

5G's Role in Next-level Infrastructure

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Article

Offering lower latency, higher speeds and compute and storage at the edge, 5G is set to be a crucial part of the infrastructure that powers a range of technologies that rely on next-generation connectivity. These include augmented and virtual reality tools, autonomous vehicles and long-range drones. Where the technology will really shine, however, is in bringing these and other technologies to life in areas where Wi-Fi currently isn't available.

"We know more of these things are coming, so we need to meet that demand by delivering high-speed bandwidth in a lot of areas," says Bryan Schromsky, managing partner of federal government and public safety at Verizon Wireless.

Indeed, delivering high-speed internet more broadly is a major issue that the COVID-19 pandemic helped to expose. As Americans sought to access jobs, classes and services online as opposed to in-person, the vastness of the U.S. digital divide became more prevalent than ever before. In fact, the Federal Communications Commission estimates that more than 21 million people in the United States don't have access to the internet. And the number of those without access to high-speed internet is even greater.

This is one of the reasons the Infrastructure Investment and Jobs Act prioritized providing funds to improve access to reliable, high-speed internet.

Funding has the potential to provide greater connectivity to more constituents and can also offer governments that embrace digital transformation the ability to serve more people remotely as countless former in-person interactions have shifted online. That transformation also ties into providing equitable digital opportunities for underserved people in inner cities, urban areas, rural settings, on Native American reservations and in other areas where equal digital access is an issue.

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"It's exciting to see what's going to happen in the next few years as 5G, mobile edge compute and cloud start to get more widely adopted," says Albert Shen, strategy manager for Verizon Business Group - public sector strategy. "These are exciting times, but the challenge is bringing that equitably to as many communities as possible and that's the most important driver of rolling out 5G."

Building the Future of Infrastructure with 5G

Verizon was the first cellular company in the world to launch a 5G mobile network and has since invested \$65 billion in C-Band spectrum to expand the availability of higher-performance 5G. Additionally, the federal government has poured \$6.8 trillion into technology investments in the last two years, Shen says.

When Verizon launched its 4G network 12 years ago, many of the common technologies of today – like Uber, Lyft, Airbnb, food delivery services and others – hadn't even been invented yet. And the likely prevalent technologies of tomorrow – from autonomous vehicles to drone technologies, high-speed video and more – are going to rely on 5G.

Fixed wireless access can help solve the problem of the high financial cost of running cables out to remote areas. Instead, the solution offers fiber-like performance wirelessly.

A challenge, however, is that the percentage of government agencies that have completed their work around 5G implementation may be as low as 1%, says Tony Dolezal, 5G and MEC Specialist with the Public Sector Field Marketing group at Verizon Wireless. Long and difficult procurement processes are one of the barriers to digital transformation, although some of that's changing with the Investment in Infrastructure and Jobs Act, Shen says. A tight labor market and the ongoing retirement of experienced baby boomer employees is another cultural challenge.

To help remedy this, Verizon is currently working with a number of government customers to build enhanced 5G network infrastructure, including Arizona State, the University of Michigan, Emory and the Defense Department, among others. 5G connectivity is paramount in private workplaces that want to compete for talent too, Schromsky says.

The same goes for cities where leaders are engaged in something akin to an "arms race" in attracting talent, growth and improved lifestyles.

Additionally, today's municipal leaders are increasingly welcoming of the infrastructure needed for enhanced network coverage in their cities, especially as cellular companies rely less on unsightly macro towers, Dolezal says. Ultimately, as government leaders begin to look at ways to approach digital transformation, investing in 5G mobile network infrastructure will potentially be key in providing faster, more reliable and more secure connectivity across the nation – including to traditionally underserved groups – which can ultimately improve the prosperity and wellbeing of the country.

"They're looking for opportunities to work with carriers because they recognize how important this next generation communication infrastructure is to meeting the mission in the future," Dolezal says.

[Learn more about how Verizon's 5G network can help your agency provide more equitable, next level infrastructure.](#)

