



ALAMANCE COUNTY DIGITAL INCLUSION PLAN

Connecting for Success



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Introduction

The COVID-19 pandemic made clear what those in the world of government, non-profits, and businesses already knew; access to the Internet is critical to modern life, and many of our residents do not have reliable and affordable access. Through a BAND-NC grant, the Piedmont Triad Regional Council (PTRC) partnered with Impact Alamance and many stakeholders in Alamance County to develop a plan to evaluate and satisfy the broadband needs of the community as the Alamance Digital Inclusion Alliance (ADIA). The overarching goal is to create a plan that will inform decision makers when dedicating funds intended to extend broadband access to the community.

Mission

Our mission is to guide and promote the effort to provide the people of Alamance County, especially those in underserved communities, with equitable, affordable, reliable, and sustainable home access to online digital resources with the knowledge and ability to use that access beneficially for learning, business, entertainment, healthcare, and civic engagement.

Vision

Our vision is for Alamance County to be a leading example in North Carolina for providing equitable, reliable, and sustainable broadband access for all its residents.

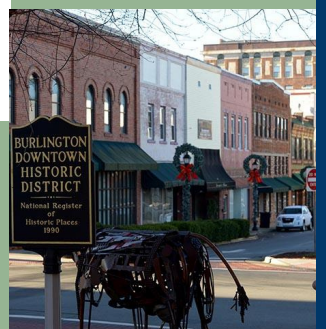
Values

The following values were developed by the group to instruct the development and implementation of the plan:

- Community-Based: Collaboration, input, and guidance from our community is vital to achieving our goals.
- Accessibility: Everyone should have the ability to connect digitally from where they live and work.
- Reliability: Internet connections and speeds should be sufficient to meet the needs of work, school, and civic involvement.
- Equity: Dependable, reliable access to digital technology should be available and affordable to everyone, regardless of demographics or socio-economic factors.



ABOUT ALAMANCE COUNTY



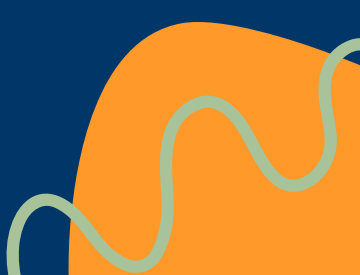
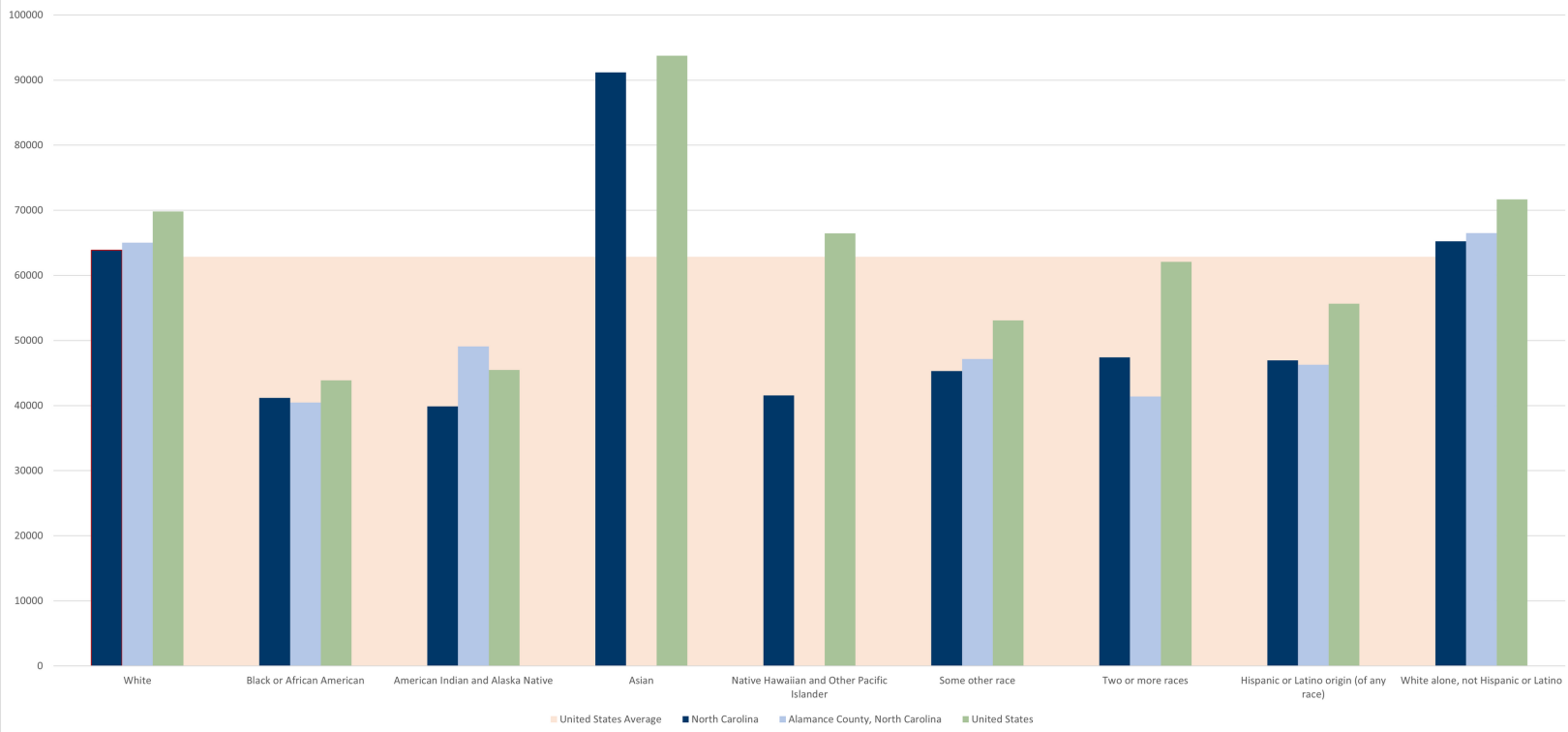
On the eastern edge of the Piedmont Triad region, Alamance County has a population of approximately 170,000, of which 71.4% is urban and 28.6% is rural. The population is 73.6% White, 20.9% African American or Black, and 5.5% other, with 13.1% identifying as Hispanic or Latino. The median household income is \$49,688 with 14.6 percent of persons in poverty. In May 2021, the unemployment rate was 4.4%. From 2000 to 2019, the county saw a population growth of 30% (U.S. Census Bureau).



There are three cities, six towns, and one village within the county, the largest of which is Burlington. The City of Graham is the county seat. Alamance County also hosts Elon University in the Town of Elon. The largest business employer in the county is LabCorp of America, which has its corporate headquarters there.



Median Household Income by Race





DEFINITIONS

Broadband Adoption: Daily access to the internet at speeds, quality, and capacity necessary to accomplish common tasks; with digital skills necessary to participate online; and on a personal device and secure convenient network.

Digital Navigators: Trusted guides who assist community members in internet adoptions and the use of computing devices.

Digital literacy: The ability to use digital tools to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.

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

Digital Equity: Is achieved when all communities and residents have the information technology needed to participate entirely in society, economy, and democracy.

Digital Inclusion: All activities that individuals and communities, including those most disadvantaged, carry out to access, and use Information and communication technologies.



Internet Speed: The rate of data transmission for connections to the Internet. These are typically referenced with Mbps, or Megabits per second. It measures how many bits (units of digital information) can be transferred each second.

Modem (modulator-demodulator): A modem's purpose is to convert digital information to analog signals (modulation), and to convert analog signals back into useful digital information

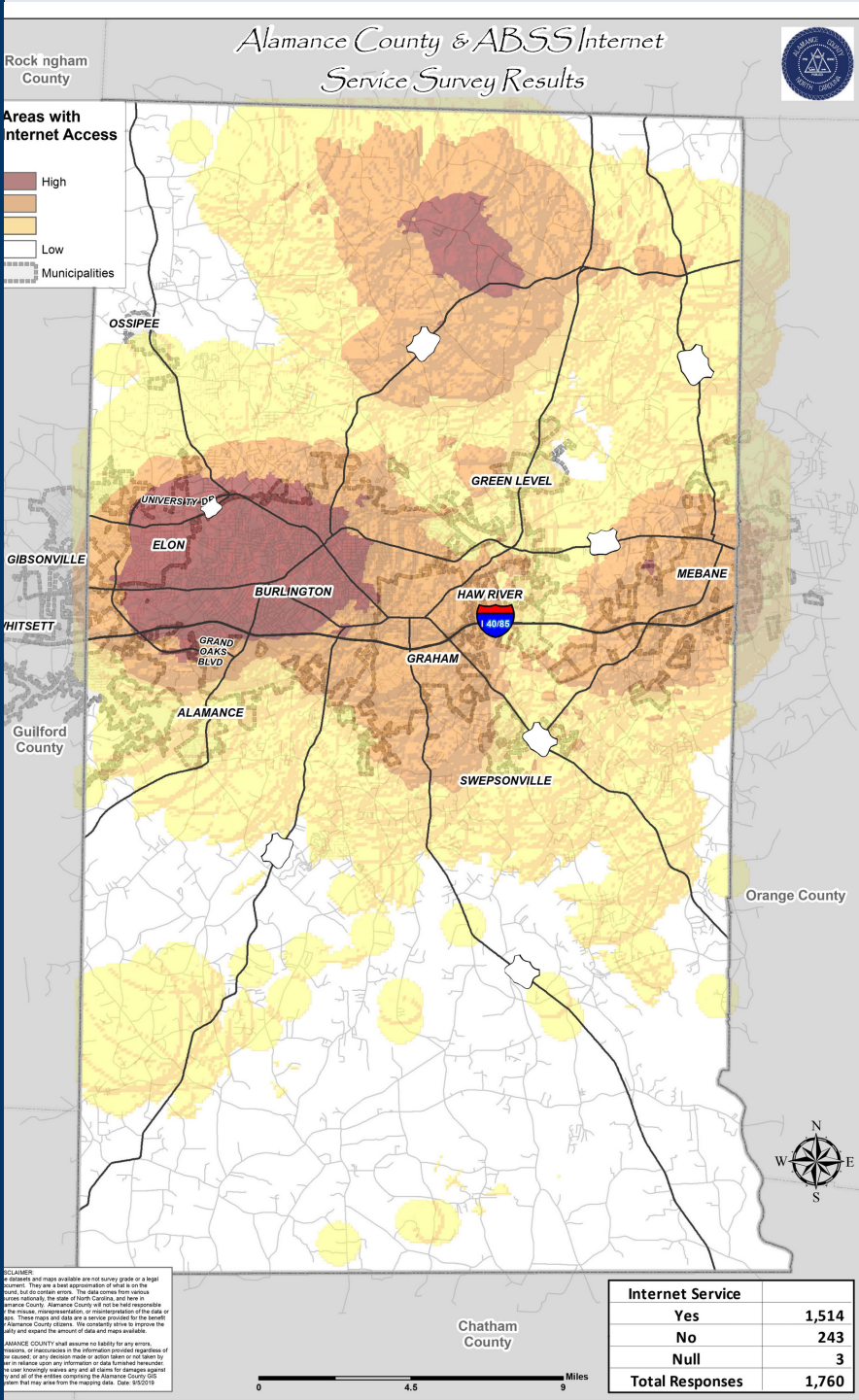
Broadband Connectivity: According to the FCC, broadband connectivity commonly refers to high-speed Internet access that is always on and faster than the traditional dial-up access and typically at speeds higher than 25 Mbps download and 3 Mbps upload.

High-Speed Internet: Broadband connectivity at speeds of greater than 100 Mbps upload and 100 Mbps download.

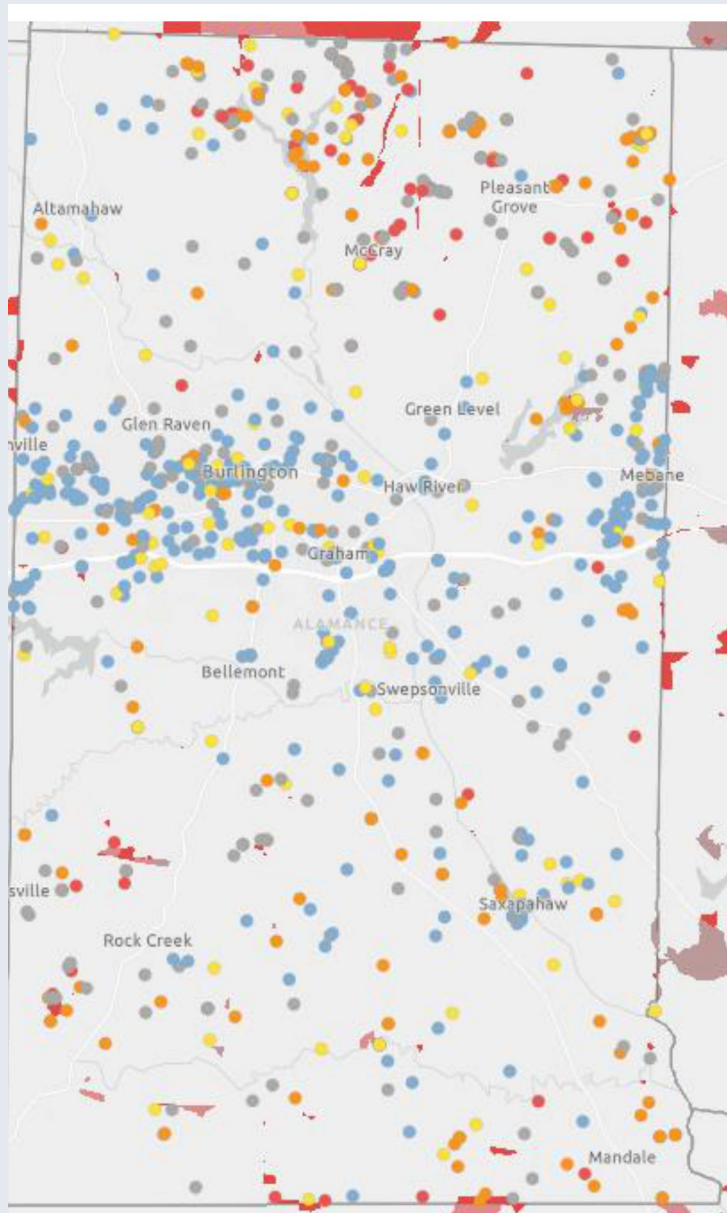


AVAILABILITY

According to the US Census Bureau, 98.8% of the population in Alamance County has access to broadband with 65.3% of the population subscribing to internet services. While that may seem impressive, it overlooks the way that the Census Bureau (and many of the federal agencies) evaluate coverage by census block. If one home in a census block has access to broadband internet service, their evaluations assume that all areas within that census block have broadband. A 2019 evaluation in Alamance County showed significant portions of the county without broadband coverage (see map 1). The North Carolina Broadband Infrastructure Office survey shows that 28% who took the survey in Alamance County have no wired internet access and 54% have access at less than 50Mbps. The average download speed for all respondents who have internet access was 39 Mbp (see map 2).



Map 1
Summer 2019 Internet
Survey Results



Map 2
 NC Broadband Survey
 Points

NC Broadband Survey Points (General, Phone, & Farm)

Service Level (calculated field):

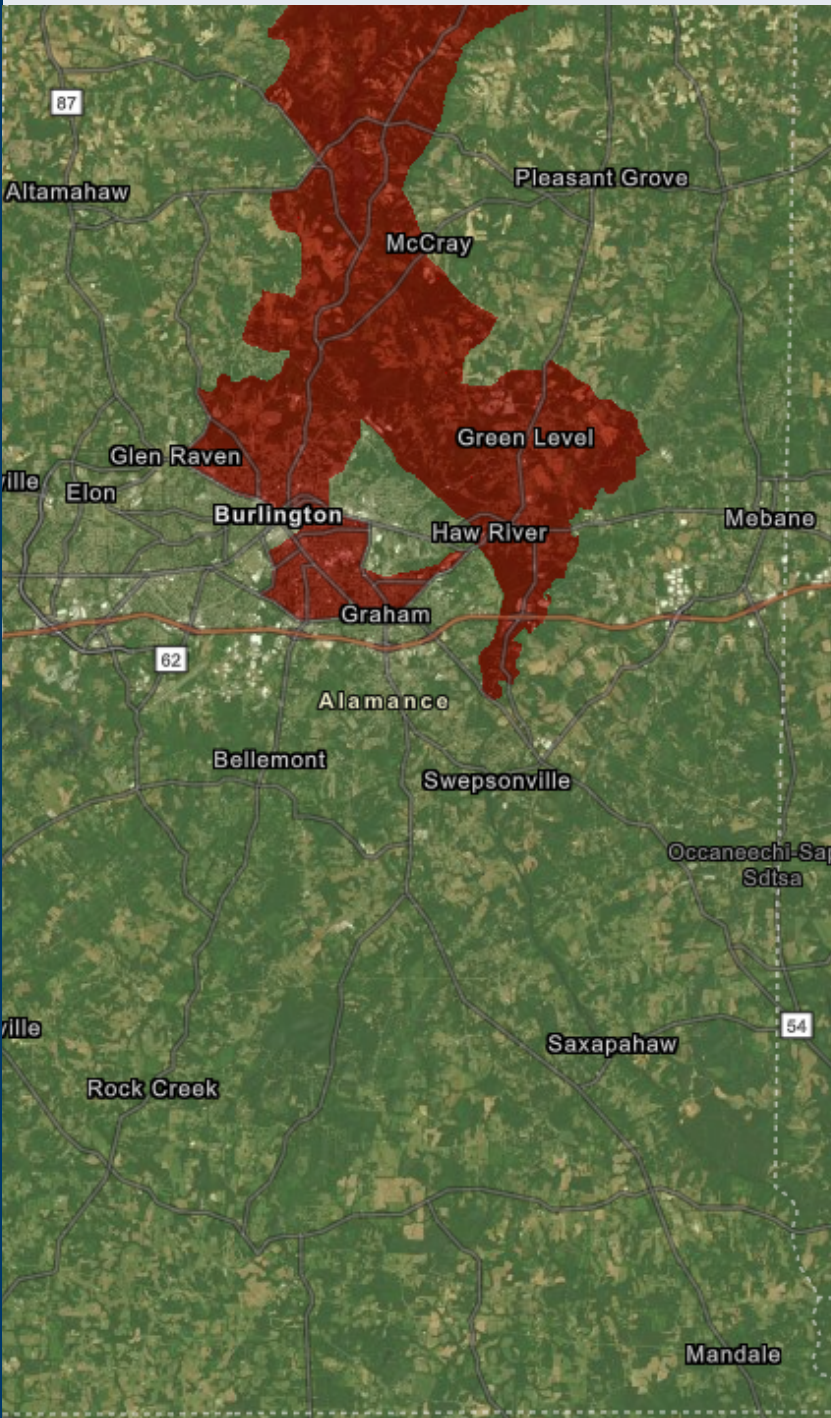
- No Internet
- Under 25/3
- Under 25/3 (Fastest)
- Over 25/3
- Other



According to the 2020 Alamance Land Development Plan, 40% of the county's land is devoted to agriculture and 40% of residences are rural. The Broadband Infrastructure Office states that 95% of those without internet service live in rural communities. Broadband USA maps show the areas where providers have indicated that they provide no service (see map 3), but as discussed, those are not a true reflection of the households with internet access. The maps indicating areas where households self-report that they have no internet access is much greater (see map 4). It should be noted that pockets exist within municipalities where internet connectivity is absent or at less than broadband speeds.

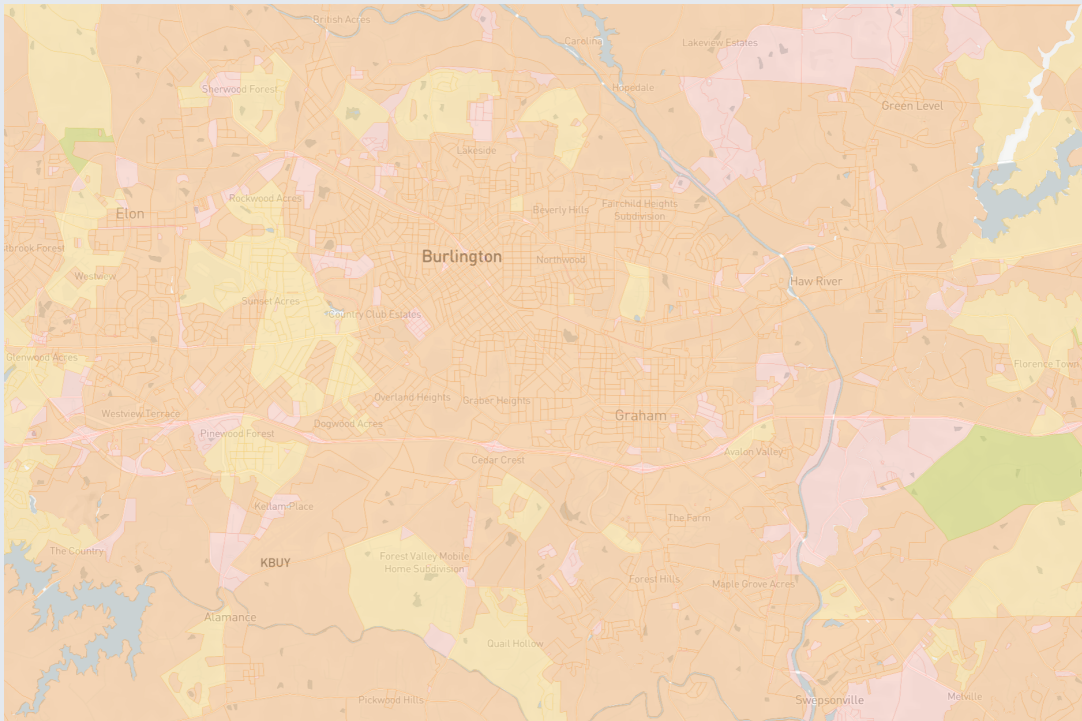


Map 3
Broadband USA:
Providers Indicate
They Provide No
Service



Map 4
Households Report
No Internet Access

The research group Broadband Now has published an aggregate map that provides more detail about the number of providers for various types of internet access. While the information provides details at a level smaller than census block, there is still no indication of which individual homes have broadband connectivity through cable or fiber. Their map of Alamance County (see map 5) indicates cable service in orange, fiber service in tan, and no service in pink.



Map 5
Broadband Now
Map

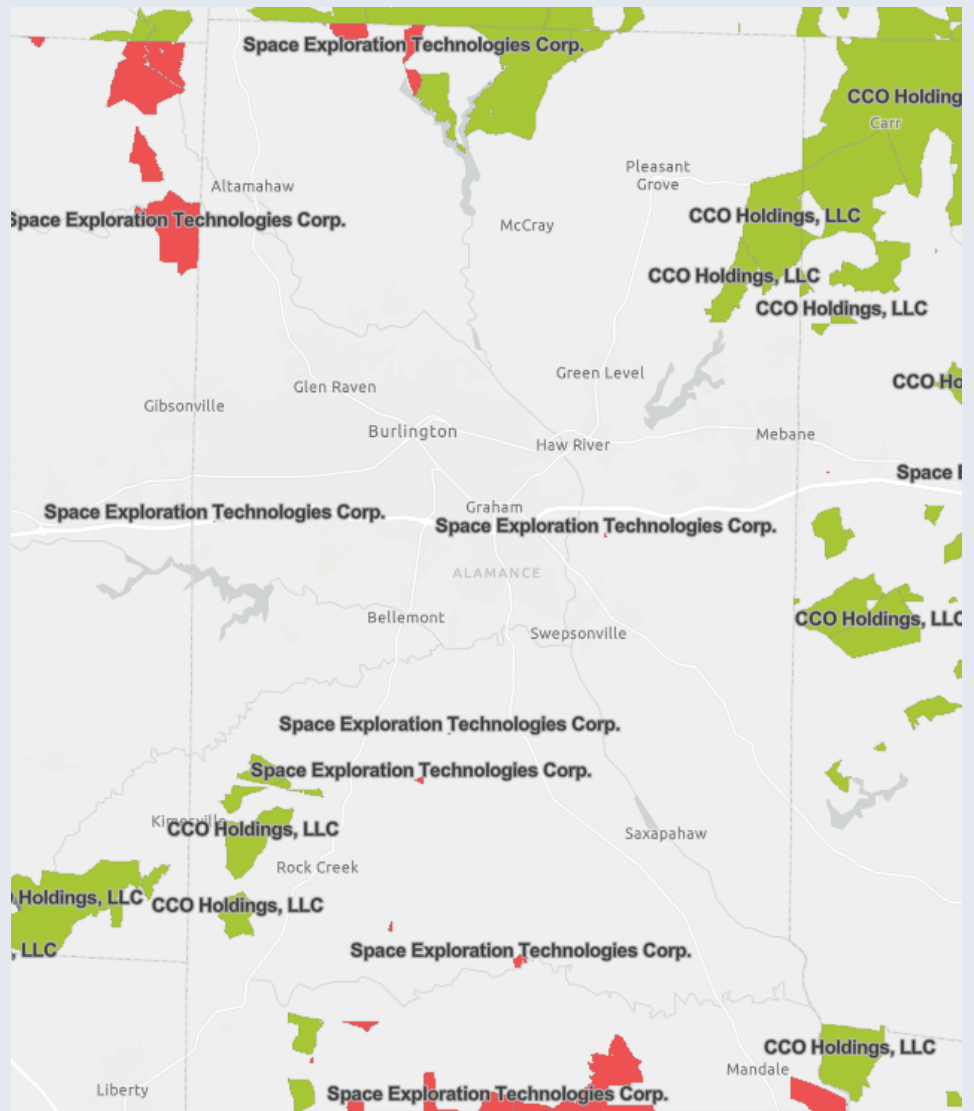


On-going Efforts to Address Availability

The FCC awarded grants through the Rural Development Opportunity Fund (RDOF) in early 2021. These grants are provided directly to internet service providers to connect census blocks in rural areas that the FCC identified as having no broadband service. In Alamance County, the awards were given to CCO Holdings, LLC (Charter-Spectrum) and Space Exploration Technologies Corp. (SpaceX), (See map 6). While these awards indicate future expansion of broadband into the rural areas, awardees have up to 10 years to complete the projects.

The North Carolina Growing Rural Economies with Access to Technology (GREAT) grant program provides additional opportunities for expansion in rural areas. Alamance County is working with Randolph Communications to obtain a GREAT grant to connect southern areas of the county. These state level grants have a more desirable completion requirement of two years.

Map 6





Priority of Needs

In the area of availability, the overall goal is to expand broadband to every home in the county with sufficient broadband speed to take advantage of current technological needs. As technology needs continue to change, the fastest connections possible should be the target rather than leaning on minimum speeds. Still, the reality is that having some connectivity is better than having no connectivity, which drives these priorities.

1. Improve Maps: The first priority should be to improve the maps indicating exactly which homes and business have broadband availability. The lack of clear and accurate availability maps is an impediment to all other digital inclusion and equity efforts.
2. Increase Connectivity: The second should be to connect areas where no broadband connection exists. For most rural areas, the cost of installing fiber to individual homes is extremely expensive. Fixed wireless may be the best solution with the County working with providers to develop these connections.
3. Improve Connectivity: The third priority should be to provide those homes and businesses with connection speeds of less than 100 Mbps download and 10 Mbps upload to a fiber connection that meets or exceeds bilateral speeds of 100 Mbps.

Addressing Priority of Needs

Priority 1: Improve Maps

Action Step: Encourage residents and local officials to contact legislative representatives and request changes or additions to the laws that will improve broadband infrastructure mapping.



Strategy 1: Create laws to mandate that Internet Service Providers (ISPs) provide the NC Department of Information Technology (NCDIT) with current and planned availability by street and address.



Strategy 2: Dedicate federal and state funds to broadband projects to collect information from individual households and businesses regarding the availability and speed of internet connections.

Addressing Priority of Needs

Priority 2: Increase Connectivity

Action Step: Dedicate state and federal funds to expand broadband access.



Strategy 1: Increase the number of grant applications to connect eligible areas of the county, including cities and towns.

- County government should seek out first and second-tier ISPs to coordinate GREAT Grant applications.
- Cities and towns should capitalize upon recognized downtown designations to seek grants to fund public Wi-Fi networks in those areas.

Addressing Priority of Needs

Priority 2: Increase Connectivity

Action Step: Advocate for an increase in the number of satellite and fixed wireless options for the most rural areas of the county.



Strategy 1: Seek to replicate the partnership that NCDIT created with SpaceX in Swain, Hyde, and Warren Counties.



Strategy 2: Capitalize on existing funding available to expand public safety connectivity through the NC Voice Interoperability Plan for Emergency Responders (VIPER) network by building extra capacity for fixed wireless transmission.

Addressing Priority of Needs

Priority 3: Improve Connectivity

Action Step: Encourage residents and local officials to contact legislative representatives and request changes or additions to the laws that currently hinder fiber-based broadband expansion.



Strategy 1: Create or change laws to allow use of existing dark fiber and government fiber infrastructure construction to expand in areas where internet service providers will not invest in improvements.



Strategy 2: Create or change laws to provide for more competition in the broadband market.

Addressing Priority of Needs

Priority 3: Improve Connectivity

Action Step: Regionalize the effort to increase availability to leverage more funds to create incentives for internet service providers to expand fiber infrastructure.



Strategy 1: PTRC should capitalize on its relationships with municipal officials to coordinate region-wide efforts at broadband expansion.



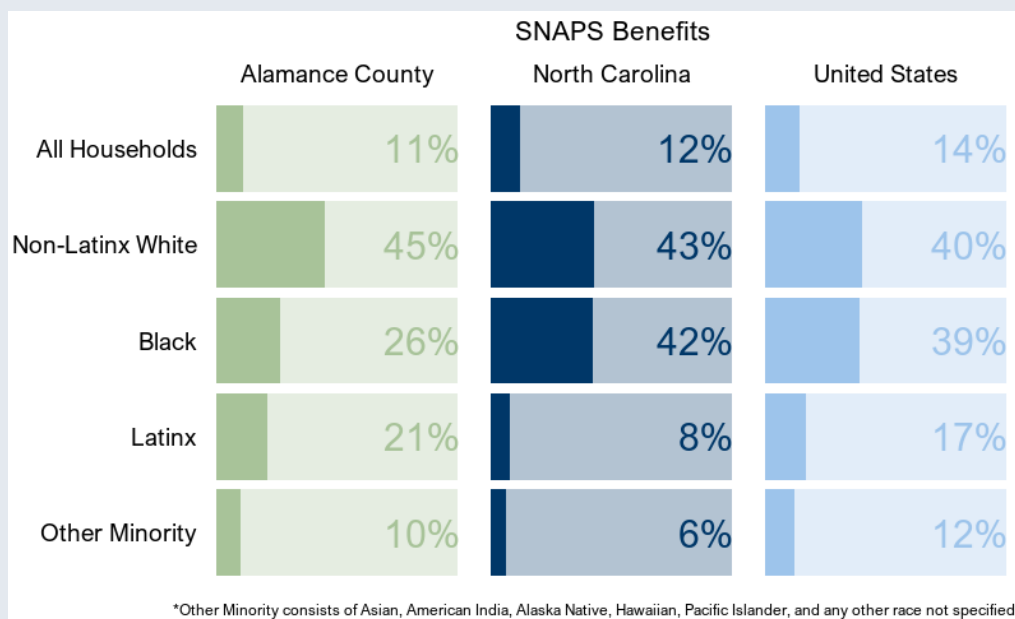
Access refers to the capacity to take advantage of available broadband infrastructure. At least 1.1 million North Carolina households lack access to high-speed internet, cannot afford it, or do not have the skills needed to take advantage of the digital economy. Everyone is affected by the digital divide, especially school-age children, work from home employees, health care patients, and county residents. To achieve digital equity means that every North Carolinian would have the technologies, tools and skills needed to access affordable high-speed internet anywhere, anytime.



Ongoing Efforts to Address Access

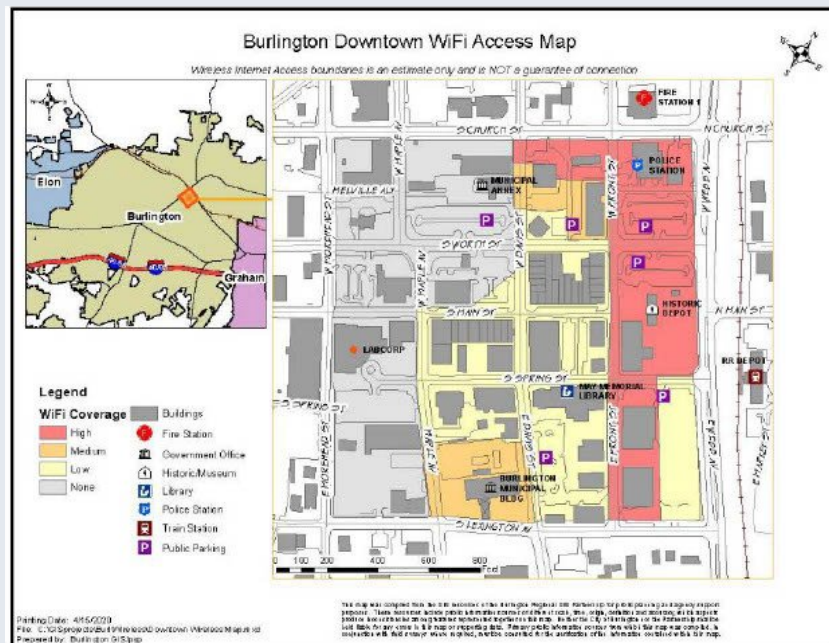
The Federal Communications Commission issued the Emergency Broadband Benefit (EBB) program to provide a monthly discount on internet bills for qualifying households.

The EBB Program will provide a discount of up to \$50 per month for broadband services for eligible consumers. Additionally, the program provides a one-time device discount of up to \$100 for a laptop, desktop computer, or tablet purchased through a participating provider. The one-time discount requires a consumer co-payment of more than \$10 and less than \$50. The Emergency Broadband Benefit is temporary. It will expire when funds are exhausted or six months after the Department of Health and Human Services (HHS) declares the end of the COVID-19 health emergency.



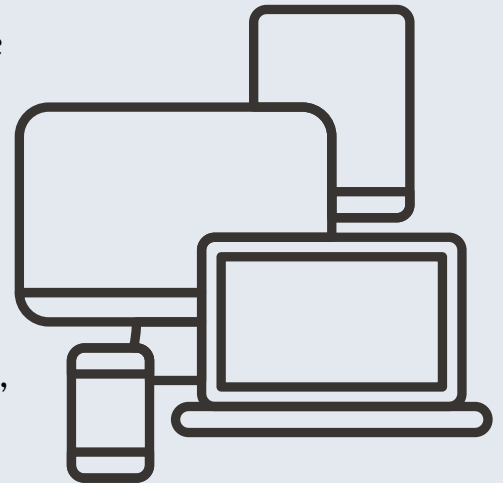
Ongoing Efforts to Address Access

Many businesses and organizations opened their doors, and parking lots, to community members to help combat the digital divide. Alamance County Public Libraries served as a location for free internet access and utilize the mobile internet van to reach underserved and rural communities. Other locations for free internet access include the Goodwill Community Centers, local churches, Dream Center, Coffee Shops, Alamance Chamber office, and areas of Downtown Burlington, etc. Free wireless internet is provided to the public in specific locations throughout Burlington's Downtown. The map below highlights these locations (see image).



Ongoing Efforts to Address Access

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Priority of Needs

Access goals should focus on where the internet may be available, but affordability is an issue and include access to computer hardware and devices. After evaluating existing assets and gaps in Alamance County, the Digital Inclusion Alliance have set the following priorities as it pertains to access:

1. Provide public access to wireless networks. This can be best championed by utilizing public spaces and building pre-existing programs.
2. Providing digital devices and computer hardware to the wider Alamance community. While efforts have been made by ABSS to ensure students and teachers have access to computer laptops and hardware devices, we must ensure the sustainability of such programs and broaden their scope to reach other members of the community.
3. Focus our efforts on reduction of cost and affordability of home internet access. Create awareness of the Emergency Broadband Benefit subsidy program. The sooner households in Alamance County become aware of the program, the more time they will have to take advantage of low-cost internet access.

Addressing Priority Areas

Priority 1: Public Access to Wireless Networks

Action Step- Create Permanent Wireless Access at Public locations throughout Alamance County



Strategy 1: Amidst the Covid-19 pandemic, churches, parks, and libraries utilized their parking lots to provide wireless access to community members from the convenience of their cars. To create permanent free wireless access, weather protected routers should be installed at public park facilities that would expand access to parking lots and picnic areas. These permanent access locations should be strategically placed within parks and community spaces that serve rural and underserved communities (Example: Green Level, Elmira Park, Morrowtown, etc.).



Strategy 2: Grant funding to support the initial engineering required to establish services in public/private use areas, hiring private network build companies, increase incentives for service providers to expand network access to government entities.

Addressing Priority Areas

Priority 2: Increase Access to Physical Computer Equipment

Action Step- Computer Refurbishment and Donation Program Initiative



Strategy 1: Organizations should look to create a computer refurbishment program in partnership with major businesses and universities in Alamance County. Dell has been identified as a partner in this initiative and is interested in donating refurbished computers. Other businesses and organizations of interest include Elon University, Alamance Community College, and LabCorp.



Strategy 2: Current Programs that would increase access to computer equipment include the library equipment lending program, ABSS student device deployment initiative. We should work to enhance these programs through the development of a computer refurbishment initiative for the county.



Strategy 3: A key step to this initiative would be to create/identify a lead organization which has the capacity to distribute and store computers. A notable program to look to model this initiative is the Kramden Institute

Addressing Priority Areas

Priority 3: Reduction of Cost and Affordability of Home Internet Access

Action Step- Emergency Broadband Benefit Program Awareness and Application



Strategy 1: Alamance County government and nonprofit organizations should disseminate information about the Emergency Broadband Benefit Program. The EBB program has community outreach flyers, social media posts, and handouts readily available for mass distribution.

Additionally, there is a need to provide spaces at computer labs for people to register for the EBB program. These locations should be strategically available to target communities of people who would most benefit from the EBB program.

Free Internet Locations

Public Internet Access in Alamance County

Number	Location	Address
1	May Memorial Library	342 S. Spring St, Burlington
2	North Park Library	849 Sharpe Road, Burlington
3	Graham Public Library	211 S. Main St, Burlington
4	Mebane Public Library,	101 S. First St, Burlington
5	CityGate Dream Center	1423 N Church St, Burlington
6	Carol Grotness Belk Library	308 North O'Kelly Avenue, Elon
7	Willowbrook Arboretum	315 W. Willowbrook Dr., Burlington, NC



ADOPTION

According to the Broadband Infrastructure Office, broadband adoption relates to the percentage of the population that subscribes to broadband services. There are various barriers to subscribing, including unavailability of broadband, costs of the service and digital products, adequate education for digital literacy, and the perceived relevance of the internet in a person's life.

Modern day livability includes digital access and internet service. Existing members of the community need broadband for greater connectivity amongst communities to enable access to distant services, whether it is health, economic, civic participation, or education related. Additionally, people are less likely to move to a place where they have terrible service, especially with the rise of remote work. Broadband adoption will continue to be a focal point for governments and communities in the coming decades, which should propel data collection and strategy development to address the growing needs in a digitized world.

The Alamance Digital Inclusion Alliance adoption committee, consisting of community leaders and business owners, focuses on digital literacy, awareness of access options, and engaging community leaders to share resources locally. In the preliminary stages of research, the team conducted a thorough analysis of Alamance County's current assets and areas of improvement.



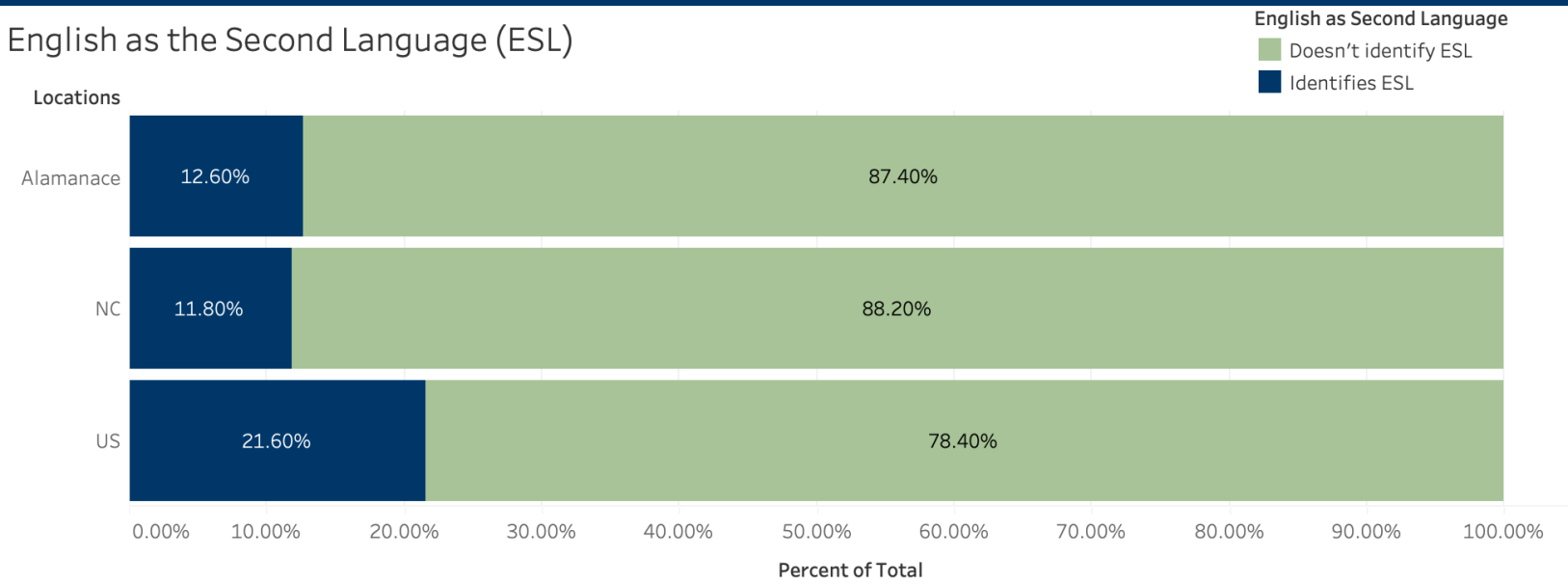
Ongoing Efforts to Address Adoption

Alamance County has viable assets to provide spaces for digital literacy training to engage a wide array of demographics. Additionally, there are numerous community organizations that offer asynchronous computer skills training or have the capacity to offer courses. Regarding telehealth, Cone Health’s “My Chart” platform allows for digital access to health records and digital tools for scheduling virtual health appointments. Small businesses, like Right Here, Right Now, have the capacity to offer technical assistance for all hard and soft issues relating to differing technologies, and they offer individualized computer skill training. While there are promising opportunities for resource sharing and space availability for technical uses, Alamance County residents, especially in low-moderate income areas, have a deficiency of services, systems, and options to access for broadband adoption related concerns.

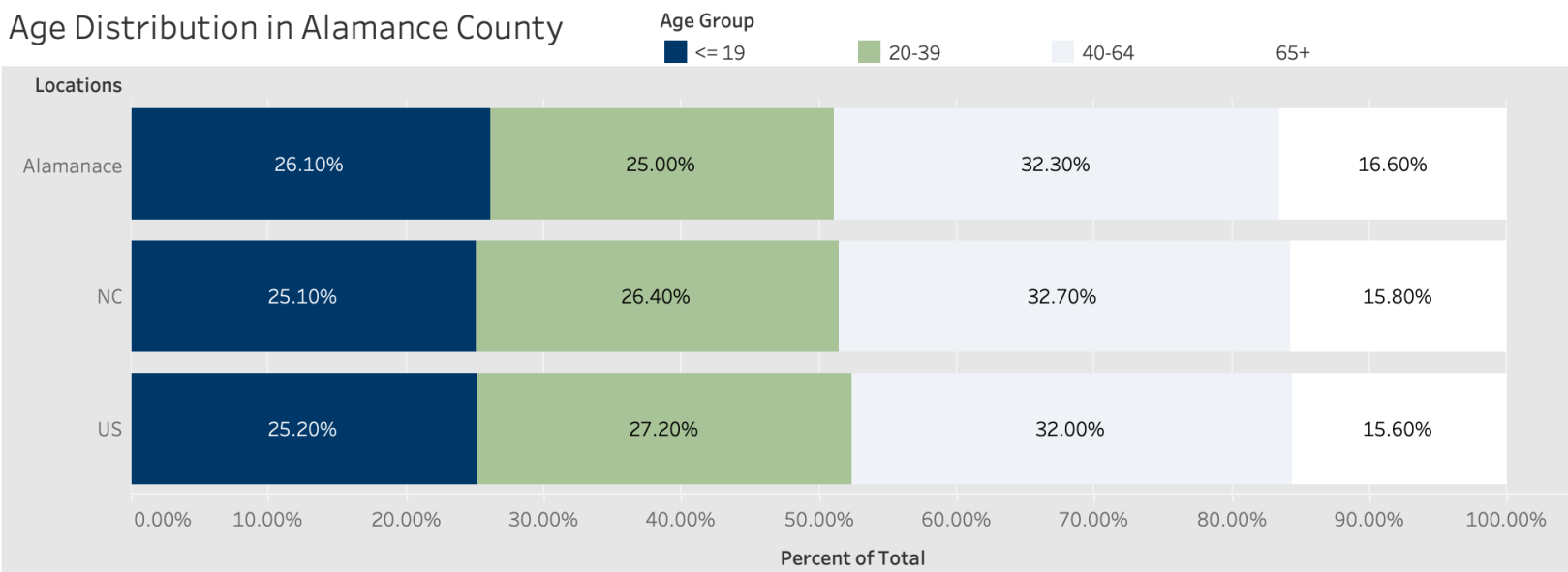
The adoption cohort found multiple areas that need attention to address gaps in the community. First, a large portion of rural residents, elderly people, and ESL (English as a second language) communities are less likely to perceive a significant need for broadband.



Ongoing Efforts to Address Adoption



Ongoing Efforts to Address Adoption



Moreover, there is a lack of resources for computer skills training and technical assistance in the rural parts of the county. In addition to the absence of those resources, there is a scarcity of individuals and organizations to offer telehealth navigation services and spaces for telehealth appointments. Lastly, the cohort identified an increased demand for digital navigator programs for consistent classes and on-demand technical assistance.

Priority of Needs

To collectively address these areas of concern, the adoption group split into sub committees to tackle four areas: telehealth, business and workforce development, digital literacy general education, and the improvement of digital literacy services. Below is a breakdown of each sub committee's goal and strategies to reach our main priority.

Overall Priority:

To develop and implement strategies to enable residents of Alamance County to confidently use the digital tools available to them to participate in economic, social, health, and educational opportunities without hindrance from negative societal constructs.

Priority 1: Telehealth- Navigation Assistance

Action Step: Expand telemedicine education, assistance and access.



Strategy 1: Create private spaces/rooms in the community (centers in apartment communities, places of worship, place of work) where residents can access telehealth services (reserve appointments, attend classes, meet with their PCP, etc.)



Strategy 2: Provide trainings on creating MyChart and how to make doctor appointments online. Have an instructor and/or video, PowerPoint self-paced materials.

Priority 2: Local Business & Workforce Digital Development

Action Step: Improve local businesses' use and understanding of technology available to them to promote and sustain their business long-term and maximize their profit.



Strategy 1: Provide support to existing businesses and their online presence and competitiveness. (Marketing, book-keeping, cyber security protection, etc.)



Strategy 2: Become a remote work friendly community.



Strategy 3: Equip essential workforce professionals with the tools to navigate digital instruments.

Priority 3: Digital Literacy.

General Education

Action Step: Address the relevance issue by offering customized digital training and assistance to the needs and interests of targeted populations.



Strategy 1: Identify partners who offer digital trainings to diverse communities.



Strategy 2: Create spaces where residents can receive free digital technical assistance within their communities or in community centers they frequently visit.

Priority 4: Improvement of Digital Literacy Services

Action Step: Raise awareness and kick start community participation through a “hackathon.” This creative problem-solving event will invite students and community members to focus explicitly on the opportunities and benefits of broadband coverage in Alamance County.



Strategy 1: Conduct annual “hackathons” where local students or residents compete to develop apps or online services to improve city services, community responsiveness, and/or quality of life in general.

Continuing The Work

Although the Alamance Digital Inclusion Alliance was created to develop a digital inclusion plan, the group has developed the capacity to continue its efforts at achieving digital inclusion goals. The group members unanimously elected to stay intact as a resource for Alamance County residents. The group will compile and maintain a comprehensive list of resources for its residents and area organizations that will serve to improve broadband access. It will continue to provide input on behalf of residents to government officials regarding the needs of the community in matters of digital equity and inclusion.



Plan Development Members

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