



# Nevada Broadband Workshop

**September 27, 2019**

Lawlor Events Center at the University of Nevada, Reno  
1664 N Virginia Street  
Reno, NV  
September 27, 2019



## Jojo Myers Campos

*State Broadband Development Manager*

*Nevada Governor's Office of Science, Innovation and  
Technology*



**Philip V. Cowee**  
*Nevada State Director  
Rural Development  
U.S. Department of Agriculture*



## Laura Spining

*Acting Associate Administrator*

*National Telecommunications and Information Administration*

*U.S. Department of Commerce*

# Agenda

- Welcome & Opening Remarks
- Planning a Community Broadband Roadmap
- State of Nevada Updates
- Federal Permitting
- ReConnect and Other USDA Broadband Funding Programs
- Closing Remarks



**Catherine Cortez Masto**  
*United States Senator*



# Break

Nevada Broadband Workshop

Reno, NV



# Planning & Funding a Broadband Infrastructure Project

## Nevada Broadband Workshop

Lawlor Events Center at the University of Nevada, Reno  
1664 N Virginia Street, Blue-Silver Room  
Reno, NV  
September 27, 2019



# Speakers



**Laura Spining**  
Acting Associate Administrator, BroadbandUSA, NTIA



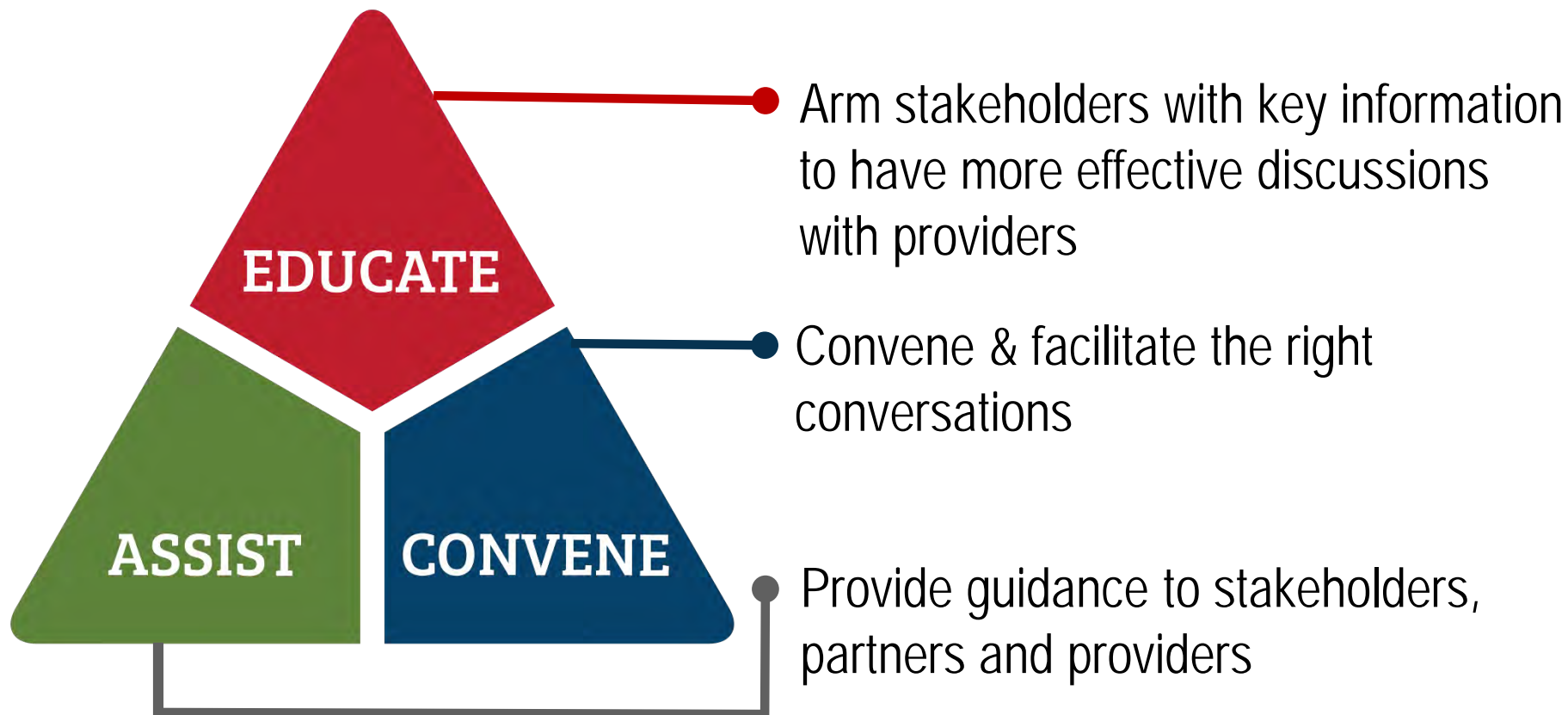
**Katherine Bates**  
Manager for State and Local Partnerships, BroadbandUSA,  
NTIA

# The National Telecommunications and Information Administration (NTIA) advises on telecom policy issues

- Expanding broadband access and adoption
- Expanding the use of spectrum by all users
- Ensuring that the Internet remains an engine for continued innovation and economic growth



# NTIA's BroadbandUSA program educates stakeholders, facilitates relationships, and provides helpful resources



# Agenda

1. Broadband Basics
2. A Roadmap for Planning a Broadband Infrastructure Project
3. An Overview of Models to Fund a Broadband Infrastructure Project

## Broadband Basics

*Overview of the information needed to understand fundamental Broadband terms, issues and network operations.*

## What is Broadband?

Broadband refers to **high-speed Internet access** that is always on and is significantly faster than traditional dial-up access. Broadband includes several high-speed transmission technologies, such as **fiber optics, wireless, Digital Subscriber Line (DSL) and coaxial cable.**

Minimum upload and download speeds are essential to quality of service for end user customers. **The FCC currently defines high speed Internet access** as download speeds of at least **25 Mbps** and upload speeds of at least **3 Mbps**. Nevada currently uses the same definition.

# Broadband speeds are important when sending (upload) and receiving information (download)

## Upload Speeds

The speed with which a system sends data to a remote server

## Download Speeds

The speed with which a system receives data from a remote system



# There are several key terms that are typically referenced when discussing broadband networks

## Speed

Pace at which data can pass through a network connection, generally measured by Megabits per second (Mbps)

## Bandwidth

Capacity or maximum amount of data that can pass through a network connection at any time

## Latency

Delay between a user's request for data (e.g. "click") and the delivery of data (e.g. website accessibility)

## Reliability

Consistency and predictability at which broadband service is provided



# Broadband Network Architecture 101

## Backbone

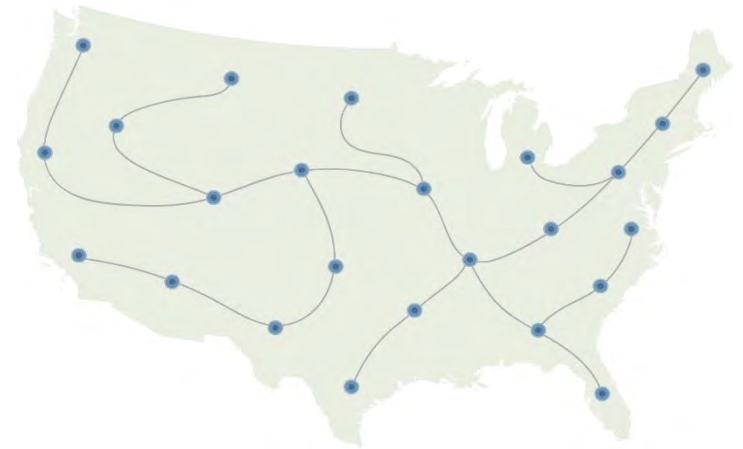
Major high-speed transmission lines that link smaller networks across the country

## Middle Mile

Connection between the backbone network and local networks

## Last Mile

Connection between the local network and end user homes and businesses



# Broadband Technologies: No Silver Bullets!

Technology	Application		
	Backbone	Middle Mile	Last Mile
<b>Fiber</b>			
Aerial Fiber	✓	✓	✓
Buried Fiber	✓	✓	✓
<b>Copper-Based</b>			
Coaxial Cable		✓	✓
DSL			✓
<b>Wireless</b>			
Fixed		✓	✓
Mobile (4G/5G)			✓
Satellite			✓
Microwave		✓	✓

# Fiber optic cable transmits data over light

There are two main types of fiber connections:

## Aerial

- Cables are deployed using existing pole infrastructure
- More exposed to elements of nature
- Typically more cost effective but may be less suited for areas with extreme weather

## Buried

- Cables are directly buried or installed in underground ducts
- More difficult to repair, but repairs are less frequent
- Typically more expensive to deploy but may be better suited for areas with extreme weather

# Copper-based technologies: infrastructure deployed by cable TV and telephone broadband providers

## Coaxial Cable (Coax)

- Wireless devices or systems provide service in fixed locations
- Robust and durable
- Dominant technology for residential broadband service

## Digital Subscriber Line (DSL)

- Service offered over traditional telephone networks
- Cannot match the speeds of other technologies
- May degrade rapidly over distance

# Wireless technologies: directional equipment to provide service over a wide area

## Fixed

- Wireless devices or systems provide service in fixed locations

## Mobile

- Cellular network delivers service to mobile end-users

## Satellite

- Geostationary satellites provide service in low-density locations

## Microwave

- Mid to high frequency signals deliver service between line-of-sight locations

# *Roadmap for Planning a Broadband Infrastructure Project*

## Nevada Broadband Workshop

# BroadbandUSA shares best practices for broadband infrastructure deployment

Support **71%** of customers with planning activities

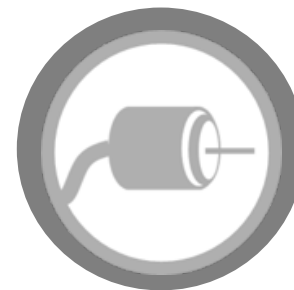
Planning



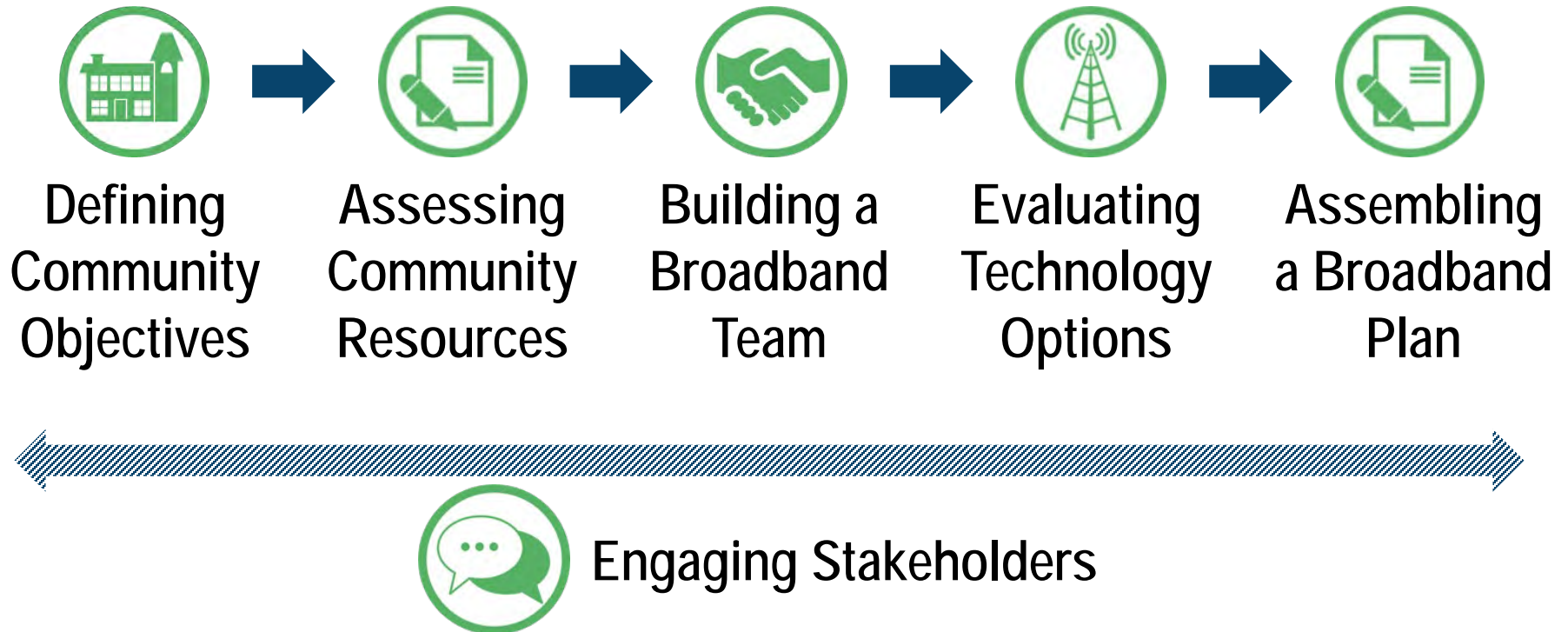
Funding



Implementation



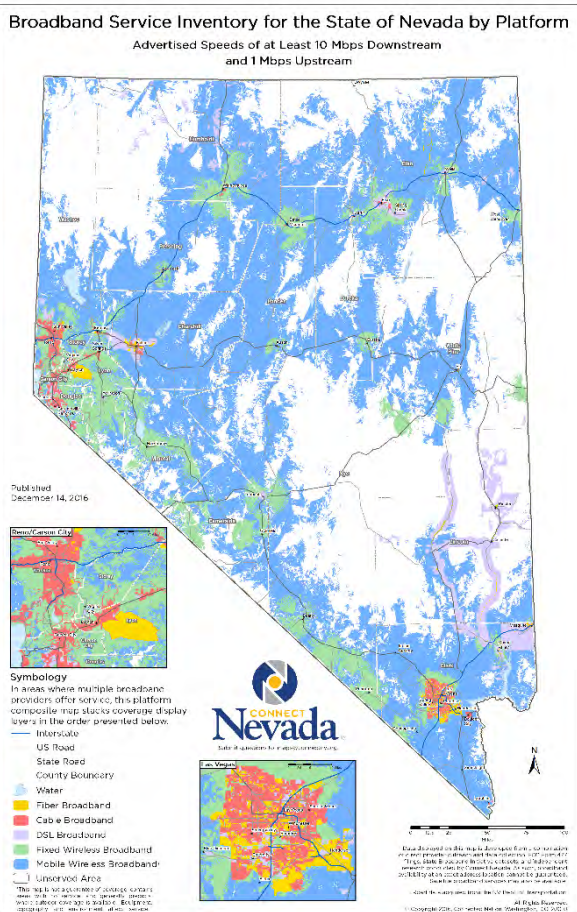
# Communities can enhance planning efforts by developing a comprehensive broadband roadmap



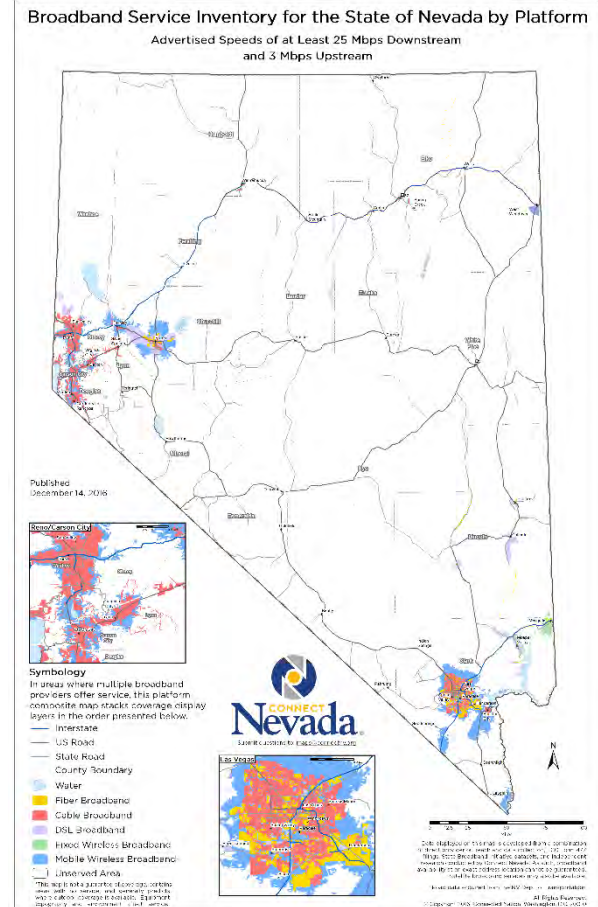


# Comparison of Advertised Speeds in Nevada

## 10Mb/1Mb



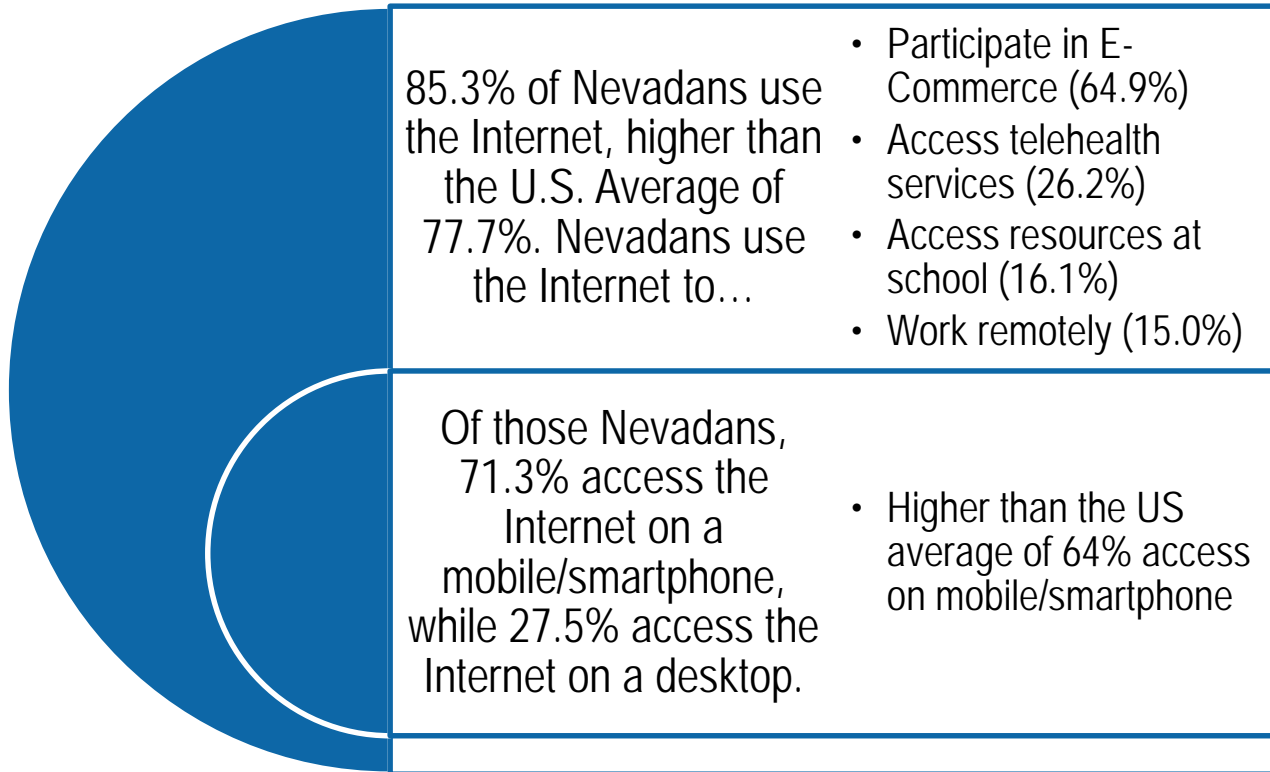
## 25Mb/3Mb



\* Source: Connect Nevada - <http://www.connectnv.org/mapping/state> (data as of 2016)

# NEVADA DATA EXPLORER

## as of November 2017



Source: NTIA, Data Central, June 2018

# Broadband access and use are critical to the growth of communities in our country



Telehealth can save rural medical facilities over \$180,000 per year



Increased broadband speed availability is associated with higher housing values in rural counties

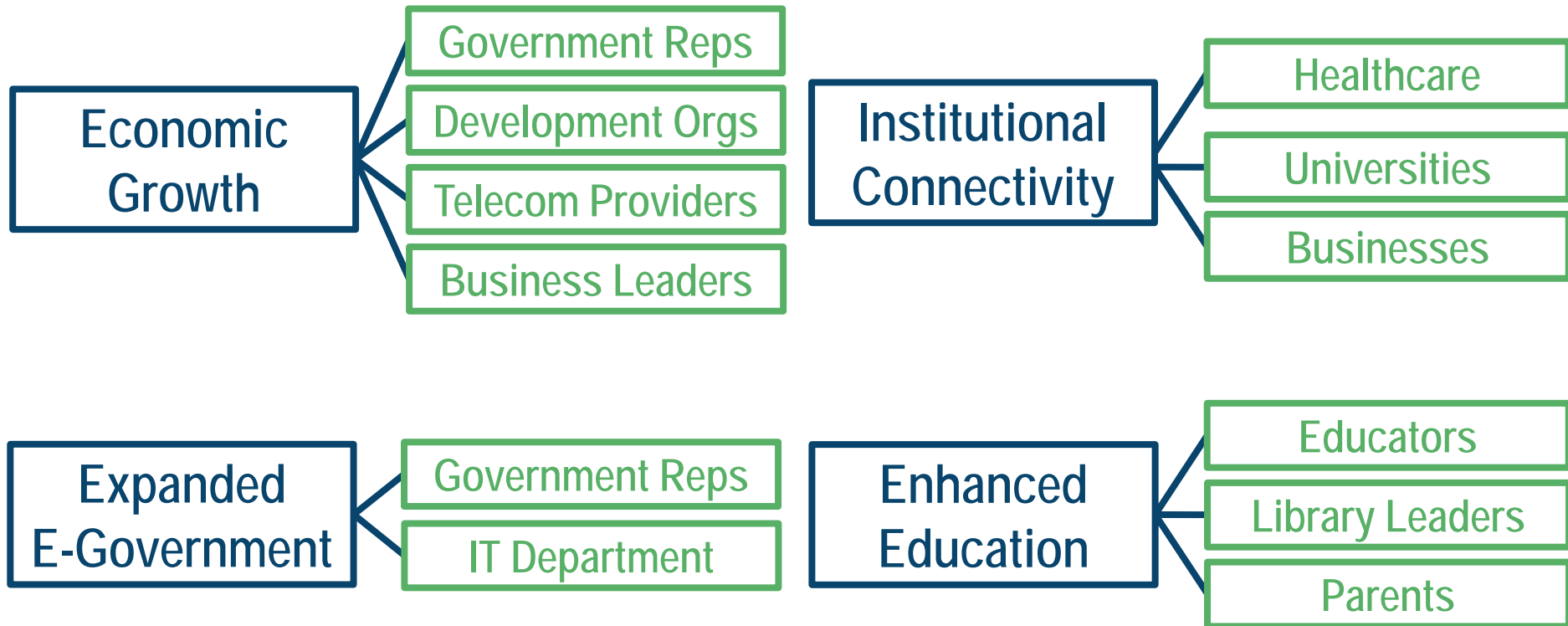


61% of Unemployed Americans Searched for Jobs Online in 2017

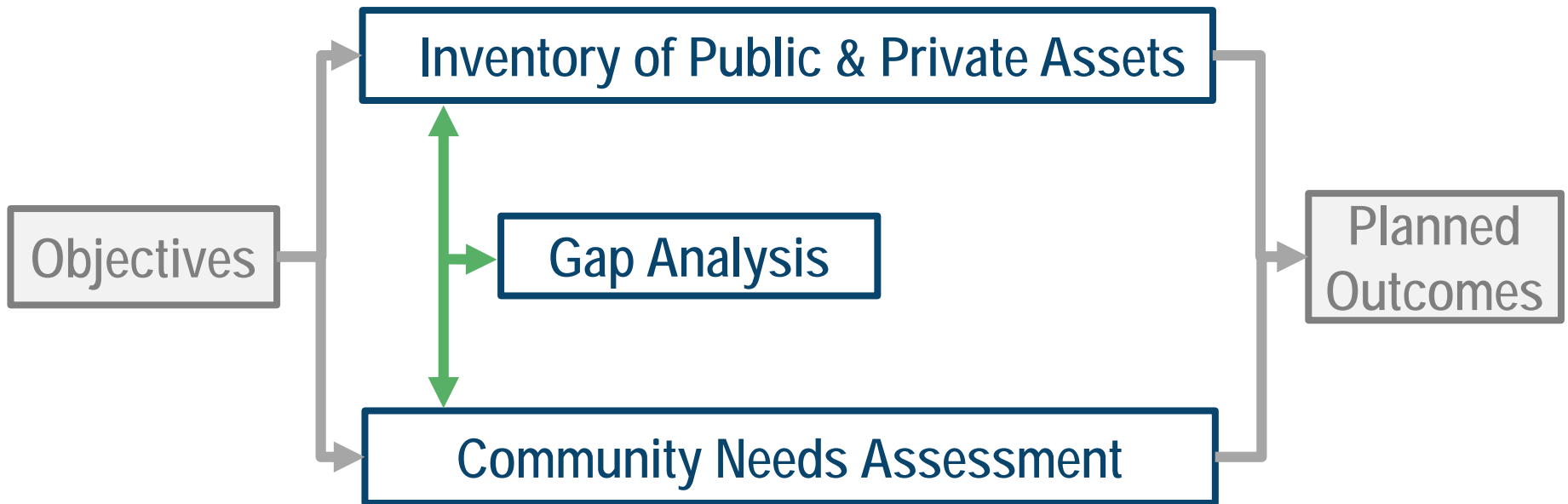


Higher adoption rates were associated with increased measures of civic engagement

# Communities can use defined objectives to shape the vision and direct planning teams to support their broadband efforts



# Once a community determines its objectives, it can assess its existing resources



# Stakeholders are a critical part of ongoing broadband efforts



Effective Stakeholder Outreach helps establish:

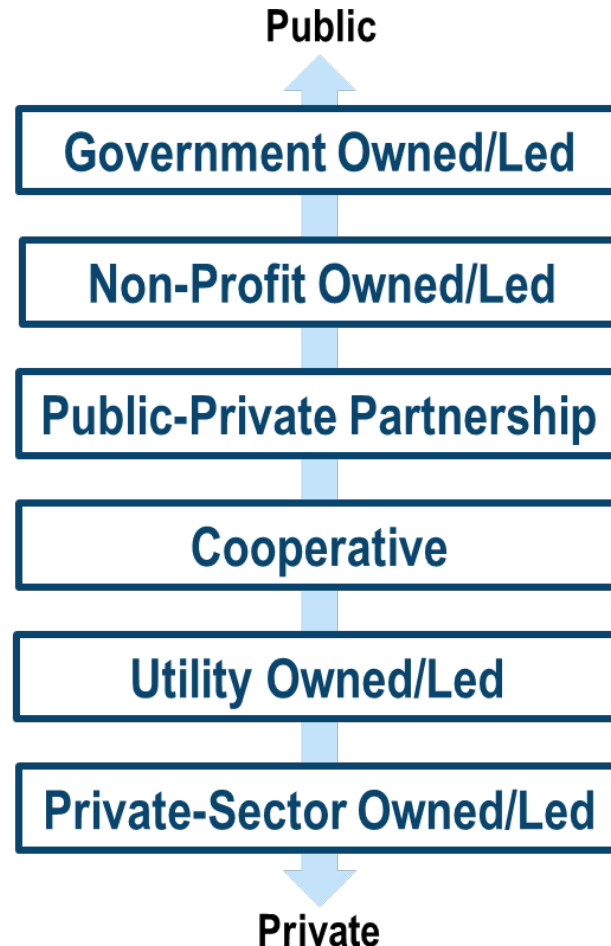
- Project Support
- Two-way Communications
- Transparency

# Strong partnerships can provide financial and personnel resources and increase project impact

## Potential Considerations

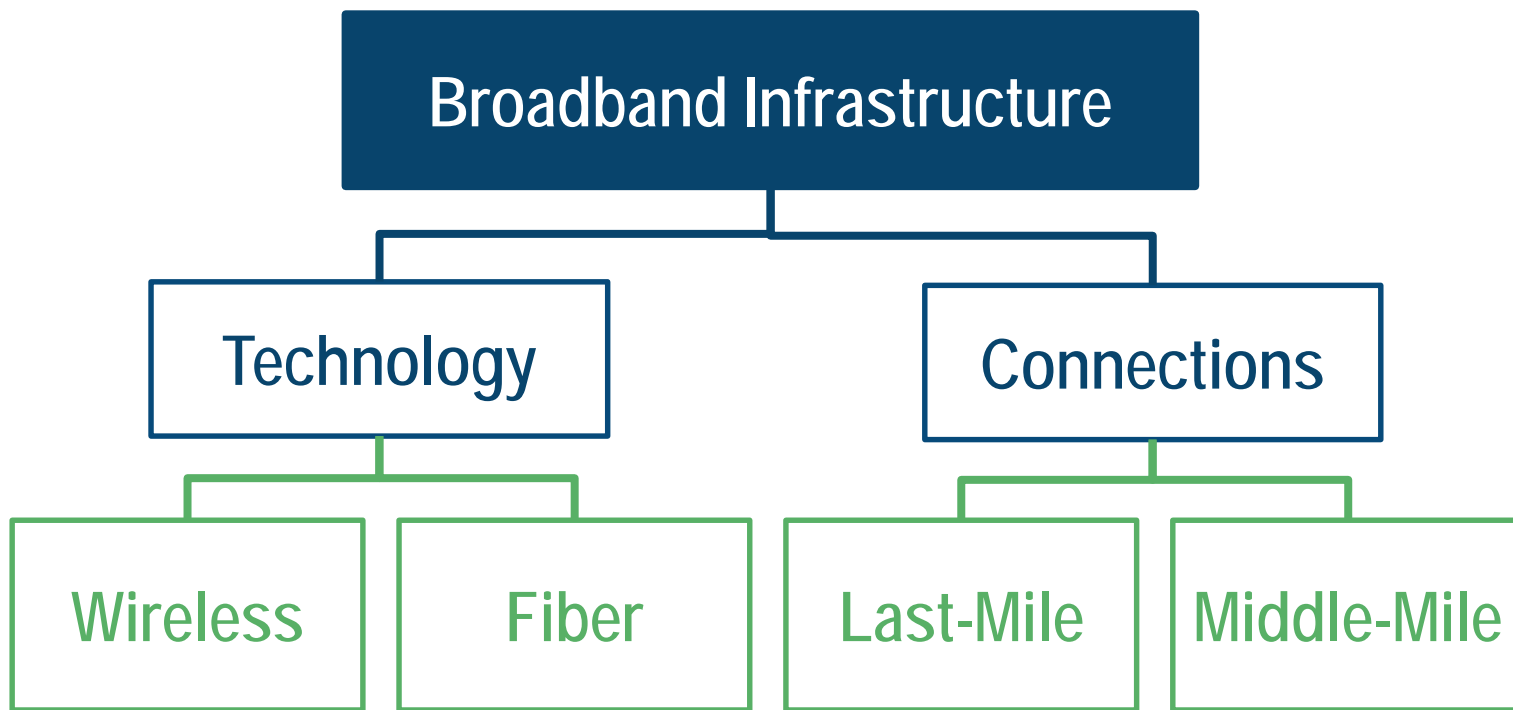


# Based on key partnerships, the community can select an appropriate organizational model

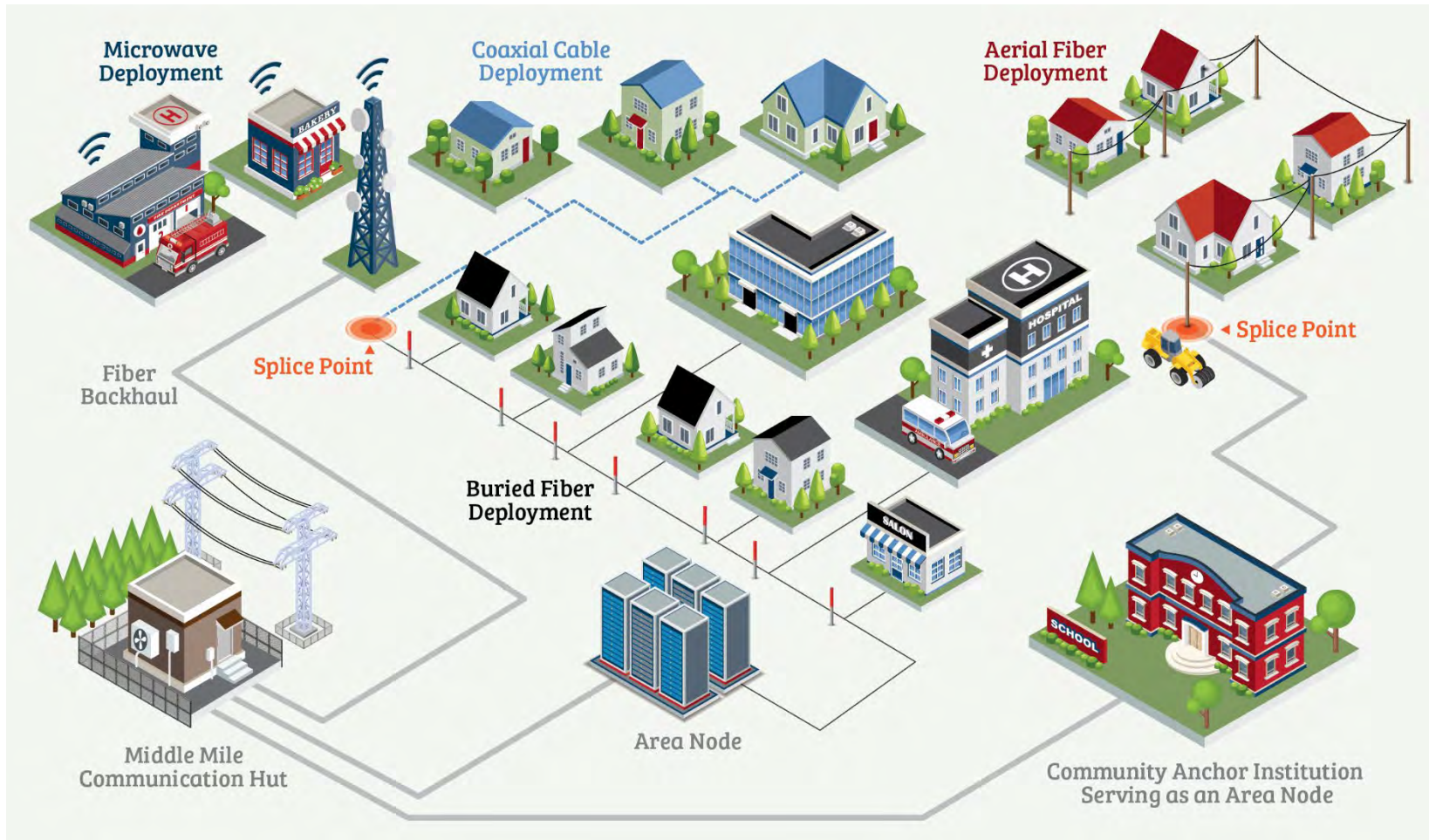




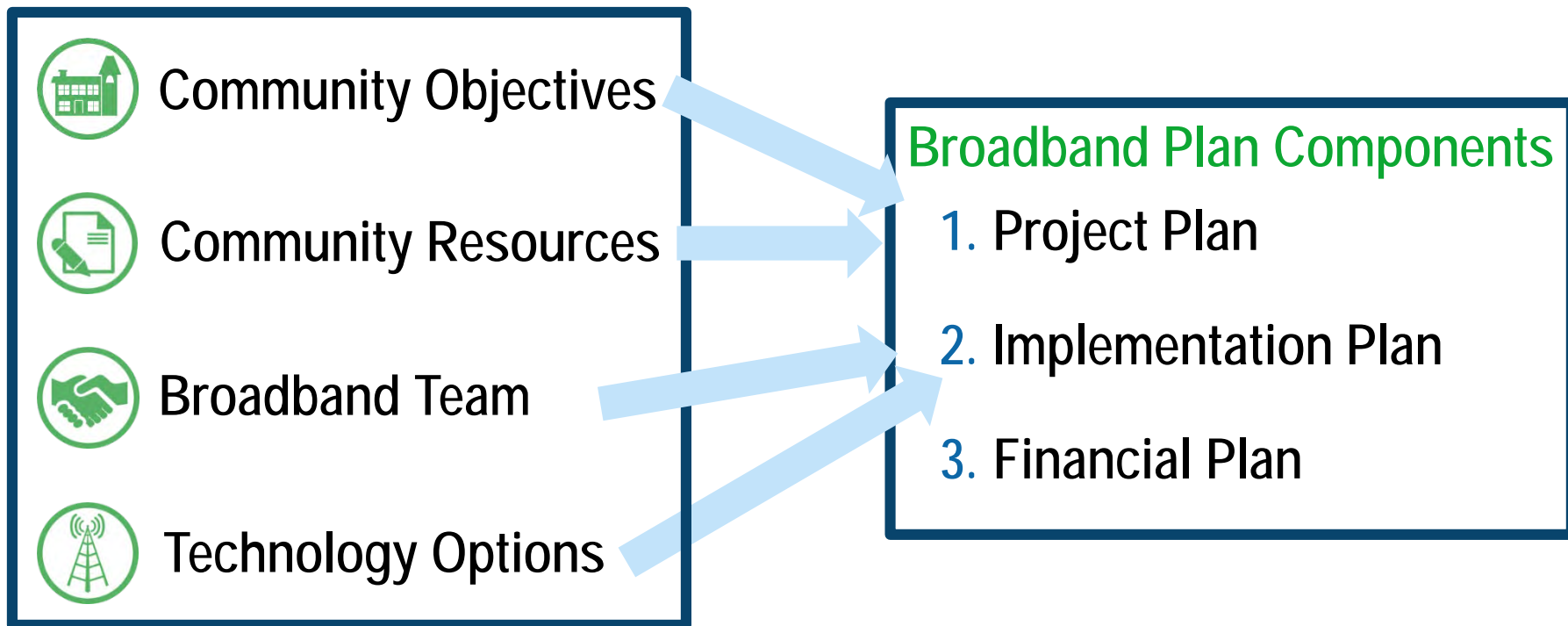
# Communities can select the “right” technology based on community characteristics and needs



# Communities can review network types to guide the project's planning and implementation



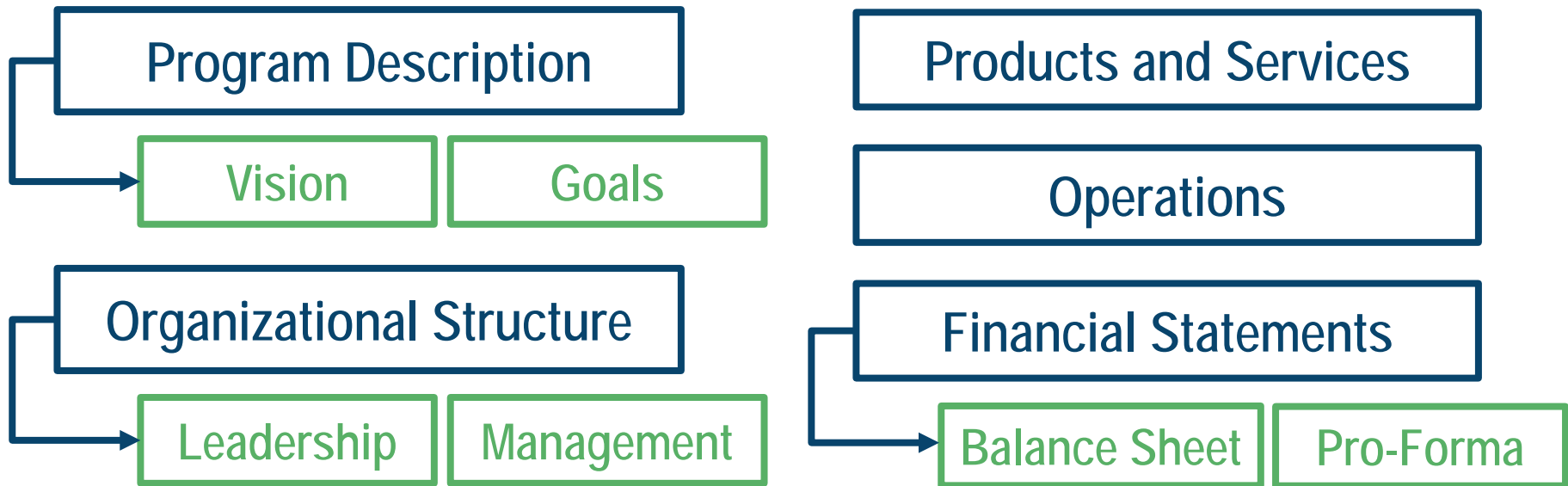
# A community can prepare a Community Broadband Plan to showcase its planning efforts



# Project Plans: Key Components

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# A community can develop project plans to share with partners, investors and stakeholders



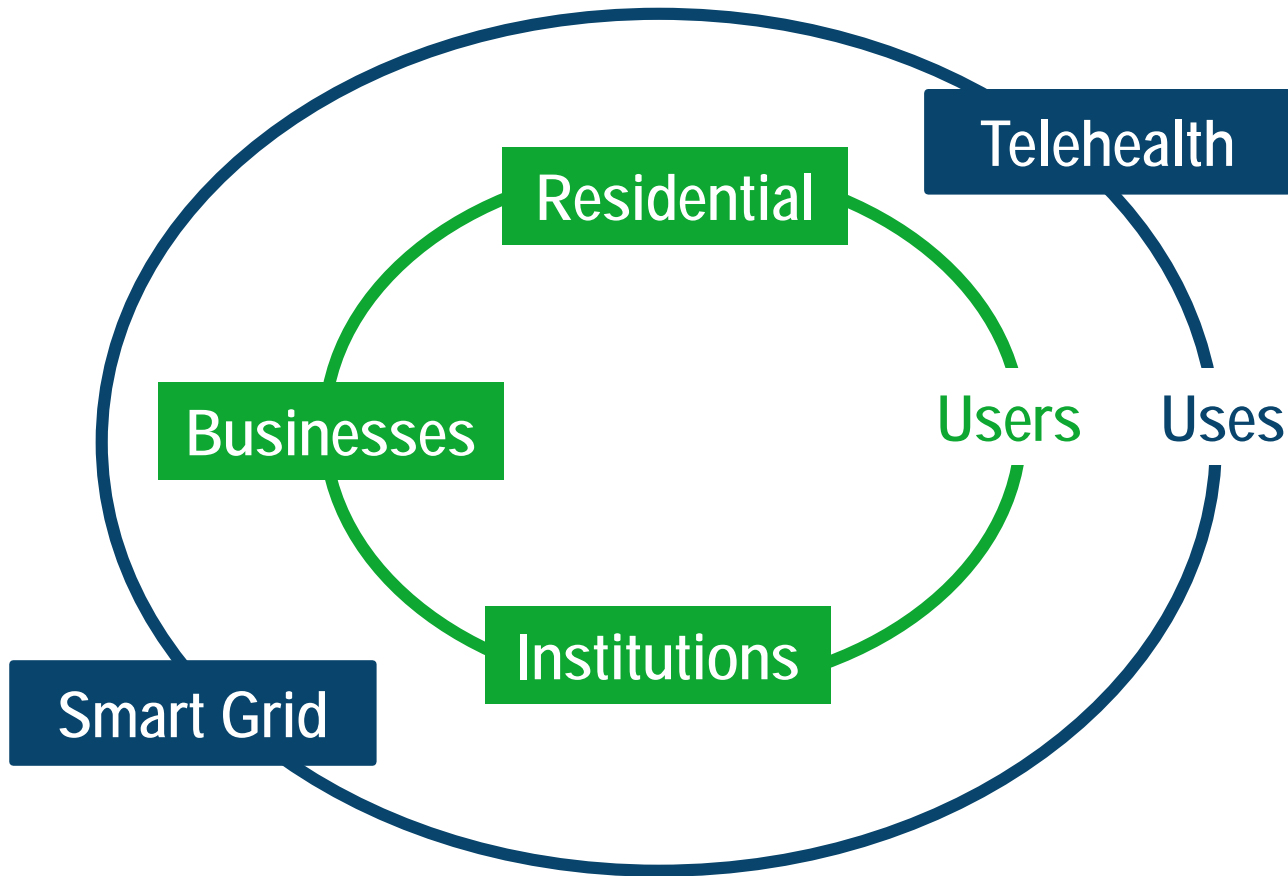
# Implementation Plans: Key Components

## Nevada Broadband Workshop

# A community can choose an implementation strategy based on strengths, weaknesses and capabilities

Option 1	Encourage provider to extend/build network and/or provide service
Option 2	Run network on another provider's network
Option 3	Build or extend network

# Communities can identify potential uses, users or customers to shape project implementation





## In Nevada, permitting on federal lands is a necessary component of your plan.

The Department of the Interior produced a map of federal lands and communications towers that could be useful in determining network options:  
<https://www.doi.gov/broadband>

BroadbandUSA published a summary of various agencies' permitting processes

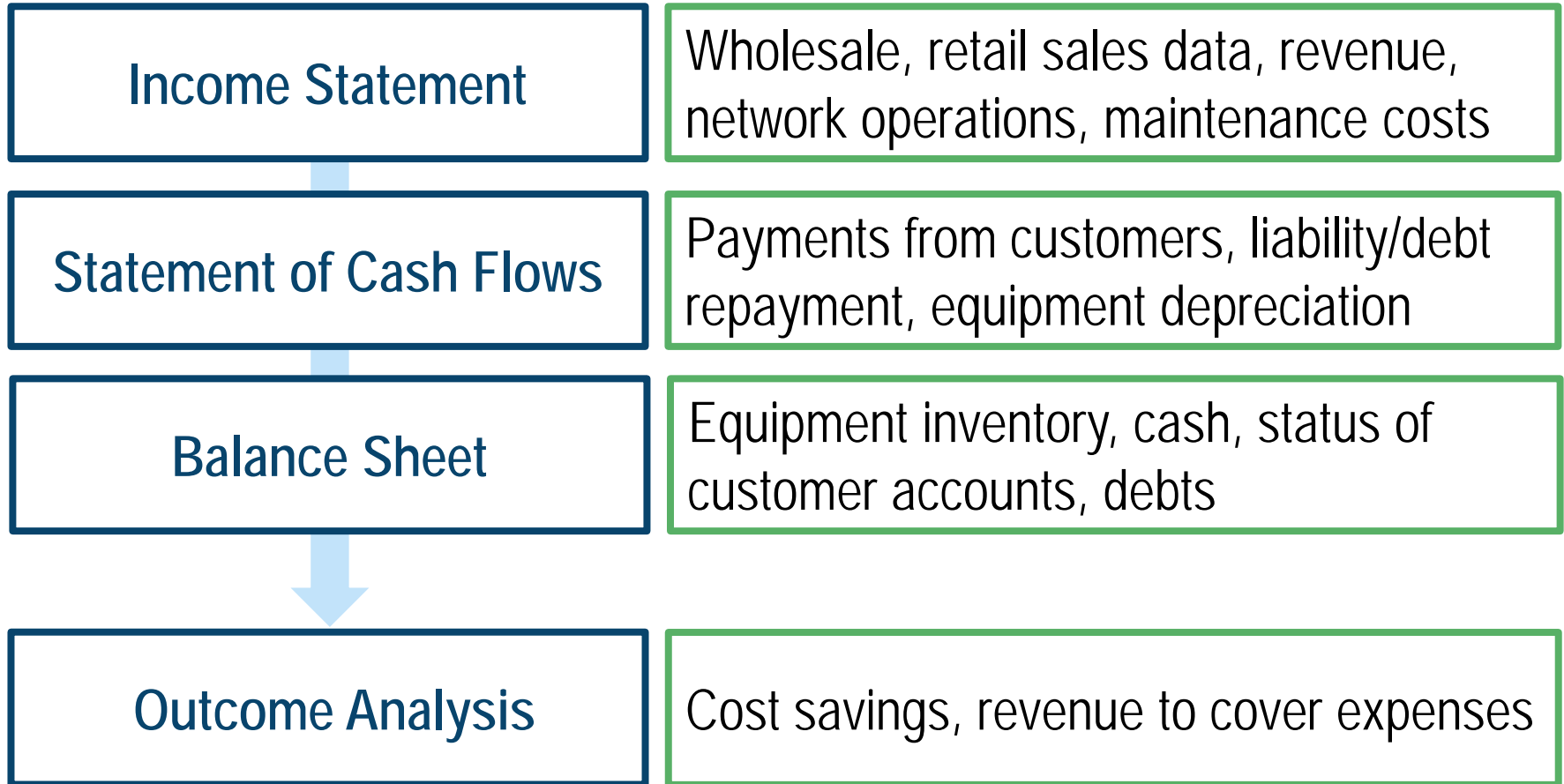
<https://broadbandusa.ntia.doc.gov/ntia-resources/federal-permitting-overview>



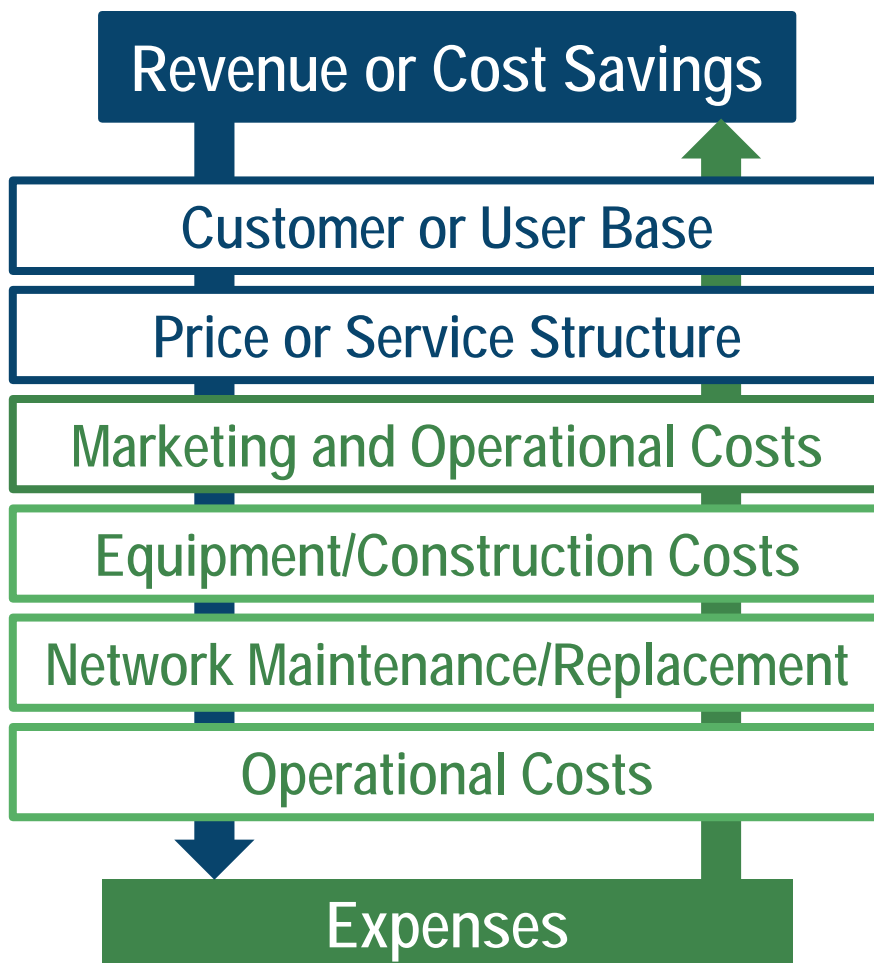
# Financial Plans: Key Components

## Nevada Broadband Workshop

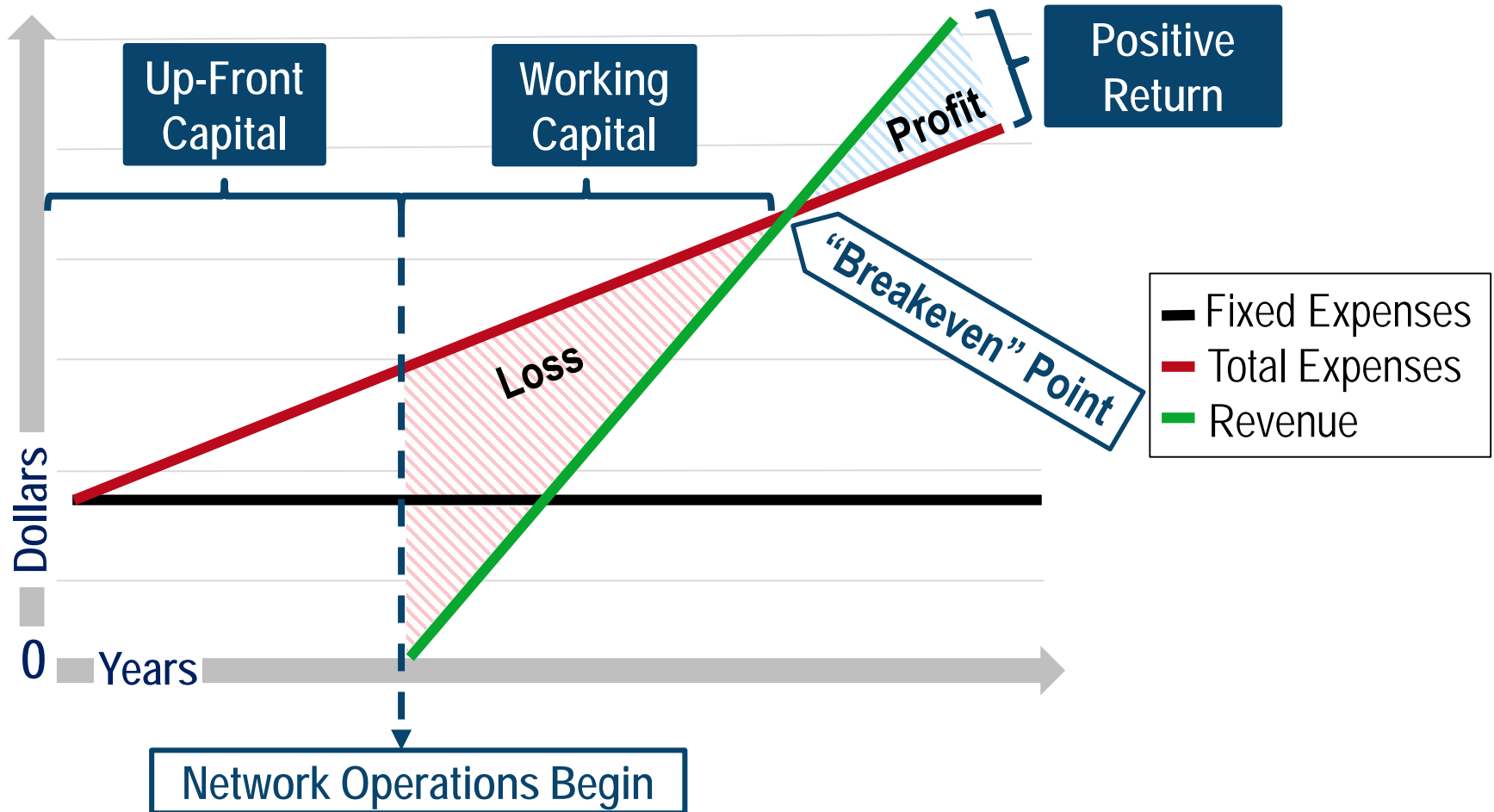
# A community can communicate anticipated project financial information through its pro forma



# Calculating expected revenue, cost savings and expenses helps to determine a project's sustainability



# Capital requirements vary depending on a project's development phase



Questions?

# *Options for Funding Broadband Infrastructure Projects*

## Nevada Broadband Workshop

# Project leaders can use broadband deployment plans to secure funding for infrastructure projects

Support **61%** of customers with funding activities

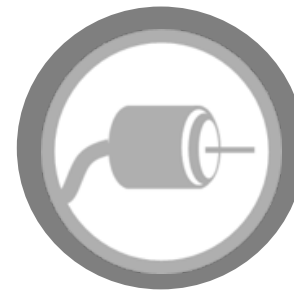
Planning



Funding



Implementation





# Planners can consider a number of financing options depending on resources and requirements



Bonds



Grants



Government-Backed Loans



Private Equity



Private Financing



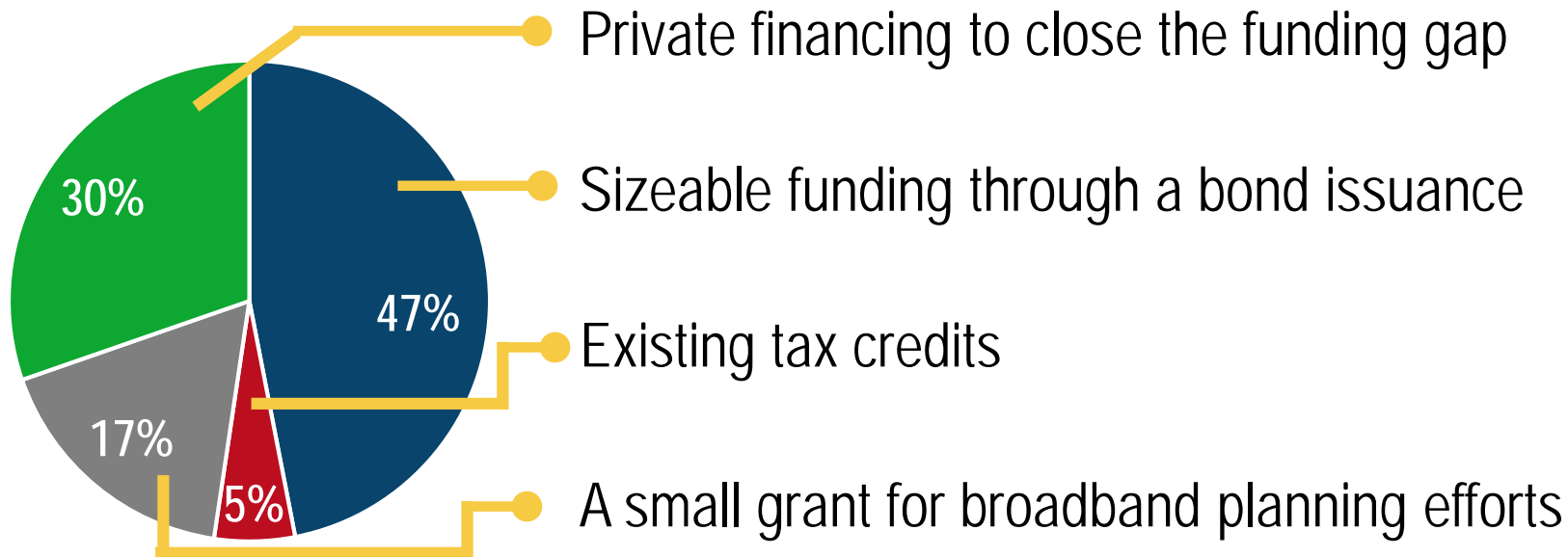
Public-Private  
Partnerships



Tax Credits

# Infrastructure deployment often includes a variety of funding sources

Hypothetical Funding Distribution

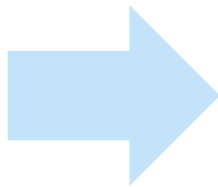


- Bonds
- Grant Funding
- Tax Credits
- Private Loans

# Bonds are revenue sources that can support a comprehensive funding plan

General  
Obligation (GO)  
Bonds

Revenue Bonds



Benefits
<ul style="list-style-type: none"><li>• Bond interest rates are fixed so repayments cannot increase</li><li>• Community can issue additional bonds to make expansions</li></ul>
Risks
<ul style="list-style-type: none"><li>• Bond repayments could limit funds for network expansions</li><li>• Default can adversely affect an issuer's credit rating</li></ul>

# There are several notable differences between bond options for broadband projects

	Revenue Bonds	GO Bonds
Funding Stream	Supported by the revenue from the project	Supported by tax dollars
Interest Rates	High	Low
Default Potential	Medium	Low
Required Approval	None Required	Constituent Vote

# Government-backed loans are options to secure initial capital

## Benefits

- Interest rates can be lower for government-backed loans
- Borrowers can use project revenue to repay the loan

## Risks

- Loan criteria could constrain network provided service
- A loan default could bring greater public scrutiny

# USDA's Rural Utilities Service provides loans and loan guarantees to fund broadband in eligible areas

## Telecommunications Infrastructure Loan Programs

- Targeted towards rural areas with a population of 5,000 or less
- Partnerships with other federal, state, local, private and non-profit entities are encouraged

## Farm Bill Broadband Loans Programs

- Targeted towards rural areas with population of 20,000 or less
- Areas wherein at least 15 percent of households in the proposed funding area are unserved

# Private lending that is not backed by the government can offer more flexible options for communities

## Benefits

- Private lenders may be open to a wider group of borrowers
- Private lenders may have greater resources

## Risks

- Interest rates can be less favorable to the borrower
- May have greater documentation requirements

# Private financiers use similar criteria as government agencies when evaluating lending potential

## *Evaluation Criteria*

- Business case for investment
- General economic conditions
- Project-specific regulatory risks
- Creditworthiness of the borrower
- Return on investment (ROI)



**Lending  
Approval**



# Communities can leverage several strategies to encourage private investment in broadband projects

## Favorable Financing

Provide economic and financial incentives to organizations

## Improved Infrastructure

Improve existing infrastructure assets that are accessible for potential network expansion

## Mapped Data

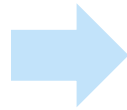
Collect and share geographic mapping data to enhance broadband planning efforts and speed up construction

## Enhanced Communication

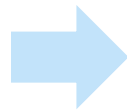
Improve access to information and communication between government and private entities

# Tax credit programs are creative ways to help finance broadband projects

New Market Tax  
Credits



State Tax Credit  
Programs



- Tax credit programs only cover a portion of total project costs
- Programs vary in the type of property they reimburse
- Availability of tax credit programs vary by state
- Due to IRS requirements, not all entities will be eligible

# Grant programs are funding sources that require diligent reporting



## Benefits

- Typically no repayment
- Support from granting organization

## Risks

- Ongoing reporting requirements
- Cost-sharing requirements

# Several federal agencies have resources that can be used for broadband planning and research initiatives

HUD's *Community Development Block Grant Program* can be used for broadband planning and deployment in low- to moderate-income communities

**Housing & Urban  
Development (HUD)**



EDA's *Economic Adjustment Assistance Program* can be used for broadband planning efforts as part of an economic development strategy

**Economic  
Development  
Administration (EDA)**



USDA's *ReConnect Rural Broadband Program* can be used for broadband infrastructure deployment efforts in rural communities

**USDA  
Rural Utilities Service  
(RUS)**

# Before applying for funding, applicants can establish goals, examine multiple programs and develop a budget

## Establish Goals

Determine concrete, measurable outcomes of your program and how the requested funding will be used

## Think Critically

Consider each program component separately; the project may qualify for multiple funding opportunities

## Count the Costs

Quantify costs and establish a reasonable budget along with detailed staff responsibilities for the project

# Private equity investors can provide access to start-up and expansion capital

## Benefits

- Investors will assume a portion of the risk following investment
- Borrowers can use project revenue to repay debt

## Risks

- Investors may have different priorities than the community
- Investors may not commit additional funds if not meeting expectations

# Private equity firms look for key attributes when evaluating potential investment opportunities

## *Key Attributes*

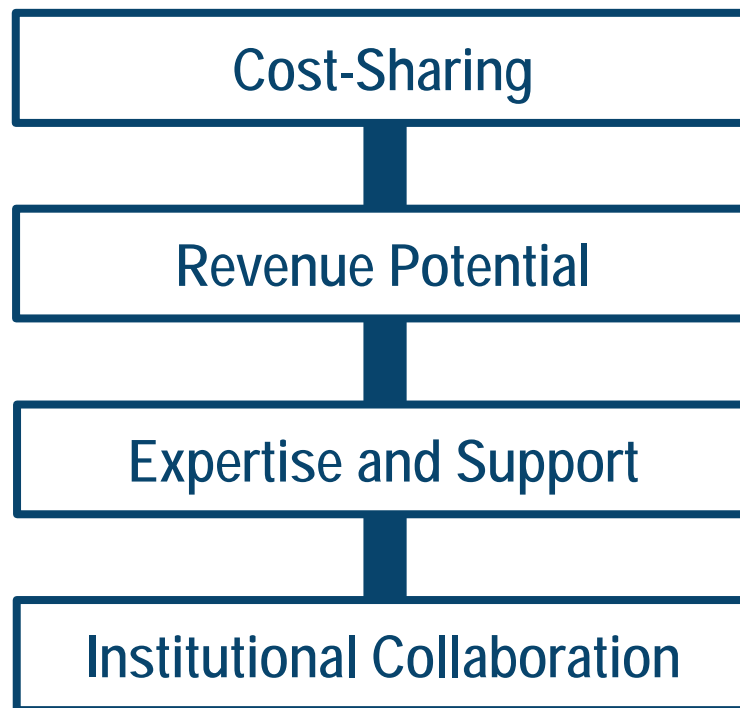
- Quality Network
- Scalable Operations
- Clear Strategy
- Large Customer Base
- Low Customer Attrition Rates
- High Growth Potential
- Strong Financials
- Proficient Management

# Public-Private Partnerships (P3) can bring funding and expertise to a potential deployment project

Consider what your community hopes to gain from a partner:

- Do they fill a specific need for expertise?
- Can they help build project support by reaching new stakeholders?
- Do they have access to additional funding sources?

Identify potential partners that would increase or expand:





# Communities can consider resources, capabilities and risk tolerance when evaluating P3 models

## Partnership Models

- Private Sector-Led
- Government-Led, Private Sector-Supported
- Joint Ownership Model

- A commercial operator can build, own and operate the network
- Community institutions can offer planning, monetary and regulatory support

- A public entity can own the network
- Private partners construct, operate and/or maintain the network in exchange for financial or in-kind support

- An operator and the public enterprise jointly invest in the network and share capacity
- Network management can be determined by agreement

# Questions?

# BroadbandUSA is available to help with broadband access and digital inclusion efforts

## Request Technical Assistance:

- Email: [broadbandusa@ntia.doc.gov](mailto:broadbandusa@ntia.doc.gov)
- Submit Technical Assistance form: <https://broadbandusa.ntia.doc.gov/ntia-common-content/how-we-can-help>
- Direct Phone: 202-482-2048

## Resources:

- Website: <https://broadbandusa.ntia.doc.gov/>

## Our Contact Information:

Laura Spining: [lspining@ntia.gov](mailto:lspining@ntia.gov)

Katherine Bates: [kbates@ntia.gov](mailto:kbates@ntia.gov)





## State of Nevada Updates

Jojo Myers Campos

State Broadband Development Manager

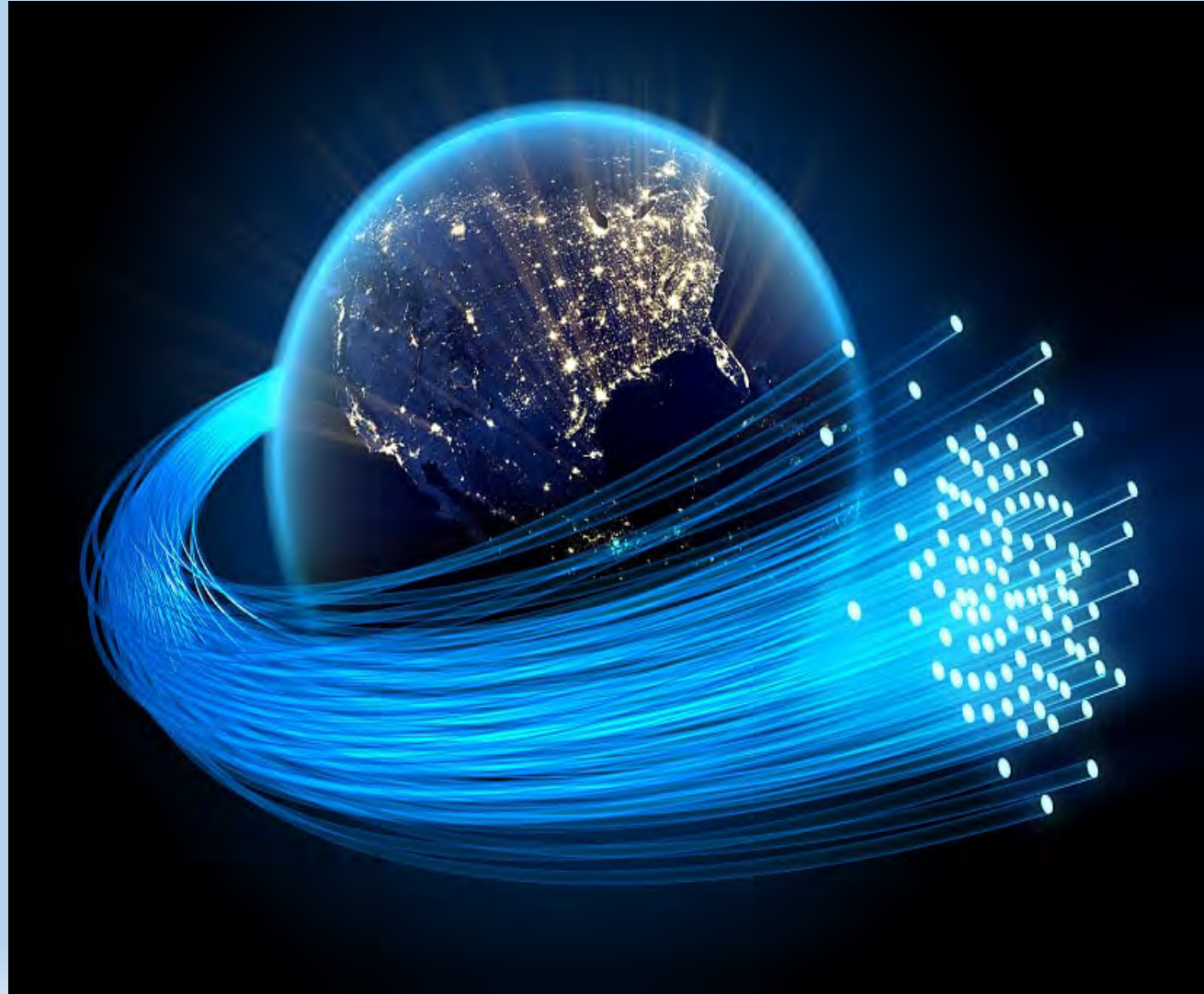
Nevada Governor's Office of Science, Innovation and  
Technology

# WELCOME

## NEVADA BROADBAND WORKSHOP



Nevada Governor's  
Office of Science,  
Innovation and  
Technology



# Broadband: YES It Matters!

## Here's how:

- Economic Development
- Employment Rates
- Municipal and Community Engagement
- Household Income
- Increased Housing Values



## Research Shows:

- **Economic Development:** The Importance of Broadband to Economic Development states *“locations are routinely eliminated due to issues pertaining to inadequate: electric, gas, water, wastewater, and telecommunications infrastructure”*.
- **Employment Levels:** The Effects of Broadband Internet Expansion on Labor Markets states *“Access to broadband is associated with a 2% increase in employment rates”* and How Broadband Internet Affects Labor Market Matching states *“Internet improves access to information about job openings, increases overall job finding rates, and provides evidence that internet increases starting wages”*.

## Research Shows:

- **Civic Engagement:** Use of Broadband Linked to Greater Levels of Civic Engagement states, *“Rural residents who use broadband are more likely to vote, belong to a community group, trust their neighbors, and participate in civic activities* and Broadband and Civic Engagement in Rural Areas: What Matters? states, *“The most influential to civic engagement overall is Broadband Adoption”*.
- **Household Income:** Purdue University, estimated household savings of \$754 per household per year, due to saving on household items, insurance, energy, and services.
- **Housing Values:** University of Colorado and Carnegie Mellon University finds high speed internet can add \$5,437 to a home priced at \$175,000(same as adding a fireplace or half bath).



# Digital Inclusion or Digital Exclusion?

- **Definition**: Ensures individuals have access to and the skills to use information and communication technologies and are able to participate in and benefit from today's growing knowledge and information society. OR super simply put:

**About the adoption of broadband for social and economic benefits**

- **Includes**:
  - **Digital Skills**- ability to use computers and the internet
  - **Connectivity**- access to the internet, (but 1<sup>st</sup> you need infrastructure)
  - **Accessibility**- services that meet all users needs

**Digital Inclusion is about overcoming ALL of these challenges, not just 1.**



### DIGITAL SKILLS IN TODAY'S ECONOMY

A NEW REPORT FROM CAPITAL ONE AND BURNING GLASS TECHNOLOGIES SHEDS LIGHT ON THE NATION'S DIGITAL SKILLS GAP.

**DIGITAL SKILLS ARE IN HIGH DEMAND.**

Of the nearly 7.5 million middle-skill jobs available today, 6.2 million require digital skills.

**78% OF MIDDLE-SKILL JOBS REQUIRE DIGITAL SKILLS**



# NEVADA



THE E-RATE PROGRAM  
and  
Nevada Connect Kids Initiative

# 2017 - 2018 Special Construction Statistics

## 2017

Project	Total Cost	State Match	Applicant Share
Elko County Schools	\$921,000	\$92,100	\$92,100

## 2018

Project	Total Cost	State Match	Applicant Share
Lyon County Schools	\$1,250,000	\$125,000	\$125,000
Eureka County Schools	\$108,422.68	\$10,842	\$21,684
Tonopah Library	\$9,950	\$497.50	0
Storey County Schools	\$41,926	\$4,192	\$4,192
<b>TOTAL</b>	<b>\$1,410,298.60</b>	<b>\$140,531.50</b>	<b>\$150,876</b>

# 2019 Funded Special Construction Projects

Project	Total Cost	State Match	Applicant Share
Elko County School District	\$435,100	\$43,510	\$43,510
Elko-Lander-Eureka Library	\$32,500	\$3,250	\$3,250
Lander County School District	\$381,000	\$38,100	\$76,200
Mineral County School District	\$208,726.55	\$20,873	0
Mineral County School District	\$185,000	\$18,500	0
Walker Lake Paiute Tribal Library	\$88,000	\$8,800	0
Pershing County School District	\$92,400	\$9,240	0
Lyon County School District	\$209,470	\$20,847	0
White Pine County School District	\$249,000	\$24,900	\$24,900
Ely Shoshone Tribal Library	\$165,750	\$16,575	\$16,575
Learning Bridge Charter School	\$50,000	\$5,000	\$15,000
Reno-Sparks Tribal Library	\$650,878	\$65,087	\$65,087
City of North Las Vegas Library	\$53,700	\$5,300	0
<b>TOTAL</b>	<b>\$2,801,524,.50</b>	<b>\$280,164</b>	<b>\$244,522</b>

## 2020 Planned Special Construction Projects

Project	Projected Cost	State Match	Applicant Share	E-rate Share
Storey County Schools	\$ 3,200,000.00	\$ 320,000.00	\$ 320,000.00	\$ 2,560,000.00
Elko County Schools-Wells and West Wendover	\$ 195,000.00	\$ 19,500.00	\$ 19,500.00	\$ 156,000.00
Elko County School-Owyhee	\$ 435,000.00	\$ 43,500.00	\$ 43,500.00	\$ 348,000.00
Elko County Schools-Flag View and Elko HS	\$ 250,000.00	\$ 25,000.00	\$ 25,000.00	\$ 200,000.00
Elko-Eureka-Lander Library - Austin and Battle Mountain Libraries	\$ 142,000.00	\$ 14,200.00	\$ 14,200.00	\$ 113,600.00
Lander County Schools - Eleanor Lemaire Middle School	\$ 162,500.00	\$ 16,250.00	\$ 16,250.00	\$ 130,000.00
Eureka County School District	\$ 800,000.00	\$ 80,000.00	\$ 160,000.00	\$ 560,000.00
Mineral County Library-Hawthorne and Mina Libraries	\$ 60,000.00	\$ 6,000.00	\$ -	\$ 54,000.00
Esmeralda County Library-Goldfield	\$ 10,000.00	\$ 1,000.00	\$ -	\$ 9,000.00
Esmeralda County Consortium - Library and School in Spring Creek	\$ 2,100,000.00	\$ 210,000.00	\$ -	\$ 1,890,000.00
Esmeralda County Library-Dyer	\$ 30,000.00	\$ 3,000.00	\$ -	\$ 27,000.00
Pershing County Schools-Imlay School	\$ 528,000.00	\$ 52,800.00	\$ -	\$ 475,200.00
Nye County Library-Round Mountain Location	\$ 50,000.00	\$ 5,000.00	\$ -	\$ 45,000.00
Duckwater Shoshone Tribe - Tribal library and school (Nye County)	\$ 800,000.00	\$ 40,000.00	\$ -	\$ 760,000.00
White Pine County Library - Ely Library	\$ 45,000.00	\$ 4,500.00	\$ 4,500.00	\$ 36,000.00
Las Vegas Paiute Tribal Library - Clark County	\$ 50,000.00	\$ 5,000.00	\$ -	\$ 45,000.00
<b>TOTAL</b>	<b>\$ 8,857,500.00</b>	<b>\$ 845,750.00</b>	<b>\$ 602,950.00</b>	<b>\$ 7,408,800.00</b>

# Assistance to Nevada Tribal Governments



Tribe	E-rate	Rural Healthcare
Washoe Tribe		Bid for funding for Washoe Tribal Health Center in 2020
Walker River Paiute	Secured funding for service to Tribal Library	Bid for funding for Washoe Tribal Health Center
Ely Shoshone	Secured funding for service to Tribal Library	Bid for funding for Ely Shoshone Tribal Health Center
Lovelock Paiute	Secured funding for service to Tribal Library	Bid for funding for Lovelock Tribal Health Center
Reno Sparks	Secured funding for service to Tribal Library	
Owyhee Shoshone Paiute	Activity planned for 2020	Bid for funding for Owyhee Shoshone Paiute Tribal Health Center
Fallon Paiute Shoshone		Bid for service for Fallon Paiute Shoshone Tribal Health Center
Yomba Shoshone	Secured funding for service to Tribal Library	Bid for funding for Yomba Shoshone Clinic
Duck Water	Activity planned for 2020	



**Brief Description:**

**Fiber to the Walker River Tribal Library**

Actual Construction Cost: \$88,000

E-rate Portion: \$79,200 (includes 10% Match)

State Match: \$8,800

Tribe Portion: \$0

2019 Project: Walker Paiute Tribal Library

**Status: Approved for reimbursement**



## Brief Description:

### Fiber to the Ely Shoshone Tribal Library

Actual Construction Cost: \$165,750

E-rate Share: \$132,600 (includes 10% Match)

State Match: \$16,575

Applicant Share: \$16,575



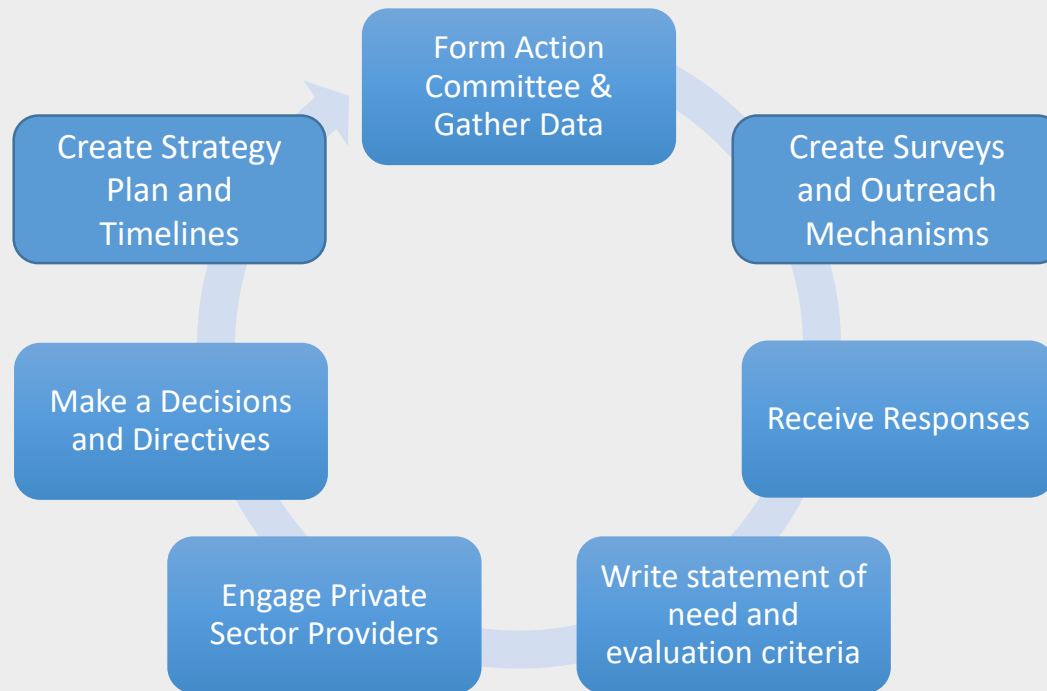
2019 Project: Ely Shoshone Tribal Library

**Status: Approved for reimbursement**

# Whole Community Connectivity Approach

Broadband Planning Process

# The Planning Process



# WHOLE COMMUNITY CONNECTIVITY PROGRAM

**OSIT** works with communities across the State to design and implement a phased Whole Community Connectivity Strategy to attract and provide better broadband options. This strategy strengthens Education, Public Safety, Healthcare, and Economic Development Opportunities.

## Whole Community Partners

Elko County

White Pine County

Pershing County

Humboldt County

City of Mesquite

Lander County

Douglas County

# Research, Studies, and Links

## Economic Development

- <http://www.aestudies.com/library/econdev.pdf>
- <https://siteselection.com/issues/2011/sep/sas-optical-infrastructure.cfm>
- [https://www.researchgate.net/journal/0308-5961\\_Telecommunications\\_Policy](https://www.researchgate.net/journal/0308-5961_Telecommunications_Policy)

## Employment Levels

- [https://www.jstor.org/stable/24369536?seq=1#page\\_scan\\_tab\\_contents](https://www.jstor.org/stable/24369536?seq=1#page_scan_tab_contents)
- [http://conference.iza.org/conference\\_files/DATA\\_2019/kostol\\_a8219.pdf](http://conference.iza.org/conference_files/DATA_2019/kostol_a8219.pdf)

## Civic Engagement

- <https://www.dailyonder.com/use-of-broadband-linked-to-greater-levels-of-civic-engagement/2016/09/22/>
- [https://www.researchgate.net/publication/307566034\\_Broadband\\_and\\_civic\\_engagement\\_in\\_rural\\_areas\\_What\\_matters](https://www.researchgate.net/publication/307566034_Broadband_and_civic_engagement_in_rural_areas_What_matters)

## Household Income

- <https://www.pcrd.purdue.edu/files/media/006-RPINsights-Indiana-Broadband-Study.pdf>

## Housing Values

- <https://www.wsj.com/articles/SB11064341213388534269604581077972897822358>



# State of Nevada Updates

**Jim Whalen**

**IT Manager – Telecommunications Infrastructure Sharing Program**

**Traffic Operations**

**Nevada Department of Operations**







# Nevada Department of Transportation 2017 - Senate Bill 53 Infrastructure Sharing Program



Utah



Ohio



Minnesota



Maryland



Arizona



Vermont



Virginia



Michigan



Idaho



Georgia



Louisiana

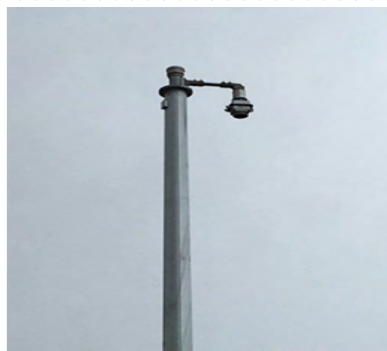


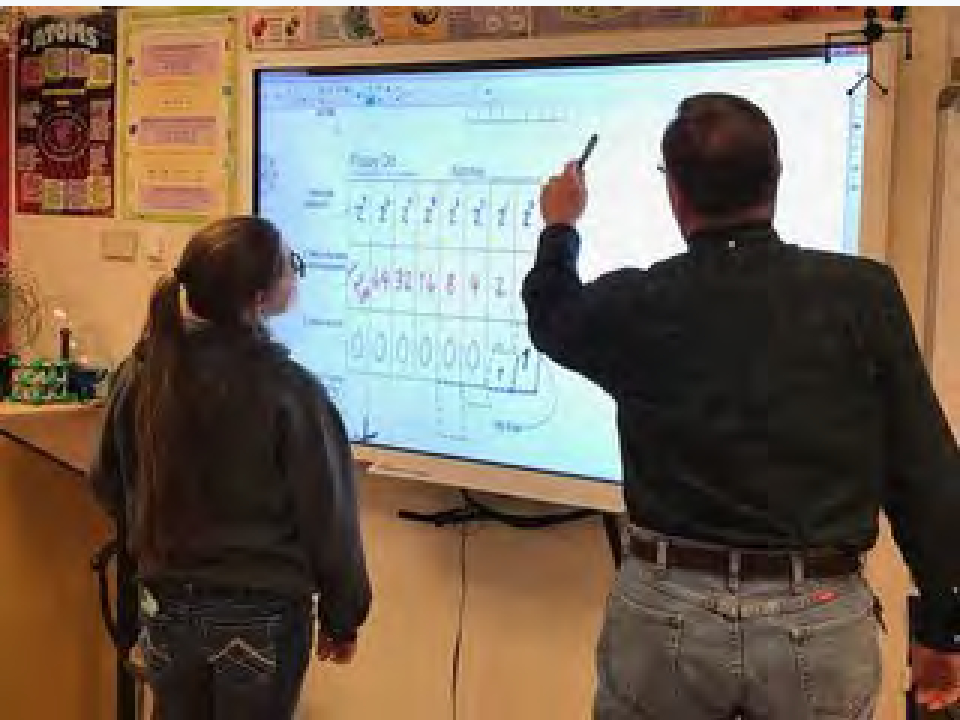
Wisconsin



# Telecommunications Infrastructure Sharing









# Reciprocal trade options available

- ❖ In-kind trading of existing telecommunications infrastructure
- ❖ Joint – construction shared cost projects
- ❖ Monetary compensation based on fair trade value
- ❖ Banked value for future consideration

# Common Goal Partnerships





# Contact Info:

**Marc Hvegholm**

**IT Professional IV**

**Nevada Dept. of Transportation**

**775-888-7132**

**[mhvegholm@dot.nv.gov](mailto:mhvegholm@dot.nv.gov)**

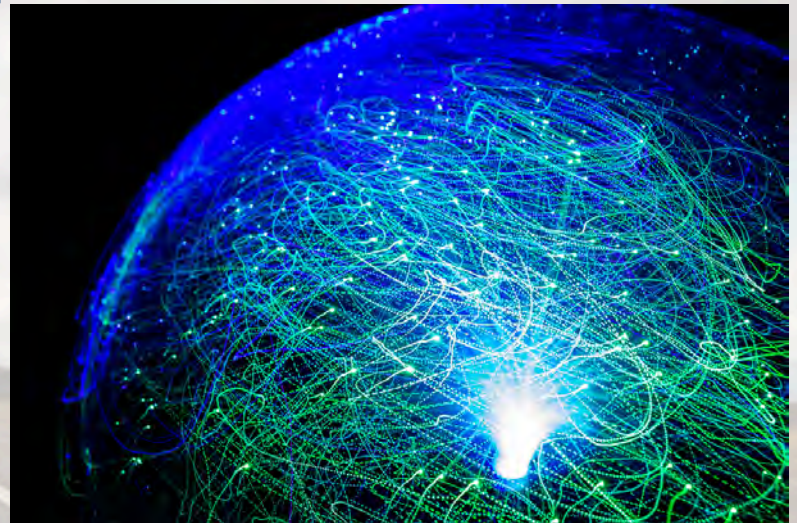
**Jim Whalen**

**IT Manager 2**

**Nevada Dept. of Transportation**

**775-888-7887**

**[jwhalen@dot.nv.gov](mailto:jwhalen@dot.nv.gov)**







# NEVADA DOT



[www.nevadadot.com](http://www.nevadadot.com)






## Lunch Break

Nevada Broadband Workshop

Reno, NV



# American Broadband Initiative (ABI)

KAREN MONTGOMERY, NATIONAL PROGRAM LEAD  
COMMUNICATIONS SITES AND HYDROPOWER  
DEPARTMENT OF INTERIOR, BUREAU OF LAND MANAGEMENT

# ABI Workstreams



Permitting



Federal Assets



Funding



American  
Broadband  
Initiative

## MILESTONES REPORT

FEBRUARY 2019



<https://broadbandusa.ntia.doc.gov/>

# ABI Workstream Streamlining Federal Permitting

Department of Homeland  
Security, Co-chair

DOI Bureau of Land  
Management, Co-chair

Department of Agriculture  
General Services Administration  
Office of Management and Budget  
Department of Commerce (NTIA)  
Council on Environmental Quality  
Department of Veterans Affairs  
Department of Defense  
Advisory Council on Historic  
Preservation  
Department of Transportation  
Federal Communications Commission

# ABI Workstream Streamlining Federal Permitting

## Completed Goals

Develop a Common  
Application Form

Process Analysis:  
Potential Changes to Processes,  
Fees, Regulations, and Rules

## Other Completed Actions:

- Broadband Permitting Workflows published on BroadbandUSA website
- Fee Transparency and Consistency Analysis
- Streamline USDA Broadband Project Reviews
- Streamline Application Processing on BLM Lands
- Implement the Streamlining measures in the MOBILE NOW Act

# ABI Workstream Streamlining Federal Permitting

## Future Goals

Streamline Environmental  
Reviews:

“One Federal Decision Process”

## Other Future Actions:

- Develop work plan and milestones for Agency implementation
- Streamline permitting on DoD lands
- Create One-Stop website for Broadband Permitting Information
- Develop Recommendations to Streamline Application Processes
- Monitor Implementation and Assess Effectiveness



# Thank You!

[K15MONTG@BLM.GOV](mailto:K15MONTG@BLM.GOV)





U.S. Department of the Interior  
Bureau of Land Management

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# Nevada Broadband Workshop

2019 Overview of Nevada Permitting

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**Jon Raby**

Nevada State Director

Bureau of Land Management

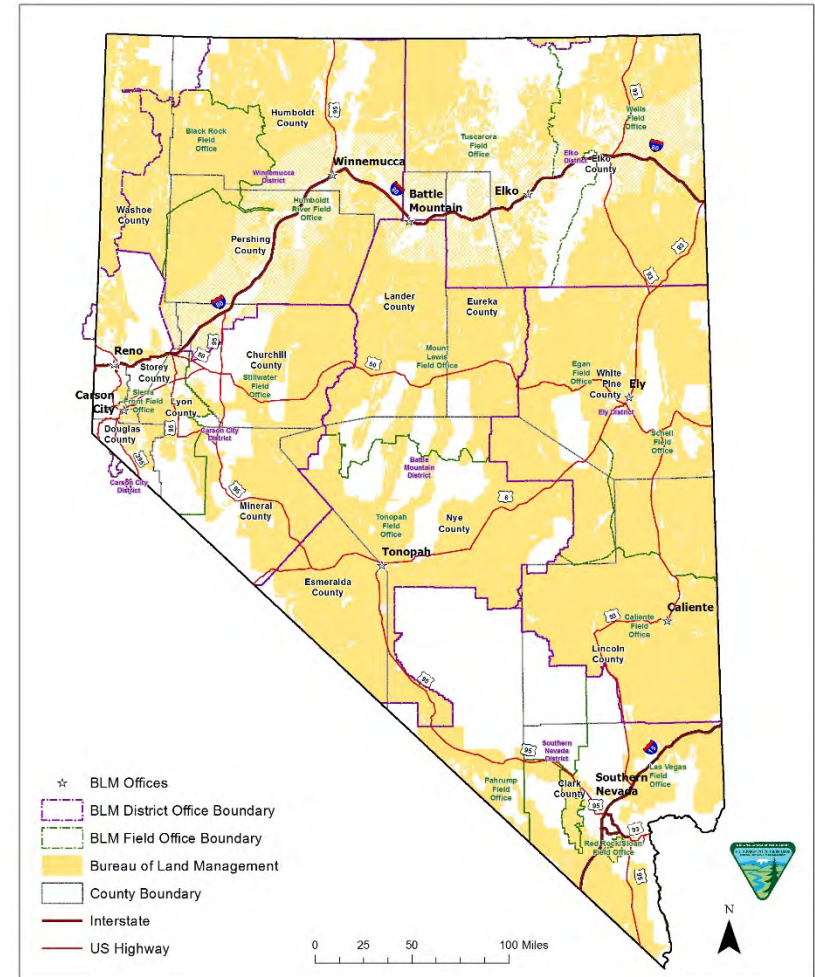
U.S. Department of Interior





# By the Numbers

- **Surface management**  
48 million acres  
70% of Nevada  
20% of BLM public lands
- **Subsurface management**  
59 million acres





# BLM Nevada Budget Report



- **Total Economic Output = \$7.2 Billion**
  - 31,000 Jobs
  - \$5.8 billion Non-energy Minerals
  - \$340 million Geothermal, Wind, Solar
  - \$505 million Recreation
  - \$27 million Oil & Gas
  - \$22 million Grazing

	FY2019
MLR	\$80,874,800
Range Improvement	\$1,575,400
Permit Processing Improvement Fund/APD Receipts	\$52,000
Non-MLR	\$8,276,800
Fire	\$41,579,400
<b>Grand Total:</b>	<b>\$132,358,400</b>



# Priorities

## BLM Nevada

- **Support for Local Communities and Economies**
- **Public and Employee Safety**
- **Workforce Development**
- **Energy Development and Infrastructure**
- **Public Access to Public Lands**
- **Sound, Effective Resource Management**
- **Fiscal Responsibility**

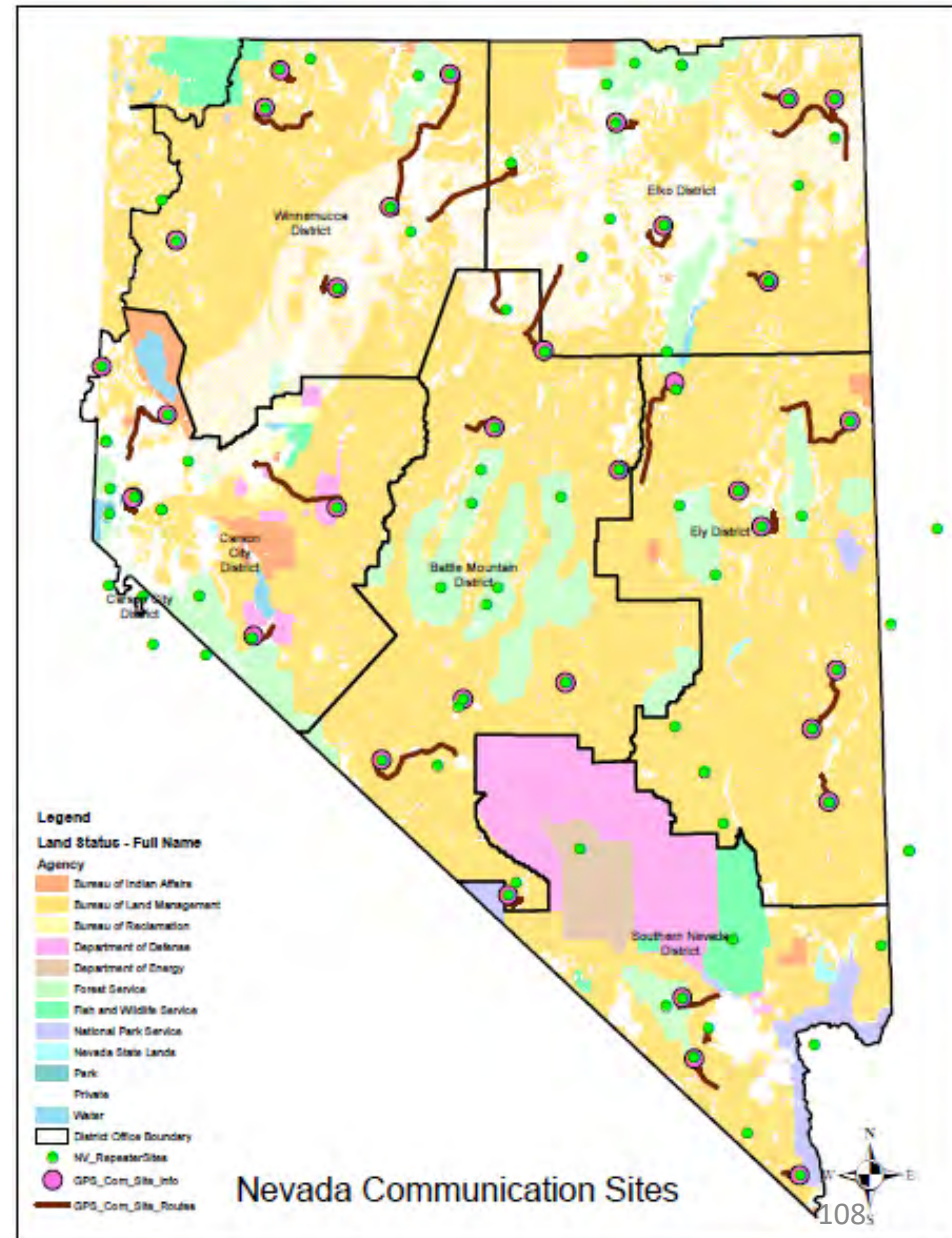




# Broadband

## Why is broadband important to BLM?

- Supports telecommunications industry
- Promotes Public Safety and Security
- Increase economic prosperity, attract new business, enhances job growth
- Enrich students learning with digital tools
- Facilitates access to the digital marketplaces.





# Application Process

## Pre-Application Meeting

Schedule a pre-application meeting as early in the process as possible.

- Discuss proposal with Field Office lands person
- Bring maps, drawings, engineered drawings
- Be prepared to discuss what, where, why, and when you need this authorization
- Discuss construction methods/needs
- Review Plan of Development criteria
- Ask about RMP conformance
- Is co-location an option

**The Pre-application meeting can save you significant time and money!**





# Application: Form SF-299

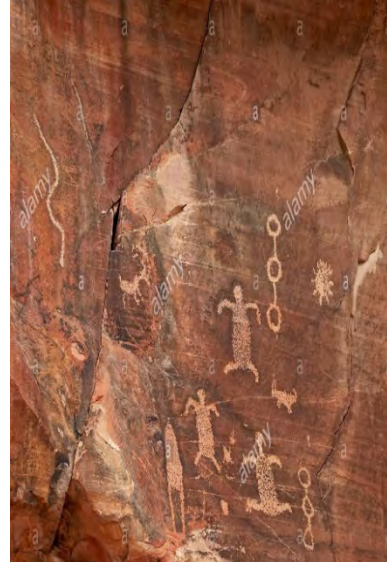
- **Representatives need formal authorization**
- **Plan of Development (detailed information about the project)**
- **Include all support facilities- roads, power, etc.**
- **Verified Corporate Entity**





# Important Considerations

- Land Use Plans/Communication Site Management Plans
- Co-location
- Visual Resources
- Special Designations (i.e. Areas of Environmental Concern (ACEC's), National Conservation Areas (NCA's), National Monuments, Wilderness Study Areas,
- Endangered Species Act
- Archaeological Sites
- US Fish & Wildlife Service
- Tribal Consultation







# Processing Steps

- **Review of Application for Completeness**
- **Determine conformance with RMP**
- **Cost Recovery Determination**
  - (categories 1 thru 6)
- **Environmental review**
- **Public involvement- other users?**
- **Monitoring fees and rent**
- **Issuance of decision**





# Environmental Review “NEPA”

- **National Environmental Policy Act, aka “NEPA”**
- **Requires BLM to consider environmental consequences of all actions**
- **Significance- EA vs. EIS**
- **Cultural, wildlife, visual, Tribal Consultation, etc.**
- **Other staff workloads contribute to delays**
- **Third party NEPA preparation**
- **Review of Threatened and/or Endangered Species**
- **US Fish and Wildlife Service concurrence**
- **Secretarial Order 3355**





# Lease Issuance

- You will usually receive an Offer Letter with 2 unsigned Leases
- Review the Terms and Conditions of Lease carefully
- A performance bond may be required
- First year's rent will be determined
- Monitoring fee will be determined and must be paid with first year's rent prior to issuance of Lease
- Sign and return both Leases
- Construction may proceed once you receive signed Lease from Authorized Officer of BLM.





# Thank you!





**Hector Ortiz**  
*Regional Manager  
United States Forest Service  
U.S. Department of Agriculture*



United States  
Department of  
Agriculture

# Rural Development



**Presented by:  
ROCKY W CHENELLE, GFR**

**Introduction to the USDA and Overview of  
Rural Utilities Service Programs**

*Nevada Broadband Workshop*

*Reno, NV*

*September 27, 2019*

# RUS BROADBAND PROGRAMS

- Telecommunications Infrastructure Loans and Guarantees
- Community Connect Grant
- Rural Broadband Access Loan and Loan Guarantee
- ReConnect 100% Grant
- ReConnect 50% Grant / 50% Loan
- ReConnect 100% Loan
- Distance Learning and Telemedicine Grant

# EXISTING ORGANIZATION

UNQUALIFIED AUDIT FOR THE LAST 2 YEARS?

YES - ALL PROGRAMS

NO - COMMUNITY CONNECT GRANT  
RURAL BROADBAND ACCESS LOAN



# SIZE OF THE PROJECT (Amount of the Request)

UNDER \$3M – ALL PROGRAMS (see Community Connect)

\$3M - \$25M – RURAL BROADBAND ACCESS LOAN

RECONNECT GRANT

RECONNECT 50/50

RECONNECT LOAN

OVER \$25M – RECONNECT 50/50

RECONNECT LOAN

# BROADBAND AVAILABLE

## WHAT BROADBAND SPEEDS ARE IN THE AREA (Ignore Satellite and Mobile)

UNDER 10 Mbps down / 1 Mbps up - ALL PROGRAMS

OVER 10/1 – Only 10% Of Households – RURAL BROADBAND ACCESS LOAN

RECONNECT 50/50

RECONNECT LOAN

OVER 25/3 - Up to 85% of Households - RURAL BROADBAND ACCESS LOAN

## AMOUNT OF CASH YOU BRING (Up Front)

- 15% - COMMUNITY CONNECT GRANT
- 25% - RECONNECT GRANT
- 10% EQUITY - RURAL BROADBAND ACCESS LOAN
- NO CASH – RECONNECT 50/50  
RECONNECT 100 LOAN

# SUTA - For All Telecommunications Loan Programs

## Modified Loan Terms for Serving a Substantially Underserved Trust Area (SUTA) include:

- At the discretion of Administrator, RUS can modify certain loan terms or application requirements, which may include:
  - Interest rates as low as 2%, extended amortization period, and/or priority processing
  - Loan interest rates as low as 2 percent;
  - \*Waiver of certain documentation requirements regarding non-duplication of service;
  - \*Waiver of matching funds or credit support requirements for loans;
  - Extension of the time period in which loans are repaid; and
  - Providing the highest priority for funding to eligible projects that will serve trust areas.

\* For RECONNECT Programs – cannot waive equity or non-duplication

# Eligible Applicants

- An incorporated organization,
- An Indian Tribe or tribal organization, as defined in 25 U.S.C. 450b(e).
- A state
- A local unit of government, or
- A cooperative, private corporation or limited liability company organized on a for-profit or not-for-profit basis.

## **Individuals and Partnerships are not Eligible.**

Applicants must have the legal capacity and authority to apply for funding and enter into a contract with RUS.

Applicants must have the legal capacity to own and operate a broadband system.

# Eligible PFSA

**Proposed Funded Service Area (PFSA)** means the contiguous geographic area within an eligible Rural Area in which the applicant proposes to provide service at the Broadband Grant Speed

**Rural Area** means any area, as confirmed by the latest decennial census of the Bureau of the Census, which is not located within:

- a city, town, or incorporated area that has a population greater than 20,000 inhabitants; or
- An urbanized area contiguous and adjacent to a city or town that has a population of greater than 50,000 inhabitants. For purposes of the definition of rural area, an urbanized area means a densely populated territory as defined by the US Census Bureau.



# Community Connect Program

## Available Funding

### FY 2017

- **\$34.5 million** available in FY 2017

### FY 2018

- **\$30.0 million** available in FY 2018

### FY 2019

- **\$30.0 million** available in FY 2019
- \* Carryover funding is sometimes available from previous fiscal years

### General provisions as of the latest FOA:

- Grant funds for Broadband Service deployment
- Population of 20,000 or less
- Amounts from \$100,000 to \$3 million
- Service Area must be entirely unserved
- Minimum Broadband Service is defined as 10 Mbps (download) and 1 Mbps (upload)
- Minimum Broadband Grant Speed is defined as 25 Mbps (download) and 3 Mbps (upload)
- 15% Matching Requirement

## Program Updates

### FY 2017

- **48 Applications processed: \$90.8 million**
- **16 grants approved: \$35.3 million**
- States (x11): AL, GA\*, ID, ME, MN, NC, OK, TN, VA, WA, WY

### FY 2018

- **124 Applications processed: \$225.6 million**
- **14 grants approved: \$30.0 million**
- States (x9): KY\*, MN, NC, ND, OK, NC, TN, VA\*, UT

\* HQ State, but grant benefited additional state(s)

### FY 2019

- Funding Opportunity Announcement (FOA), published on the Community Connect website and Grants.gov on February 12, 2019

*Updated: 11/16/2018*

<http://www.rd.usda.gov/programs-services/community-connect-grants>



# Key Definitions and Limits

## Community Connect Grant Program

- **Broadband Service** means any terrestrial technology having the capacity to provide transmission facilities that enable subscribers of the service to originate and receive high-quality voice, data, graphics, and video at the minimum rate of 10 megabits per second download and 1 megabits per second upload for both fixed and mobile service.
- **Broadband Grant Speed** means the minimum bandwidth of 25 megabits per second download and 3 megabits per second upload that an applicant must propose to deliver to every customer in the PFSA.
- Minimum and Maximum Grant Amounts:
  - \$100,000 minimum
  - \$3,000,000 maximum

# Eligible Project

To be eligible for a Community Connect grant, the Project must:

- Serve a Proposed Funded Service Area (PFSA) in which Broadband Service does not exist;
- Offer service at the Broadband Grant Speed to all residents and business customers within the PFSA;
- Offer free service at the Broadband Grant Speed to all Essential Community Facilities (ECFs) located within the PFSA for at least 2 years starting from the time service becomes available to each ECF; and
- Provide a Community Center with at least two Computer Access Points and wireless access at the Broadband Grant Speed, free of all charges to users for at least 2 years and is open and accessible to area residents before, during and after normal working hours and on Saturday and/or Sunday.

# Eligible PFSA

**Broadband Service** cannot exist in any portion of an eligible PFSA.

Applicants should use all available resources to determine if Broadband Service exists, including: FCC data (<https://broadbandmap.fcc.gov> or <https://www.fcc.gov/reports-research/maps>),

A listing of communities served by existing RUS borrowers and grantees

<https://broadbandsearch.sc.egov.usda.gov>

View service provider websites and contact local service providers

\*\*\* All Information Will Be Independently Verified By RUS \*\*\*

# Eligible Grant Purposes

1) The construction, acquisition, or leasing of facilities used to deploy service at the Broadband Grant Speed to all residents and businesses in the PFSA

- Buildings constructed with grant funds must reside on property owned by the awardee.
- Leasing costs will only be covered through the advance of funds period included in the award documents.

2) The improvement, expansion, construction, or acquisition of a Community Center and provision of Computer Access Points.

- Grant funds for the Community Center are limited to the lesser of ten percent of the requested grant amount or \$150,000.
- If the community center is constructed with grant funds, the center must reside on property owned by the awardee.
- Includes funding for at least 2 and up to 10 computer access points to be used in the Community Center.

3) The costs of providing the necessary bandwidth for service free of charge to the ECFs for 2 years.

# Ineligible Grant Purposes

- 1) Funds may not be used to finance the duplication of any existing Broadband Service provided by other entities.
- 2) Operating expenses are ineligible with the exception of lease costs for facilities used to deploy broadband service and bandwidth expenses.

# Matching Contribution

- Applicants must provide a Matching Contribution which is at least 15% of the total amount of financial assistance being requested.
- Matching Contributions cannot include any financial assistance from federal sources unless there is a federal statutory exception.
- At the time of closing of the award, the awardee must contribute or demonstrate available cash reserves in an account(s) of the awardee equal to at least 15% of the grant.
- The Matching Contribution must be in the form of cash, to be used to fund operations of the project.

# Scoring

Up to 100 points are available. These points are broken into 3 Scoring Components:

- PFSA Needs (up to 50 points are available)
- Stakeholder Involvement (up to 40 points are available)
- Management Experience (up to 10 points are available)

**SPECIAL CONSIDERATION AREA POINTS ARE NOT PART OF THE 2019 PROGRAM**

**APPLICANTS MAY SUBMIT MORE THAN ONE APPLICATION, HOWEVER, ONLY THE SINGLE HIGHEST SCORING ELIGIBLE APPLICATION WILL BE CONSIDERED FOR AWARD**

# **Rural Broadband Access Loan and Loan Guarantee Program**



# Rural Broadband Access Loan Program

Available Funding	Program Updates
<p><b><u>FY 2017</u></b></p> <ul style="list-style-type: none"> <li>• <b>\$27 million</b> appropriated in FY 2017</li> </ul> <p><b><u>FY 2018</u></b></p> <ul style="list-style-type: none"> <li>• <b>\$29.9 million</b> available in FY 2018</li> </ul> <p><b><u>FY 2019</u></b></p> <ul style="list-style-type: none"> <li>• <b>\$29.9 million</b> available in FY 2019 *</li> <li>* Additional Carry over funding is available from previous fiscal years</li> <li>• Loans finance the costs of constructing a broadband network</li> <li>• Amounts from \$100,000 to \$25 million</li> <li>• Broadband Service and Broadband Lending Speed is defined as 25 Mbps (download) and 3 Mbps (upload)</li> <li>• Serving rural communities of 20,000 or less &lt;typically&gt;</li> <li>• At least 15% of the proposed funded service area households in unserved</li> <li>• Cannot have 3 or more incumbent service providers</li> <li>• Service area cannot be in a RUS previously funded area</li> </ul>	<p><b><u>FY 2017</u></b></p> <ul style="list-style-type: none"> <li>• <b>2 loans approved: \$24.0 million</b></li> </ul> <p><b><u>FY 2018</u></b></p> <ul style="list-style-type: none"> <li>• <b>1 loan approved: \$19.9 million</b></li> </ul> <p><b><u>FY 2019</u></b></p> <ul style="list-style-type: none"> <li>• <b>5 loans in process: \$83.7 million</b></li> <li>• <b><u>RD Apply</u></b> online application system</li> <li>• <b><u>NOSA Released</u></b> on November 15, 2018 <ul style="list-style-type: none"> <li>• RUS is accepting applications on a rolling basis</li> <li>• This will give RUS the ability to request additional information and modifications to a submitted application whenever necessary</li> <li>• Applications will be processed on a first come, first served basis</li> <li>• Every 90 days, RUS will conduct an evaluation of submitted applications, ranking them based on the percentage of unserved households that the applicant proposes to serve</li> <li>• RUS conducted least 2 evaluation periods for FY2019</li> </ul> </li> </ul>

Updated: 11/15/2018

<https://www.rd.usda.gov/programs-services/farm-bill-broadband-loans-loan-guarantees>

# Rural Broadband Access Loan Program –Did You Know?

\* **Loan Amounts** between \$100,000 & \$25 Million.

\* **Unserved areas:** “Broadband Service”, the rate used to determine if an area is eligible for funding, shall mean the minimum rate of data transmission of 25 megabits downstream and 3 megabits upstream for both mobile and fixed service.

**Applicant Priority:** The greatest proportion of unserved households.

\* **Broadband Lending Speed:** Applicants must propose to offer new broadband service at a minimum bandwidth of 25 megabits downstream and 3 megabits upstream for both mobile and fixed service to the customer.

**Special Terms and Conditions** may apply if more than 50% of the households are unserved:

- up to 4 year principal deferral
- 25% extension to the amortization period of the loan up to 35 years

**Standard Loan Terms** include:

- 2 Year Principal Deferral
- Interest Rate at the Cost-Of-Money
- Loan Maturity - Life of the Facilities Financed Plus 3 Years

\* As of the most recent NOSA on November 15, 2018

# Notice of Solicitation of Applications (NOSA)

## REQUIRED DEFINITIONS:

- **Broadband Service** – existing Broadband Service with a minimum rate of data transmission of 25 Mbps downstream & 3 Mbps upstream for both mobile and fixed service
- **Broadband Lending Speed** – the rate at which applicants must propose to offer broadband service is a minimum bandwidth of 25 Mbps downstream & 3 Mbps upstream for fixed service



United States  
Department of  
Agriculture

# Rural Development



## ReConnect Program

### *Program Introduction and Key Considerations*

# Application Eligibility Factors

- Unqualified Audited Financial Statement
- Fully Complete Application
- Timely Buildout Completion
- Financial Feasibility and Sustainability
- Technical Feasibility
- Service Areas
- Fully Funded



## LOAN



## COMBO



## GRANT

### Buildout Speed

25/3 Mbps minimum

25/3 Mbps minimum,  
incentive for higher speeds

25/3 Mbps minimum,  
incentive for higher speeds

### Terms

Max award: \$50 million  
2% Interest Rate

Max award: \$50 million  
50/50 Loan/Grant  
UST Rate

Max award: \$25 million  
25% match

### Application Review

Open (non-competitive)

Competitive Scoring

Competitive Scoring

### Round 1 Federal Funds

\$200 million

\$100 million grant +  
\$100 million loan

\$200 million

# Eligible Proposed Service Areas

## **100% Loan Products**

- Proposed funded service area (PFSA) must be located in an area where 90% of households do not have sufficient access to broadband.

## **50/50 Loan/Grant Products**

- PFSA must be located in an area where 90% of households do not have sufficient access to broadband.

## **100% Grant Products**

- PFSA must be located in an area where 100% of households do not have sufficient access to broadband.

# Proposed Funded Service Area (PFSA)

## **Key Considerations**

- Applicants may view some factors of ineligibility using the mapping tool available at <https://reconnect.usda.gov>.
- PFSAs do not need to be contiguous.
- PFSAs may contain “donut holes”.

## **Validation**

- Once an application is received and reviewers complete first eligibility review, PFSAs will be released for public comment.
- USDA will conduct service area validations on applications.
- Validations will check for 10/1 service in the PFSA, validate other information submitted in the application, and any public notice responses.



# Eligible Costs

- The construction or improvement of facilities, including buildings and land, required to provide broadband service.
- Pre-application expenses (not to exceed 5% of the total award). Costs must be incurred after the publication date of the FOA and be documented.
- Costs must be reasonable, allocable, and necessary.
- Applications that propose to use any portion of the award or matching funds for any ineligible cost may be rejected.

## **For 100% loans only**

The acquisition of an existing system that does not currently provide sufficient access to broadband (limited to 40% of the total loan amount).



**Rurality of proposed funded service area**



**Farms served**



**Performance of the offered service**



**Business**



**Healthcare centers**



**Educational facilities**



**Critical community facilities**



**Tribal lands**



**State broadband activity**

# Evaluation and Processing Procedures

## **Loans**

- Loans are accepted, evaluated and processed on a rolling basis

## **Combo Loan/Grant**

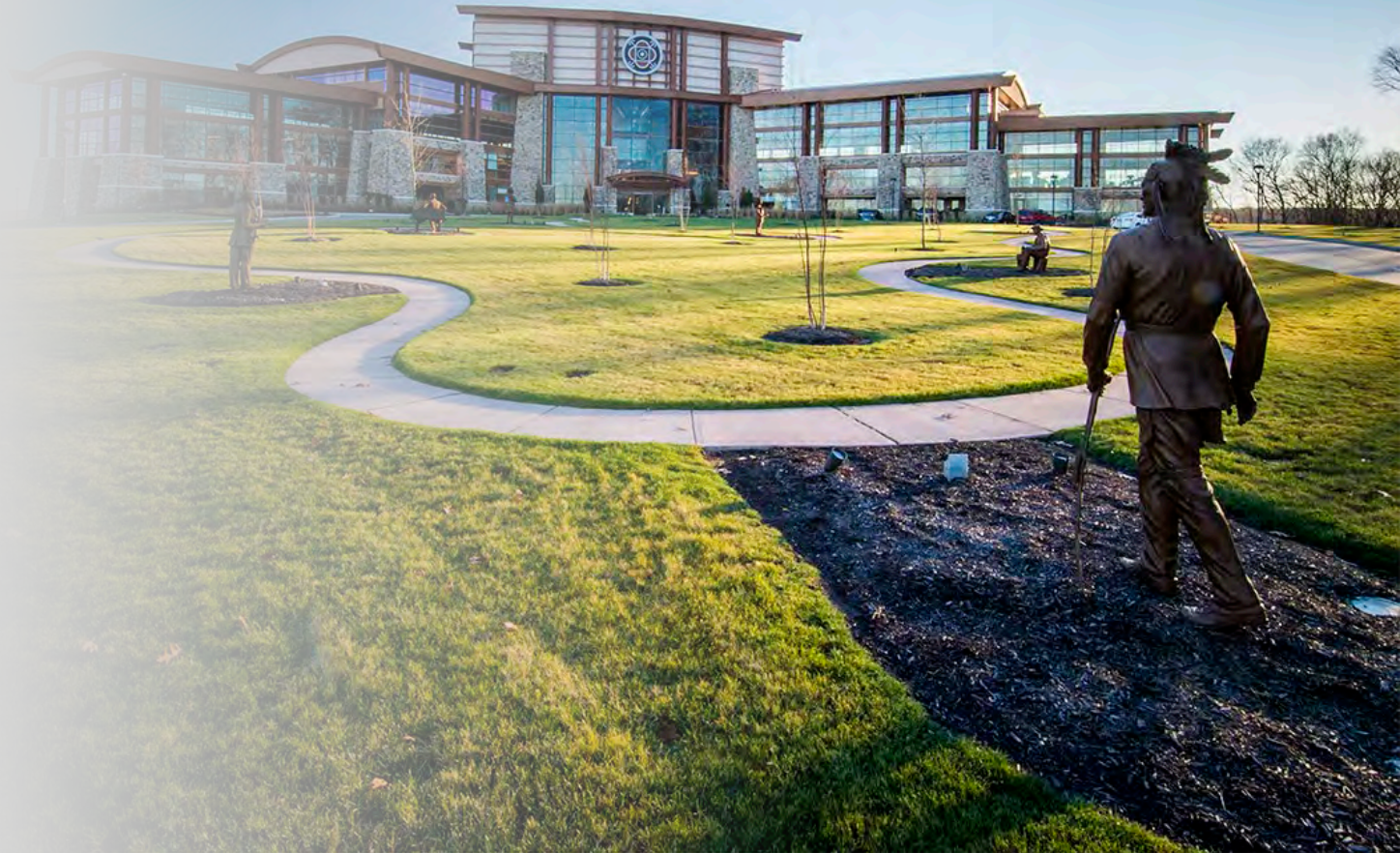
- Combination Loan/Grant will be evaluated and scored in a competitive process

## **Grant**

- Grants are evaluated and scored in a competitive process

Questions?

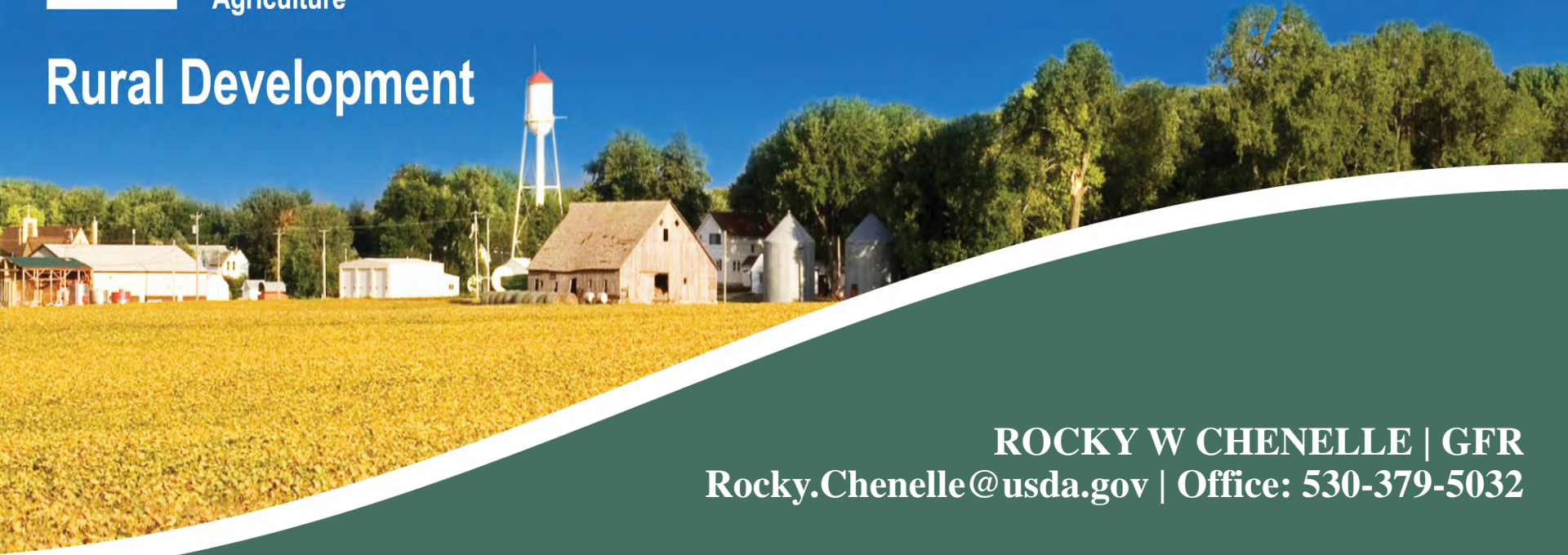
Questions?





United States  
Department of  
Agriculture

# Rural Development



**ROCKY W CHENELLE | GFR**

**Rocky.Chenelle@usda.gov | Office: 530-379-5032**

**Rural Development | Telecommunications Program  
Rural Utilities Service | U.S. Department of Agriculture  
1400 Independence Ave., S.W. | Washington, D.C. 20250  
[www.rd.usda.gov](http://www.rd.usda.gov)**

*USDA is an equal opportunity provider, employer and lender.*



**Jacky Rosen**  
*United States Senator*

# Thank you for attending!

Our Contact Information:

Laura Spining: [lspining@ntia.gov](mailto:lspining@ntia.gov)

Katherine Bates: [kbates@ntia.gov](mailto:kbates@ntia.gov)

Visit Our Website

[broadbandusa.ntia.doc.gov](http://broadbandusa.ntia.doc.gov)