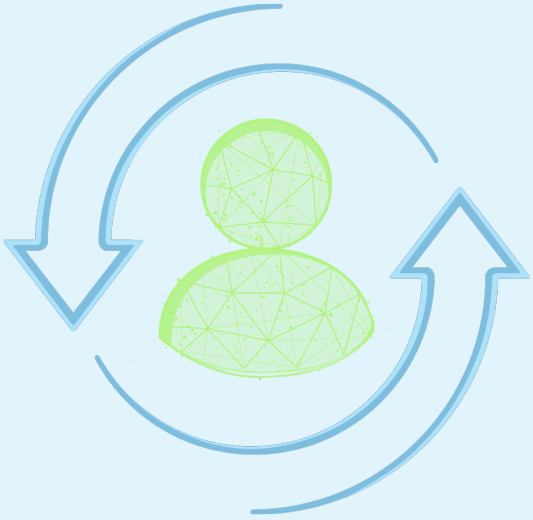
SMART

Tools for Digital Inclusion

Specific, Measurable, Achievable, Realistic and Timely Strategies For Digital Equity Planning

NTCA THE RURAL BROADBAND ASSOCIATION®



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Toolkit for Digital Inclusion

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Access appendices online at: ntca.org/member-services/digital-inclusion

This SMART Toolkit can also be accessed online at ntca.org/member-services/digital-inclusion

Introduction

The Infrastructure Investment and Jobs Act of 2021 (IIJA) allocates $42.5B for the expansion of broadband networks throughout the United States and territories. These funds, commonly referred to as "BEAD" (Broadband Equity, Access and Deployment Program) will be distributed by each state (and the District of Columbia and territories) in accordance with guidelines established by the federal government. Each state is required to create a Five-Year Action Plan describing how it will administer the deployment of broadband networks.

States participating in BEAD are "strongly encourage[d]" by the federal government to also participate in programs funded by the Digital Equity Act of 2021 (DEA), which allocates $2.75B to promote digital inclusion. Like BEAD, these funds are to be distributed by the states (these funds will be administered through three principal programs: the State Digital Equity Planning Grant Program; the State Digital Equity Capacity Grant Program and the Competitive Digital Equity Program). Although BEAD does not require that states participate in DEA programs per se, BEAD guidelines nevertheless stipulate states "cannot have a Five-Year Action Plan that does not address digital equity." Accordingly, DEA provides substantial guidance to states seeking to promote broadband adoption and engagement among covered populations, which include, but are not limited to, low-income individuals; the elderly; racial and ethnic minorities and rural populations.

This SMART Toolkit is intended to assist rural internet service providers (ISPs) and state broadband offices (SBOs) in their development of state Digital Equity Plans. Moreover, to the extent that individual state scoring criteria may include applicants' digital inclusion efforts, aspects of this SMART Toolkit can be incorporated into individual BEAD planning and applications.

Three broad stages of community planning to address community assessments, assets and action are presented here. These include a general community overview, sample surveys, action plans and examples of digital inclusion efforts undertaken by NTCA member companies. Appendices to this SMART Toolkit include baseline broadband adoption data against which local engagement rates can be compared, federal guidelines for digital equity plans and a Digital Equity Plan template.

A History of Digital Inclusion

NTCA members who live in and serve rural communities with increasingly diverse populations have deployed digital inclusion strategies long before such efforts were anticipated to respond to regulatory standards. As providers who are based within the small communities they serve, NTCA members recognize the imperative to ensure ubiquitous access to, and engagement with, robust future-proof broadband. Accordingly, these locally operated companies engage broad offerings of digital inclusion efforts, including digital literacy programs and outreach initiatives to make these vital services accessible and affordable to rural users. Profiles of these companies are featured throughout this SMART Toolkit.

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The locally-operated, facilities-based ISP members of NTCA demonstrate impressive broadband deployment achievements. More than 80% of NTCA members' customers on average can receive downstream speeds of 100 Mbps. Additionally, subscriptions in NTCA member service areas to broadband service packages of 100 Mbps-1 Gbps service increased 29.7% from 2021 to 2022. Successful digital inclusion strategies engage even more users with broadband and its enabled applications that improve agriculture, economic development, education, healthcare and other vital services in rural spaces.

What is Digital Inclusion?

Digital equity and inclusion are the achievement of equivalent broadband adoption and usage across different demographic groups. Digital inclusion includes digital literacy, which is defined as the ability to understand technology and use related devices and applications, as well as cybersecurity literacy, which is necessary to keep users and their devices, networks and information safe. A Digital Equity Plan (DEP) defines a strategy to ensure that those who are not currently empowered by broadband have access to digital tools and technology.

Who is a "covered population?"

According to federal rules, digital equity programs are intended to promote the adoption and meaningful use of the internet among covered populations, which include: (1) individuals in low-income households; (2) aging individuals; (3) incarcerated individuals (except those in federal correctional facilities); (4) veterans; (5) individuals with a disability; (6) individuals with a language barrier (including English learners or those with low levels of literacy); (7) racial and ethnic minorities; and (8) rural residents. These categories do not preclude rural ISPs from reaching additional populations.

National broadband adoption data is provided in Appendix A.

Creating a Digital Equity Plan

A successful DEP will differ from state-to-state since each state has different needs and challenges. Local community participation is vital to ensure the statewide plan meets local needs. Accordingly, it is important that DEPs offer sufficient flexibility for tailored implementation at the local level. National Telecommunications and Information Administration (NTIA) guidelines provide a broad, yet specific, overview of what a DEP must address. These include, but are not limited to:

- **The plan's vision for digital equity**
- **Identification of barriers faced by covered populations**
- **A needs assessment (discussed more fully later)**
- **An asset inventory (discussed more fully later)**
- **Measurable objectives to document and promote availability, affordability, digital literacy, cybersecurity awareness and access to user devices**
- **Assessments of how broadband will affect economic conditions, including workforce development, education, healthcare, civic and social engagement and delivery of essential services**
- **A description of community partners, including local governments, anchor institutions, non-profit organizations, groups representing covered populations and where applicable, Indian Tribes, Alaska Native Nations or Native Hawaiian organizations**
- **Outreach strategies**
- **Plans to address affordability, digital literacy and cybersecurity awareness**
- **How the DEP complements and supplements existing state resources and plans**
- **State plans to coordinate with workforce agencies, schools and labor organizations**
- **A timeline for the plan**

NTIA guidance is provided in Appendix B. A sample DEP framework based on NTIA materials is provided in Appendix C.

Needs Assessment and Asset Inventory

The needs assessment and asset inventory enable states and partners to identify how current and prospective users can engage broadband; where efforts to increase engagement are most needed and tools that communities can deploy to meet DEP goals.

Needs Assessment

States and local communities (and particularly rural communities) can be expected to experience broadband engagement trends that differ from national averages. Accordingly, a "needs assessment" will reveal where local DEP efforts are best focused. Partners in this undertaking can include the ISP, government representatives, community leaders and members of the public. The needs assessment can be conducted through surveys, focus groups, public meetings and individual interviews. While the results of these surveys can be compared to national trends to measure local performance, the findings will more importantly help SBOs, ISPs and other inclusion champions develop local strategies to increase digital participation within less-engaged groups.

Needs Assessment Action Plan

1. Identify potential government and private sector community partners to identify their respective constituents' needs and how broadband can meet those needs. These partners can include social service organizations, fraternal and professional associations, schools and libraries and faith-based organizations.

2. Create and conduct a survey that includes current and prospective broadband users to identify purposes for which users currently and would use broadband; conduct similar surveys with government, educational, health, agriculture, commercial and not-for-profit partners to identify outcomes in those sectors that improve through increased broadband engagement.

3. Collate data to create an image of desired broadband outcomes and current standing. Determine how digital inclusion efforts can fill gaps and create a plan to increase broadband engagement among covered populations.

Sample Needs Assessment Survey

A typical needs assessment survey can include the following questions:

1. Age
2. Sex
3. Race
4. Highest educational level completed
   (a) High school
   (b) Some college
   (c) College graduate (trade college or two- or four-year college)
   (d) Graduate degree

5. Household income
6. I am
   (a) Rural resident
   (b) Veteran
   (c) Individual with a disability
   (d) English learner or low level of literacy
   (e) Incarcerated (does not include individuals incarcerated in a Federal correctional facility)
   (f) Prefer to not say

7. I subscribe to mobile broadband (cell phone) service yes/no
8. I subscribe to home broadband service (yes/no)
9. I do not subscribe to broadband at home but access it elsewhere
   (a) Friends' houses or offices
   (b) My place of employment
   (c) Public library
   (d) School
   (e) House of worship
   (f) Civic or public recreation center
   (g) Internet café
   (h) Downtown/parks
   (i) Outside schools, restaurants, or other public facilities
   (k) Other (please describe)

10. If you answered "no" to questions 7 or 8, please explain why
    (a) Service is too expensive
    (b) Do not need it
    (c) Do not know how to use it
    (d) Equipment (computer or other) is too expensive
    (e) Other (please describe)

11. I use broadband for:
    (a) School
    (b) Telework
    (c) Healthcare
    (d) In my business (please describe – farming; sales; manufacturing; professional services)
    (e) In my home business
    (f) Communicating with friends and family
    (g) Entertainment (movies, music, video)
    (h) Gaming
    (i) Other (please describe)

12. I am satisfied/not satisfied with my broadband service
    (a) Price
    (b) "Speed"
    (c) Customer service
    (d) Other (please describe)

13. If eligible, I would take advantage of reduced-price broadband programs for low-income users yes/no

    If no, please explain

NTCA Member Profile

- Horry Telephone Cooperative, Inc. (HTC) (Conway, S.C.) worked extensively to identify the scope of various demographic communities within its service areas. HTC conducted targeted outreach within specific segments, including the elderly and families with children. Working with community organizations, HTC pinpointed issues of predominant interest within the various communities and, alongside local leaders, selected venues and approaches that would be attractive for outreach efforts. These efforts culminated in a tailored educational curriculum that addresses different use scenarios for broadband, including telehealth, financial management and education. HTC personnel partnered with community leaders to design outreach sessions focused on "introductions to broadband" and digital literacy programs. By working hand in hand and appearing with community leadership, HTC conveyed the hallmark of locally operated communications providers, namely, their commitment to serving their community. These grassroots outreach efforts reflected simultaneously the general strategy of promoting broadband adoption alongside targeted efforts to increase digital inclusion within specific demographic groups.

Asset Inventory

An asset inventory helps SBOs, ISPs and other principals identify existing resources that can contribute to implementation of the DEP. An inventory of community assets begins by identifying current local broadband capabilities, including a relative comparison of those capabilities to meet short-term and long-term goals.

- **Does the community have a fiber broadband provider?**
- **Does the community rely on wireless or satellite service?**
- **Do those technologies support applications desired by residential, commercial and government users, as reflected in the community needs survey?**

Community assets also include people, tools and facilities that can help the community meet its broadband engagement goals. For example:

- **Is the community home to broadband and technology experts who can impart their knowledge (and enthusiasm) to others?**
- **Does the community have facilities that can host digital inclusion and engagement events, such as a civic center, social hall or library assembly room at which digital literacy and cybersecurity awareness can be promoted?**
- **Does the community have a social services agency or other organizations that can conduct specific outreach to low-income or disenfranchised individuals?**
- **Does the community have a local chamber of commerce or business association that can survey and promote broadband engagement among local businesses and their customers?**
- **Can students from area schools or nearby colleges be recruited to assist with instruction in digital literacy and cybersecurity awareness?**

Each DEP and its implementing community will benefit from strategies that incorporate existing community assets. The asset inventory can also be useful to highlight where gaps might exist in local resources.

Asset Inventory Action Plan

1. Identify current local broadband resources and capabilities; compare current capabilities to desired outcomes as reflected in the Needs Assessment.
2. Work with community partners as identified in the Needs Assessment to identify how their respective and collective resources can be deployed to increase awareness of and engagement with broadband. These resources may include interpersonal connections as well as financial, educational, technical and physical space that can be applied to develop greater digital inclusion within the community.
3. Confer with philanthropic and other organizations, including commercial firms, to identify avenues to increase access to affordable hardware.

Taking a Community Asset Inventory

SBOs, ISPs and their community partners can undertake a joint inventory from a common template. The collective results can present a comprehensive impression of community assets.

1. Broadband services currently available in the community
(a) Wired (specify fiber, cable, DSL)
(b) Mobile wireless
(c) Fixed wireless (specify licensed or unlicensed)
(d) Satellite

2. Anchor institutions utilizing broadband
(a) Schools
(b) Libraries
(c) Hospitals
(d) Manufacturers/Industry
(e) Military
(f) Government
(g) Public safety and essential services

3. Community organizations/digital champions
(a) Social/fraternal organizations
(b) Trade associations (including chamber of commerce, farmers associations, small business association, medical/dentistry, manufacturers, banking, and entrepreneurial)
(c) Faith-based organizations
(d) Social services support
(e) Veterans' associations
(f) New Americans/Immigration
(g) Elder services
(h) Low-income support services
(i) Schools
(j) Charitable foundations and not-for-profit organizations

4. Digital literacy/cybersecurity awareness partners
(a) Libraries
(b) Social service organizations
(c) Schools, including high-schools and colleges
(d) Technology providers, including services and consumer products
(e) Business associations, working with local businesses
(f) Youth associations, including Scouts, Future Farmers of America, and 4-H

5. Conduits for connectivity
(a) Schools providing laptops or other devices
(b) Businesses or other organizations offering second-hand/recycled equipment
(c) Libraries or other lending associations
(d) Other (please describe)

6. For each of the organizations enumerated in items 3-5, above, please consider how they currently meet the needs of each of the covered populations and how their participation can help implement the DEP.

Advancing Digital Literacy

Digital literacy refers to the ability of users to navigate the internet and the devices used to access the internet and its supported applications. Digital literacy can be promoted in classes, one-on-one instruction and community gatherings. Tiers of digital literacy include:

Hardware and Connections

- Introduction to computer hardware, including desktops; laptops; tablets; e-readers; phones and other devices.
- Introduction to network configurations and platforms including wired (fiber, cable and DSL); wireless (mobile and fixed); satellite; Wi-Fi; LANs.

Meeting the Internet

- Introduction to the internet, including definition and examples of ISPs; knowledge of browsers; understanding of domain types.
- Advanced instruction in web-browsing, history and function of cache; navigation and use of hyperlinks and pop-ups.
- Uploading and downloading files; texts; graphics; photos; video; web search skills.
- Digital hygiene; internet safety for children; passwords; antivirus and security.

Email and Social Media

- Email; passwords; etiquette of online communications.
- Use of social media and digital identities.
- Using the internet for shopping, education and healthcare; privacy, network and personal security.

Cybersecurity Awareness

Cybersecurity is the practice of protecting devices, networks and information from unauthorized access. Information includes business, government and personal data and unauthorized access can include both accidental, intentional or malicious breaches. The growing use of broadband in agriculture, economic development, education, healthcare, public services and other sectors increases the opportunity for harmful breaches that can compromises users' financial, personal, business and reputational standing.

Efforts to increase digital inclusion and engagement can be safely effective only when accompanied by robust cybersecurity practices, including cybersecurity awareness to assist new and current users with protecting their devices, networks and information. Digital inclusion and engagement coaches are advised to emphasize the importance of "digital hygiene," including:

- Updating software and enabling automatic updates and patching
- Installing anti-virus software and firewalls
- Strong passwords and multi-factor identification
- Securing home Wi-Fi networks and caution when using public networks
- Phishing and scams
- Backing up data regularly, either in the cloud or on supplemental external drives
- Regular review of all credit, mortgage, bank and other accounts to detect fraudulent activity

Effective awareness of these topics requires a basic understanding of how the internet operates; how devices connect to each other; and the importance of securing sensitive personal identifiable information (PII), including health, family and financial records.

Helping Communities Stay Safe Online

CyberShare

Small broadband providers are committed to helping keep their customers safe online and participate more meaningfully in our digital economy.

As part of this commitment, NTCA introduced CyberShare: The Small Broadband Provider ISAC (cyber-share.org) in 2020, to help small broadband providers protect their networks through an intelligence sharing community. Additionally, NTCA releases cybersecurity communications resources to its ISP members during Cybersecurity Awareness Month (in October) and encourages sharing messages about how to stay safe online with their customers and other consumers.

NTCA Member Profiles

- Focus Broadband (Shallotte, N.C.) partnered with local county public libraries to create a digital inclusion plan. Measures include surveying residents about their internet usage, service tiers used and provider information. Focus also supported virtual fitness classes for senior citizens in the county during the COVID-19 pandemic.

- People's Rural Telephone Co., Inc. (McKee, Ky.) supports Project CAFÉ (Computers Are For Everyone). PRTC members can apply for an 18-month, low interest loan to purchase a new home computer and 18 months of broadband internet access.

- UniTel, Inc. (Unity, Maine) provides funding for a digital literacy training program and partners with "PCs For Maine" to assist with required hardware, software, and devices for people who need a computer to achieve an important personal goal such as literacy, education, small business startups, job skills training or overcoming a disability.

- Hart Telephone Co., Inc. (Hartwell, Ga.) provides a high-speed fiber optic network that allows schools to connect to distance-learning; student devices and tablets are used for learning from anywhere.

Community Action

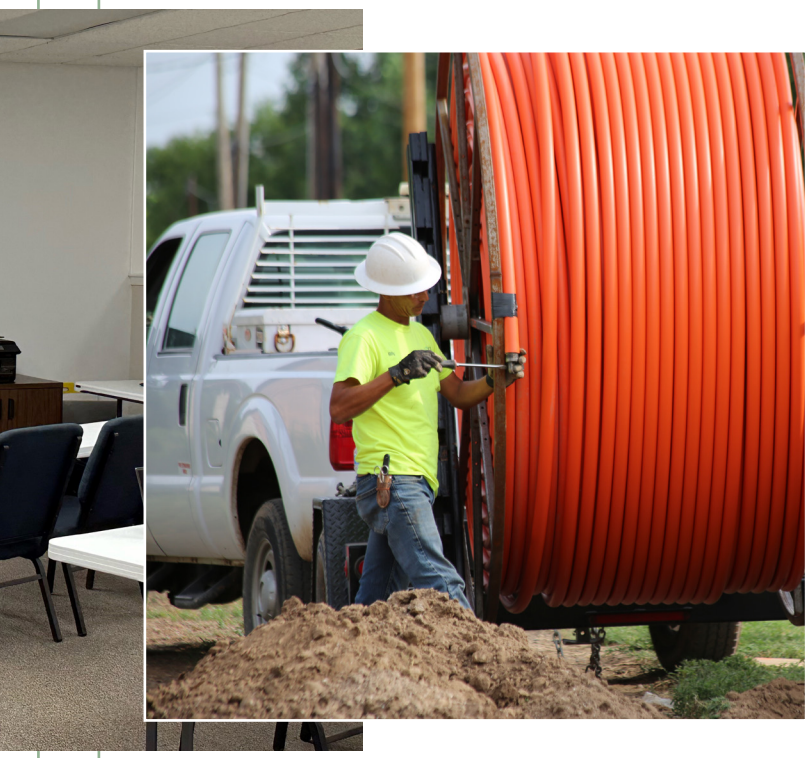
Successful outreach strategies rely on a significant understanding of the identified audience. This enables the development of targeted communications, strategies and methods to meet the specific needs and interests of each covered population. In many instances, understanding community needs begins with introductory communications among public principals and community members. ISPs and their partners can meet with leadership from target communities to learn more about what drives interest and adoption among their constituents. For example, one community may identify perceived relevance of broadband as the most significant barrier to entry, while another may cite affordability as the most pressing challenge. Identifying those dynamics will help the ISP, government officialsh and community leaders develop effective DEP strategies to bridge broadband divides.

Outreach methods may vary. Some communities may find large-scale events useful, while others might benefit from one-to-one efforts. Digital inclusion principals are also advised to identify and

work with trusted partners from the communities they intend to serve. These partners can stand with the ISP and other inclusion champions to encourage communities to engage. Moreover, an array of outreach channels can be considered, from traditional print and radio to social media, to outreach at community fairs and events. In these endeavors, it is also useful to observe the success of channel or method, and to adjust where necessary.

Community Action Plan

1. Identify target audiences for engagement.
2. Determine mode of engagement, whether broad or targeted advertising; outreach through organizations; or one-to-one connections. Identify representatives and ambassadors for covered populations.
3. Define how the effectiveness of engagement can be measured so that adjustments, as necessary, can be made.
4. Establish timeline and goals, including ongoing outreach to facilitate engagement with new technological developments.



NTCA Member Profiles

- Sacred Wind Communications (Yatahey, N.M.) serves Navajo Nation lands and partnered with a career academy to provide internet access for students during the coronavirus emergency. These efforts illustrate the unique role of locally operated broadband providers- their presence in and knowledge of each community's needs and their ability to work effectively with local partners.

- Waitsfield and Champlain Valley Telecom (Waitsfield, Vt.) and Maple Broadband, a communications union district (CUD), signed an agreement to manage and deliver services to Maple Broadband's fiber network. CUDs are non-profit municipal entities with the single goal of delivering highspeed fiber broadband service to every unserved and underserved address in their member towns.

- Totelcom (De Leon, Texas) offers a Learning Center in a downtown location where anyone can bring their electronic devices to receive one-on-one assistance.

- Triangle Communications (Havre, Mont.) offers a Connected Community Program to fund digital literacy projects up to $2,500. Project topics include entrepreneurship, job creation, outreach and broadband adoption.

Focus on Youth

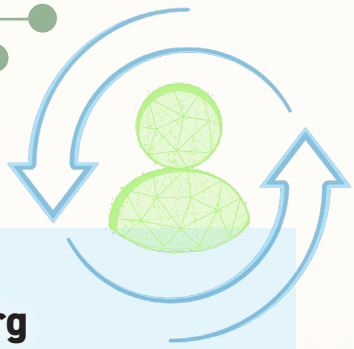
Broadband engagement benefits youth and young adults. Schools can be important partners in efforts to increase digital engagement. While students are largely back to in-person learning, the COVID-19 pandemic enlightened educators, parents and students to opportunities in distance and remote education and the greater opportunities those tools offer to students, particularly those in rural and insular areas. In all regions, increased use of broadband capabilities for in-school and outside-school assignments is expected to continue. Moreover, the benefits of broadband are not limited to supporting distance education during disruptive times. Rather, broadband access has been demonstrated as a factor in student success across a variety of settings. A Michigan State University study explored the relationship between connectivity and middle and high school students' performance on standardized tests and school subject areas. Students with home internet access scored higher on the SAT and PSAT than students with only mobile cell phone access as well as those with no access. Notably, these results controlled for demographic factors. Similar data were reported by the Federal Reserve Board, with higher average GPAs in social sciences, mathematics and science for students with home broadband access as compared to students with no home access or only mobile wireless access. These data complement findings from prior studies reporting that youth who live in areas with broadband are found to have earned higher scores on college entrance exams. Additionally, lack of broadband has been identified as compounding difficulties for students who have preexisting limited avenues to higher level academic institutions.

Engaging Our Elders

Senior citizens can face loneliness and isolation. "Loneliness" refers to the experience of unfulfilled social and intimate needs, while "isolation" is a lack of social connections. A person can be isolated, yet not feel lonely, while a person with social contacts can feel lonely. Broadband engagement strategies to embrace aging populations can mitigate these conditions. Preliminary research suggests a link between the use of information communications technology (ICT) and improved mental health outcomes in elderly populations; these occur independent of seniors' engagement with social networking sites (SNS). Engagement with ICT has been found to correspond to positive self-esteem as well as personal identity, which themselves can play a role in overall emotional status, including impacts on subjective feelings of loneliness. Moreover, engagement with ICT is a foundational element of telehealth, which offers substantial benefits to seniors who live in communities that endure shortages in specialist health care, or who face transportation or other challenges accessing even local services. While current research is at a nascent stage, an evolving body of literature suggests several encouraging conclusions. Positive correlations between ICT usage and loneliness and/or senior isolation have been identified, even if more focused studies will be necessary to develop more precise conclusions. At the same time, there are consistent reminders that SNS use by the elderly, as is the case in other age populations, is a useful supplement to but not a replacement for face-to-face interactions. Finally, growing telehealth usage among the elderly leads to improved health outcomes. Taken together, these findings support logical, common-sense efforts to increase digital inclusion, including adoption, literacy and cybersecurity awareness, among the elderly.

TEN DIGITAL PLANNING QUESTIONS

1. What need is your company trying to address – adoption, increased engagement, or both?
2. Who is your target population or populations?
3. What are your short-term and long-term goals?
4. Who are your potential partners?
5. What will development and implementation of these plans cost?
6. What resources to pursue these goals currently exist in your community, including those within your company, local government and the private sector?
7. What is the initial time frame for launching the initiative?
8. Do you predict an ongoing need to maintain these efforts over the long term?
9. How will you evolve and sustain this initiative?
10. How will you evaluate the success of the project?



Share & Connect with us at communications@ntca.org

Do you have a digital inclusion activity or idea to share with other small broadband providers? Connect with us at **communications@ntca.org**. For additional information about this report, please contact the author **Joshua Seidemann**, VP Policy and Industry Innovation, **jseidemann@ntca.org.**

PRO-TIPS
Messaging

1. Craft the outreach message carefully by relating it to people's lives.

2. Use active outreach strategies that are engaging and interactive.

3. Enlist trusted spokespeople and ambassadors.

4. Reach people through multiple media.

5. Track who is responding and adjust when necessary.

- **SPECIFIC: Who is the target audience?**
- **MEASURABLE: How will the company know if the outreach messaging is effective?**
- **ACHIEVABLE: How can the company best craft outreach messaging?**
- **REALISTIC: Is the outreach messaging aligned properly with the community and its residents' interests and needs?**
- **TIMELY: What is the time frame for crafting the outreach messaging?**

NTCA Member Profiles

- Home Telecom (Moncks Corner, S.C.) partnered with its public school district to provide free internet to households with school-age children in lower-performing schools. Home Telecom has invested in infrastructure updates to support this initiative.

- GRM Networks (Princeton, Mo.) supports students from households that cannot afford broadband. GRM offers schools discounted service that supports open Wi-Fi networks and provides six libraries in its service area with free broadband.

- Skyline Membership Corp. (West Jefferson, N.C.) works closely with schools in five counties through its Skyline/SkyBest Student Connect Grant Program to link fiber-based internet access directly to the homes of those students who lack access due to need or challenging circumstances.

- Valley TeleCom Group (Wilcox, Ariz.) provided internet and social media safety fliers and fact sheets to parents and educators during back-to-school activities, including cybersecurity vocabulary and information on the most common internet scams.

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