

Municipal Options for Fiber Deployment

Considerations: Ease of Entry, Financial & Political

Option	Examples	Ease of Entry Considerations	Financial Considerations	Political Considerations	Relationship to Blandin Broadband Principles*
Municipal Utility Retail – City entity finances, constructs, operates and retails telecommunications services	<p>Windom MN www.windomnet.com</p> <p>Monticello MN www.fibernetmonticello.com</p> <p>Burlington VT www.burlingtotelecom.com</p> <p>Baldwin, WI www.baldwinlightstream.com</p> <p>Reedsburg, WI www.reedsburgutility.com</p> <p>Spencer, IA www.smunet.net</p> <p>Bristol, TN www.btes.net</p>	Necessary to hire expertise in telecom planning, construction, operations, marketing, billing. Some municipalities leverage the facilities, financing and expertise of a municipal electric utility.	Total financial commitment, total financial control. Opportunity to gain positive cash flow to support municipal government operations.	Where local government has a positive service reputation, this can be the easiest approach. Quality private sector partner may reduce opposition from skeptics who believe technology is too sophisticated and/or dynamic.	Municipal networks provide Ubiquity for all residents and may make broadband more Affordable . Competition may be enhanced in the short term; long term impact would depend on competitor response. FTTP would be World Class in all of these models. FTTP also enables Symmetric services.
Municipal Utility providing fiber services to large customers only – government, schools, large business	<p>Chaska, MN www.chaskamn.com</p> <p>Bowling Green, KY www.bgmua.com</p> <p>St. Paul’s interim strategy www.ci.stpaul.mn.us</p>	Relatively simple to construct and operate. City could choose to provide Internet access or access to dark fiber.	Fiber network is often good investment for connecting public sector buildings. Depending on required build, added cost may not be significant, especially with quality planning.	This strategy provides operational savings to public sector, plus is seen as a high-level economic development strategy to lower the costs of larger employers and tech-oriented companies.	While Affordable and Collaborative are met, this strategy may inhibit short-term Ubiquity unless the network expands to 100% coverage. This option may add limited Competition but could inhibit additional market entrants.
Joint Venture – City finances the network with a private sector entity serving as a wholesale provider to multiple retail providers	<p>UTOPIA – Utah. Multiple community participation. www.utopianet.org</p>	Joint powers board sells bonds, hires wholesale operator who recruits retailers. City role is generally limited to financing.	Adequate revenues from providers required to pay bonds.	Multiple providers ensure choice. City loses marketing power of municipal utility.	Competition and Ubiquity would be enhanced in this model. Collaboration between public and private sectors is enhanced in this model.



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Joint Venture – Network financed through capital lease with leasing company owning the network until leases are paid. Non-profit provider as operator.	East Central Vermont FiberNet www.ecfiber.net	Complexities in negotiating partnership agreements. City escapes need to create its own operating entity.	Reliance on partner to operate the network and sell services adequate to retire the debt and maintain / upgrade the network.	Single provider limits choice; responsibilities for service and performance are clear. Overcoming financial difficulties may be difficult w/ weak financial partner.	Competition and Ubiquity are enhanced in this model. Public and private sector Collaboration is enhanced in this model.
Private Sector Entrant – Public sector entices a private sector provider to enter the market. City may provide financing incentives, ease or remove barriers such as ROW fees or permitting, or serve as anchor tenant (possibly with other entities, like schools, hospital, large business)	Brainerd Baxter MN with CTC as provider www.goctc.com Hiawatha Broadband (Wabasha and St. Charles) www.hbci.com Fort Wayne, IN www.verizon.com/fios	Collaboration between Brainerd Schools and CTC enabled new fiber ring for the school district and FTTP deployment by CTC. Aggressive recruiting by Wabasha and St. Charles. Fort Wayne convinced Verizon to deploy FIOS by linking economic development strategies to technology and by reducing barriers.	Brainerd Public sector financial liability is limited to school technology bond. Limited financial incentives. Atypical Verizon investment in older community at no cost to Fort Wayne.	Reduced school tech costs are beneficial. Third wired provider enhances the competitive environment. Lack of public control on services offered, prices, etc. Big win for the Fort Wayne mayor and leadership in Wabasha and St. Charles.	Competition and Ubiquity would be enhanced in this model. Collaboration between public and private sectors is enhanced in this model.
Municipality and major local institutions build dark fiber network which is then leased to any entity that wishes to use it-private or public	St Joe Valley Network, South Bend, IN www.choicelight.org	City and seven major institutions/businesses finance the initial fiber build and point of presence as founder members; dark fiber leased to public and private entities	Need a few well capitalized institutions; in South Bend these founder institutions have realized achieved large annual savings in telecom budgets by being founder members	No ongoing public funding or liability; city paid for their portion of the network through right of ways and savings in annual telecom budget	Collaboration and Competition are enhanced through this model. Ubiquity may be enhanced if providers use network to reach community wide. Affordability is increased for those connected.



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Municipality or Regional authority alone builds dark fiber infrastructure and leases to local business or for public interconnect	<p>Leesburg FL – Lake County FL www.leesburgflorida.gov</p> <p>Development Authority of the North Country, NY www.danc.org/telecommunications-services</p>	Similar to the Municipal Utility noted above, but done on a larger, regional base with specific intent toward economic development	Regional area can spread cost among many economic opportunities	Where strong opposition to government action exists, yet economic development is critical, this approach can serve a middle ground	Collaboration and Competition are enhanced through this model. Affordability is increased for those connected.
County or regional government-built fiber infrastructure for public sector uses including government and education; additional capacity may be available for private sector use.	<p>Scott County, MN (Recently built network designed for multi-sector use) www.co.scott.mn.us</p> <p>Dakota County, MN (expanding network, with expanded uses under consideration) www.co.dakota.mn.us</p>	<p>Scott County used public funds offset by existing private carrier costs to link all municipalities and school districts. Additional fiber in conduit may be made available for public or private uses.</p> <p>Dakota County network built incrementally by connecting county buildings and linking with other public sector networks.</p>	Counties are able to proceed based on county, municipal and school district costs and service needs with possible future offsets from localities and business	County or regional governments can build fiber networks to serve public sector needs to achieve significant public sector cost savings. Policy decisions about opening this infrastructure to private sector users can be a separate discussion.	These projects can impact Affordability, Competition, Collaboration, and Ubiquity depending on the implementing policies.
City builds infrastructure; private operator purchases electronics and operates the network for 15 years, providing all retail services	Powell, Wyoming www.cityofpowell.com	Powell has issued bonds for building a fiber infrastructure as community infrastructure; US Metronets will operate the network providing retail services to the town	City only needs to finance the fiber outside plant construction	City must renegotiate contract with network operator every 15 years	Competition and Ubiquity would be enhanced in this model. Collaboration between public and private sectors is enhanced in this model.



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Private non-profit sector begins fiber infrastructure and later adds public bodies as partners	OneCommunity, Cleveland, OH www.everstream.net/press-releases/onecommunity-launches-everstream/	Entry considerations involve persuasion only, initial investment is borne by non-profit sector	City become anchor tenant and financial contributor later	No City involvement initially other than organization and encouragement.	Competition, Affordability and Ubiquity would be enhanced in this model. Collaboration between public and private sectors is enhanced in this model.
Local government requires developers to install fiber to the home through subdivision and development ordinances. Telecommunications infrastructure is treated in the same way as sewer, water and local streets.	Loma Linda, CA www.lomalinda-ca.gov	Developers build this cost into the price of lots and housing. City benefits from growing network. This process is most suitable to growing communities.	Little or no cost to the city as the network and community grow at the same pace. Small cost passed on to end user / home buyer.	The costs of the expanded network are paid by new users. Loma Linda requires new homes and businesses to include structured wiring which can raise initial housing costs.	Ubiquity, Affordability, Collaboration are impacted in this model.



Blandin Foundation's Broadband Initiative

Vision and Principles

Vision:

Everyone in Minnesota will be able to use convenient, affordable world-class broadband networks that enable us to survive and thrive in our communities and across the globe.

Principles:

- Ubiquity - Ultra high-speed broadband needs to be available to everyone in Minnesota, including businesses, institutions and individuals. While ultimately all Minnesotans will need this service, this goal will necessarily be achieved in stages.
- Symmetry - Ultra high-speed broadband needs to provide symmetric speeds and facilitate source-to-source communication. More communication in the future will be two-way as we work more from our homes.
- Affordable - Ultra high-speed broadband needs to be available at rates people can afford.
- Competition - Competition among service providers should be encouraged. Competition increases customer choice and promotes innovation.
- World Class - We must achieve world class state-of-the-art service based on global standards. We cannot afford just to be better than our neighboring states.
- Collaboration - The deployment and utilization of ultra high-speed broadband is a challenging goal that can benefit from public and private entities working together.
- Neutrality - Ultra high-speed broadband policy should be promoted regardless of the technology platform that delivers it. The best technology for delivering ultra high-speed broadband may not have been invented yet.
- Interoperability - Regardless of the technology used for ultra high-speed delivery, all systems must seamlessly interoperate with all other technologies.

