BROADBAND TASK FORCE:

High-Speed Internet Is Essential For All Counties

NATIONAL ASSOCIATION of COUNTIES NACo

July 2021

Today, reliable, fast, and affordable high-speed internet is as fundamental as acquiring electricity in the first half of the 20th century.

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IT IS NOW TIME FOR ACTION!

HIGH-SPEED INTERNET IS ESSENTIAL FOR ALL COUNTIES.

Throughout America's history, the most prosperous communities and people thrived based on their proximity to infrastructure, like rivers, railways, roads, and airports.

The NACo Broadband Task Force, as appointed by President Gary Moore of Kentucky, was chartered with the premise that "if you can't connect… you can't compete." It is the equity issue of our hour.

Recognizing the complexities of this charge, the task force focused on four primary areas of work: (1) Preparing for Broadband, (2) Barriers to Buildout, (3) Digital Divides, Digital Disparities, and (4) Future-proofing and the "Glocal" Economy. Each group was asked to make recommendations based on short-term, intermediate, and long-term goals.

After months of study and dialogue, our Task Force concluded that a comprehensive, coordinated approach is needed to pursue new broadband infrastructure investment, public policies, and user skills. We also found that the digital opportunity gap is widening, not closing, in many areas of our counties and the country.

While often dense, wealthier counties have multiple providers and competition that drives pricing and service quality, far too many communities and pockets within even our affluent counties are coping with no, or limited, broadband service options.

Like the space race of the 1960s, we need a national focus, with a shared, laser-like sense of purpose, in driving innovation and investment. To be inclusive and equitable, we must overcome the lack of density or difficult terrain in certain rural areas, limitations of current technologies and markets in other areas, and skills and opportunity gaps in our most disadvantaged communities.

The following report is only a preliminary summary of the Task Force's efforts. In the months ahead, NACo, with the leadership and drive of America's county officials, will continue to produce new reports, policy recommendations, case studies and how-to resources to help guide county officials throughout the various stages of broadband deployment.

We wish to express our deepest appreciation to the members of the NACo Broadband Task Force. This group of elected and appointed county officials worked tirelessly to probe and explore the challenges and opportunities facing our communities. We also thank our advisory council members, representing service providers, academic researchers, key end-user constituencies and other stakeholders.

It is now time for action.

JUDGE J.D. CLARK
Co-Chair

COUNCIL MEMBER CRAIG RICE
Co-Chair

BEYOND BEING A BASIC NECESSITY, HIGH-SPEED BROADBAND IS ALSO AN ACCELERATOR OF OPPORTUNITY IN TODAY'S CONNECTED WORLD.

EXECUTIVE SUMMARY

PRELIMINARY FINDINGS OF THE NACo BROADBAND TASK FORCE

1. **County officials play a crucial role** as policymakers, funders, data aggregators, conveners, and partners in pursuing sustainable solutions to broadband access, affordability, and reliability. Therefore county officials require the knowledge, policy tools, funding resources, and support necessary to meet community broadband needs

2. **Federally supported, locally collected, and verified data** is imperative to understand America's true state of connectivity

3. **Eliminating our nation's digital divide and ensuring universal, reliable, affordable broadband access** will require multiple technological solutions (with redundancy and scale), including fiber, satellite, cellular, fixed wireless, cable, and future innovations

4. **Open "middle mile" systems can increase competition** and result in improved affordability and access

5. **Federal resources used to eliminate the digital divide should incentivize future-proofed systems** (i.e., symmetrical 1gbps network) and require coordination between local governments and Internet Service Providers (ISPs) to ensure community needs are met within acceptable timeframes

6. **Ultimately, broadband should be regulated as a utility** to eliminate the digital divide effectively and comprehensively

"County officials play a crucial role as policymakers, funders, data aggregators, conveners, and partners in pursuing sustainable solutions to broadband access, affordability, and reliability."

Regardless of where your county exists along the connectivity spectrum – "from no-G to 5G" – county officials should think about the road ahead with broadband deployment and expansion.

BROADBAND TASK FORCE: BEST PRACTICES AND POLICY RECOMMENDATIONS

THE NACo BROADBAND TASK FORCE UNDERSCORED TIME AND AGAIN THE IMPORTANCE OF DEFINING THE TERM BROADBAND.

As **outlined by Lara Fishbane and Adie Tomer of the Brookings Institute,** there are "three distinct but interrelated parts of the sector":

1. **Digital telecommunications infrastructure,** whether wireless or wireline technologies that enable high-speed exchanges of data

2. **Actual use of broadband technologies,** including data plan subscriptions and the digital skills needed to use a physical broadband connection, and

3. **A federal policy framework** that governs physical infrastructure and related programming, including the regulatory policies and framework of federal, state, local and tribal governments.

In applying this concept of broadband, the NACo Broadband Task Force **outlined nine specific themes that serve as important force multipliers** in deploying better and more affordable services. These include:

- **Defining a modern "minimum standard"** of broadband
- **Implementing smart "Dig Once" policies and practices** including "rights of way" as public assets
- **Testing and deploying** fiber, cellular, satellite and other technologies
- **Focusing on local community engagement** and partnerships
- **Tackling the "Homework Gap"**
- **Removing bans** on municipal broadband
- **Establishing a national grants/loans clearinghouse**
- **Regulating broadband** as a utility
- **Committing to world-leading broadband data** and mapping analytics

The following are preliminary findings for consideration by county officials & others as summarized by the Task Force.

1. DEFINING A "MINIMUM STANDARD" OF BROADBAND

BEST PRACTICES:

1. Reported speeds must be measurable off-network, capturing the real user experience
2. Design and construct broadband systems that are scalable (e.g., meet current community needs – 50/25mbps, for example – yet allow expansion and increased capacity and services as community needs change and advance)

POLICY RECOMMENDATIONS:

1. The federal broadband definition should be scalable, ultimately up to 1 Gbps symmetrical
2. Starlink, Wireless Mesh Networks, 5G and other viable technologies should be leveraged for areas that fiber cannot cost effectively reach through public/private partnerships and remove barriers of entry for low-income and disenfranchised communities

CASE STUDY FEATURE:
HURON COUNTY BROADBAND COMMITTEE
HURON COUNTY, MICHIGAN

The pandemic exposed the realities of broadband quality in Huron County, Michigan. In December 2020, the Huron County Economic Development Corporation and the Huron County Broadband Committee began a months-long study to identify areas of expansion and improvement for high-speed internet access. After analyzing more than 770 surveys across the county, the Broadband Committee found a lack in speed compared to neighboring communities. On average, Huron County households experienced download speeds of 27 Mbps – 21 percent slower than commensurate jurisdictions. Armed with $10.8 million in federal broadband funding from the Rural Digital Opportunity Fund, Huron County is working to respond to a lack in speed quality by delivering 100 Mbps to 1 Gbps of broadband service to more than 3,900 households and businesses over the next six years.

2. IMPLEMENTING "DIG ONCE" POLICIES AND THINKING OF RIGHTS OF WAY" AS PUBLIC ASSETS

BEST PRACTICES:

1. Advocate for federal, state and local "Dig Once" policies across agencies, with smart, flexible that recognizes local conditions and needs

2. Require that when any critical infrastructure construction projects occur, such as those managed by DOTs, DOE, utilities and Public Safety agencies, the construction includes adding at least three conduits of varying size(s) to accommodate fiber with sufficient strand count for "future-proofed" fiber installations when ready for expansion to meet increased community needs

POLICY RECOMMENDATIONS:

1. Require that federal "Dig Once" policies are established across agencies, including within infrastructure legislation, with flexibility and incentives for future-proofing capacity and services

2. Require all federal, state and local transportation infrastructure and construction provide at least three conduits of varying sizes to accommodate fiber lines with sufficient strand count which can be used for "future-proofed" fiber installation to ensure providers adequately use the infrastructure

3. Just as electricity is relied upon as an essential utility, so is broadband, and as such, we must examine the country's past electrification efforts and apply those lessons toward "broadbandification" to deliver necessary broadband speeds to all premises. This examination should include federal legislation related to the collaboration of utilities and the involvement of rail agencies and their rights-of-way (ROW) to deliver broadband to all residents

4. Require that all public utilities promote the opportunity for communities and providers to add appropriately sized conduit where needed for any new trenching that is occurring

CASE STUDY FEATURE:
YORK COUNTY RECOVERY TASK FORCE
YORK COUNTY, PENNSYLVANIA

With only months to invest the $40.5 million in CARES funds, York County, Pennsylvania, deployed a 16-mile fiber backbone through the county using a conduit laid twenty years prior as part of a rail-trail project. Thanks to effective dig-once practices, York County quickly adapted otherwise restrictive federal dollars and is now poised to take even more significant steps towards closing its digital divide.

3. TESTING AND DEPLOYING FIBER, CELLULAR, SATELLITE & EMERGING TECHNOLOGIES

BEST PRACTICES:

1. Develop an efficient, consistent, and simplified micro-trenching permitting process, including a standardized electronic application form, standardized approval conditions (e.g., siting and rules), and provision of points-of-contact which improves public safety, minimize disruption in the right-of-way, and speeds implementation of broadband services to customers

2. Remove state and local government legislative obstacles and barriers (including prohibitive costs and fees) within public utilities regarding placement of attachments on municipal electric poles for ISPs providing broadband services. The efficient use of utility rights-of-way for the delivery of broadband services can reduce cost-constraints associated with buildouts to underserved and unserved areas

3. If installing fiber, require sufficient strand count to ensure the necessary capacity to meet the community's expanding needs as a method of "future-proofing"

POLICY RECOMMENDATIONS:

1. Implement a federal policy that eliminates any restrictive one-technology-fits-all requirement and allows for the consideration and deployment of all avenues of broadband technology and combinations thereof to extend cost-effective services to all communities

2. Allow the deployment of various advanced network technologies to meet community needs to promote competition in price, features, and quality-of-service among providers. As such federal funding reimbursements should be tied to a sliding scale system based on speeds delivered to customers and other community needs

3. Create a national universal fiber plan that emphasizes meaningful coordination of all federal infrastructure efforts (including federal rail ROWs) in conjunction with state government broadband efforts, including all next-generation services

4. Any federally-funded middle-mile backhaul routes (e.g., mapping infrastructure) should be made available upon request by local governments and private-sector interests for planning purposes to help efficiently and informatively extend broadband services that meet community needs in a cost-effective manner

CASE STUDY FEATURE:
EXPEDITED ONE GIGABIT BUILDOUT
BOONE COUNTY, KENTUCKY

Boone County, part of the three-county northern Kentucky region, has partnered with Cincinnati Bell Inc. to deploy a one-gigabit high-speed broadband fiber network to every address in the county within an accelerated 24-36 month time frame. The broadband expansion will make Boone County one of the very first county governments in the nation to deliver access to one-gigabit high-speed broadband service to every address in its jurisdiction, including enhanced speeds for existing broadband customers.

4. FOCUSING ON LOCAL COMMUNITY ENGAGEMENT AND PARTNERSHIPS

BEST PRACTICES:

1. At the onset of preparing for broadband, local communities should make genuine attempts to engage with ISPs to determine what options work to meet the identified needs. Such discussions should involve a collaborative review of locally collected, quantifiable data which demonstrate community needs

2. Communities that develop "solutions deployment plans" in collaboration with ISPs should construct plans based on quantifiable, accurate data demonstrating real community needs

"Promoting digital literacy in communities can help encourage uptake rates."

3. Local governments should assemble a comprehensive list of all public assets which could be utilized in possible public-private partnerships to help expand broadband infrastructure and reduce the cost burden on ISPs to expand to rural and other underserved areas

4. Local governments should also work with ISPs to reduce locally-imposed barriers such as permit and right-of-way fees, engineering review fees and prolonged decision-making timeframes

5. To help ensure that locally collected data demonstrating broadband needs reach federal systems, communities should monitor, participate in, and provide input in proceedings of the Federal Communications Commission and other federal agencies related to the geographic availability and deployment of broadband internet service in their respective communities

6. As communities collect the necessary data to quantify their community needs, it is essential to involve, build, and facilitate local partnerships with a cross-section of the community. These partnerships should include representatives from libraries, K-12 education, colleges and universities, local health care providers, private businesses, community organizations, economic development organizations, local governments, tourism, parks and recreation, and agriculture

7. When assessing and addressing community broadband needs, it is imperative for local communities and the state to focus on access, and evaluate and build digital literacy skills among all residents. Promoting digital literacy in communities can help encourage uptake rates. The plan must include a process to review and verify public input regarding transmission speeds and availability of broadband internet service throughout the state and individual counties

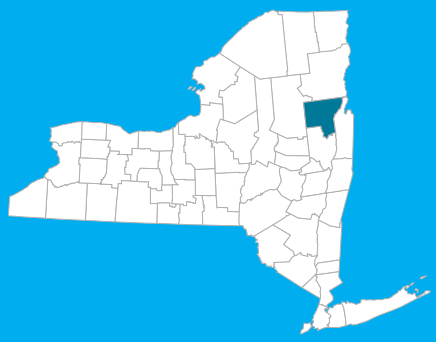
POLICY RECOMMENDATIONS:

1. Ensure federal grants and loans require coordination between local communities and ISPs with a strict buildout table that allows the broadband implementation to be fast and effective in meeting real community broadband needs. Implementation should also be based on quantifiable, verifiable data (collected locally as available) that effectively inform "solutions deployment plans"

2. Federal policy needs to create a long-term solution to create broadband support that provides predictability and sustainability. One potential opportunity is to reform the universal fund contribution system to include broadband and lower the fee on phone bills since the usage of landlines is decreasing

3. Create systems to access ISP infrastructure data without compromising security and confidentiality issues and proprietary rights. Access to such typically restricted data is invaluable for community broadband planning purposes, especially when collaboration with ISPs can help to address community broadband needs

CASE STUDY FEATURE:
BROADBAND ASSESSMENT
WARREN COUNTY, NEW YORK



Nestled in both the foothills and heart of the Adirondack Park in Upstate New York, Warren County launched a broadband assessment. The effort, featuring separate surveys for homes and businesses, is part of the county's strategy to engage residents and business leaders directly to see where the greatest needs are and advance broadband availability. These types of assessments are vital for the county to advance its goals for education, health care, jobs and agriculture.

Federal policy needs to create a long-term solution to create broadband support that provides predictability and sustainability.

5. TACKLING THE HOMEWORK GAP

BEST PRACTICES:

1. Create partnerships for the co-development of "solutions deployment plans" between the private and public sectors to outline the best approaches for local and regional communities, including school districts, to address permanent solutions. This action would provide a clear understanding of the support needed to allow for private sector expansion of service where the digital gap exists in collaboration with local governments and schools

2. As communities advocate for and deploy broadband access solutions, a focus should also be placed on the affordability and bandwidth of broadband services and the promotion and deployment of digital literacy skills training and programs. Digital literacy enhancements among residents offer multiple advantages to economic advancement for communities, along with increased uptake rates for ISPs

POLICY RECOMMENDATIONS:

1. Establish comprehensive, cost-effective solutions like the Student Internet Equity Program to address the affordability and adoption issues for middle and high school students as a means to eliminate the "homework gap"

2. Advocate for creating permanent broadband benefit/affordability funding, such as extending the ongoing Emergency Broadband Benefit Program. It is also critical that ISPs do not force customers to increase their services/speeds to receive monetary benefits

3. Financial support for broadband access by qualified households should be a permanent program

4. Congress should develop policies to assist states that have large tribal entities to engage and collaborate with local governments, ISPs, and state governments to deploy access to areas that need broadband service to reduce the homework gap

5. Broadband standards should be defined on a "per individual" basis rather than by household

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CASE STUDY FEATURE:

PUBLIC WIFI HOTSPOT PROGRAM – VIRTUAL LEARNING

ELMORE COUNTY, ALABAMA

In 2019, the Elmore County Commission conducted a countywide broadband survey that later helped the county identify potential locations for free public broadband Wi-Fi Hotspots to provide students with access to the internet while schools and libraries were closed due to COVID-19. The county commission then partnered with service providers to offer close to 100 Wi-Fi hotspots in rural areas of the county to serve the public, focusing on helping students complete education requirements virtually. The county commission also provided funding to help offset the cost of equipment and monthly service fees for the Wi-Fi hotspots.

6. REMOVING BANS ON MUNICIPAL BROADBAND

BEST PRACTICES:

1. Local governments should analyze and address state laws prohibiting or dictating how municipal broadband systems operate

2. Local agencies should address state policies impacting the taxation of municipal networks legislatively

3. The decision to deploy municipal broadband systems should be based on a robust decision-making process. For example, communities must quantify their needs with data, ISPs must work collaboratively with communities to share their infrastructure (existing and planned), to review and develop "solutions deployment plans" to determine the best options for broadband expansion. This decision will ultimately involve multiple variables, but in the end, if ISPs cannot provide service at affordable rates to areas that need it (based on required quantifiable data), then it should be up to individual communities to determine whether they can or should deploy municipal systems that will deliver affordable, reliable speeds

POLICY RECOMMENDATIONS:

1. Community broadband networks connect millions of Americans affordably. However, 18 states have passed laws to limit these networks. Federal policy should promote competition, incentivize modern services to underserved communities and prohibit state preemption of municipal investments and partnerships, including with the private sector, to enable community broadband networks to operate

CASE STUDY FEATURE:

KITSAP PUBLIC UTILITY DISTRICT – COUNTY BROADBAND SERVICE

KITSAP COUNTY, WASHINGTON

On July 1, 2021, the state of Washington removed state-imposed restrictions preventing local governments from offering affordable broadband service alternatives to residents. Building off previous broadband infrastructure improvements to local government buildings, Kitsap County is now working to extend broadband service to residents while increasing private-sector competition through leasing agreements on their open-access networks.

By restricting local governments from making investments in broadband networks and services, often much-needed seed capital, or middle-mile infrastructure for start-up or expansion projects, states are effectively limiting opportunities for counties and municipalities to aggregate the user scale necessary, including with public-private partnerships, that help overcome otherwise cost-prohibitive service opportunities.

7. ESTABLISHING A NATIONAL GRANTS AND LOANS CLEARINGHOUSE

BEST PRACTICES:

1. Design and implement a strategic broadband grant program for unserved areas. Components of the program should include speed and latency costs. Providers should be reimbursed for implementation costs based on the above factors being validated once an independent engineering source has completed the project

2. Create a national clearinghouse of grants and technical assistance resources strictly focused on the deployment and installation of broadband functionality should be implemented along with tutorials outlining best practices for broadband community grants submittals

3. Once a sound deployment plan is in place and agreed upon, a county might pursue a fee to supplement the necessary expansion of services. With a sound, accountable and transparent plan, residents will more likely support a new fee

"Grants and subsidies should be distributed based on performance factors"

POLICY RECOMMENDATIONS:

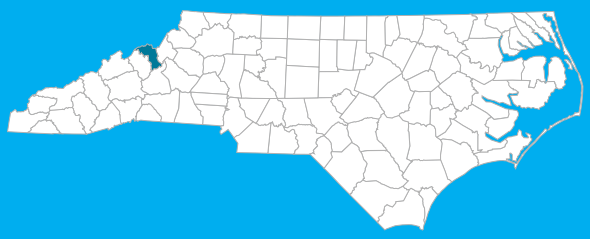
1. Federal policy on grant programs associated with broadband deployment should stipulate that grant monies be used through a reimbursable process, based on the speeds that ISPs actually deliver, and require coordination with local communities to ensure needs such as speed and latency requirements are met

2. Grants and subsidies should be distributed based on performance factors such as speed, cost, availability and latency with a graduated grant match

3. Consider a local tax dedicated to broadband expansion that is not directly paid by citizens, such as a lodging tax or mineral tax (used for mining). Regardless of the type of tax, verifiable, quantifiable planning is necessary to ensure accountability of the buildout

4. The buildout process should begin with public/private coordination to review community broadband needs and co-develop "solutions deployment plans," which include pre-engineering and cost-modeling with ISPs

CASE STUDY FEATURE:
USDA COMMUNITY CONNECT GRANT TO MITCHELL AND YANCEY COUNTIES, N.C.
MITCHELL AND YANCEY COUNTY, NORTH CAROLINA



A $25.3 million Community Connect Grant from the USDA's Rural Utilities Service in 2010 made it possible for a collaborative partnership between the counties and Country Cablevision to install fiber optic cables in Mitchell and Yancey Counties. They completed the first leg of the network in 2014 and added more legs as more customers requested the service. Almost 1,500 miles of cable were needed to expand broadband access, and more than 900 miles were installed using grant funds. The county partnership with the USDA and Country Cablevision was vital to installing the network and deploying high-speed broadband to 97 percent of Mitchell and Yancey county homes and businesses.

8. REGULATING BROADBAND AS A UTILITY

BEST PRACTICES:

1. Peer-reviewed mapping to ensure minimum speeds are met
2. Community engagement and education that stresses the benefits of broadband being regulated as a utility as a way to eliminate the digital divide effectively

POLICY RECOMMENDATIONS:

1. Middle-mile systems should be an open network
2. It is inefficient to have multiple middle-mile systems. It is important to leverage public assets and federal/state/local resources to build middle-mile solutions to areas of need and areas where ISPs do not intend to build middle-mile systems or make such systems available at a reasonable wholesale cost to retail providers. Such collaborative systems can ensure ISPs are held accountable in meeting community needs while also leveraging available resources to deliver cost-effective broadband solutions which provide a return on investment to public and private interests
3. Regulate buildouts to prevent lock-outs where new providers are not allowed to enter the area. Lock-outs between providers create underserved or unserved areas
4. Ultimately, broadband needs to be regulated as a utility to eliminate the digital divide effectively

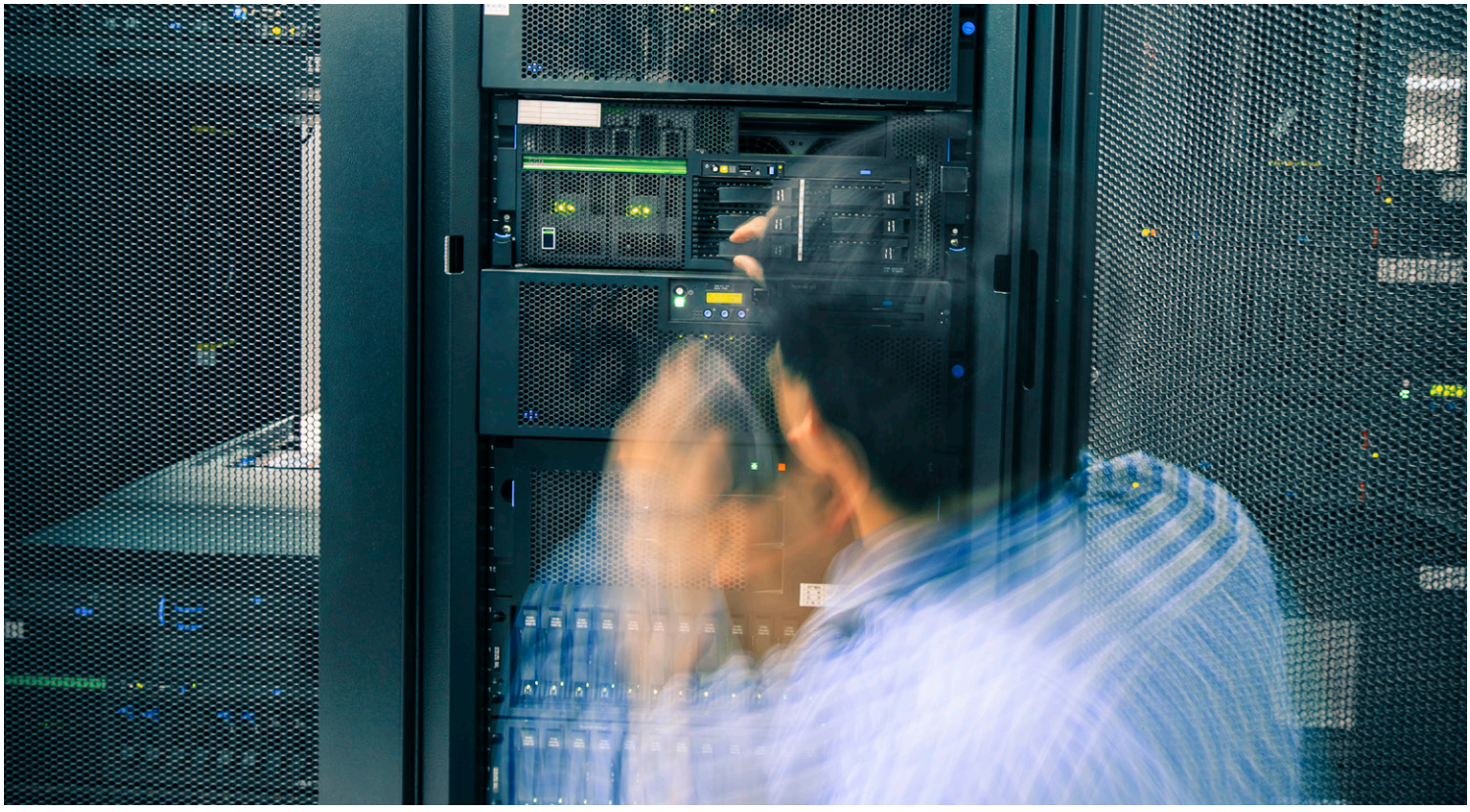
CASE STUDY FEATURE:

DIGITAL 395 – REGIONAL OPEN-SOURCE BROADBAND NETWORK

MONO COUNTY, CALIFORNIA

The Digital 395 initiative built a "digital backbone" that provides a platform for entrepreneurialism and economic development throughout the Eastern Sierra's U.S. Highway 395. The carrier-neutral network allows any service provider to interconnect on a non-discriminatory, equal basis. By utilizing an open-source network, over 92 percent of Mono County residents now have access to Gigabit broadband.

DEVELOP STANDARDS OR THE EQUIVALENT OF A "NUTRITION LABEL" FOR ISPs WHICH WOULD IMPROVE THE CUSTOMER EXPERIENCE REGARDING PRICING AND SPEED TRANSPARENCY FOR CONSUMERS



9. COMMITTING TO WORLD-CLASS BROADBAND DATA AND MAPPING ANALYTICS

BEST PRACTICES:

1. Mapping must be peer-reviewed and based on user experience off-network, such as NACo's TestIt app

POLICY RECOMMENDATIONS:

1. Federal policy should require the FCC to monitor the Digital Opportunity Data Collection process to ensure that the parameters of data being reported are accurate. Additionally, enforcement mechanisms should be developed and implemented to ensure providers receiving funding are held accountable for speed, latency and customer experience as it relates to costs

2. Develop standards or the equivalent of a "nutrition label" for ISPs which would improve the customer experience regarding pricing and speed transparency for consumers

3. Counties require access to state and federal "planning" grant dollars to conduct critical data collection and mapping analyses when developing data-driven "solutions deployment plans." The infusion of planning dollars for local governments would help to quantify and validate localized community needs to ensure the prudent use of tax dollars when moving to the subsequent phases of deployment - whether deployed by ISPs or municipalities

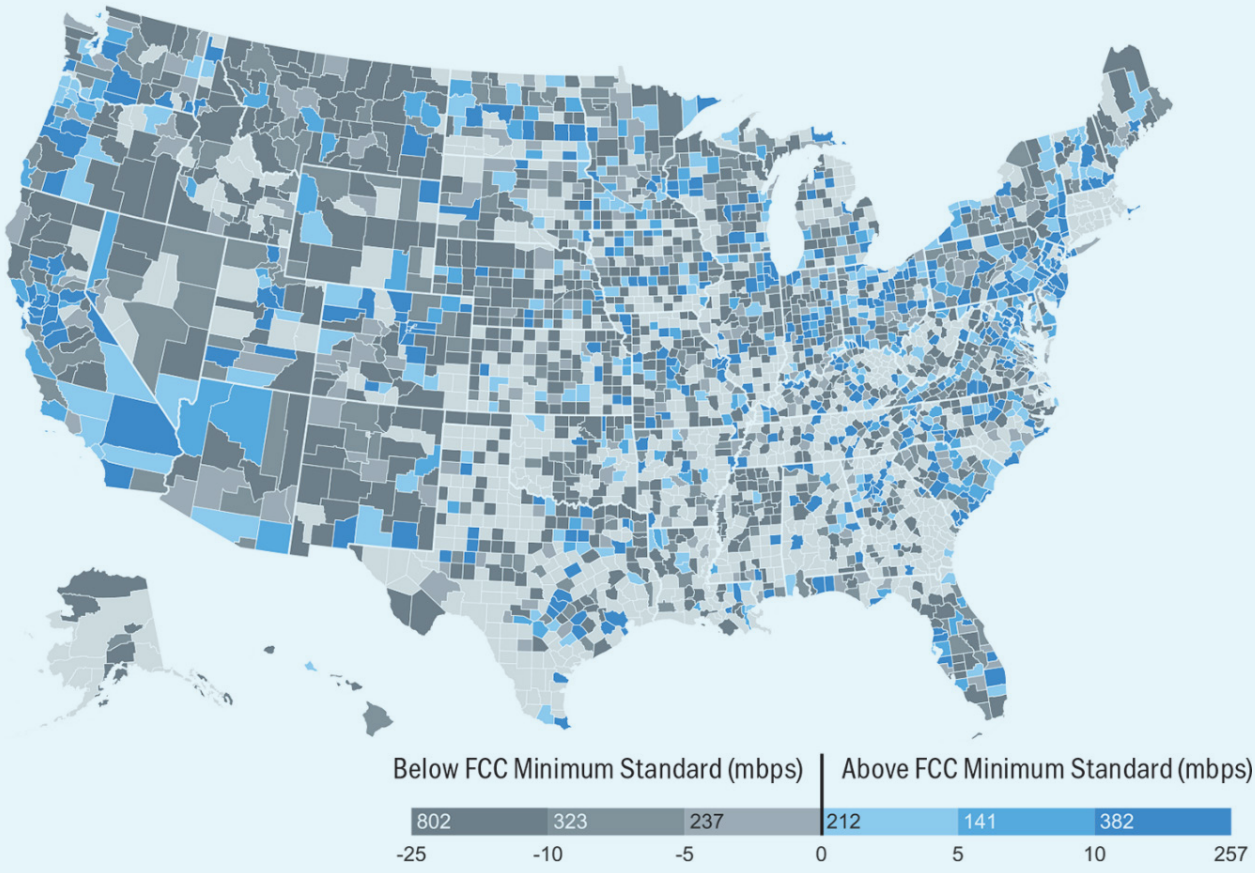
CASE STUDY FEATURE:
COMMUNITY TECHNOLOGY ACTION PLAN
ERIE COUNTY, PENNSYLVANIA

In 2015, Erie County joined several other organizations and local governments in Northwest Pennsylvania to form the Northwest Pennsylvania Broadband Committee. The committee, part of Connected Nation's Connected Community Engagement Program, produced the Community Technology Action Plan (CTAP) in 2017. CTAP mapped gaps and growth areas for new high-speed internet infrastructure, analyzed the current capacity available to meet broadband needs, identified best practices to improve infrastructure and produced recommended strategies to provide affordable internet coverage. Erie County has identified specific areas of need through this plan, which the county is addressing through the Erie County Broadband Initiative. The initiative aims to expand affordable broadband coverage to 100 percent of Erie County residents by working with Internet Service Providers, utility companies, municipalities, broadband organizations, and state and federal government partners.

Better data breeds better decisions. Local, state, and federal stakeholders should prioritize data collection and broadband planning dollars.

A NACo ANALYSIS, USING TestIT APP DATA OF REAL PEOPLE IN THE REAL WORLD, CONCLUDED THAT ROUGHLY 65 PERCENT OF COUNTIES WERE, ON AVERAGE, EXPERIENCING INTERNET SPEEDS BELOW THE FEDERAL COMMUNICATION COMMISSION'S DEFINITION OF BROADBAND.

A wide range of factors contributes to our nation's digital divide, including overstated coverage maps, dated equipment and infrastructure, affordability, cost of buildout, troublesome terrain, and even adverse weather conditions.



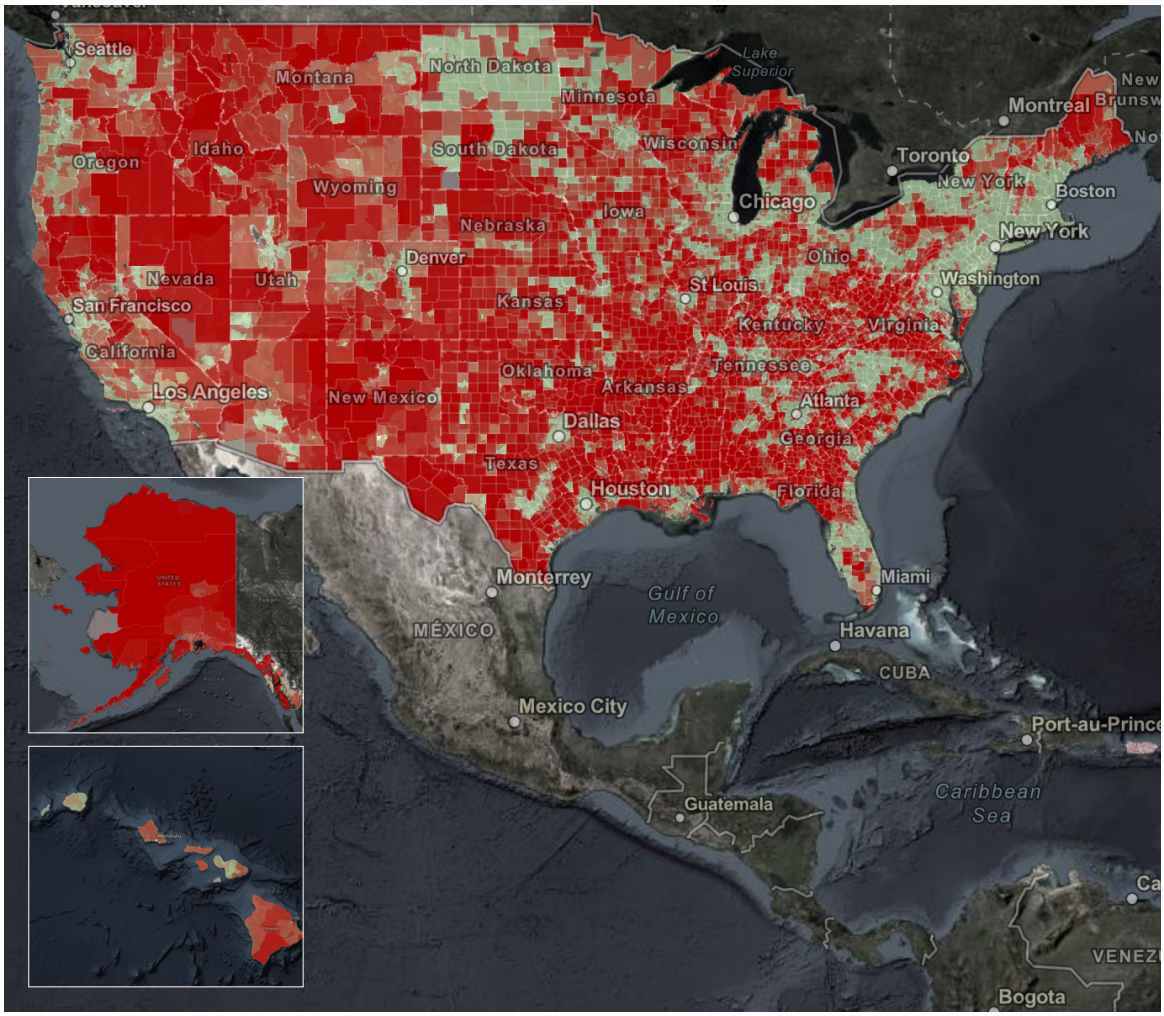
Source: NACo Report: Understanding the True State of Connectivity in America, March 2020

NEW INTERACTIVE NTIA BROADBAND MAPPING TOOL

The National Telecommunications and Information Administration (NTIA) has created an **interactive broadband data mapping platform** that displays key indicators of broadband needs across the country.

The map allows users to explore various broadband datasets from the U.S. Census Bureau, the Federal Communications Commission (FCC), Measurement Labs (MLabs) and Ookla. This is the first publicly available map that allows users to compare these different data sources graphically.

NACo's TestIT App utilizes a Network Diagnostics Tool (NDT) designed by MLabs. All samples collected through NACo's TestIT App are aggregated on MLab's open-source database, further supporting the new NTIA mapping tool.



Source: NTIA's Interactive Broadband Data Mapping Platform

ABOUT THE NACo BROADBAND TASK FORCE: FOUR PILLARS OF ACTION

Launched in October 2020 by NACo President Gary Moore, the National Association of Counties (NACo) Broadband Task Force convened county government officials from across the country to focus on the challenges and opportunities facing unserved and underserved counties.

The Task Force was supported by an Advisory Council comprised of external stakeholders and industry experts. With the help of the Advisory Council, the Task Force examined the intersection of public, private, and nonprofit sector efforts to deploy and sustain advanced, affordable, and accessible broadband.

The Task Force and Advisory Council formed **four subcommittees,** with each working group tasked with assessing a different component of broadband deployment:

1. **Preparing for Broadband** examined the role of complete and accurate data in preparation for broadband buildout. With many counties lacking even basic connectivity while others contain smaller pockets of disconnected communities, this group studied how to help counties prepare for a meaningful buildout and solutions using quality data as a foundation

2. **Barriers to Buildout** focused on the wide range of challenges facing the buildout of broadband networks, from geographic hurdles and technological differences to state-imposed restrictions and preemption to poor adoption rates of potential users

3. **Digital Divides, Digital Equity** focused on identifying groups disproportionately impacted by the digital divide and the range of factors contributing to national and local disparities

4. **Future-Proofing the "Glocal" Economy** explored how counties are preparing for and applying advanced broadband technologies to address the needs of today, with an eye toward long-term and sustainable economic competitiveness and workforce readiness, both locally and globally

"Launched in October 2020 by NACo President Gary Moore, the National Association of Counties (NACo) Broadband Task Force convened county government officials from across the country to focus on the challenges and opportunities facing unserved and underserved counties."

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Tazewell County, Ill.

SPECIAL THANKS TO THE ADVISORY COUNCIL

In recognizing the importance of service providers, private industry, academic researchers, and other key stakeholders, the NACo Broadband Task Force worked with an advisory council of experts. The Advisory Council participated in Task Force meetings and other engagement opportunities.

The Advisory Council included representatives from:

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An organization's participation in the Advisory Council does not reflect endorsement of the report or any of its recommendations.

APPENDIX: COUNTY BROADBAND SOLUTIONS

Albermarle County, Va. partnered with public and private organizations to facilitate broadband delivery within the county. After four years of partnership, **over 800 locations – including rural-based businesses – are now offered service,** with fundraising plans to offer broadband fiber to more than 2,000 additional locations.

Anne Arundel County, Md. used CARES Act funding to provide high-speed internet service to low-income families and students through a contract with Comcast. The county plans to **cover the cost of internet services for up to 12 months.** Families are eligible if they qualify for Supplemental Nutrition Assistance Program, National School Lunch Program, housing assistance or social security insurance.

Arlington County, Va., located across the river from the nation's capital, is working with the New Urbana Institute to provide broadband connectivity to affordable housing complexes in Arlington County. The partnership conducted a feasibility study in December 2020 and determined **the county could provide a multi-service plan (with a minimum of 50/5mbps) for roughly $830,000 in total for specific properties.**

Bedford County, Pa. allocated $184,000 in CARES Act funding to retain Crowsnest Broadband to install six wireless transmitters to enhance broadband access to county residents. The CARES funding **provided service for up to 900 customers** in the northern part of the county. The work was completed in December 2020.

Boone County, Ky., part of the three-county northern Kentucky region, has partnered with Cincinnati Bell Inc. to deploy a one-gigabit high-speed broadband fiber network to every address in the county within an accelerated 24-36 month time frame. The broadband expansion will make Boone County one of the very first county governments in the nation to **deliver access to one-gigabit high-speed broadband service to every address in its jurisdiction.**

Botetourt County, Va. has been building out broadband capacity over the past three years using a variety of sources. The county has secured over $2 million in Virginia Telecommunications Initiative grant funds, $569,808 in CARES Act Fast Track Grant funds, and attracted multiple new broadband providers to the area. Through these efforts, **an additional 1,948 local addresses have gained access to high-speed internet connections.** The competitive VATI grant also provided nearly $760,000 for **building fiber-to-the-home for 621 homes and 52 businesses, covering one-third of CBEC's members** in western and southern Botetourt County.

Clinton County, La. allocated $150,000 in ARPA funds to conduct a broadband feasibility study. SmartSource Consulting will conduct the study and provide its feedback to the county for future planning. The study will not just determine where broadband currently is but will focus on where it can be deployed so the county can make a **comprehensive plan for allocating federal dollars to improve broadband moving forward.**

Coconino County, Ariz. Rural Broadband Feasibility Study found broadband coverage issues across the county impacting education, health care and public safety. With the understanding that broadband underpins all future economic growth with participation in the digital economy, the county is leveraging the information learned through the study to submit grant applications, work with state and federal partners and engage with private entities to **lead a coalition of interested stakeholders in creating regional broadband solutions.**

Charles County, Md. Nanjemoy/Cobb Neck (NCN) Broadband Buildout project is an intergovernmental collaboration between the county, the state, and public/private organizations. The initiative seeks to construct and operate a 90-mile fiber network to underserved rural areas of the county, **providing over 1,400 residents and businesses with high-speed internet connections.** The buildout is scheduled to occur in 5 phases, with completion in August 2023.

Cook County, Ill. President Toni Preckwinkle is focused on sustainable action to advance digital equity within the county. About 25% of County residents lack high-speed internet, and 17% of Black and Latinx households lack a computer. Forty-three (43) percent of unconnected Illinois households are within Cook County. As such, President Preckwinkle has initiated

programs with public and private partners to **advance digital infrastructure, digital proficiency, and digital accessibility** to underserved households across the county.

Coshocton County, Ohio. is committing $5 million in federal ARP funding to expand broadband infrastructure within the community. Currently, 40% of county residents live without broadband access. The funding will be targeted at **building the needed infrastructure to provide service** and greater economic opportunity for county residents.

Dakota County, Minn. established the Dakota Broadband Board in 2017 to expand broadband access throughout the cities within Dakota county and the county at large. The Dakota Board of County Commissioners approved $800,000 in CARES act funding to support the development of broadband infrastructure in partnership with Hiawatha Broadband Communications. The partnership will help the provider **expand network coverage into underserved and underdeveloped communities** currently without coverage or providers.

Erie County, N.Y. is devoting federal ARP funds to expand broadband access to every municipality in the county by installing 360 miles of fiber lines. The program will also establish an open network connecting schools, libraries, health care, business, government service providers, and businesses and **serve as a backbone for internet service providers to expand access.**

Elmore County, Ala. conducted a countywide broadband survey i,n 2019 that later helped the county identify potential locations for free public broadband Wi-Fi Hotspots to p**rovide students with access to the internet while schools and libraries were closed** due to COVID-19. The county commission then partnered with service providers to **offer close to 100 Wi-Fi Hotspots in rural areas** of the county to serve the public, focusing on helping students complete education requirements virtually. The county commission also provided **funding to help offset the cost of equipment and monthly service fees for the Wi-Fi Hotspots.**

Fayette County, Pa. used a portion of CARES funds to expand Wi-Fi along the state's Route 40 corridor. The work, completed in December 2020 by Vitalink LLC of Markleysburg, was part of a Design-Build Broadband Deployment contract focused on installing broadband "hotspots" countywide. Since its completion, the project has had a major impact on citizens, businesses and visitors, by **making the internet more easily accessible to those in rural areas.** Signage is currently being installed countywide, designating the broadband hotspots.

Huron County, Mich. was awarded a $10.8 million grant from the federal Rural Digital Opportunity Fund to improve broadband access in the county. Atlantic Engineering Group (AEG), Thumb Electric Fiber (TEC Fiber), CenturyLink and Mercury Broadband will be the participating broadband providers and investors in this initiative. This significant investment will help deliver 100 Mbps to 1 Gbps broadband service to **more than 3,900 households and businesses** in Huron County over the next six years.

Jefferson County, Ala. allocated CARES Act Coronavirus Relief Fund dollars towards expanded broadband access for students. The county granted the Jefferson County Board of Education $4 million in order to provide **free wireless internet access to thousands of students.**

Jefferson County, Ore. allocated $140,000 in CARES funds to conduct a broadband feasibility study. This investment supports the development of a robust broadband feasibility plan to assess the gaps, inventory, obstacles, and potential for increasing rural broadband in Jefferson County. The project will help boost access and broadband speed by engaging with a consultant to **conduct a plan and assessment** to help increase business innovation, boost productivity, and create more jobs.

King and Queen County, Va. established the Wireless Services Authority in 2012 to provide wireless broadband coverage. The network was incorporated into the design and leverages the public safety communications linear microwave backhaul to distribute broadband coverage across the length of the county. This initiative **provides about 75 percent coverage** of county residents.

King County, Wash. Broadband Access Study, conducted in 2020, seeks to understand the barriers that prevent low-income and rural residents in the community from full and equitable digital engagement. The study found that the average internet cost was $182 per month, and about 96

percent of households have internet access. Armed with this information and mapping of the need, King County is seeking to **enable the expansion of affordable broadband access to more residents within the county.**

Los Angeles County, Calif. The Delete the Divide Initiative seeks to empower youth, young adults and small businesses in underserved communities who are adversely impacted by the digital divide. The initiative is focused on building technology skills, as much as access to bringing broadband to underserved areas. About 365,000 households within the county do not have internet service, and 182,000 households are without home computers. To address the digital divide, the initiative **provides direct access to training, technical certifications, scholarships, employment, information sessions, networking opportunities and other resources to individuals and businesses.**

Mono County, Calif. The Digital 395 initiative built a "digital backbone" that provides a platform for entrepreneurialism and economic development throughout the Eastern Sierra's U.S. Highway 395. The carrier-neutral network allows any service provider to interconnect on a non-discriminatory, equal basis. By utilizing an open-source network, **over 92 percent of Mono County residents now have access to Gigabit broadband.** Many residents also remain skeptical of the technology or lack familiarity with its utility. While most Americans have been online for decades, others have yet to experience how high-speed internet can impact and improve our daily lives.

Montgomery County, Va. started the Wireless On Wheels (WOW) initiative using CARES funding. The county purchased 20 solar panel-equipped carts that emit free wireless hotspots, which were positioned throughout Montgomery County at easily accessible locations such as fire stations and churches. Locations were chosen based on the unserved and underserved areas determined in the broadband survey completed in early 2020. **This allowed children in these areas to continue their schoolwork during the pandemic.**

New Hanover County, N.C. is allocating around $5.7 million for broadband conn,ectivity. The plan will promote access to adequate internet and **connect approximately 8,000 homes** focused on households with children who qualify for Medicaid or other benefits.

Palm Beach County, Fla. As challenges with digital access became increasingly apparent during the COVID-19 pandemic, county leaders engaged in the Digital Inclusion Broadband Initiative to create coverage for over 50 square miles of neighborhoods. Leveraging the IT skillset within the county, **25,000 students in areas of need were mapped** out for the county to focus broadband efforts.

Pierce County, Wash. is dedicating $4 million in federal ARP funds for broadband partnerships. The plan will **support infrastructure expansion in underserved areas** and match funds from other state, federal, and private investments.

Warren County, N.Y., nestled in both the foothills and heart of the Adirondack Park in Upstate New York, Warren County, launched a broadband assessment. The effort, featuring separate surveys for homes and businesses, is part of the county's strategy to **engage residents and business leaders directly to see where the greatest needs are** and advance broadband availability.

York County, Pa. With only months to spend $40.5 million in CARES Act funds, the county **deployed a 16-mile fiber backbone through the county** using conduit laid twenty years prior as part of a rail-trail project. Thanks to effective dig-once practices, York County quickly adapted otherwise restrictive federal dollars and is now poised to take even more significant steps towards closing its digital divide.

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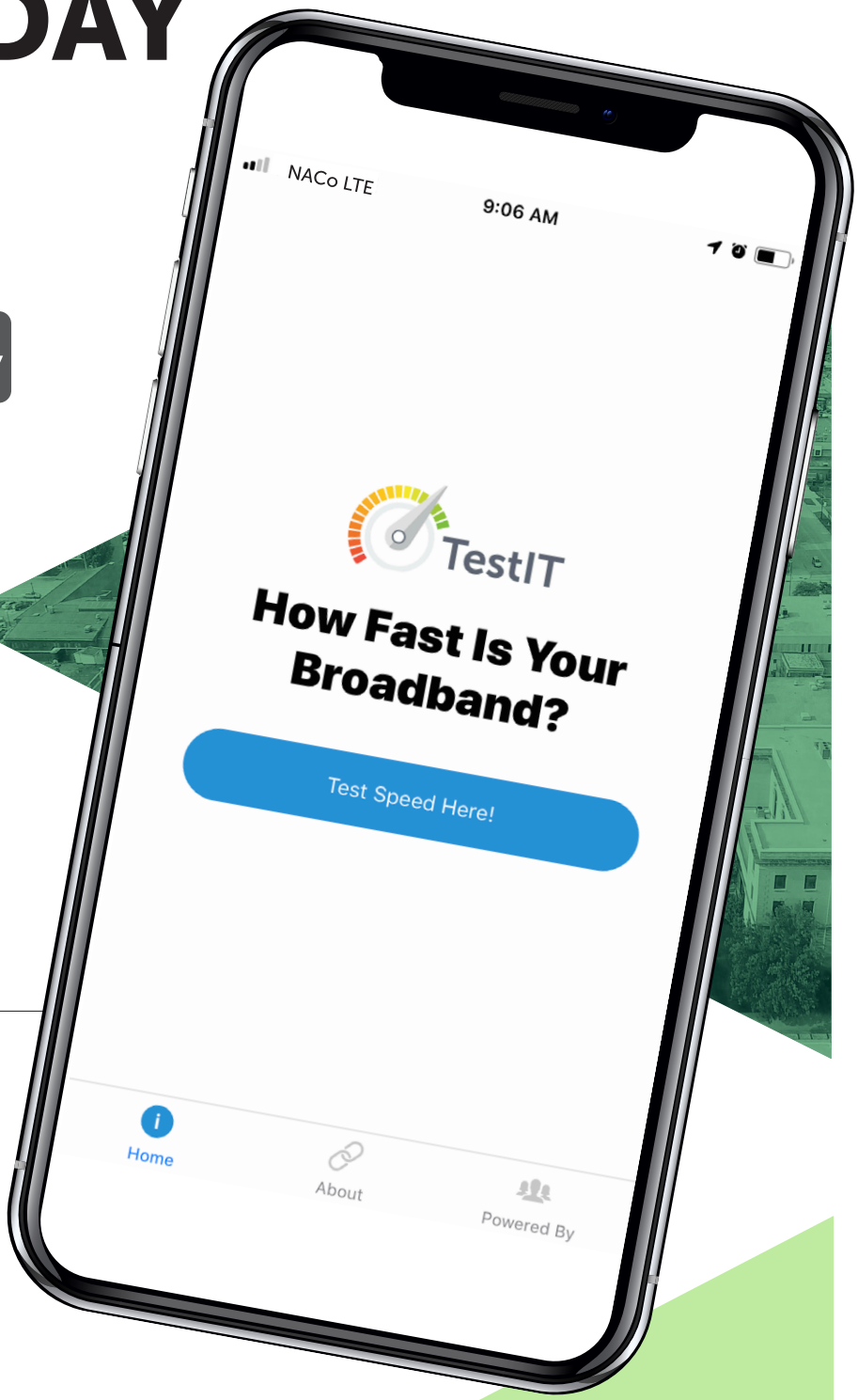

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