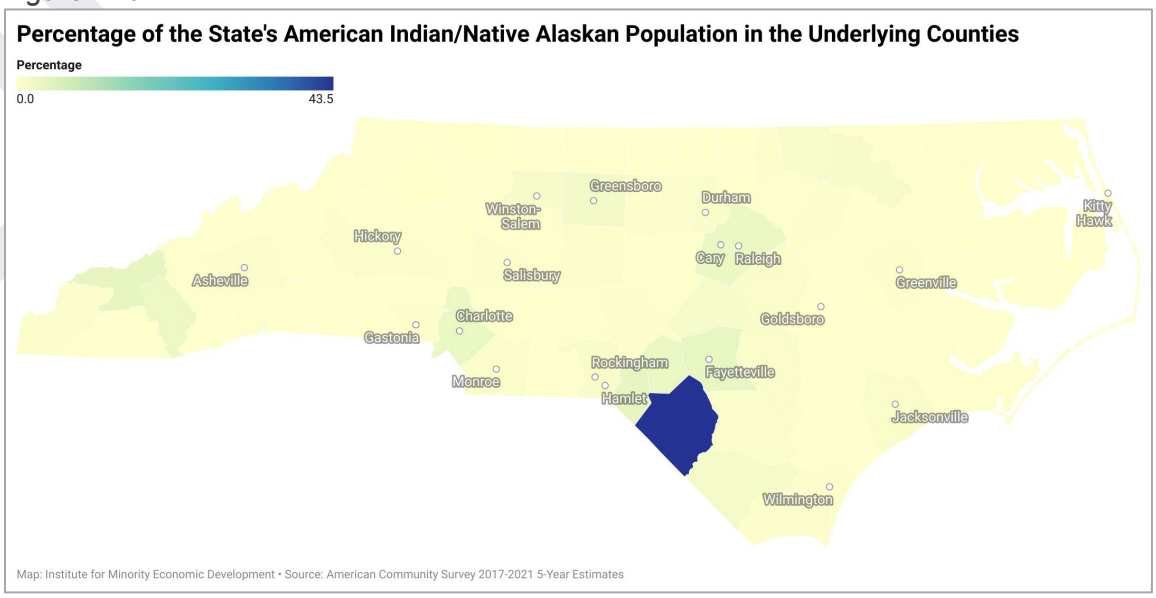


- Link to live interactive map: https://datawrapper.dwcdn.net/mD4L0/6/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of American Indian and Native Alaskan residents. Robeson County has around 43.5% of the state's total, while Scotland County has around 3.8% of the state's total. Camden County has 0% of the state's total, while Hyde County also has only 0.006%.

Figure 11b



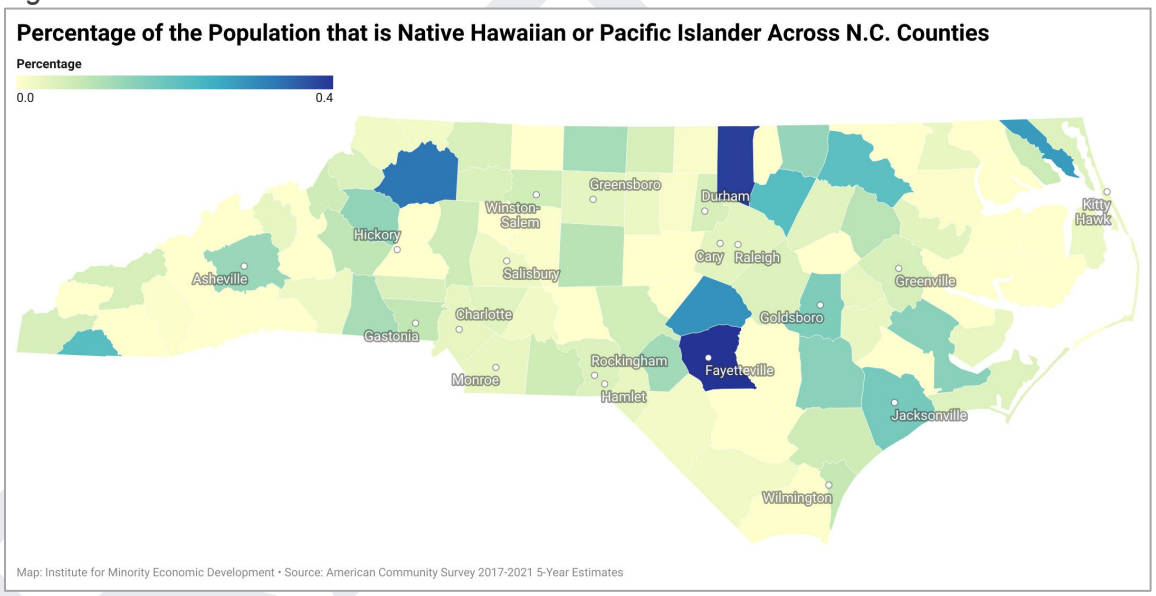
- Link to live interactive map: https://datawrapper.dwcdn.net/I9X8p/3/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Native Hawaiian or Pacific Islander Population

Shares

The average percentage of the population comprised of Native Hawaiian or Pacific Islander residents among the 100 counties in N.C. is around 0.06%. Cumberland County has the highest percentage in N.C. at 0.39%, while Granville County has the second highest at 0.37%. Twenty-nine counties in the state have no residents who are Native Hawaiian or Pacific Islander.

Figure 12a

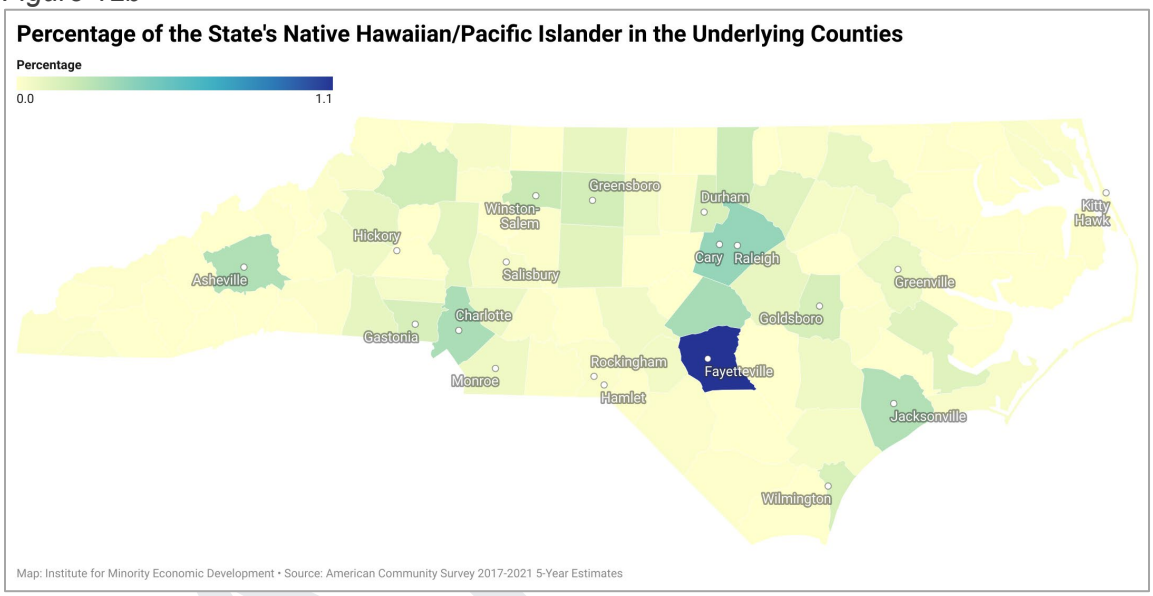


- Link to live interactive map: https://datawrapper.dwcdn.net/KOIEd/4/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of Native Hawaiian or Pacific Islander residents.

Figure 12b



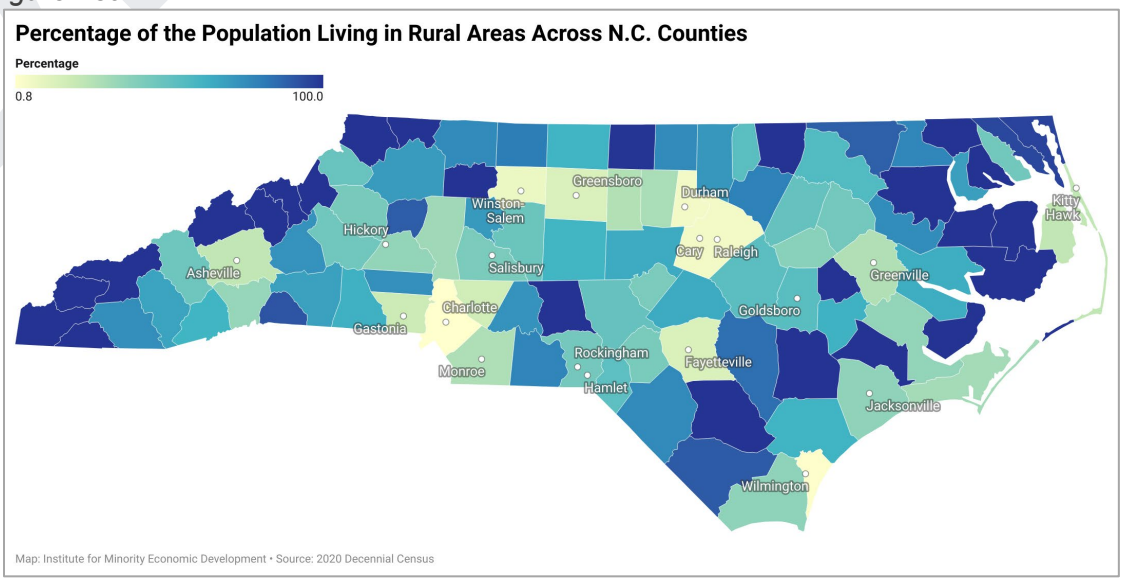
- Link to live interactive map: https://datawrapper.dwcdn.net/ddUa5/3/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Individuals who primarily reside in a rural area

Shares

The average percentage of the population living in rural areas among the 100 counties in North Carolina is around 63.9%. In 25 counties in the state, 100% of the population lives in a rural area. These counties tend to be located along the edges of the state. Some counties have only a small share of their residents living in rural areas. In Mecklenburg County, only 0.8% of the population lives in a rural area and in New Hanover County, only 1.7% live in a rural area.

Figure 13a

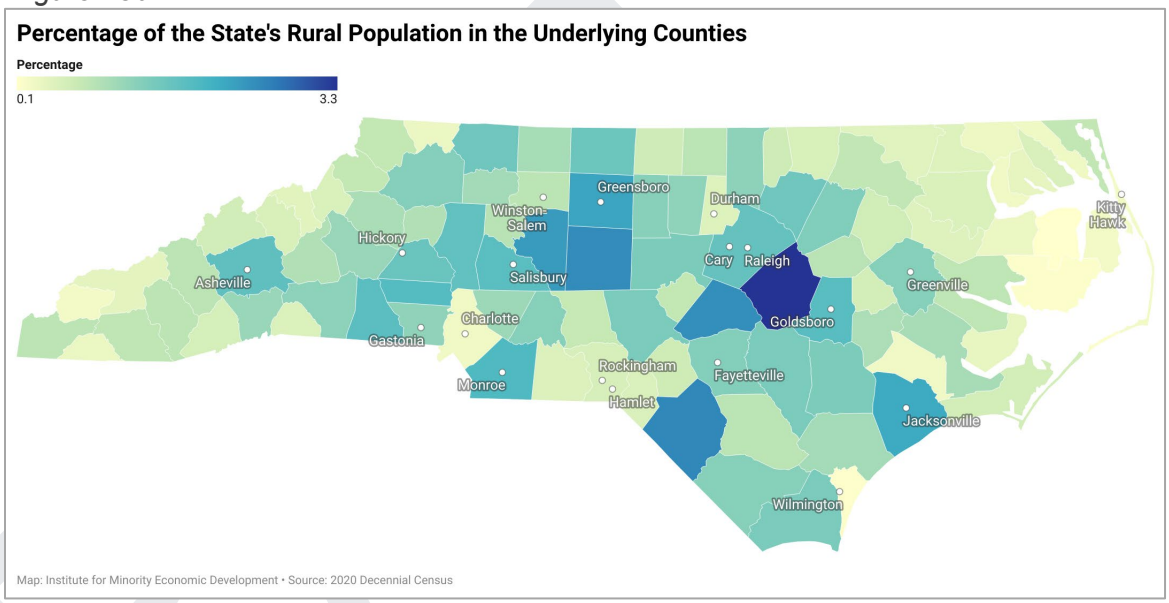


- Link to live interactive map: https://datawrapper.dwcdn.net/Yv2Zr/3/
- Data Source: 2020 U.S. Census
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's rural population. Johnston County has around 3.3% of the state's total, while Robeson County has around 2.5% of the state's total. Tyrrell County has 0.1% of the state's total, while New Hanover County also has only 0.1%.

Figure 13b



- Link to live interactive map: https://datawrapper.dwcdn.net/bgL2f/2/
- Data Source: 2020 U.S. Census
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

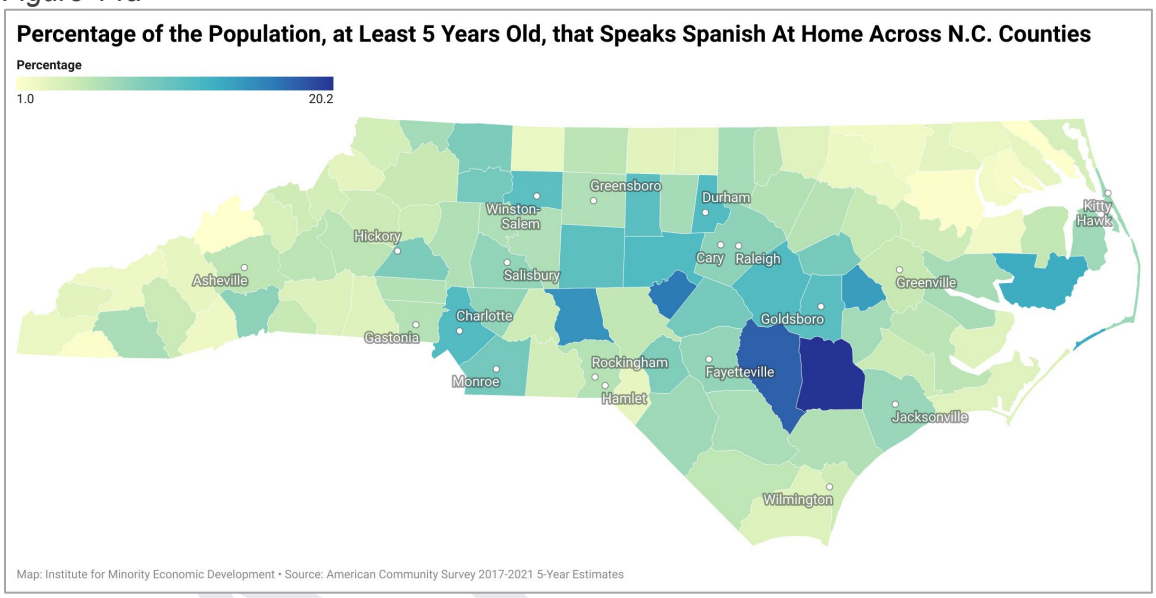
Languages Spoken at Home

Spanish

Shares

The average percentage of the population, at least 5 years old, that speaks Spanish at home among the 100 counties in North Carolina is around 6.1%. These counties tend to be located towards the central part of the state. In Duplin County, around 20.2% of the population speaks Spanish at home, and in Sampson County, around 17.9% speaks Spanish at home. In Madison County, only around 1% of the population speaks Spanish at home, and in Camden County, only around 1% speaks Spanish at home.

Figure 14a

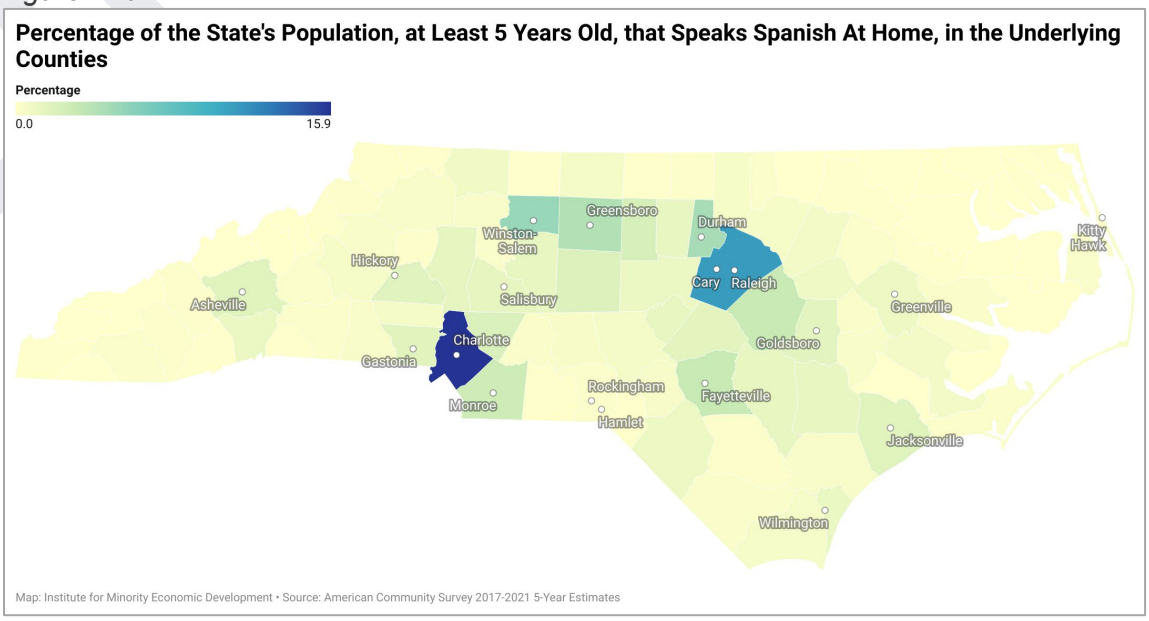


- Link to the live map: https://datawrapper.dwcdn.net/Mnzuf/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of residents (at least 5 years old) that speak Spanish at home. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the states total population of residents that speak Spanish at home. Mecklenburg County has around 15.9% of the state's total, while Wake County has around 11% of the state's total. Camden County only has 0.01% of the state's total, while Clay County has 0.02%.

Figure 14b



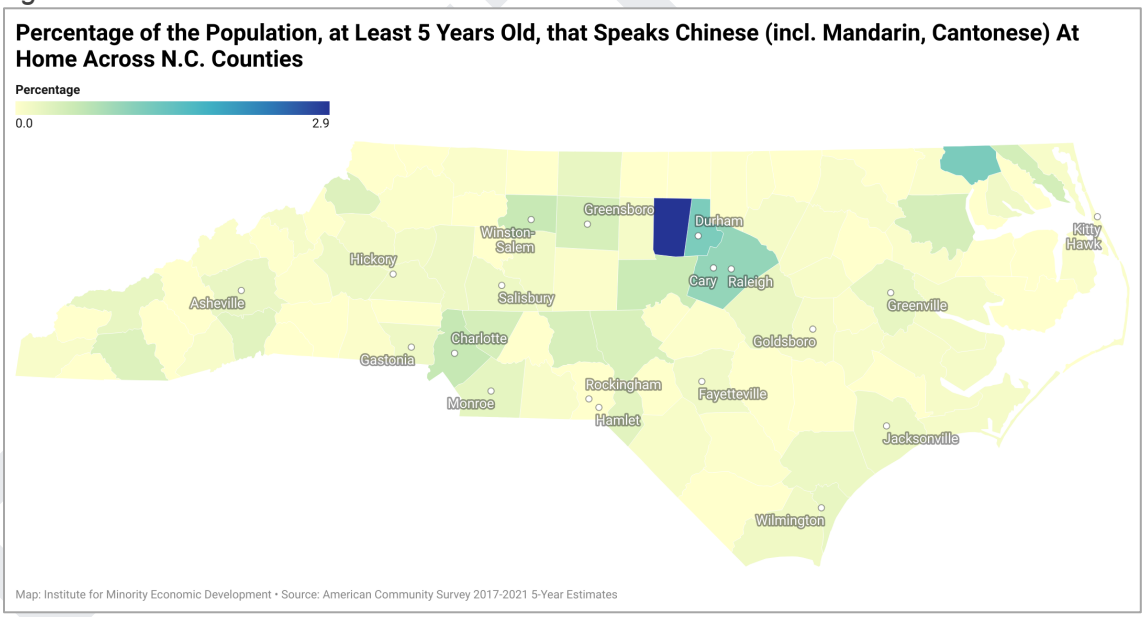
- Link to the live map: https://datawrapper.dwcdn.net/BPjcT/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Chinese (including Mandarin and Cantonese)

Shares

The average percentage of the population, at least 5 years old, that speaks Chinese at home among the 100 counties in North Carolina is around 0.18%. These counties tend to be located around Raleigh and Durham. In Orange County, around 2.9% of the population speaks Chinese at home, and in Gates County, around 1.2% speaks Chinese at home. There are 25 counties in the state where no one speaks Chinese at home.

Figure 15a

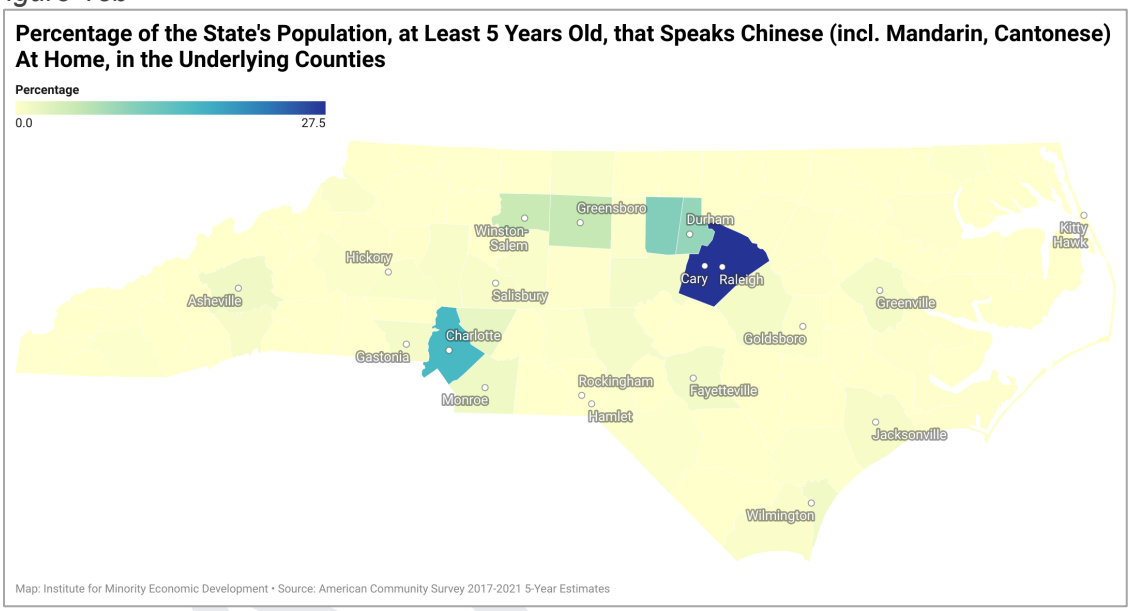


- Link to the live map: https://datawrapper.dwcdn.net/mlDwQ/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of residents (at least 5 years old) that speak Chinese at home. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of residents that speak Chinese at home.

Figure 15b



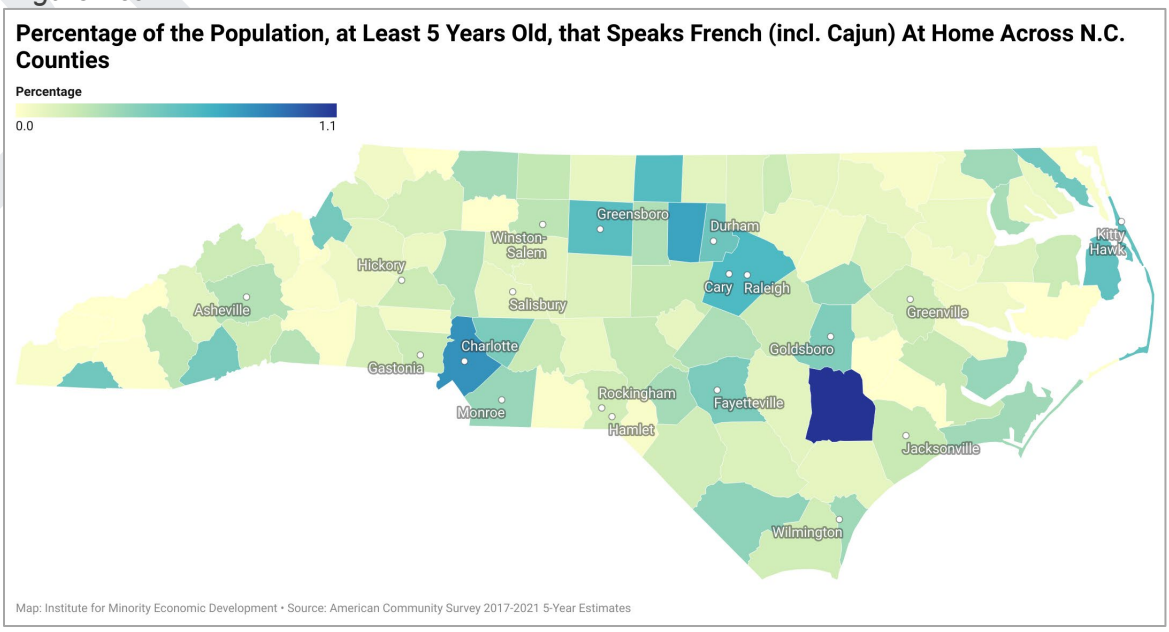
- Link to the live map: https://datawrapper.dwcdn.net/HC2jw/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

French

Shares

The average percentage of the population, at least 5 years old, that speaks French at home among the 100 counties in North Carolina is around 0.22%. In Duplin County, around 1.1% of the population speaks French at home, and in Mecklenburg County, around 0.8% speaks French at home. There are 7 counties in the state where no one speaks French at home.

Figure 16a



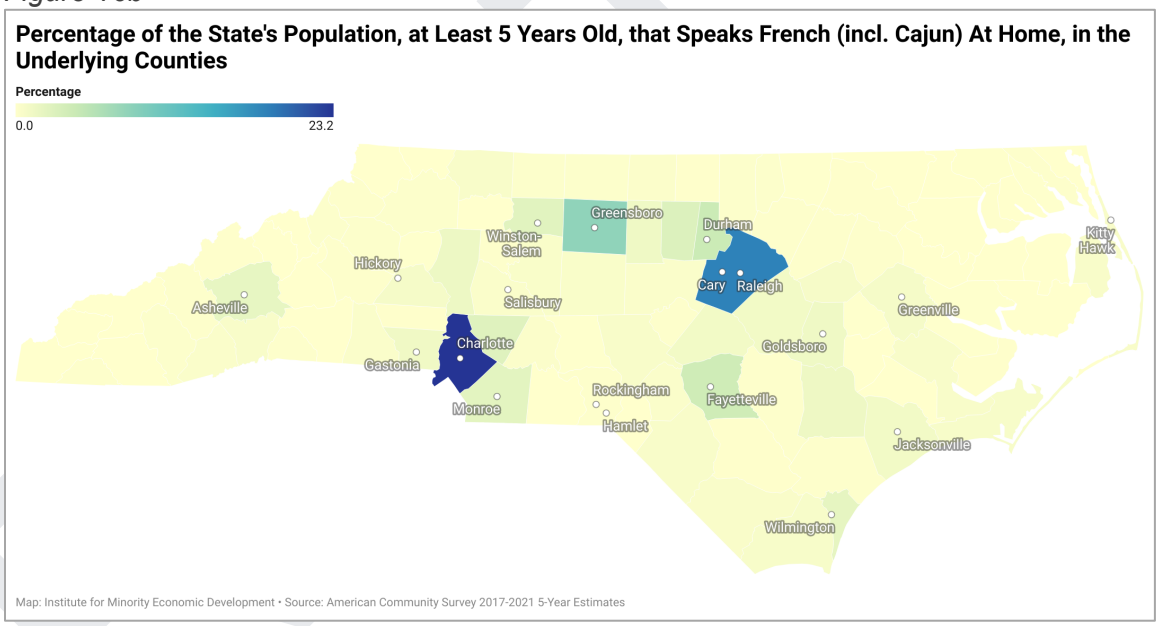
- Link to the live map: https://datawrapper.dwcdn.net/D8VAW/2/

- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of residents (at least 5 years old) that speak French at home. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of residents that speak French at home.

Figure 16b



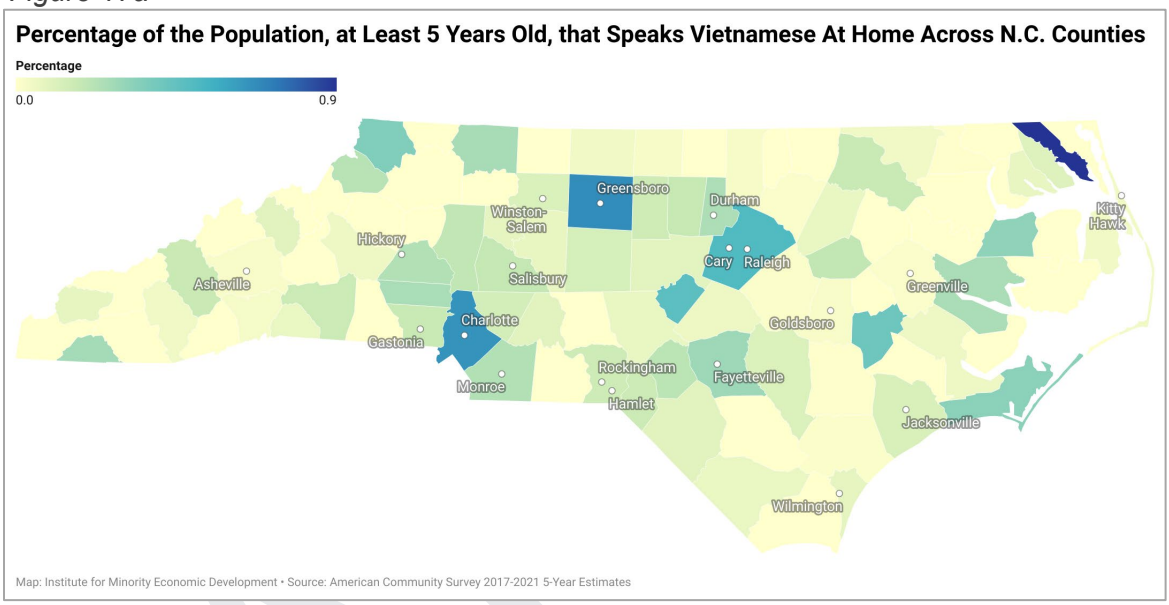
- Link to the live map: https://datawrapper.dwcdn.net/dVEgI/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Vietnamese

Shares

The average percentage of the population, at least 5 years old, that speaks Vietnamese at home among the 100 counties in North Carolina is around 0.12%. In Camden County, around 1% of the population speaks Vietnamese at home, and in Guilford County, around 0.7% speaks Vietnamese at home. There are 33 counties in the state where no one speaks Vietnamese at home.

Figure 17a

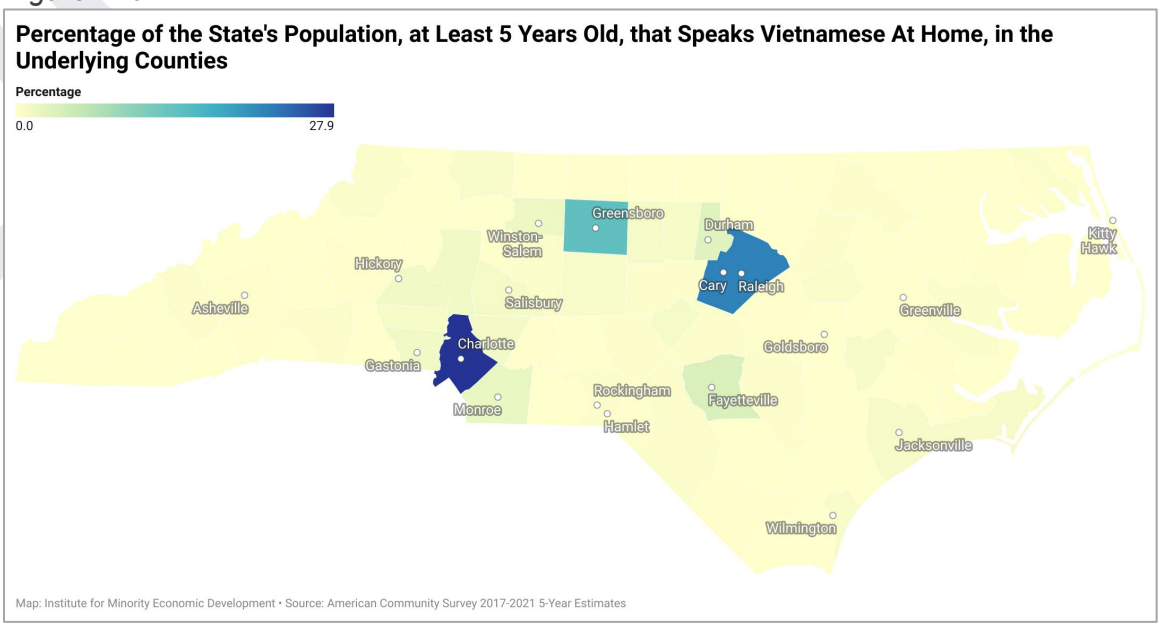


- Link to the live map: https://datawrapper.dwcdn.net/pDRF4/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of residents (at least 5 years old) that speak Vietnamese at home. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of residents that speak Vietnamese at home.

Figure 17b



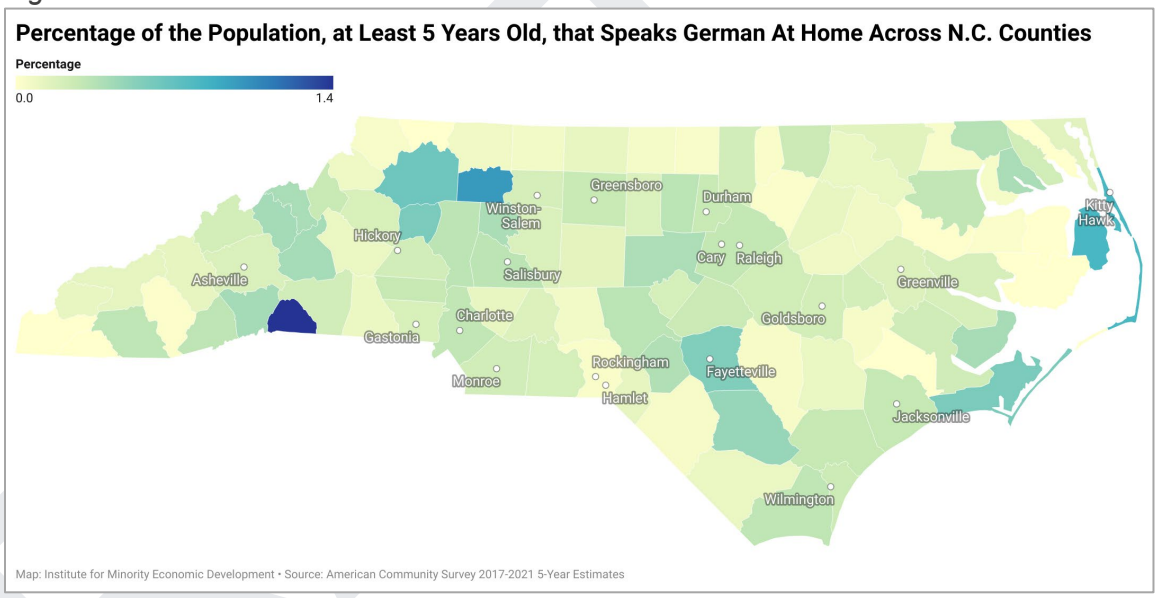
- Link to the live map: https://datawrapper.dwcdn.net/ioEnO/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

German

Shares

The average percentage of the population, at least 5 years old, that speaks German at home among the 100 counties in North Carolina is around 0.23%. In Polk County, around 1.4% of the population speaks German at home, and in Yadkin County, around 1% speaks German at home. There are 7 counties in the state where no one speaks German at home.

Figure 18a

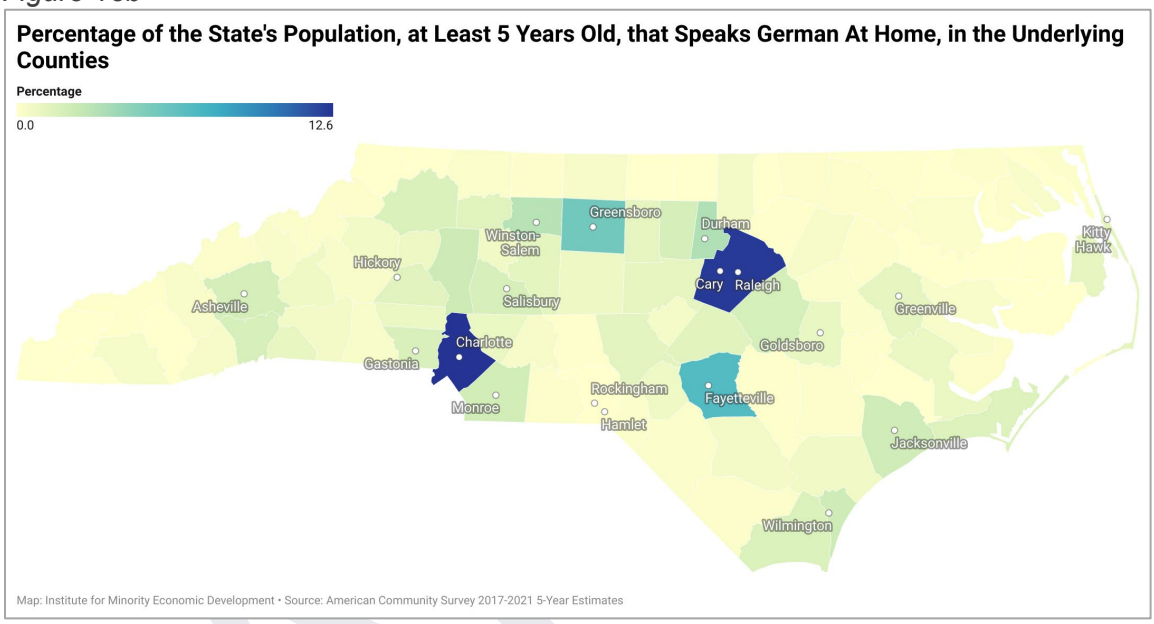


- Link to the live map: https://datawrapper.dwcdn.net/lq1L4/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of residents (at least 5 years old) that speak German at home. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of residents that speak German at home.

Figure 18b



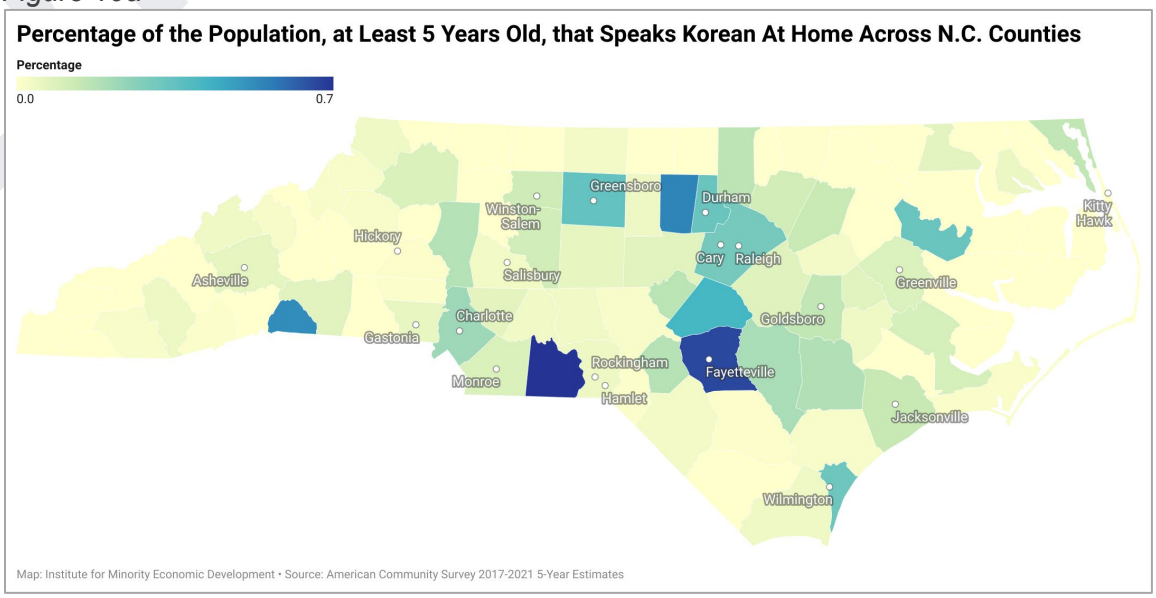
- Link to the live map: https://datawrapper.dwcdn.net/pL0Op/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Korean

Shares

The average percentage of the population, at least 5 years old, that speaks Korean at home among the 100 counties in North Carolina is around 0.08%. In Anson County, around 0.7% of the population speaks Korean at home, and in Cumberland County, around 0.7% speaks Korean at home. There are 32 counties in the state where no one speaks Korean at home.

Figure 19a



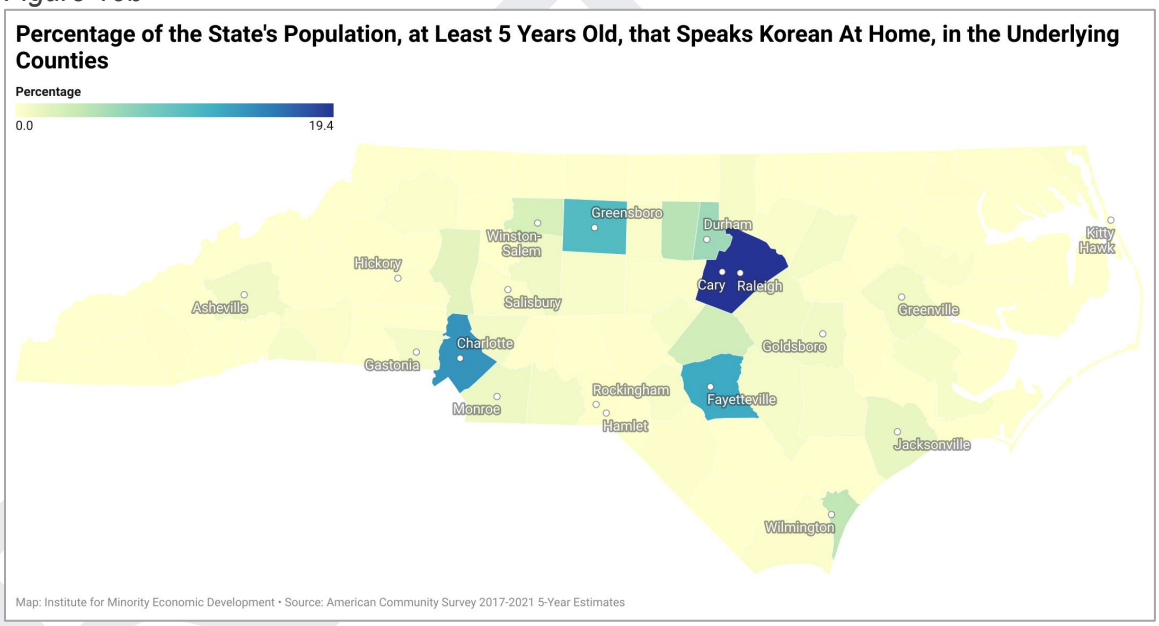
- Link to the live map: https://datawrapper.dwcdn.net/PJTLX/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021

- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of residents (at least 5 years old) that speak Korean at home. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of residents that speak Korean at home.

Figure 19b



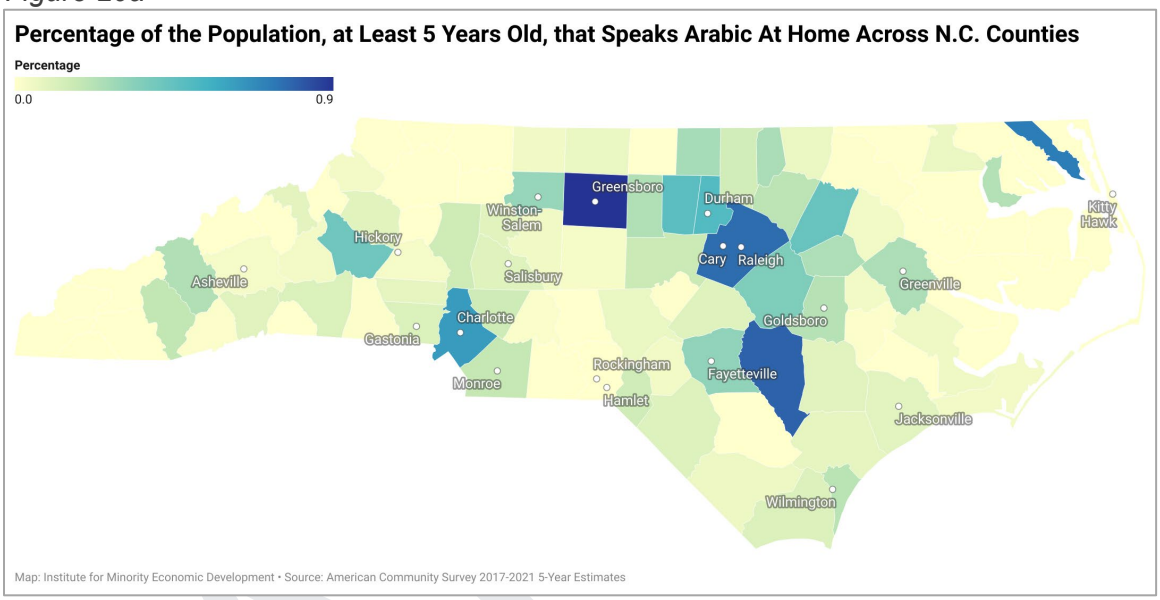
- Link to the live map: https://datawrapper.dwcdn.net/nOm86/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Arabic

Shares

The average percentage of the population, at least 5 years old, that speaks Arabic at home among the 100 counties in North Carolina is around 0.12%. In Guilford County, around 0.9% of the population speaks Arabic at home, and in Sampson County, around 0.8% speaks Arabic at home. There are 33 counties in the state where no one speaks Arabic at home.

Figure 20a

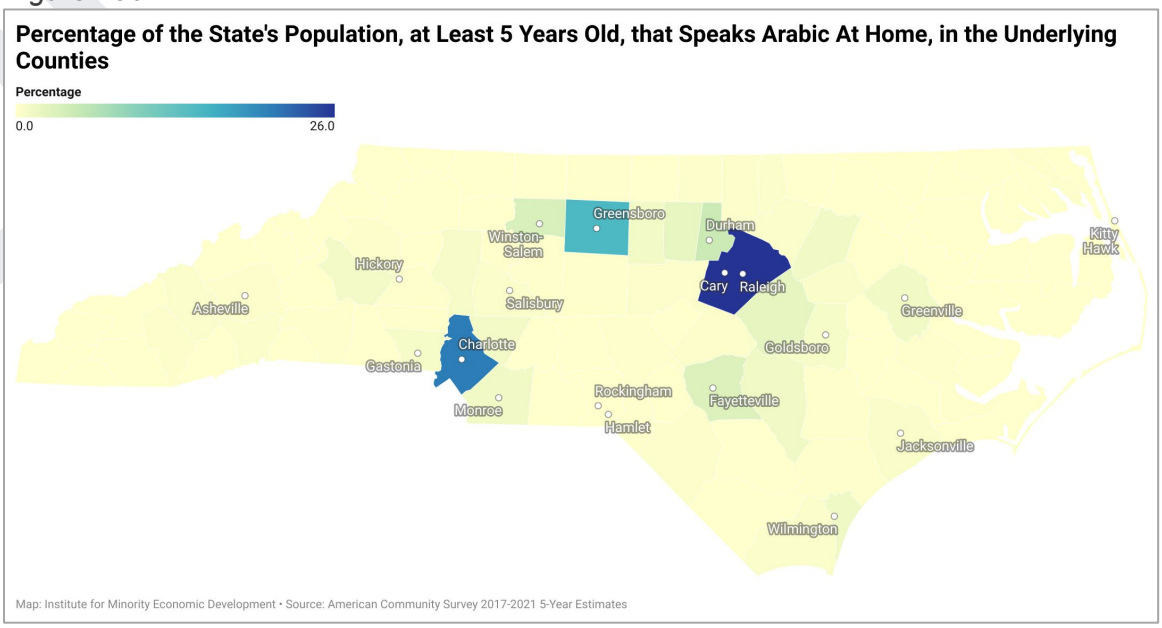


- Link to the live map: https://datawrapper.dwcdn.net/y0STu/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

Clusters

The average county in the state contains around 1% of the entire state's population of residents (at least 5 years old) that speak Arabic at home. Counties that contain large cities, like Mecklenburg County and Wake County, tend to have the highest share of the state's total population of residents that speak Arabic at home.

Figure 20b



- Link to the live map: https://datawrapper.dwcdn.net/KI844/2/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System (NHGIS)

Languages Spoken at Home

Table 1. Top 10 Counties for Percentage of Different Languages Spoken at Home

	Spanish			Chinese			French			Vietnamese		
Rank	**County**	**%**	**Number**	**County**	**%**	**Number**	**County**	**%**	**Number**	**County**	**%**	**Number**
1	Duplin County	20.23	9,468	Orange County	2.93	4,125	Duplin County	1.14	535	Camden County	0.92	90
2	Sampson County	17.89	9,960	Gates County	1.21	124	Mecklenburg County	0.84	8,603	Guilford County	0.69	3,486
3	Lee County	16.63	9,765	Durham County	1.21	3,625	Orange County	0.76	1,069	Mecklenburg County	0.67	6,842
4	Montgomery County	15.02	3,686	Wake County	1.01	10,564	Wake County	0.65	6,793	Wake County	0.52	5,386
5	Greene County	14.26	2,781	Mecklenburg County	0.60	6,151	Caswell County	0.63	136	Lee County	0.48	282
6	Hyde County	13.16	583	Forsyth County	0.57	2,050	Guilford County	0.61	3,080	Lenoir County	0.43	223
7	Chatham County	11.75	8,412	Chatham County	0.54	389	Dare County	0.58	204	Ashe County	0.36	93
8	Johnston County	11.64	23,097	Camden County	0.46	45	Durham County	0.53	1,597	Carteret County	0.34	221
9	Durham County	11.62	34,885	Bertie County	0.44	77	Clay County	0.52	55	Washington County	0.33	36
10	Mecklenburg County	11.61	119,494	Cabarrus County	0.44	915	Camden County	0.52	51	Cumberland County	0.29	906

	German			Korean			Arabic		
Rank	County	%	Number	County	%	Number	County	%	Number
1	Polk County	1.45	270	Anson County	0.70	148	Guilford County	0.87	4,385
2	Yadkin County	1.02	359	Cumberland County	0.66	2,033	Sampson County	0.76	421
3	Dare County	0.84	296	Orange County	0.54	764	Wake County	0.73	7,678
4	Wilkes County	0.67	420	Polk County	0.52	97	Camden County	0.70	68
5	Carteret County	0.60	394	Harnett County	0.41	507	Mecklenburg County	0.60	6,173
6	Alexander County	0.60	210	Guilford County	0.35	1,754	Durham County	0.48	1,440
7	Cumberland County	0.57	1,770	Durham County	0.33	1,004	Orange County	0.46	644
8	Bladen County	0.49	139	Martin County	0.33	70	Nash County	0.42	374
9	Yancey County	0.43	76	New Hanover County	0.32	692	Burke County	0.40	331
10	Henderson County	0.43	475	Wake County	0.30	3,167	Johnston County	0.35	687

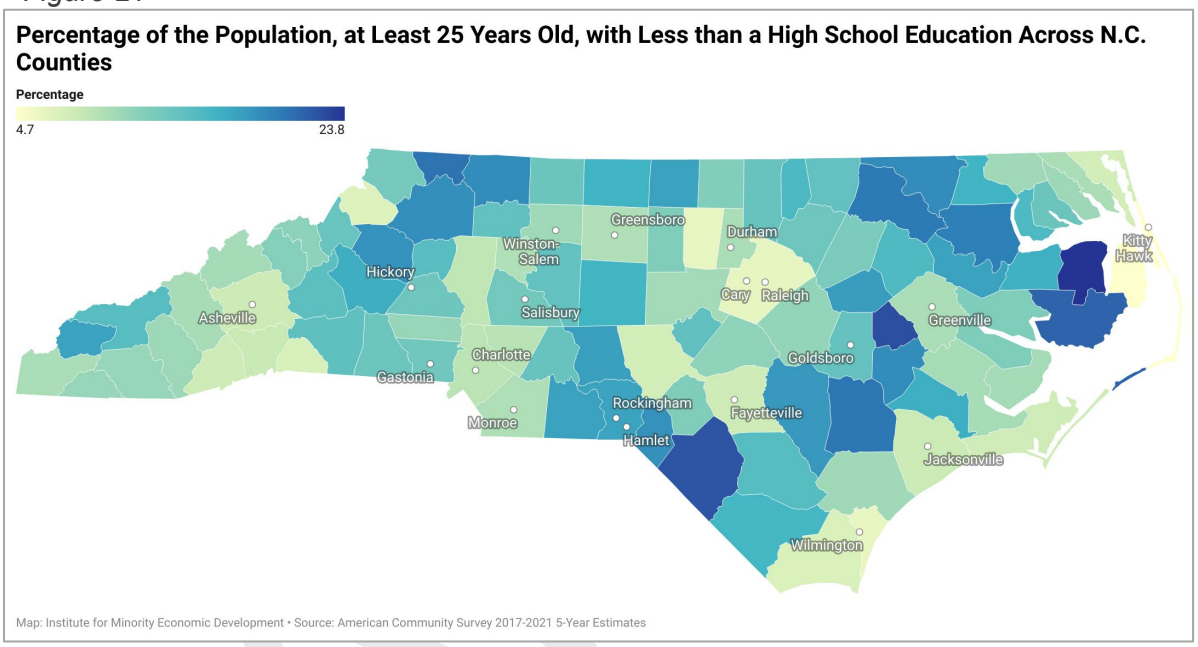
Notes:
1) Rank indicates the rank in terms of the percentage (%), ranked in descending order.
2) Percentage (%) is the percentage of the population that is at least 5 years old.
3) Data comes from the ACS 5-Year Estimates for 2017-2021.

Less than a High School Education

Shares

The average percentage of the population, at least 25 years old, with less than a high school education among the 100 counties in North Carolina is around 13.3%. In Tyrrell County, 23.8% of the population, 25 and up, has less than a high school level of education. In Greene County, 22.4% of the population, 25 and up, have less than a high school education. In Dare County, only 4.7% of the population, 25 and up, has less than a high school education.

Figure 21



- Link to the live map: https://datawrapper.dwcdn.net/r7Yvg/1/
- Data Source: American Community Survey 5-Year Estimates, 2017-2021
- Downloaded from: Integrated Public Use Microdata Series National Historical Geographic Information System

REFERENCES

American Library Association. Digital Literacy Task Force (2011). *What is Digital Literacy? https://alair.ala.org/bitstream/handle/11213/16260/Digilit%20definition_one%20pager_Marijke%20Visser.pdf?.*

Bergson-Shilcock, A. (2020). *The new landscape of digital literacy: How workers' uneven digital skills affect economic mobility and business competitiveness, and what policymakers can do about It.* National Skills Coalition.

Craig, S., Shen, A., Wallis, K., Pak-Gorstein, S., Yun, K., & Dalembert, G. (2021). *How health systems can help address language barriers to achieve digital health equity*. Penn Leonard Davis Institute of Health Economics Blog.

Dang, S., Muralidhar, K., Li, S., Tang, F., Mintzer, M., Ruiz, J., & Willy, M. V. (2022). Gap in willingness and access to video visit use among older high-risk veterans: Cross-sectional study. *Journal of Medical Internet Research*, *24*(4), 1-15. https://doi.org/10.2196/32570.

Davis, R., Huggins, E., Ogbo, E., Yalincaya, A., Duke, S., Adrines, V., Gragson, A. & Ferdous, T. (2023). *Digital literacy and equity: A synthesis of findings for covered populations. Friday Institute for Educational Innovation*, Raleigh, NC.

Davis, J. G., Kuan, K. K., & Poon, S. (2020). Digital exclusion and divide in the United States: Exploratory empirical analysis of contributing factors.

Federal Communications Commission. (n.d.). FCC Broadband Data Collection. https://www.fcc.gov/BroadbandData.

Fernández-Muñoz, J., Kiptaş, D., & Lozano, J. (2021). How to Close the Digital Divide in the U.S. *Harvard Business Review*. https://hbr.org/2021/07/how-to-close-the-digital-divide-in-the-u-s.

Horrigan, J. B. (2010). Broadband adoption and use in America. OBI Working Paper Series No. 1. https://docs.fcc.gov/public/attachments/DOC-296442A1.pdf

Katz, V. S., Moran, M. B., & Ognyanova, K. (2017). Contextualizing connectivity: How internet connection type and parental factors influence technology use among lower-income children. *Information, Communication & Society, 22(3), 313–335. https://doi.org/10.1080/1369118x.2017.1379551*

Katz, V. S., & Levine, M. H. (2015). Connecting to learn: Promoting Digital Equity for America's Hispanic families. https://joanganzcooneycenter.org/wp-content/uploads/2015/03/jgcc_connectingtolearn.pdf. Retrieved May 2, 2023, from https://joanganzcooneycenter.org/wp-content/uploads/2015/03/jgcc_connectingtolearn.pdf

Khanlou, N., Khan, A., Vazquez, L. M., & Zangeneh, M. (2020). Digital Literacy, access to technology and inclusion for young adults with developmental disabilities. *Journal of*

Developmental and Physical Disabilities, 33(1), 1–25. https://doi.org/10.1007/s10882-020-09738-w

Lai, J., & Widmar, N. O. (2021). Revisiting the digital divide in the COVID-19 era. *Applied economic perspectives and policy,* 43(1), 458-464.

Lee, O. E.-K., & Kim, D.-H. (2019). Bridging the digital divide for older adults via Intergenerational Mentor-Up. *Research on Social Work Practice*, 29(7), 786–795. https://doi.org/10.1177/1049731518810798

Livingstone, S., Mascheroni, G., & Stoilova, M. (2023). The outcomes of gaining digital skills for young people's lives and wellbeing: A Systematic Evidence Review. *New Media & Society*, 14614448211043189.

Lyons, A. C., Zucchetti, A., Kass-Hanna, J., & Cobo, C. (2019). Bridging the gap between digital skills and employability for vulnerable populations. *IN THE DIGITAL AGE.*

National Digital Inclusion Alliance. (n.d.). Home.Retrieved from https://www.digitalinclusion.org/

North Carolina Broadband (n.d.). Home. www.ncbroadband.gov

Park, K., So, H.-J., & Cha, H. (2019). Digital Equity and Accessible MOOCs: Accessibility evaluations of mobile MOOCs for learners with visual impairments. *Australasian Journal of Educational Technology, 35(6), 48–63.* https://doi.org/10.14742/ajet.5521

Prison Scholars Fund. (2023). *Our work and impact.* https://www.prisonscholars.org/what-we-do/our-work-impact/

Saeed, S. A., & Masters, R. M. (2021). Disparities in health care and the digital divide. *Current Psychiatry Reports, 23, 1-6.*

Steele, M. (2021, May 28). Maintaining your online Privacy. NIST. https://www.nist.gov/blogs/cybersecurity-insights/maintaining-your-online-privacy

Tech For Troops. (n.d.). *Our Service to Veterans.* https://techfortroops.org/services/veterans/,

Tinubu Ali , T., & Herrera, M. (2020, April). Distance learning during COVID-19: 7 Equity considerations for schools and districts. *Southern Education Foundation.* Retrieved April 28, 2023, from https://southerneducation.org/publications/covid-19-digital-equity/

Veteran Health Administration (n.d). Home. *https://www.va.gov*.

Washington State Department of Veterans Affairs. (n.d.). *Digital navigator program.* https://www.dva.wa.gov/veterans-service-members-and-their-families/digital-navigator-program.

Weaver, D. J. (2022, December). Delivering on the promise of digital equity. Digital Promise. https://doi.org/10.51388/20.500.12265/166.

Withers, E., Jacobs, G., Castek, J., Pizzolato, D., Pendell, K., & Reder S. (2015). Corrections and reentry. Digital literacy acquisition case study. http://archives.pdx.edu/ds/psu/16519.

Workie, E., Hinkle, L., deDufour, A., & Lacarte, V. (2022). Advancing digital equity among immigrant-origin youth. *Migration Policy Institute.*

World Wide Web Consortium. (n.d.). Web Accessibility Initiative (WAI) - Fundamentals. https://www.w3org/WAI/fundamentals/.

Zivanai, E., & Mahlangu, G. (2022). Digital prison rehabilitation and successful re-entry into a digital society: A systematic literature review on the new reality on prison rehabilitation. *Cogent Social Sciences, 8(1). https://doi.org/10.1080/23311886.2022.2116809*.