Yet, communities throughout New York State lack adequate internet access. And even in places with ample coverage, not all residents are able to afford the cost of high-speed internet. These realities contribute to the technological inequities that plague economically disadvantaged locales and play a central role in the “homework gap” in both low-income urban and rural communities.

Municipal broadband programs may help diminish the homework gap as well as provide high speed internet service to areas unserved by the industry. Unlike market-driven internet access, municipally provided internet may enable residents in underserved communities to experience the benefits of high-speed internet access. Additionally, broadband access helps local governments and emergency responders manage natural disasters and emergencies. Consequently, increased internet connectivity through municipal programs may help cities and villages enhance their economic vitality and public safety. This article will consider both the benefits and costs of municipal broadband programs and identify issues that may
While internet access provided by municipal networks is as fast as traditional providers, it offers connection to communities that are left unserved by the industry.

Internet sminternet. What is broadband anyway?
The Federal Communications Commission (FCC) defines broadband as “high-speed Internet access that is always on and faster than the traditional dial-up access.” Internet speed is measured in megabits per second (Mbps), which is broken down into download and upload speeds. The FCC has set the standard for high speed connection at 25 Mbps downstream/3 Mbps upstream, which is considered sufficient for most customers’ demand for web browsing, emailing, social networking, and moderate video streaming. Because nearly every aspect of modern life involves internet connectivity, achieving broadband ubiquity is considered the “great infrastructure challenge of the 21st century.”

Broadband internet is transmitted over a variety of mediums, including, digital subscriber lines (DSL), coaxial cables, fiber optic cables, and wireless networks. While satellite service is sometimes understood as a category of broadband connection, this service is not considered high speed because the data transmission does not meet consumer demand. Fiber, coaxial, and wireless service generally involve fast download speeds, low latency, and reliable connections. In contrast, satellite connections are unreliable, erratic in weather events, and transmission is often lagged because of the long signal distances affiliated with satellite service.

Unlike traditional public utilities, which are heavily regulated and mandated to provide certain services, broadband access is primarily market-based and dependent on private sector investment. As a result, the industry-driven delivery of broadband service has left millions of Americans without access to high-speed internet. The FCC’s 2019 Broadband Deployment Report concludes that as many as 21 million Americans do not have broadband access. However, the methodology used by the FCC has been criticized by many, including the Government Accountability Office, as inaccurate and misrepresentative of actual customer service. Other analyses have concluded that as many as 162 million Americans lack high-speed internet connections.

Despite the variations in calculating the total number of Americans without meaningful internet access at home, it is clear that the digital divide persists throughout the country and in New York State, and is attributed to the unregulated market environment in which providers are able to choose to invest in areas that provide higher profit margins. This is particularly problematic for low-income urban markets and rural areas that lack a concentration of users and/or high infrastructure costs. Municipal broadband programs, however, offer the opportunity to hasten development in underserved areas in the State when existing providers fail to offer competitive services. Moreover, researchers believe that municipal corporations are “uniquely well-positioned to provide broadband access due to their existing ownership of the right-of-way [ROW] and experience in providing utility services.”

I don’t know what it means but I want it. How are municipal broadband programs structured?
Throughout the United States, as many as 500 municipal corporations have invested in broadband programs, which utilize a variety of models to disseminate internet service. Some municipalities engage in full-retail service provision, which offers broadband services directly to residents much like private-industry providers. Generally, full-service municipal networks operate in connection with the municipal electric utility. Other communities establish networks in defined areas, such as within municipally owned buildings and parks. These communities may also offer service to businesses and residents in the immediate vicinity and eventually expand throughout the municipal boundary.

But not all local governments that engage in municipal broadband systems provide service directly to users. Another system used by municipalities is installing conduit and fiber optic cable when engaging in capital projects. This method is often lower cost and less speculative than direct service and is used to facilitate future network connections. Municipalities that have installed dark fiber (fiber optic cable that is not currently being used to supply internet service) are positioned to lease the publicly-owned cable to internet service providers (ISPs) or use it to engage in a public/private partnership for direct customer service. When networks are laid at the municipality’s own expense, ISPs may be more inclined to provide service within the locality. Additionally, these open access networks encourage competition and enable broadband connections in traditionally underserved communities.
Beauty is in the eye of the beholder. Are municipal broadband systems successful?

A 2018 Harvard University study found that municipal broadband networks deliver internet service at significantly lower rates than private internet service providers and those costs are more consistent, transparent, and less confusing to consumers. While internet access provided by municipal networks is as fast as traditional providers, it offers connection to communities that are left unserved by the industry. Similarly, a different Harvard study concluded that open access systems “routinely result in lower prices and better service.”

Chattanooga, TN was the first municipality in the country to establish a city-wide fiber-optic internet service that operates at competitive market-speeds and prices. In 2007, when the city was upgrading its municipally operated electrical system, local leaders decided to invest in laying fiber-optic cable at the same time to supply every home in the territory with broadband internet service. As of 2016, the city provided service to 82,000 customers, which consisted of more than half of the market in the territory and cost the local ISP tens of thousands of customers. Chattanooga provides discounts for low-income residents, which support the city’s goal of minimizing the digital divide. Importantly, the city has watched its local economy grow exponentially as more businesses moved to the region creating an estimated 5,200 new jobs.

Other localities that have pursued municipal broadband systems have also experienced community revitalization. The Institute for Local Self-Reliance reports that increases in manufacturing jobs are common when municipalities establish broadband networks. Local governments may also experience a reduction in their own internet access costs and may increase public safety by establishing high-speed connections throughout the municipality to support first-responder communications.

There’s no place like home. Can cities and villages in New York State establish community broadband programs?

Given the advantages of municipal networks, ISPs are openly critical of community networks. In states where localities have pursued publicly-owned networks, telecommunications providers have sued the municipalities alleging that “the service amounted to unfair competition for the company.” While these actions have not been successful, ISPs have effectively lobbied 21 state legislatures to prohibit municipalities from engaging in full-service broadband programs and public/private partnerships. Fortunately, New York is not among these.

While the State has not specifically authorized municipal broadband systems, there are many strong public policy arguments supporting a city or village’s decision to pursue a municipal broadband system. The State Constitution, as well as various statutes, authorize cities and village to expend public funds for proper purposes. Additionally, the State’s “Broadband for All” campaign states, “In today’s world, internet connectivity is no longer a luxury -- it is a necessity. Broadband is as vital a resource as running water and electricity to New York’s communities and is absolutely critical to the future of our economy, education, and safety.” Given the State’s policy on internet connectivity and the essential role high-speed internet connects play in contemporary life, cities and villages should also be able to establish community networks. Furthermore, nothing in current State law preempts or prohibits a city or village from pursuing a system of municipal broadband service.

Show me the Money. How much does municipal broadband cost?

Investing in a full-service municipal broadband program or pursuing a capital project to lay fiber-optic cable in the municipal ROW will require a significant investment of municipal resources. For instance, building 87 miles of fiber would cost approximately $15 million. But the tremendous financial cost may be outweighed by its prospective returns. Chattanooga had a population of about 157,000 residents when it invested $220 million in its system, but is estimated to have received up to $1.3 billion in economic growth and social benefits throughout the community.

Although some municipalities have increased local taxes to finance a municipal broadband network, others bonded the project to avoid placing the financial burden directly on the taxpayers. There are provisions of Local Finance Law § 11 that may be construed to authorize indebtedness for municipal broadband programs, however, New York State Law does not specifically address this issue. Accordingly, cities and villages proposing to issue bonds to finance a publicly-owned broadband program are encouraged to consult with their bond counsels.

In some, admittedly less frequent, instances, the provision of high-speed internet access to residents may be free. The Rochester City School District was recently chosen by the 1Million Project Foundation to provide free high-speed internet access to high school students who do not have reliable internet access at home. The program, which is partners with Sprint, provides mobile hotspot devices to more than 4,000 students at no cost to the district.

Undoubtedly, the cost of laying fiber or operating a municipal broadband system prevents many communities from investing in such a program. While a city-appointed taskforce recommended that Cambridge, MA pursue a municipal broadband program for its roughly 112,000 residents, the $180 million price tag has prevented local leaders from acting since 2016. Similarly, a city-commissioned study estimated in 2016 that it would cost Seattle, Washington
between $480 million and $665 million to build a network to serve its 707,000 residents. While the city chose not to build its own broadband program, it partnered with Google to lend WiFi hotspot devices to the public through the Seattle Public Library.

**Conclusion**

Broadband investment has been largely limited to the communities in which service already exists. This concentration of investment by the industry has reinforced the digital divide by providing the same populations with faster and more consistent service. Fast and effective data delivery has become the foundation of contemporary society and the benefits of high-speed broadband access cannot be understated. While the cost may impede many cities and villages from engaging in community networks, the benefits associated with municipal broadband programs, including increased competition in the local telecommunications market, providing unserved communities with internet connectivity, and spurring local economic development should not be overlooked.

For more information relating to municipal broadband programs or to obtain copies of the documents cited herein, please contact NYCOM Counsel Rebecca Ruscito at (518) 463-1185 or by email at rebecca@nycom.org.

**Endnotes**

11. Id. See also, Koch, supra note 7.