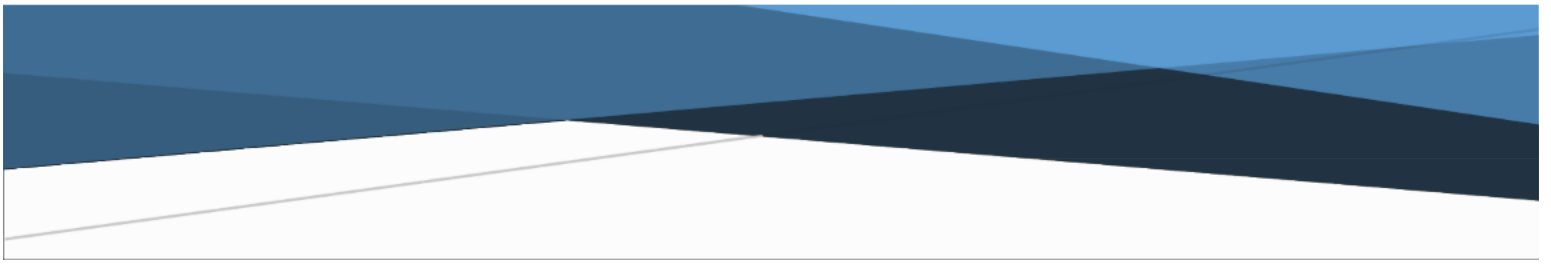




Stronger Economies Together

Doing Better Together

Broadband: Session I



SET COACHES' GUIDE

Broadband: Session 1

DEVELOPING A COMMUNITY BROADBAND ROADMAP

OVERVIEW

Purpose: This slide deck is to highlight the importance of the planning process to achieve communities' Broadband vision.

Estimated Time to Complete: 2 hours

Materials Needed: None

SLIDE 1

INSTRUCTIONS

Have this slide up when participants enter the room.

SET Leaders are ideally positioned to convene stakeholders, assess needs, determine gaps, and plan to leverage assets. A well designed **Community Broadband Roadmap** documents a community's strategic vision and goals, analyzes existing community resources and needs, and guides the tactical plans to realize this vision.



SLIDE: 1

TIME: 1 MINUTE

SUPPLIES: NONE

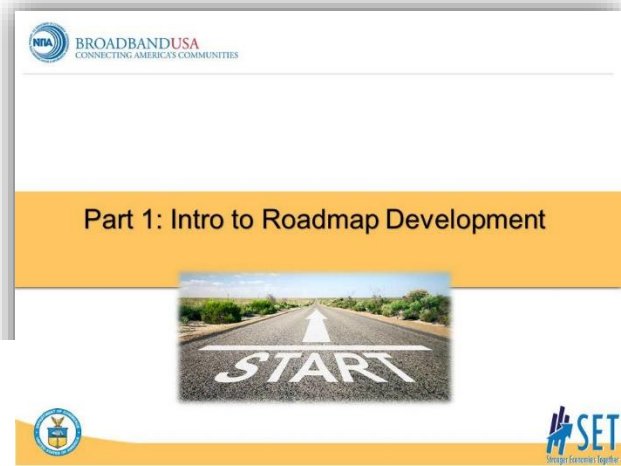
HANDOUTS: NONE

SLIDE 2

INSTRUCTIONS

Continue to reinforce the importance of Broadband planning.

The benefits of developing a Community Broadband Roadmap extend far beyond developing a technology plan, business model, or project plan. It helps identify opportunities for partnerships and collaborations that can spur additional businesses' programs and economic growth. The best roadmaps reflect each community's unique priorities, resources, and needs.



SLIDE: 2

TIME: 1 MINUTE

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 3

INSTRUCTIONS

GOAL: Provide background information on the benefits of Broadband.

Broadband access and use have become critical to the growth of communities in our country.

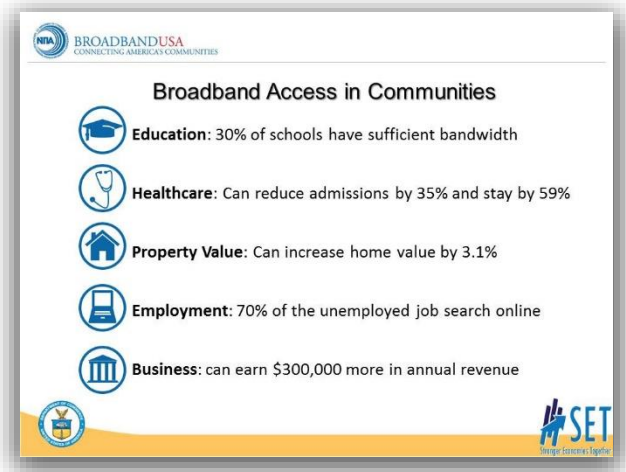
Education: Only 30% of U.S. schools have sufficient bandwidth for digital learning

Healthcare: Telehealth can help reduce Hospital admissions by 35% and overall length Of hospital stays by 59%

Property Value: Broadband can increase home Value by an average of 3.1%

Employment: More than 70% of unemployed Americans use the Internet to find new jobs

Business: Businesses that use Broadband earn \$300,000 more in annual revenue



SLIDE: 3

TIME: 5 MINUTES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 4

INSTRUCTIONS

GOAL: to provide background on NTIA

NTIA has been advancing community Broadband goals through infrastructure and digital inclusion efforts.

Through legacy grant programs, NTIA gained Experience guiding recipients as they:

- Deployed more than 116,000 miles of infrastructure
- Trained more than 4,000,000 people
- Established or upgraded more than 3,000 PCCs
- Helped more than 670,000 households sign up for Broadband
- Mapped Broadband availability across 50 states, 5 territories, and the District of Columbia

NTIA can be a resource for SET regions that would like to know what NTIA funded infrastructure is in their area, what anchor institutions are served, what digital incursion programs may serve as a model, and what state Broadband plans have been developed.

Infrastructure and Digital Inclusion Efforts

Recipients:

- Deployed 116,000 miles of infrastructure
- Trained 4,000,000 people
- Established 3,000 PCCs
- Signed up 670,000 households
- Mapped broadband availability

Logos: NTIA, BROADBANDUSA (CONNECTING AMERICAN COMMUNITIES), SET (Stronger Economies Together)

SLIDE: 4

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 5

INSTRUCTIONS

GOAL: Provide information on NTIA's Current projects

Today, BroadbandUSA continues that work by helping communities plan and execute Broadband initiatives.

Advising: Staff provide support for community infrastructure and digital inclusion efforts in planning, funding, and implementation

Partnering: Staff leverages experience to support communities seeking public-private partnerships

Training: Staff provide information and training to organizations that need assistance navigating the Broadband landscape



SLIDE: 5

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 6

INSTRUCTIONS

GOAL: Discuss why planning is important

Planning efforts are a critical piece of any successful community Broadband project. Through our engagements with customers around the country, we know that planning can be costly, time consuming, and difficult.

However, with the right tools and guidance, planning can also:

- Engage partners, investors, and Broadband champions
- Help secure funding for Broadband efforts
- Develop a systematic approach that will help guide the project from planning through implementation

Take time to develop the roadmap: to establish the process, engage the community and stakeholders in discussion about the benefits of better Broadband, establishing relationships and partnerships, gathering data, creating a vision, and developing on-going support.

Importance of Planning Efforts

- Planning can be costly, time consuming and difficult.
- However, planning can also:
 - Engage partners, investors and broadband champions
 - Secure funding for broadband efforts
 - Develop a systemic approach to complete the project

SLIDE: 6

TIME: 10 MINUTES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 7

INSTRUCTIONS

GOAL: Emphasize the importance of looking at the big picture – what can Broadband do for communities?

As a community begins planning efforts, it is important to consider the overall goals of the program.

- How do Broadband initiatives support the community, institutions, and businesses?
- How do infrastructure plans and workforce training projects benefit other economic development activities?
- What mix of initiatives is best?
- Which initiatives and benefits can be achieved in the short term vs. long term?

Successful planning engages the public and stakeholders to understand their needs and it is important to look at the big picture of how Broadband can provide community benefits (e.g. telehealth, education, e-government, digital inclusion, and end the homework gap).

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CONNECTING AMERICA'S COMMUNITIES

Consider Overall Goals

- How do broadband initiatives support the community, institutions and businesses?
- How do infrastructure plans benefit other economic development activities?
- What mix of initiatives is best?
- Which initiatives and benefits can be achieved in the short term vs. long term?

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SLIDE: 7

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 8

INSTRUCTIONS

GOAL: Describe the benefit of embarking on a thorough planning process

Developing a Community Broadband Roadmap can help get communities on the right track.

A Community Broadband Roadmap should include:

- A vision (and goals) for the Broadband initiative
- Anticipated benefits of program offerings
- The strategy and action plan necessary to achieve the vision

The Roadmap can also help identify new opportunities for partnerships and collaborations that can help spur community achievement and growth. It can also foster a common Broadband vision, prioritize needs and interest, catalyze stakeholder commitments, assess where to find the needed physical infrastructure, organizational capacity, and human capital assets of the community.

Community Broadband Roadmap

- Roadmap should include:
 - A vision and goals
 - Anticipated benefits
 - Strategy and action plan
- The Roadmap can also identify new partnership opportunities

SLIDE: 8

TIME: 10 MINUTES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 9

INSTRUCTIONS

GOAL: To provide six steps to follow when embarking on a Broadband planning process

Each community will need to work through six key steps to create the roadmap

1. Assemble a team to develop a community Broadband vision
2. Assess Broadband needs, state, local or regional plans; assess resources, gaps, and needs
3. Engage stakeholders
4. Evaluate technology options for digital inclusion and infrastructure
5. Assess organizational models
6. Develop project plans



SLIDE: 9

TIME: 2 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 10

INSTRUCTIONS

GOAL: Communities learning from the best practices of others

Communities can benefit from our experience with grant projects and technical assistance communities.

Rely on **project champions** to advocate for the vision and keep activities moving forward (they can articulate how Broadband with further a community's economic and social goals)

Adjust timeframes as planning progresses (**stay flexible**)

Network with other communities that began Broadband projects to learn what worked

Leverage work by other states or regional planning groups by using their guides, research, and frameworks

Be prepared with research and initial planning to pursue funding and partner opportunities that could suddenly emerge (from the beginning, planners should incorporate data drive research into the planning process. Data helps identify the Broadband projects the community needs most, builds the funding case, and can be used to evaluate the project's results.

Engage the community by recruiting organizations, economic development groups, and foundations having strong local ties.

Communities Can Benefit from Our Experience

- **Project champions** - advocate and keep activities moving forward
- **Adjust timeframes** – stay flexible
- **Network** – other communities
- **Leverage** – use guides from other planning groups
- **Be prepared** – pursue new funding opportunities
- **Engage the community** – recruit organizations with strong local ties

SLIDE: 10

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 11

INSTRUCTIONS

GOAL: Discuss the first step in the Broadband planning process – establishing a team

First, a community can assemble a team to develop a vision for the Broadband effort. Empower a small team to start building the roadmap.

Compose the team based on the mission and include:

- A mix of skills
- Varying backgrounds or viewpoints
- Interest in a common goal

Teams need to include individuals with experience in telecommunications, information technology, finance, outreach, marketing and business, as well as individuals who understand the community needs and goals. The team should develop a hypothesis about how Broadband will impact the community and build research methods to test assumption. The team also must decide on the analytic framework to analyze costs, risks, and potential benefits to the local economy, institutions, and residents. Some communities set up special committees or task forces.

Mission sample

- Expanded E-government
- Economic growth
- Enhanced education

Step 1: Assemble a Team

- Compose the team based on the mission and include:
 - A mix of skills
 - Varying backgrounds or viewpoints
 - Interest in a common goal

Expanded E-Government
Government Reps
IT Department

Economic Growth
Government Reps
Development Orgs
Telecom Providers
Business Leaders

Enhanced Education
Educators
Library Leaders
Parents

SLIDE: 11

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 12

INSTRUCTIONS

GOAL: Provide a Case Study: Port of Clarkson

Project purpose: Upgrade Broadband infrastructure to attract new tenants and bring jobs to a local industrial park.

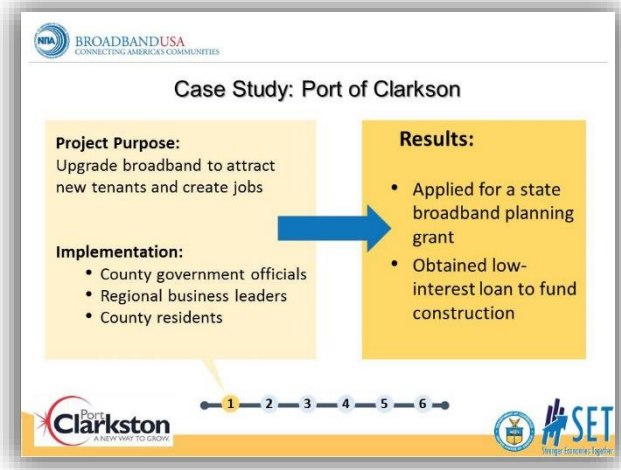
Built a planning team comprised of key stakeholders:

- County government officials
- Regional business leaders
- County residents

Results:

- Applied for a state Broadband planning grant to cover needs assessment, preliminary engineering plan, and cost estimates
- Obtained low-interest loan from Washington State economic revitalization board to fund construction

Use as example of how planning found a solution and funding.



SLIDE: 12

TIME: 5 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 13

INSTRUCTIONS

GOAL: Discuss how to assess local resources

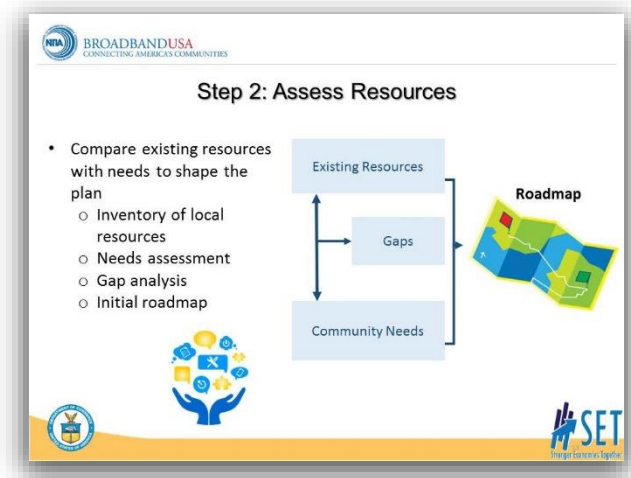
Step 2: The team can assess the community's Broadband-related resources, gaps, and needs.

Learn more about community resources and needs by:

- Taking an inventory of local resources
- Conducting a needs assessment
- Performing a gap analysis
- Drafting an initial roadmap

Some typical questions to ask during the assessment phase:

- Who currently provides Broadband to residents, businesses, and institutions?
- What assets do local governments have that may be used for Broadband networks?
- Are discounted or low cost subscriptions offered to low income residents?
- Where are the physical network resources and what is the capacity and choice?
- Is there a middle mile provider who offers wholesale rates?
- Where are public computer centers available and when?
- Is public Wi-Fi available?
- Are digital skills classes being offered?



SLIDE: 13

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 14

INSTRUCTIONS

GOAL: Provide a Case Study: Columbia County, GA

Project purpose: Build a county-wide fiber middle-mile network to connect community organizations

Implementation:

- Created a survey map by census block to evaluate coverage by existing providers
- Utilized working group (economic development authority, Broadband utility group, tech firms and IT personnel) to identify gaps and needs to their stakeholders

Results:

- Built a 220-mile fiber network
- Connected 150 community organizations

This was a major effort undertaken by rural county with implementation coordinated by county staff.

Case Study: Columbia County, GA

Project Purpose:
Build a county-wide fiber middle-mile network

Implementation:

- Created survey map by census block
- Utilized working group to identify gaps and needs

Results:

- Built a 220-mile fiber network
- Connected 150 community organizations

SLIDE: 14

TIME: 10 MINUTES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 15

INSTRUCTIONS

GOAL: Discuss the importance of civic and stakeholder engagement

Step 3: the team can develop a plan to engage stakeholders and build relationships

Use outreach efforts to:

- Strengthen relationships
- Seek areas of agreement
- Reach new stakeholders

Tailor efforts to community resident preferences (e.g. in-person meetings or via an online newsletter)

Holding meetings and discussion groups is important in order to hear new perspectives on how Broadband might benefits the community. It's important to involve leaders of local governments, community institutions, schools, hospitals, chambers of commerce, and economic development organizations. Discussion should address how the roadmap can improve healthcare and education, strengthen civic participation, and workforce development and other benefits so the stakeholders and the public understand that Broadband is a means to solve problems and reach goals.



SLIDE: 15

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 16

INSTRUCTIONS

GOAL: Discuss a Case Study on a rural, tribal initiative

Case Study: College of Menominee Nation

Project Purpose: Bring Broadband's benefits to more than 5,000 tribal members in a rural, economically disadvantaged area

Used knowledge of community activities to develop outreach:

- Worked with the local transit authority to place promotional signage on buses and negotiated a new bus stop in front of the center
- Identified partners to reach to broader stakeholder groups (e.g. schools, unions, University of Wisconsin Extension)

Results:

- Served more than 2,800 people and provided more than 25,000 hours of training
- Outgrew the project space because of the success and added 5,000 ft. of additional support space

Ongoing training is continuing to be provided to the tribe through the College.

Case Study: College of Menominee Nation

Project Purpose:
Bring broadband to more than 5,000 tribal members

Implementation:

- Placed promotional signage and negotiated a new bus stop
- Identified partners

Results:

- Served 2,800 people and provided 25,000 hours of training
- Added 5,000 ft of additional support space.

Logos: BroadbandUSA (CONNECTING AMERICAN COMMUNITIES), SET (Stronger Economies Together)

SLIDE: 16

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 17

INSTRUCTIONS

Step 4: the community can begin to evaluate technology and service offering options

- Select the 'right' technology and/or service based on key community characteristics and needs
- Consider the program's mission and target audiences when evaluating potential options

Broadband Infrastructure

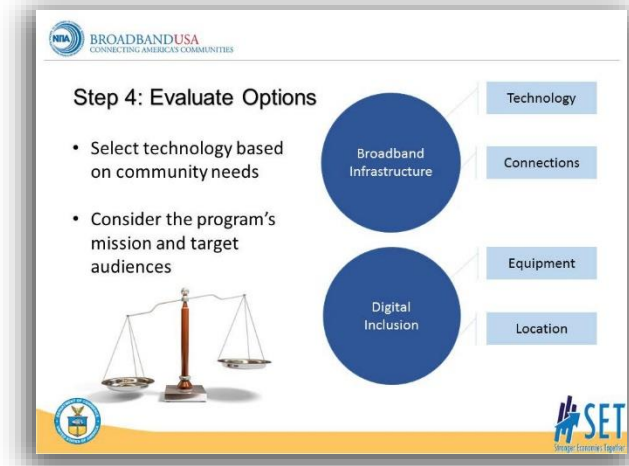
- Technology
 - Wireless
 - Fiber
- Connections
 - Last-mile
 - Middle-mile

Digital Inclusion

- Equipment
 - Tablet
 - Laptop
- Location
 - Brick & mortar
 - Mobile lab

Some of the questions to ask are:

- How much capacity will households, businesses, and institutions need in the future?
- Which mix of equipment is best for public computer centers?
- Does the available technology, architecture, and capacity meet needs?
- Is new infrastructure or service needed to meet community needs and save cost?



SLIDE: 17

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 18

INSTRUCTIONS

GOAL: Discuss an educational Case Study

Case Study: Region 18 Education Service Center

Project purpose: Deploy high-speed middle-mile infrastructure through collaboration with five Broadband service providers

Implementation:

- Conducted market research and surveys of service providers to identify service needs and select technology type(s)
- Leveraged information from local community development corporations to identify where Broadband fiber placement could have the most strategic impact on education, the economy, and healthcare

Results:

- Deployed 244 miles of new fiber that provided all K-12 public schools in Region 18 with at least 100 Mbps of Internet service with the ability to upgrade to 1 Gbps

High capacity is needed to serve the needs of schools.

Case Study: Region 18 Education Service Center

Project Purpose:
Deploy high-speed middle-mile infrastructure

Implementation:

- Conducted research to identify needs and technology
- Identify where broadband fiber could have the most impact

Results:

- Deployed 244 miles of new fiber

ESC 18 | 1 2 3 4 5 6 | SET Stronger Economies Together

SLIDE: 18

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 19

INSTRUCTIONS

GOAL: Cover the elements of Step 5 – selecting an organizational model

Chose a model that provides the best legal and financial framework to implement and maintain the Broadband project

Select an organizational model based on:

- Project benefits
- Legal relationships
- Funding sources
- Asset ownership
- Expertise needed

The various types of partnerships are:

- Government owned/led
- Non-profit owned/led
- Public-Private Partnership
- Cooperative
- Utility owned/led
- Private sector owned/led

Selecting the best organizational model and partnership structure depends upon the resources and needs of the community.

Step 5: Select Organizational Model

Public

- Select organizational model based on:
 - Project benefits
 - Legal relationships
 - Funding sources
 - Asset ownership
 - Expertise needed

Government Owned/Led

Non-Profit Owned/Led

Public-Private Partnership

Cooperative

Utility Owned/Led

Private Sector Owned/Led

Private

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SLIDE: 19

TIME: 5 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 20

INSTRUCTIONS

GOAL: Provide a big city example of digital inclusion partnerships

Case Study: City of Chicago

Project purpose: Spur economic development an increase in civic engagement through digital inclusion efforts

Created on organizational model that leveraged strong partnerships with local community organizations:

- Partners more easily served as conduits for government and private funding to organizations in the selected neighborhoods
- Trusted representatives helped increase use of program services

Results: Increased Broadband adoption in targeted neighborhoods by approximately 15% (in other communities it rose by 6%). Chicago developed their digital inclusion plan over many years, including the work of a task force. The city contracted with local non-profit groups to provide training in the communities they serve.

Case Study: City of Chicago

Project Purpose:
Spur economic development and increase civic engagement

Organizational Model:

- Partners served as conduits for funding to organizations
- Representatives increased use of program services

Results:

- Increased broadband adoption by approximately 15%

Smart Communities

1 2 3 4 5 6

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SLIDE: 20

TIME: 10 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 21

INSTRUCTIONS

GOAL: Discuss developing the project plan for Broadband

Base the scale and scope of the project plan on the project type and groups involved.

Include information about:

- Operational and financial models
 - Existing and new resources
 - Benefits to the community and partners
- ✓ Project description
 - Vision
 - Goals
 - ✓ Organizational Structure
 - Leadership
 - Management
 - ✓ Products and Services
 - ✓ Operations
 - ✓ Financial Statements
 - Balance sheet
 - Pro-Forma

The scale and scope of the project plans, which include operation and financial models, may differ significantly depending on the types of projects and communities involved. Since circumstances change, the information in these documents will need to be continually updated.



SLIDE: 21

TIME: 10 MINTUES

SUPPLIES: NONE

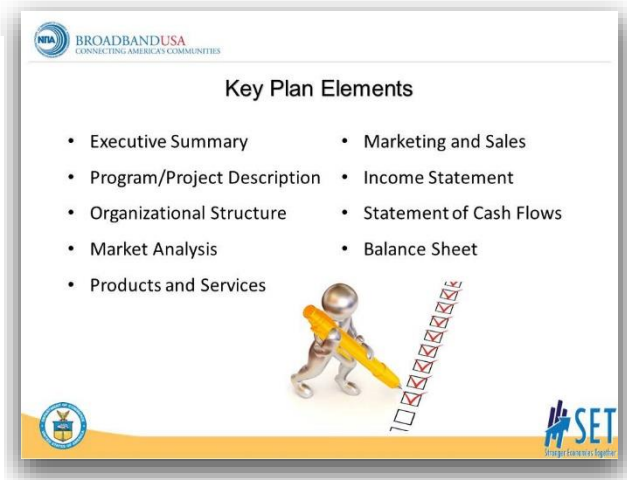
HANDOUTS: NONE

SLIDE 22
INSTRUCTIONS

Communities should build-in infrastructure-specific elements to their business plan.

Key plan elements:

- Executive summary
- Program/Project description
 - Interconnection point in region
 - Leased/contracted network assets
 - Estimated cost-per-mile for build
- Organizational structure
- Market Analysis
 - Demand forecast
 - Estimated take rate
- Products and services
- Marketing and sales
 - Service plan (wholesale, retail)
- Income statement
- Statement of cast flows
- Balance sheet



SLIDE: 22

TIME: 5 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 23

INSTRUCTIONS

GOAL: Case Study of the plan for and development of the North Georgia Network

Case Study: North Georgia Network

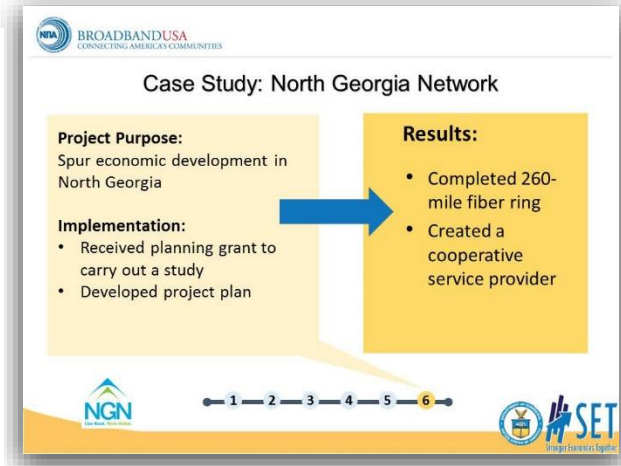
Project Purpose: Use broadband network to spur economic development in North Georgia

Implementation:

- Applied for and received a planning grant to carry out a Broadband feasibility study
- Developed a detailed project plan, including financial plans, to drive program implementation

Results: Completed a 260-mile fiber ring, activated points of presence, and created a member-owned cooperative service provider.

The local University and two counties designed and developed the plan. Two utility companies partnered to create the North Georgia Network.



SLIDE: 23

TIME: 5 MINTUES

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 24

INSTRUCTIONS

GOAL: Reinforce the importance of Broadband planning

Working through the different stages of the roadmap helps communities develop a full broadband picture

- Each stage plays a different role and, when combined, helps communities think through key aspects of any initiative
- When possible, communities should try to work through each phase in order, building plans out with each succeeding phase
- The information collected when building the roadmap will help communities be more successful, “planning with the end in mind”

This initial planning cycle requires significant effort, but similar evaluation, analysis, and revaluation will be required throughout the lifetime of the Broadband project or projects to keep community members engaged, achieve community goals, increase broadband utilization, and ensure continued participation by large institutions and/or businesses. Broadband plans should be updated on a regular basis to maintain the continuous cycle of planning, evaluation, and improvement that is critical to sustain any community Broadband initiative.

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Importance of the Roadmap

- Each stage plays a different role
- Communities should try to work through each phase in order
- “Planning with the end in mind”

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SLIDE: 24

TIME: 5 MINTUES

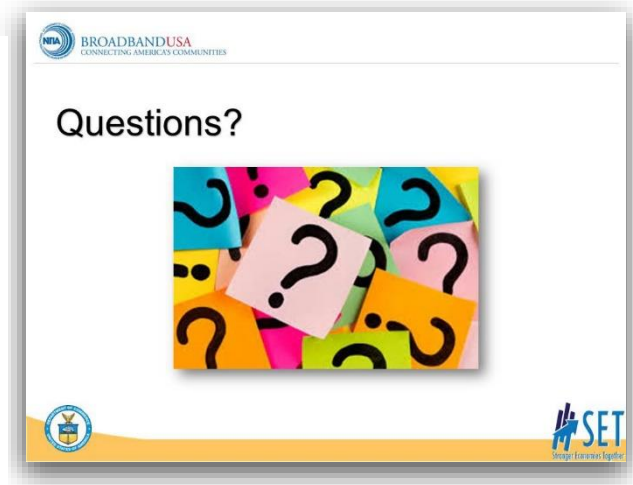
SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 25

INSTRUCTIONS

Allow participants to ask questions.



SLIDE: 25

TIME: 1 MINTUE

SUPPLIES: NONE

HANDOUTS: NONE

SLIDE 26

INSTRUCTIONS

Include any additional contact information.

Additional resource on broadband partnerships:

http://www2.ntia.doc.gov/files/powerbroadband_070517.pdf



SLIDE: 26

TIME: 1 MINUTE

SUPPLIES: NONE

HANDOUTS: NONE