

Digital Equity & Why is Broadband Important?

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Broadband Adoption, Digital Equity, and Inclusion



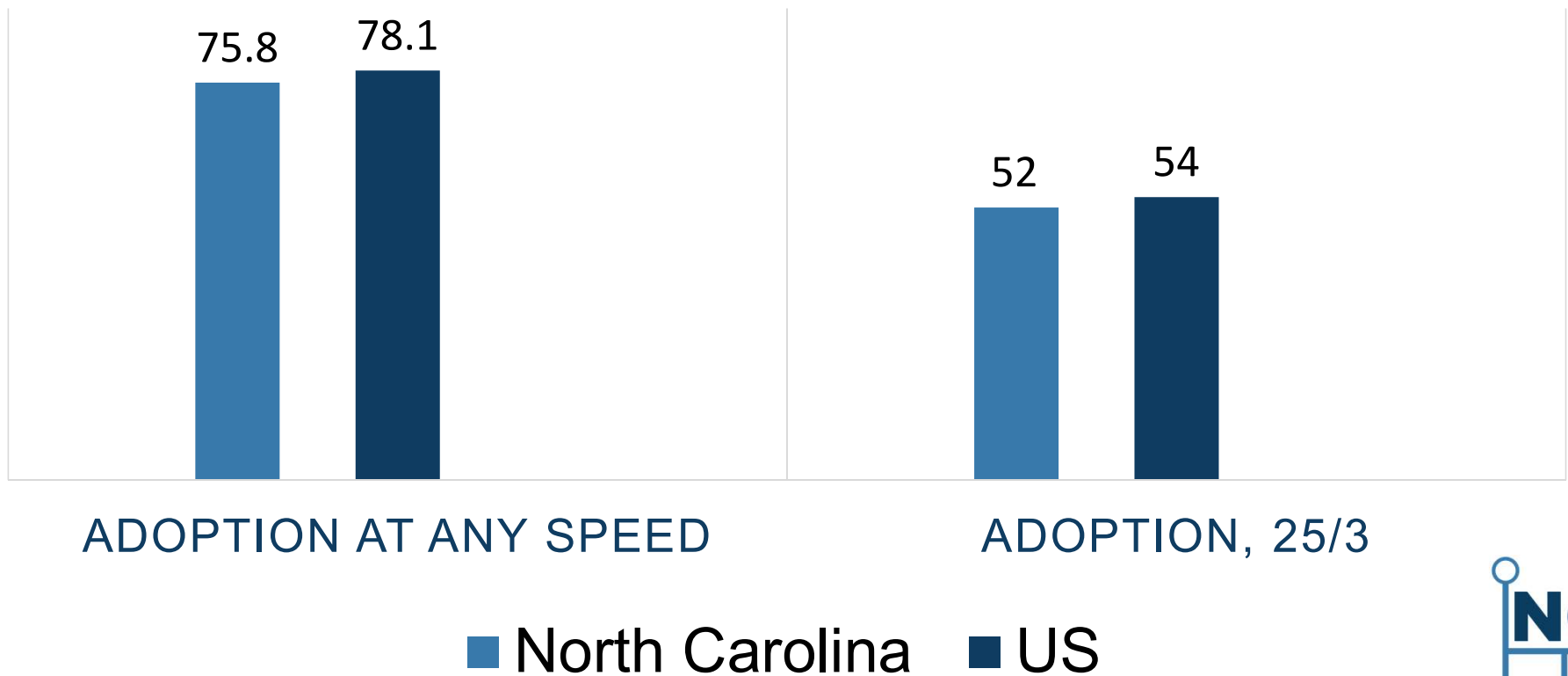
- High levels of broadband availability are associated with lower total employment
- High levels of broadband adoption in nonmetropolitan counties are *positively* associated with higher numbers of businesses and jobs

Importance of Adoption

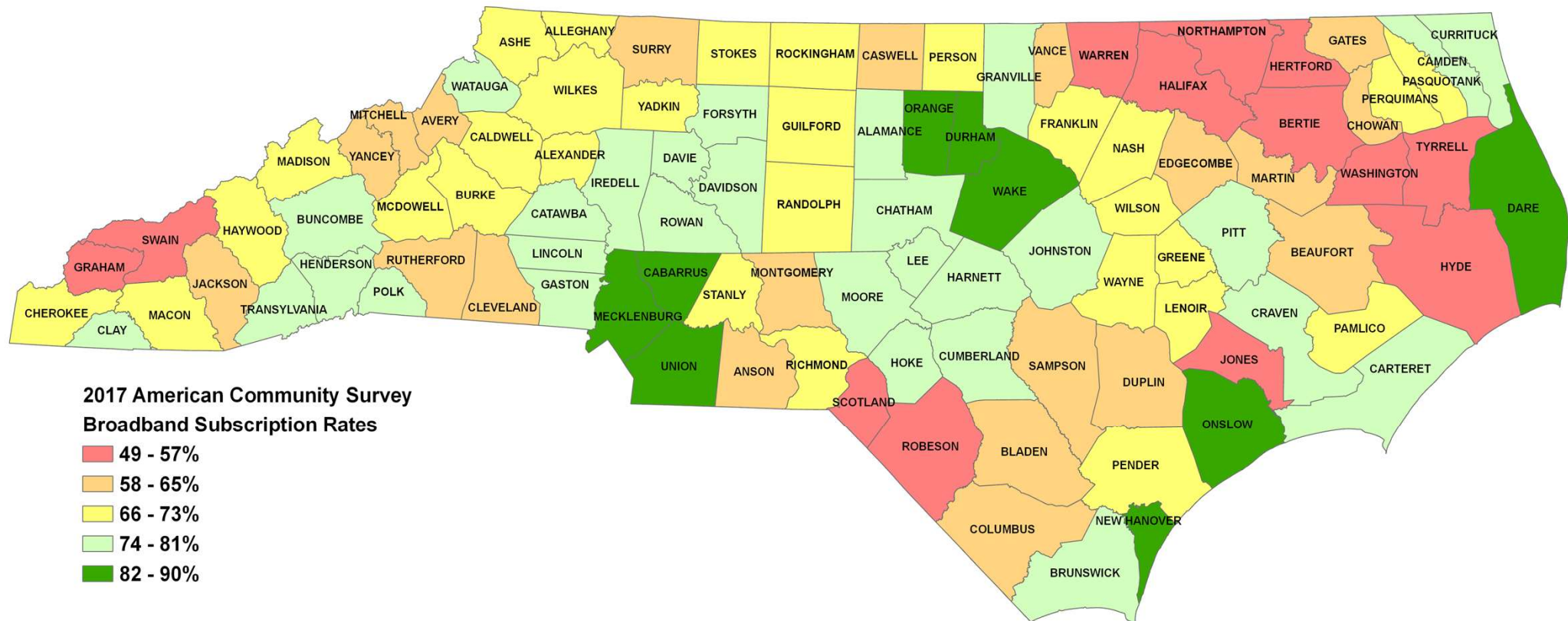
Definition: Broadband Adoption

The percentage of the population that subscribes to a broadband service

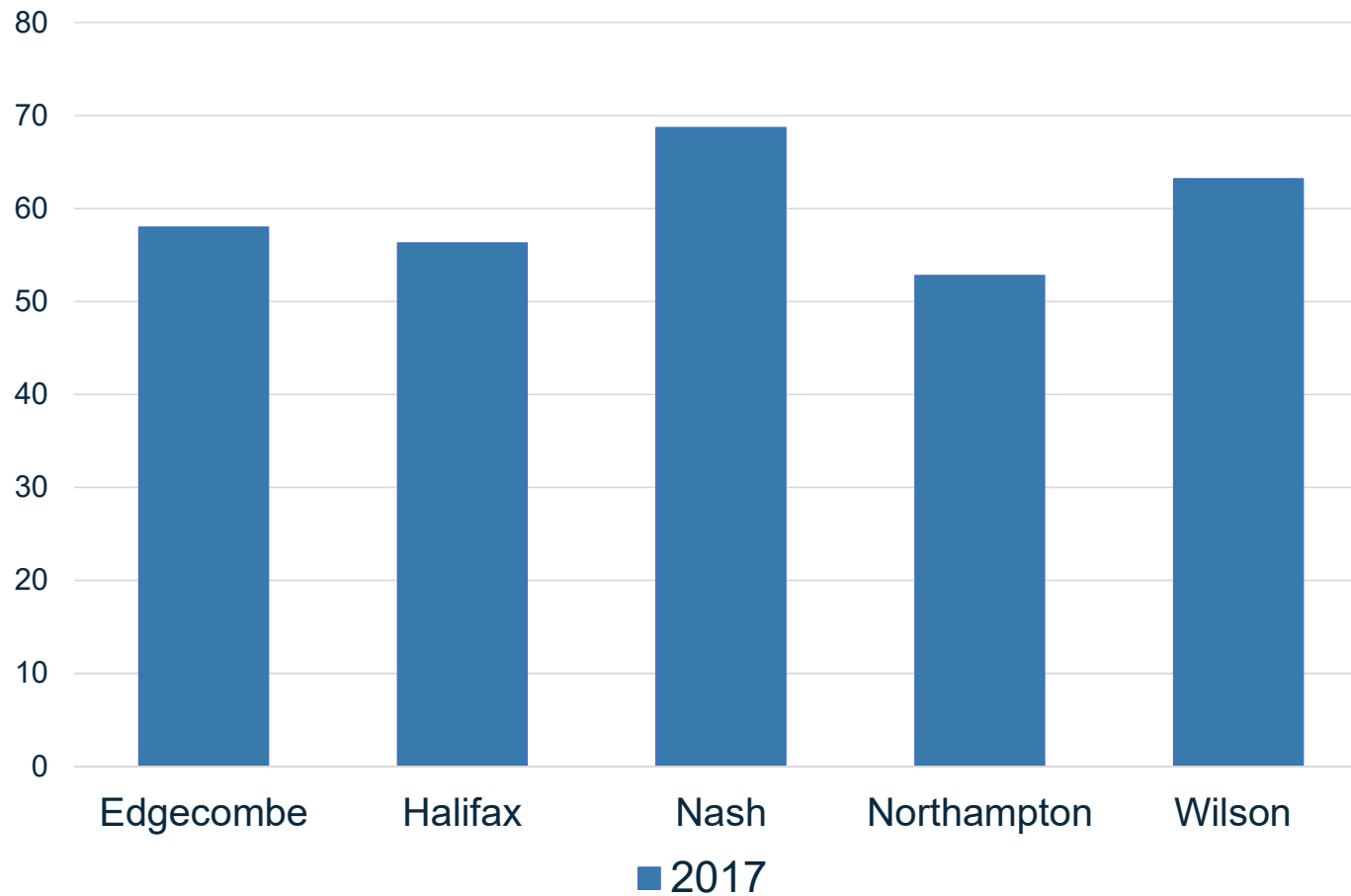
2017 Broadband Adoption Rates



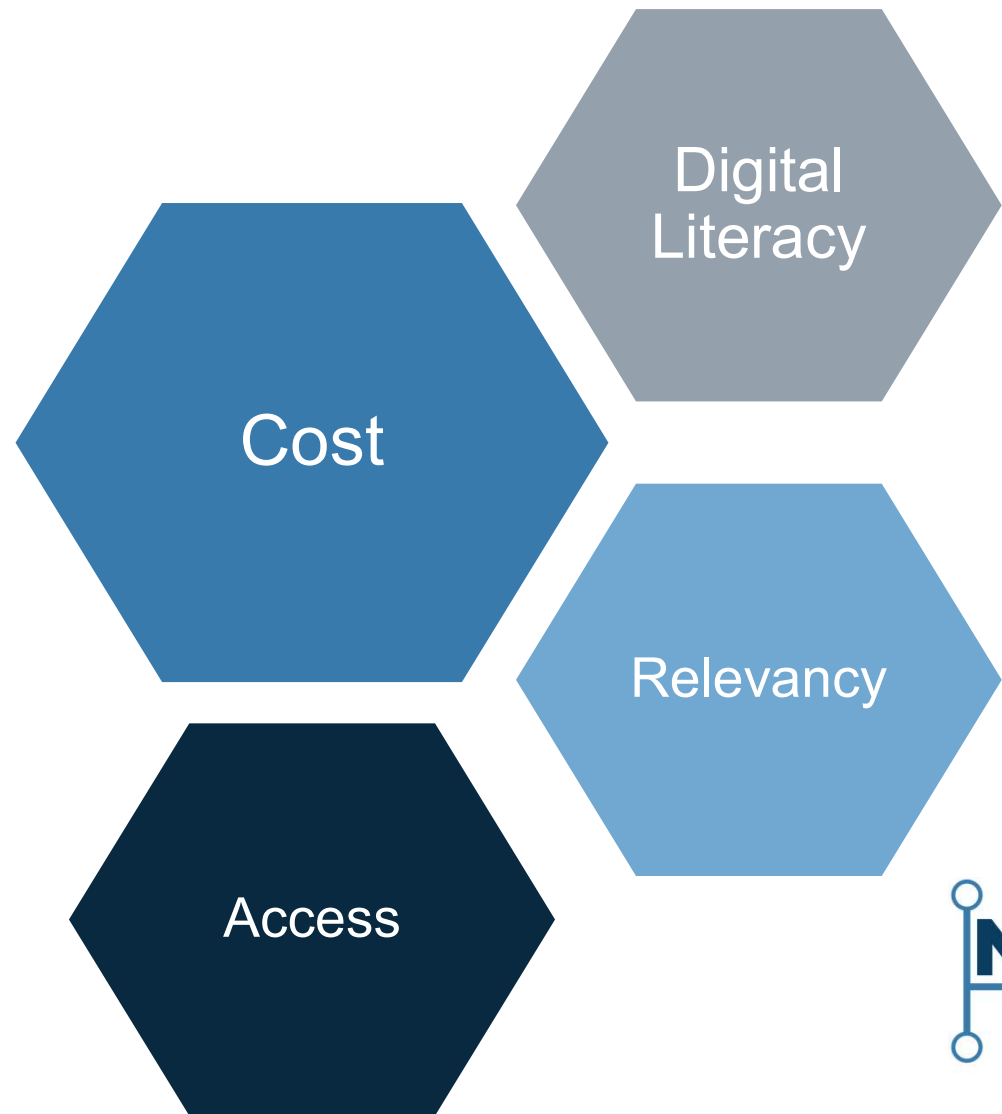
2017 County Broadband Adoption Rates



Adoption Rates in Upper Coastal Plain COG Counties



Common Barriers to Broadband Adoption



Definition: Digital Divide

The Digital Divide refers to **the gap between** those who have access to technology, the internet, and digital literacy training and those who do not.



Definition: 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.*

Definition: 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).

Digital Inclusion must **evolve as technology advances**. Digital Inclusion requires *intentional strategies and investments to reduce and eliminate* historical, institutional and structural *barriers* to access and use technology.

Definition: Digital Inclusion Cont.

This includes 5 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.

Definition: 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.**

Definition: Digitally Literate Person

A Digitally Literate Person:

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

BIO's Role in Digital Equity and Inclusion

Lead

Lead the state in digital equity & inclusion work

Convene

Bring stakeholders together around different topics related to digital equity & inclusion

Provide space and time to work together on understanding and addressing those topics

Connect

Connect groups to each other

Connect resources to efforts needing them

Connect best practices to those who need them

Connect citizens to groups who serve them

Champion

Advocate for resources from funders and policymakers to support strategies & policies that close the divide

Advocate for policies/programs/resources from policymakers & funders to address digital equity & inclusion

Champion and highlight the work of partner and stakeholder organizations to our audience

BIO's Role in Digital Equity and Inclusion Cont.

Aggregate

Aggregate the best ideas and best practices for closing the divide

Aggregate the data, research, etc. necessary for measuring the divide and benchmarking progress in closing it

Educate

Educate state, policymakers, etc. on digital equity

Educate state & policymakers on depth of current digital divide

Educate stakeholders on how to address the digital divide

Define the issue and create materials/resources for stakeholders and partners to use

Strategize

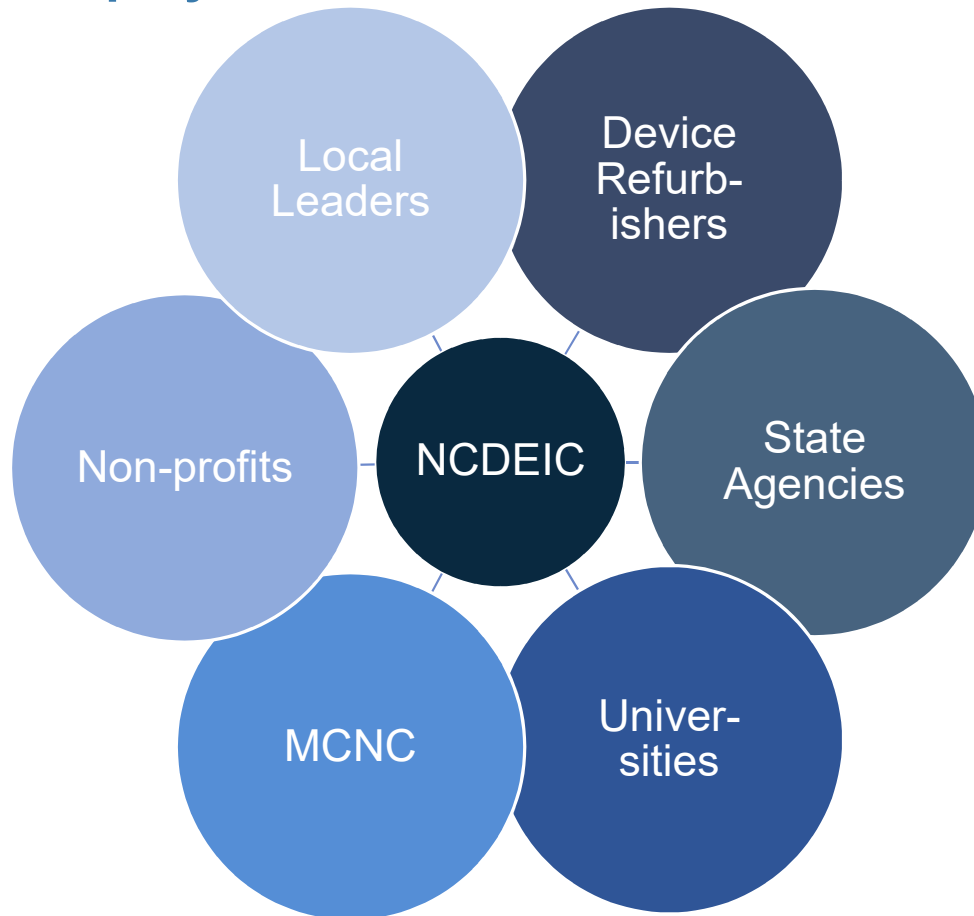
Design policies to address the digital divide

Design strategies to address the digital divide

Design programs to address the digital divide

NC Digital Equity and Inclusion Collaborative

In 2017, BIO Convened Leaders of Organizations Across North Carolina Dedicated to Digital Equity and Inclusion the NCDEIC includes:



NCDEIC Vision and Mission

Vision Statement:

We envision a North Carolina where all citizens have access to the technologies, digital skills, and opportunities necessary to thrive in today's society.

Mission Statement:

To foster collaboration among digital equity and inclusion leaders to bridge the digital divide in North Carolina.



**“The Homework Gap
is the cruelest
problem we have, but
I think it is in our
power to fix.”**

*Federal Communications
Commissioner, Jessica
Rosenworcel*



Pilot Homework Gap Survey

State level data

Consulted with
Previous
Surveys/Experts

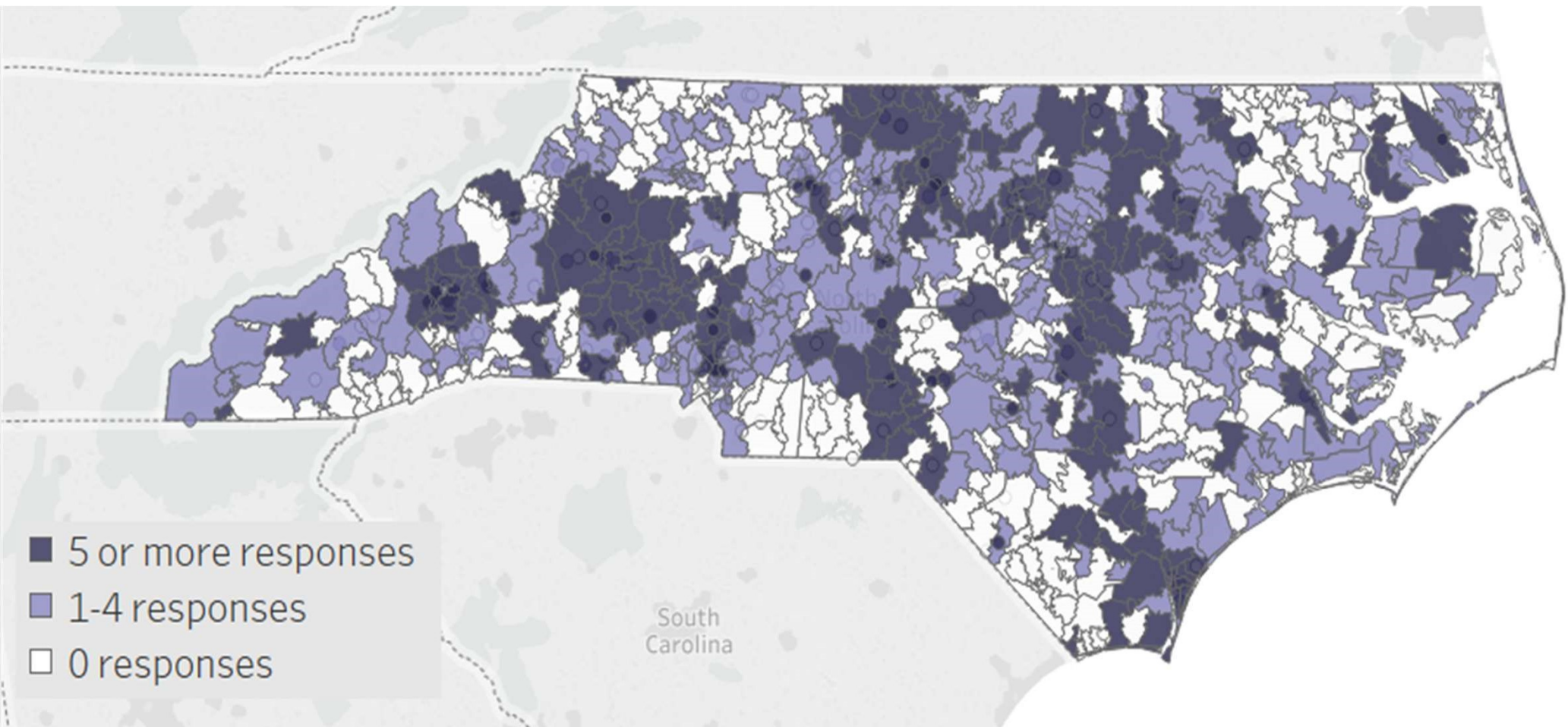
17 Questions

English &
Spanish

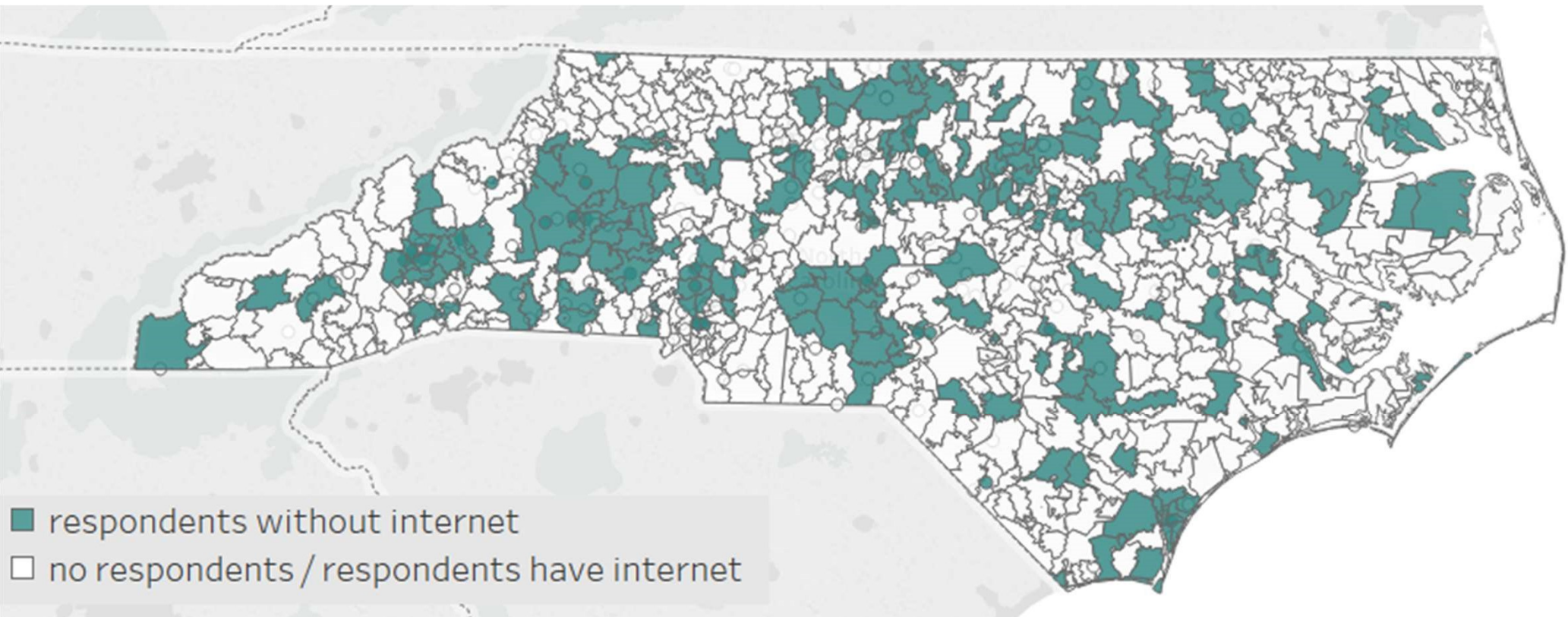
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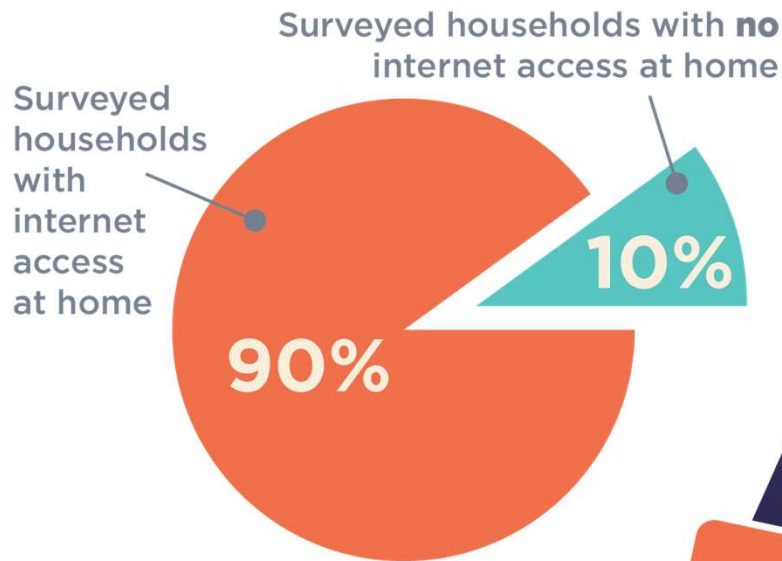
Count of Survey Participants by Zip Code



Survey Respondents without Access



Quantifying the Homework Gap



67% of those without internet access cite cost as the primary reason.



"Very Comfortable" Respondents:

67%

PARENT'S COMFORT LEVEL
USING DIGITAL DEVICES FOR WORK

55%

STUDENT'S COMFORT LEVEL
USING DIGITAL DEVICES FOR HOMEWORK



Addressing the Homework Gap through Libraries

New Grant

- \$250,000 from Institute of Museum & Library Services
- Awarded to BIO/DIT + State Library
- 2 year grant

Homework Gap

- Grant will fund pilot to test holistic model of closing homework gap through local libraries
- Will produce Toolkit with best practices for addressing homework gap through libraries

Details

- Creates new position: Digital Inclusion Librarian
- Provides hotspots, digital literacy training for participants
- Partner with one library system in Y1, expand to (up to) 3 others in Y2



Next Steps to Close the Homework Gap in NC

Summarize

Full Report
Release

Implement

Implement
Policies &
Programs

Research

Add Survey
Questions
to Existing
Surveys



Upcoming Digital Equity Projects

'Device Day'

- Establish annual "Device Day" to highlight need for devices to close digital divide
- Purpose: to educate, public & businesses on digital divide, device refurbishing

Highlight Low-Cost Offers

- Offer Locator Tool
- Highlights existing low-cost offers
- Assists citizens in identifying low-cost offers
- Encourages providers to offer low-cost offers

Digital Literacy & Adoption Days

- Establish annual "Digital Literacy" and "Broadband Adoption" days to highlight need for digital literacy and ability to afford broadband as means to close the digital divide
- Most likely between January & August 2019

Net Inclusion 2019

- April 1st-3rd, 2018 in Charlotte, NC
- Great way to learn more about digital equity best practices from experts and peers

Broadband Benefits

How Broadband Impacts Your Daily Life



Broadband and Education

The background image is a blurred photograph of a classroom. In the center, a young boy is wearing a VR headset and holding it up to his eyes. To his right, another boy is holding a tablet. In the background, a teacher or adult is standing and holding a tablet, looking at it. The classroom has colorful decorations on the wall, including puzzle pieces with words like 'after' and 'before'.

Opportunities

- Personalized Learning
- Immersive Technologies
 - Augmented Reality (AR) and Virtual Reality (VR)
 - Skills based training
 - Soft skills training
- 3D Printing, robots, AI, etc.
- Online educational resources
 - Apps
 - Khan Academy, etc.

Challenges

- Homework Gap
- Teacher Training
- Device management
- Funding
- Speed of technology evolution
- Screen time

Broadband and Healthcare

Opportunities

- Telehealth
 - Video
 - Store & Forward
 - Remote Patient Monitoring
 - mHealth
- Digital Health
 - Electronic Health Records
- Rural healthcare delivery
- Healthcare IoT or (Internet of Medical Things)

Challenges

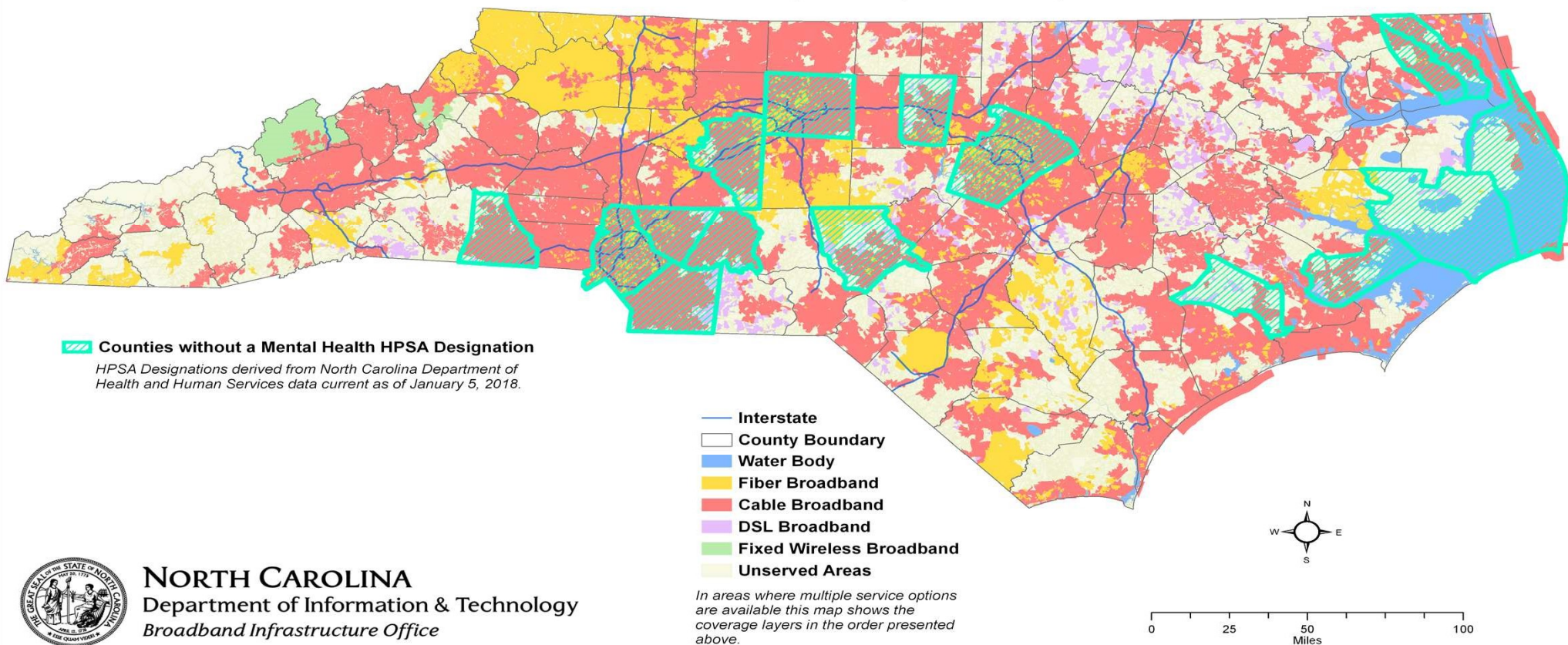
- Insurance/Reimbursement
- Policy
- Provider & patient training
- Complicated nature of healthcare industry

Broadband Service Inventory for North Carolina

Advertised Speeds of at Least 25 Mbps Download and 3 Mbps Upload

Data derived from U.S. Federal Communications Commission Form 477 Data Release Dec. 2016.

Note: A provider that reports deployment of a particular technology and bandwidth
in a census block may not necessarily offer that service everywhere in the block.



NORTH CAROLINA
Department of Information & Technology
Broadband Infrastructure Office

Broadband and Economic Development

Opportunities

- Growth of Entrepreneurial Ventures and Ecosystem
- Small Businesses with Tools to Grow and Increase Impact
- Business Location Selection and Retention
- New Workforce Development Opportunities Telework
- Smart Cities
- Positive Impacts to Quality of Life

Challenges

- Funding
- Coordination
- Rapid technology evolution



Public Safety and Broadband

Opportunities

- “Connected Responder”
 - Quick Response
 - Better Informed
- Data Sharing Between:
 - Departments
 - Local, County, State and Federal entities
- Increased Communication Methods
- Trainings

Challenges

- Policy
- Governance
- Standardization
- Funding
- Laws/Public Policy
- Perception

