Accessing Broadband in Your Community through the
Community-Driven Broadband Process

COMMUNITY-DRIVEN BROADBAND PROCESS

ENGAGE THE COMMUNITY
- Form broadband working group
- Identify community priorities
- Stakeholder Communication
- Convene for regional and policy context

ASSESS INFRASTRUCTURE OPTIONS
- Request for information process
- Work with an incumbent provider
- Feasibility study

FUND BROADBAND PROJECTS
- Choose a financial model
- Seek private and public funding
- Address affordability

REALIZE BENEFITS & USE
- Expand access to education & healthcare
- Advance ability to telecommute
- Discover business efficiencies
- Improve digital literacy & use

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islandinstitute.org/broadband

Why Broadband?

High-speed internet access is essential for connecting and sustaining Maine's rural and remote communities. Do you have internet? Great! Are you able to upload and download videos, pictures and webpages with ease? If you live in rural Maine, then probably not. While a convenience to most of us, broadband is a necessity for businesses, community services, students, and individuals who work from home.
Slow and unreliable internet places communities on the wrong side of the digital divide and out of contact with customers, clients, educational opportunities, and visitors.

Bring broadband to your community!

Knowing is half the battle. Large telecom companies have not made significant investments in the infrastructure of rural areas with small populations; as a result, many rural areas have taken control of their own futures and begun funding community-driven solutions.

Community members celebrate the arrival of broadband to Cliff Island

High-speed, reliable internet service ensures equitable access to education and healthcare, supports civic engagement and aging in place, spurs economic diversification and development. It is a major contributor to the sustainability of Maine's island and coastal communities. Geographic isolation and sparse populations mean Maine's rural communities continue to lag behind the rest of the nation in quality of internet service and economic productivity.
As they see this digital divide widening, many island and coastal communities are taking charge of their own future through a community-driven broadband process.

Maine's communities pride themselves on being unique from one another, both socially and economically. So it's not surprising that the broadband solutions they seek are also unique. After working with many Maine communities, however, we've identified a set of best practices and necessary steps that can help guide a successful *community-driven broadband process*. From research to community education to funding, communities are taking full ownership of their digital futures. Residents are working together to solve the connectivity problem by identifying and implementing improvements to infrastructure.

They are also helping raise awareness of the ways that broadband can be used to improve business efficiency, workforce development, and quality of life. Broadband solutions that entail municipal involvement require political will and leadership. Community leaders may need to make the case for high-speed internet to local governments and other community members. Broadband attracts and retains young families. It supports schools and education. It can provide second incomes, which contributes to the local economy and municipal services. It supports growth and prosperity of businesses, farmers and fishermen, which helps sustain communities.

Residents of Islesford watch a microwave tower being erected next to the Cranberry Isles town office.

Realize Benefits & Use
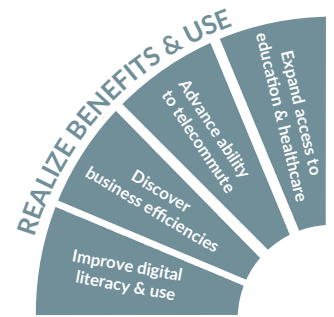
Discover business efficiencies

Accessing suppliers or customers and clients is difficult when your business is located in a hard-to-reach area of Maine. Instead of having to travel to meetings in Portland and beyond, imagine the efficiency of being able to video conference. With broadband, you can sell your lobsters, pottery, or other goods across the world. With the ability to quickly upload photos and videos onto webpages and receive orders and target advertising throughout the web, your markets can be expanded instantly. Growing your audience beyond your community and its tourism industry means that you can gain income in the off-season and access greater numbers of potential buyers.

Improve digital literacy

Digital literacy is having the knowledge and competence in understanding and using digital connection to the internet. Addressing familiarity with accessing the internet and improving skills to use the internet benefits business growth, workforce development, health access, community and civic engagement, student education, and all around quality of life. Improving digital literacy also drives support for better connected communities, for the economic and social benefits, and for increasing adoption or subscription to internet service.

Consider WiFi hotspots

Providing public access to the internet for your community's residents and visitors is a great way to boost the quality of the experience they have, and the economic activity that occurs, in key areas of the community.

Setting up WiFi hotspots in downtown or other public areas is a fast and cost-effective way to bring the internet to residents and visitors. Another way to support commerce and education among community members is a mobile WiFi program at the library or other institution, which allows the internet to be "checked out" for the day or week.

Attract and keep year-round families

High-speed internet can help keep and attract new families by greatly increasing career opportunities in the community. Employment opportunities on an island greatly increase when it is possible to telecommute. In rural areas where career opportunities are often limited to seasonal work, broadband allows families to support themselves year-round and provides career paths for those who can't find reliable work within the community. We often hear from young people who want to move to islands but can't do so without access to high-speed internet for work.
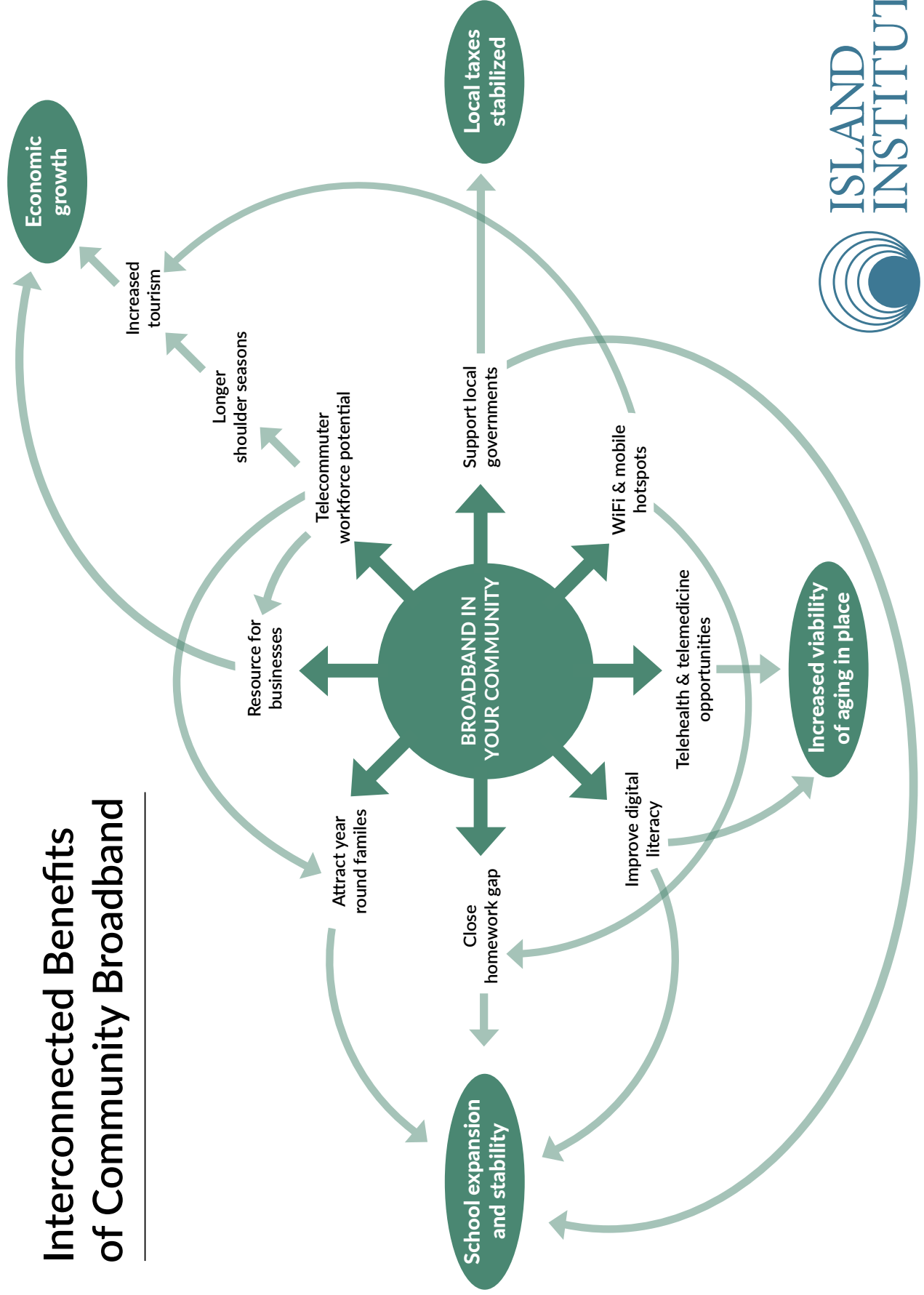
Broadband makes it possible to work where one chooses to live, not live where one happens to work.

Libraries, such as St. George seen here, are increasingly providing tech help to communities. Support ranges from software education and installation to phone apps and password support.

Interconnected Benefits of Community Broadband

BROADBAND IN YOUR COMMUNITY

- Support local governments
- WiFi & mobile hotspots
- Telehealth & telemedicine opportunities
- Improve digital literacy
- Close homework gap
- Attract year round familes
- Resource for businesses
- Telecommuter workforce potential

Economic growth

Local taxes stabilized

Increased tourism

Longer shoulder seasons

Increased viability of aging in place

School expansion and stability

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Community-Driven Broadband in Practice

Broadband Timeline — Cliff Island

March 2013
Sustainable Cliff Island (SCI) is incorporated as a 501(c)(3)organization with five priorities not inclusive of broadband

2015 -2018
- Attend broadband conferences to learn what is happening statewide
- Engage the Island Institute in plans
- Board of SCI adds bringing broadband to Cliff Island to their list of priorities
- Research broadband options through a Request for Information (RFI) process
- Assess RFI responses and Interview Axiom's Mark Ouelette
- Decide to partner with internet service provider Axiom Technologies

Fall 2016 - Spring 2018
- SCI communicates with the City of Portland about its investigation of a city-wide broadband network
- SCI decides not to wait for the city to establish a city-wide broadband network
- The city declines to financially support SCI's broadband project
- SCI hires a tax attorney to help decide on a broadband ownership model as a nonprofit or an LLC

Summer 2018
- Walt Swift, a Cliff Island summer resident comes to SCI Broadband meeting; he is heading up a similar Broadband project in Lyme, New Hampshire and strongly recommends establishing an LLC
- Cliff Island Association, which owns the community hall, votes to fund an addition; it will serve both the broadband project and also create space for the new health clinic (another one of SCI's priorities)

Fall 2018
- SCI chooses the Lyme LLC model
- CIFiber LLC plan is drafted and Board is established
- Investor package is drafted and marketed to prospective Cliff Island residents
- A minimum of 60 subscriber commitments are sought
- $340,000 is raised through private investment
- First progress report goes out to investors

Winter 2018-2019
- Permissions for fiber optic cable to cross properties and public ways are achieved
- Permitting for construction occurred

Spring 2019
Fiber Optic Cable sleeving and cable is laid on the ground around the island

Summer 2019
- 85 subscribers commit to join the CIFiber/Axiom Broadband Network
- Mid-year progress report goes out to investors
- Cliff Island community meeting is held
- CIFiber Control Room is constructed
- Equipment changes are made to connect island network to the internet on the mainland
- Subscriber hook-ups are completed
- A ribbon-cutting ceremony was held in the community hall—complete with an island-baked cake

Fall 2019
- The CIFiber system is fully activated from the CIFiber Control Room
- Axiom meets with the Cliff Island community to inform and assist attendees with all aspects of its service, including billing, repairs and addressing any problems
- CIFiber and SCI representatives join 2019 Broadband Summit to share their story

Create a Working Group

Creating a broadband working group, task force, or committee is a great way to bring in community members with diverse backgrounds, help spread out the work, and communicate to all segments of the community. In this way, working groups can help ensure that there's community-wide support for resulting broadband projects.

Identify important representation
- Municipal official or someone with political will to support broadband
- Educator, librarian, or someone who cares about educational opportunities
- Someone who interacts with a wide range of the community
- Telecommuter or someone who depends on broadband
- Someone from a business or industry that is important to the community

Assign important roles
- Respected communicator
- Finance guru
- Energizer who engages people of all ages
- Technical, policy, or other expert
- Visionary who keeps process moving forward and feeling upbeat

Other key Factors to effective broadband working groups
- Determine how the group should be organized
- Articulate the need for broadband, defining the goal the group will work toward
- Set a meeting schedule—what frequency is needed for assigning tasks and problem-solving
- Set a meeting agenda
- Agree on a mode of communication
- Celebrate your milestones with the community

CHALLENGES

Engaging volunteers
It can be hard to find people who are interested and have the time to commit. Broadband may not be the issue of the day, so you need to make the case for reliable high-speed internet. What do they care about, and how is broadband related to that problem?

Timing and communication
Be sure to communicate between meetings. Try to hold meetings when the most people can attend as possible. Consider setting up a conference call option, which can also come in handy for bringing outside experts to the table.

Staying positive
The pursuit of broadband will take months if not years, and maintaining momentum can be challenging. Try not to get discouraged when milestones take longer to reach than expected. Spread out the work among group members to maintain engagement and celebrate small successes!

Assess the levels of interest and commitments from potential working group members, and seek a variety of expertise or perspectives. A balance of year-round and summer residents is important.

Community Example

Broadband solutions may require municipal involvement. The Town of Cranberry Isles Select Board authorized the Broadband Communications Working Group, which met on set agendas to progress their broadband efforts.
The formality of the Cranberry Isles Group helped ensure transparency of their actions and decisions, which supported efforts to garner broad community buy-in for an eventual broadband project. While meeting on an as-needed basis, the Cranberry Isles Group members continued conversations using Slack, an online messaging system.
By maintaining continuity from one meeting to the next, despite the members' very busy lives, the Cranberry Isles Group ensured consensus was reached and well-communicated broadly as they developed their action plan, which was overwhelmingly approved at their town meeting.

Community-Driven Broadband Process

Broadband Working Group Worksheet

IDENTIFY IMPORTANT REPRESENTATION

Municipal official
(someone with political will to support broadband)

Educator
(a librarian or someone who cares about educational opportunities)

Interacts with wide range of the community
(someone from the community center or other gathering place)

Telecommuter
(someone who depends on broadband)

From a local business
(or an individual from an industry that is important to the community)

Other key individuals
(people who are integral to the fabric of the community)

POTENTIAL GROUP MEMBERS

ASSIGN IMPORTANT ROLES WITHIN WORKING GROUP

Draw lines to potential group members

Communicator
(for within the working group and from the working group)

Finance guru
(someone who can calculate and share potential cost-savings)

Energizer
(of any age: from high school to those trying to age in place)

Technical, policy, or other expert
(someone who can dive deep into broadband)

Visionary
(someone who keeps the process moving forward and feeling upbeat)

RECRUITMENT PLAN IDEAS:

Stakeholder Communication

Like any community project, widespread understanding, support, and engagement helps create a positive buzz and accomplish tasks. In addition to forming a broadband working group with members that can reach various segments of the community, stakeholder communication that is frequent and transparent helps build and maintain community support.

Ideas for stakeholder communication

- Create an online space for generating a buzz and allow for feedback from the community
- Social media or a community newsletter are great ways to spread the word
- Own a community email list to share information and stick to a clear broadband message
- Use community priorities to frame the importance of broadband
- Be transparent: hold informative meetings that are accessible to a large swath of the community. Use this time for updates and education

Tips for community outreach

- Whether a survey or other outreach document, consider the purpose, which should determine its design
- Meet people where they are, by using both electronic and hard-copy communications
- Broadband is an unfamiliar term or idea, so frame it in the context of community priorities
- Seek out experts or technical assistance in developing surveys or outreach materials

Improving internet service doesn't always rise to the top of community priorities, especially in communities with many public service concerns like funding education, ensuring transportation, or addressing medical needs.

After it becomes clearer through education that broadband is a necessary tool for the community to remain viable into the future, it may slowly rise up the priority list. Consider how economic or social values could be connected to, or benefited by, broadband. Putting together community meetings or a regional conference is a great way to provide space in order to discuss the economic and social value of broadband, and build enthusiasm and support for internet improvement projects. By inviting internet service providers and public funders, communities can learn about the options available to them. Community members can collaboratively plan with one another and with neighboring communities.

Falling behind the digital divide could put your community at a huge disadvantage in the new economy and in addressing other priorities like education and public health.

Community Example

The Fox Islands Broadband Task Force wanted a place where they could share their progress on exploring current and future broadband needs and options with the residents of North Haven and Vinalhaven.

One of the Task Force members created a Facebook page, which provides space for generating buzz about the topic and for sharing information. Task Force members post events that can be shared by page followers to other individuals who are their friends on Facebook. Members also share examples or stories about broadband efforts outside the community's own progress.

Identify Community Priorities

Identify the community's priorities and what level of access or service is needed to address those priorities.

Ideas for identifying community priorities

- Engage the community in identifying priorities through creating a community survey and/or hosting an event
- Review municipal documents and other community plans
- Attend regional or community meetings to hear how the community is portrayed

Community surveys

A community survey provides background on why broadband is important and collects needed information for those taking action toward improving internet service. While surveys can be a great way to generate buzz about broadband and contribute to community outreach, survey goals are best accomplished after the community has been educated on broadband.

A survey can be designed to:

- Assess the lack of broadband
- Identify the interest in a broadband solution
- Evaluate willingness to pay
- Help engage the community by identifying priorities and assessing infrastructure options

IMPLEMENTATION STEPS

Planning the survey

- Determine the purpose of the survey, which should be what drives the survey design. Don't just copy other surveys—what information do you need to collect?
- Determine how the results will be used and what response rate is required
- Design around the survey takers' characteristics and needs
- Determine the cost/budget limitations

Design and review the survey

Conducting surveys properly helps to limit the amount of bias or inaccuracy in responses. How your questions are worded and ordered can influence what a respondent perceives about the possible answers. Consider online surveys—they can save considerable time with collecting and analyzing results.

Conduct the survey

Sometimes the hardest part of a survey is getting people to take it. Consider:

- Emailing the link to the online survey
- Using word-of-mouth to remind people about it
- Work with small groups and individuals to take the survey; in doing so, they are able to share more information about the topic with others

The survey should be short; it should take no more than five minutes to complete.

Review and share the results

It's helpful to look for patterns in survey responses and also individual responses.

The results of the survey should be shared across multiple platforms, including community meetings, municipal websites, and social media, ideally within two weeks of the survey closing.

CHALLENGES

Funders may require surveying.

Volunteers: Who will help with spreading the word about the survey? Who will be responsible for reviewing results (which can take a lot of time)?

Cost: The cost of mailing surveys can get pretty high. Is there an organization than can provide in-kind support? Can paper surveys go out in mail already planned, e.g., tax bills or community newsletter?

Community Example

The Swan's Island Broadband Committee needed to figure out where the internet service gaps were located, so they could focus improvement efforts in the most effective way possible. They also realized the need for broader community awareness around broadband, in order for the community to eventually improve service. With a population that triples during the summer, the Swan's Island Broadband Committee decided to run their survey all summer long. Over the course of three months, the committee received responses from 17% of their residents.

Convening for Understanding the Regional & Policy Context

Being aware of the regional and policy context around broadband can lead to the discovery of additional resources and opportunities, as well as help to anticipate any obstacles or challenges that might arise as the community pursues better internet connectivity. Community or regional meetings are great ways to discuss the economic and social value of broadband, build enthusiasm and support for projects, learn about the options available from internet service providers or public funders, and plan within or among communities.

KEY FACTORS

Identify a purpose
It's important that a regional or strategic meeting be outcome-focused. This helps form an agenda, which will culminate in concrete steps to move forward.

Identify participants
Who are the key individuals who should be present? Consider who can bring information, who can answer questions and who can give context.

Prepare facilitators and speakers
Clarify the goal of the meeting and each person's role. What information will attendees gain from the presentation, and what will be helpful to discuss? Prepare questions for your speakers based on those considerations. Provide thoughtfully crafted questions to initiate productive group discussion. Have experts float between group breakouts to further guide discussion toward developing next steps or other desired outcomes.

Mix it up
Maintain attendees' engagement by having a thoughtful structure to the meeting: speaker presentation to full group, small group breakout sessions, large group panel discussions, etc. Different formats lend well to different purposes: inspiration or seeing the big picture, collaborative networking or planning next steps, learning how pieces come together or comparing stories, strategizing policy changes or sharing expertise, etc.

Provide networking time
Productive conversations may occur one-on-one, not just in group breakouts. Mixing up how attendees participate and interact throughout the meeting can maximize the opportunities for valuable discussion.

Follow up
Ensure that participants take away something physical (or digital) from the meeting that will remind them of the purpose, goal, and next steps. Meeting materials can include speaker and expert biographies, as well as attendees' contact information for continued learning and collaborations.


Through convening, community members can collaboratively plan with one another and with neighboring communities

Community Examples

After a productive joint meeting, the three islands in Casco Bay formed the Down Bay Technology Task Force and issued a Request for Information to solicit engineered infrastructure designs that leverage existing networks for a cost-effective broadband solution.

The telecommunications working groups of several communities in Penobscot and Blue Hill Bays have connected through the Island Institute to further understand how their potential options for improved internet and cell service are linked and consider how they may collaborate on solutions.

Assessing & Accessing Options
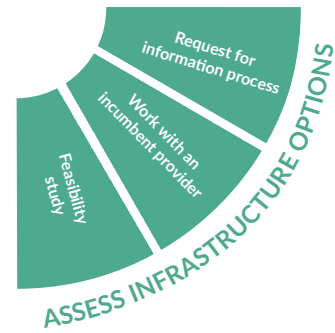
Reliable high-speed internet can provide economic, educational, medical, and other benefits without the need for physical connectedness. In order to best determine baseline connectivity and community goals around broadband, it is important to do a thorough study before settling on any infrastructure improvement project or public-private partnerships. Many Maine communities are commissioning studies to learn what internet access and speeds currently exist in their town and how they might invest in infrastructure.

Feasibility study

A feasibility study clearly identifies a community's needs around high-speed internet—whether it's businesses, educational or telehealth opportunities, government services, or attracting and retaining young families. These community objectives create a framework within which the community broadband working groups can pursue better internet service for their community. On a technical level, feasibility studies identify existing infrastructure, so communities know what they have to work with.

Request for Information/Request for Proposal

Once you have a handle on most of your community's broadband goals and existing infrastructure, using a Request for Information (RFI) process is a great way to solicit creative solutions to leverage existing infrastructure and improve internet connectivity. If you've determined the details of the broadband project you want to undertake and are seeking bids for construction of new infrastructure, then you may choose to use a Request for Proposals (RFP). Whether in an RFI or RFP, consider whether or not to also request a financial or business model for the broadband solution. It's important for the project plans to connect the dots between initial investment sources, potential revenue from operation, ongoing expenses, and any debt that would be incurred.

Ideas for broadband planning/assessing options

- Meet with internet service providers to learn about options available
- Explore public funding options for eligibility requirements
- Communicate with neighboring communities or your region
- Identify needed technical assistance or other planning resources
- Submit a Request for Information or a Request for Proposal
- Before reviewing RFI/RFP responses, develop a scoring matrix or other means of objectively reviewing responses to the community's goals/objectives

Project costs:

- Initial infrastructure investment
- Any share of operation and maintenance (lower case maintenance)
- Potential loan Interest

Incumbent provider

Maine's rural communities often have small, geographically disperse populations. This can make it difficult to gain the attention of the incumbent already operating in their community. As a small community, consider working with neighboring communities to combat this issue by aggregating your voices and demand for broadband.

Feasibility Studies

A feasibility study provides information on existing infrastructure needs. Many Maine communities are producing plans that define local broadband goals and encourage adoption of identified best practices. Then communities identify the infrastructure needed to meet their goals and a process by which they can obtain infrastructure designs and business models.

KEY FACTORS

Engage community leaders

Leverage the expertise of the broadband working group members and the roles they play in the community to involve key political leaders and support outreach efforts.

Identify community places

Make sure to involve the places that do or could provide public internet access. Feasibility studies usually include speed tests at identified locations that relate to the community's goals or vision, such as libraries, schools, and other municipal, nonprofit, medical, or business locations. These "anchor institutions" are very likely to connect to improved internet service, so they are important to consider when internet infrastructure improvement projects are being pursued. Managers and board members of anchor institutions can also be very helpful in communicating and educating about the project.

CHALLENGES

Community awareness

Don't expect overwhelming community interest, let alone support at first. Internet usage has long been a private matter. People easily notice if the roads are bad, but might not have experience to compare their internet service to other areas. Roads are publicly funded, but internet infrastructure is not. It will take time to raise community awareness of the topic and properly identify community goals around preparing the town for the future.

Quality of data or knowledge

The results or conclusions of a feasibility study are only as good as the data going into it. The company conducting the feasibility study reaches out to existing internet service providers to find out what service and prices are available currently, what infrastructure improvements are planned or possible in the future, and how likely they are to partner with the community toward implementing a solution. **It is helpful if community leaders reach out to internet service providers before/during the study as well to help ensure that the provider shares as much information as possible.** It's also important that community members actively participate in the study in order to best define community needs for broadband.

Community Example

The island town of Islesboro started this process as "residents felt the lack of competitive broadband was an anchor on the economic vitality of the island and its summer community."

In 2012, private donations and municipal funds were used to conduct a feasibility study. Based on the results of the study, residents voted to approve spending for an infrastructure design and financial model for building a new network with gigabit speeds. The final phase began in June 2016, when residents voted to move forward with construction of the first universal, municipal-wide, gigabit internet system in Maine.

Request for Information Process

An RFI (Request for Information) or RFP (Request for Proposals) process can provide more options for improving connectivity. An RFI process solicits information from the private sector about a project that the community is investigating. An RFI is more flexible than the more traditional/typical RFP. RFPs ask for more financial information than an RFIs. If your community is seeking to garner creative solutions, which might be used to help you choose a company for an eventual engineered infrastructure design, then (at least starting with) an RFI may work better than an RFP.

Designing the RFI (or RFP)
- Be clear about what information or responses are required versus any questions that are optional or where there is room for creativity in responses

Posting and reviewing:
- The RFI/RFP needs to be publicly posted, e.g., your website, especially if you want to seek grant funding
- Ensure transparency of the process, especially for grant seeking. Consider using the website to post updates and document the process to show that it is equitable, etc.

| RFI (Request for Information)	RFP (Request for Proposal)
An RFI is non-binding.	An RFP can also be written to be non-binding.
RFIs work better for garnering creative options and are often used to choose a company for engineering an infrastructure design.	RFPs state very specific project details and are often used to garner bids for construction.
RFIs are better if you want to keep the option open of going straight into negotiations with a company rather than using a bid process.	RFPs imply that there will be a contract (through a bid process), and so it usually requests additional financial information.
Need to be reviewed by the community's legal advisor, but this usually isn't a municipal requirement of all RFIs. You'll want to check with a local official who knows, or review your municipality's charter/bylaws.	Need to be reviewed by the community's legal advisor. If not the municipality issuing it, then a different entity (like a nonprofit) should still seek legal advice.

Community Example

The Town of Cranberry Isles used an RFP to solicit creative options for an infrastructure network that would meet its community goals. The working group chose to partner with the respondent that best addressed their needs, and entered right into negotiations for an infrastructure design and financial model for their broadband project. In 2017, the town voted to move forward with building a fiber-to-the-premise network.

Ownership Options
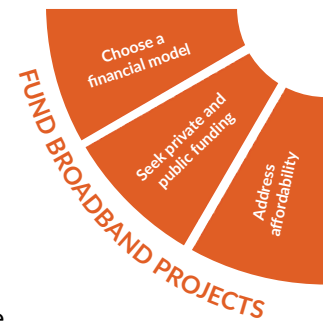
When communities partner with internet service providers (ISPs) to build out broadband infrastructure, there are several options for who will own that infrastructure and how it will be operated. The ownership structure chosen will affect which financial options are available for the project.

ISP owned and operated
- Expansion or improvement of existing network

Community owned, ISP operated
- Likely providing symmetrical speed capabilities

Community owned, single-payer to ISP
- Likely administered by the municipality

Community owned and operated
- Likely by leasing to ISP(s)

KEY FACTORS

Though community ownership means that the infrastructure is locally controlled, there are many risks to owning the infrastructure.

Consider the pros and cons

For financial and operation purposes, the owner needs to be a legal entity; will the owner be the municipality, a new LLC or nonprofit, or a broadband utility? If legal formation is needed, what are the costs? Along with ownership comes maintenance. What percentage of subscription fees will go toward the cost of operation and maintenance? How much additional revenue from other sources to cover these ongoing costs needs to be identified?

Meet with a provider

Strategize before any meeting with an incumbent service provider to make sure that all partners share a common goal and speak with a unified voice. If you don't know what you want from the service provider, it will be hard for them to respond. Come to the meeting with an objective in mind, but be flexible to working within the service provider's corporate capabilities. Propose ways that you might be able work together to ensure that internet service meets your community goals into the future. A one-off negotiation only answers current broadband goals. A long-term relationship means that, as community goals change, the discussion with the service provider can continue to address new objectives.

CHALLENGES

Incumbent service providers have to ensure that infrastructure investments are economically viable and may request public investment in order to move forward with any improvements.

Connecting with other communities and coordinating goals and strategies can require a lot of time and energy leading up to meetings with internet service providers, but a unified voice of several communities is almost always more powerful than separate communities advocating for their own goals alone. Discussions with an incumbent service provider might reveal that they are not interested in a serious public-private partnership, so the community may need to look deeper into working with other internet service providers.

Fiber being laid on Cliff Island (Courtesy: Nate Brimmer)

Choosing a Financial Model

Finding the money to fund a broadband project is often a major road block, because most internet service providers (ISPs) do not serve rural areas where potential subscribers are few and far between. This means most Maine communities need to find creative ways to enable ISPs to connect them with broadband without that ISP losing money on the buildout.

ISP investments
- Most often made possible by subsidies
- Unlikely including local public involvement

Philanthropic giving
- Thousands, but less than $50,000 overall
- Requires a financially legal recipient

Municipal reserve funds
- Unlikely more than $100,000
- Sometimes a Town or Council vote is required

Municipal credit/loan
- Likely tens of thousands of dollars per year
- Requires Town or Council vote

Municipal bond/debt
- Likely between $500,000 and a few million dollars
- Requires Town or Council vote

State infrastructure grants
- Unlikely more than a couple hundred thousand dollars
- Matching dollars from ISP and/or town required

Federal infrastructure grants
- Very competitive and onerous
- Matching dollars from the recipient and high community support are required

CHALLENGES

Revenue flow

Revenue from operating the broadband network may or may not be enough to cover any debt from the initial infrastructure build, so it is risky to rely on this source of funding. For communities that are looking to fund broadband without increasing taxes, this financial option is worth exploring. Prior planning around the community's financial limitations can help mitigate potential risks of this financial option. Note that the community would need to choose an ownership structure that grants them access to this revenue.

> *The potential return on investment from subscriptions over time is most often too small or too slow for private internet service providers; therefore, the financial risk of the initial buildout largely falls on the community.*

Increase the take rate

In order to generate as much revenue as possible from operation of the broadband network, consider how many subscriptions are needed--the "take rate" required. Meeting or exceeding the required take rate depends on the commitment to the community's broadband solution despite low population density or internet service competition. Regardless of the chosen owner, the community can greatly improve the financials of a broadband project by focusing on adoption rates or boosting the number of subscribers.

- What number of premises would be reached by the network?
- How many are occupied year-round versus seasonally?
- What internet service packages are expected to be offered?
- If a seasonal package is offered, what does it look like?

If the community anticipates funding the buildout, what are the known costs versus uncertain ones? Considering the ongoing operational and maintenance costs, is there revenue from subscriptions left to be shared by those incurring the debt to buildout the infrastructure?

Balancing risk

Finding the right private partner can take a community-driven broadband process from impossible to successful. The key to making a community broadband project viable is when both the private partner and the public group are willing to offer something that the other needs, either in terms of capital investment or technical expertise. Ultimately, this is what makes a public-private partnership attractive to both sides.

Broadband Infrastructure Ownership and Financial Models
Pros and Cons Worksheet

OWNERSHIP MODELS:	PROS	CONS
ISP owned and operated		
Community owned, ISP operated		
Community owned, single-payer to ISP		
Community owned and operated		

FINANCIAL MODELS:		
Incumbent investments		
Philanthropic giving		
Municipal reserve funds		
Municipal credit/loan		
Municipal bond/debt		
State infrastructure grants		
Federal infrastructure grants		

Municipal Funding Sources

In combination with grant funding, Maine municipalities can chose among a few tools for self-financing internet infrastructure projects:

- Tax-exempt bonds
- Taxable bonds
- Conventional bank loans

These financing tools can be used to leverage grant funding and reduce the cost of subscription fees.

HOW IT WORKS

Municipal bonds provide access to low-cost capital funds. The Maine Municipal Bond Bank provides assistance with tax-exempt and taxable bonds. These two types of bonds, and conventional loans all have advantages and disadvantages. Learn more at the Maine Municipal Bond Bank website.

KEY FACTORS

Consider how long it may take to acquire the funds

Bonds through the Maine Municipal Bond Bank usually take a minimum of 15 weeks. Selling taxable bonds on the open market or obtaining a conventional bank loan can take half as much time.

Consider how quickly the funds must be accessed

Tax-exempt bonds through the Maine Municipal Bond Bank are distributed just twice a year.

Anticipate the interest rate

Tax-exempt bonds have the lowest interest rates; taxable bonds have slightly higher rates; bank loans have substantially higher rates, which are often more variable.

Ask about up front fees

In addition to the potential cost of bond counsel, taxable bonds often come with high fees.

CHALLENGES

Limitations on tax-exempt bonds

The IRS has strict regulations on cash flow and for how the project is operated.

Municipal form of government

With a council form of government, it can be faster to reach a decision and obtain funding; councils may meet every other week versus a town-meeting form of government that meets just once a year. Public hearings, submitting warrant articles, and posting warrant notices all take months to complete before a town meeting.

Delayed construction

While waiting for bonds or long-term loans to be distributed, a municipality may have to access short-term financing to avoid delays in starting construction. Often this is done by seeking a bond anticipation note from a local lender.

Community Example

In seeking municipal financing, the Town of Islesboro anticipated a subscription fee for internet service of just $30/month. That helped ensure that internet access was affordable, aiming to prevent a digital divide in the community. Even once additional taxes were incorporated into the total monthly cost of broadband, about 75% of improved properties would not see an increase in the amount currently paid for internet and phone service. The new service would have 200 times the speed of current service, along with other benefits.

State Grants

State planning grants

To help fund broadband projects, the ConnectME Authority awards grant funding to Maine communities. ConnectME offers planning grants for designing projects and infrastructure grants for construction.

IMPLEMENTATION STEPS

- Determine eligibility and the requirements for the plans developed with these grant funds
- Complete and submit a pre-certification checklist—this is a stakeholder and information gathering process
- Complete and submit the grant application, which can be found with prior awardees on the ConnectME website
- Submit reporting forms to ConnectME

Considerations

Typically there are very limited funds available for planning grants. Communicate with any partners, e.g., those who will provide digital literacy or broadband infrastructure designs, early on in the process. Communicate with ConnectME staff well before the grant deadline to help ensure a very competitive application. Conducting the tasks in the pre-certification checklist and implementing a planning grant proposal takes a considerable amount of time—be sure to collaborate with other community members.

State infrastructure grants

ConnectME also offers infrastructure grants for construction.

IMPLEMENTATION STEPS

- Determine eligibility and application requirements (they can change yearly)
- Communicate with an internet service provider who will be applying for the grant with the community
- Complete the application and evaluate its strength before submitting it
- Continue working with internet service provider to ensure reporting forms are submitted to ConnectME

Considerations

Existing funding available for infrastructure grants has not always met all communities' needs. Communicate with ConnectME staff and your internet service provider partner early and often to help ensure a very competitive application.

To date, infrastructure grants have required substantial funding matches. Be sure to collaborate with other community members and partners to explore all possibilities for matching funds required.

A portion of the broadband infrastructure on the Cranberry Isles was funded by a ConnectME grant. The rest of the funding came from a grant through the USDA.

For more information on the funding strategies used by Cliff Island and the Cranberry Isles, visit:

islandinstitute.org/fundingbroadband

Community Example

The Diamond Cove Association on Great Diamond Island partnered with an internet service provider to obtain an infrastructure grant. With an ISP partner and a ConnectME infrastructure grant covering just over 50% of the cost of the project, the Diamond Cove Association needed to raise only an additional $35,000 to build a whole new internet network. Diamond Cove residents now experience ten times the internet speed and much better reliability than before.

Planning Next Steps

Broadband Working Groups may use this worksheet to help you articulate where you are and what you need from partners such as ISPs, technical assistance providers, funders, etc. to move your project forward.

Summarize the current status of your project:

Prepare three next steps based on your current status that you hope to accomplish in the coming months:

What do you hope to gain from resources, community partners, and ISPs?

Resources

ISLAND INSTITUTE

- Broadband for Island and Coastal Sustainability
- Planning for a better internet
- Funding broadband infrastructure
- Resource page for guides to broadband planning

REGIONAL

- Maine Regional Planning Organizations

STATE

- ConnectME Authority
- ConnectME Broadband Mapping
- State of Maine Broadband Action Plan 2018
- ConnectME Authority Strategic Plan
- Maine Office of the Public Advocate
- Maine Broadband Coalition
- The 3-Ring Binder: What is it?

NATIONAL

- National Telecommunications and Information Administration (NTIA)
- NTIA's introduction to to public-private partnerships
- NTIA's guide to federal funding of broadband projects
- NTIA Toolkit
- Institute for Local Self-Reliance
- Community Broadband Networks Initiative

NEWSLETTERS

- Broadband Communities Magazine - *case studies chronicled*
- Next Century Cities
- WiredWest- a 44 - *community partnership in Massachusetts*
- Maine Broadband Coalition- *Join the Mailing list*

EDUCATIONAL

- Goodwill Community Foundation - *Free tutorials for technology*
- National Digital Equity Center
- Digitalliteracy.gov
- Maine State Library

ARTICLES

- *The Atlantic* - America Has a Digital Skills Gap. Libraries Can Help Fix It

ACCESS LINKS ONLINE

If you have printed this guidebook, you can access the above links online by using your smartphone's camera to capture the QR code to the left.