The State of Enterprise Connectivity

United States 2025

ERICSSON

Introduction — The state of 5G in the U.S.

For the third year in a row, the State of Enterprise Connectivity Report has analyzed how enterprises across the country are leveraging cellular connectivity to solve business challenges, use new technology, and prepare for the future.

The previous 12 months have represented yet another unpredictable time for the enterprise. Organizations across multiple industries continue to face economic uncertainty, talent shortages, and evolving client expectations. This is driving enterprises to maximize their technology investments to ensure they lead to tangible business success.

Multiple industries are investing in generative AI, automation tools, IoT devices, and additional mobile devices to adapt to this unpredictable landscape. These devices help promote additional agility and efficiency but without resilient connectivity these tools will not be able to deliver on the promises to industry. As the report outlines, many business leaders in the enterprise space recognize that this fast, resilient connectivity can materialize in the form of cellular networks, particularly 5G.

The data in this report suggests almost every organization (93 percent) believes more secure, reliable, and high performing networks like 5G are important to the country's position as a global technology leader. Further, 92 percent believe a new era of connectivity will help unlock business innovation, including AI and IoT.

However, certain business executives fear that as the enterprise depends more on 5G, available spectrum in the US isn't keeping pace. According to the data, 80 percent of respondents said spectrum auctions for 5G frequencies have delayed network rollouts and hindered innovation. Moreover, 88 percent of business leaders believed closing the gap between 5G population coverage and mid-band spectrum coverage is key to remaining competitive as a nation.

Respondents' concerns with auctions may stem from the fact that the Federal Communications Commission (FCC) currently lacks the authority to conduct new spectrum auctions for 5G operators. Prior to 2023, the FCC was able to hold auctions for licensed spectrum, removing allocation decisions from the government and instead selling the spectrum to the highest bidder. This created a lane for high-powered 5G operators to buy licensed spectrum. However, in **March of 2023**, the FCC's authority to auction lapsed. This has produced frustration with some 5G operators who fear the government is not sufficiently disseminating spectrum for 5G to meet the current allocation needs of today's businesses.

Now, as the world races to leverage data-intensive technology like AI, **legislators are calling for the FCC** to regain that auction authority. This would allow 5G operators to grab the spectrum and make it available to those most prepared to push innovation throughout the country. The alternative, per legislators, is a nation that could lag behind the rest of the world in 5G deployments.

This call for the FCC to regain its auction authority displays just how much U.S. leaders believe 5G is the foundation for future technologies such as AI. As the data in this report will illustrate, enterprise leaders share this sentiment and, in some cases, are already using 5G to power transformative technologies and change the very trajectory of their businesses.

Methodology

The following report has been developed based on the findings of Censuswide research of over 1,000 respondents across the U.S.

Vertical sectors researched include:

Agriculture	HR
Arts and culture	IT and telecoms
Automotive	Legal
Building management	Manufacturing and utilities
Catering and leisure	Maritime
Construction	Public transportation
Education	Retail
Finance	Supply chain and logistics
First responders	Travel and transport
Government	
Healthcare	

Respondents were business owners, C-level executives, or senior managers from businesses with over 250 employees; all were technology decision makers.

The relationship between 5G and the next wave of technology

Emerging technologies like AI, automation, IoT, and mobile devices all share a common requirement: fast, secure, and reliable data exchange. This is why today's enterprises value the low-latency, high bandwidth capabilities of 5G. Through 5G networks, businesses plan to use these technologies to enhance critical business metrics such as production and efficiency as leading metric improvements.

88%
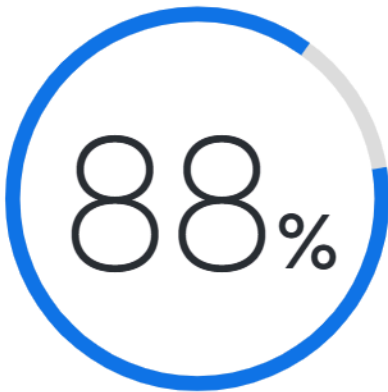
of U.S. businesses consider 5G "critical to optimizing the use of AI in the workplace".

As AI takes on a larger role in solving business challenges, 5G will become increasingly critical to enterprise operations. According to the survey, 88 percent of U.S. businesses consider 5G "critical to optimizing the use of AI in the workplace". Additionally, 90 percent say AI improves workplace security by automatically detecting network issues. These findings suggest a mutually beneficial relationship between 5G and AI as both technologies become more widespread. 5G enables the high-speed data transfers AI systems rely on, while AI enhances 5G network performance and security.

For example, generative AI can identify when network performance drops below expected levels and either alert administrators or resolve the issue autonomously. It can also detect unauthorized network activity and initiate immediate remediation or notify the IT team.

How the enterprise benefits from 5G

- 67% — Production efficiency
- 65% — Reliability/resilience
- 63% — Customer experience
- 61% — Scalability
- 53% — Worker safety
- 53% — Visibility into operations

Beyond performance gains, AI is also helping businesses address workforce challenges. As talent shortages persist in certain industries, 89 percent of companies say AI is helping upskill network management staff by automating analysis and reducing manual tasks. This workforce enablement complements the role of 5G, which facilitates the data movement required for AI tools to operate efficiently. Together, they form a foundation for enterprises to scale innovation while optimizing both human and technological resources.

IoT devices are also a technology growing in ubiquity. They have the power to streamline workflows and mitigate burnout on the path to workload efficiency. In the report, 58 percent of businesses said they were already using IoT devices across the business, and another 34 percent indicated they were planning to invest in IoT technology. According to business leaders in the report, in the next 12 months they plan to implement IoT devices such as security systems (54 percent), video surveillance (41 percent), route management/GPS (38 percent), supervisory control and data acquisition (37 percent), fleet management (37 percent), and predictive equipment maintenance (35 percent).

These examples carry benefits across various industries. For example, in retail, security systems and video surveillance can help with loss prevention. In transportation, public agencies can ensure effective and timely work with fleet management tools. In warehouses and/or manufacturing, predictive analytics equipment maintenance is essential for limiting production interruptions that can lead to missed deadlines or lost revenue. The benefits of 5G cellular tie almost directly into a company's bottom line. If any of these devices can no longer share data in real time, they will create significant obstacles to accomplishing the simplest of business goals.

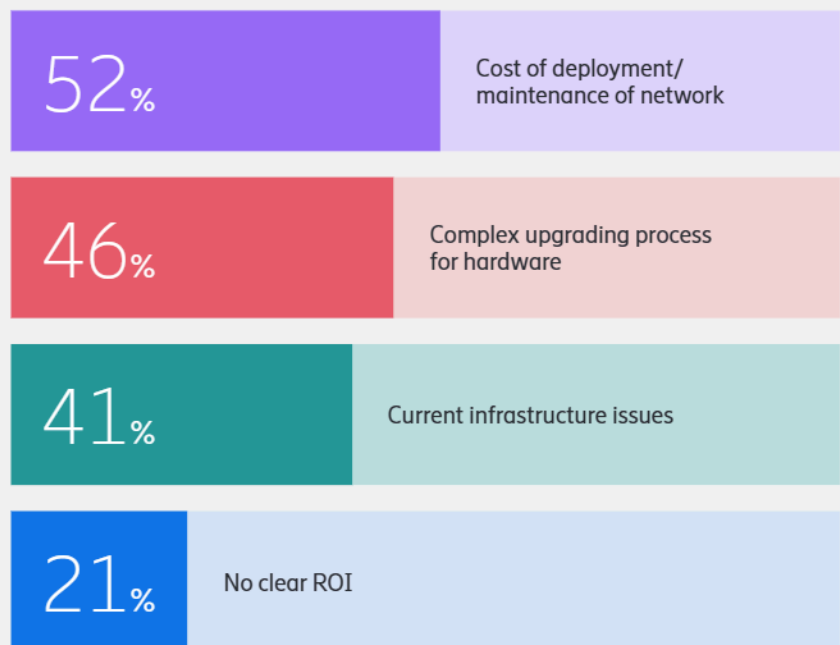
5G — AI — Automation — IoT and mobile devices
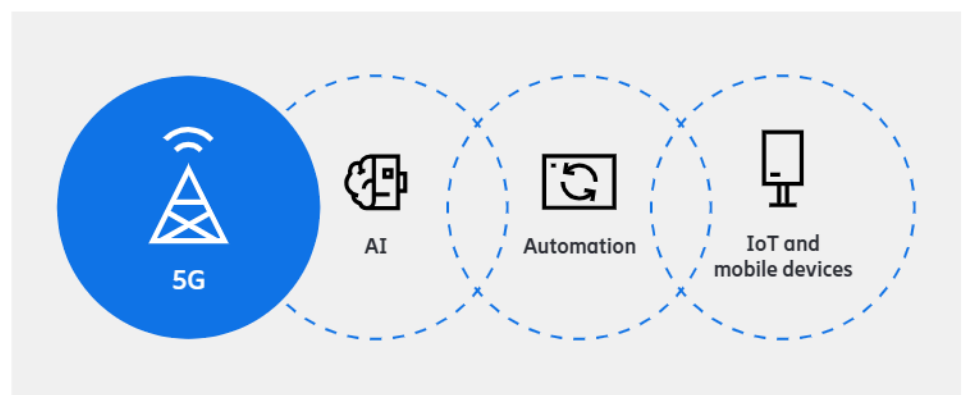
The barriers to effective cellular implementation

Even with the clear advantages of 5G and other state-of-the-art technologies, there remain obstacles to implementing 5G and the subsequent benefits it provides for other technologies. When it comes to investing in 5G networks, respondents noted several hurdles. More than half of businesses (52 percent) cited "cost of deployment/maintenance of network" as a main barrier to 5G network investment. A little less than half (46 percent) pointed to the complexity associated with upgrading their hardware to support the network, while others noted current infrastructure issues (41 percent).

These answers reflect the talent and resource issues companies can face when deploying and managing their networks. Certain businesses lack the expertise throughout their organizations to ensure their network infrastructure is always up and running. They may not know how to ensure bandwidth is always available, failover connectivity is in place, or the best ways to implement network security protocols.

Another obstacle that commonly stands in the way of new cellular deployments is an inability to convince necessary stakeholders that the technology is worth it. This seemed to be an issue for some respondents, as 21 percent of businesses cited "no clear ROI" as a main barrier to investing in 5G networks. Financial stakeholders must not only be convinced that 5G cellular can provide business benefits, but that the resources necessary to achieve and maintain those benefits don't carry a price tag that's too high.

Survey respondents noted several hurdles to investing in 5G networks

52%	Cost of deployment/ maintenance of network
46%	Complex upgrading process for hardware
41%	Current infrastructure issues
21%	No clear ROI

Image courtesy of Getty

Breaking through the barriers

While the barriers to effective 5G, or any cellular implementation, can be daunting, there are available network solutions that can mitigate the concerns business leaders presented within the report. These solutions can help address the expertise deficits and the deployment complications that business leaders have outlined. They can also help network administrators approach network management concerns and while ensuring zero-trust network security.

Battling network complexities

IT leaders who lack the resources or expertise to deploy and manage 5G networks can benefit from a managed 5G wireless WAN solution. These solutions simplify configuration, automate updates, and reduce the burden on in-house network administrators. Modern WWAN platforms also deliver built-in resilience, with intelligent, secure routers offering cellular, Wi-Fi, and even satellite failover. This ensures maximum uptime and enables lean IT teams to focus on more strategic priorities instead of troubleshooting connectivity issues.

Businesses facing expertise gaps and/ or talent shortages may also be worried about implementing private 5G, due to it 's deployment complexities. However, forward-looking private 5G vendors are working to mitigate some of those complexities by making 5G implementation and management similar to Wi-Fi network experiences, while also benefiting from the dedicated bandwidth and total network control private 5G provides.

Today, warehouses, hospitals, and manufacturing facilities are increasingly adopting private 5G to provide dedicated bandwidth for their most critical devices. These solutions offer built-in security and consistent uptime, allowing network administrators to manage operations with greater confidence and less complexity.
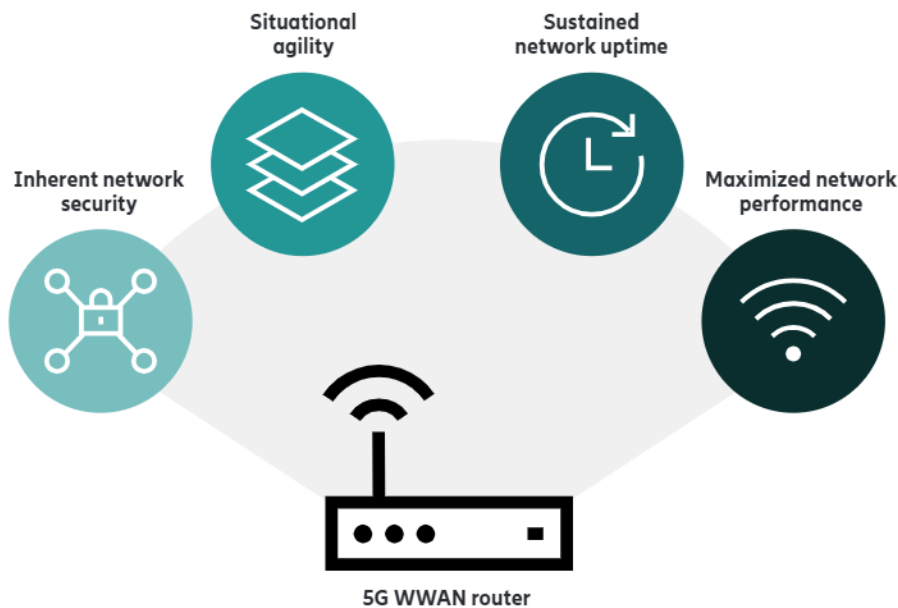
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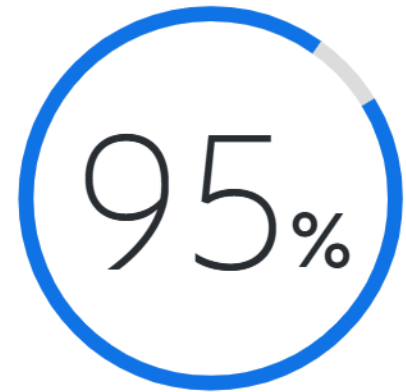
Image courtesy of Getty

State-of-the-art 5G WWAN routers can switch between 5G and other transport types, such as Wi-FI and satellite, to keep AI tools, automated machinery, and IoT devices constantly connected to the network. If equipped with zero-trust features, the WWAN solution can also help prevent network downtime due to cyberattacks or unauthorized network activity.

Maximizing cost and realizing ROI

In addition to mitigating expertise issues, a 5G WWAN approach can also maximize the investment enterprises are putting into their networks, thereby promoting the ROI business leaders in this survey are worried about. A comprehensive WWAN solution allows day-one network connectivity, which means businesses can begin operations as soon as possible. In addition, the routers used in a WWAN solution allow businesses to create a network that they can easily control and scale to meet business needs.

95%

of U.S. business leaders say unreliable connectivity raises costs or causes inefficiencies.

Alternatives to a WWAN approach, such as wired connectivity solutions also contribute to network uptime. Wired networks can take months to deploy, preventing immediate time to value from a network. Compared to the smaller routers in a WWAN solution, wired connectivity solutions make flexiblity and scalability a challenge.

Inherent network security

Situational agility

Sustained network uptime

Maximized network performance

5G WWAN router

Businesses also lose out on network ROI when their devices are unable to connect to a 5G or cellular network due to dead spot within an office building or facility. Traditional coverage extension technology leverages distributed antenna systems, or DAS. DAS frameworks usually include large-scale equipment that leads to high deployment costs and frustrating scalability issues.

New neutral host networks leverage small cell radios as a highly efficient, scalable, and future-proof solution for providing reliable wireless coverage indoors. By enabling multiple carriers to share the same infrastructure, neutral hosts can dramatically reduce capital expenditures (CapEx), improve service quality, and simplify network management.

While executives are concerned about ROI, it's important to remember the value of network uptime. Network downtime and unreliable connectivity can put a dent in the bottom line of any business. Almost every business leader (95 percent) revealed that unreliable business connectivity leads to higher operational costs or operational inefficiencies. Additionally, 30 percent of respondents said unreliable connectivity can cause reputational damage, while 26 percent said it causes a loss of earnings. The right 5G WWAN will be purpose-built to sustain network uptime and maximize network performance.

Introducing private 5G into the connectivity framework

> Private 5G allows businesses to maximize their investments in Wi-Fi and WWAN solutions, creating a powerful connectivity ecosystem that can meet all of an enterprise's connectivity needs.

While public cellular solutions like WWAN, and even Wi-Fi, play a role in establishing resilient, scalable, and easy-to-deploy connectivity, large-scale enterprises may find it prudent to implement a private 5G/private cellular network. A private cellular network is a dedicated network that leverages cellular connectivity — either 4G LTE or 5G standalone — within a defined geographic area to support business and mission-critical requirements for the enterprise.

Private cellular networks are especially valuable because they offer advantages that help mitigate the gaps public cellular, Wi-Fi, and wired networks present. While Wi-Fi is relatively inexpensive and easy to deploy, it can offer coverage gaps due to the amount of access points necessary to create sufficient network coverage. While public cellular provides access to powerful 5G or LTE connectivity, it relegates enterprise networks to potential bandwidth limitations. Wired networks are now considered out-moded because they are inflexible and expensive to move to meet new business needs.

Private 5G allows large scale enterprises to leverage dedicated bandwidth for their most vital business functions. Moreover it allows businesses to maximize their investments in Wi-Fi and WWAN solutions, creating a powerful connectivity ecosystem that can meet all of an enterprise's connectivity needs. Private networks also offer built-in network security as devices are unable to access them without the right SIM authorization.

Certain industries are already investing in private 5G networks for their mission critical needs. Warehouses, logistics, and manufacturing facilities are increasingly adopting private 5G to provide dedicated bandwidth for their most critical devices. When implementing a 5G network, it is important to partner with a vendor who can provide curated expertise.

Conclusion — Embracing the future with 5G

The 2025 State of Connectivity report proves that today's businesses understand they will need 5G and a reliable connectivity framework to support future technologies.

For example, Agentic AI, or AI that can learn and operate on its own, is currently growing to more industries. Gartner recently projected that by 2029, Agentic AI will resolve 80 percent of customer issues on its own with no human intervention. This suggests the enterprise will present an even greater dependence on AI technology and, consequently, a greater dependence on sufficient network connectivity.

80%
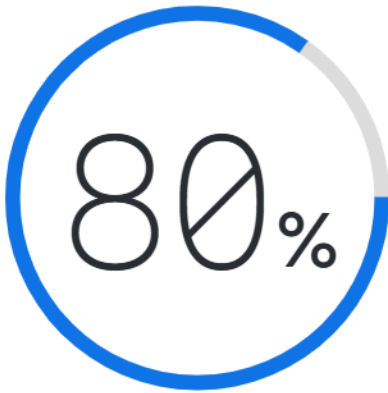
of customer issues are projected to be resolved by Agentic AI with no human intervention by 2029.

Image courtesy of Getty

Also, as AI technology becomes more innovative, 5G technology is set to do the same. 5G standalone networks are growing in number, making the long-awaited network slicing a possibility. Network slicing, or the existence of multiple logical networks on the same physical infrastructure, will allow enterprises and public organizations to access dedicated 5G bandwidth for certain operational functions. They will give businesses the ability to achieve the service level agreements associated with certain wired connectivity options, without the cost and deployment times those options usually entail.

In the meantime, businesses still have the opportunity to implement the connectivity solutions that will prepare them for what's next. Looking into comprehensive WWAN and/or private 5G solutions will establish a network that can support newer technologies whenever enterprises decide to implement them. Moreover, enterprise leaders will be able to lay a connectivity foundation that will let them choose when, on what scale, they invest in the latest digital solutions. This will be especially important as 2025 hints at an economic and professional landscape that will continue its unpredictability. To survive in this uncertainty, enterprises must leverage connectivity that allows the most agile and scalable innovation.

Learn more about enterprise connectivity