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## NETWORK

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# The Risks and Rewards of Municipal Broadband (Contributed)

*Broadband is the most important infrastructure investment a community can make, especially as a new generation of connection is upon us: ultra-broadband.*

BY JAIME ESPINOSA, CORNING OPTICAL COMMUNICATIONS / FEBRUARY 8, 2018



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As communities across the country plan their future in the context of a competitive global economy, cause a new generation to develop a plan that addresses the risks that corporations face.



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Ultra-broadband (100 Mbps or faster) applications like telemedicine and virtual reality. Typically delivered by a deep fiber broadband network, ultra-broadband ideally drives fiber all the way to the locations where people live and work.

Beyond important end-user applications, ultra-broadband also lays the foundation for a **smart city**, enabling communities to fully participate in the "gig economy." Smart cities are more efficient, saving taxpayer money through lower operational costs. Smart cities also provide a better means for civic engagement, ensuring communities can best leverage the many talents of their citizens and increase citizen satisfaction.

Community investment in ultra-broadband also drives economic development. Communities who lack it are at a disadvantage to those who provide it. Both consumers and businesses now look for ultra-broadband connectivity when making stay-or-go decisions in any given community. In fact, a **recent** study by RVA LLC for the Fiber Broadband Association found that access to ultra-broadband ranked only second to safe neighborhoods as a factor for relocating to a new community. Like any major infrastructure investment, building a network comes with risks. These risks include the obvious financial ones, but also partner and operational considerations. When evaluating risk, it's important to put ultra-broadband into proper context. It is the most important infrastructure investment a community can make.

While there are risks inherent with building and operating any network, there are arguably greater risks to communities that let the opportunity pass them by. Technology has made the world much smaller, and communities are now in global competition with each other. Competing means attracting and retaining knowledge workers and the companies who employ them. The largest long-term risk to a community's future may be missing out on

the benefits of an ultra-broadband network:

- **Leverage infrastructure for economic development** — The engine for stability and growth for any community is continuing economic development. Gross metropolitan product (GMP) is an economic measure of the value of all goods and services produced within a metropolitan statistical area (MSA). **Research sponsored by the Fiber Broadband Association** found that GMP growth for communities with a 60 percent or better penetration of fiber to the premises (FTTP) was 64 percent higher than those with FTTP penetration of less than 25 percent. While ultra-broadband by itself does not guarantee improved economic development, there is no question that without it, economic development is significantly more difficult.
- **Prepare communities for 5G wireless opportunities** — Movement to 5G, the next generation of wireless technology, is already well under way. To function properly, 5G infrastructure requires a fiber-rich broadband network, like that deployed through an ultra-broadband network. 5G wireless will bring tremendous improvements over today's 4G environment, but will also be a major factor in job growth and economic development. Management consulting firm **Accenture recently performed a study** that indicates 5G could create up to 3 million jobs and add approximately \$500 billion to the U.S. gross domestic product (GDP).

The benefits have a local impact as well: “The [Accenture] report findings show what an incredible opportunity there is in local economies,” said Tejas Rao, managing director and Mobile Offering Network lead for Accenture’s North America practice. “5G-powered smart city solutions applied to the management of vehicle traffic and electrical grids alone could produce an estimate of \$160 billion in benefits and savings for local communities and their residents.”

- **Deliver fiber to the people** — While much economic attention is focused on attracting new citizens and employers, communities can't lose sight of their own important populations, including younger demographics. It's no secret that young people favor technology and the technology-driven applications enabled by ultra-broadband networks. Whether it's virtual reality or the ability to study at any university across the globe from the comfort of home, young people crave technology. They are digital natives and they choose to live, work and spend in areas that support their digital lifestyle.

Many communities throughout the country and all across the globe are already embracing the economic development and other benefits of ultra-broadband, and they're gaining a competitive advantage in our increasingly connected world as a result. Communities heading into 2018 without broadband capabilities must evaluate how they will keep pace — a finding that will inevitably lead to the need for development and therefore understanding of operating an ultra-broadband network.



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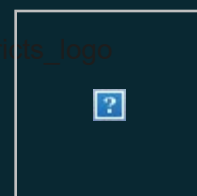
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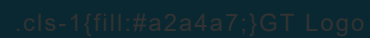
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