

Municipal Broadband: Using Today's Technology to Support Communities' Futures

Municipal broadband gives everyone an equal opportunity for access to fast, affordable internet and provides various other benefits to communities, from keeping taxpayer money local to future-proofing infrastructure.

By John Honker / *Magellan Advisors*

Amid the ups and downs of the COVID-19 pandemic, one thing that remains constant is communities' need to stay connected. But stay-at-home, work-from-home and learn-from-home measures highlight a glaring gap in the availability and distribution of reliable, high-speed internet networks. Many citizens and businesses are still unable to access the online resources needed to maintain a sense of normalcy.

As the pandemic continues for a third year, addressing that resource gap is critical for local governments and communities to prosper. The solution is fiber and wireless broadband investment and ownership by municipalities, utilities, electrical co-ops, and tribal governments. With access to fiber broadband, everyone from residents and tourists to government entities can benefit from telework, access online education, offer and access online services, use telehealth, take advantage of economic opportunities and stay connected.

MUNICIPAL BROADBAND DEFINED

Municipal broadband is internet that local government, instead of for-profit companies, provides to residents and businesses. With internet access now necessary for everything

from work to school to entertainment, many see it as an essential utility, such as water, and therefore something local government should provide. Governments can increase the number of people and businesses with affordable access to the internet.

Governments must build broadband infrastructure with fiber optic cable to provide internet as a service through municipalities, electrical co-ops, utilities and tribes. Fiber-based internet is the most reliable, secure internet option in the industry, with network speeds of up to 10 Gbps for residential areas and 100 Gbps for businesses. These speeds are significantly higher than the traditional copper, Ethernet, DSL cables or satellites many private internet companies still use today.

The FCC's threshold for "high-speed broadband" is download speeds of up to 25 Mbps and upload speeds of up to 3 Mbps. However, these speeds aren't accessible to every American because of a lack of broadband infrastructure and high cost. More than 17 percent of Americans, or 57.23 million people, live in rural areas, many of which lack broadband infrastructure. Accessing the internet via satellite is one of the only options available in those areas, but it can be slow-



moving, and it's not always affordable. For example, in the U.S., the average monthly cost of satellite internet service is \$86.33; the average monthly price of fiber internet service is \$63.78.

Compare the price and speed of satellite internet from a private company versus fiber internet a municipality, a utility, an electrical co-op or a tribal government provides to take it one step further.

A typical satellite internet company lists one of its most affordable packages as 12 Mbps for \$30, equating to \$2.50 per Mbps and 13 Mbps *slower* than the FCC's threshold for fast internet. With fiber internet, that \$30 could get 100 Mbps, which equates to \$0.30 per Mbps and is 75 Mbps *faster* than the FCC's threshold.

The difference in price and speed is similarly dramatic when comparing fiber internet with DSL, Ethernet or cable. Optical rates do not decrease as network demand increases, and signal strength does not degrade as quickly

over distance as satellite, DSL, Ethernet or copper cable.

MUNICIPAL BROADBAND BENEFITS

In addition to an equal opportunity for access to fast, affordable internet, municipal broadband offers many other benefits to a community. It also helps

- Keep taxpayer money local;
- Future-proof infrastructure by creating the flexibility to deliver additional services and keep up with customer demand;
- Reduce the cost of internet to residents and businesses;
- Create faster internet speeds with greater bandwidth and simultaneous upload and download speeds.

Those are just the broad strokes. Individuals, businesses and government entities have a lot more to gain.

PUBLIC SAFETY BENEFITS

Municipal broadband can increase public safety by providing faster,

more reliable internet to police departments, fire stations and EMTs. With municipal fiber internet, these entities can connect instantly without worrying about delays or glitches in information transfer. This allows them to respond to emergencies faster and more efficiently with better-organized, readily available data.

Other public safety matters that municipal broadband improves include traffic-signal management and traffic flow along major transportation corridors by enabling local and statewide intelligent transportation systems to send quicker, real-time notifications.

LOCAL BUSINESSES

The pandemic proved that businesses must be online to be relevant and survive. The latest Census Bureau data shows that in the third quarter of 2021, digital sales accounted for more than 20 percent of all gains in retail spending. Although 2021 e-commerce numbers are lower than in 2020, they are still higher than pre-pandemic levels.

Municipalities offer cheaper broadband than private companies and create infrastructure to provide households and businesses access to affordable, fast, reliable internet.

Unfortunately, not all small business owners have access to a reliable network to take their business online. Recent National Federation of Independent Business and Google surveys found that around 8 percent – about 2 to 3 million – of U.S. small businesses do not have access to broadband internet. Of those that do, the FCC's current broadband benchmark speeds may be too slow to meet their internet speed needs, according to a 2021 study by the U.S. Government Accountability Office. Having faster broadband means businesses can take advantage of e-commerce opportunities, mobile apps and more sophisticated marketing tactics. It also means firms can generally improve their website performance, encouraging organic growth.

Website functionality is critical to improving website performance, and one of the most significant factors in organic growth is the loading speed of a page. A municipal fiber optic infrastructure can level the playing field for small businesses, making the internet more affordable and ensuring all web pages function at the same speed and reliability.

Local governments can collect more sales tax revenue when local businesses thrive, and the area becomes attractive to other companies. According to *Governing Magazine*, the Chattanooga, Tennessee, municipal broadband network is the fastest in the nation and attracts developers, computer programmers and investors to the once manufacturing-heavy area.

PUBLIC EDUCATION

The pandemic made online classes and homework more than a supplement to in-person teaching. It made it the new

normal, and it has not gone away even with most schools back to in-person classes. Unfortunately, because of high costs and lack of development in some rural areas and underprivileged communities, not every student has the internet at home, causing those who don't to fall behind those who do. In addition, many students must share internet with other household members working from home, straining already limited bandwidth.

Municipal broadband can help remedy this inequality by creating an infrastructure that gives every household in the community equal access to affordable, reliable, fast fiber optic internet. This can help every student and teacher from kindergarten to college, including those who are homeschooled.

It can also support the public library system. Municipal broadband is cheaper than private internet services, giving libraries leeway to set up more public-access computer stations and provide more online resources to the public.

UNDERPRIVILEGED COMMUNITIES

Municipal broadband can help give underprivileged communities the boost they need to start thriving. It can improve education access for disadvantaged students and allow individuals to create online businesses or find online jobs.

In addition, most human services agencies and health care providers have used virtual communication to stay in touch with clients and patients, especially since the beginning of the pandemic. However, according to the U.S. Department of Health & Human Services, more than one in six people in poverty have *no* internet access. So

the clientele many of these agencies were designed for cannot access their services. Municipal broadband offers those in poverty and underprivileged communities a better chance at taking advantage of health care and human services. Even those without the tools to access municipal broadband from their homes could still take advantage of its benefits at their local library branch.

FUNDING MUNICIPAL BROADBAND

Establishing a municipal fiber internet infrastructure is no small feat. Still, the federal government has passed several acts that offer local governments funding, including the Coronavirus Aid, Relief, and Economic Security (CARES) Act (2020), the American Rescue Plan Act (ARPA) (2021), and the Infrastructure Investment and Jobs Act (2021).

Through these, local governments can access competitive grants for broadband infrastructure; adoption and deployment; and data, maps and plans. Grant monies are prioritized for unserved and underserved areas; anchor institutions such as schools, universities, libraries, medical providers and public safety entities; and other community support organizations and agencies. ❖



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