



6 Steps to Better Broadband

Why is broadband important to your community?

Rural broadband availability and adoption are associated with:

- Attraction and retention of millennials
- Greater economic growth
- Attraction of new firms
- Higher household income
- Small business growth

Gallardo, R., Whitacre, B., Grant, A. (January 2018)

Is your community leveraging broadband?

- Does your community have adequate broadband for businesses, work-at-home employees, health care and education?
- Are there opportunities in the community to learn how to use new technologies?
- Does the library have adequate broadband to provide internet access to those who do not have broadband at home?
- Are local health care providers using telehealth technologies to improve access to care and patient outcomes?

The following six steps can help your community or region to leverage broadband to create jobs, improve access to education and health care, and improve quality of life.

STEP 1: GET ORGANIZED

- Identify one or more community champions.**

- Community champion(s): _____

- Establish a core group.** If possible, include representatives of

- Business and industry
- Community foundation
- Local government
- Local or regional economic development organizations
- Education
- Libraries
- Health care
- Financial institutions
- Telecommunications providers
- Local public power district or cooperative
- Nonprofit organizations, and
- Key populations

Broadband-related development doesn't require community leaders who know all of the answers. It does, however, require community leaders who have the passion and commitment to find the answers.

- Develop an “elevator pitch”** to explain the need for better broadband.

Pitch: _____

- Contact Local and State Officials and Resources** to make them aware that your community wants better broadband or is running into particular issues. They may be able to help identify strategies and solutions.

STEP 2: GATHER INFORMATION

- ❑ **Complete a community assessment** to identify areas that need to be improved and assets that can be leveraged.
- ❑ **Inventory current broadband services.**
- ❑ **Document Demand for Broadband.**
Understand how individuals and businesses are utilizing broadband and identify those interested in better service. Conduct a broadband household and business survey.
- ❑ **Talk to Your Local Providers.** Ask your local providers about current service available, future plans and what can be done to encourage deployment.
- ❑ **Map community infrastructure assets (including duct, high points) as well as institutions and residences interested in better broadband.**
- ❑ **Talk to other communities.**

Community Assessment Tools

Nebraska County Broadband Fact Sheets

<http://nlc.nebraska.gov/stats/broadband/>

Intelligent Community Checklist for Rural Communities*

<https://pcrd.purdue.edu/checklist>

Leveraging Broadband in Your Community: A Workbook to Help Communities Stimulate Broadband Development

(Nebraska Broadband Initiative, 2014)

<http://broadband.nebraska.gov/workbook/html5/index.html>

Broadband Impacts Rural Health Care

Broadband connectivity is playing a greater role in healthcare, with more than three-fourths of U.S. hospitals connecting with patients and consulting practitioners through video and other technology.



With broadband service, rural residents can:

- Research health topics online
- Access electronic health records
- Make appointments and communicate with health care providers
- Access health primary and specialty care via telemedicine
- Participate in home monitoring telehealth services

Photo Credit: L1040381.jpg by Ref54 is licensed under Creative Commons Attribution-NonCommercialNoDerivs 2.0 Generic (CC BY-NC-ND 2.0). See photo credits on back page.

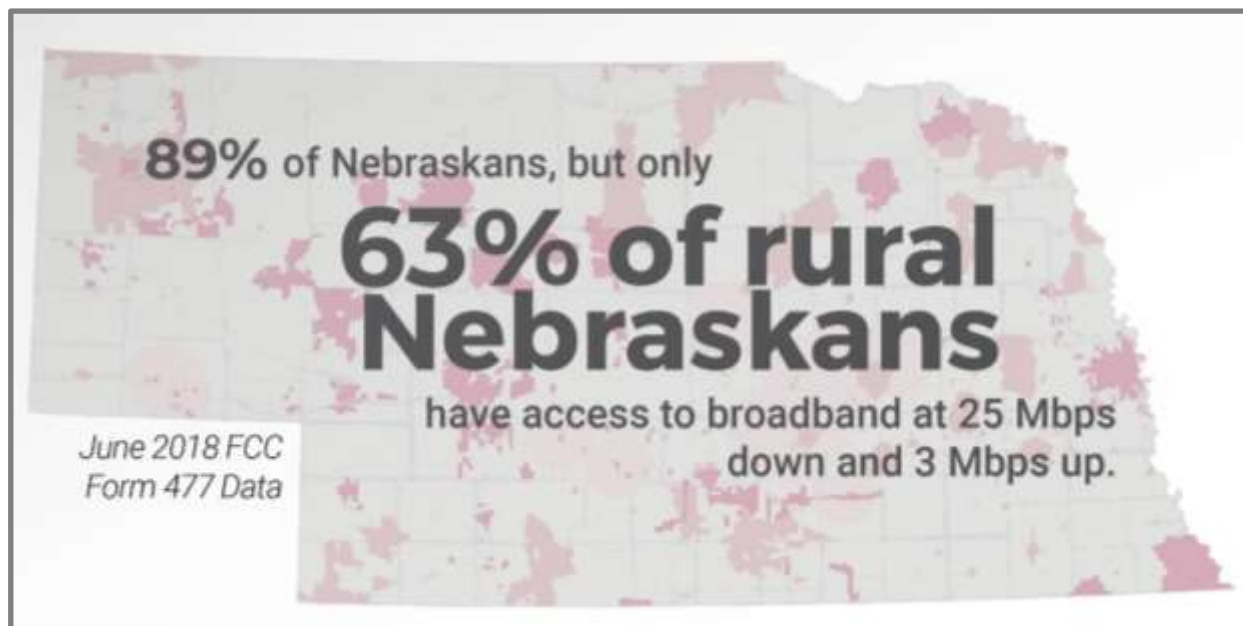
Sources: Statement of the American Hospital Association for the Energy and Commerce Subcommittee on Communications and Technology of the U.S. House of Representatives: Realizing the Benefits of Rural Broadband: Challenges and Solutions. (July 2018). Available at <https://www.aha.org/system/files/2018-07/180717-statement-rural-broadband.pdf>

STEP 3: BUILD A COMMUNITY MOVEMENT

- Build Awareness.** Community members, businesses and those living outside of city limits need to understand the importance of broadband and how new technologies can be utilized
- Host events and involve the community in conversations.**
- Develop partnerships and collaboration.**
- Use social media to share information.**

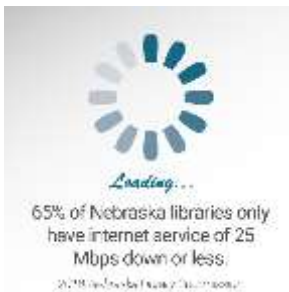
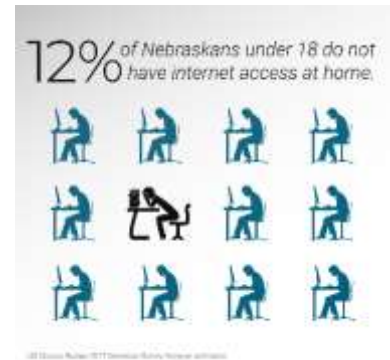
STEP 4: EXPLORE STRATEGIES TO IMPROVE BROADBAND SERVICES

- Review Local Permitting and Rights of Way Processes** to make sure applications are processed in a timely manner and are not unduly burdensome on telecommunications providers.
- Encourage Public-Private Partnerships** by:
 - Encouraging local power providers and telecommunications companies to engage in communications planning.**
 - Placing Conduit in Right of Way.** Communities can lease conduit to telecommunication providers, reducing costs for providers and reducing the need to dig up streets.
 - Inventorizing High Points** such as grain elevators and water towers that may be used for fixed wireless deployments. This can help attract a fixed wireless provider and reduce their costs.
 - Conducting an Engineering Study.** Conducting an engineering study is another way to partner with a provider to identify the best locations to deploy broadband.
 - Exploring Financial Incentives.** Offer a low-interest loan, a loan over a longer period, or explore grants or other cooperative approaches.
- Explore Forming a Broadband Cooperative.** A broadband cooperative may have certain investment and tax advantages and may empower stakeholders to focus on solutions rather than problems.



STEP 5: ADDRESS DIGITAL INCLUSION AND SKILLS DEVELOPMENT

- ❑ **Enhance Broadband in Libraries.** The E-rate program can provide funding for library internet service and Wi-Fi. Libraries may also be able to partner with schools to improve library internet access.
- ❑ **Address Digital Inclusion and the Homework Gap** by implementing programs to provide internet access for students to complete homework and for others in the community who lack internet access. Examples include hot spot lending programs at the local school or library and Wi-Fi on buses.
- ❑ **Encourage Broadband Use and Skills Development.** Classes at the local library or a maker space are great ways to help community members learn about new technologies.



Library Broadband and Digital Inclusion Resources

Contact Holly Woldt (holly.woldt@nebraska.gov, 402-471-7980) for information about strategies to improve library broadband, Christa Porter (christa.porter@nebraska.gov, 402-471-3107) for assistance with library E-Rate applications, and Tom Rolfes (Tom.Rolfes@nebraska.gov, 402-471-7969) for information on strategies to address the homework gap.

STEP 6: DEVELOP AND IMPLEMENT A PLAN

Develop a plan for improving broadband availability, encouraging the use of broadband in the community, and addressing digital inclusion.

- ❑ Prioritize action items.
- ❑ Include a few easy wins to keep the momentum going.
- ❑ Establish goals and measures.

State Contacts

Anne Byers
Nebraska Information Technology
Commission
Anne.byers@nebraska.gov
402-471-3805

Cullen Robbins
Nebraska Public Service
Commission
Cullen.robbins@nebraska.gov
402-471-0230

Charlotte Narjes
University of Nebraska-Lincoln
Cnarjes1@unl.edu
402-472-1724

Tom Rolfes
Nebraska Information Technology
Commission
Tom.Rolfes@nebraska.gov
402-471-7969

Holly Woldt
Nebraska Library Commission
holly.woldt@nebraska.gov
402-471-7980

Roger Meeks
USDA Rural Utilities Service
Roger.Meeks@wdc.usda.gov
402-420-1467

Members of the University of Nebraska Extension Community Vitality Initiative field or statewide staff may be able to facilitate broadband planning effort in your community. See <https://communityvitality.unl.edu/CVIDirectory> for contacts.

Additional Resources

Additional resources are available at <https://ruralbroadband.nebraska.gov/resources/index.html>

Broadband, Precision Ag Technologies Would Add \$47 to \$65 Billion to U.S. Economy

Broadband and precision agricultural technologies are becoming increasingly important for agriculture. The USDA estimates that fully utilizing precision agricultural technologies would generate approximately \$47-\$65 billion annually in additional gross benefit for the U.S. economy.



The USDA identified the following economic and environmental benefits of precision agriculture

- 40% less fuel burned due to variable rate technologies
- 20% or greater reduction in water usage
- Up to 80% reduction in chemical application

Precision agriculture is in use by the early majority of row crop producers, with guidance systems used on approximately 50% of the planted acres of some row crops in the United States. The use of precision agriculture in specialty crops and livestock is still in the early stages of adoption, however.

Precision agricultural equipment requires both GPS and mobile broadband connectivity. Wired broadband can facilitate the transfer of the vast amounts of data generated by precision agricultural equipment from the field to the cloud where the data can be stored and analyzed. Currently 75% of agricultural producers in Nebraska have internet access. Many of these producers may lack sufficient upload speeds to transfer large amounts of data, necessitating the transfer of data via sneakers or the mail.

Sources: USDA. (April 2019). A Case for Rural Broadband: Insights on Rural Broadband Infrastructure and Next Generation Precision Agriculture Technologies. Available at <https://www.usda.gov/sites/default/files/documents/case-for-rural-broadband.pdf> USDA. (August 2017). Farm Computer Usage and Ownership. Available at <https://usda.library.cornell.edu/concern/publications/h128nd689>

Photo Credit: Mary Ridder

Photo Credits. Page 3: Creative Commons L1040381.jpg by Ref54 is licensed under Creative Commons Attribution-NonCommercial-NoDerivs 2.0 Generic (CC BY-NC-ND 2.0), no changes made. License: <https://creativecommons.org/licenses/by-nc-nd/2.0/>. Page 6: Mary Ridder