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Community Broadband Snapshot Report™

Getting Off the Dime: Finding Alternative Sources to Fund Community Broadband Networks

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Introduction

Introduction

The state of broadband in many communities is, to put it bluntly, pathetic. And no amount of PR smoke and mirrors will un-do this painful reality. Weak broadband is not just a rural or an urban problem. It is a U.S. problem.

"We have been marinated in a corporate culture that believes only a Fortune 500 company is able to deal with high tech," observes Wally Bowen, founder and Executive Director of the nonprofit Mountain Area Information Network (MAIN). However, quite a few communities hold the power to produce for themselves that which large incumbents fail to deliver – blazingly fast and affordable Internet access.

Solutions to the problem won't come exclusively from the private sector or local government, but from the creative combined effort of many community stakeholder groups working together. This report highlights several alternative structures and strategies that have worked for others, and can get you there from here.

Many communities need to understand and act upon the fact that they have more options than they realize to get better, faster broadband that is sufficient to meet current and future needs. Quite a few local government officials despair that poor economic conditions make municipal networks unaffordable. But that view is too narrow. There are alternative operating structures and funding strategies that merit serious review by people willing to take action.

I spent a few days chatting with people in the trenches who are making good things happen with broadband because they revised old scripts, or took chances and wrote new scripts to find/earn money to build infrastructure. The concepts are easy to grasp, though the execution requires serious dedication and lots of hard work by stakeholders.

If you want to find the key to unlock money for better broadband, I don't have the answers for you. This report gives some direction and a few good ideas. You have to look in the mirror to find the person who'll turn some of these ideas into answers.

I. Expanding Community Broadband Options

Currently communities receive varying levels of broadband speed and quality, though when evaluated on the world stage, U.S. broadband overall is mediocre when measured by speed or by price per performance. My 2011 survey of economic development professionals reveals what speed levels are needed to achieve various economic outcomes. How many communities fail to come close to these standards?

To date, communities wanting higher broadband speed and quality seem to have only a few choices. They either can 1) wait for the large incumbent service providers to install adequate infrastructure, 2) hope for a miracle and small local providers can somehow afford to build a network or 3) build their own networks.

For those choosing to operate their networks (over 150 so far), one camp wants to both own the infrastructure and deliver Internet services, and another camp wants to form a variation of a public-private partnership. Unfortunately, both camps often are stymied by costs, plus 19 states have anti-muni network laws on the books. So many local governments are broke, while economic and political conditions don't favor passing bond measures to fund broadband.

It's way past time for local stakeholders to take charge and broaden their choices, both in the types of organization they create to own and manage a broadband network, and in the tactics they use to generate money to build broadband networks. The following are organizational structures and funding tactics that a growing number of communities are finding to be successful.

Nonprofit with a broadband purpose

When the Mountain Area Information Network (MAIN) began in 1996, dial-up Internet access was state of the art technology. Yet many rural communities in western North Carolina couldn't get dial up at all, or when they could get it the service was expensive, plus dialing up cost subscribers long-distance toll charges on top of access fees. There were no public places where people could get onto computers with access.

Wally Bowen, MAIN's founder and Executive Director says constituents and local businesses felt the only way to get Internet services was to bring it in themselves. Forming a nonprofit company was for them the best option, in large part because it made them eligible for federal and state grants.

"Equally as important, a nonprofit gave subscribers local control and subsequently greater responsiveness to their needs," says Bowen. "The money the network made is kept local, jobs are created for local residents. We also discovered that owning the network kept IT and

network expertise, what we call social capital, in the area and it grows over time." With social capital, when someone wants to learn about new technology they have resources right there. Or if someone has a new idea, the network's staff is available to help constituents cultivate it.

Bowen assembled a core group to move the project forward. He believes communities need people on the team who have a passion for the public interest. "If someone seems to be in it for personal gain, this is a red flag for me. A computer retail storeowner came to us. It was clear he was interested in what was good for community as much as how he could benefit. He brought a lot of technical expertise to the table, and brought important information about wireless technology."

MAIN filed nonprofit incorporation papers with the state and the IRS. They selected a Board of Directors from Asheville and the surrounding area. Rules were written to ensure that the network remains community owned, community governed, locally accountable and can't be sold to out of town organizations. The North Carolina Council of Governments helps starting nonprofits prep to pursue federal grant money. Their help enabled MAIN secure their first grants.

MAIN has grown to currently serve four counties in western North Carolina, offering wireless services delivering 4 Mbps or more (depending on geography) to homes and businesses.

Co-ops, an American tradition

Co-ops are why, in a majority of rural communities, you can turn on a switch and get light, or pick up a telephone and get a dial tone. At the turn of the 20th Century, the private sector would not deliver electricity or phone service to rural America. So communities solved their own problems, following a playbook in which the Federal government provided capital, and communities formed co-ops to get the job done.

Fast forward 100 years, and co-ops are becoming a potent force in delivering broadband, boosted in large part by the broadband stimulus program launched in 2009. Telephone and electric co-ops are typically expanding their respective service offerings to offer broadband services after they build out the infrastructure. Co-ops devoted solely to broadband aren't a new idea, but it may be easier to start a nonprofit.

Most people may not see much fundamental difference between forming a nonprofit such as MAIN or creating a co-op that is itself a nonprofit. They both have tax-free status. However, two key factors differentiate these options, one is marketing and the other, legalities.

Typically, everyone who buys service from a co-op becomes a "member" and as such, there is a greater perception of ownership that subscribers have than when they just subscribe to a nonprofit's service. Members attend meetings that set policy, vote for their leaders and get a share of the profits, no matter how small. The nonprofit is clearly a community organization, but "ownership" has a higher marketing value.

The legalities that govern and influence co-ops and nonprofits are different. "You have to focus very carefully on tax law when creating them," states telecom attorney Jim Baller, a nationally recognized expert in legal issues that impact broadband. "If you're looking to establish co-op, there can be substantial tax benefits under IRS Section 501(c)(12), but there are also a number of important compliance issues. For example, there are specific rules for allocating profits back to members." The choices you make during the IRS application process can have a big impact on how you eventually structure and operate the business.

It's also important to understand how laws applicable to co-ops operate in a particular state. Some states have restrictions on what services co-ops can provide, and others may draw distinctions between operating as a wholesaler of broadband services and providing those services directly to subscribers for a fee. Compliance rules are complex.

Arrowhead Electric Co-op Inc.

[Arrowhead Electric Co-op](#) decided to jump into the broadband arena after a Minnesota statewide study conducted in 2007 to assess broadband connectivity. The county ranked dead last among the state's 87 counties. Cook County, where Arrowhead is located, sits in the northeast corner of the state surrounded by Canada, Lake Superior and thousands of acres of federal government-owned forests and wilderness. This county presents challenges to broadband deployment, and the incumbent provider CenturyLink wasn't interested in helping solve them.

Arrowhead began in 1953 and supplies electric services to the county's 5,500 residents and the businesses, many of which are targeted to the tourist trade. Everyone who receives service is a member of the co-op. Members receive capital credits (profit sharing), vote for the Board of Directors and ultimately are responsible for the co-op's management.

Although the fit between an electric co-op's business operations and a broadband provider's is not as seamless as a telephone co-op, there are still enough similarities to make selling broadband a good decision. "Electric co-ops have systems in place to market to, sign up and manage potential subscribers, plus we have efficient customer service and service delivery operations," states Arrowhead CEO Jeanne Muntean.

Arrowhead and Cook County applied for and won a $17 million stimulus award to build a broadband network. Muntean continues, "We have a construction contract with MasTec, a company that builds fiber network infrastructures. They are attaching fiber to our overhead poles, and digging to lay fiber where we have our underground electric systems. This saves significant time and money. Arrowhead will manage the network operations and deliver Internet access services."

The county expects the network to increase the number of telecommuters. "46% of our members are people from out of town who own second homes here," states Muntean. "They typically are business executives and managers, and we'd like to see them spend more time here and bring more dollars into the local economy. Broadband is a

necessity for that to happen. We also get a lot of tourists visit every year and we plan to use broadband to lure them to stay longer every time."

Mid-Atlantic Broadband Cooperative

In 2000, southern Virginia was witnessing the exodus of all its major industries critical to the tax base and employment. 10,000 people lost jobs within a three-month period. Community stakeholders needed a bold strategy to re-purpose the entire region.

24 elected officials from Congress, the state legislature and local government met to address the problem. David Hudgins, then Manager of Economic Develop for Old Dominion Electric Co-op, presented a plan to transform the southern Virginia economy to a digital information age economy that relied heavily on broadband. Hudgins told those assembled that this was an all or nothing deal. "Once we agree to move forward, there will be no backbiting, no backsliding, no efforts at political grandstanding or infighting. We're all in. We're all going to pull in the same direction."

Hudgins soon realized that their biggest challenge was money. Several large electric co-ops had tried unsuccessfully to deploy broadband by setting up telecom subsidiaries. Old Dominion itself was too big to execute this effectively, and the region was too expansive. "We couldn't cover the debt service for such a large project and get that money back through subscriptions," Hudgins says.

Hudgins requested $6 million from the Tobacco Commission that was disbursing money won by the state in a legal settlement, but they demanded he find a matching grant. Traditional money sources were a poor bet because providing broadband in rural areas as high risk.

Hudgins decided that it made financial and political sense to create a co-op specifically for broadband, the [Mid-Atlantic Broadband Cooperative](#) (MBC). Co-ops are eligible for Federal funds, so he went to the Economic Development Administration, which agreed to provide the $6 million match. MBC quickly started selling broadband services to companies that before were paying thousands of dollars a month for T-1 lines, and now get highspeed fiber connections for $400 or $500 a month.

MBC proved they could make money where incumbents couldn't. Once other counties saw the benefits of the initial buildout they quickly got on the broadbandwagon, aggressively lobbying the Tobacco Commission for money to pay MBC to expand infrastructure to others counties. As local telcos saw they could sell a lot of broadband services with MBC supplying the backbone, they lobbied legislators to support MBC's efforts.

Bigger than services to local constituents, 60% of MBC's revenue today comes from transporting huge data loads for major national and international institutional subscribers needing. MBC's infrastructure is designed to be able to move gigabit and terabit files with just one data hop between US locations and European destinations

Community foundations

There are over 700 established community foundations covering about 75% of the United States, with a high concentration in Midwestern states. These nonprofit organizations originated 100 years ago when wealthy residents set aside portions of their fortunes to help their communities execute economic development and related projects.

As an increasing number of foundations understand that broadband can improve local companies' competitiveness, transform the workforce and attract new organizations to an area, they've increased their interest in the technology.

The Steuben County [IN] Community Foundation was established in 1992. As community leaders began formulating ideas for addressing the lack of adequate broadband, the Foundation was an ideal partner with its ties to community leaders and potential funders, as well as its ability to channel network profits into local economic development grants.

The Foundation created a supporting organization called iMAN to build a dark fiber network. iMAN, also a nonprofit, sells access to businesses that contract with ISPs to light the fiber and buy Internet services. 65% of the monthly $225 dark fiber fees go to the Foundation whose Board of Directors selects economic development projects to fund.

iMAN began building the network in 2003. Their CEO Bill Geiger states, "this has always been a needs-driven buildout beginning with the City of Angola that paid $150,000 to build a fiber network to connect city government offices and departments." iMAN raised $2.7 million through donations to deploy 96-strand fiber cabling. Since Angola only needed 6 strands, iMAN built the infrastructure so it passed by hospitals, schools and businesses that use the remaining strands.

Today iMAN's network covers 75 miles and generates $80,000/year. As a nonprofit, iMAN does not have to repay the donations it raises for CapEx. Dark fiber rates subsequently are kept affordable, which drives up institutional and business subscribers. Donations and subscription fees continually drive network expansion. ISPs carry the costs – and reap the profits – from selling end-user services, also at affordable rates.

Urban communities need broadband too

There is a myth bordering on fraud being perpetrated across the country that only rural areas are in dire need of broadband, that the urban poor and underserved have plenty of "good" broadband options. The party line is that poor urban dwellers only need effective broadband adoption (marketing) campaigns to teach them the value of broadband and they'll be just fine.

Horse feathers! as MASH's Col. Potter would shout. Read this article and this one to understand why urban areas need new broadband infrastructure almost as much as rural communities do. Policymakers and others need to understand that having sufficient broadband is not about

having access to the Internet, it's about the speed and quality of that access! Community foundations can help urban areas as well as rural.

"Even if we're in urban areas that technically have broadband available, deep analysis reveals that schools in poor communities actually have the least amount of access," observes Nicole Taylor, President and Chief Executive Officer of the East Bay Community Foundation (EBCF). "The Internet speeds they get are not fast enough to support hundreds of students using the Internet at the same time. When you look at what's required of the next generation of workers and students, schools' lack of Internet capabilities is perpetuating a digital disadvantage."

There isn't true highspeed residential coverage in the poorest neighborhoods because they may not be wired yet (or have had old infrastructure upgraded), and likely won't be because they offer large incumbents low or no ROI. When people think Alameda County, they think Oakland and Berkeley. However, some unincorporated parts of the county have no coverage. Where there is coverage, it can be too expensive for the people who need it the most because to get the cheapest Internet rates, people have to buy high-priced bundled data-TV-voice packages.

Communities need to engage these foundations that bring key stakeholders to the table to ask and answer the right questions, assess broadband needs and raise awareness of these needs. Foundations also analyze best practices for solving problems, work with stakeholders to locate resources and provide or identify seed capital to help take action. Unfortunately the politics and the providers can get in the way.

The EBCF, which includes Contra Costa and Alameda County, is engaged in moving broadband forward. "We're working with elected officials to see where resources are going, and being proactive with donors," states Taylor. "We're in an area where grass roots activism is popular and as a result, we have become very focused on public-private partnerships."

EBCF is partnering with the East Bay Economic Development Alliance that consists of three Bay Area counties, the Contra Costa Economic Partnership and Solano Economic Development Corporation (they are the lead partners). 28 other members are part of this consortium. As a partner, EBCF provides staff, seed money and planning expertise. "For now we're not sure what the final picture will look like, but we are definitely contributing to this future," concludes Taylor.

II. Funding Models

All the noble intent that drives a community's discussion of broadband doesn't mean jack if you can't answer the questions "who's going to pay to build the network?'

To pay for building the network, what's commonly referred to as CapEx (capital expenditure), a community can rely upon grants, donors, investors or some combination of the three. There is probably plenty written about successfully preparing grant applications, but pursuing donors and investors is relatively new in the broadband space. However, there's a lot of potential for this kind of fundraising.

In a GigaOm article, I posed a question that gets to the heart of why you should pursue an "investor" strategy. If Green Bay, WI can raise $70 million in five weeks to rehabilitate its football field by selling $250 stock shares, I bet $250 there's a community in America that can raise $2 or $3 million the same way for a broadband network. Any takers?

The Green Bay Packers raised this amount of money right before Christmas, during a serious economic downturn and using an investment vehicle (stock shares) that has nearly zero financial worth to investors. Granted, broadband does not incite the same passion as one of America's most popular football teams. But then, not every broadband project needs $70 million. It's the validity of the tactic I address here.

ECFiber takes local investing to the bank

23 small Vermont towns and townships banded together in 2008 to explore building a broadband network. The group decided to create a nonprofit corporation to formally manage the project, which they named ECFiber. Each town's Select Board appoints delegates and alternates to the ECF Governing Board. ValleyNet, a nonprofit ISP, provided seed money to fund this effort. ECFiber in 2011 began a fundraising effort that raised over $1.2 million in two rounds.

ECFiber offers tax-exempt 15-year $2,500 promissory notes that effectively earn 6 percent interest. From 50,000 people in the 23 towns, they raised over $900,000 in 2011 to begin an initial buildout covering 26 miles. In a recent effort, the town of Barnard, VT with 386 households generated $350,000 to continue building out the network in their town. With funds for covering two-thirds of Barnard accounted for, they expect to raise enough to complete the job. To finish the network and bring connections to everyone's doorsteps, ECFiber is doing additional fundraising rounds.

The average investor buys two notes. However, investors do not get favorable pricing for broadband services. ECFiber retains attorneys who are experts in investment laws and practices to make sure the company is in compliance with all applicable laws, and investors are protected.

It's important to note two interesting tactics ECFiber uses to keep buildout costs manageable and ensure the success of its investor strategy. First is the "leapfrog" approach to deploying and expanding the network. Rather than try to build one massive network for all 23 towns at once, they raise enough money to build out sections of a town and light up service to generate revenue as well as demand from other towns. It's a slow process, but EC Fiber doesn't financially over extend itself. Eventually it hopes to leverage its success to entice financial institutions to make traditional investments to build at a faster pace.

The other cost-saving tactic is to not sell cable (video) services. Other communities building networks also avoid these services. In small rural markets, the cost of equipment necessary for cable adds too much to CapEx costs. Striking deals with cable content providers adds significant additional costs and headaches that are hard to justify. Enough constituents in ECFiber's territory seem satisfied enough with satellite cable to not require this service from ECFiber.

UTOPIA CUEs up for broadband financial success

The Utah Telecommunication Open Infrastructure Agency (UTOPIA) has a different angle to getting subscribes to invest in buildouts. UTOPIA is a league of 16 cities that started building a municipal fiber network in 2002 and offered Internet access services wholesale to ISPs who retailed them to constituents.

By 2008, the project was fighting problems, including the fact that the average revenue per user (arpu) wasn't enough to support the business. Despite the popularity of the wholesale model, the fly in the ointment was that ISPs paid fees to UTOPIA based on how many customers were served. In this model, if the number of customers needed for a city to make money is greater than the number ISPs are willing/able to take on, the city has little leverage to get ISPs to increase customers.

Todd Marriott became CEO in 2008 and completely changed the arrangement. Starting with Brigham City, "if residents were interested we'd bill them one fee of $3,000/home to connect to the network. We offered financing if they agreed to have a lien put on their houses. Over 31% of residents subscribed, with 25% of these households paying the $3,000 up front."

Going one step further, UTOPIA started using a Contractual Utilities Enhancement (CUE) that creates a Subordinated Note of Interest. The Note enables a city to bill subscribers for expanding the network to their doorstep without requiring a lien. They pay $22/month for the buildout, and another $24 for network operations costs. Comcast puts a similar charge in their bills. ISPs offer Internet services directly to subscribers.

Marriott says "this revised fee structure allowed us to become profitable while we installed a gig to every home. We're working on new financing models that allow homes to connect for a shorter period of time. We did our homework well, so there were no legal challenges. We did, however, have some PR issues."

The Comcast/Qwest PR front group Utah Taxpayers Association tried to incite negative media coverage, but of the first nearly 6,000 people who signed up for UTOPIA's service, only 17 complained on record that the person who signed them up didn't provide enough details. Another 30 said they hadn't understood the details. In the meantime, Brigham City has garnered recognition as one of the most connected cities in the U.S.

Hey broadband, were you born in a B4RN!?

The Brits have set the bar high when it comes to community investors, by pursuing what most closely resembles Green Bay's strategy of selling stock. Except these stock shares are actually worth something.

Eight parishes in rural Lancashire in northwest England combined to form Broadband for the Rural North, Ltd (B4RN), a not-for-profit community co-op. B4RN not only sells shares in their broadband businesses, but also offer opportunities to work for the co-op in exchange for stock. There are farmers literally running the machines that drop conduit in the ground.

B4RN shares sell for £1 each. Investors have to buy 100 shares minimum. Those buying 500 or more get a tax credit of 30% of the purchase price. Buying 1500 shares also earns a year's worth of 1 gig-to-the-home service (regularly £30/month). Residents and businesses do not have to be investors to subscribe to the network for the same monthly rate.

B4RN stock purchases earn immediate tax breaks and potentially will pay back investors and the communities. So far, at the end of March this year B4RN reached its financial goal that enabled the buildout to start. They sold shares to 200 people, many of whom bought 1,500 shares.

"Investors buying 3000 shares can donate 1500 of those plus the broadband service to a neighbor," says Chris Conder, one of B4RN's founders and a co-op member. "We created a charitable organization to donate eventual profits to community economic development and other projects. Some people from the south are buying 1500 shares and allowing B4RN to raffle their shares."

In England, investment rules dictate that people have to hold their shares for three years before they can sell them. In year four of B4RN's operation they can start paying investors back at 5% interest per year if the company makes a profit. Being a co-op, the members ultimately decide what to do. If the members don't want to share a payout, they can use the profits to help another community, reduce Internet access fees or anything they want as long as it's a benefit for the community.

B4RN pulled in legal expertise to make sure the company complies to all the regulations. The company is structured as a community co-op so it cannot be taken over by any one person. B4RN can't be sold to a business, but has to be owned by another co-op. They are not government funded but B4RN does have to be insured. Investors have to know their money is safe.

Emporia, KS taps traditional investor strategy

Emporia, KS is a town of 30,000 people in which AT&T has no interest in investing, and Cable ONE has no interest in expanding or improving their current infrastructure. These incumbents see no profit potential here. So four guys with backgrounds in the telecom industry decided to find investors with clearer vision.

Steve Sauder, Bobbie Agler, Rick Tidwell, and Stormy Supiran all were in management positions in a company called Valu-Line. Similar to rock performers who'd left the business at the top of their game, they decided on a reunion tour under the banner Valu-Net, LLC to re-create the magic.

The current cable, telecom and wireless providers serving Emporia deliver at best 10 Mbps and that's just download speed, with much weaker uploads. The Tech Fab Four believe that gigabits are the future and local-grown broadband is the best way to get there. But how do you tackled the buildout costs?

Valu-Net's engineering study determined they needed $12 -14 million to build a fiber network for the entire town. However, similar to ECFiber's strategy, they estimated that with $5 million they could build enough of the network to start selling and delivering services.

"We went to local banks who endorsed our plan and its financials," says Tidwell. "They committed to help with debt financing down the road. Communities need at least one-third of the expected total cost so you can get to the point of generating cash flow. Keep your labor force low. It's a race to sign up customers before you run out of money. If you can get 500 customers, for example, can you make payroll, then use capital to generate capital?"

Rather than go the co-op route, Valu-Net decided to become a private telephone company, technically a Competitive Local Exchange Carrier (CLEC). It took a year of hard work and lots of paperwork to become a CLEC, a designation blessed by the appropriate state agency. There may be different requirements in each state. The process intimidates many communities, but it can be worth the effort. In addition to being in a strong position to pursue investors, community networks that receive their state's CLEC stamp are eligible for certain federal monies such as the FCC's $4 billion fund being re-tooled to better support broadband.

Valu-Net then pursued a small number of large-sum investors rather that hundreds of people willing to make small investments ($2,000-$3,000) because investor relations is easier to manage. Investors had to be accredited by meeting certain SEC requirements such as validation they have a net worth that allows them to lose this particular investment without going bankrupt. The founders put up $500,000 themselves.

The company got early interest, with most of their initial investors living in or right around Emporia. Valu-Net asked for an initial investment of at least $50,000. Investors could choose between Series A Preferred Stock

or Series B. With Series A, investors receive 12% interest accrued and compounded. Series B investors receive 8% per year annually.

"To date we have raised $6.8 million and shut off investments before we became oversubscribed," comments Tidwell. The founders own 35% of the company while investors have rest. "We were surprised by the people who put money in who you wouldn't expect to have this much to invest. There were small business owners, farmers who'd done well. Mostly average people who invested because they believe in the founders and believe that it eventually helps the community."

Tidwell has friends in Nebraska who are executing the same type of investor strategy. They plan to duplicate their company once they get the first network project up and running in. He believes there are a lot of small communities that need broadband, and many have residents with money that they're willing to invest.

Valu-Net's founders view this as a long-term deal and are working on a five-year plan. "Our hope is that the network becomes an economic development tool. However, we don't see it bringing in big companies with 100 high tech jobs at a time, but small businesses or branch offices that bring in six-to-ten jobs. These are good jobs with good pay. We'd rather have five or ten of those kinds of businesses because these are going to grow."

The success model for Valu-Net's investors is built on a 50% subscriber take rate, meaning 50% of potential subscribers actually buy services. However, at a 30% take rate the model still works. The size of the investment amounts is an individual community's decision. But getting local investment is the main objective.

Tactics for lowering buildout costs

The focus of these fundraising tactics is to pull together people with money they're willing to invest. However, there is a sub-theme at work in these stories as well, which deals with cost management.

Communities need to devote some creativity and planning resources to determining how they will manage the cost of building the network, as well as create forward-thinking plans to control the costs of operating the network. It is easier to get investors involved with a network when they can see project teams are managing money well from the outset.

ECFiber and Emporia in particular have strategies that call for building part of the network in an initial effort, and then selling services to residents and businesses in this area. As sales pick up, they expand the network.

"This is a reasonable approach from a purely financial standpoint," states Chris Janson, Sr. Marketing Manager for Ciena Communications. "It minimizes the odds of both organizations becoming overextended ahead of revenue generation. However, there is a risk that if they encounter obstacles in construction (such as right-of-way issues) or generate lower than expected subscriber up-take, the network team could end up

serving only areas that are prime for immediate financial return and ignore other pockets. As a result, they'd still have under-served areas that cannot benefit from access to broadband. A lot of contingency planning is necessary to avoid this problem."

In addition to leap-frogging the buildout, there are also other opportunities to keep costs manageable. Alan Davis is President and CEO of CapeNet, which is building a major fiber network in Cape Cod, MA, the OpenCape project.

"Communities are already saving a significant amount of money by managing the buildout themselves," Davis states. "A Comcast or a Time Warner will hire a subcontractor to build the network, but they will add a sizeable margin of profit above the contractor. A community could hire the same contractor and save that mark-up."

Another cost-saving measure is building an intranet, a network that provides closed links between local government departments, or organizations such as college campuses, business operations and large institutions. Intranets do not link to the public Internet, which has cost implications.

Multiple city and town governments sharing a network, such as with OpenCape, can have links just to benefit the respective towns' specific public safety agencies or mobile employees working between jurisdictions. Davis also points out that "applications such as GIS can be very expensive when bought and used just within a town. But if the GIS app can be shared across towns, then overall costs can be reduced."

Communities, particularly those participating in regional projects that involve multiple jurisdictions, need to identify ways in which they can lower buildout costs without lowering the network's overall quality. And then, do not be shy about these measures. Tell everyone. Investors reward financial prudence.

III. In the final analysis

If a community wants good broadband that delivers speeds fast enough to produce significant economic, educational, healthcare and other advances, it's constituents must take the initiative and maintain a leadership position in pursuing broadband solutions. Furthermore, it is more than likely that whatever solution you eventually settle on will present funding challenges.

What the stories in this report say loud and clear is that there are workable alternative routes to acquiring the money needed to build broadband networks. These are not the only alternatives, and the fundraising tactics presented here likely will be refined and enhanced as their use increases. However, "we don't have money" and "we might fail" are no longer valid reasons for not having broadband in your community.

There are some common threads that run through these stories that point the way forward for your particular community and its unique needs.

- ▸ These and virtually every successful community broadband project has a champion, someone local who lives, breathes and endlessly advocates for broadband.
- ▸ Creating the overall business structure – a nonprofit – is relatively easy, and it was a concept easy for people to get their minds around when presented with "yes, we can fund this network."
- ▸ Never underestimate the power of broadband to inspire community investors.
- ▸ Doing a needs assessment properly is neither easy nor quick. But if a community doesn't do this right, they probably will not generate CapEx funding OR financially sustain the network once it's built. When you dig deep into these stories, you typically find a lot of planning went into the network. The strength of the plan reassured and inspired early investors who in turn inspire future investors.
- ▸ Doing all the paperwork and doing it right cannot be emphasized enough. These communities here DID NOT cut corners on competency when finding professionals to help them.
- ▸ Rome wasn't built in a day, the entire network need not be built in a year. Many of those interviewed here owe their success to leap-frogging initial buildout, generating broadband adoption, expanding buildout, adding more customers. Repeat.

For most of the project champions interviewed, removing the aggravation of politics, politicians and bad state laws was a main factor in deciding to use a nonprofit or co-op business structure. This definitely removes a lot of headaches. However, they find they still have to contend with large incumbents' aggressive marketing and dirty tricks. Communities must maintain their vigilance and fortify their marketing plans to counteract such nastiness.

In speaking with communities in general, they appear to be better informed of the option to become CLECs and the required certification process. It is not an easy process. In states where incumbents hold huge sway with state legislatures there will be high hurdles indeed if municipalities attempt this. Co-ops and nonprofits can expect lots of static as well. However, billions of dollars in FCC grants plus numerous other state and federal grants targeted to broadband are open to organizations branded as CLECs. The rewards can be worth the paperwork pain.

There is a potential flashpoint a couple of communities alluded to briefly. Even though the co-ops and nonprofits interviewed are clearly very pro community and can be relied upon to act in the local public's best interest, there is no guarantee of this unless the community puts it in writing and enshrines it in the organizations' by-laws. As the regions being covered with broadband and organization that runs the network grows, communities have to increase their vigilance.

Finally, communities should not lose sight of the fact that local governments have a critical role to play. Even with the co-op, nonprofit and other options, local government needs to very much remain a key player in the broadband picture.

"There is an important role for the public sector here, such as using public funding for planning and oversight with a private entity to build and operate the networks," states Janson. "This does two things. First, it identifies and funds construction to areas that otherwise would be ignored by for-profit entities. Second, it assigns a profit motive to the construction and operation of the network. Those who benefit from the infrastructure should pay for their service and the public sector should aid localities that need assistance."

OpenCape is a non-profit company, funded initially through private, state and federal grants to define and oversee a regional broadband middle mile network. CapeNet, a private for-profit is building and operating that network. Moving forward, OpenCape will oversee the network and promote its capabilities within the regional community. CapeNet will be the service provider for a portion of the network capacity.

IV. Recommendations for actions

The communities highlighted in this report serve as role models that validate several alternative approaches to finding the money for broadband projects. Planning without a doubt is essential. However, at some point there comes a need for action. Here are some action steps to consider.

Commit to thinking outside the box, or be trapped in a box. Becoming the next MBC or UTOPIA is not a path for conventional thinkers, so you have to get everyone on your project team and inner circle of stakeholders to take this pledge.

Create a base of strong lead investors. National Community Development Services, Inc. (NCDS) specializes in boosting the economic health of communities through economic development fundraising. CEO Tom DiFiore explains, "Most successful fundraising campaigns for community and economic development initiatives usually adhere to four core principles:

1. It's about the *community's needs*–not the organization's needs. So you make the community and the benefits they'll receive from broadband the focus of the campaign, not the organization.

2. It's much easier to raise big money for specific initiatives and projects [digital inclusion, workforce retraining programs, improving healthcare delivery] than it is to fund an "organizational budget." No one is interested in ensuring an income stream for an organization. They want outcomes in the community–not 'activity.'

3. What they help write, they will help underwrite. Key stakeholders and funders must have a sense of ownership in the initiative being funded. The best way to achieve that is to involve them during planning and development.

4. The initiative must be *relevant* to the community's needs and opportunities; there must be *measurable* goals that define progress and success; and the leaders of the organization/initiative must be *accountable* to the investors.

Read more tips from DiFiore.

Initiate the fundraising marketing effort by changing how people think about the Internet. "The community needs to stop thinking of broadband as a means of entertainment," warns Janson. "Constituents need to recognize that high speed, highly accessible broadband is critical to economic development and a high quality of life resulting from improved healthcare, education and government services.

Overestimate costs, underestimate revenue. Baller advises, "Each of these options has its strengths and weaknesses. A community must have realistic expectations and cautious action plans. In my experience, the most successful projects have been those in which communities

rallied around clear, compelling, and tangible economic goals. They deliberately overestimated costs and underestimated revenues to give themselves a lot of headroom when the pushback from the incumbents inevitably occurred. However attractive a community broadband initiative might be in theory, success was not guaranteed and had to be earned every day. Only by proceeding with their eyes are wide open and making necessary adjustments as they went along were they able to stay the course and succeed in the end. Those that did were well rewarded for their vision and persistence."

V. Conclusion

This report does not contain all that can be written about business organization structures and funding options for broadband networks. But it should be enough to motivate project teams and community stakeholder to get off the dime and aggressively explore these options and opportunities, find options that work for your specific community and move forward.

About the author

For over 25 years Craig Settles' workshops, consulting services and books have helped organizations worldwide use technology to cut costs, improve business operations and increase revenue. Author of "Fighting the Next Good Fight: Bringing True Broadband to Your Community," plus his blog and many in-depth analysis reports, Mr. Settles is a prominent thought leader on executing appropriate broadband strategies. He currently hosts Gigabit Nation, a weekly Internet radio talk show, and is Co-Director of Communities United for Broadband, a national grass roots effort to assist communities launch their networks.

About the sponsors

Ciena Communications

Ciena brings extensive expertise in intelligent network infrastructure that enables you to reliably and cost-effectively expand healthcare, education, public safety, and commerce. As the network specialist, our innovation focuses on technologies that directly satisfy the requirements of regional broadband networks. Ciena's technology forms the cloud backbone and helps to build data centers without walls through the industry's most comprehensive and automated Carrier Ethernet solutions. We provide the industry's most advanced coherent optics, automated OTN switching, control plane technology, and tie it together with unified management. Our implementation of these critical technologies gives you a truly intelligent infrastructure to scale and manage bandwidth. To learn more about Ciena, visit http://www.ciena.com/corporate/

CapeNet

CapeNet LLC was chosen to build and operate the OpenCape BTOP network in southeastern Massachusetts and Cape Cod, and offers a suite of optical broadband services in the region. CapeNet is a joint venture between CapeNet Partners, Inc. and Lightbridge Communications. CapeNet Partners, the managing member, is comprised of seasoned

professionals who have extensive experience in building and operating telecommunications networks in the region, and specifically in Massachusetts. To learn more, please visit www.capenet.com.