Clarke County

Broadband Profile

August 2023

Be Linked Alabama

Profile background

This report was prepared by the Alabama Department of Economic and Community Affairs for Clarke County.

ADECA thanks the elected officials, staff, internet service providers (ISPs), institutions, and residents of Clarke County for their input and insights.

Introduction

ADECA is pleased to present this profile document for Clarke County. This plan was developed as part of ADECA's Alabama Community Broadband Technical Assistance Program in 2022 and 2023.

The profile is based on meetings with County partners, data collected through a phone survey of residents, the Alabama Broadband Map, and a range of federal and other relevant data sets.

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01 Executive summary

Overview

This section presents an overview summary of ADECA’s findings regarding the broadband infrastructure and Digital Opportunity landscape in Clarke County. It briefly summarizes the content of the County Broadband Profile, including potential strategies and opportunities to address broadband availability and Digital Opportunity.

Background

This County Broadband Profile results from ADECA's award to Clarke County of support under the Alabama Community Broadband Technical Assistance Program.

In 2020 and 2021, ADECA identified an urgent need for broadband planning to address gaps in broadband infrastructure and participation, and to allow communities to plan for grant opportunities.

In 2021, ADECA received a grant from the U.S. Economic Development Administration to provide broadband technical assistance for local communities.

Through its competitive Technical Assistance Program, ADECA is providing technical assistance for communities seeking to expand broadband infrastructure and services in response to the critical need for internet access.

The technical assistance — as delivered in this County Broadband Profile — takes a broad view of infrastructure and digital participation needs across the County and provides recommendations for how the County can improve its broadband profile.

ADECA's Technical Assistance Program

The Technical Assistance Program followed three stages that led to the development of this County Broadband Profile.

County Broadband Profile

Engage

Meet with community leaders, local institutions, ISPs, and the public.

Identify local challenges and assets.

Analyze

Assess current broadband service levels.

Evaluate unmet needs for broadband, training, devices, and support.

Strategize

Develop strategic approaches to public-private collaboration.

Provide guidance regarding grant funding for broadband and Digital Opportunity.

Opportunities

The current moment presents an opportunity to address broadband challenges through state, local, and ISP efforts.

Awareness of Broadband's Criticality

following the pandemic and widespread adoption of remote work and education.

State and Federal Funds

available now and in the next few years for infrastructure. Federal funds may be available to help lower-income households afford broadband service.

Growing Data Needs

resulting from growth in digitalization, online services, streaming, and connected devices.

ISP Investment Plans

to expand and upgrade current networks through both public grants and private funds, in collaboration with the state and localities.

ADECA's engagement with Clarke County

In-person meetings in the County, along with statewide engagements, will inform ADECA's planning for the upcoming grant programs.

Initial collaboration

- ADECA collaborated with Clarke County leaders to identify participants and coordinate logistics for an on-site meeting. The meeting was designed to share information about the Broadband Equity, Access, and Deployment (BEAD) and Digital Opportunity programs, understand barriers to broadband, and gather information about current broadband-related programs in communities throughout the County.
- ADECA invited 92 people from a pool of government officials, ISPs, and community-based organizations; the public was also invited to attend.

On-site meetings

- ADECA conducted this meeting at the Grove Hill Town Hall Council Chambers on March 21, 2023. 18 participants were in attendance, including organizations representing the entities listed to the right.
- Appendix D includes a partial list of organizations that attended the on-site meeting.

Outcome

- Participants provided insights into their community-specific needs and what obstacles to broadband they were experiencing. They also shared programs that are making an impact on broadband access and Digital Opportunity.

The meetings in Clarke County included participation from a range of entities:

- ISPs
- Elected officials
- Local nonprofit groups
- Anchor institutions, such as schools and libraries

Source: Clarke County in-person discussions, March 2023

Local perspectives

Partners note barriers and obstacles to broadband opportunity.

Elected Officials

Said that affordability is also an issue for municipalities and businesses, not just residents.

Governments and Anchor Institutions

Expressed interest in expanding publicly available Wi-Fi access.

Internet Service Providers

Described how ISPs could be more efficient if city and County zoning provided notice of new construction.

Other Participants

Expressed concern about the time it will take to serve currently unserved areas, as students may not be able to complete schoolwork with currently available service.

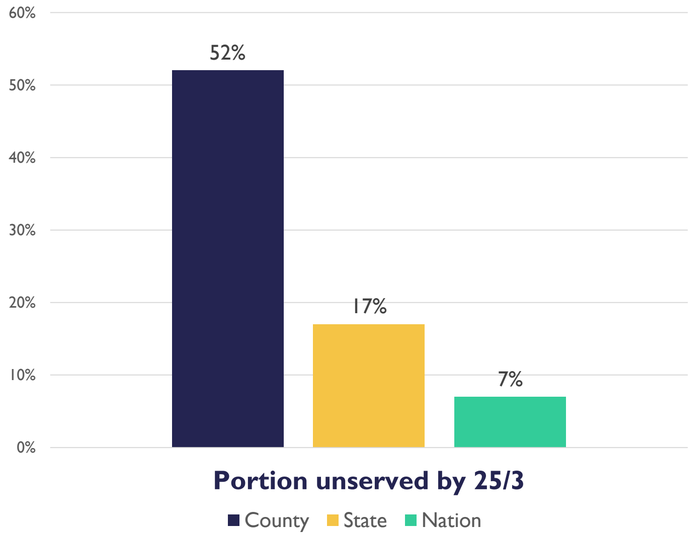
Source: Clarke County in-person discussions, March 2023

Summary of findings

Clarke County significantly lags behind other Alabama counties and national averages for broadband availability and adoption but has greater participation in federal subscription subsidies.

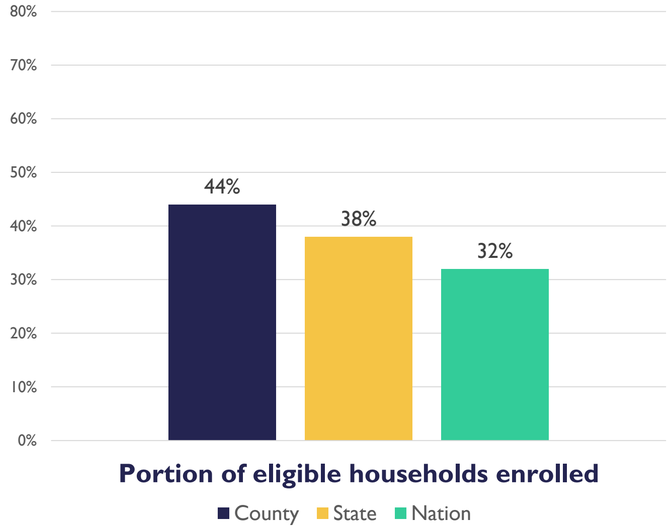
Availability

The County significantly lags behind the state and the nation in availability, with more households unserved by broadband.



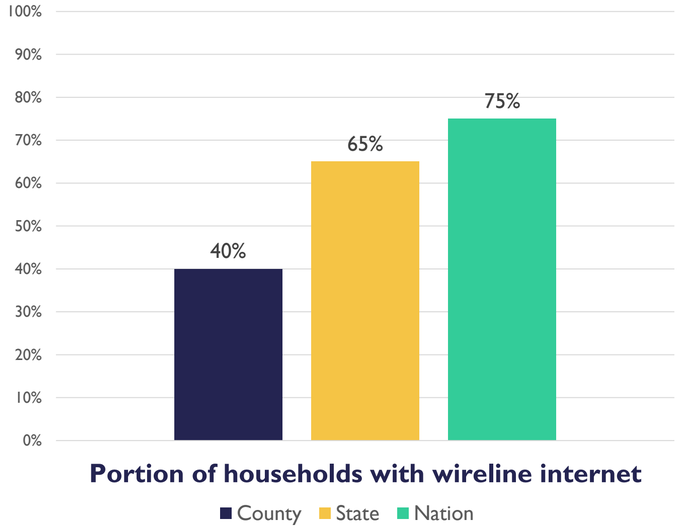
Federal Subsidy Use

The County leads Alabama and the national average for percentage of eligible households that participate in the federal Affordable Connectivity Program's $30/month subsidy.



Broadband Adoption

The County lags behind both the state and nation on percentage of households with wireline internet service.

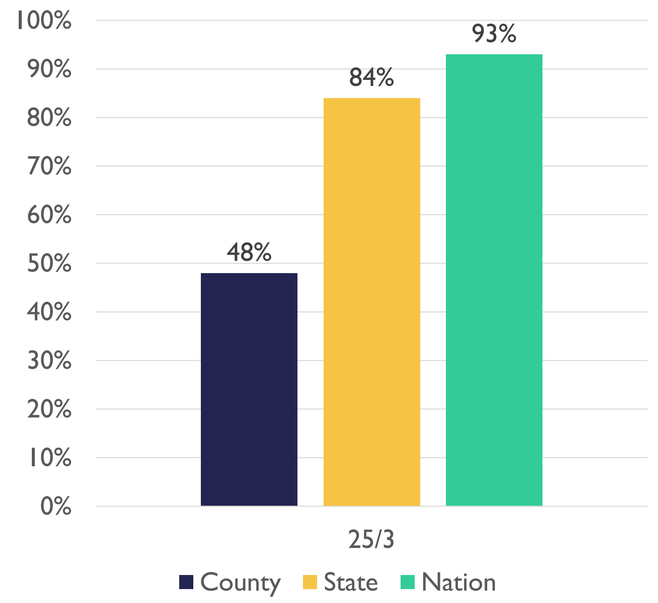


Sources: ADECA, *Alabama Broadband Map* (2023); Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023); Universal Service Administrative Company, *ACP Enrollment & Claims Tracker* (2023); Census Bureau, *American Community Survey Public Use Microdata 2021 1-year estimates*

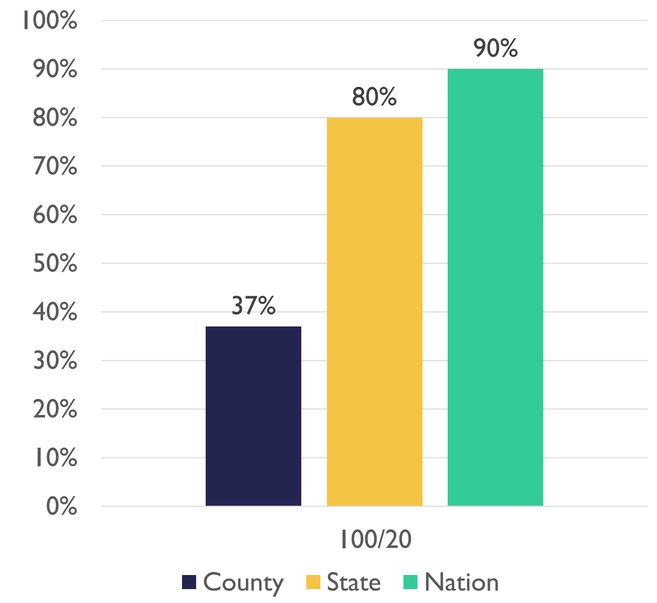
Findings on availability

Clarke County lags behind Alabama and national averages for all speeds of broadband availability.

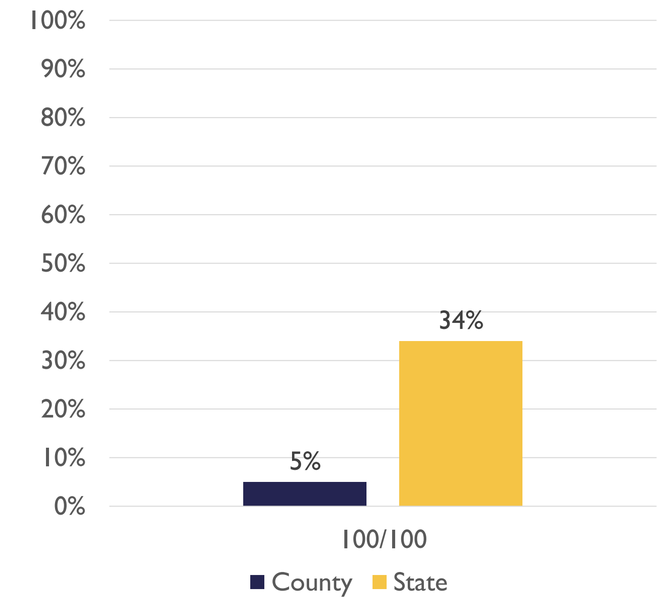
Percentage of units served by ≥25/3 Mbps



Percentage of units served by ≥100/20 Mbps



Percentage of units served by ≥100/100 Mbps

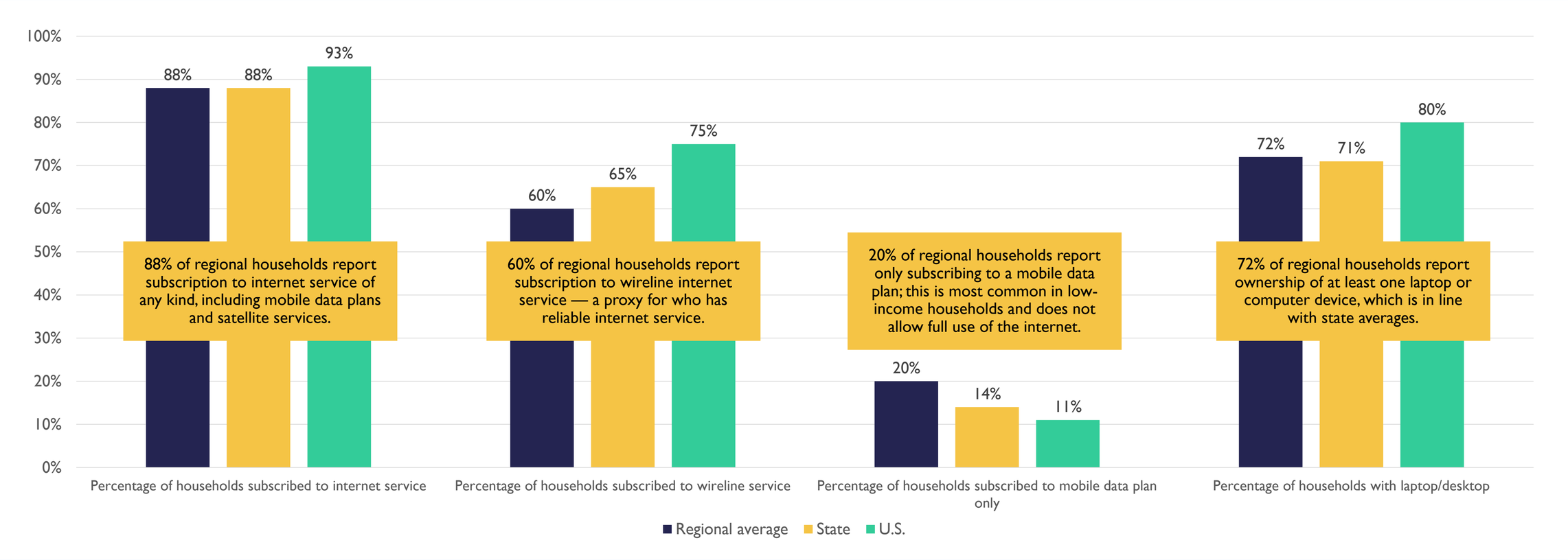


FCC's National Broadband Map does not report national figures for 100/100 Mbps.

Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023)

Findings on adoption and use

Clarke County's region is comparable to the statewide internet adoption rate and device ownership but lags behind on availability of reliable service and on nationwide averages on all broadband adoption parameters.



Source: U.S. Census Bureau, *American Community Survey* (2021)

Findings on Digital Opportunity

Lower-income residents face greater barriers across four pillars of Digital Opportunity.

Findings were derived from Census survey data, and ADECA's phone survey of County residents, both of which inquired on residential needs in internet and device access, and confidence in digital skills.

Broadband Access

Low-income households subscribe to internet at lower rates and report less reliable service.

Subsidies available from the federal Affordable Connectivity Program are underutilized.

Devices and Tech Support

Low-income, senior, and disabled households lag behind others in device ownership.

Privacy and Security

Low-income households do not feel confident in their ability to identify fraud and misinformation.

Digital Skills

Many low-income households are not confident in their ability to use basic digital skills.

Senior households lag behind other groups in key digital skills, including accessing medical services.

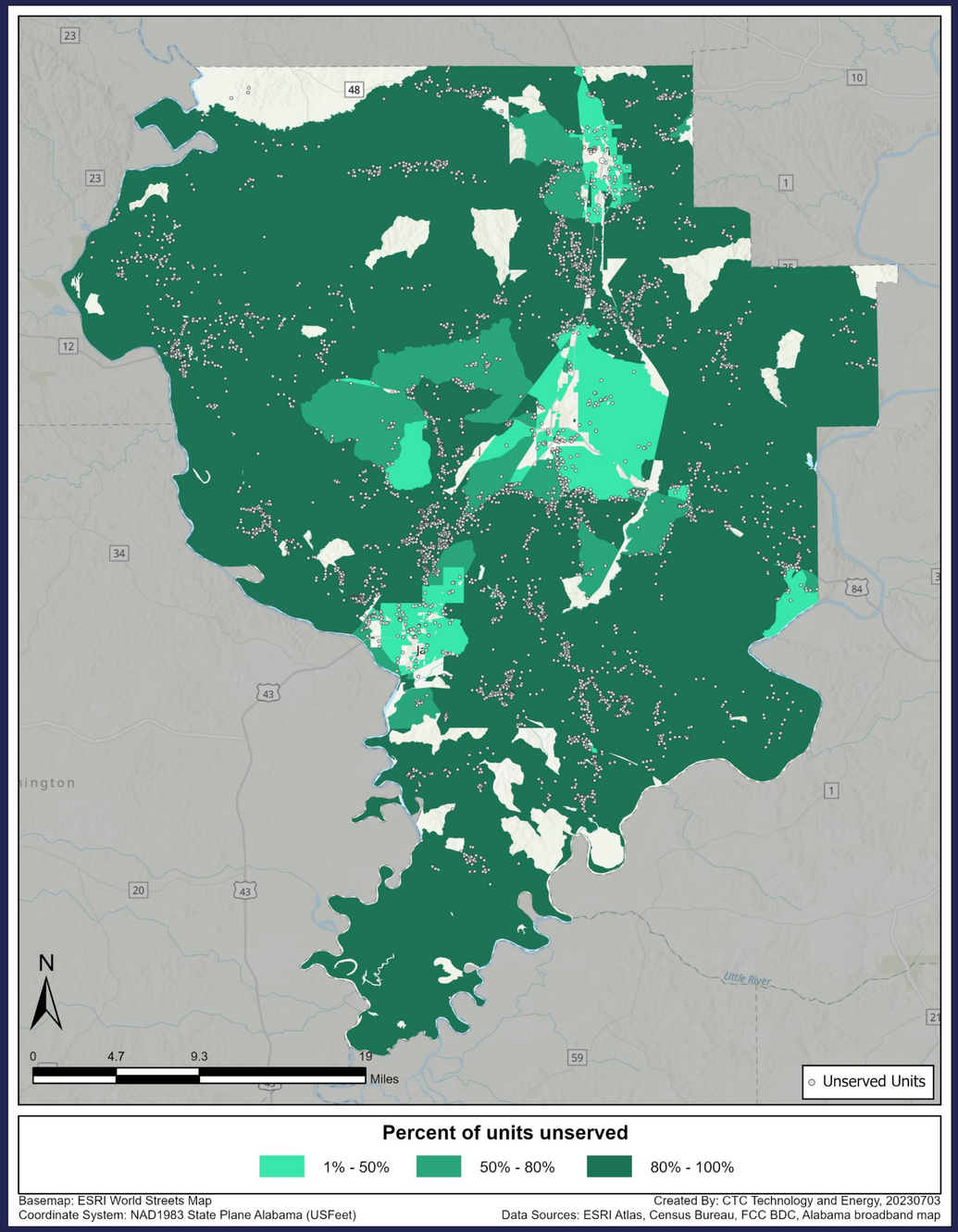
Sources: ADECA 2023 Regional Phone Survey, U.S. Census Bureau

52% of County units are *unserved* on the FCC Map

These unserved locations do not have access to an internet service product providing speeds of greater than or equal to 25/3 Mbps.

These areas are the top priority for federal funding under the Infrastructure Investment and Jobs Act, through the Broadband Equity, Access, and Deployment (BEAD) program.

ISPs and policymakers can observe additional address-level data on unserved units on ADECA's Alabama State Broadband Map.



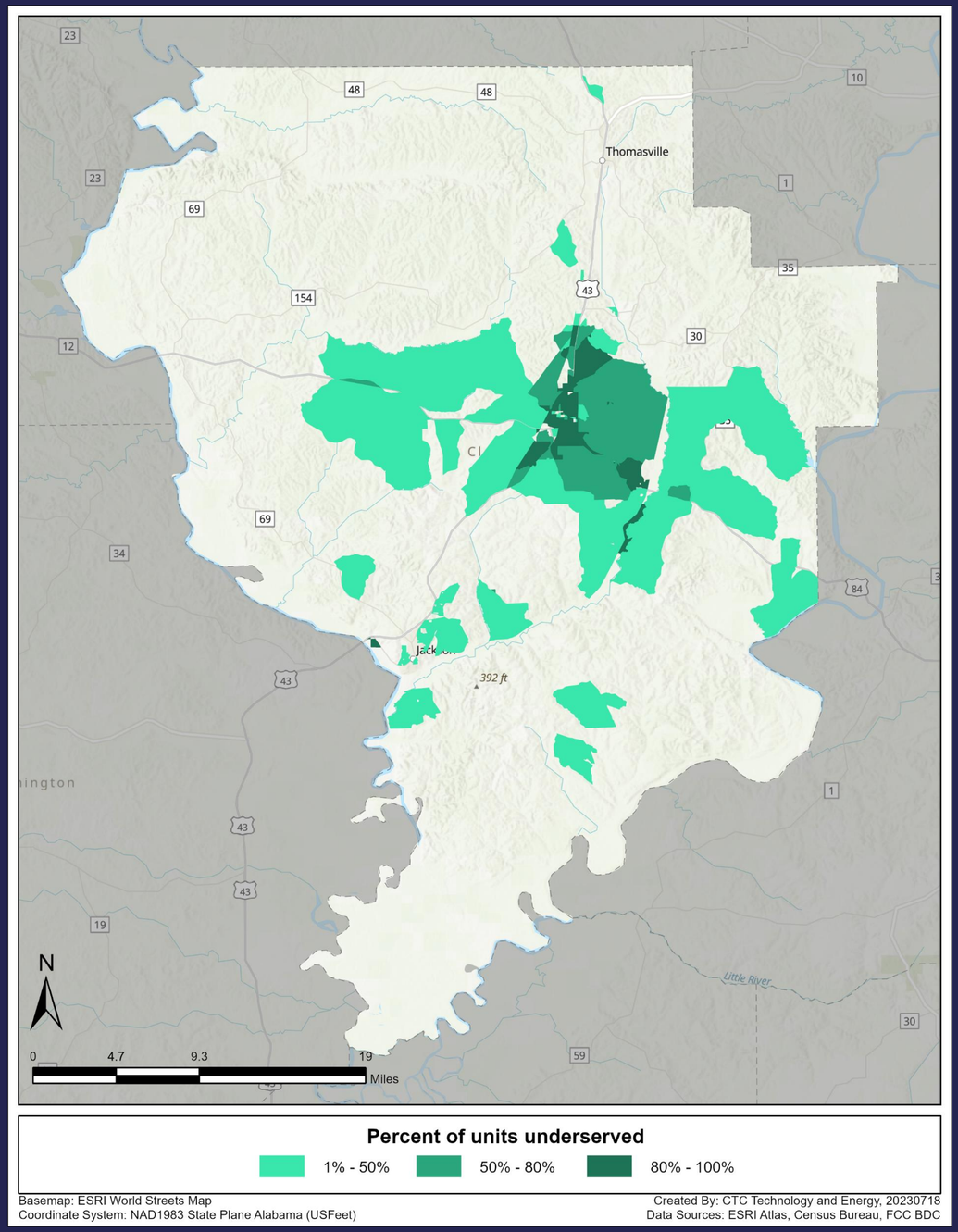
Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023)

11% of County units are *underserved* on the FCC Map

Under federal rules for the upcoming broadband funding (known as “BEAD”), underserved areas (between 25/3 Mbps and 100/20 Mbps) can receive funding if unserved areas are connected first.

Addresses are sometimes inaccurately reported as underserved when they are actually unserved if ISPs overstate the capabilities of their networks. This sometimes happens with DSL and fixed wireless/mobile home internet products.

As only a few locations in Clarke County fall into this federal “underserved” category, Clarke County can focus on encouraging deployment in unserved areas under both the Alabama and federal maps.



Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023)

Summary of strategies

ADECA recommends Clarke County consider several strategies to prepare for upcoming funding opportunities over the next two years.

Challenge	Recommendation	Potential Impacts on:		
		Availability	Affordability	Adoption
Unserved locations	1. Identify ISPs that commit to meeting County needs and support applications for ADECA broadband infrastructure funds	✓		
Low ISP interest in investing in low-density areas of Clarke County	2. Consider strategies to attract ISP interest, including modest grants, support for grant applications, and optimized, efficient permitting	✓		
Affordability of internet service and device procurement	3. Develop programs, potentially with schools, libraries, or nonprofits, to help low-income households use federal subsidy programs, such as the Affordable Connectivity Program		✓	✓
Insufficient digital skills among low-income households	4. Support programs, such as those housed by some Alabama libraries, to help low-income households develop internet skills and access devices			✓
Lack of resources for programs to increase adoption and use	5. Develop local plans to apply for federal Digital Equity Act grants in 2025			✓

Strategy: consider programs to improve opportunity

Educational programming and subsidy programs may help lower-income and senior residents.

Broadband Access

Communicate with ISP partners regarding known service gaps and emerging markets to prioritize infrastructure in areas without reliable service.

Partner with ISPs and local organizations to publicize the federal Affordable Connectivity Program to low-income households.

Devices and Tech Support

Consider a device giveaway program in partnership with organizations, such as PCs for People. Market these programs to low-income households that are likely enrolled in other support programs.

Privacy and Security

Review the digital skills curriculum of current and future digital skills programs to make sure they educate participants on privacy and security risks.

Digital Skills

Support current and planned digital skills programming by sharing resources and facilities and providing additional marketing; programs relevant to Clarke County are listed in Appendix C.

Partner with AARP and hospitals to address challenges that seniors face accessing telehealth.

Overview of ISP market dynamics

ISPs prioritize lower-cost, higher-income areas where returns are high and risk is low. Counties can use proven strategies to improve their attractiveness for private investment.

Certain areas see low levels of investment because private ISPs choose to invest elsewhere, where return will be greater

Low-density areas are unattractive for investment because there are fewer potential customers available relative to construction costs.

Low-income areas are less attractive for investment because low-income consumers subscribe at lower levels than higher-income households.

Clarke County can use proven strategies to help make these areas more attractive to ISPs

ISP revenue opportunity increases in places where counties help low-income consumers access federal broadband subsidies or learn digital skills to use the internet.

ISP costs are reduced in places where counties facilitate ISP deployment or offer grants or access to public assets.

Strategy: develop public-private collaboration to improve local broadband infrastructure

Working together can enable communities and ISPs to develop win-win outcomes.

Partnerships enable localities to further their broadband goals by working with ISPs

Through efforts or resources, counties can make their community more attractive for private investment and operations

By investing effort and resources, counties can incentivize ISP behavior that meets the community's needs

Three primary models for public-private collaboration can drive infrastructure deployment

Every community should adopt and refine the approach or approaches that best meets its own needs and goals.

1

Facilitation

1. The community makes investment more attractive for companies
2. Mechanisms include lowering costs and increasing revenues

2

Grant

1. The community makes a grant to the company
2. The company makes enforceable commitments to build infrastructure and deliver service

3

Investment

1. The community pays for and owns the network assets
2. The private partner operates the network and provides service to the public

Any of these models can accommodate collaboration between counties and ISPs to prepare for the funding that ADECA will administer — and to enable the County to support its preferred partner, including through provision of financial support.

Strategy: partner with organizations that serve the community

These organizations are logical partners for Digital Opportunity efforts such as training and expanding access to devices.

1. Organizations such as AARP, the Alabama Public Library Service, the Alabama Community College System, and United Way shared their interest in collaborations to develop programs that increase digital skills and device access among their partners, members, and patrons.

2. A wide range of community organizations recognize the importance of local coalitions, including to maximize opportunities for Digital Opportunity/equity grant funding from the U.S. Department of Commerce in 2025.

3. ADECA has developed a Community Broadband Organization and Programming Inventory to help identify organizations participating in Digital Opportunity programming; programs relevant to Clarke County are listed in Appendix C.

Source: Clarke County in-person discussions, March 2023; Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

Strategy: prepare for funding opportunities

Clarke County can take steps to inform ADECA's plans for federal infrastructure and Digital Opportunity funds — and to benefit from them.

Ensure service coverage data accurately reflects availability in your County	• Check the FCC map and challenge if necessary • Provide data on unserved and underserved locations to the FCC
Continue to collect Digital Opportunity data to understand your community	• Understand how many households lack access to broadband because of affordability, language, or other issues — even where it is available • Use existing data and collect new data to understand challenges
Develop partnerships with nonprofits for Digital Opportunity programs	• Using your data, prioritize areas of effort for your community • Identify existing Digital Opportunity programs that work and can be expanded — and needs for new programs • Plan to support state and federal grant applications by local nonprofits or submit your own
Develop partnerships with ISPs	• Build partnerships with ISPs that show intent to invest in your County and that have track records • Plan to support state and federal grant applications by ISPs in return for ISP commitments

Strategy: prepare for grant opportunities

There are two general types of grants: those for ISPs and those targeted for other parties.

ISP grant opportunities are usually for building network infrastructure in underserved areas

ADECA will administer 3 major grant programs that will enable ISPs to build network infrastructure:

1. Last-mile infrastructure to unserved locations — **$191M in 2023**
2. Middle-mile infrastructure to anchor institutions — **$245M in 2023**
3. Last-mile infrastructure to unserved addresses — **$1.4B in 2025**

At the federal level, USDA awards grants to help build network infrastructure in rural and unserved areas.

Public entities and nonprofits typically have access to funding for broadband planning, community owned infrastructure, or addressing Digital Opportunity needs

The federal Economic Development Administration (EDA) provides comprehensive planning grants that can include broadband planning.

In 2025, the U.S. Department of Commerce will offer Digital Opportunity grants, enabling counties and nonprofits to compete for funding to operate Digital Opportunity programs.

USDA awards grants for distance learning and telemedicine equipment to public entities and enables public entities to compete for broadband loans and grants.

02 Background: The broadband market and ecosystem

Overview

This section provides background regarding the evolution of broadband and how service providers deliver connectivity. The goal of this section is to help the County to understand the cause of broadband gaps as a means of developing strategy to partner with private entities to address those gaps.

Broadband infrastructure is at the intersection of technology, policy, and economics

1. There are three geographic scales of infrastructure that carry internet information throughout the world:
   - Long-haul infrastructure
   - Middle-mile infrastructure
   - Last-mile infrastructure

2. Internet technology and policy is predominantly analyzed in terms of download and upload speeds.

3. Different broadband technologies deliver connectivity at different speeds, levels of reliability, and cost efficiency.

4. The private sector independently invests in technologies that offer usable speeds in areas where returns are high, but public funding or support is required to reach many rural and low-income communities.

The importance of broadband investment

Lack of investment in broadband has important consequences.

Speed

Slow speeds and unreliable connections result when households share limited capacity over outdated electronics and cables.

Affordability

In areas that lack reliable broadband, households and businesses are forced to rely on expensive satellite service.

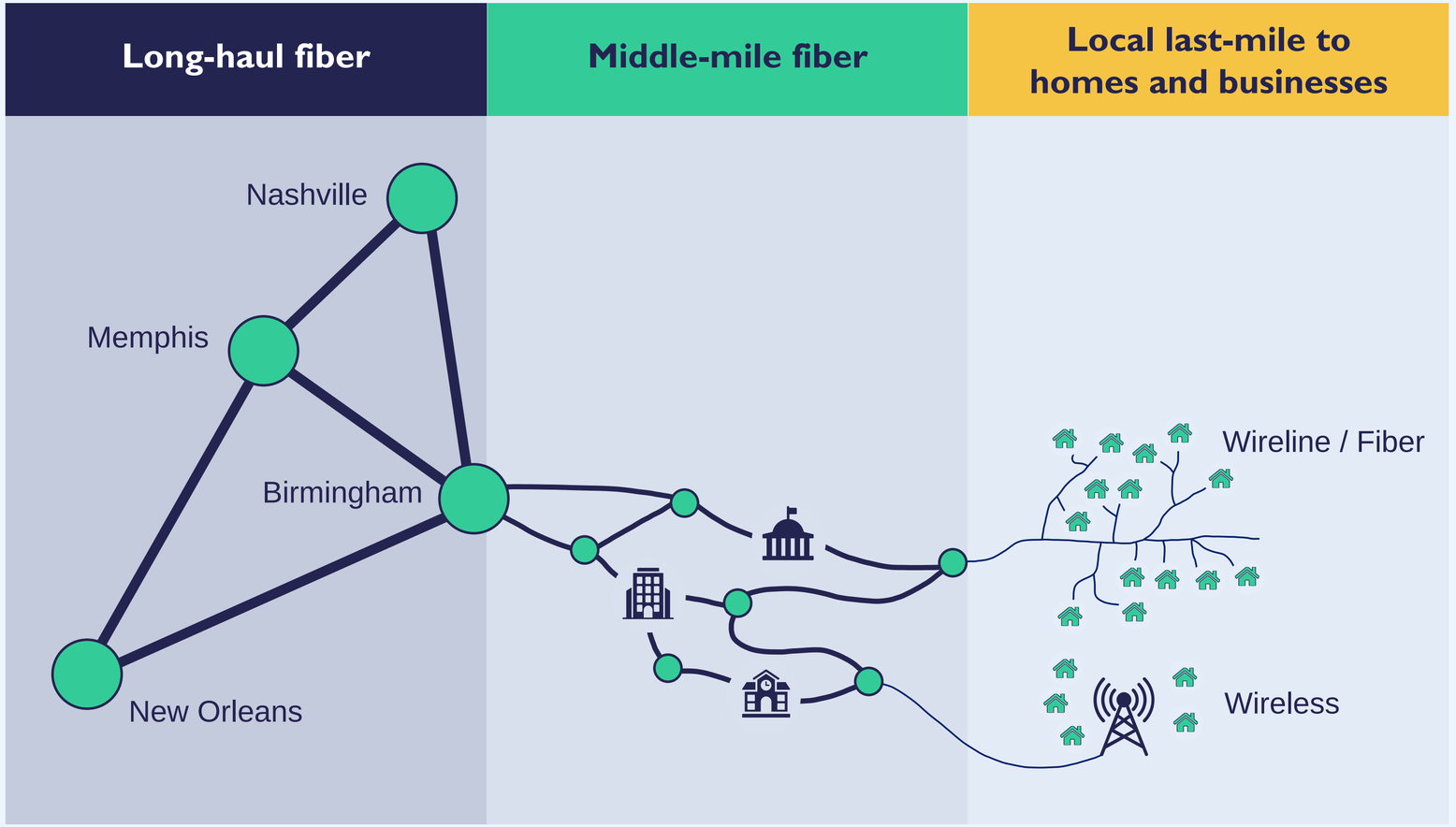
Vulnerability

Frequent and prolonged outages can result if a cut in a critical cable takes down service for a whole town or county.

Elements of a broadband network

The broadband market is divided into types of services based on the physical structure of the network.

- **Long-haul** fiber connects major cities and regions.
- ADECA has funded **middle-mile** grants that bring connectivity from major cities into smaller Alabama communities.
  - A lack of middle-mile in rural areas can make last-mile deployment more costly and create single points of failure that lead to unreliable service.
- Most future funding emphasized **last-mile**, to connect all unserved households.



Six parameters characterize broadband experience

Of the six, state and federal governments focus primarily on speed to measure broadband availability.

Parameter	Description
Download speed	Rate at which user receives information
Upload speed	Rate at which user can transmit information
Latency	Time delay between the sender and recipient devices (typically 20 milliseconds to microseconds)
Jitter	Time variations in arrival of information packets (measured in milliseconds; most relevant for real-time applications like teleconferencing, video streaming, and telehealth)
Data cap	Limit on monthly data usage, typically in mobile wireless networks, above which there are extra fees and/or throttling (slow-down) of download speeds
Down time	Portion of time when users are unable to access the internet due to technical issues or maintenance

Internet speeds are expressed as download/upload

e.g., 25/3 is 25 Mbps download, 3 Mbps upload.

Benchmarks for broadband speed

Governments tend to design grant programs and make decisions based on end-user speeds.

1

Unserved

< 25/3 Mbps

25/3 Mbps is insufficient in the modern age and is considered unserved under both state and federal rules. These areas are eligible for most funding opportunities, including all ADECA grants.

2

Underserved

< 100/20 Mbps

Areas in this tier are in less urgent need for network upgrades but would still greatly benefit. These areas are eligible for state funding and for federal funding once < 25/3 Mbps areas are served.

3

Future-proof

≥ 100/100 Mbps

Addresses in this tier are well-served. This is the Alabama standard for infrastructure funded with state funds. 100/100 Mbps service is sufficient for the foreseeable future.

4

Community Anchors

≥ 1/1 Gbps

Community anchor institutions (including government, schools, and public safety) have different needs than households and are considered well-served when they can access 1/1 Gbps speeds.

In addition to speed, technology matters

Digital Subscriber Line (DSL)

DSL is a slow technology delivered over old telephone lines.

Because of the ubiquitous legacy of telephone line infrastructure, DSL is frequently the only wireline service available in rural areas.

DSL generally cannot be upgraded and must be replaced with newer, higher-capacity technologies.

Areas with exclusively DSL coverage are frequently unserved or underserved and eligible for new federal funding.

Fixed Wireless

Fixed wireless utilizes radio-antenna systems to wirelessly deliver connections to end users.

In areas with difficult terrain, fixed wireless may be the most cost-effective technology to deploy.

Fixed wireless service can be affected by vegetation and terrain, leading to unreliable service, even in areas reportedly served.

In very high-cost areas where fiber is infeasibly expensive, grant funds are likely to flow to fixed wireless buildouts.

Cable Broadband

Cable networks primarily use coaxial cable, which is generally faster than DSL, but not as reliable or fast as fiber; modern cable networks are deployed using a hybrid of fiber optics and coaxial cable.

Cable broadband is relatively rare in rural areas because the cable TV networks were originally built only in towns and cities.

Generally, areas served with cable broadband do not qualify for new funding because the networks can meet the standard of 100/20 Mbps.

Fiber-to-the-Premises

Fiber optic cable is made of thin glass, and represents the fastest, most future-proof technology.

Fiber networks generally offer symmetrical speeds, the same upload and download speeds.

Under federal policies, fiber is the preferred infrastructure for federal dollars.

Understanding the Clarke County broadband market

ISP willingness to invest depends on their existing networks, history, technology, and economics.

Incumbent telephone companies have connectivity to almost all locations with copper wire used for landline telephone service

As telephone companies often own the utility poles, they have easy access to provide broadband service. While they can deliver slower internet service through legacy copper wires, they achieve the fastest speeds by replacing connections with fiber.

However, they are hesitant to prioritize fiber upgrades in rural and lower-income communities unless facing competition or receiving public financial support.

In the 70s and 80s, cable companies installed wires in urban areas after negotiating rights with local authorities in exchange for serving the entire residential community

Based on revenue potential, cable companies focused on urban and suburban areas. When they discovered the capability to provide high-speed broadband through their TV cable infrastructure, a speed gap emerged between urban and rural regions.

Additionally, they usually installed on utility poles and were slow to upgrade infrastructure and expand into less dense areas until recently.

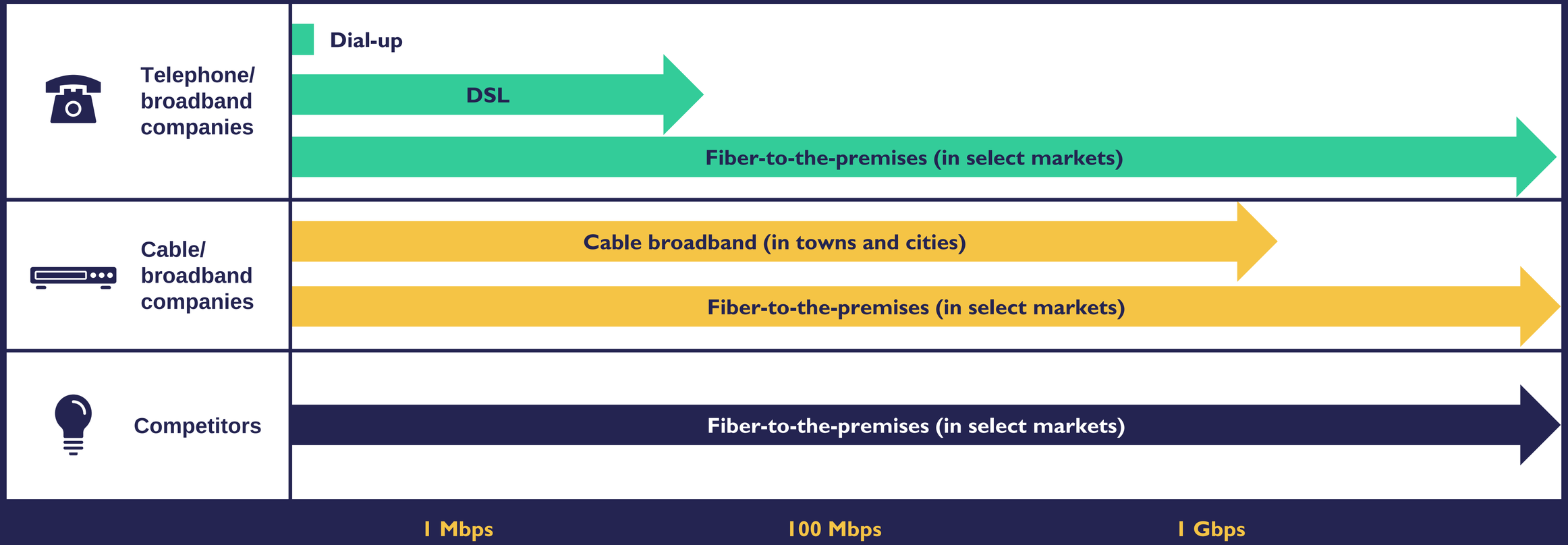
Competitive broadband companies usually specialize in deploying fiber and can therefore compete on service quality and speeds with incumbents

Since they do not have the access to infrastructure that incumbents do, their ability to expand into new areas often depend on public funding.

Recently, some incumbents, especially cable companies, have joined competitive broadband providers with fiber projects in unserved areas.

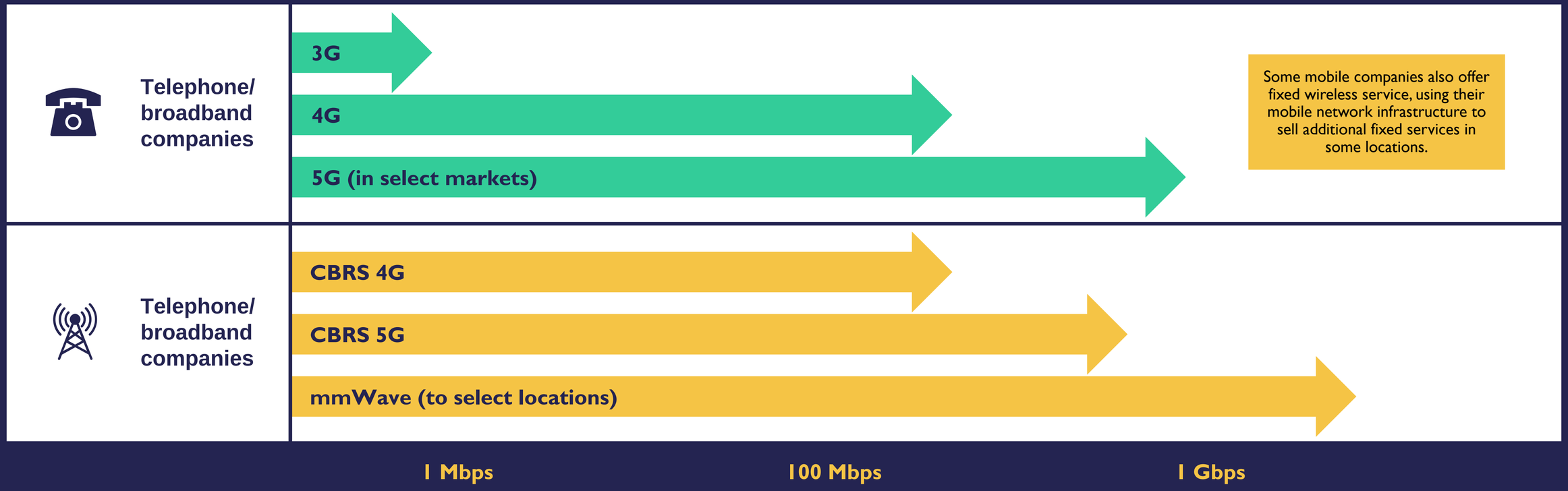
Last-mile wireline speeds vary by technology

Wireline speeds vary by technology, with fiber-to-the-premises offering almost unlimited potential for future increases in speed, which is why fiber is referred to as “future-proof.”



Last-mile wireless speeds

Wireless speeds increase with each leap in technology (3G, 4G, 5G), though they face challenges reaching all locations and keeping pace with wireline technologies, particularly fiber. Each generation of wireless requires significant investment to (re)deploy.



Overview of the market

Type of provider and business model:

Service and customer types

	Infrastructure provider Leverages real estate and infrastructure to support ISPs	**Enterprise service provider** Sells high-end services to sophisticated end users and ISPs	**National incumbent** Operates regional networks to serve multiple segments	**Mobile carrier and fixed wireless** Offers a fixed wireless product largely based on cellular mobile assets	**Local incumbent** Operates local networks to serve multiple segments	**Local competitor** Builds new networks to compete with incumbents (wired or wireless)
Consumer-grade Residential and small business customers			✓	✓	✓	✓
Business class Small/medium business customers			✓	✓	✓	✓
Enterprise Larger business and institutional customers		✓	✓			
Middle-mile ISPs	✓	✓	✓			

The private market

A wide range of potential partners offer last-mile internet service in Clarke County:

Wireline	AT&T Brightspeed Frontier Mediacom	Pine Belt Broadcasting Pine Belt Telephone TDS Telecom
Wireless	AT&T Pine Belt Cellular Southern Linc T-Mobile Verizon Wireless	

Economics of broadband

Understanding gaps in broadband availability requires knowledge of how service providers select areas for deployment to maximize their return on investment.

The economics of last-mile rural broadband are very challenging, as with other types of infrastructure	• Standard market economics do not work for investing in rural broadband infrastructure • Low housing density means high costs to build to relatively few potential customers • Lack of existing broadband infrastructure means no opportunity to efficiently extend existing networks
Public funding is necessary to attract private investment to fill last-mile rural gaps	• In the past, there was little appetite from the federal government to fund large last-mile broadband infrastructure projects • Alabama has invested consistently, far more than most states, thereby attracting private funds • Pandemic-era, bipartisan legislation (under both Presidents Trump and Biden) appropriated unprecedented funds for rural broadband

County research is key to effectively planning for broadband success

The following sections of this County Broadband Profile offer key insights in the following areas:

1. Where are the unserved and underserved areas in the County?
2. To what extent is the available service in the County being meaningfully used by residents?
3. Based on the previous two questions, what challenges does the County face, and what goals should the County adopt?
4. What grant programs, partnerships, and strategic frameworks can the County leverage to achieve those goals?

03 Broadband availability and services in Clarke County

Overview

This section summarizes the current state of broadband infrastructure and services in Clarke County, based on state and federal data. It is intended to help policymakers understand the current environment, prioritize areas for new efforts, and work with ISPs and other partners to develop solutions.

Understanding broadband service availability is key for broadband success

Policymakers and ISPs must understand where service exists and where service is needed.

1

Policymakers can develop strategies to secure grant funding and devote public resources to connect areas that do not currently have sufficient service.

- This requires an understanding of where service exists and where it does not.

2

ISPs are interested in growing their networks wherever profitable.

- This requires an understanding of where markets are competitive and where potential customers live.

3

A shared understanding between ISPs and policymakers can help to define priority investment areas and partnerships to leverage grant funding.

- ISPs typically apply for and receive grant funding, but localities can influence project planning in exchange for support in making the application more competitive.

Broadband service availability

Analysis was performed to understand where broadband is available in Clarke County.

1. Data from the Alabama Broadband Map and the FCC map were used to identify unserved and underserved areas.

2. Service availability in the County was benchmarked against state and national averages to contextualize the extent of service availability in the County.

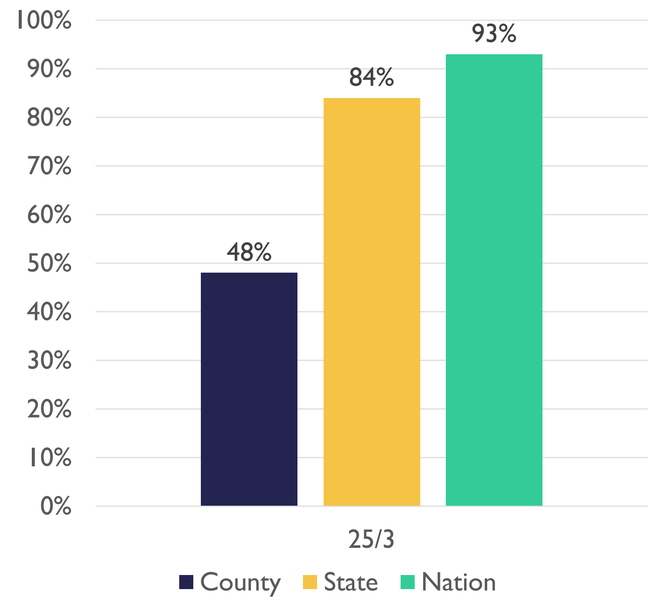
3. Geospatial analyses were performed to understand:
   - Coverage areas
   - Download and upload speeds
   - Service delivery technology
   - Levels of market competition
   - Income demographics of residents

4. Upcoming broadband projects funded by federal or state grant sources were evaluated to anticipate what broadband coverage in Clarke County will look like in the near future.

Clarke County lags behind Alabama and the U.S. for all speeds in broadband availability

Broadband availability is studied at the unit level (housing units) and address level (physical location or building). An apartment building may count as one address but contain many units.

Percentage of units served by **≥25/3 Mbps**



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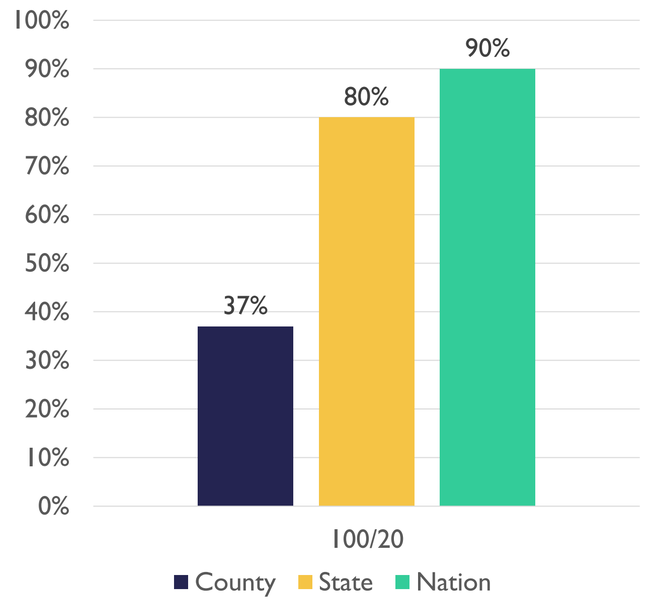
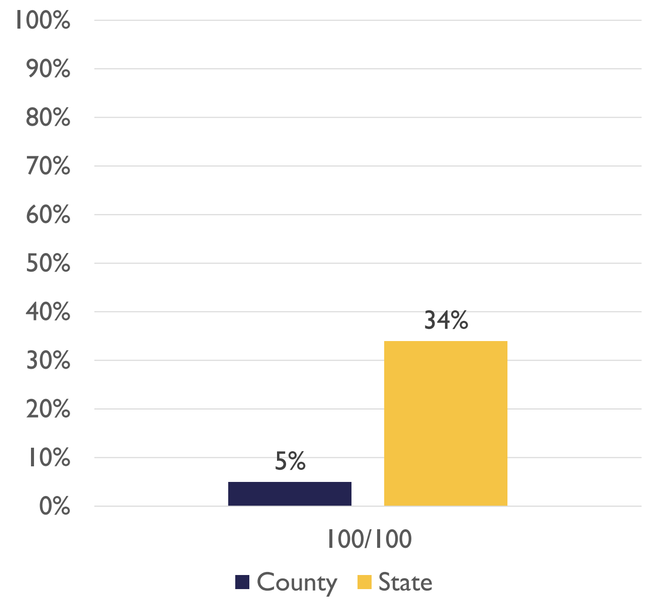


Percentage of units served by **≥100/100 Mbps**



FCC's National Broadband Map does not report national figures for 100/100 Mbps.

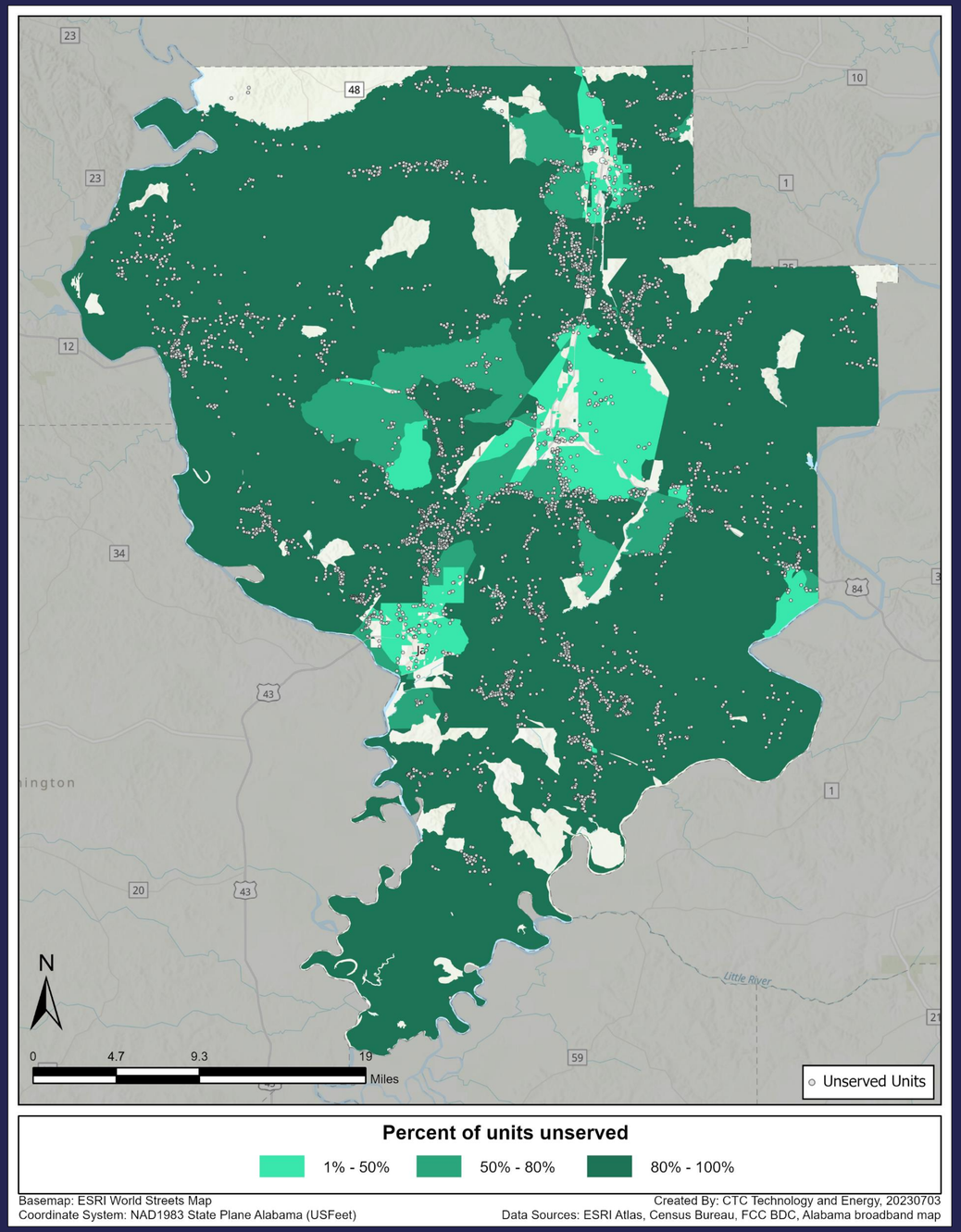
Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023)

52% of County units are *unserved* on the FCC Map

Under federal rules, these unserved locations are the top priority for federal funding under the Infrastructure Investment and Jobs Act (through the BEAD program).

To be considered unserved by the FCC, a location must lack 25/3 Mbps speeds over wireline (fiber, coaxial cable, DSL), licensed fixed wireless, or hybrid licensed/unlicensed fixed wireless.

FCC data may overestimate unserved locations in the denser urban areas and underestimate the number of locations in rural areas, as a result of the methodology used. ADECA's map data has been developed separately, in close consultation with ISPs and with proactive verification in many cases.



Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023); ADECA, *Alabama Broadband Map* (2023)

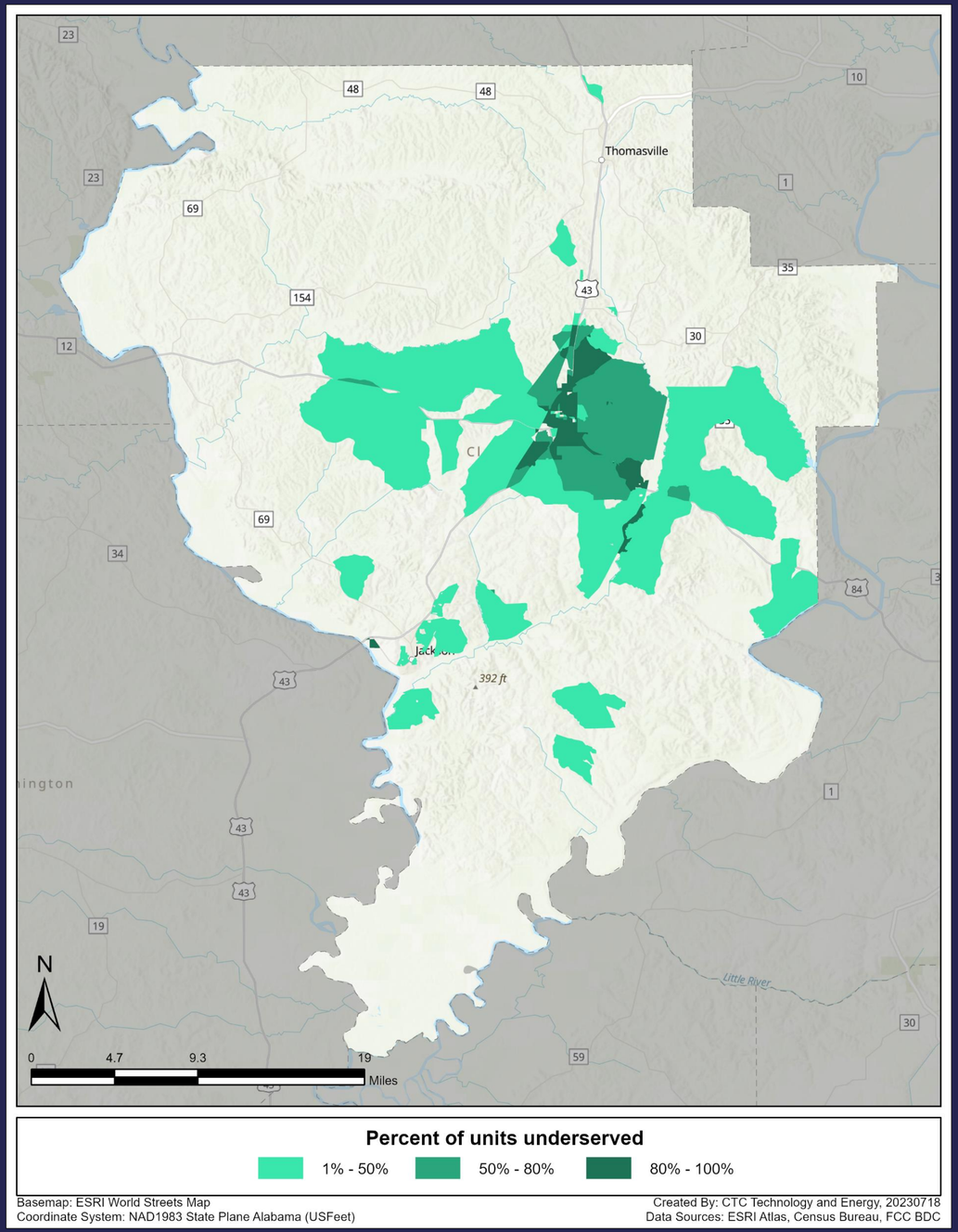
11% of County units are *underserved* on the FCC Map

Under federal rules for the upcoming broadband funding (known as “BEAD”), underserved areas (between 25/3 Mbps and 100/20 Mbps) receive funding as long as unserved areas are connected first and sufficient funding remains.

As relatively fewer locations in Clarke County fall into this federal “underserved” category, Clarke County can focus on encouraging deployment in unserved areas under both the Alabama and federal maps.

Further, because wireline networks must be connected and contiguous, the central underserved areas may be built during efforts to connect the unserved outlying areas.

- If not, these underserved locations are eligible for state grant funding, which considers them unserved.



Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023)

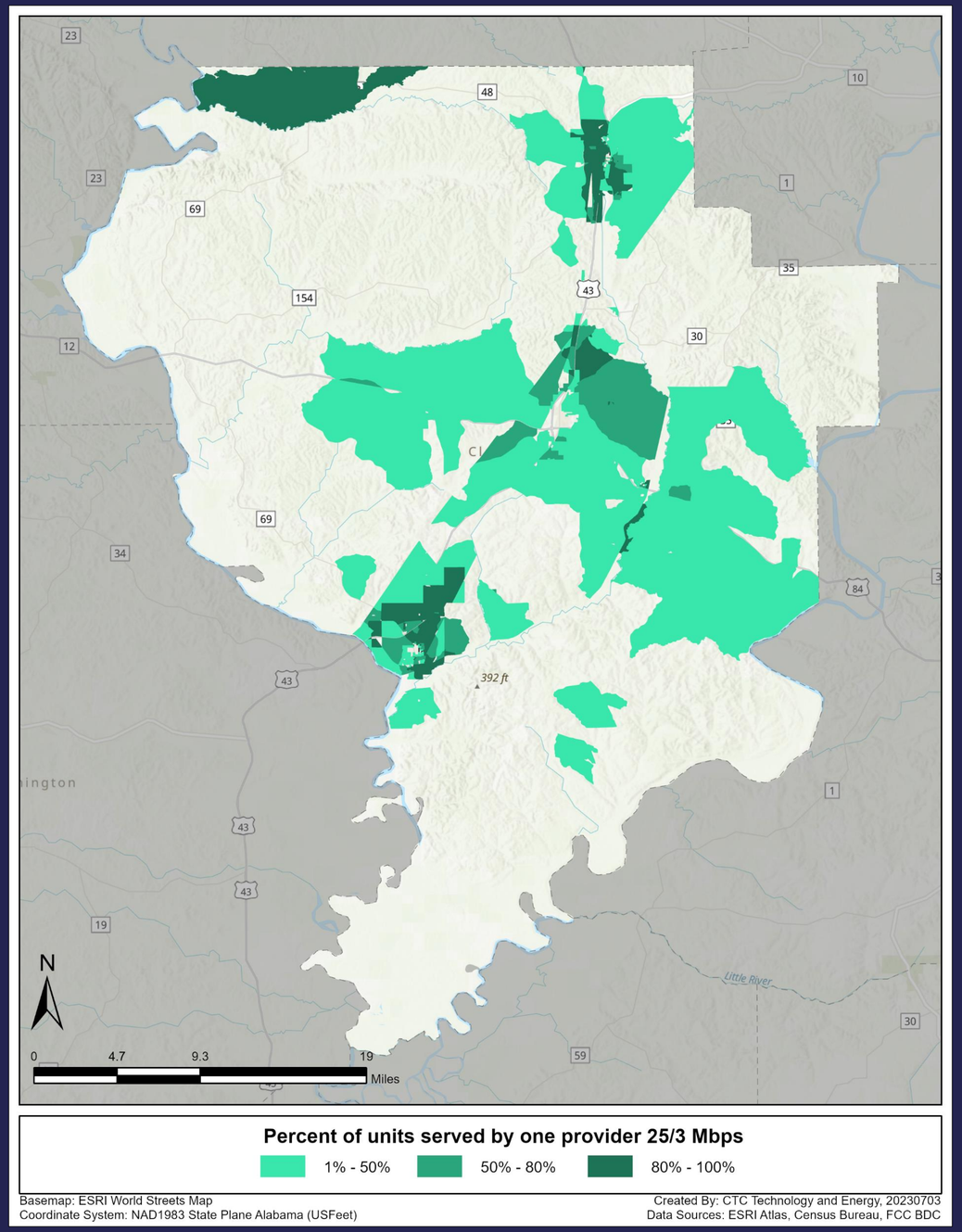
Most served County addresses have access to only a single broadband provider of speeds greater than or equal to 25/3 Mbps

33% of served Clarke County addresses have access to more than one broadband provider at 25/3 Mbps.

67% of served addresses have access to only a single broadband provider and may not gain the benefits of a competitive market.

33% is a low percentage of competitive areas compared to most Alabama counties.

When mobile carriers and other ISPs with fixed wireless service expand their coverage, they can often provide competitive options at lower speed tiers.

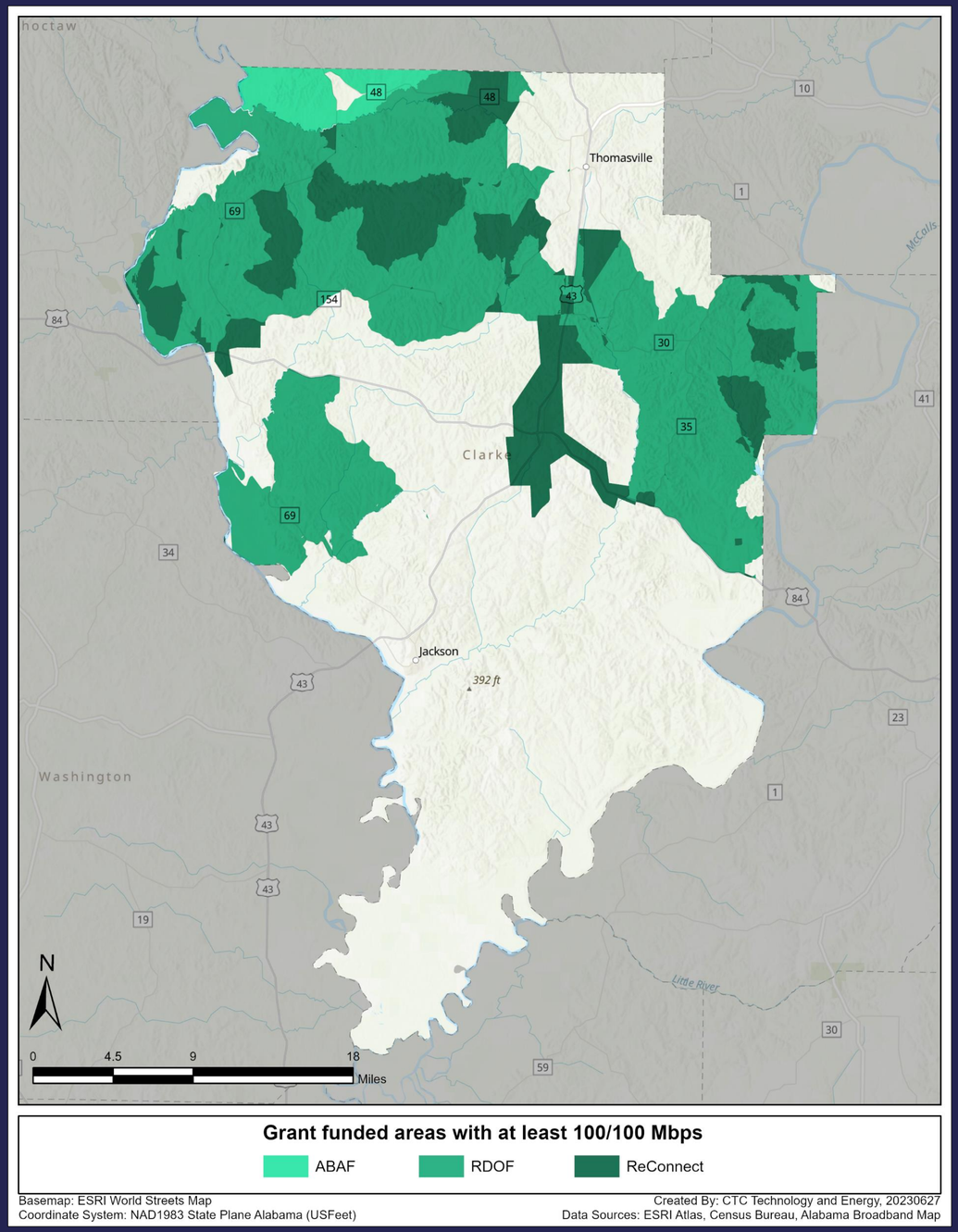


Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023)

Some areas of Clarke County are already slated for new broadband deployment with state or federal funds

Pine Belt and CenturyTel received awards from the FCC Rural Digital Opportunity Fund (RDOF) and will deploy network infrastructure in the north of Clarke County.

Millry and Pine Belt received funds from USDA's ReConnect program and from the Alabama Broadband Accessibility Fund to deploy network infrastructure in the north of Clarke County.



Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023)

County opportunities

Most Clarke County residents are not currently served with good broadband, so opportunity for significant improvement exists.

1

Service gaps exists in Clarke County where households have no options for a broadband connection.

- Even after recent grant funded broadband infrastructure projects are deployed, many pockets of unserved will remain across the County.

2

Many of the unserved areas are low density and not sufficiently attractive for private ISP investment.

- Most commonly, these gaps are found in rural areas and areas where residents are not able to pay for the more expensive service.

3

The County and ISPs could collaborate to secure state and federal funding to construct network infrastructure in unserved areas.

- Recent grant awardees and wireline incumbents can extend their networks to these areas.
- Locations only served with licensed fixed wireless less than 100/20 Mbps are eligible for state grant funding.

4

Service availability does not guarantee residents will subscribe to or use internet services effectively.

- Deeper analysis of internet adoption and use is needed.

04

Broadband adoption and Digital Opportunity in Clarke County

Overview

This section presents an overview of the current state of broadband adoption and use (as distinguished from availability) in Clarke County, based on state and federal data, input gathered from County partners, and ADECA's own scientific survey of residents of the region that includes the County.

“Digital Opportunity” definition

Generally, experts have identified five elements of Digital Opportunity (sometimes called “digital equity” by federal policymakers).

Broadband Access

Affordable, accessible, and reliable high-speed home internet service is available for all individuals.

Accessible and Inclusive Content

Public online content is inclusive and accessible by all individuals.

Devices and Tech Support

Individuals have access to a computer or tablet and technical support.

Privacy and Security

Individuals can protect their data privacy and online security.

Digital Skills

Individuals have digital skills to support their ability to meaningfully use the internet in their daily lives.

Source: National Telecommunications & Information Administration

Digital Opportunity challenges

For any person to fully engage in the digital economy, they must have an internet subscription, access to a usable computing device, and basic digital skills — all of which can be addressed through efforts by policymakers, ISPs, and community organizations.

1

Policymakers can fund programs that help residents overcome barriers to adoption and use of the internet.

- This requires an understanding of what adoption barriers exist and which demographic groups are impacted.

2

ISPs can support these efforts by promoting the federal Affordable Connectivity Program, which helps low-income households afford broadband subscriptions.

- Supporting households to adopt and use the internet can increase demand for broadband service offerings, which will grow ISP customer bases and revenues.

3

Community-based organizations are key to administering programs.

- Localities and community organizations can partner to develop effective programs.

Digital Opportunity data

An analysis was conducted to determine who is and is not using broadband in Clarke County — and why.

1 The nature and extent of barriers were analyzed to understand what types of programs could be prioritized

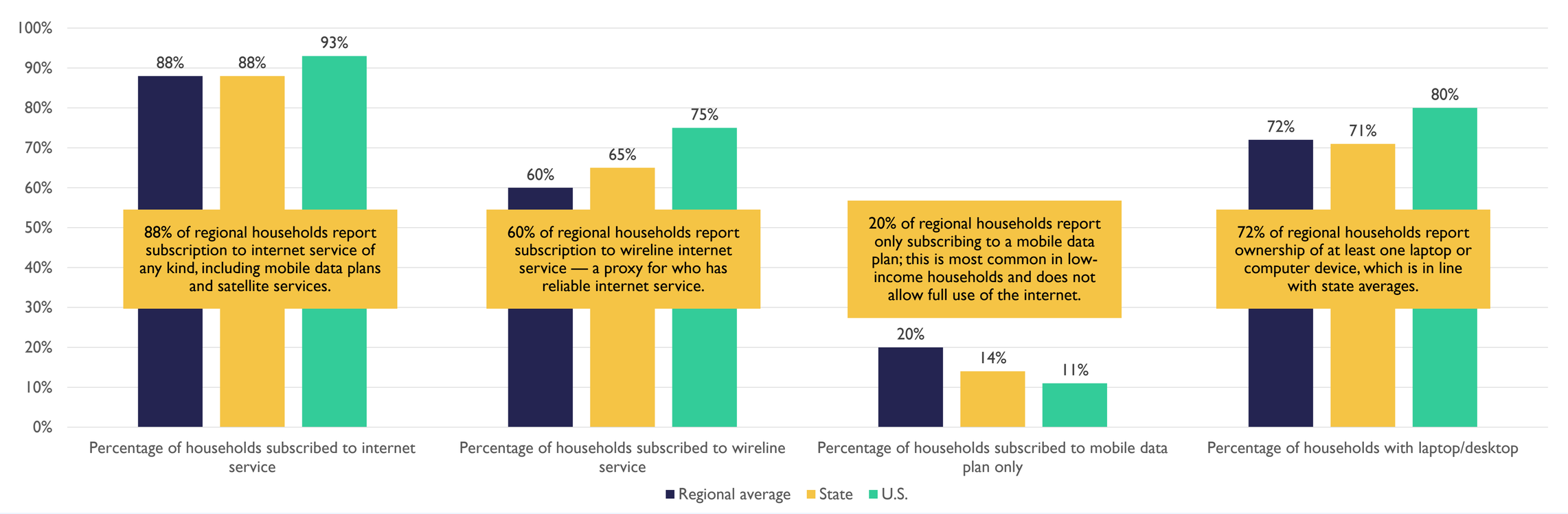
- Data were gathered from the American Community Survey, ADECA's own scientific phone survey, and partner engagement sessions.
- Analysis was performed to understand the prevalence of prohibitively high-cost service, inaccessibility of online content for people with disabilities, lack of computing devices such as laptops, concerns about privacy and security, and confidence in digital skills.
- Additional analysis was performed to understand bottlenecks for existing Digital Opportunity programs.

2 To further contextualize these barriers, findings were compared across demographic groups and geographic regions

- Barriers were compared within demographic groups including seniors, racial and ethnic minorities, low-income households, and disabled households.
- Where relevant, findings were compared to state and national averages.
- Data were aggregated across multiple counties in the region to derive statistically significant conclusions. Regional counties included:
  - Baldwin County
  - Choctaw County
  - Clarke County
  - Conecuh County
  - Escambia County
  - Mobile County
  - Monroe County
  - Washington County
  - Wilcox County

88% of regional households reportedly subscribe to internet service

Clarke County's region is comparable to the statewide internet adoption rate and device ownership, but lags behind on availability of reliable service; the County also lags behind the nation on all broadband adoption parameters.



Source: U.S. Census Bureau, *American Community Survey* (2021)

Low-income, senior, and disabled individuals report lower internet subscription rates than other demographic groups

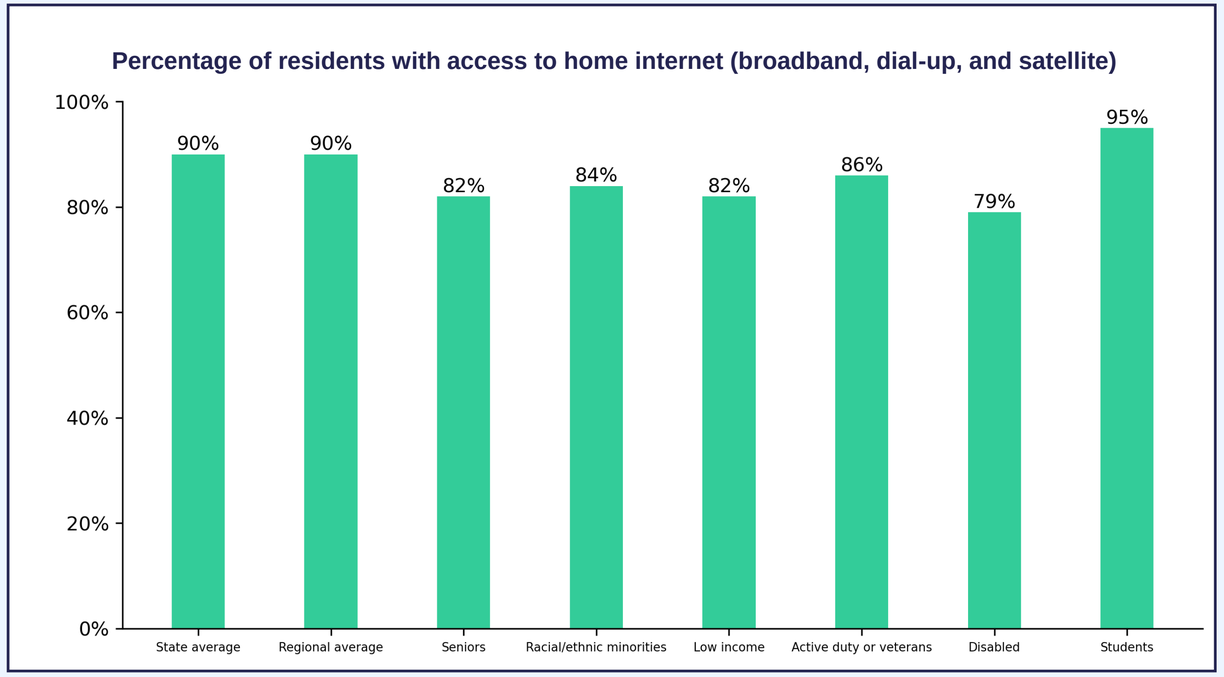
A lower income is likely a significant factor in reducing internet use for a range of demographics, including seniors and people with disabilities.

While an estimated 90% of all individuals in the region report internet use, other groups report much lower rates of use:

- 82% of individuals in a household earning less than 200% of the federal poverty line
- 82% of seniors
- 79% of people with disabilities

Seniors, who tend to have fixed incomes, and disabled households have a greater likelihood of being low-income than the average resident.

These data suggest that broadly targeted affordability programs could have a material impact on internet use rates.



Source: U.S. Census Bureau (2021)

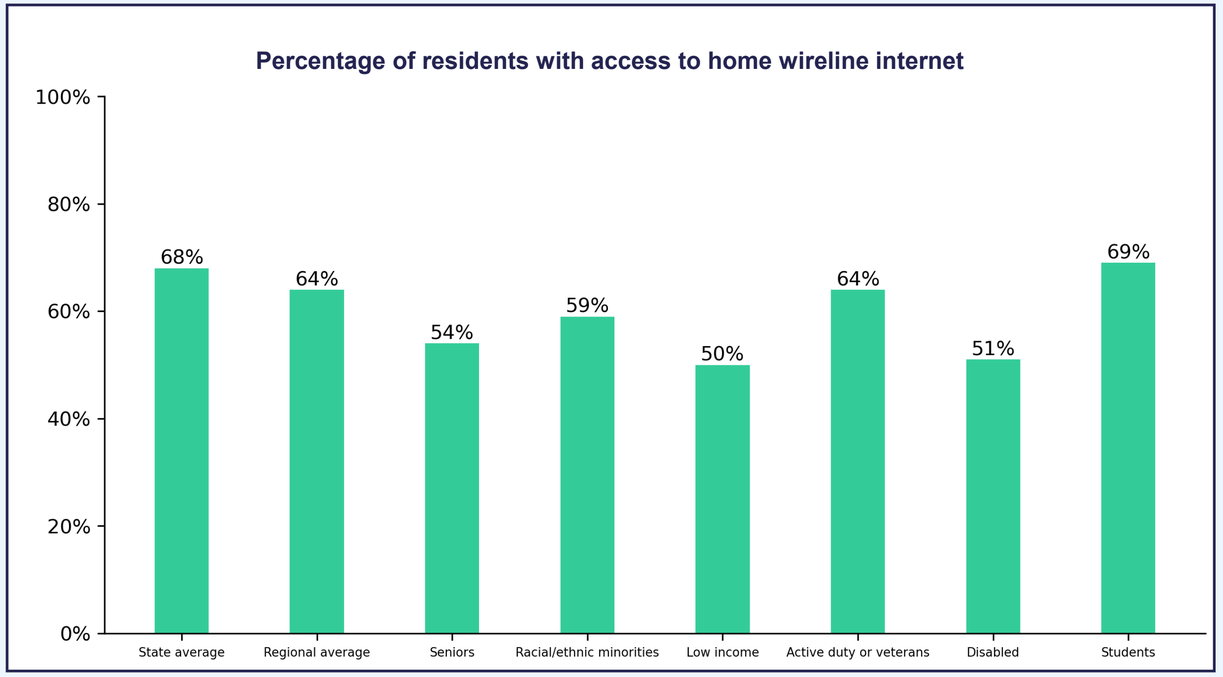
The region lags behind the state in wireline internet subscriptions, and low-income individuals lag behind the regional average

A lower income is likely a significant factor in reducing internet use for a range of demographics, including seniors and people with disabilities.

64% of individuals in the region report that they use more reliable wireline internet such as cable, fiber, or DSL, but some demographic groups lag behind that average:

- 50% of individuals living in households earning less than 200% of the federal poverty line
- 54% of seniors
- 51% of people with disabilities

While cable and fiber technologies generally deliver the most reliable service, DSL is considered a legacy technology. Overall, wireline subscription rate is often used as a proxy for reliable service.



Source: U.S. Census Bureau (2021)

More individuals in the region rely only on mobile service compared to the state average

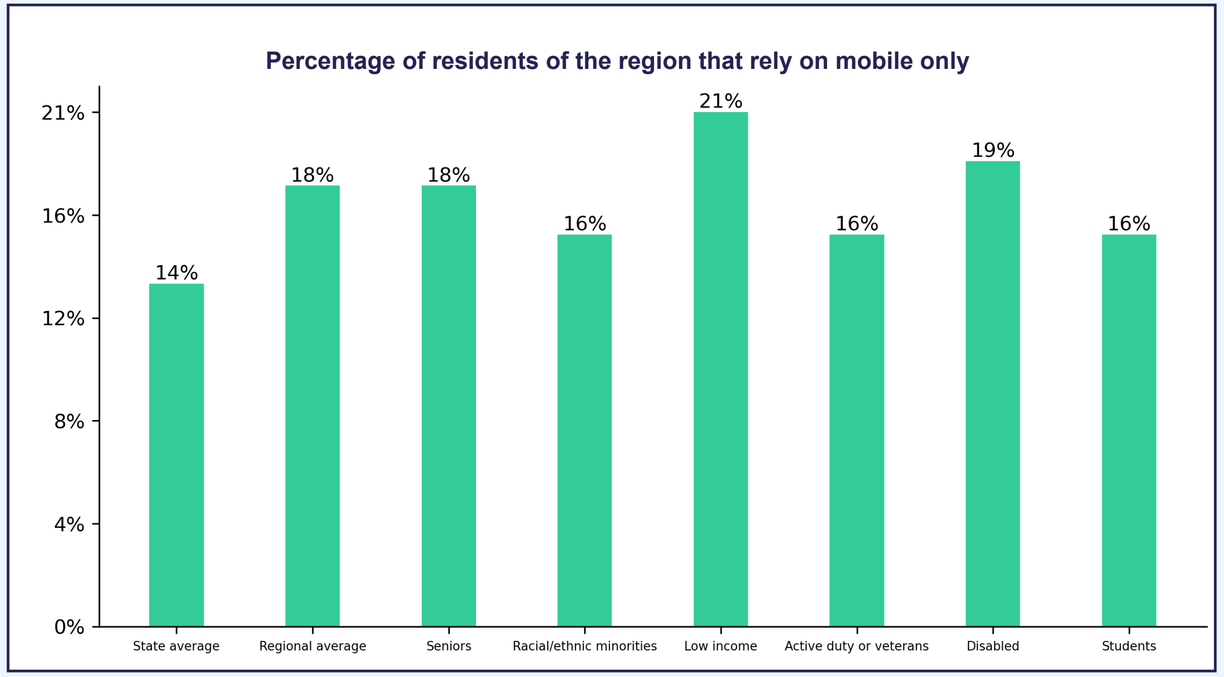
Individuals with lower incomes frequently purchase mobile service only, given the high costs of buying both mobile and fixed (to the home) service.

Regionally, 18% of individuals report relying on mobile service alone, a number that is worse (higher) than the statewide average of 14%.

Experts consider mobile-only service to be insufficient to realize the many benefits of broadband.

Mobile-only individuals typically cite affordability, smartphone is good enough, and/or having access to broadband somewhere else as the reasons for not having home internet connectivity.

- Source: Pew Research, Mobile Technology and Home Broadband 2021



Source: U.S. Census Bureau (2021)

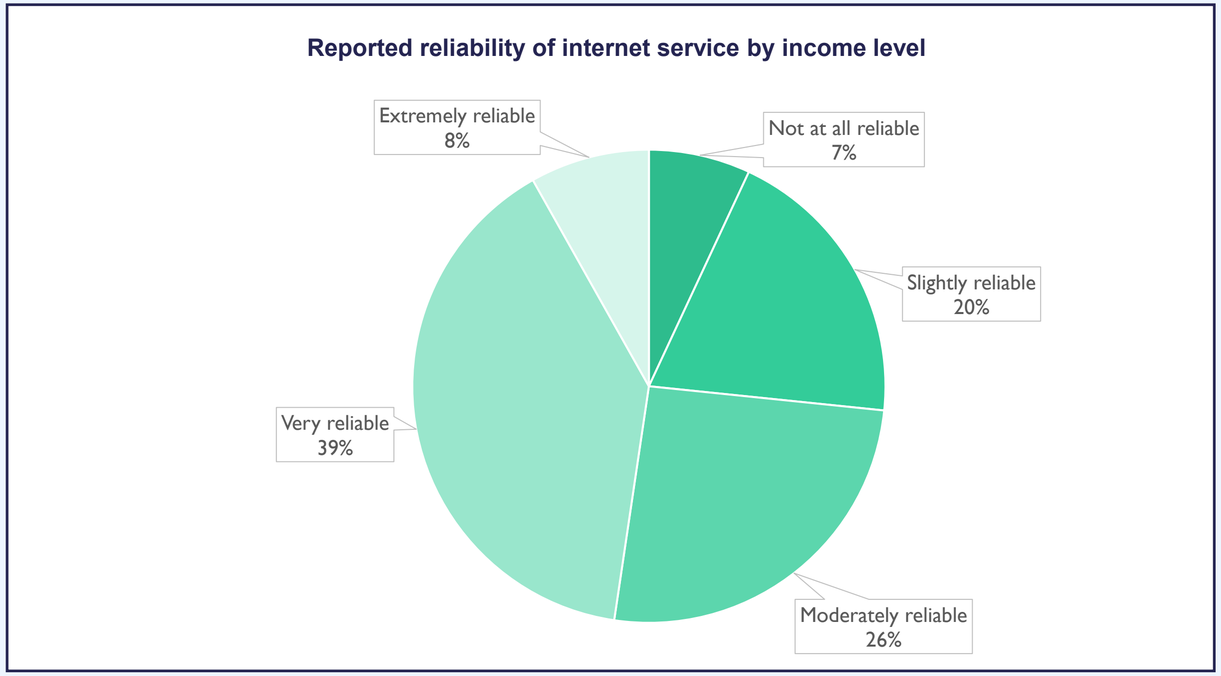
27% of households with internet service report unreliable service

Households may experience low levels of reliability due to increased rates of mobile service, legacy technology service such as DSL, or lower tiers of service.

47% of households report either very or extremely reliable internet service.

27% of households report either slightly or not at all reliable internet service.

Those reliability issues that do exist are not unique to low-income communities, as 32% of households earning less than $50,000 report slightly reliable or unreliable service compared to 29% of those earning more than $100,000.



Source: ADECA 2023 Regional Phone Survey

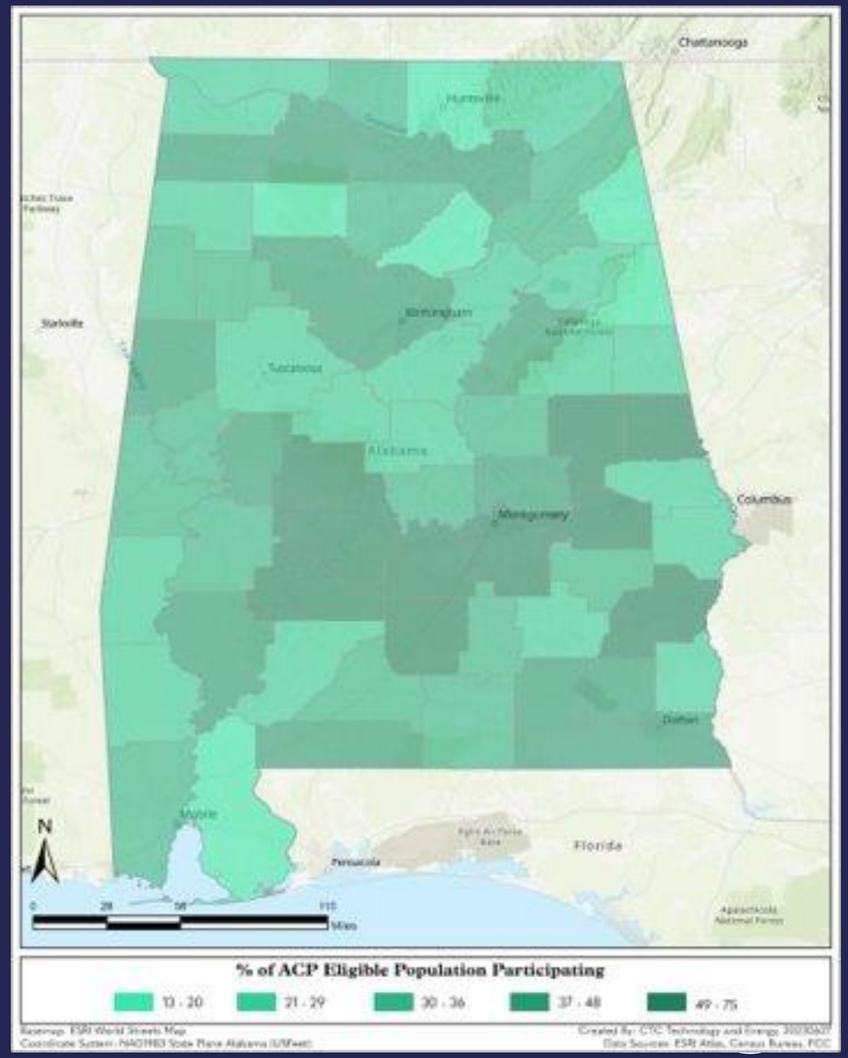
44% of eligible Clarke County households have enrolled in the federal broadband subsidy program

Clarke County outpaces the state and nation in enrollment, but still has opportunity for many more households to benefit.

The federal Affordable Connectivity Program (ACP) subsidizes up to $30 per month (or $75 for households on Tribal lands) for broadband for low-income households, and may include a contribution toward buying a laptop or tablet.

Households are eligible if they earn up to approximately 200% of the federal poverty level or participate in one of many federal or state support programs (e.g., school lunch).

	County	State	U.S.
Total enrollment (households)	2,329	351,832	17,842,925
Estimated eligible households	5,321	937,000	55,266,900
Portion of eligible households enrolled	**44%**	**38%**	**32%**



Source: Total enrollment sourced from USAC's *ACP Enrollment and Claims Tracker*; Estimated eligible households from internal model based on U.S. Census' *American Community Survey* data; results accurate as of May 1, 2023

Device access in the region is comparable to the statewide averages, but lags behind national device adoption averages

Low-income households do not have the same access to computing devices as high-income households.

43%

of households earning less than 200% of the federal poverty line report either no internet devices or only smartphones in the home.

	Region	State	U.S.
Households using a desktop or a laptop	72%	71%	80%
Households with smartphones only	20%	20%	14%
Households with no internet device	8%	7%	5%
Low-income households using desktop or a laptop	57%	57%	66%
Low-income households with smartphones only	31%	30%	23%
Low-income households with no internet device	12%	13%	11%

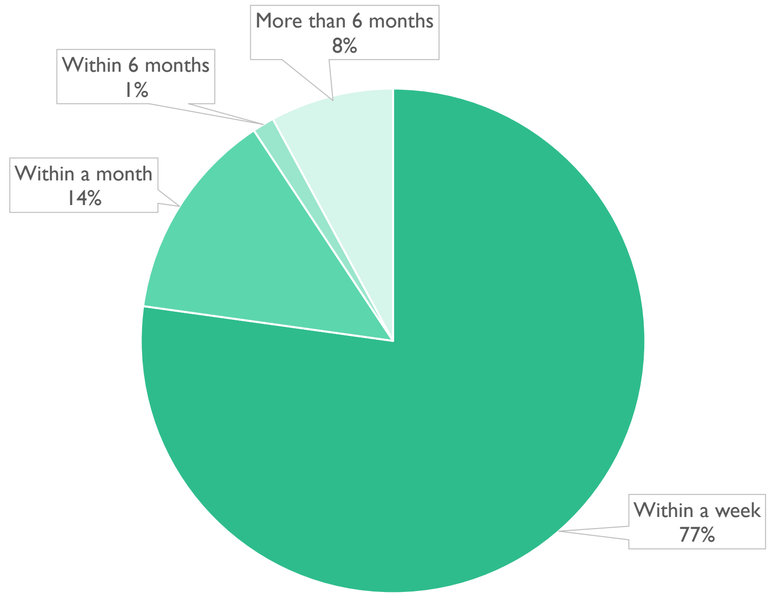
Source: U.S. Census Bureau (2021)

Some low-income households in the region that own computing devices struggle to replace broken computing devices

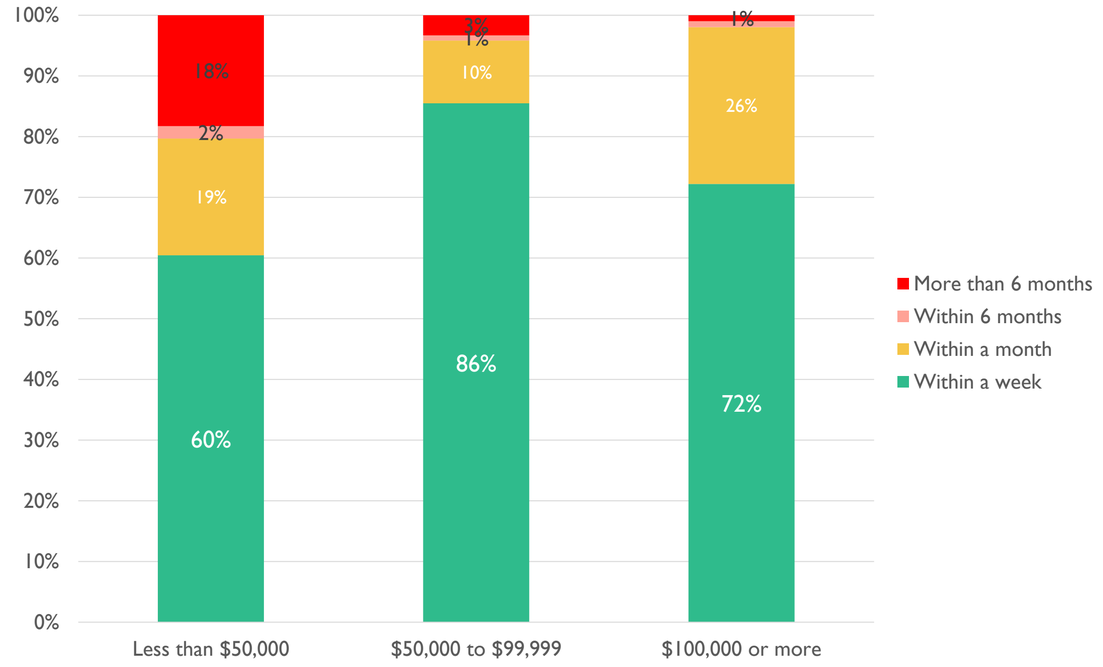
77% of all responding households report that a broken device would take a week or less to replace.

79% of households earning less than $50,000 can replace a device within one month, compared to 98% of households earning $100,000 or more.

Timeline for replacing a computing device



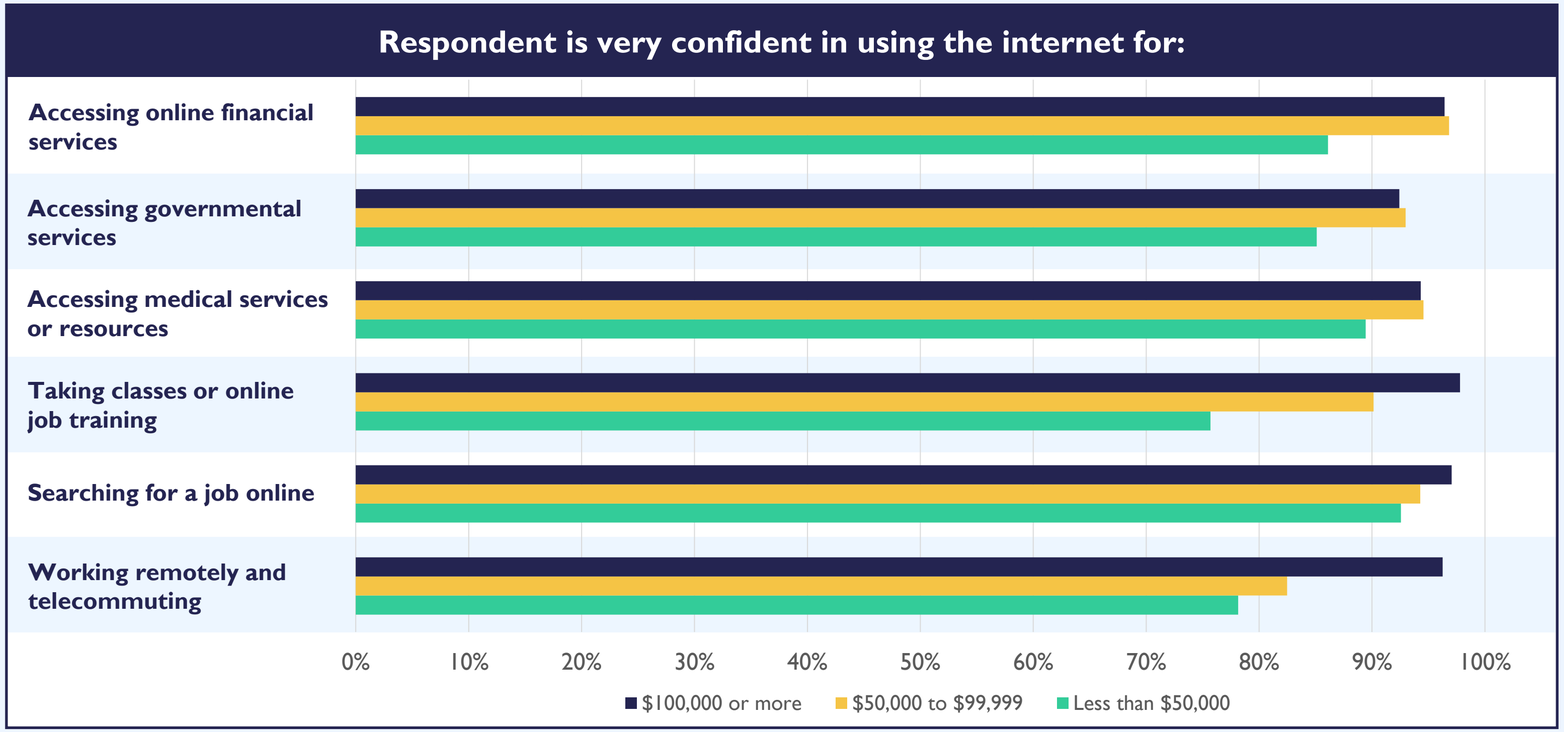
Timeline for replacing a computing device by income



Source: ADECA 2023 Regional Phone Survey

Low-income households are consistently less confident in their ability to undertake activities online

Even if a household has a working computer device and internet service, users must have the necessary digital skills to realize meaningful opportunity online.

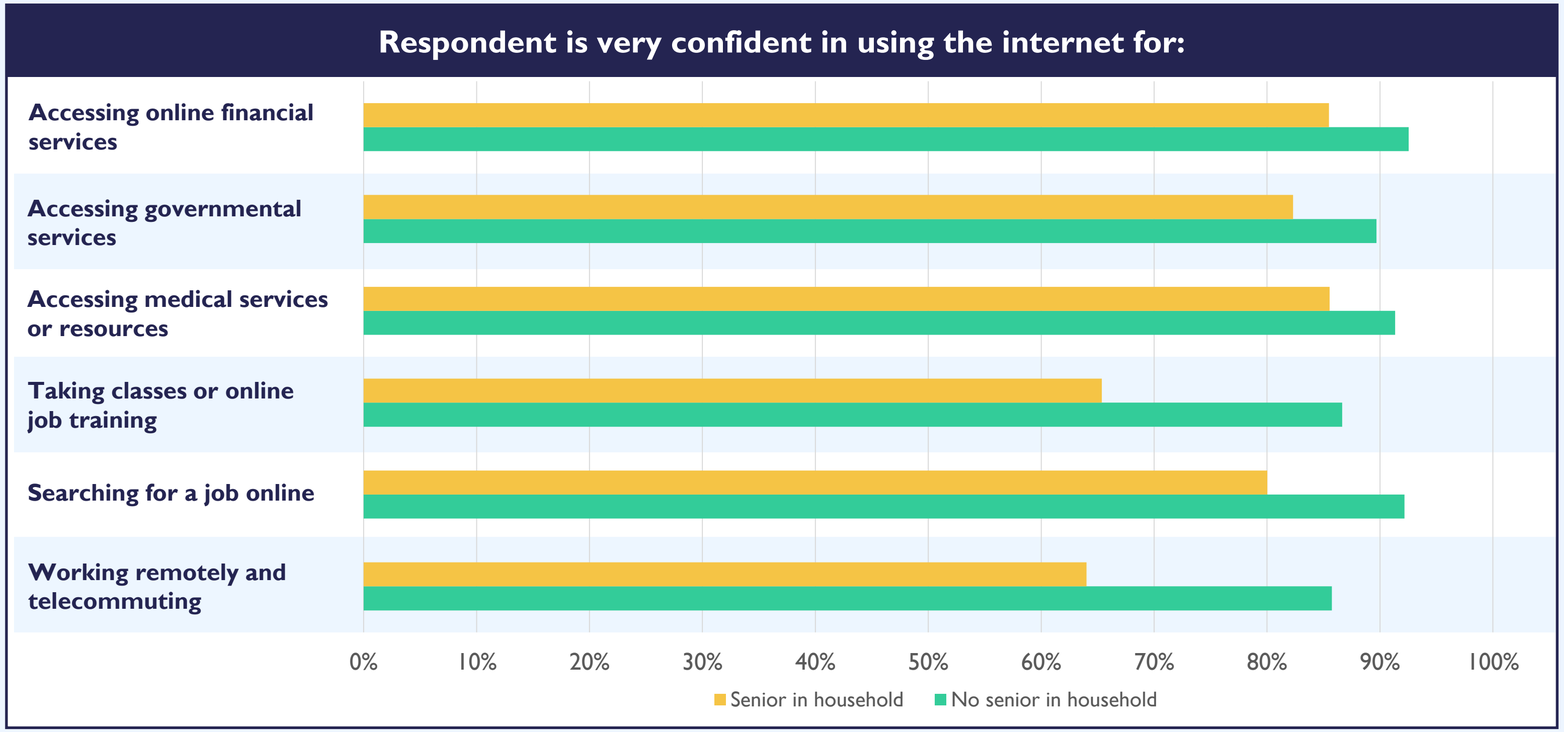


- Households earning less than $50,000 report lack of confidence in undertaking critical, valuable online activities, such as job searches, education, and health care.
- For all online tasks, fewer households earning less than $50,000 report confidence in their abilities compared to mid- and high-income households.
- Households earning less than $50,000 are roughly 18 percentage points less likely than households earning $100,000 or more to feel confident working remotely and telecommuting.

Source: ADECA 2023 Regional Phone Survey

Households with senior citizen members are consistently less confident in their ability to undertake activities online

Lack of online skills and confidence reduce seniors' ability to access critical services online, including in telehealth and telemedicine.

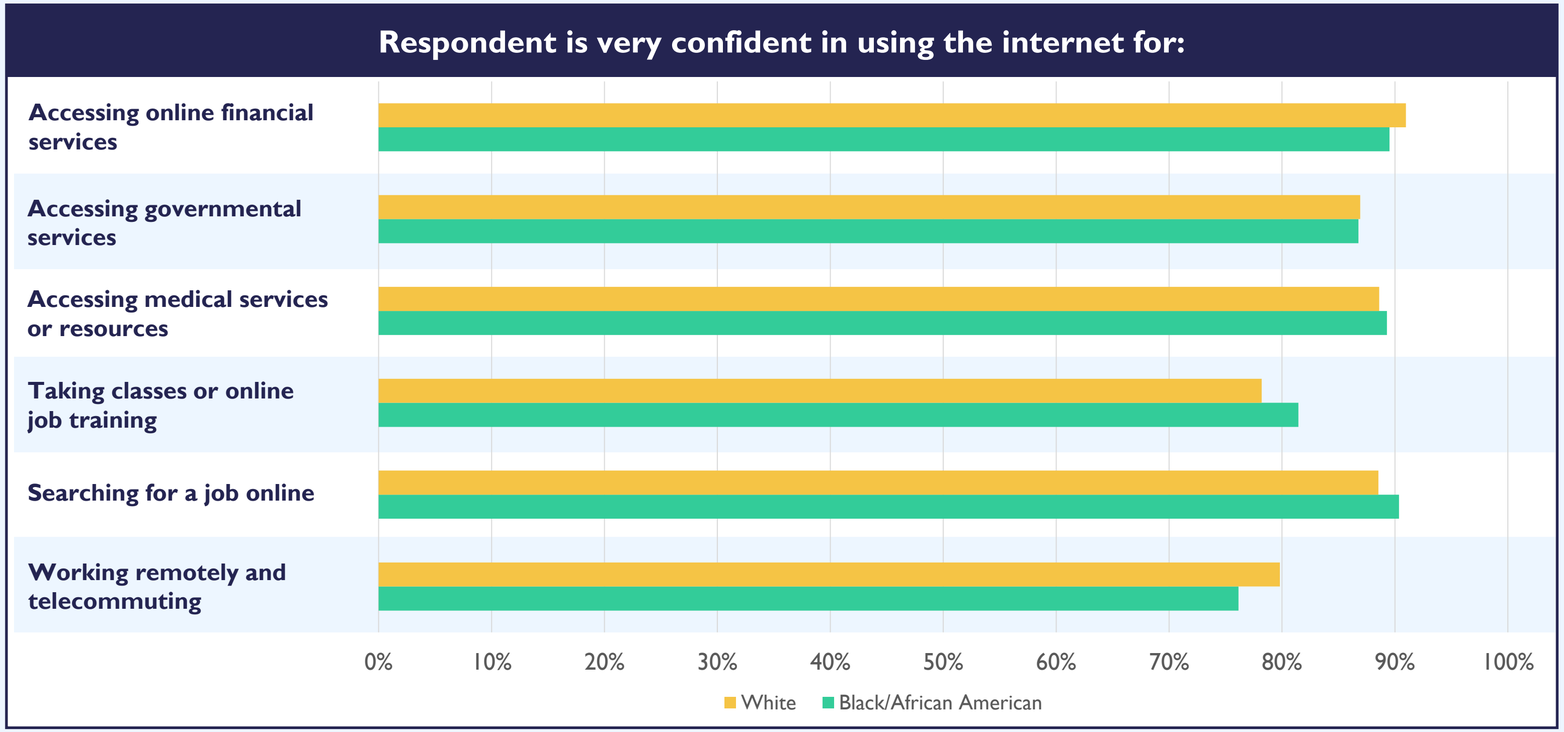


- For all online tasks, fewer households with seniors report confidence compared to younger households.
- Senior households are five percentage points less confident than younger households accessing medical services or resources online.

Source: ADECA 2023 Regional Phone Survey

Black households are consistently as confident as white households in their ability to undertake activities online

Lack of online skills and confidence sometimes reduces racial and ethnic minorities' ability to access critical services online, including in finding jobs and working remotely.



- For all online tasks, households with Black residents report confidence within 5 percentage points of the analogous confidence from white households.
- These data suggest that targeting digital skills educational programs towards racial or ethnic minorities may not be as effective as broadly inclusive initiatives for counties in the region.

Source: ADECA 2023 Regional Phone Survey

Regional households report confidence in their ability to navigate the internet safely, privately, and securely

Confidence in safety, privacy, and security extends across income brackets and other demographic groups.

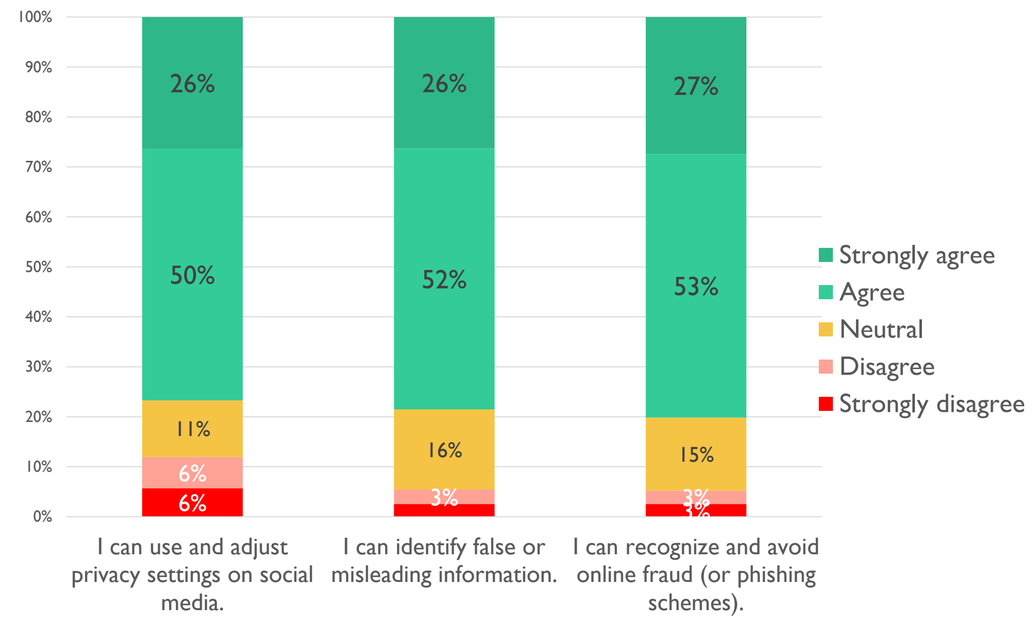
80% of regional households reportedly can recognize and avoid online fraud and phishing schemes.

78% of households can identify false or misleading information, and 76% can adjust privacy settings on social media.

Only 9% of households earning less than $50,000 report inabilities to identify false or misleading information.

Further research may be valuable, as confidence in digital skills does not necessarily imply competence.

Reported agreement with online privacy and security statements



Source: ADECA 2023 Regional Phone Survey

In addition to the above, experts consider accessibility to be essential to Digital Opportunity

Without accessible online content and resources, service, and computing devices, digital skills cannot be put into practice.

Digital Opportunity requires residents to be empowered to meaningfully use the internet.

Web developers and localities play a key role in ensuring online content and resources are accessible and inclusive of all residents, including those with disabilities.

Despite challenges to fully evaluating online accessibility, an audit of government websites and an understanding of online accessibility standards can enable localities to help all their residents to take advantage of online resources.

Government websites can be easily evaluated for accessibility and Digital Opportunity

There are low-burden means by which counties can review their online services to determine if they are accessible to people with disabilities.

A best practice for accessibility review involves checking websites against WCAG 2.1 online accessibility standards.

Online accessibility calculators can quickly summarize results: https://equally.ai/aria

These are simple to use; web designers and authors can run their pages against accessibility calculators and evaluations.

The cost is less than $300 for 1,000 pages per year.

Digital Opportunity is increased when government websites are accessible to all, including people with disabilities

Web Content Accessibility Guidelines (WCAG) 2.1 summarizes best practices for making web content accessible to all users, including individuals living with disabilities. It has four primary criteria:

1

Content should be perceivable by everyone

- Provide text alternatives for non-text content
- Include captions and other alternatives for multimedia
- Create content that can be presented in different ways, including by assistive technologies, without losing meaning
- Make it easy for users to see and hear content via thoughtful color selection and audio control

2

Websites should be operable by everyone

- Make all functionality available from a keyboard
- Give users enough time to read and use content (applying to timeouts, re-authentication methods, timed content, etc.)
- Do not use content that causes seizures or physical reactions
- Help users navigate and find content via informative page titling, focused page ordering, effective hyperlinking, etc.
- Make it easier to use keyboard alternative inputs such as pointer inputs

3

Information should be understandable by everyone

- Make text readable and understandable via accessible font choice and programmatic language decision (e.g., programmatic Spanish language option)
- Make content appear and operate in predictable ways
- Help users avoid and correct input mistakes through clear labeling, error identification messages, and error correction instructions

4

Websites should be robust

- Maximize compatibility with current and future user tools by making interface components programmatically determinable
- Implement functionality across multiple computer devices (e.g., laptops, desktops, tablets, smartphones)

Source: Web Accessibility Initiative, *WCAG 2.1 at a Glance*, 2018

The County could consider initiatives to create opportunities for low-income households

Cost is a barrier to low-income households realizing Digital Opportunity.

1

Affordability challenges prevent many households from subscribing to reliable internet services

- Promoting the federal Affordable Connectivity Program can help households connect to the internet at lower cost

2

Affordability challenges prevent many households from procuring adequate computer devices to meaningfully use internet services

- Device lending and repair programs can help facilitate meaningful internet use

3

Low-income households are less confident in their security and less confident in their ability to perform digital skills

- Supporting digital skills educational programming can help empower residents to meaningfully use the internet

4

Potential partners within the County can further describe the connectivity needs of residents and community-based organizations

Source: Web Accessibility Initiative, *WCAG 2.1 at a Glance*, 2018

05 Local perspectives and input

Overview

This section describes the feedback offered by a range of local entities that attended ADECA and Clarke County's on-site, strategic brainstorming meetings. Attendees shared perspectives and experiences regarding perceived obstacles to connectivity and ongoing efforts to increase Digital Opportunity.

ADECA held an on-site broadband meeting with community leaders and others in Clarke County

This event, along with statewide engagements, will inform ADECA's planning for the Broadband Equity, Access, and Deployment (BEAD) and Digital Opportunity programs in the County.

Initial collaboration

- ADECA collaborated with Clarke County leaders to identify participants and coordinate logistics for an on-site meeting. The meeting was designed to share information about the Broadband Equity, Access, and Deployment (BEAD) and Digital Opportunity programs, understand barriers to broadband, and gather information about current broadband-related programs in communities throughout the County.
- ADECA invited 92 people from a pool of government officials, ISPs, and community-based organizations; the public was also invited to attend.

On-site meetings

- ADECA conducted this meeting at the Clarke County at the Grove Hill Town Hall Council Chambers on March 21, 2023. 18 participants were in attendance, including organizations representing the entities listed to the right.
- Appendix D includes a partial list of organizations that attended the on-site meeting.

Outcome

- Participants provided insights into their community-specific needs and what obstacles to broadband they were experiencing. They also shared programs that are making an impact on broadband access and Digital Opportunity.

The meetings in Clarke County included participation from a range of entities:

- ISPs
- Elected officials
- Local nonprofit groups
- Anchor institutions, such as schools and libraries

Source: Clarke County in-person discussions, March 2023

Participants noted barriers and obstacles to broadband access during the in-person meeting

Furthering broadband investments and community centered programming can help alleviate obstacles.

Elected Officials

Said that affordability is also an issue for municipalities and businesses, not just residents.

Governments and Anchor Institutions

Expressed interest in expanding publicly available Wi-Fi access.

Internet Service Providers

Described how ISPs could be more efficient if city and County zoning provided notice of new construction.

Other Participants

Expressed concern about the time it will take to serve currently unserved areas, as students may be unable to complete schoolwork with currently available service.

Source: Clarke County in-person discussions, March 2023

Participants shared their concerns about access in Clarke County

These are first-person accounts of barriers and obstacles encountered.

1

"Fixed wireless is a stopgap until fiber arrives. The pandemic showed us that everyone needs some access to the internet."

2

A representative of AT&T said that some cities take three to four months to issue a permit which may delay deployment.

3

An attendee shared their concern about ISP deployment: "How do we know whether [an internet service provider] will get money and then leave? How can we tell whether [the company is] reputable?"

Source: Clarke County in-person discussions, March 2023

Current programs are making an impact

Information on existing programs is an important part of ADECA's broadband program inventory and successful projects may be candidates for future funding.

Internet service providers

Assurance Wireless and Metro by T-Mobile (both owned by T-Mobile), AT&T, Brightspeed, Frontier, Mediacom, Pine Belt Broadcasting, Pine Belt Cellular, Pine Belt Telephone, Southern Linc, TDS Telecom, and Verizon Wireless participate in the Affordable Connectivity Program.

Current broadband programs

The Thomasville Public Library has computers available for public use, provides digital skills training, and offers ACP enrollment support.

Opportunities for program expansion

The United Way of Southwest Alabama has programs to support communities by advocating for health services, education, and financial stability.

Characterizations of Digital Opportunity program offerings were derived from a variety of sources, including provider descriptions, information shared by meeting participants, and survey respondents. The availability of each offering in Clarke County could not be independently verified.

Source: Clarke County in-person discussions, March 2023; Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

Insights from Clarke County suggest the community could benefit from more Digital Opportunity training and more affordable service

Digital Opportunity programming can help increase connectivity, device ownership, and confidence in digital skills.

1. Local leaders said that the price they were quoted for internet service, $1,000 per month for 60 months, was too expensive for the town and likely too expensive for most businesses.

2. Device access programs and the Affordable Connectivity Program can be made more accessible via financial, organizational, and logistic support.

3. Some Digital Opportunity programming is currently offered in Clarke County, but there is room for improvement and expansion.

4. The United Way of Southwest Alabama is a potential partner to expand Digital Opportunity programming in Clarke County.

Source: Clarke County in-person discussions, March 2023; Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

06

Opportunities for partnership

Overview

This section describes a range of ways in which localities, ISPs, and community organizations can consider working together toward win-win outcomes that improve broadband across Clarke County.

Opportunities for collaboration

Both infrastructure and Digital Opportunity efforts present options for public-private and public-public partnerships:

1 ISPs and localities can collaborate to achieve mutual goals in building infrastructure and shaping residential broadband markets

- ISPs leverage their network engineering expertise and existing infrastructure assets to reach new customer bases.
- Localities leverage their support in state and federal grant opportunities to lessen the cost of entry to build infrastructure in low-income and rural areas.
- Localities collect and share data, streamline permitting policies, and facilitate active planning communication to further ease ISP investment.

2 Community-based organizations and localities can collaborate to expand and execute Digital Opportunity programming

- Community-based organizations utilize their facilities and community ties to publicize and administer educational and device lending programs.
- Localities support programs by coordinating efforts between various independent partners and providing additional funding and execution support to increase a program’s scope and efficacy.

Evaluation of partnership models requires balancing risk tolerance and expected rewards

Different partnership models were analyzed to understand which approaches would be most suitable for Clarke County.

1

Three different public-private partnership models were defined to achieve infrastructure deployment goals:

1. Facilitation model
2. Grant model
3. Investment model

2

Public-private partnership models were evaluated in terms of level of effort, potential benefits, and potential risks to understand their suitability to Clarke County.

Three primary models for public-private collaboration can drive infrastructure deployment

Every community should adopt and refine the approach or approaches that best meets its own needs and goals.

1

Facilitation

1. The community makes investment more attractive for companies
2. Mechanisms include lowering costs and increasing revenues

2

Grant

1. The community makes a grant to the company
2. The company makes enforceable commitments to build infrastructure and deliver service

3

Investment

1. The community pays for and owns the network assets
2. The private partner operates the network and provides service to the public

Any of these models can accommodate collaboration between counties and ISPs to prepare for the funding that ADECA will administer — and to enable the County to support its preferred partner, including through provision of financial support.

Model 1 strategies: facilitation

Facilitation involves reducing costs and increasing revenues:

Streamline processes and share data

- **Permitting**
- **Inspections**
- **Access to public assets**
  - Fiber, conduit, real estate
  - Vertical assets for placement of wireless facilities
- **Document and share data regarding your processes and your assets**

Increase adoption

- **Outreach campaign to those who do not subscribe**
- **Help eligible households access federal subsidy programs**
  - Affordable Connectivity Program
  - Lifeline
- **Requires community-specific strategy**
  - No one knows better than you

Strategy and Goal

1. Attracting private investment in broadband is often a numbers game
2. Investors will deploy in areas where return is greatest, i.e., where costs are lowest relative to revenues
3. The community has the potential to reduce ISP costs by sharing data and assets and by ensuring efficient processes
4. The community has the potential to increase ISP revenues by helping eligible households get federal subsidy

Model 2 strategies: grants and incentives

Grantmaking involves bridging the private sector business case:

Sources of grants

- **Local funds**
  - A 2022 state constitutional amendment allows localities to grant public funds, including local American Rescue Plan Act (ARPA) funds, to private companies for the purpose of broadband expansion
- **Federal funds**
  - Federal Dept. of the Treasury has generally approved use of ARPA Local Fiscal Recovery funds for broadband, so long as it covers some locations where broadband does not currently exist

Alternative grant strategies

- **Traditional economic development incentives can function as effective grants**
  - For example: tax exemptions; tax increment financing; municipal bond financing
- **Foregone revenues do the same**
  - Some communities choose to waive rights-of-way, franchise, or other fees in return for deployment commitments
  - Other communities commit to using fees and other revenues from ISPs to fund adoption programs that increase network use

Strategy and Goal

1. The community makes a grant to a private internet service provider in return for commitments to deploy broadband
2. Investors will deploy in areas where return is greatest
3. The community has the potential to make investment more attractive through grants or incentives
4. In return, the community can secure enforceable commitments from the entity it funds

Model 3 strategies: investment

Investment involves building your own assets and then making them available to your private partner:

Sources of capital

- **Local funds**
- **Federal funds**
  - Dept. of the Treasury has generally approved use of ARPA Fiscal Recovery funds for broadband, so long as the investment covers some locations where broadband does not currently exist.

Private sector interest

- **This model can be attractive to smaller providers who lack capital**
- **Larger companies (such as Google Fiber in Huntsville) have also embraced this model**

Strategy and Goal

1. In this approach, the community funds construction of broadband infrastructure that it will own but will be operated in the long term by a private partner.
2. As with any model, it is important that a community secures enforceable promises in return for access to public assets.

This partnership model involves more cost and risk for a community. Given its challenges, a community should fully study all costs and risks — and proceed only if it has identified a willing, able, and experienced private partner.

Each partnership approach offers benefits, risks, and tradeoffs

	Level of effort	Potential impact	Potential risk	Suitability for the County
Facilitation model	High	Modest	Low	Long-term benefits with little risk make this an **attractive model**
Grant model	Low	High	Low to modest	Historic funding amounts available today make this a **highly attractive model**
Investment model	High	High	High	Given near saturation of served locations and grant opportunities this model is **less attractive at this time**

Organizations serving the community express interest in Digital Opportunity collaborations with the County

These organizations are logical partners for Digital Opportunity efforts such as training courses.

1

Organizations such as AARP, the Alabama Public Library Service, the Alabama Community College System, and United Way expressed interest in collaborations to develop programs that increase digital skills and device access among their partners, members, and patrons.

2

A wide range of community organizations recognize the importance of local coalitions, including to maximize opportunities for Digital Opportunity/equity grant funding from the U.S. Department of Commerce in 2025.

3

ADECA has developed a Community Broadband Organization and Programming Inventory to help identify organizations participating in Digital Opportunity programming; programs relevant to Clarke County are listed in Appendix C.

Source: Clarke County in-person discussions, March 2023; Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

Clarke County can leverage strategic partnerships to achieve goals

Closing the digital divide requires County leadership and strong partnerships.

1

Clarke County can best achieve its goals of servicing unserved locations and spurring investment by utilizing the facilitation and grant partnership models.

2

Clarke County can best achieve its goals of making service and computers more affordable, increasing resident confidence in digital skills, and expanding Digital Opportunity programming by partnering with existing, enthusiastic entities.

3

A robust understanding of the funding landscape will aid in the creation of these partnerships.

Source: Clarke County in-person discussions, March 2023

07

Broadband grant opportunities

Overview

This section provides an overview of a variety of grant and other funding programs that create opportunity to deploy broadband infrastructure, connect anchor institutions, and promote broadband opportunity. Some of these funds may be available directly to Clarke County, while others may be available to partners that can benefit from the County's support and encouragement.

The broadband funding environment has never been better at both the state and national levels

There are two general types of grants: those for ISPs and those targeted for other parties.

ISP grant opportunities are usually for building network infrastructure in underserved areas

ADECA will administer three major grant programs that will enable ISPs to build network infrastructure:

- Last-mile infrastructure to unserved locations — $191M in 2023
- Middle-mile infrastructure to anchor institutions — $245M in 2023
- Last-mile infrastructure to unserved addresses — $1.4B in 2025

At the federal level, USDA awards grants to help build network infrastructure in rural and unserved areas

Public entities and nonprofits typically have access to funding for broadband planning, community owned infrastructure, or addressing Digital Opportunity needs

- The federal Economic Development Administration (EDA) provides comprehensive planning grants that can include broadband planning
- In 2025, the U.S. Department of Commerce will offer Digital Opportunity grants, enabling counties and nonprofits to compete for funding to operate Digital Opportunity programs
- USDA awards grants for distance learning and telemedicine equipment to public entities and enables public entities to compete for broadband loans and grants

County partners can utilize funding to achieve goals

Understanding the funding landscape is key for policymakers, ISPs, and community-based organizations.

1

Localities that understand the funding options available to them are well positioned to leverage their support for advantageous projects.

2

ISPs can align construction plans with grant programs and coordinate with localities to lower their own capital expenditures in infrastructure build outs.

3

Community-based organizations and localities may apply to grant programs to alleviate financial barriers outside of infrastructure, such as:

- Digital Opportunity programs, especially related to telehealth
- Digital Opportunity planning
- Procuring internet service

ISP funding opportunities

Alabama Department of Economic and Community Affairs

Capital Projects Fund (CPF)

CPF is federal funding from the American Rescue Plan Act that will be administered by the states. This program is for infrastructure deployment in rural areas that do not yet meet the current state standard for broadband (100/20 Mbps).

- This grant program will be administered in 2023.

Anchor Institution/Middle-Mile (AIMM)

AIMM is federal funding from the American Rescue Plan Act that Alabama has designated for broadband use. This program will connect critical anchor institutions (such as hospitals, schools, libraries, and public safety) that require better broadband, while creating new middle-mile connectivity into unserved areas.

- This grant program will be administered in 2023.

Broadband, Equity, Access, and Deployment (BEAD)

BEAD is federal funding under the Infrastructure Investment & Jobs Act that will be administered by the states. Alabama's allocation of funds is $1.4 billion and planning is currently underway for how these funds will be used to reach unserved locations.

- This grant program will be administered in 2024.

ISP funding opportunity – 2024

ADECA Last-Mile Broadband Equity, Access, and Deployment (BEAD) Program

Program Purpose

The program funds last-mile broadband network infrastructure deployment in rural areas.

Nature of Award

The program provides $42.45 billion in nationwide broadband infrastructure funding. It is funded by the federal Infrastructure Investment & Jobs Act.

Alabama's allocation of the funds is $1.4 billion and ADECA is the entity designed by the state to administer the program.

Eligible Entities

An eligible applicant is a cooperative, corporation, limited liability company, partnership, or other private business entity or unit of government that currently provides broadband service.

All ISPs that receive funding must participate in the Affordable Connectivity Program.

Eligible Areas

Areas gain tiered eligibility based on demonstrated presence (or absence) of broadband internet service offerings based on speed and technologies.

Areas that are not yet served by 25/3 Mbps are highest priority, followed by those not yet served by 100/20 Mbps.

Eligible Costs

Eligible costs include those associated with deploying or upgrading network infrastructure.

If funds allow after all residents are served, data collection, installing internet and Wi-Fi in residential buildings, training and workforce development, and broadband adoption programming may be considered.

Timelines

State subgrant design and application windows are anticipated in 2024, with deployment starting in 2025.

ISP funding opportunity – 2023

ADECA Last-Mile Capital Projects Fund (CPF) Program

Program Purpose

The program is intended to fund broadband infrastructure construction in the last-mile to locations that are currently unserved with broadband.

Nature of Award

Grants will be awarded through a competitive application process.

The program has a total budget of $191.9 million.

This program is funded by the federal government under the Capital Projects Fund of the American Rescue Plan Act.

Eligible Entities

The program will be open to a wide range of entities, including for-profit or nonprofit corporations, cooperatives, limited liability corporations, local governments, consortia, partnerships, or other business entities.

Eligible Areas

Rural, unserved addresses will be eligible for funding.

Eligible Costs

All construction costs are eligible for reimbursement.

Operating costs and pre-application costs are not considered eligible expenses.

Timelines

ADECA will accept applications until October 13.

ISP funding opportunity – 2023

ADECA Anchor Institution/Middle-Mile (AIMM) Grant Program

Program Purpose

The program is intended to fund world-class fiber connectivity to anchor institutions and simultaneously lower the cost of last-mile deployment to unserved areas by providing awards to bidders that demonstrate plans for how the new fiber would be used to facilitate last-mile deployment.

Nature of Award

Grants will be awarded through a competitive application process.

The program has a total budget of $245 million, funded with dollars from the American Rescue Plan Act State Fiscal Recovery Fund.

Eligible Entities

The program is open to cooperatives, corporations, limited liability companies, partnerships, nonprofits, other private business entities, or units of government that currently provide middle-mile, last-mile, or anchor institution broadband services.

Eligible Areas

Eligible projects will be those that connect anchor institutions and simultaneously provide middle-mile capabilities that advance last-mile goals.

Eligible Costs

Eligible costs include network construction expenses.

Operating costs and pre-application costs are not considered eligible expenses.

Timelines

ADECA will accept grant applications until October 13.

Federal broadband funding for ISPs

DEPARTMENT OF AGRICULTURE

- **The Community Connect program** provides rural infrastructure funding.
- **The ReConnect program** provides rural infrastructure funding to unserved addresses.

USDA Rural Development

FEDERAL COMMUNICATIONS COMMISSION

- **Rural Digital Opportunity Fund (RDOF)** is an FCC-administered program, but no immediate funding opportunity exists, as the FCC has not signaled its plans. Generally, RDOF funds are focused on last-mile broadband to unserved locations. The FCC may wait to act until after the current federal and state grants are awarded and the scale of the remaining need is better understood.

FCC Federal Communications Commission

ISP funding opportunity – annual

USDA Community Connect Program

Program Purpose

The program funds network infrastructure construction in rural areas.

Nature of Award

The program funds grants and requires at least 15% cash match. It Requires broadband connections to anchor institutions (e.g., schools, libraries) funding 100/20 Mbps service for at least 2 years.

Approximately $79 million will be available in the next fiscal year. Awards range from $100,000 to $5 million.

Eligible Entities

Eligible entities include for-profit and nonprofit corporations, cooperatives, state, local and Tribal governments.

Eligible Areas

Eligible areas are rural with a population of less than 20,000 that are unserved with broadband service (25/3 Mbps).

Priority is given to areas that demonstrate “economic necessity.”

Eligible Costs

Eligible costs include construction, acquisition, or lease of facilities such as spectrum, land, towers or buildings used to deploy service.

Applicants must own the land on which construction of buildings takes place.

Timelines

Annual grant window usually opens in the spring.

ISP funding opportunity – annual

USDA ReConnect Program

Program Purpose

The program funds network infrastructure construction in rural areas.

Nature of Award

ReConnect provides grants, loans, or a combination of the two. Most grants are for up to $25 million, and most awardees must provide 25% in matching funds.

Most loans are for up to $25 million. Eligible entities may apply for both loans and grants at the same time, raising the total funding limit to $50 million. In some cases, award limits are raised up to $35 million.

Eligible Entities

Eligible entities include for-profit corporations, limited liability partnerships, cooperatives, mutual associations, state, local and federally recognized Tribal governments.

Eligible Areas

Eligible areas will be updated with the release of an upcoming Notice of Funding Opportunity.

Eligible areas must be rural and at least 50% of households must lack broadband (100/20 Mbps service) and serve all premises in the proposed funding service area.

Eligible Costs

Eligible costs include construction or improvement of broadband infrastructure. Up to 40% of the awarded funds may be used to acquire an existing system.

Up to 5% of the awarded funds may be used to reimburse pre-application expenses. Network operation costs are ineligible.

Timelines

Annual grant window usually opens in the early spring.

Historically, application windows are open for 60 days.

Federal broadband funding for public entities

DEPARTMENT OF AGRICULTURE

Distance Learning and Telemedicine

This program provides communications equipment for public health and education entities.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMIN.

Digital Equity Competitive Grants

This program will provide competitive grants in 2025 for “Digital Opportunity” programs such as training, device access, and affordability efforts.

ECONOMIC DEVELOPMENT ADMINISTRATION

Public Works and Economic Adjustment Assistance

This program provides grants to localities for rural infrastructure.

Planning and Local Technical Assistance Program

This provides grants to localities for technical assistance.

FEDERAL COMMUNICATIONS COMMISSION

E-Rate Program

This program provides generous subsidies for broadband to schools and libraries.

Healthcare Connect and Rural Healthcare

These programs provide subsidized service for hospitals and clinics.

Federal broadband funding for public entities

TENNESSEE VALLEY AUTHORITY

Connected Communities

This program provides support for innovative Pilot Projects that will improve access to digital services, create a healthy, natural, and built environment, scale economic opportunities or prepare for natural disasters or cyber threats.

DELTA REGIONAL AUTHORITY

Community Infrastructure Fund

This fund complements other federal and state resources in the region to collaboratively fund infrastructure projects.

APPALACHIAN REGIONAL COMMISSION

ARISE

ARISE funds large-scale, regional economic transformation through multistate, collaborative infrastructure projects across Appalachia.

Area Development Program

This program grants support impactful infrastructure projects.

Community funding opportunity – annual

USDA Distance Learning and Telemedicine Program

Program Purpose

The program funds equipment purchases and two years of operating costs to enable remote education and telehealth.

Nature of Award

The program awards competitive grants and requires matching funds at least 15%.

The program has a total budget of $64 million for the 2023 fiscal year.

Awards range from $50,000 to $1 million.

Eligible Entities

Eligible entities include for-profit and nonprofit corporations, state or local governments, federally recognized Tribal Nations, and collaborations of these entities.

Eligible Areas

Eligible areas are defined as rural areas with a population of less than 20,000.

Eligible Costs

Eligible costs include equipment (e.g., audio, visual), facilities, and programming for distance learning and telemedicine resources, as well as any operating costs for two years.

It does not include broadband service.

Timelines

A Notice of Funding Opportunity is anticipated in fall 2023.

Community funding opportunity – 2025

U.S. Dept. of Commerce NTIA Digital Equity Competitive Grant Program

Program Purpose

The program will fund digital equity programming and initiatives.

Nature of Award

The Digital Equity Competitive Grant Program will award $1.25 billion in competitive funding.

Competitive grants will support five years of program activities.

Eligible Entities

Eligible entities include local and Tribal governments, and nonprofit entities.

Eligible Areas

The grant is expected to take applications from across the country.

Eligible Costs

It is anticipated that funded programs will address access to devices, broadband affordability, accessibility of public resources, and digital skills training, including for privacy and security.

Timelines

A Notice of Funding Opportunity should be released in 2025.

Community funding opportunity – annual

Economic Development Administration Public Works and Economic Adjustment Assistance

Program Purpose

The program funds a variety of economic development projects that address equity, workforce development, and climate change resiliency.

Any infrastructure applications must be oriented towards public or nonprofit ownership.

Nature of Award

The program has a total budget of $39.5 million for 2023. Awards are generally between $150,000 and $1 million.

In most cases, grantees are required to provide matching funds.

Eligible Entities

Eligible entities include state, local and Tribal governments, nonprofit corporations, public educational institutions, and other recognized EDA grant-eligible entities such as district organizations (e.g., Economic Development Districts).

Eligible Areas

Program gives preference towards geographical areas that can demonstrate local need and achievable projects.

Eligible Costs

Eligible costs include construction, loans, and studies, as well as other local economic development projects.

Timelines

Applications are evaluated on a rolling basis until the funds are exhausted or a new Notice of Funding Opportunity is issued.

Community funding opportunity – 2023

Economic Development Administration Planning and Local Technical Assistance Program

Program Purpose

The program supports economic development projects such as those that stimulate job creation, private investment, workforce development, and foreign direct investment.

Nature of Award

There is $33 million available for planning and $10 million available for technical assistance in 2023. Awards are provided in the form of a grant or a cooperative agreement.

In almost all cases, cost sharing is required.

Eligible Entities

Eligible entities include state, local and Tribal governments, nonprofit corporations, public educational institutions, and other recognized EDA grant-eligible entities such as district organizations (e.g., Economic Development Districts).

Eligible Areas

Eligibility is not determined by geographic or demographic criteria.

Eligible Costs

Eligible planning costs include capacity building, economic development plans.

Eligible technical assistance costs include specific economic development projects and feasibility studies.

Timelines

Applications are evaluated on a rolling basis until funds are exhausted or a new Notice of Funding Opportunity is issued.

Community funding opportunity (schools and libraries)

FCC E-Rate Program

Program Purpose

The program supports projects that serve broadband connectivity needs for schools and/or libraries.

Nature of Award

Funds are awarded through the FCC's Universal Service Fund.

The program has an annual funding cap of $4.15 billion.

Eligible Entities

Eligible entities include schools, school districts, and libraries.

Eligible Areas

Eligibility is not determined by geographic or demographic criteria.

Eligible Costs

Eligible costs include internet access, internal connections, and related internet equipment.

Timelines

Applications are evaluated on a rolling basis with the window of July 1 through June 30.

Community funding opportunity (health care facilities)

FCC Healthcare Connect and Rural Healthcare Programs

Program Purpose

The program funds broadband connections to health care providers, with a specific goal to reduce the disparity in costs between rural and urban internet (and therefore medical) costs.

Nature of Award

Funds are awarded through a subsidy from the Universal Service Fund. The program has a $637 million funding cap in the 2023 fiscal year.

Eligible Entities

Eligible entities include public and nonprofit health care providers (HCP), and consortia of HCPs.

Eligible Areas

Applicants must serve rural communities, with priority determined by degree of rurality.

Eligible Costs

Eligible costs include those associated with procuring telecommunication services and broadband connectivity.

Timelines

The application window runs from July 1 through June 30, within which applications are evaluated on a rolling basis.

Community funding opportunity

Tennessee Valley Authority Connected Communities

Program Purpose

The program funds Pilot Projects that will improve access to digital services, create a healthy natural and built environment, scale economic opportunities, or prepare for natural disasters or cyber threats.

Nature of Award

The program has $2 million in available awards and will fund up to $750,000 per project.

Eligible Entities

Each applicant team must be led by a principal organization which is responsible for entering into an agreement with TVA and able to receive and manage federal funding.

All teams must have at least one community partner organization to facilitate outreach and engagement.

Eligible Areas

All proposed pilot projects must be conducted in the TVA service region.

Eligible Costs

Funds must be used to pay for direct expenses related to the pilot project purpose.

Overhead costs to implement the pilot project may be included in project costs.

Timelines

Applications will be accepted from April 3, 2023 - June 30, 2023.

Community funding opportunity

Delta Regional Authority Community Infrastructure Fund (CIF)

Program Purpose

Funds are focused on the following ordered priorities:

1. Basic public infrastructure in distressed counties and isolated areas of distress.
2. Transportation infrastructure for the purpose of facilitating economic development in the region.
3. Projects that address flood control.

Nature of Award

CIF has $29.5 million in available funding, to be allocated across the eight states based on an allocation formula.

In general, project awards will range from $500,000 to $2 million, depending on the type of project, application score, and available funds.

Eligible Entities

Eligible entities include counties/parishes; cities or other political subdivisions of a state; public or private nonprofit organizations; regional development organizations; economic development organizations; workforce investment boards; unions/labor organizations; community-based organizations; faith-based organizations; public Institutions of higher education; minority-serving institutions; trade/technical schools; Historically Black Colleges & Universities; and federally recognized Tribal Nations.

Eligible Areas

Under federal law, a least 75% of DRA funds must be invested in economically distressed and isolated areas of distress in the region.

Eligible Costs

Applicants are encouraged to work with their Local Development Districts (LDD) for specific guidance pertaining to eligible use of CIF funds.

Generally, these are Investments in priority infrastructure projects that will encourage economic development.

Timelines

Funding Availability began in April 2023 and continues with rolling deadlines.

Applications are reviewed monthly.

Project periods may be no more than 24 months after the Notice to Proceed is awarded.

Community funding opportunity

Appalachian Regional Commission ARISE Program

Program Purpose

To drive large-scale, regional economic transformation through multistate, collaborative infrastructure projects across Appalachia.

Nature of Award

ARISE has $73.5 million in available funding, with $10 million set aside for planning grants.

Up to $10 million in grant funds can be requested per project.

Eligible Entities

Local development districts (LDDs); Indian Tribal Nations; states, counties, cities, or other political subdivision of a state; institutions of higher education; public or private nonprofit organizations or associations.

Eligible Areas

Appalachian Counties served by ARC.

Eligible Costs

Costs related to planning, development and construction of infrastructure improvements.

Timelines

A pre-application concept paper must be submitted to the ARC state program manager.

Applications are being accepted on an ongoing basis.

Community funding opportunity

Appalachian Regional Commission’s Area Development Program

Program Purpose

ARC’s Area Development program makes capital investments in two general areas: critical infrastructure and business and workforce development. Some projects qualify for specialized Area Development initiatives that have unique application requirements and operating guidelines.

Nature of Award

ARC's FY 2023 funding includes $118 million to continue the Area Development Base Program and $32 million for special regional initiatives for distressed communities.

Eligible Entities

Funds are available to Appalachian communities in partnership with their state governments.

Eligible Areas

Appalachian Counties served by ARC are eligible for the program.

Eligible Costs

Costs related to the development and construction of infrastructure projects are eligible.

Timelines

Applicants must work with their ARC state program manager to access program funds.

Clarke County can take advantage of the unprecedented funding landscape

Policymakers, ISPs, community-based organizations, and residents can all benefit.

1. The immense funding opportunities can be leveraged to make never-before-seen progress in closing the digital divide.

2. Clarke County can prepare for next steps by coordinating with ADECA and partnering with ISPs and community-based organizations.

08 Next steps and ADECA's upcoming efforts

Overview

ADECA will undertake multiple programs over the next few years to address issues of broadband infrastructure and Digital Opportunity. This section describes next steps and the ways in which Clarke County and its partners can contribute to, impact, and benefit from ADECA’s work.

Strategy: prepare for funding opportunities

Clarke County can take steps to inform ADECA's plans for federal infrastructure and Digital Opportunity funds — and to benefit from them.

Ensure service coverage data accurately reflects availability in your County	• Check the FCC map and challenge if necessary • Provide data on unserved and underserved locations to the FCC
Continue to collect Digital Opportunity data to understand your community	• Understand how many households lack access to broadband because of affordability, language, or other issues — even where it is available • Use existing data and collect new data to understand challenges
Develop partnerships with nonprofits for Digital Opportunity programs	• Using your data, prioritize areas of effort for your community • Identify existing Digital Opportunity programs that work and can be expanded — and needs for new programs • Plan to support state and federal grant applications by local nonprofits or submit your own
Develop partnerships with ISPs	• Build partnerships with ISPs that show intent to invest in your County and that have track records • Plan to support state and federal grant applications by ISPs in return for ISP commitments

Counties and the public will have opportunity to comment on ADECA's ongoing planning efforts

1

Five-Year Action Plan

Will be presented to the federal government in August.

There will be opportunity for input in the summer.

2

Digital Opportunity Plan

Will be presented to the federal government in October to unlock new programmatic funds.

There will be opportunity for input in the fall.

3

Investment

Will be presented to the federal government by year end to unlock new infrastructure funds.

There will be opportunity for input in the fall.

ADECA

Alabama Department of Economic and Community Affairs

MAUREEN NEIGHBORS

Chief, Digital Expansion Division

COMMENTS AND FEEDBACK

Broadband.Fund@ADECA.alabama.gov

ON THE WEB

adeca.alabama.gov/broadband

Be Linked Alabama

Appendix A: Smart practices

This appendix outlines smart practices in permitting, asset sharing, and information sharing for localities to facilitate ISP investment.

This appendix presents “smart practices” for localities to facilitate ISP deployment and investment

Localities can attract ISP interest by optimizing permitting, sharing assets, and sharing data.

1 Policy decisions are unique to each locality — smart practices can serve as a helpful guide

- This appendix focuses on efforts local governments can make to facilitate broadband project development — with or without public funding, and at varying levels of complexity.
- It presents a menu of options that are considered smart practices for permitting and related processes under certain circumstances.
- These approaches are not all appropriate for all communities — nor would any given community be likely to adopt every practice described here.
- Rather, the menu presents a set of options a local government can evaluate in light of its public policy priorities, its community’s unique circumstances, and its residents’ needs.

2 Smart practices aim to ease collaboration with ISPs while achieving local goals

- The strategies and smart practices presented in this appendix are intended to enable localities to receive value in return for the efforts they make to enable a broadband deployer’s efforts.
- That value may be financial (such as a lease payment in return for access to a city’s fiber network) or it may be less tangible (such as a commitment by the partner to deliver broadband service to low-income residents in return for access to a locality’s excess conduit).
- Either way, the locality will facilitate broadband deployment in partnership with the deployer; the relationship should not favor the deployer over the public interest.

Adopting smart practices creates sustained ISP interest without expending financial resources

Investment involves building your own assets and then making them available to your private partner.

Localities can design policies and processes to attract private sector investment

- Localities that are unable to spend sufficient matching funds find it challenging to use grant programs to solve their broadband gaps.
- These localities and others can utilize inexpensive strategies to make themselves more attractive for private investment.
- Implementing these strategies carries minimal risks for localities, but it requires effort.

Strategy and Goal

1. Attracting private investment in broadband is often a numbers game
2. Investors will deploy in areas where return is greatest, i.e., where costs are lowest relative to revenues
3. The community has the potential to reduce ISP costs by sharing data and assets and by ensuring efficient processes
4. The community has the potential to increase ISP revenues by helping eligible households get federal subsidy

Four steps to facilitate ISP interest

Localities can provide ISPs lower costs, faster timelines, and greater revenue.

1

Enhance permitting processes

Streamline permitting processes to improve coordination with applicants, leverage local resources, and clarify expectations and requirements for project deployment.

2

Facilitate access to assets

Maximize access to fiber, conduit, real estate, or other facilities that would make broadband infrastructure deployment less costly.

3

Create equitable access to information

Share information (such as detailed maps) relevant to broadband planning among a wide range of potential deployers.

4

Increase interest in internet services

Publicize information on service and subsidy availability, and advertise Digital Opportunity programming to expand customer bases and interest in internet services.

1. Strategies for enhancing permitting processes

Localities can attract ISP interest by optimizing permitting, sharing assets, and sharing data:

A Developing and sharing information about relevant permitting and processes

- Developing clear construction design standards and regularly updating the standards with industry and expert input
- Developing a telecommunications permitting manual that documents requirements, application forms, standards, process workflows, fee lists, etc.
- Publishing permit timeline expectations and metrics
- Creating a mechanism for receiving feedback

B Creating conditions that make deployment of private assets more likely

- Requiring conduit installation in new developments and during major renovations, including:
- Ensuring the availability of conduit from the street to the building
- Ensuring the installation of in-building pathways and cabling
- Facilitating aerial construction by encouraging pole owners to facilitate make-ready

C Revisiting all policies periodically to comply with changing state and federal rules

- Ensuring compliance with federal and state requirements
- Periodic reviews and revisions may also minimize delays related to questions from applicants

D Developing strategies for scaling up staffing and support

- This is a typical challenge for localities without a surplus of resources, and solutions are highly unique to each locality
- One potential solution is for the locality to find means by which local processes are respected but the broadband provider can use its own resources to supplement public sector staff

2. Strategies for facilitating access to key assets

Maximize access to fiber, conduit, real estate, or other facilities that would make broadband infrastructure deployment less costly:

A Creating access to public assets for new deployment

- Enabling ISPs to lease public assets such as fiber, conduit, facility space, and/or real estate
- Trading or swapping access to public assets for access to private infrastructure
- Building new assets such as middle-mile fiber or redundant conduit

B Optimizing permitting for broadband projects

- Establishing a single point of contact for broadband permitting
- Creating a dedicated telecommunications permit to enable specialization in staffing for broadband-related permits
- Distinguishing between major and minor broadband permits to expedite smaller or routine broadband projects
- Developing an online permitting portal
- Developing a batch permitting process to eliminate repetitive applications
- Coordinating permitting policies and procedures among jurisdictions in the region

C Encouraging deployment of public and private assets

- Developing a “Build Once” policy
- Developing a “Dig Once” policy to promote conduit and fiber construction

3. Strategies for creating equitable access to information

Improve coordination with applicants, leverage local resources, and clarify expectations and requirements for project deployment:

A Making public GIS datasets available where possible

- The following data sets can be extremely helpful for facilitating construction:
  - Addresses
  - Streets
  - Rights-of-way and easements
  - Building footprints
  - Streetlights
  - Neighborhood boundaries
  - Parcels
  - Utility poles
  - Overhead strand
  - Conduit (both locality-owned and belonging to other utilities)
  - Fiber (both locality-owned and belonging to other utilities)
  - Manholes and handholes
  - Zoning
  - Existing underground utilities

B Documenting public fiber assets

- Fiber documentation should indicate where the fiber is, whether it is aerial or underground, and where it is located spatially on a pole or underground
- Effective documentation also includes conduit color, fiber count, pole locations, and location of asset points

C Documenting public conduit assets

- Well-documented conduit, like well-documented fiber, requires effort and consistency, and needs to be regularly updated
- Effective conduit documentation includes the path, size, location (vertical and horizontal), access points, and design specifications (bends, availability of pull strings, composition)

D Coordinating telecommunications infrastructure mapping across permitting agencies

- Collaborative data collection and analysis can help create tools for coordination, for example:
  - A public map that shows the location of jurisdiction-owned infrastructure
  - A map that is only accessible by permit applicants that shows the location of pending and approved permits
  - An internal map that shows more detailed information about each pending and approved permit application

4. Strategies to increase public interest in internet services

Publicize information on service and subsidy availability, and advertise Digital Opportunity programming to expand customer bases and interest in internet services:

A

Publishing joint information campaigns on broadband projects and availability

- Alerting the public that broadband service is, or will soon be, available through the upcoming collaboration with ISPs
- Alerting the public of opportunities for feedback to further inform future planning

B

Joint advertising and enrollment assistance for subsidy programs

- Performing active outreach towards at-risk communities to inform them on the existence of internet subsidy programs such as the Affordable Connectivity Program and Lifeline
- Providing assistance to those who are unable to register for subsidy programs on their own

C

Joint advertising for Digital Opportunity programming

- Growing interest in using the internet by educating residents on the opportunities of internet use
- Enabling increased digital citizenship by growing resident confidence in their digital skills

Appendix B: Maps

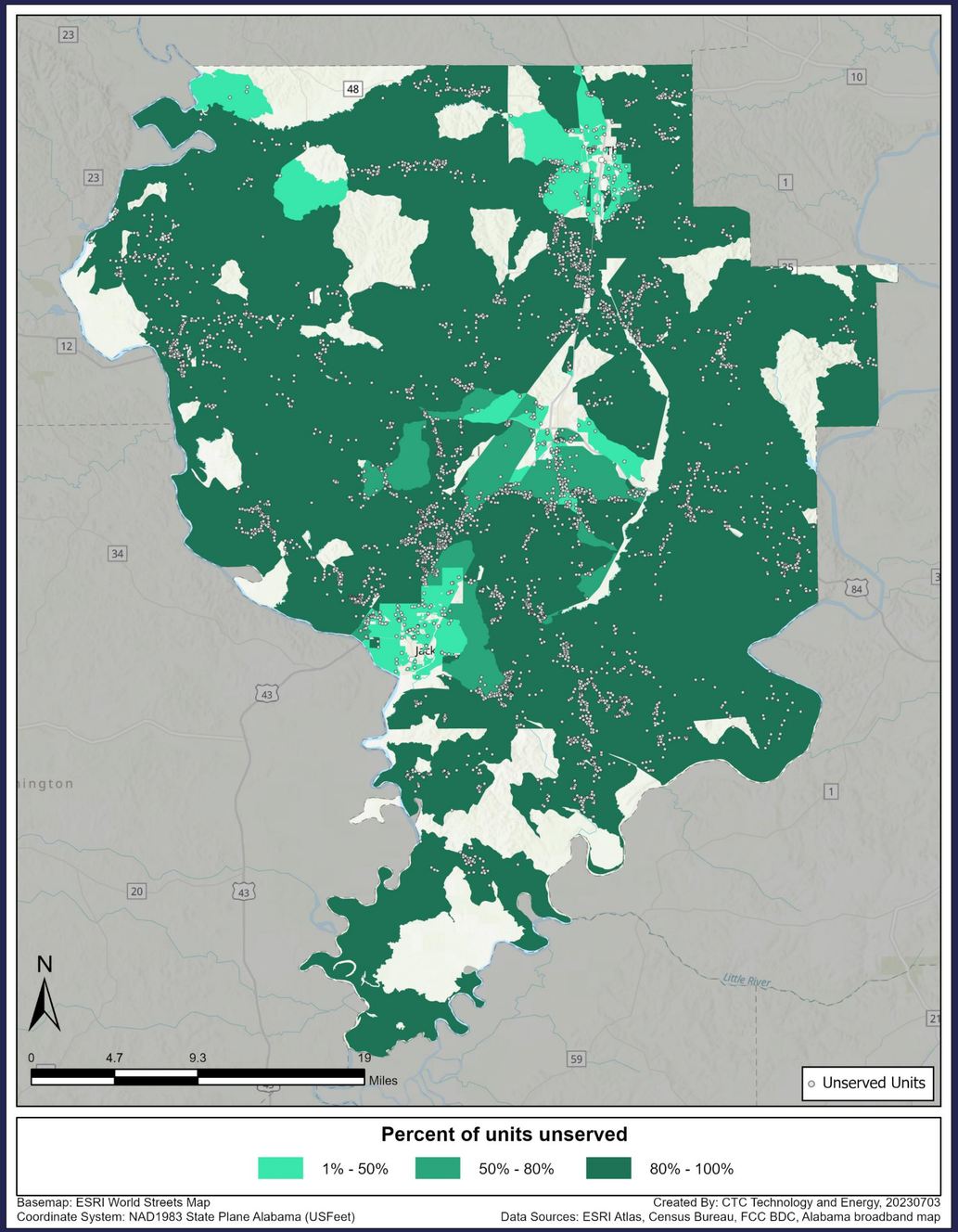
This appendix includes maps of the areas of Clarke County that are unserved and underserved, including a breakdown of locations served by fixed wireless technologies.

47% of County units are *unserved* on the Alabama Broadband Map

1. According to the Alabama Broadband Map, 47% of County units are unserved under Alabama's definition.

2. To be considered "unserved" by the state, a unit must lack 100/20 Mbps speeds over wireline or fixed wireless. Neither satellite nor mobile qualifies as service.

3. These locations are Alabama's priority for state grant program funding.



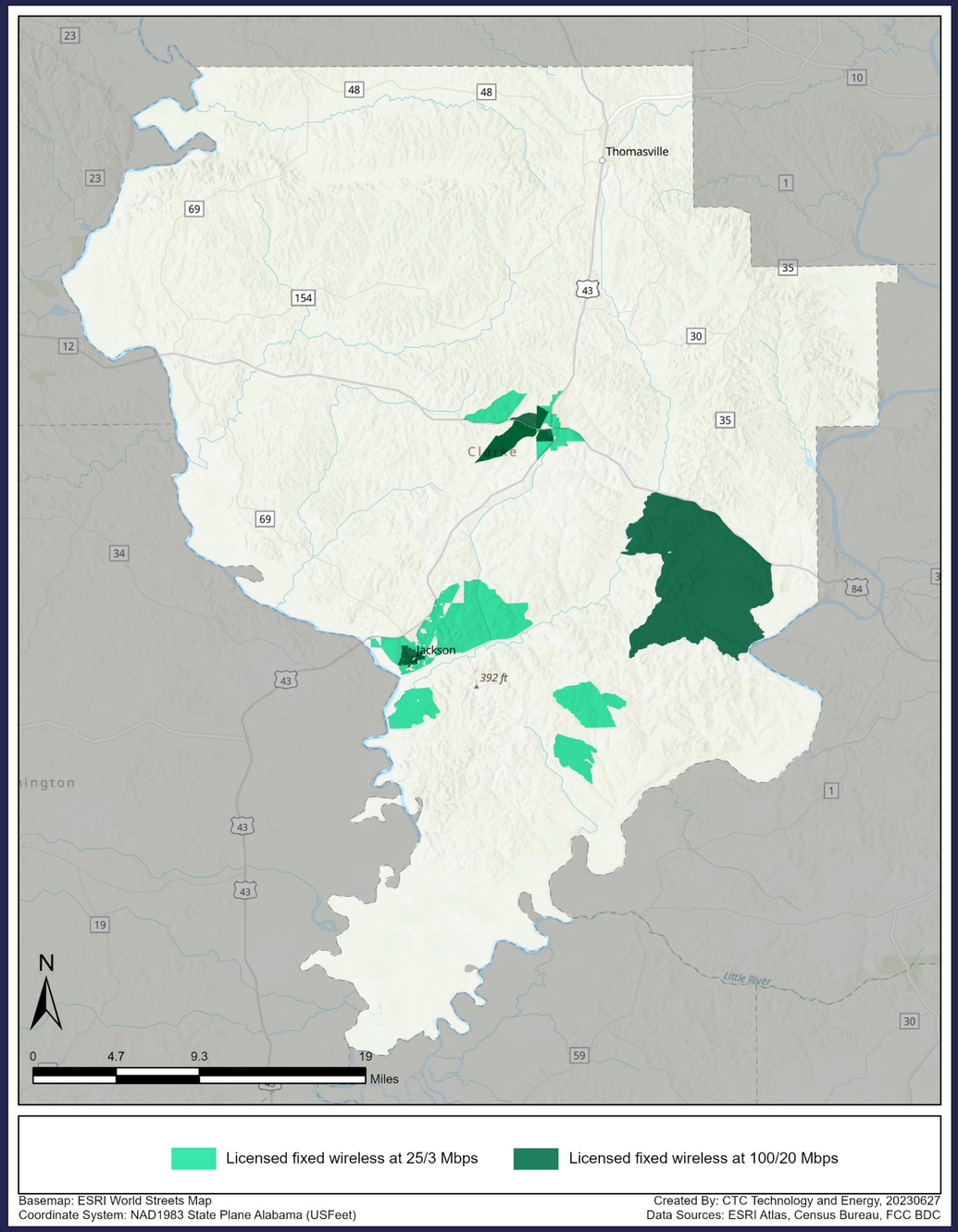
Source: ADECA, *Alabama Broadband Map* (2023)

9% of County units have access to licensed fixed wireless at or above 25/3 Mbps, which generally qualifies as *served*

1. Overstatement of licensed fixed wireless coverage can make locations ineligible for upcoming federal funding.

2. In Clarke County, licensed fixed wireless mostly covers locations that are not served by wireline technologies at broadband speeds.

   These locations are eligible for state grant funding if the fixed wireless speeds are less than 100/20 Mbps.



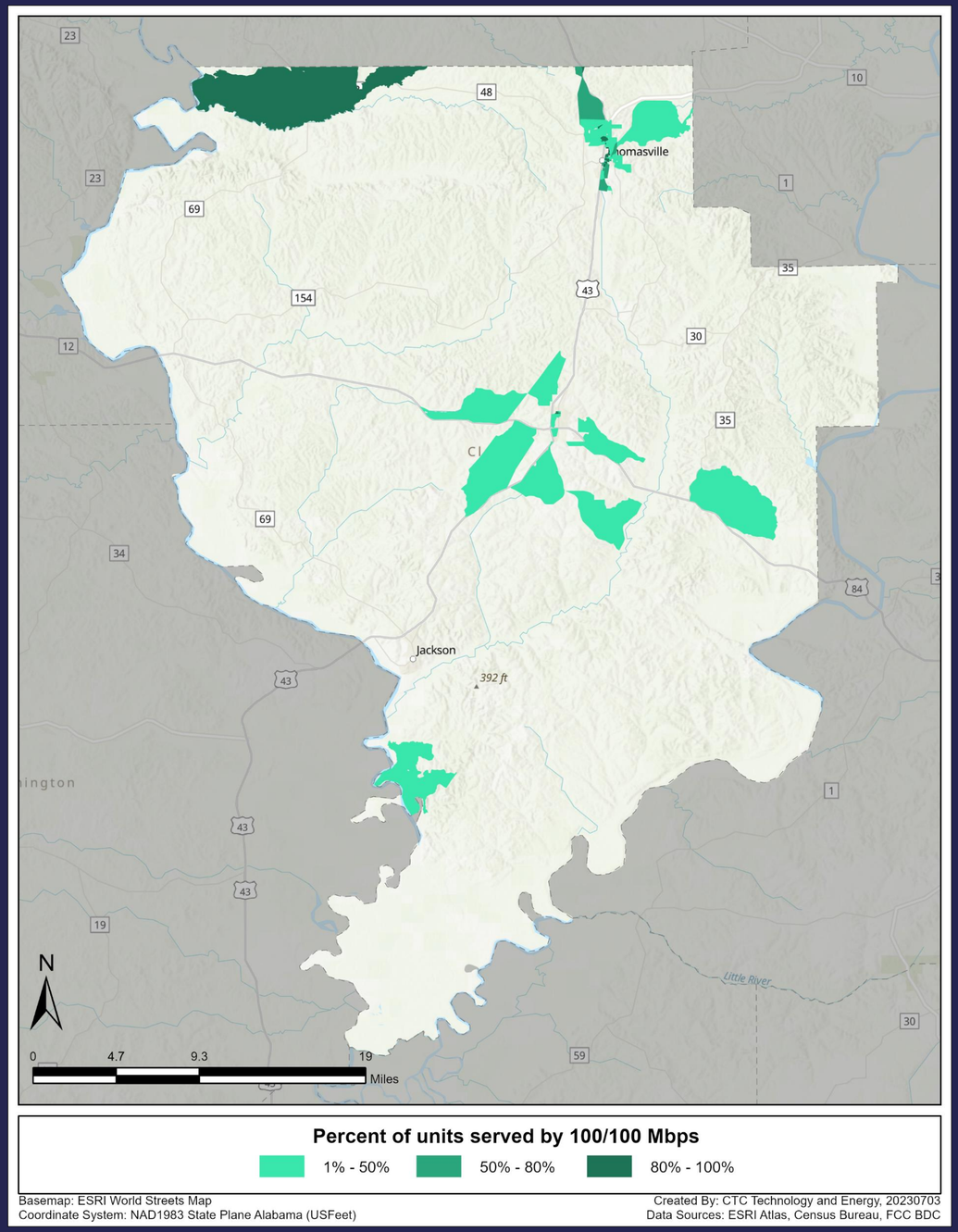
Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023)

5% of County units have 100/100 Mbps or higher, with additional areas funded for that speed in the future

1. Speeds of 100/100 Mbps or higher indicate future-proof infrastructure — meaning that the network can easily offer faster speeds over time to meet new needs.

2. 100/100 Mbps is the standard used by Alabama for new grant-funded construction.

3. The map illustrates areas of Clarke County that already have 100/100 Mbps service.



Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023)

Appendix C: Tables of existing Digital Opportunity programs

This section lists existing Digital Opportunity resources in Clarke County and Alabama with which the County, City, and other local communities can partner to expand digital access.

Digital Opportunity programs are key local resources

Clarke County is home to a diverse and extensive list of organizations delivering Digital Opportunity programming that can be expanded through partnerships.

1 Localities can assist existing Digital Opportunity programs in aiding Clarke County residents

- Programs operating in Clarke County can increase program enrollment and reach through increased visibility and access to local government and central community facilities, such as town halls, libraries, schools, recreation centers, etc.
- Regional programs may be interested in expanding into Clarke County with the assistance of localities.
- Statewide programs can directly serve Clarke County residents or help coordinate more local efforts.

2 ADECA developed an inventory of existing programs that serve as potential partners for Clarke County

- Digital Opportunity programs were identified via a statewide asset inventory survey circulated among nonprofit and public-interest entities.
- Programs were organized by their type of program offerings, such as:
  - Career guidance and adult education
  - Digital literacy
  - Advocacy for covered populations
  - Workforce development
  - Broadband planning

County or regional Digital Opportunity programs

These programs operate throughout the County or region:

Program name	Offering	Primary service area
Area Agency on Aging – Alabama Tombigbee Regional Commission (ATRC)	Potential outreach partner; advocates for covered population(s)	Tombigbee Regional Commission service area
Area Agency on Aging – South Alabama Regional Planning Commission	Potential outreach partner; advocates for covered population(s)	Southwest Alabama
Atmore Public Library	Computers available for public use, hotspots available for check-out	Escambia County
Baldwin County Library Cooperative	Hotspot lending program; advocates for covered population(s)	Baldwin County
Ben May Main Library	Digital skills training through in-person classes	Mobile County
Bishop State Community College	Digital skills training; workforce development	Mobile County
Black Belt and Central Alabama Housing (BBCAH)	Potential outreach partner; advocates for covered population(s)	Black Belt, central Alabama
Black Belt Community Foundation	Digital skills training; advocates for covered population(s)	Black Belt counties

Source: Clarke County in-person discussions, March 2023; Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

County or regional Digital Opportunity programs

These programs operate throughout the County or region:

Program name	Offering	Primary service area
Black Belt Digital Equity and Inclusion Coalition (BDEIC)	Planned computer labs available for public use; planned digital skills training; advocates for covered population(s)	Black Belt counties
Coastal Alabama Community College – Baldwin County Adult Education	Digital skills training and resources	Baldwin County
Coastal Alabama Community College – Escambia County Adult Education	Digital skills training and resources	Escambia County
Comcast Project UP	Digital skills training; Wi-Fi for public use at participating locations	Statewide (except for areas of southeast central Alabama)
Community Service Programs of West Alabama, Inc. -- Digital Navigators	Planned digital skills training; advocates for covered population(s)	West Alabama
Flomaton Public Library	Computers and Wi-Fi available for public use	Escambia County
Mediacom ACP Community Workshops	ACP enrollment support offered in multiple languages upon request	Southern and portions of northern Alabama
Monroe County Public Library	Computers and Wi-Fi available for public use, hotspots available for check-out	Monroe County

Source: Clarke County in-person discussions, March 2023; Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

County or regional Digital Opportunity programs

These programs operate throughout the County or region:

Program name	Offering	Primary service area
Prichard Housing Authority	Services facilitating telehealth access; digital skills training; cybersecurity awareness; advocates for covered population(s)	Mobile County
Reid State – CACC Monroeville	Digital skills training and resources	Monroe County
Thomasville Public Library	Wi-Fi for public use, computers for public use; ACP enrollment support; tablet lending program for seniors; digital skills training	Clarke County
Tuscaloosa-based Community Service Programs of West Alabama, Inc. (CSPWAL)	Advocates for covered population(s); potential outreach partner	West and Central Alabama
United Cerebral Palsy of West Alabama (UCPWA)	Advocates for covered population(s); potential outreach partner	West and Central Alabama
United Way of Southwest Alabama	Potential digital skills training, device lending, and outreach partner; advocates for covered population(s)	Southwest Alabama
Washington County Public Library	Hotspot lending program; Wi-Fi for public use; informal digital literacy support provided by staff as-needed	Washington County

Source: Clarke County in-person discussions, March 2023; Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

Statewide Digital Opportunity programs

These programs operate throughout Alabama and have expressed interest in partnering with local communities such as Clarke County:

Program name	Offering	Program name	Offering
AARP	Digital skills training and cybersecurity awareness; advocates for covered population(s)	Alabama Career Center System	Digital skills training; workforce development
AARP – Senior Planet	Digital skills resources	Alabama Community College System	Digital skills training offered in some locations, potential for program expansion
Alabama Alliance for Students With Disabilities	Advocates for covered population(s); potential outreach partner	Alabama Conference of Black Mayors	Services facilitating telehealth access; advocates for covered population(s)
Alabama Alliance for Students With Disabilities, Alabama State University	Advocates for covered population(s); potential outreach partner	Alabama Cooperative Extension System	Digital skills training offered in partnership with local organizations in some counties, potential for program expansion
Alabama Area Agencies on Aging	Digital skills training offered in some locations, potential for program expansion	Alabama Cooperative Extension System - 4H Tech Changemakers	Digital skills training, cybersecurity awareness through a train-the-trainer model
Alabama Association of Housing & Redevelopment Authorities	Supports other organizations' delivery of digital skills training	Alabama Department of Human Resources	ACP enrollment support; advocates for covered population(s)
Alabama Association of Regional Planning Councils (AARC)	Advocates for covered population(s); potential outreach and digital skills training partner	Alabama Department of Veterans Affairs	Advocates for covered population(s); telehealth; potential outreach partner

Source: Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

Statewide Digital Opportunity programs

These programs operate throughout Alabama and have expressed interest in partnering with local communities such as Clarke County:

Program name	Offering	Program name	Offering
Alabama Head Injury Foundation (AHIF)	Advocates for covered population(s); potential outreach partner	Alabama Public Library Service (APLS)	Potential digital skills and outreach partner for covered population(s), particularly those with disabilities; Wi-Fi for public use at some locations; potential for expansion
Alabama Indian Affairs Commission (AIAC)	Advocates for covered population(s); potential outreach partner	Alabama Public Library Service "Get the Internet to Go"	Hotspot lending program in some locations; potential for expansion
Alabama Institute for the Deaf and Blind (AIDB)	Digital skills; advocates for covered population(s); potential outreach partner	Alabama State Department of Education – Course of Study	Digital skills training curriculum
Alabama Network of Family Resource Centers	Digital skills training offered in some locations, potential for program expansion	Alabama State Department of Labor	Wi-Fi for public use in some locations
Alabama Partnership for Children (APC)	Advocates for covered population(s); potential outreach partner	Alabama Supercomputer Authority (ASA)	Internet access for Alabama public school districts
Alabama Public Health - Women, Infants and Children	ACP awareness campaigns; potential outreach partner; advocates for covered population(s)	The Arc of Alabama	Advocates for covered population(s); potential outreach partner

Source: Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

Statewide Digital Opportunity programs

These programs operate throughout Alabama and have expressed interest in partnering with local communities such as Clarke County:

Program name	Offering	Program name	Offering
Black Churches 4 Digital Equity	Advocates for covered population(s); broadband affordability through ACP awareness; potential outreach and digital skills partner	Low Income Housing Coalition of Alabama (LIHCA)	Advocates for covered population(s); potential outreach partner
Community Action Association of Alabama (CAA)	ACP awareness campaigns; potential outreach partner; advocates for covered population(s)	National Center for Women in Technology (NCWIT)	Digital skills resources
Department of Human Resources (DHR) – County Field Representatives	Advocates for covered population(s); potential outreach partner	United Ways of Alabama	Digital skills training offered in some locations, potential for program expansion
Equal Justice Initiative (EJI)	Advocates for covered population(s); potential outreach partner	VOICES for Alabama's Children	Advocates for covered population(s); potential outreach partner
Governor's Office of Volunteer Services	Potential outreach partner; funding to support other organizations' programs	World Education	Digital skills training; workforce development in partnership with the Alabama Community College System

Source: Statewide partner questionnaires, May 2023; Research conducted by CTC, May 2023 to June 2023

Appendix D: Consulted partners

The following partners and others provided input and insights through a range of engagement mechanisms, including in-person meetings, follow-up calls, and completion of ADECA's broadband questionnaires:

AARP
Alabama Alliance for Students With Disabilities
Alabama Association of Regional Planning Councils (AARC)
Alabama Career Center System
Alabama Community College System
Alabama Conference of Black Mayors
Alabama Cooperative Extension System
Alabama Department of Human Resources
Alabama Department of Veterans Affairs
Alabama Indian Affairs Commission (AIAC)
Alabama Institute for the Deaf and Blind (AIDB)
Alabama Network of Family Resource Centers
Alabama Partnership for Children (APC)
Alabama Public Library Service (APLS)
Alabama State Department of Education
Alabama State Department of Labor
Area Agency on Aging – Alabama Tombigbee Regional Commission
(ATRC)
AT&T
Black Churches 4 Digital Equity
City of Jackson
Clarke County Board of Education
Clarke County Commission
Community Action Association of Alabama (CAA)
Equal Justice Initiative (EJI)
Governor's Office of Volunteer Services
Mediacom
TDS Telecom
Thomasville Public Library
Town of Grove Hill
United Way of Southwest Alabama
VOICES for Alabama's Children
White Smith Memorial Library

Disclaimer

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