PATHWAYS to DIGITAL EQUITY: How Communities Can Reach Their Broadband Goals – and How Philanthropy Can Help

by Robbie McBeath

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for Broadband & Society

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Broadband Delivers Opportunities
and Strengthens Communities

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FOREWORD

For community leaders striving for digital equity, this guidebook will help communities evaluate and meet specific connectivity needs. We chart three pathways—Access, Adoption, and Use—that together offer a comprehensive approach to guide communities' digital equity planning and provide structure for implementing effective solutions.

Just as every community has unique features and characteristics, so too do their connectivity challenges. With this in mind, communities are encouraged to follow a variety of steps and best practices as they participate in local and regional education and planning programs to build capacity, increase community engagement, and move toward a more equitable future.

In order to receive federal funding from the **Infrastructure Investment and Jobs Act**, states, territories, and tribes are required to develop broadband infrastructure and digital equity plans in collaboration with local and regional entities. And states are feeling a sense of urgency as these plans required by the National Telecommunications and Information Administration (NTIA)—the administrator of Broadband Equity, Access, and Deployment Program (BEAD) and Digital Equity Act (DEA) funds—must be completed nine months after states receive their planning grant funds this fall—likely by mid-2023.

Community plans can serve as a vehicle for the input states, territories, and tribes need as they answer the following questions:

- How will we engage with the groups that federal broadband programs are designed to help? (For example, how will states work with "covered populations"[1]?)
- Which projects will serve communities of color and address historic lack of investment in marginalized communities?
- Which projects will increase meaningful internet adoption and use in communities?

Policymakers can create community-centric solutions only with education, planning, and engagement programs formulated to solve digital equity challenges and structured to engage local stakeholders. These pages show how many solutions have been executed with the help of philanthropy.

This publication builds off of the belief that digital equity starts at the local level. As states, territories, and tribes develop **digital equity plans**, the stories, tools, and resources found here offer both guidance and inspiration for what's possible when community members have a seat at the table.

A Place for Philanthropy

With so much money coming from the federal government to fund broadband efforts, many philanthropies may be wondering why their involvement is needed.

Although this is a time of unprecedented federal broadband funding, this opportunity, this "Broadband Moment," requires a lot of work and coordination. State broadband offices—many in their nascency—can increase their capacity through strategic partnerships. This is a place for philanthropy.

1. Heartland Forward Helps *Accelerate* Community-Driven Broadband Infrastructure Planning . . .

In addition to funding, philanthropic organizations have expertise, as well as important connections to valuable stakeholders. Place-based philanthropies' deep local knowledge and commitment to strengthen communities can be critical in bringing together the diverse coalitions needed to make progress along any of this guidebook's pathways. Philanthropies with regional or national scope are well positioned to support coordination and share lessons across regions and the country. They can also push for accountability, working to ensure that federal investment meets its aims. This guidebook is filled with stories about how philanthropic efforts have enhanced the work of states and communities to expand broadband access, adoption, and opportunity.

Adrianne B. Furniss
Executive Director
Benton Institute for Broadband & Society

INTRODUCTION

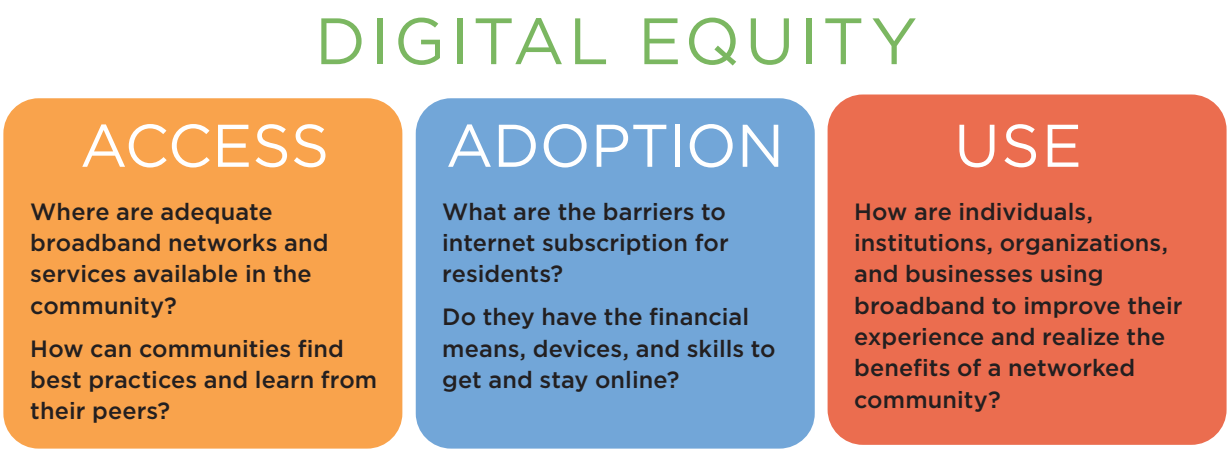
Three Pathways to Digital Equity

Closing our digital divides and moving toward digital equity requires an all-hands-on-deck approach. Real **digital equity** is achieved when all individuals and communities have the information technology capacity needed for full participation in our increasingly digital society, democracy, and economy. Digital equity is necessary for full civic and cultural participation, employment, lifelong learning, and access to essential services.

Leaders working to increase digital opportunity in their communities must look beyond a binary analysis of a community as either connected or unconnected and evaluate communities on continuums of connectivity and skills. They must adjust to a dynamic course, while envisioning and aiming toward a sustainable, integrated **digital equity ecosystem**, which encompasses all players shaping digital inclusion work in local communities and promotes more equitable access to technology and social and racial justice.

All too often, communities, and even policymakers, approach the digital divide as a material problem—as only an infrastructure or device challenge—failing to address the structural and human interactions that create and sustain digital inequities. Overlooking affordability or local gaps in digital literacy can deepen divides. A focus on digital equity helps humanize and expand beyond material divides, moves support organizations and programs toward people-centered solutions, recognizes and overcomes the many underlying structural inequities, and responds to the dynamic nature of technological divides.

Communities need to ask these important questions to effectively target community digital equity efforts and find appropriate partners in the work:



A community-driven, inclusive approach that creates pathways to broadband access, adoption, and use is essential for digital equity work. When voices are absent or overpowered in crucial decisions that affect a community's broadband ecosystem, historically under-resourced populations often continue to suffer the consequences of inequity.

Therefore, community education, planning, and engagement programs should not only emphasize a holistic approach to solving digital inequity; they should also leverage the power of more diverse local voices to address the community's most pressing technology needs.

Broadband's fundamental value doesn't come from connecting computers to networks; it comes from connecting people to opportunity, and society to new solutions.[2]

A Guide to Pathways

The successful access, adoption, and use pathways outlined in this guidebook can orient and assist communities as they mobilize human and financial resources to address their unique connectivity and adoption challenges. Increasingly, philanthropy is stepping up to fund projects, help community and state programs expand capacity and planning capabilities, and even provide direct matching grants aimed at broadband infrastructure expansion.

2. Texas Rural Funders Plays an Essential Role in State Broadband Efforts . . .

In our experience, communities embarking on access, adoption, and/or use pathways follow similar steps:

Establish a steering committee. To leverage the power of community, a team should identify local broadband champions and key community leaders including, especially, representatives from populations most affected by digital inequities. This first step should be guided by this question: *Who are the community champions and broadband activators who can propel a community broadband vision?*

Gather data and information. To reach effective solutions, communities need to assess their current digital equity landscape. Communities need to compile broadband maps, perform speed tests, and distribute community broadband use surveys. These data-gathering steps are at the nexus of broadband access and broadband adoption, as quantifying the number of current and potential subscribers will define the scope of the market for internet service providers. In this step, the questions are: *What are the digital inequities in our community? What are our broadband assets? What is our broadband story?*

Formulate and adopt a shared vision statement that helps propel a preferred strategy path. As communities learn more, a vision statement may evolve. *What does digital equity look like for our community?*

Identify strategic and financial resources. Communities should examine a range of partnerships, including with broadband internet service providers and community anchor institutions (schools, libraries, hospitals, social service agencies, and job training resource

providers), as well as explore financing and other funding models to realize a community broadband vision. Here leaders should ask: *How can our community and our partners support broadband access, adoption, and use?*

Create and implement an action plan. Broadband leaders should communicate strategic options, key barriers (including trade-offs), and prospective paths forward. The questions for this step are: *How does our community build support, make crucial decisions, and sustain effort? What milestones can we accomplish that work toward a community's broadband vision?*

Identify and Continue to Build Success. Digital equity goals will need to be adjusted over time as progress is made. For instance, as users gain skills, the sophistication of training programs needs to increase. Communities should acknowledge successes—even little wins—as they work toward their longer-term goals. *How will we know when we are successful? How can we sustain success?*

Each of the following pathways contains best practices and suggested actions to guide communities in adopting a strategic action plan. We include sidebars illustrative of the unique role that place-based and national foundations have played in digital equity initiatives that help communities realize their broadband visions. A list of resources and opportunities for further reading conclude each pathway.

ACCESS PATHWAY
Deploying Broadband Infrastructure

Key Questions

Where is broadband connectivity available in my community? Are there incumbent internet service providers who hold a sizable market share? How can we ensure that people have the broadband they need, now and in the future? What are our community's physical assets?

Infrastructure COMMUNITY ASSETS
Inventory **Capacity** Speed
Bandwidth[3] MAPPING
Unserved vs. Underserved[4] **COMPETITION**

Overview

Since the early days of the COVID-19 pandemic, the need for robust broadband networks has come into especially sharp focus. Community leaders are rightfully concerned that broadband services meet the demands of residents, organizations, and local businesses.

Some communities may have "broadband deserts"—neighborhoods where adequate service is unavailable. Some may lack competition, resulting in higher prices and poor customer service. Households may show up on maps as "served" or "covered" but, in reality, lack affordable services.

In other areas, broadband services may meet the general requirements of many residents and business owners but fall short as an economic development asset. Prospective bandwidth-intensive businesses and residents may be drawn to broadband-rich communities, taking with them jobs and investment. Addressing a community's "access" to broadband means ensuring adequate physical infrastructure that meets the entire community's connectivity needs—both now and in the future.

Cities, towns, and counties have assets and access to resources that can be leveraged to encourage broadband infrastructure investments that ultimately lead to better connectivity. Mapping assets that might include existing fiber, conduit, and public rights of way[5], as well as financial tools and programs, is an important part of this process.

While there is no one model that works for every community, there are best practices that run through the diverse array of successful broadband access projects.

Community broadband leaders must investigate and evaluate the quality and affordability of available broadband services by asking questions of both end users and internet service providers.

By constructing a community broadband team—including, for example, local business owners, school technology coordinators, and neighbors—leaders can begin to understand their community's access to broadband.

If a community discovers a broadband deficit, it can take the access pathway below to develop strategies for enhanced broadband deployment. Each community will ultimately need to find its own unique solutions to achieve its broadband goals. For some lucky communities, there can be quick victories at low cost. Others can struggle for years to overcome their broadband shortcomings.

Experience shows that if a community's current services are inadequate, it will need to take some action to spur broadband investment, up to and including public investment. The good news is that shortcomings in broadband access are issues that can be solved. And philanthropy can play an integral role in connecting communities to solutions, solutions that can benefit a community for a generation or more.

3. Health Conversion Foundations Leverage Matching Grants to Bring Broadband Infrastructure to Virginia Counties . . .

Access Pathway

Many of the best practices, resources, and worksheets are taken from the guidebook *Accelerate:* A Community Broadband Planning Program.

Establish a Broadband Access Steering Committee

Gather local leaders and broadband activators.

BEST PRACTICES

Identify and Recruit (a) Local Broadband Champion(s). Successful communities have a dedicated staff member—a city or county employee or a paid participant on the steering team—who is passionate about connectivity and empowered to lead the broadband project. An important duty of this project leader is to help inform elected officials in the community about broadband project goals and the value this project will bring to the community, including workforce and economic development benefits and improvements in public safety, health care delivery, distance learning, and transportation. Project leaders communicate project details, such as the build timeline and who exactly will be getting service when.

BroadbandUSA's Introduction to Stakeholder Outreach

Build a Community Movement. Community interest in and support for high-speed internet is imperative when attempting to attract investment and increase competition. Emphasizing real-world benefits and overcoming resident apathy and mistrust are critical to the long-term sustainability of local projects.

4. Experts in Community Networks and Tribal Connectivity Collaborate With Philanthropy to Address the Digital Divide in Native American Communities . . .

Community leaders should strive to meet the principle of "Build With, Not For"—a philosophy that puts community residents first and strives to meet the actual current and future needs of residents, as opposed to the needs that leaders or broadband providers assume.

Assemble a Diverse Team. Teams should be inclusive, engaging a wide variety of stakeholders (e.g., community members, teachers, parents, students, people without internet access, librarians, local government, landlords, business owners, residents). A team can include existing and/or prospective broadband providers if the community is assured that the providers put community needs as a high priority.

Set Team Expectations. Individuals on the teams need to agree on a common goal—and be motivated to reach that goal together. Every team member must know that they are making a time commitment when joining the effort.

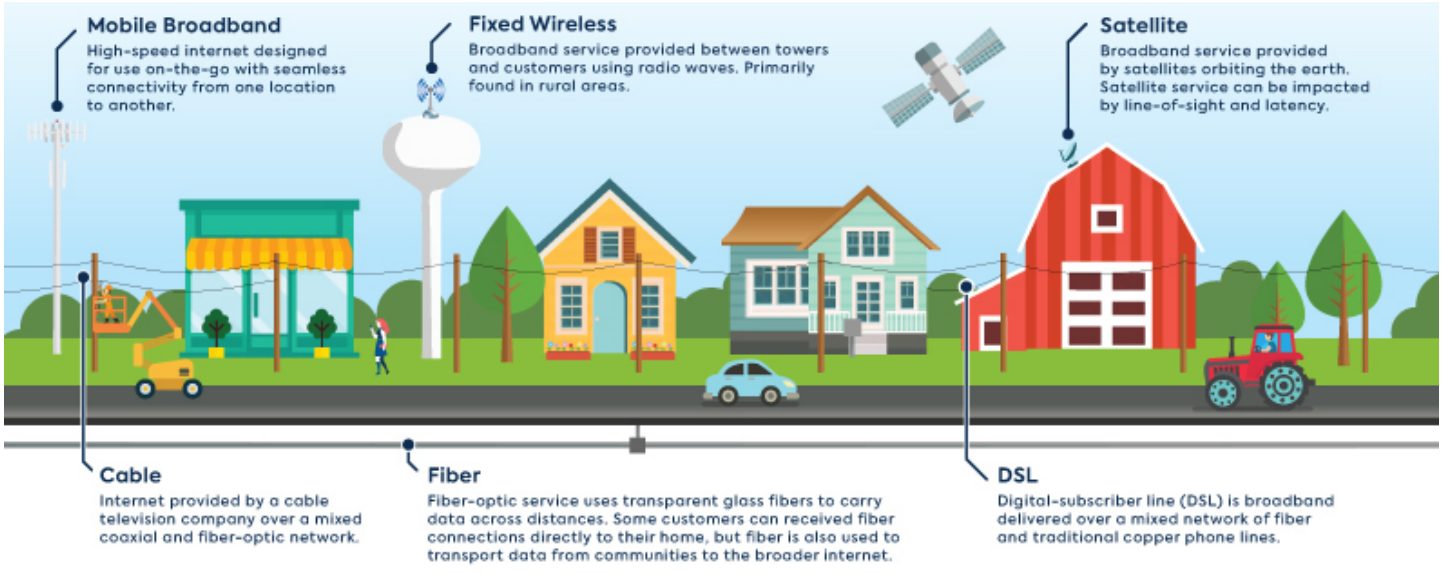
Gather Data and Information

This can include quantitative and qualitative data, including broadband maps, speed tests, surveys, and community stories.

BEST PRACTICES

Review your community's broadband maps. State and federal maps illustrate reported broadband coverage. These are a good starting point for analysis, but the data needs to be verified. If possible, engage in asset mapping to gather information on the public and private infrastructure assets scattered across your community. Assets can include fiber, conduit, towers, right-of-way agreements, and more.

Accelerate Community Mapping Worksheet



connectednation.org / connectmycommunity.org

Convene community meetings to gather and share information, educate elected officials, and learn from broadband providers and role model communities. Municipalities have the unique opportunity to bring together city staff, residents, community organizations, nonprofits, schools and universities, libraries, faith-based communities, and other community stakeholders. Such convenings can provide an opportunity to hear directly from those who are affected by lack of access and can lead to collaborative problem-solving, an intervention plan, and shared ownership of the solution.

Accelerate Community Broadband Meeting Agenda Sample

Conduct a community survey to document internet-related customer satisfaction and demand for improved services. Communities should engage in multiple forms of surveying, including online surveys via social media such as community Facebook pages, and paper surveys that can be distributed by canvassing, by leveraging in-person events at community anchor institutions, or by setting up tables in other community locations such as grocery stores. Include a link to a speed test website in the survey and gather the data.

Accelerate Broadband Surveys Discussion Worksheet

Accelerate Mailed Survey Sample

Broadband Infrastructure Questionnaire

Interview existing and prospective broadband providers to ascertain whether providers can meet or contribute to a community's broadband vision. Communicating with providers in your area can bring clarity around service options or future buildout plans, in addition to planting the seeds for future collaboration.

Accelerate Guide to Interviewing Broadband Providers

BroadbandNow: The Complete List of Internet Companies in the US

Formulate and Adopt a Shared Vision Statement

This will help propel a preferred strategy path.

BEST PRACTICES

Build a team/community consensus. Consider the quality of desired broadband service, geographic coverage, time frame, role of local government (facilitator, partner, owner, and/or operator), and technology options.
Advice: *Do not be too quick to eliminate a strong role for the public sector; it may be required for success.*

Accelerate Community Broadband Vision Worksheet

Develop a communications strategy. You will want to make sure that your community understands the shared vision and tasks ahead. Create and implement a communications strategy to spread the word.

Accelerate Communicating to Achieve Your Community Broadband Vision

Identify Financial and Other Strategic Resources

BEST PRACTICES

Explore successful broadband connectivity models from other communities, including municipal networks, public-private partnerships, institutional networks, open-access networks, and working with incumbent providers.

Accelerate Ownership and Partnership Models Worksheet

Recruit partners appropriate for your strategy. Ensure that your partners share your project's values and goals. All partners should agree on a financial framework and implementation strategy.

Identify non-financial assets that a community can bring to the table: credibility, organization and marketing, permitting processes, rights of way, existing fiber or conduit, digital equity resources, etc.

Identify federal, state, and local resources. During the COVID-19 pandemic, Congress has passed a number of laws creating unprecedented broadband funding opportunities for state, county, and local governments.

Accelerate Federal and State Program Opportunities Worksheet

Accelerate Local Broadband Finance Worksheet

Create and Implement an Action Plan

Framed by the community vision and based on the information gathered through the study process, teams can move forward to achieve the community goal and define what smaller outcomes they need to build toward their community vision. If a community is lacking a committed broadband provider partner or implementable deployment strategy, it may need to move forward with more study.

BEST PRACTICES

Create an action plan to guide future activities.

Accelerate Planning Outline and Worksheet

Accelerate Presentation Outline

Initiate a detailed financial and technical feasibility study, if necessary. A feasibility study may help to recruit and set the framework with a provider partner. This study might not be necessary if a community has a trusted provider partner.

Accelerate Broadband Feasibility Worksheet

Pursue federal, state, and local resources, including philanthropic resources.

5. The Just Transition Fund Invests in Closing the Digital Divide to Strengthen Economic Resilience in Coal-Affected Communities ...

Continue to Build Success

Successful infrastructure planning and implementation takes time. Yet small victories can abound when a community seriously addresses connectivity challenges for the first time. Communities must celebrate successes to continue to grow strategic partnerships and pivot toward continuing sustainable digital equity.

BEST PRACTICES

Compare metrics from early information gathering to get a sense of how many households and businesses have/lack access to broadband service.

Hold a community listening session to receive feedback about the project and explore ways in which to improve it.

Maintain a communications strategy that keeps the public informed through all stages of the project.

Access Pathway Victories

- Formed a broadband access team
- Conducted a broadband user survey and broadband speed tests
- Interviewed broadband providers
- Entered into a partnership with a provider
- Applied for a state grant
- Applied for other federal infrastructure grant funds
- Implemented feasibility studies and/or consultant services

Resources

Benton Institute for Broadband & Society

- Getting a BEAD on Community Asset Mapping
- *Accelerate:* A Community Broadband Planning Program
- The Era of the Broadband Public-Private Partnership: New trends and opportunities in the wake of COVID-19
- Six Community Broadband Networks Demonstrate Diversity of Approaches to Connectivity Challenges
- Putting State Broadband Funds to Work: Best Practices in State Rural Broadband Grant Programs
- If We Build It, Will They Come? Lessons from Open-Access, Middle-Mile Networks

Institute for Local Self-Reliance

- Community Connectivity Toolkit

National Telecommunications and Information Administration

- BroadbandUSA program — promotes planning and funding efforts through solution-neutral guides, resources, and publications

National Urban League

- Digital Equity Playbook: How City Leaders Can Bridge the Digital Divide

New America's Open Technology Institute

- Community Broadband: The Fast, Affordable Internet Option That's Flying Under the Radar

Next Century Cities

- Becoming Broadband Ready Toolkit

Pew Charitable Trusts Broadband Access Initiative

- Broadband Access Challenges Persist for Residents of Federally Subsidized Multifamily Housing
- How Do Speed, Infrastructure, Access, and Adoption Inform Broadband Policy?
- How Broadband Infrastructure Gets Built
- States Considering Range of Options to Bring Broadband to Rural America

State Broadband Grant Programs: The Challenge Process

State Broadband Grant Programs: Scoring Metrics

How State Grants Support Broadband Deployment

Schools, Health & Libraries Broadband (SHLB) Coalition

The "To and Through" Opportunity: An Economic Analysis of Options to Extend Affordable Broadband to Students and Households via Anchor Institutions

A Model for Understanding the Cost to Connect Anchor Institutions with Fiber Optics

US Ignite

Broadband Models for Unserved and Underserved Communities

ADOPTION PATHWAY
Subscribing to and Using Broadband

Key Questions

Who is and who is not using broadband in my community? Why are people not online? How can we meet people where they are and demonstrate how broadband can improve lives?

Overview

Even though community members may have *access* to broadband infrastructure, there are many reasons why individuals or families do not *subscribe*. And many individuals cite more than one barrier as a reason for non-adoption. If service is unaffordable; if household members do not have internet-enabled devices that meet their needs or the skills to use them; if they don't have access to quality technical support; or if they do not see content and services relevant to their daily lives that encourage self-sufficiency, participation, and collaboration, subscription rates may be low.

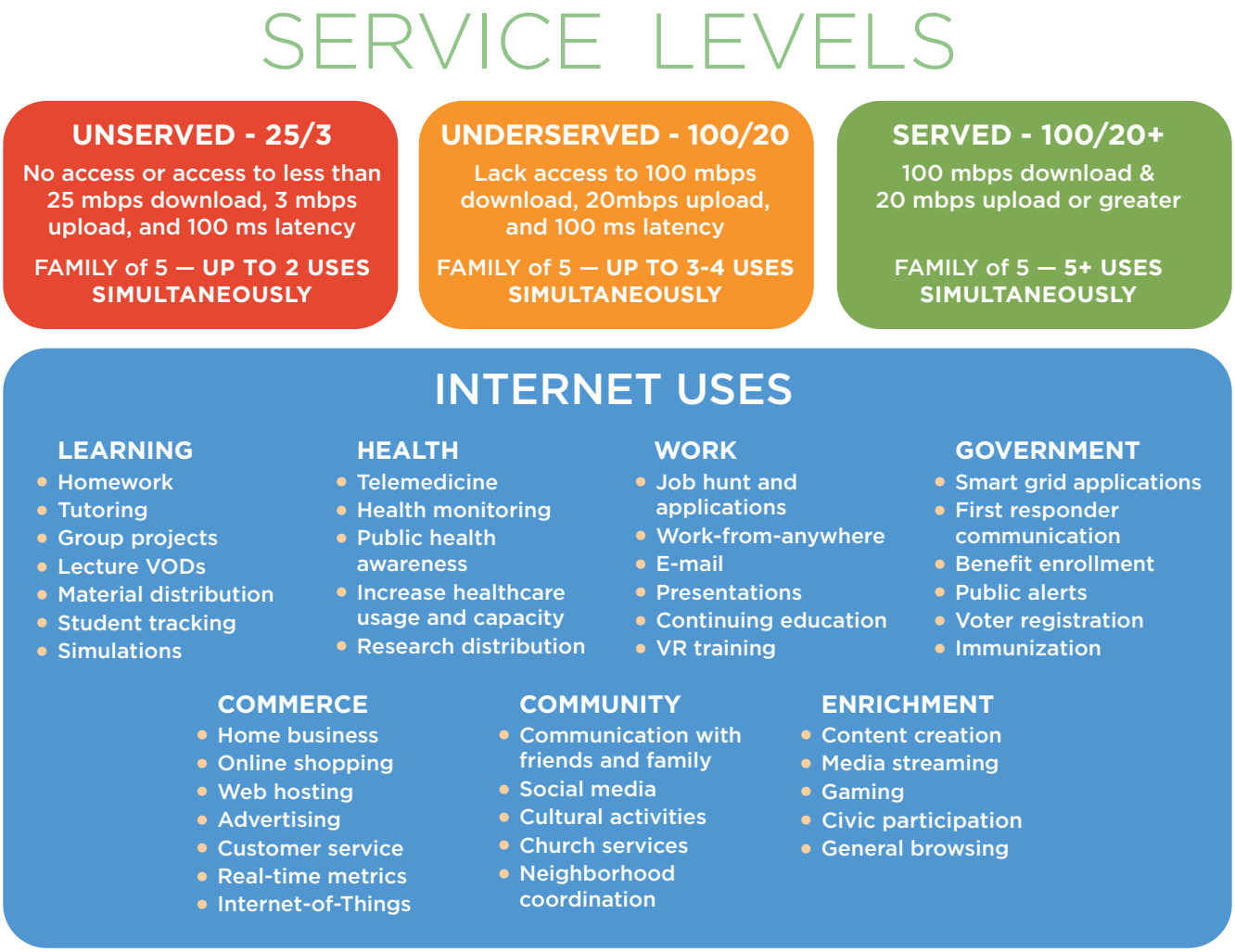
The Adoption Pathway addresses **digital inclusion**, the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and can use broadband technologies. It ensures that people overcome barriers to subscribing to affordable, reliable, high-speed broadband.

Therefore, broadband adoption means an individual has daily access to the internet 1) at the speeds, quality, and capacity necessary to accomplish common tasks; 2) at an affordable price; 3) with the digital skills necessary to participate online; and 4) on a personal device with a secure, convenient network.

For a community focused on digital equity, broadband adoption is about understanding and responding to the connectivity needs of individuals. This entails surveying and engaging with community members, especially those in marginalized groups where broadband technology traditionally has been underutilized. Broadband adoption work is best done in coordination with other assistance programs with the aim of addressing people's needs holistically.

The role of broadband adoption programs goes beyond simply stating the benefits of broadband or assuming that people will want to get online. Successful adoption programs—such as trainings, discount sign-ups, or device distribution events—often meet people where they are, encourage them, and show them how they can safely use the internet to improve their lives.

The Adoption Pathway is also about identifying places where broadband speeds may be inadequate or bandwidth limitations[6] or data caps obscure digital inequities. For example, a family "served" by a 25/3 Mbps connection may run into bandwidth issues when trying to simultaneously learn and work from home.



Source: Drew Garner

The Infrastructure Investment and Jobs Act directs federal funds to states, Washington, D.C., Puerto Rico, territories, and tribal organizations to draft digital equity plans, and it provides funding for projects specifically aimed at increasing broadband adoption. Communities should be in touch with their state broadband offices to learn how they can be involved in crafting their state's Digital Equity Plan.

Adoption Pathway

Form a Broadband Adoption Team

Setting up a diverse and engaged team of key stakeholders can unlock new partnerships and opportunities to reach populations who have not adopted broadband or are under-connected.

BEST PRACTICES

Convene a diverse, inclusive group to brainstorm collaborative solutions. Engage a wide variety of stakeholders from local government, businesses, faith-based organizations, schools, libraries, health care providers, community colleges, public housing, nonprofits, senior service groups, philanthropy, and housing authorities. Don't forget to include community members who are unconnected!

Identify and recruit people who can reach key populations. People who face barriers to broadband adoption often qualify for federal assistance programs, such as Medicaid, Supplemental Security Income, the Supplemental Nutrition Assistance Program (SNAP), and/or free or reduced school lunches. An adoption team should include team members who work on a daily basis with the digitally excluded, helping them to secure low-cost broadband, affordable devices, and training. These strategies ease outreach costs, bring trusted partners into the conversation, and draw on expertise in navigating other benefit programs.

6. Chicago Mobilized Philanthropy to Connect School Kids, Then Built On These Partnerships to Accomplish Broader Digital Equity Goals . . .

Gather Information. Identify Subsidies and Other Strategic Resources

Communities need to identify who is unconnected or under-connected and why. Those least likely to be online at home include: seniors, people who are disabled or differently abled, those with limited incomes, those who have not obtained a high school diploma, rural residents, and indigenous and tribal communities.[7]

BEST PRACTICES

Review available data.

- Computer and internet use data can be found in the U.S. Census Bureau's 2020 American Community Survey.

Identify existing broadband subsidy programs.

- Explore federal broadband subsidy opportunities.

  FCC's Affordable Connectivity Program — ACP provides a $30-a-month broadband benefit for eligible households ($75 on Tribal lands).

  FCC's Emergency Connectivity Fund — For eligible schools and libraries, the ECF program covers reasonable costs of laptop and tablet computers; Wi-Fi hotspots; modems; routers; and broadband connectivity purchases for off-campus use by students, school staff, and library patrons.

  FCC's Lifeline Program — This program provides a monthly $9.25 benefit for mobile voice and broadband service.

- Ask local service providers about their low-cost plans.

  NDIA's list of Free and Low-Cost Internet Plans

Conduct a broadband adoption survey.

- Try to identify household size, speed, and cost, if possible.
- Through the survey process, raise awareness of community efforts and bring in other digital inclusion activators.
- Specific unconnected populations may require paper surveys, certain language translations, materials for the visually impaired, or other special emphasis.

  Broadband Adoption Questionnaire

Explore relationships with local Community Anchor Institutions (CAIs).

- Schools, libraries, health care providers, community colleges, public media, public housing, and other community organizations are among the key institutions that enable universal broadband adoption.

Formulate and Adopt a Shared Vision

When a community has a good understanding of its broadband adoption needs, it can begin to formulate and adopt a shared community vision for digital inclusion that is tailored to its unique broadband adoption challenges. They should then set a preferred strategy or action plan to achieve their vision.

Accelerate Community Broadband Vision Worksheet

After conducting its broadband survey, the city of Springfield, Illinois, created this shared vision:

> By 2024, all residents, anchor institutions, and business locations in Springfield, Illinois, will have access to a minimum of one—affordable, equitable—broadband network that is capable

of providing benefits of current and future economic, social, civic, educational, health, and entertainment applications for households and businesses in our city.

By 2025, all Springfield residents will have access to affordable computing devices for their homes and businesses along with free resources including technical assistance and digital education courses to help all residents advance personally and professionally.

Through these initiatives, 100% of City of Springfield residents will have access to broadband, personal devices, and digital education by 2026.

BEST PRACTICES

Have your vision statement target specific adoption challenges, such as affordable service and access to devices and training.

Identify the opportunities and challenges to achieving your vision.

Be realistic about what your community is willing to do to achieve your community vision.

Implement the Plan

Successful adoption strategies often balance small and large "adoption victories." Compared to the goals in the Access Pathway, adoption victories can often be more of a moving target. Digital inclusion goals will evolve as technology and its associated norms—such as speed and bandwidth needs—advance.

Be especially mindful of the "**subscription vulnerable**"—lower-income households that may struggle to maintain service once they have signed up for a plan.

BEST PRACTICES

Work to promote sign-ups to affordable internet service discount programs.

- Partner with internet service providers to expand enrollment in the Affordable Connectivity Program (ACP) or their own discount programs.
- When partnering with providers on infrastructure expansion, include requirements for them to offer affordable subscriptions and participate in federal internet service subsidy programs.
- Be aware of **frequently asked questions** by digital inclusion practitioners who are working with low-income households to sign up for ACP.
- Track the federal pilot program, **Your Home, Your Internet**, whose goal is to raise awareness of the ACP for recipients of federal housing assistance and to help them with the application process.

- Apply to the FCC's Affordable Connectivity Outreach Grant Program, which will provide funding to support eligible partners in increasing their ACP awareness outreach effort.

Create and/or promote training programs and resources.

- Digital Navigators are individuals who address the whole digital inclusion process—home connectivity, devices, and digital skills—with community members through repeated interactions, often at social service agencies, schools, and libraries.
- NDIA's The Digital Navigator Model
- Offer programming in languages that are spoken in the community.
- Implement programs focused on specific populations who have not yet subscribed to broadband service.

Explore ways to distribute computers and other devices.

- Establish or promote wireless hotspot lending programs through local libraries.
- Partner with organizations like PCs for People, which has hosted hundreds of distribution events and offers refurbishing services to help businesses and other organizations properly recycle used device equipment.

Deploy or facilitate public access Wi-Fi.

- Work with local libraries to offer free Wi-Fi and public computer workstations, especially for those without at-home broadband subscriptions.
- Encourage other local organizations and institutions (e.g., low-income housing providers, religious centers, community social service recreation centers, laundromats, and municipal buildings) to create free computer and internet access facilities inside their buildings.
- Urge municipalities to install free public Wi-Fi in city buildings, parks, and public spaces and promote these as valuable community resources.

Investigate and promote solutions for apartment buildings and multi-dwelling units (MDUs).

- Bulk purchasing agreements can lead to affordable options for those living in low-income housing.
- The Infrastructure Investment and Jobs Act offers funding to expand digital equity in public and other federally subsidized multifamily housing.

Continue to Build Success

Successful adoption initiatives can be hard to measure in full. Broadband subscription numbers may increase but do not tell the entire story. The positive externalities that come with increased broadband adoption often cannot be fully captured with hard data but have very real, human benefits.

BEST PRACTICES

Capture success stories. Get feedback from people and communities that have benefited from adoption initiatives. These stories are helpful when communicating with city officials and applying for grants.

Maintain communication with key stakeholders in order to maintain momentum, scale the reach of your adoption initiatives, continue engagement, and build coalitions.

Continue to identify and pursue federal, state, and local resources.

- Be in touch with state broadband offices to stay up to date on grant opportunities.
- Philanthropy can contribute funds and capacity-building resources to continue or scale adoption efforts.

Adoption Pathway Victories

- Formed a diverse, inclusive adoption team/subcommittee
- Convened and collaborated with adoption-oriented stakeholders
- Conducted education and enrollment outreach on ACP, Lifeline, and/or ECF
- Worked with broadband providers to promote use of discount programs
- Created or supported a local broadband subsidy program
- Distributed computers and other devices (including through PCs for People and other device refurbishers)
- Investigated and promoted alternative internet solutions for apartment buildings and MDUs
- Deployed or facilitated the deployment of public access Wi-Fi, including offerings by internet service providers
- Created or promoted training programs and learner resources
- Focused on supporting English language learners and speakers of other languages
- Implemented programs focused on specific non-adopting populations

Resources

Annenberg Research Network on International Communication

- A Roadmap for Affordable Broadband: Lessons from the Emergency Broadband Benefit

Benton Institute for Broadband & Society

- Growing Healthy Digital Ecosystems During COVID-19 and Beyond
- Digital Inclusion Outcomes-Based Evaluation
- Digital Inclusion and Meaningful Broadband Adoption Initiatives

Boston Consulting Group

- A Human Approach to Closing the Digital Divide

EveryoneOn

- Affordability and the Digital Divide
- Digital Skills and Trust

Federal Communications Commission

- Affordable Connectivity Program
- Affordable Connectivity Program Providers
- Emergency Connectivity Fund

Institute for Local Self-Reliance

- ACP Dashboard

National Digital Inclusion Alliance

- The Digital Inclusion Startup Manual
- The Discount Internet Guidebook
- Free and Low-Cost Internet Plans

National Telecommunications and Information Administration

- Connectivity with a Purpose: Considerations for Planning Digital Inclusion Efforts

New America's Open Technology Institute

- Learning at Home While Under-connected
- The Cost of Connectivity 2020

USE PATHWAY

Realizing Full Value from Broadband Connectivity

Key Questions

How are our institutions, organizations, and businesses using broadband? How can we use connectivity to solve problems and strengthen our community?

7. Philanthropy Joins Hands to Build a New Generation of Leaders to Help Bring People Online . . .

Remote Learning SMART CITIES
Network Effects E-Commerce
Telework TELEHEALTH
DIGITAL CITIZENSHIP Precision Agriculture
Community Anchor Institutions

Overview

The Use Pathway is about realizing full value from broadband connectivity. Maybe your network is in place, and residents have affordable broadband as well as the appropriate skills and devices to use it. How does this make a difference to your community?

By broadband *use*, we refer to a system or community-wide approach in how broadband is integrated into the social fabric of communities. How broadband positively affects economic development, education, health, agriculture, and civic engagement is broadband *use*.

Specifically, the Use Pathway is about how broadband can create stronger, more vibrant communities, creating a greater return on community broadband investment.

As former Benton senior fellow Jonathan Sallet wrote in *Broadband for America's Future:*

> Broadband's fundamental value doesn't come from connecting computers to networks; its value comes from connecting people to opportunity, and society to new solutions. When a broadband network is available but a person who wants to use it can't do so, then the network is less valuable to everyone else who does use it.

That's because the benefits of broadband adoption do not flow only to the people who are new broadband users. Expanding broadband usage can grow the U.S. economy broadly. Expanding broadband usage and furthering civic engagement can build stronger democratic institutions. Expanding broadband usage, from an individual's perspective, opens a window on the world, connecting people to people, and people to services that can improve lives.

8. Philanthropy Builds Capacity So Equity Is at the Forefront of Broadband Infrastructure Dollars Spent in California . . .

As the variety of uses for the internet continues to expand, being connected will become even more important to all Americans, regardless of income, education, age, race, ethnicity, or ability.

Unemployed Americans often must rely on internet access to search for and apply for jobs. Many employees have worked from home over the past few years, and even those who haven't are often required to maintain basic computer and internet skills to retain their positions or advance their careers. Young people need digital skills to complete homework assignments, take classes online, or apply to college. They will need advanced digital skills to compete in the new digital economy. Businesses must have a web presence, and many use e-commerce to connect with customers and suppliers. Senior citizens use web-based applications—such as email, Facebook, and Skype—to keep in contact with families and friends or to look for health information. Today, broadband is a necessary tool to innovate farming practices, allowing for more targeted and efficient resource use. Farmers need connectivity in the farmhouse and farm office, in the field, and in the community.[8] In addition, as government agencies continue to expand their online presences, more citizens use web-based applications to access services, file taxes, and apply for permits. And the vast majority of Americans now rely on the internet to follow the news. More than 8 in 10 U.S. adults (86 percent) say they get news from a smartphone, computer, or tablet "often" or "sometimes," including 60 percent who say they do so often.[9]

The Use Pathway addresses how connectivity helps community institutions, organizations, and businesses achieve and expand their missions. With the encouragement and support of more sophisticated use of broadband connectivity, community competitiveness and vitality are enhanced. Businesses can expand into new markets, in turn benefiting digitally skilled labor. Health care access and sustainability are increased. Educational opportunities expand. Farmers are able to use innovate tools for more targeted and efficient resource use. Government services become more efficient and convenient. Pursuing the benefits of a connected community with an eye toward digital equity is how communities can realize the full potential of broadband.

Approaches to adoption and use can often take similar form, as both are concerned with the skills and means to take advantage of the value that broadband provides. Many of the same best practices found in the adoption pathway could just as easily apply to the use pathway. Rather than offering a step-by-step pathway, we have organized resources around use-oriented topics, with the intention of inspiring communities to see how broadband's use in different sectors and institutions can lead to stronger communities.

Use Pathways

Economic and Workforce Development

9. Island Institute's Rural Community Engagement Amplifies Maine's Broadband Efforts ...

High-performance broadband will help grow the American economy in the next decade.[10] After all, the combined innovations and changes that ride over broadband connections have already been responsible for a significant portion of American economic progress in this century. The U.S. digital economy has grown at an average rate of 9.9 percent over the past two decades, more than four times that of the total economy (2.3 percent). Information-based industries—such as financial markets, insurance, and accounting—have significantly gained from broadband, and there is widespread consensus that broadband technologies have enabled businesses across nearly all sectors to improve their productivity.

Today workers increasingly need to be digitally literate to get the jobs that are available. Across the nation, roughly half of all job postings are for middle-skill positions[11], "jobs that do not require a college degree, pay a living wage, and usually require skills in dealing with technology and people."

Digital skills have become critical for the entire workforce, and jobs that have traditionally not relied on technology may add new technological demands.

- Adapting Jobs Programs for Today and Tomorrow (Benton Institute for Broadband & Society)
- Digital Skills and Job Training: Community-driven initiatives are leading the way in preparing Americans for today's jobs (Benton Institute for Broadband & Society)
- Broadband for All: Charting a Path to Economic Growth (Deloitte Consulting LLP)
- Closing the Digital Divide: A Framework for Meeting CRA Obligations (Federal Reserve Bank of Dallas)
- Choosing the Future: Technology and Opportunity in Communities by Karen Mossberger, Caroline J. Tolbert, and Scott J. LaCombe (Oxford University Press, 2021)
- Digital Bridge: Providing digital access to low-income job seekers during the COVID-19 Pandemic (University of Washington, Technology & Social Change Group)

Health

Broadband can help solve some of health care's most enduring problems and intractable challenges: delivering massive cost-saving opportunities to slow runaway health care cost growth, enabling patients to harness a new generation of connected-care devices that help them live longer and more productive lives, and extending connected care everywhere, closing the rural health care gap.[12]

- Digital prosperity: How broadband can deliver health and equity to all communities (Brookings)
- Best Practice Guide: Telehealth for Rural Areas (Health Resources & Services Administration)
- Advancing Health Equity through Telehealth Interventions during COVID-19 and Beyond: Policy Recommendations and Promising State Models (Families USA)

Education and Remote Learning

Students have long suffered the consequences of the digital divide both in the classroom and at home. In Broadband and Student Performance Gaps, researchers from the Quello Center at Michigan State University explained the difference between students with limited or no home internet access and those who do have such access as big—it's equivalent to the gap in digital skills between eighth- and eleventh-grade students.

The demand for online education, both at the K-12 and higher education levels, will be greater after the pandemic than before. With students returning to classrooms, teachers and professors will continue to use the technologies they adopted to enhance distance learning, recognizing that digital technologies can be powerful complements to in-person learning.[13]

- The Digital Generation's Classroom (Broadband USA)
- Closing the K–12 Digital Divide in the Age of Distance Learning (Common Sense)
- Learning at Home While Under-connected (A collaboration between New America and Rutgers University New Brunswick)

Agriculture

The future of agriculture is now rooted in broadband. The advantages of connectivity can be as simple as bringing internet access to a local poultry farm that needs to monitor its chicken houses or as technologically daunting as precision agriculture's ability to collect and analyze data about variations in nutrient and moisture levels in individual fields.

- The Future of American Farming: Broadband Solutions for the Farm Office, Field, and Community (Benton Institute for Broadband & Society)
- Task Force for Reviewing the Connectivity and Technology Needs of Precision Agriculture in the United States (Federal Communications Commission)

Government Services/Smart Cities

Cities and municipalities can realize enormous benefits by shifting government services online, as residents are able to access important data, information, and services more efficiently and effectively. This can also improve the services themselves as they are modernized to better meet the needs of the government's constituencies.

- **Toward Inclusive Urban Technology** (Benton Institute for Broadband & Society)
- **Connecting Cuyahoga: Investment in Digital Inclusion Brings Big Returns for Residents and Administration** (Connected Insights)

Use Pathway Victories

- Formed a use team/subcommittee
- Convened sector-specific stakeholders (economic and workforce development, health, education, agriculture, government services/smart cities)
- Launched programs by sector to spur enhanced use of technology

PHILANTHROPY'S ONGOING ROLE

The COVID-19 pandemic spurred widespread awareness of broadband's essential function and, with it, the federal government's historic investments. The Infrastructure Investment and Jobs Act is now making billions of dollars available to states to expand broadband networks and digital equity efforts.

Closing our digital divides, and moving toward digital equity, requires an all-hands-on-deck approach. There has never been a more important time for philanthropy to be engaged with state and local broadband leaders. This is a once-in-a-generation opportunity to connect the nation. And the stakes could not be higher for communities that could be left behind.

Communities need to collaborate with a variety of stakeholders to increase broadband access, adoption, and use. The pathways in this guidebook will lead to more civic and cultural participation, increase community economic resilience, promote healthier communities, spur lifelong learning, drive sustainable agricultural practices, and facilitate access to essential government services—but only if we connect everyone.

10. A Love Letter to Rural Minnesota's Broadband Champion, Bernadine Joselyn . . .

As Bernadine Joselyn, former director of public policy and engagement at the Blandin Foundation in Minnesota, said: "It's not about broadband. It's about what broadband can do. Broadband is the means to the end … Internet access is fundamental to everything philanthropy cares about."

As this guidebook has documented, philanthropy has provided direct infrastructure funds; paid for capacity building, feasibility studies, and grant writers; underwritten community education, engagement, and planning programs; brought fellows to under-resourced communities; mobilized pools of financial resources for mapping, affordability, and advocacy; and convened to build a community movement in Tribal lands.

But there is more than can be done. To assist communities in expanding digital equity, philanthropy can invest at critical moments to ensure that we do not squander our broadband moment. These efforts can be directed toward assessments, capacity building, convenings, and evaluation.

Assessments: Data collection, particularly on broadband availability and affordability, is a crucial first step that is both resource-intensive and contentious. The baseline picture of availability, for instance, will determine the level of federal funding available for infrastructure investments and might be heavily contested by existing internet service providers. Philanthropy can:

- support high-quality data collection on what service is available and what it costs and build an accurate broadband baseline, and
- cover the costs of broadband project feasibility studies.

Capacity Building: State and local capacity, within communities and government bodies, is unequally distributed. The technical knowledge required with broadband infrastructure can create a high barrier for entry. Philanthropy can bolster the capacity of state and local offices as well as community efforts by:

- partnering with state broadband offices, particularly in nascent or understaffed offices,
- helping communities stay on top of grant opportunities and pursuing such opportunities, and
- providing matching funding for broadband infrastructure projects.

Convenings: Digital equity must be a collective effort. With substantial federal investment forthcoming, philanthropy is well positioned to ensure that relevant stakeholders, especially affected communities, are meaningfully engaged in the process at the local, state, and national levels. Funders can also work in concert to amplify or strategically target specific areas of need that federal efforts may overlook. Philanthropy can:

- help states convene a variety of stakeholders to make sure that BEAD and DEA planning is inclusive, and
- pool funds, make connections, and convene to direct more philanthropic effort to promoting digital opportunity.

Evaluation: Communities and states will adopt a variety of approaches to address their broadband needs, but with no resources currently earmarked for research and evaluation, there could be a missed opportunity to learn the lessons about what works and under what conditions. Philanthropy can:

- underwrite the research and evaluation work to ensure that best practices are widely adopted.

High-performance, affordable broadband connections and the devices and skills to use them are an essential pathway to equal opportunity and full participation in our society, our economy, and our democracy. Digital equity may start at the local level, but collaborative relationships with philanthropy can help communities move farther, faster, and more comprehensively. In partnership, we have a chance to fulfill that promise between now and the end of this decade when broadband infrastructure and digital equity program implementation is expected to be complete.

1. Heartland Forward Helps *Accelerate* Community-Driven Broadband Infrastructure Planning

Heartland Forward is a nonpartisan, nonprofit "think and do tank" focused on improving economic performance in the center of the United States. Its Connecting the Heartland initiative aims to boost internet availability, speeds, and adoption rates across America's heartland.

With the Department of Commerce's National Telecommunications and Information Administration distributing $42.5 billion to states for broadband infrastructure deployment, community engagement and planning are paramount if federal funds are to be used effectively and efficiently.

Angie Cooper, chief program officer at Heartland Forward, said, "With unprecedented federal funding to increase access to high-speed internet, it is so important for local communities to have the tools necessary to create a plan to ensure their residents are connected as soon as possible."

Heartland Forward collaborated with the Illinois Office of Broadband and University of Illinois Extension and supported the Benton Institute for Broadband & Society to lead the *Accelerate Illinois Broadband Infrastructure Planning Program*, helping communities get ready to leverage federal and state funds for community-driven broadband expansion. The 14-week *Accelerate* program, and this guidebook, focus on engaging community leaders to develop broadband plans to address their unique connectivity needs.

"The cross-sector collaboration that we've really homed in on is the differentiator with this program," said Matt Schmit, director of the Illinois Office of Broadband. "The office is incredibly lean—two full-time employees, the way it's been from day one. For two years, we've been probably one of the smallest offices of broadband in the country administering one of the largest grant programs. So, if we're going to do anything beyond [our] infrastructure grant program, we've really got to forge partnerships and collaborate externally. It's been a great pleasure to work with the Benton Institute and other stakeholders, such as University of Illinois Extension and other philanthropic partners. It's a differentiator for this program—that we really forge these bonds external to the Office of Broadband to make it succeed."

In addition to Illinois, Heartland Forward focuses its efforts on closing the digital divide in Ohio, Arkansas, and Tennessee and is currently supporting *Accelerate* programs in Illinois, Ohio, and Arkansas.

2. Texas Rural Funders Plays an Essential Role in State Broadband Efforts

In 2019, Texas Rural Funders, a statewide philanthropic collaborative of 39 funders focused on bringing attention and resources to rural Texas, learned that Texas was one of six states in the United States that had neither a statewide broadband plan nor a broadband office.

This put Texas communities at a disadvantage; federal agencies deducted points when scoring broadband grant applications, lowering communities' chances of receiving the critical funding needed. This is crucial in a state where 83 percent of the land mass is rural and state and federal funds and policy solutions are required to achieve the scale needed to reach as many rural Texans as possible.

Texas Rural Funders sprang into action to gather data, engage in marketing and communications efforts, form coalitions, create resources, and support rural leaders to affirm the need for a statewide broadband office. House Bill 5, forming the Broadband Development Office at the Texas Comptroller's office, passed in 2021.

What did Texas Rural Funders and their partner organizations do to achieve this success? First, they funded broadband infrastructure mapping and broadband speed tests in all 254 Texas counties to understand where broadband service is and, more importantly, is not available. Armed with good data, Texas Rural Funders could convene and connect, urging partners to coalesce around necessary programs and policies. Specifically:

- It commissioned Broadband Stories from Rural Texas in 2021 with policy recommendations showcasing rural communities working hard to obtain broadband.
- It engaged a marketing and communications firm that wrote letters, op-eds, and other materials designed to highlight rural broadband needs.
- It co-founded, with the Greater Houston Partnership and Texas 2036, the Digital Texas Coalition, convening more than 40 urban and rural partners to speak with one voice about the need for a broadband office and plan. Ninety organizations signed a letter to the legislature affirming the need for a statewide broadband office.
- It undertook policy and advocacy efforts during the 2021 legislative session and delivered a training for 50 individuals who highlighted the importance of rural Texans' broadband needs and experiences with elected leaders.
- It coordinated a broadband awards ceremony to recognize individuals who worked hard to advance broadband during the legislative session.

Texas Rural Funders has built on its earlier efforts to engage and use its philanthropic platform to continue working to ensure that the broadband needs of rural Texans are understood and addressed. To support the Texas Broadband Development Office, Texas Rural Funders held a summit in May 2022 to highlight the current state of broadband in Texas and resources for Texas communities. In addition, Texas Rural Funders is:

- **Encouraging rural communities and residents to participate in the public engagement process**. This will focus on giving people information about hearings or information sessions, grant processes, and resources about how to build coalitions and find funding.

- **Working closely with its mapping and data partner** to improve and increase use of the high-quality data set by organizations in education, health care, and workforce. An upcoming brief will highlight how Operation Connectivity at the Texas Education Agency employed the data to produce maps showing schools where students and families are disconnected. A second brief will showcase how the Texas State Office of Rural Health surveyed rural hospitals to understand the status of their broadband capacity and connectivity in order to provide technical assistance to these critical rural institutions.

- **Telling the stories of rural communities** engaging in broadband work in Get Connected Y'all: A Guide for Texas Communities on Securing Broadband, which highlights best practices and shares lessons learned.

- **Continuing engagement with the Digital Texas Coalition** to identify areas of collective need and opportunity in urban and rural areas as the broadband office and plan are initiated.

- **Gearing up for the 2023 legislative session** by conducting a state-level study to determine a strategic funding approach—based on best practices and tailored to Texas—that will identify the ways that Texas may derive the greatest impact from its investment of public funds (both federal allocations and the state's own commitments). The report will be presented at the Capitol in Fall 2022, prior to the legislative session.

Finally, by developing further **strategic partnerships** with organizations including nonprofits, state agencies, and businesses that are engaged in innovative efforts to expand knowledge of and access to broadband—such as the Texas State Library and Archives Commission, United Ways of Texas, electric cooperatives, and the Federal Reserve Bank of Dallas, among others—Texas Rural Funders is amplifying its voice and multiplying its initial investments to promote broadband ubiquity in Texas and build systems of digital inclusion that give all rural Texans the benefits of being online.

BACK

3. Health Conversion Foundations Leverage Matching Grants to Bring Broadband Infrastructure to Virginia Counties

The Virginia Funders Network (VFN) is a prominent membership organization with more than 100 philanthropic organizations from every corner of Virginia. VFN convened a small group of member foundations that were interested in or already supporting broadband initiatives. Based on input from this small group, VFN quickly came to understand the critical connection between affordable, reliable broadband access and VFN members achieving their missions. As a result, VFN ramped up its efforts to inform and engage its membership through webinars, a conference presentation, and coordination of meetings with state and national experts.

VFN served as a facilitator connecting place-based foundations with one of the state's broadband authorities and the main broadband infrastructure program, the Virginia Telecommunication Initiative (VATI).

Housed within the Virginia Department of Housing and Community Development (DHCD), VATI distributes grants to public-private partnerships to extend broadband service to under-connected regions of the state. Applicants for VATI grants, which will provide up to 80 percent of project costs, must be submitted by a unit of government (e.g., towns, counties, economic development authorities, broadband authorities) with a private-sector provider as a co-applicant. That means that local governments need to find the remaining 20 percent of project costs, or what is referred to as the "match" or gap funding.

Three health conversion foundations in Virginia collaborated with Virginia counties and stepped up to the plate to help cover the match VATI requires—The Cameron Foundation, the Harvest Foundation, and the PATH Foundation.

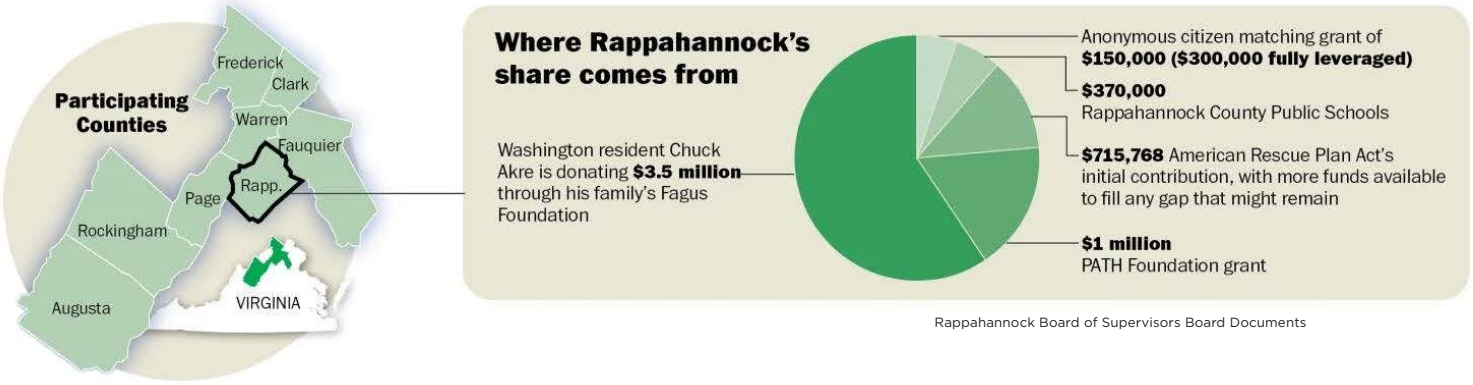
The collaboration between these foundations and county governments served as leverage to pursue and acquire large infrastructure grants.

- **The Harvest Foundation** ($1.4 million), Henry County ($1.4 million), and Henry County Public Schools ($1 million) provided the match to leverage funding from VATI. The foundation received an initial DHCD planning grant to map the assets of Henry County and its county seat, Martinsville, to determine broadband availability in the region. To get fiber to every part of the county, the Henry County Board of Supervisors partnered with RiverStreet Networks, Appalachian Power, a local planning district, and two other counties in the region. Grant funds will be used to supplement construction costs by RiverStreet to build a fiber-to-the-home and business network with almost 350 miles of fiber-optic cable, which will serve more than 3,000 locations.

- The Cameron Foundation committed up to $1.15 million to Sussex ($500,000) and Dinwiddie ($650,000) counties to help meet their VATI match requirements. J. Todd Graham, president of The Cameron Foundation, noted that the pitch to foundation leadership was about leveraging the larger grants with these matching investments: "That's how [The Cameron Foundation] viewed it," he said. "This $1.15 million that we're investing is a way to bring in over $25 million in federal, state, and private funds that otherwise might not have been directed here."

- The PATH Foundation committed $1 million and the chair of their board worked closely with the Fagus Foundation on a $3.5 million commitment toward the local match requirement. This project, part of an eight-county high-speed broadband project, involves multiple partners, roles, and funding sources. PATH and Fagus funding supports the work of the Rappahannock Broadband Authority, Rappahannock Electric Cooperative, private internet provider All Points Broadband, and other partners to bring fiber service to unserved households.

Eight-county High-speed Broadband Project in Virginia



Rappahannock Board of Supervisors Board Documents

Each foundation faced little pushback from its board for making broadband infrastructure grants. "It was amazing to me how intuitively our board got this and understood it," said Jerry Kuthy, program officer at The Cameron Foundation. "We have an annual grants budget of approximately $5 million dollars—which is allocated across different funding programs—so making a $1.15 million award for a single initiative is a substantial move for us. And, by preparing our board through many conversations, they were ready to make the commitment."

"It really wasn't a difficult sell at all," said DeWitt House, senior program officer with Harvest Foundation. "Everyone [on our board] understood the importance and the return on investment. The only questions I received were, 'How quick can you make it happen?'"

The COVID-19 pandemic emphasized the need for broadband access for distance education, telehealth, and community resiliency.

Graham said broadband is integral to many facets of The Cameron Foundation's work. "Education was the entry point," he stressed, pointing to early Cameron Foundation investments in

Chromebooks and internet hotspots. “But that was just triage,” he said, identifying the foundation’s goal to be a part of longer-term solutions, which include supporting broadband infrastructure.

In addition to the financial assistance, these foundations were able to strengthen relationships with Virginia broadband leaders. “There’s a really good relationship with our state broadband agency that came out of this,” said Kuthy. “Because it’s uncommon for philanthropy to be this robustly involved in [state broadband efforts].”

With a strong relationship with Virginia broadband authorities now in place, The Cameron Foundation is looking to pilot affordability programs and work on broadband adoption efforts with nearby Virginia State University, an HBCU seeking to establish a digital navigator program.

Kuthy points to the helpful facilitator and connector role played by the Virginia Funders Network, as does Kate Keller, president of the Harvest Foundation. “During the pandemic, it was abundantly clear that we needed to address access to broadband in our community,” she said. “The Harvest Foundation did not have a history in this space but needed to get up to speed quickly. Through our partnership with VFN, we were able to learn from experts and other foundations, as well as share our learnings with funders across the state. VFN helped to prepare us so that we could help our community.”

BACK

4. Experts in Community Networks and Tribal Connectivity Collaborate With Philanthropy to Address the Digital Divide in Native American Communities

Tribal lands and Native American communities are some of the least connected places in the United States. Infrastructure deployment lags behind that in other rural communities. Only 46.6 percent of housing units on rural tribal lands have access to broadband service. And even when they are connected, households on tribal lands tend to pay more for basic broadband plans and receive lower speeds.

Native Americans are increasingly building their own broadband networks to deliver high-quality internet access for their communities, but they face significant challenges—from access to financing, to access to spectrum, to technical knowledge and skills.

Tribal Broadband Bootcamps (TBBs) provide an intensive learning experience on the technical, business, policy, and social aspects of building, maintaining, and using broadband networks in Native American communities. Over three days, bootcamps bring together network architects, service managers, and policy experts to walk tribal participants through building and operating networks. TBBs are focused on hands-on, practical learning that demystifies the technical aspects, including how deep to trench fiber and how to build, break, and repair wireless connections. Through sessions on funding opportunities and how to enroll community members in the Affordable Connectivity Program, TBBs ensure that these networks are sustainable and will continue to serve Native American communities for decades to come.

Matt Rantanen of the Southern California Tribal Chairmen's Association's (SCTCA) Tribal Digital Village, Chris Mitchell of the Institute for Local Self-Reliance, Spencer Sevilla of TreetopNetworks, Sascha Meinrath of X-Lab, Mark Buell of Internet Society (and now Connect Humanity), and many others collaborated to run the first bootcamp in July 2021 with funding support from the Internet Society Foundation. Its aim, initially, was to support tribes that received 2.5 GHz licenses under the Federal Communications Commission's Tribal Priority Window. The bootcamp focused on building, maintaining, and troubleshooting wireless networks. Subsequent bootcamps in March and May 2022 evolved to meet the needs of participating tribes, including trainings on fiber networks as well as digital inclusion.

The cost of a single bootcamp can range from $100,000 to $150,000, depending on the number of participants and how far they must travel. Planning and logistics costs are borne by Connect Humanity and the Institute for Local Self-Reliance. Additionally, some of the instructors donate their time. Participants who are able can pay a registration fee, but it is not a requirement for attendance.

Other bootcamps were made possible by Schmidt Futures and the Michelson 20MM Foundation. The First Nations Development Institute has also underwritten the participation of some tribal attendees. Funders have been active participants in previous bootcamps not only by learning about the specific connectivity challenges faced by indigenous communities, but also by contributing their own expertise. They have led sessions on how tribal networks can raise funds, maintain donor relationships, and demonstrate the value of their work.

This funder involvement illustrates the broader collaboration and friendly environment emphasized at TBBs. Bootcamps welcome newcomers and broadband veterans alike. At previous bootcamps, people who worked on subscriber billing, with no interest in technology, left wanting to climb towers and install equipment. Some technicians left with an understanding of how the broadband provider must work as a business, or how federal policy has shaped connectivity on Tribal lands.

Beyond building capacity, the bootcamps are valuable for fostering community. Participants from previous bootcamps can reach out for advice and questions. Tribes often face shared challenges, and the Tribal Broadband Bootcamps offer a space to recognize these common problems and find solutions together.

BACK

5. The Just Transition Fund Invests in Closing the Digital Divide to Strengthen Economic Resilience in Coal-Affected Communities

The Just Transition Fund (JTF) provides grants, technical assistance, peer-to-peer support, and education to help coal communities identify, prepare for, and apply for federal funding for broadband projects that meet local needs.

Roughly one-third of residents in the rural and tribal areas the JTF serves cannot access high-speed internet—an inequity that restricts work, education, health care, public services, and civic engagement. Community and economic development organizations and government entities have essential roles to ensure that people in rural areas have equitable access to this critical infrastructure, can afford the service once it's available, and can learn the necessary skills to use the internet to expand opportunities.

JUST TRANSITION FUND

The Just Transition Fund was established in 2015 to help communities secure funding through the Obama Administration's POWER Initiative, the first federal program aimed at helping communities affected by the changing coal economy. Since its inception, the JTF has helped its community partners leverage nearly $300 million in public and private funding, guided by their belief that the most sustainable solutions come from local leaders and are built from the ground up.

With historic levels of federal funding available for broadband, JTF wants to drive public investment to the coal communities who often face substantial capacity barriers to leveraging these resources.

JTF offers grants of up to $150,000 and technical assistance to help organizations access federal and state funds to expand broadband access. This program is designed to offer flexible support for what local organizations need. Grants and technical assistance can be used for:

- Grant writing to put together a successful application
- Identifying grant programs that are a good fit for a community project
- The community's portion of infrastructure project matching funds
- Building internal staff capacity to further develop and refine a community broadband project
- Feasibility studies and additional project planning

The Fund prioritizes communities in Kentucky, Virginia, West Virginia, North Carolina, Pennsylvania, Ohio, Illinois, Indiana, Missouri, Minnesota, Wyoming, Arizona, Colorado, Montana, New Mexico and Texas.

Recipients of broadband grants or technical assistance, which are provided on a rolling basis, are invited to join JTF's community of practice. Through ongoing open calls and relationship-building, the JTF supports communities and connects them with one another to facilitate peer learning, mentorship, and the sharing of best practices.

The JTF works with national experts to develop resources and host webinars so that community and economic development organizations in coal communities are aware of opportunities to get involved. Topics include upcoming federal funding opportunities, the role of community organizations in accurate broadband mapping, opportunities for comprehensive outreach about the Affordable Connectivity Program, and workforce development and digital skills training in rural areas.

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6. Chicago Mobilized Philanthropy to Connect School Kids, Then Built On These Partnerships to Accomplish Broader Digital Equity Goals

At the height of the pandemic in April 2020, the City of Chicago learned that roughly 1 in 5 K-12-aged students did not have internet access at home. Schools had shifted to remote learning, and Chicago needed to act quickly to ensure that students could continue their education from home. By June 2020, the City of Chicago, in partnership with Chicago Public Schools (CPS) and Kids First Chicago, successfully galvanized the philanthropic sector to quickly stand up a $50 million public-private partnership, Chicago Connected.

Thanks to 10 philanthropic donors and the City's commitment of CARES dollars, Chicago Connected subsidizes at-home broadband costs for CPS families in need, connecting 77,000 students in its first year of operation and an estimated 100,000 students across the first two years of the program. Chicago Connected, the first program of its kind in the country, informed more than 20 cities' approaches to the digital divide and pandemic learning and was directly replicated in Philadelphia and Miami.

Philanthropic contributions allowed the City to respond swiftly to the emergency pandemic situation. Now, two years after the launch of Chicago Connected, the City is building upon the historic public-private partnership to understand and tackle the nuanced barriers to digital equity faced by Chicagoans citywide. Once again, philanthropy stepped up to complement the City's investment in closing the digital divide, funding a comprehensive community engagement effort through the Chicago Digital Equity Council. Thanks to philanthropic contributions, the Digital Equity Council is able to compensate community members for their time and contributions, provide incentives for participation, and contract with a stakeholder engagement expert to ensure that the engagement process is equitable and inclusive.

Philanthropic dollars can be deployed quickly and nimbly. Chicago Connected partners with United Way of Metro Chicago to serve as the fiscal agent for the program, allowing it to allocate and invest funds efficiently into communities. For example, philanthropic dollars are funding more than 20 community-based organizations to conduct outreach, support, and digital learning workshops for Chicago Connected families. This coming year, community partners will also assist community members with Affordable Connectivity Program sign-ups, moving beyond just K-12 families to additional households facing barriers to digital equity.

Initially, the Chicago Connected philanthropic funders weren't primarily motivated by the digital divide. Rather, the urgency of addressing low-income, primarily Black and Hispanic students not being able to attend school due to lack of internet access motivated Chicago Connected's seed funders and most of the immediate followers to invest in the program—as did the fact that the school district and City of Chicago also committed funds to the effort. As the funders saw the extraordinary success of Chicago Connected and learned more about how impactful connectivity was for families, a few funders have become more interested in the digital divide overall. These funders have learned that digital equity aligns with their core missions of racial and social equity.

7. Philanthropy Joins Hands to Build a New Generation of Leaders to Help Bring People Online

American Connection Corps, an initiative operated by Lead for America, is the nation's largest fellowship program focused on bridging the digital divide. AmeriCorps, Land O'Lakes, Heartland Forward's Connecting the Heartland initiative (which supports fellows in their target states of Illinois, Ohio, Arkansas, and Tennessee), and select partners from the American Connection Project all support the corps. The American Connection Corps is building and empowering a new generation of leaders to help bring connectivity to communities.

One fellow, Liz Lima, was placed at Rural LISC (a branch of the community development nonprofit Local Initiatives Support Corporation), which "help[s] rural community developers address the problems rural communities face."

Rural LISC manages a digital navigators program that takes a holistic approach to digital inclusion, including home connectivity, devices, digital skills, and free or affordable home internet service options. Navigators work at 41 sites in 20 states across the Appalachia region, the Deep South, the upper Midwest, and the Navajo Nation. "Digital equity leads to economic mobility," according to Christa Vinson, a program officer for Rural LISC, and the belief that "creating digital opportunity is all of our jobs" motivated LISC-affiliated organizations to enter the digital inclusion space and join the digital navigators program.

The sites are diverse—including affordable-housing developers, health providers, financial opportunity centers, and even a volunteer fire department—and each one possesses the trust of the local rural community.

But how did Rural LISC determine where best to target its efforts, particularly for those who needed help paying for internet service? Lima, the American Connection Corps fellow, made an impact by working 1) to understand the lessons learned from the Emergency Broadband Benefit (EBB) program rolled out by the Federal Communications Commission during the pandemic, and 2) to help increase enrollment in the FCC's successor program to EBB, the Affordable Connectivity Program (ACP). (ACP lowers the internet service bills of low-income people with a $30-per-month subsidy [$75 on tribal lands].)

Lima and other Rural LISC team members created an innovative mapping tool, the Affordable Connectivity Program Enrollment Visualization, that overlays ACP enrollment data with census data estimating ACP eligibility. This tool has helped target ACP outreach by pinpointing zip codes where large populations of people are likely eligible for the program but haven't yet taken advantage of it. To further assist digital inclusion practitioners' outreach strategy, the ACP visualization tool also layers data from the Digital Divide Index (DDI), which ranks digital exclusion on a scale from 0-100.

"The ACP map is an easy-to-use tool for local governments, organizations, and digital navigators interested in bettering digital equity in their communities. We hope this tool allows practitioners to see where outreach has been successful and where outreach is needed next," Lima said.

Reneisha Rudder, another fellow assigned to the Southeastern Indiana Regional Planning Commission, helped promote Indiana's Broadband Ready Community Program requirements by working with community leaders and organizations to establish broadband and digital inclusion task forces in five of nine counties in her region. Nathan Palmer works with PCs for People in Cook County, Illinois, which provides refurbished, affordably priced computers plus low-cost high-speed internet connectivity to eligible Illinois households, as part of a statewide Computer Equity Network.

The 50 fellows, who undergo extensive training, mentoring, and networking throughout the program, spend one year in their communities as leaders in digital inclusion, strengthening local civic infrastructure and helping to create the critical community development initiatives that broadband can enable.

BACK

8. Philanthropy Builds Capacity So Equity Is at the Forefront of Broadband Infrastructure Dollars Spent in California

Building a critical mass of informed and organized community voices in the broadband policymaking arena to balance the historical presence of private industry is a long-term capacity challenge in California—and in other states. How do digital equity advocates make their voices heard during the rulemaking process for California's $6 billion statewide broadband rollout?

The California Public Utilities Commission (CPUC) has new resources and authorities to be a partner to local governments and other agencies in closing the digital divide. Right now, the CPUC is determining specific applications and mechanisms for distributing state dollars for middle- and last-mile infrastructure and the loan loss program through regulatory rulemaking and eventually local implementation defined by those rules. The formal CPUC rulemaking process is a complex technical exercise favoring those voices most familiar with the intricacies of the broadband sector and how to engage the CPUC itself.

To ensure that equity is at the forefront of how every broadband infrastructure dollar is spent in the state, a group of philanthropies created a pooled fund to address the immediate, midterm, and long-term needs of digital equity advocates and practitioners in California.

Housed at the Michelson 20MM Foundation, the digital equity pooled fund—which has a minimum institutional commitment for participation and will grant dollars until December 31, 2024—is a collaboration between multiple funders who are focused on advancing digital equity in California.

The Michelson 20MM Foundation, the California Community Foundation, and the Silicon Valley Community Foundation are founding members and form the steering committee that will guide all aspects of the work including governance (strategy, direction, partnership opportunities), convening, education, and communications.

The effort aims to address:

- Short-term priorities include the provision of grants to groups who can educate digital equity advocates and city and county officials, bridging knowledge gaps with "how-to" one-pagers and recorded Q&A sessions.
- Midterm efforts include the development of a technical assistance center to support sustained community engagement at the CPUC on broadband and digital literacy and the establishment of regional and local technical assistance hubs for ongoing legislative, regulatory, and implementation advocacy. The purpose is to build the capacity of rural and urban grassroots organizations to engage on broadband infrastructure and digital equity issues.
- Long-term efforts aim to formalize a philanthropic digital equity workgroup, fostering philanthropic affinity groups and creating space to educate philanthropy on opportunities to support systemic change.

The first pooled fund grants, available to invited U.S.-based nonprofits doing work in California, went to:

- The Utility Reform Network (TURN) to implement the "Voice for Broadband Equity Project." This project will bring technical assistance to BIPOC-led, BIPOC- and low-income-community-serving organizations working to bridge the digital divide.
- The Center for Accessible Technology (CforAT) to implement the "Digital Equity Technical Assistance Project," which will provide "office hours" to nonprofit organizations to learn the fundamentals of CPUC practice and identify relevant proceedings and open comment periods.

Foundations precluded from joining the pooled fund are giving directly to organizations whose goals align with pooled-fund priorities. Since digital equity advocates must build relationships with community stakeholders, and with key legislative, administrative, and CPUC staff and leadership, some of this aligned funding is going to NextGen Policy to implement the "Digital Equity Nonprofit Capacity Building and Advocacy Project." The project will build relationships and capacity among nonprofit partners. The goal is to ensure that these partners have a clear understanding of current policy proposals at the state legislature and their potential impact on local communities. Confident in their own knowledge, partners will then inform policymakers about communities' broadband needs.

When digital equity legislation becomes California law, guidance for philanthropic and community partners on how to implement policy and evaluate programs will be critical. The pooled funders will continue to build capacity to meet the long-term needs of digital equity advocates around the state.

BACK

9. Island Institute's Rural Community Engagement Amplifies Maine's Broadband Efforts

The Island Institute works to sustain Maine's island and coastal communities, helping them tackle pressing environmental and socioeconomic issues and lead as examples of sustainability. With a focus on developing resilient economies, this philanthropic institution works with community leaders to increase broadband expansion in rural areas. As the most rural state in the nation—with mountains, coasts, and islands—Maine faces a mighty economic challenge to connect every resident to reliable high-speed internet service.

The Island Institute's broadband team engages with community leaders through working groups, financial and economic trainings, and conferences, and via the facilitation of discussions between community members, local officials, and internet service providers. Through the Tom Glenn Community Impact Fund, the Island Institute provides broadband planning grants to municipalities, local institutions, and nonprofits in Maine.

After years of working with Maine's rural communities, the Island Institute developed the Community-Driven Broadband Process to help guide community leaders through the steps for bringing broadband to their towns and residents. This process has guided more than 100 Maine communities as they began conversations around digital equity, and it has served as a model for 20 of those communities seeking fiber-to-the-home networks or infrastructure expansions through public-private partnerships.

The Island Institute also works with two recently merged state broadband authorities: the ConnectMaine Authority (ConnectME), established in 2006, and the Maine Connectivity Authority, established in 2021. They have recently joined forces to provide a streamlined approach for communities and ISPs seeking to expand broadband service. The Maine Connectivity Authority, through a contract with ConnectME, offers grants and resources to support community preparedness. It is actively continuing to build out mapping platforms that will support the prioritization of infrastructure funding and deployment statewide. The Maine Connectivity Authority also seeks to achieve universal high-speed broadband in Maine, but it has the ability to own physical infrastructure and steward partnerships.

Maine's broadband work is enhanced by a group of diverse community organizations across the state who formed the Maine Broadband Coalition (MBC) in 2015. Island Institute has played a leadership role in MBC from the start.

By collaborating with the Island Institute and the Maine Broadband Coalition, the state broadband authorities are able to share knowledge, engage with rural communities, and guide communities through grant applications. Kendra Jo Grindle, former senior community development officer at the Island Institute and now with the Maine Connectivity Authority, said, "Engaging the whole community in the process, learning from others, and working with [state] and nonprofit partners can help towns leverage the availability of public funding and their unique strengths to bring universal high-speed internet access" to Maine communities.

BACK

10. A Love Letter to Rural Minnesota's Broadband Champion, Bernadine Joselyn

Since 2003, Bernadine Joselyn has been a trailblazer, inspiring communities around the country to participate in broadband planning programs. The former director of public policy and engagement at the Blandin Foundation in Minnesota spurred philanthropy to get involved in digital equity and commit financial and other resources. "It's not about broadband," she said. "It's about what broadband can do. Broadband is the means to the end … Internet access is fundamental to everything philanthropy cares about."

She and her team, through the Blandin Community Broadband Program, engaged at the local, state, and federal levels to ignite and sustain policies that support rural access to robust broadband. Guiding this work is a vision: Everyone in Minnesota will be able to use convenient, affordable world-class broadband networks that enable us to survive and thrive in our communities and across the globe. This vision inspired the creation of the Minnesota Rural Broadband Coalition, which unites dozens of broadband champions from across the state to sustain broad, bipartisan support for Minnesota's broadband grant program.

According to Minnesota Governor Timothy Walz, the state has approximately 240,000 households that lack wireline access to 100/20 broadband service; 224,000 of those households are located in rural areas. Approximately 171,000 households (8 percent of all households in the state) lack access to 25/3 broadband; 161,000 of those households are located in rural areas.

Blandin has been empowering rural community leaders to focus on improving broadband infrastructure and services to enable community vitality and quality of life. The foundation trained these leaders on community broadband planning strategies to create their own path toward better connectivity. Blandin's programs have balanced broadband access, adoption, and use—spurring better infrastructure, addressing digital inclusion, and supporting more effective use of technology in business, education, health care, and civic engagement.

Bernadine served on the Governor's Broadband Task Force through multiple administrations and as a board member of ConnectedMN, a public-private partnership response to the pandemic. With a seat at these tables, Bernadine fiercely advocated for rural communities.

Through her policy acumen and well-earned reputation for being a trusted rural community broadband advocate, Bernadine transformed newly empowered community leaders into local broadband advocates. Her ability to form and maintain relationships through long and often tortuous policy debates has earned her respect and lasting friendships across Minnesota and the nation.

During her tenure, Blandin partnered with more than 70 rural Minnesota communities to invest over $5 million and leverage over $12 million in matching dollars to fund hundreds of projects across the state. Participating communities worked through a proven process to define their technology goals and measure current levels of broadband access and use. They received technical assistance and grant funding to implement projects that helped close the digital divide and take advantage of the extraordinary benefits of a broadband-enabled economy, including economic and workforce development. In addition, communities participating in Blandin programs secured millions in infrastructure development funds from federal and state agencies due to their community planning, commitment, and provider partnerships.

Led by Bernadine, the Blandin Foundation's innovative thinking and pragmatic and flexible program implementation led to the creation and deployment of the Accelerate program in Minnesota, as well as the creation of many of the tools shared in *Accelerate: A Community Broadband Planning Program*, published by the Benton Institute for Broadband & Society with support from Heartland Forward.

"Active engagement of community leadership is essential so that broadband infrastructure investments meet long-term community needs," said Bernadine. As Minnesota's Border-to-Border Broadband Development Grant Program assists localities, private providers, nonprofits, and cooperatives in building out broadband infrastructure—and continues to roll out its competitive matching capital grant program with federal funding—investing in the capacity of communities to name and claim their own broadband vision for the public's benefit is Bernadine's lasting legacy.

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ENDNOTES

1 Covered Populations: individuals who live in covered households (that is, a household with income that is not more than 150 percent of an amount equal to the poverty level), aging individuals, incarcerated individuals (other than individual who are incarcerated in a federal correctional facility), veterans, individuals with disabilities, individuals with a language barrier (think: those who are learning English or who have low levels of literacy), individuals who are members of a racial or ethnic minority group, and individuals who primarily reside in a rural area.

2 Sallet, Jonathan. October 2019. Broadband for America's Future: A Vision for the 2020s. Evanston, IL: Benton Institute for Broadband & Society. https://www.benton.org/publications/broadband-policy2020s

3 Bandwidth is the volume of information that can be sent over a connection in a measured amount of time—calculated in megabits per second (Mbps). If you have multiple devices and several family members on the internet at the same time, you'll need more bandwidth to keep up.

4 Here we define "unserved" to mean households who receive less than 25 Mbps download speed and 3 Mbps upload speed. Underserved means households that receive greater than 25/3 Mbps but less 100/20 Mbps.

5 Public rights-of-way (PROWs) in any community are generally owned by local government in fee or as easements that are dedicated to the general public and administered by local authorities as trustees for the benefit of the entire community. Traditionally, local governments manage access to and use of PROWs by private parties pursuant to state law.

6 BroadbandUSA's Speed Simulator demonstration tool is designed to help make smart decisions about a community's data needs. The tool lists typical internet uses and the data requirements. All examples assume a standard, minimum latency connection and are for demonstration purposes only.

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9 Shearer, E. (2021, January 12). More than eight-in-ten Americans get news from digital devices. Pew Research Center. https://www.pewresearch.org/fact-tank/2021/01/12/more-than-eight-in-ten-americans-get-news-from-digital-devices/

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12 Sallet, Jonathan. October 2019. Broadband for America's Future: A Vision for the 2020s. Evanston, IL: Benton Institute for Broadband & Society. https://www.benton.org/publications/broadband-policy2020s

13 Sallet, Jonathan. October 2020. Broadband for America Now. Evanston, IL: Benton Institute for Broadband & Society. https://www.benton.org/sites/default/files/BroadbandAmericaNow_final.pdf

Broadband Delivers Opportunities
and Strengthens Communities