

Reliable cellular connectivity is a key driver of business success, research shows.

Organizations want to be proactive in deploying 5G infrastructure to boost employee productivity and address challenges head-on

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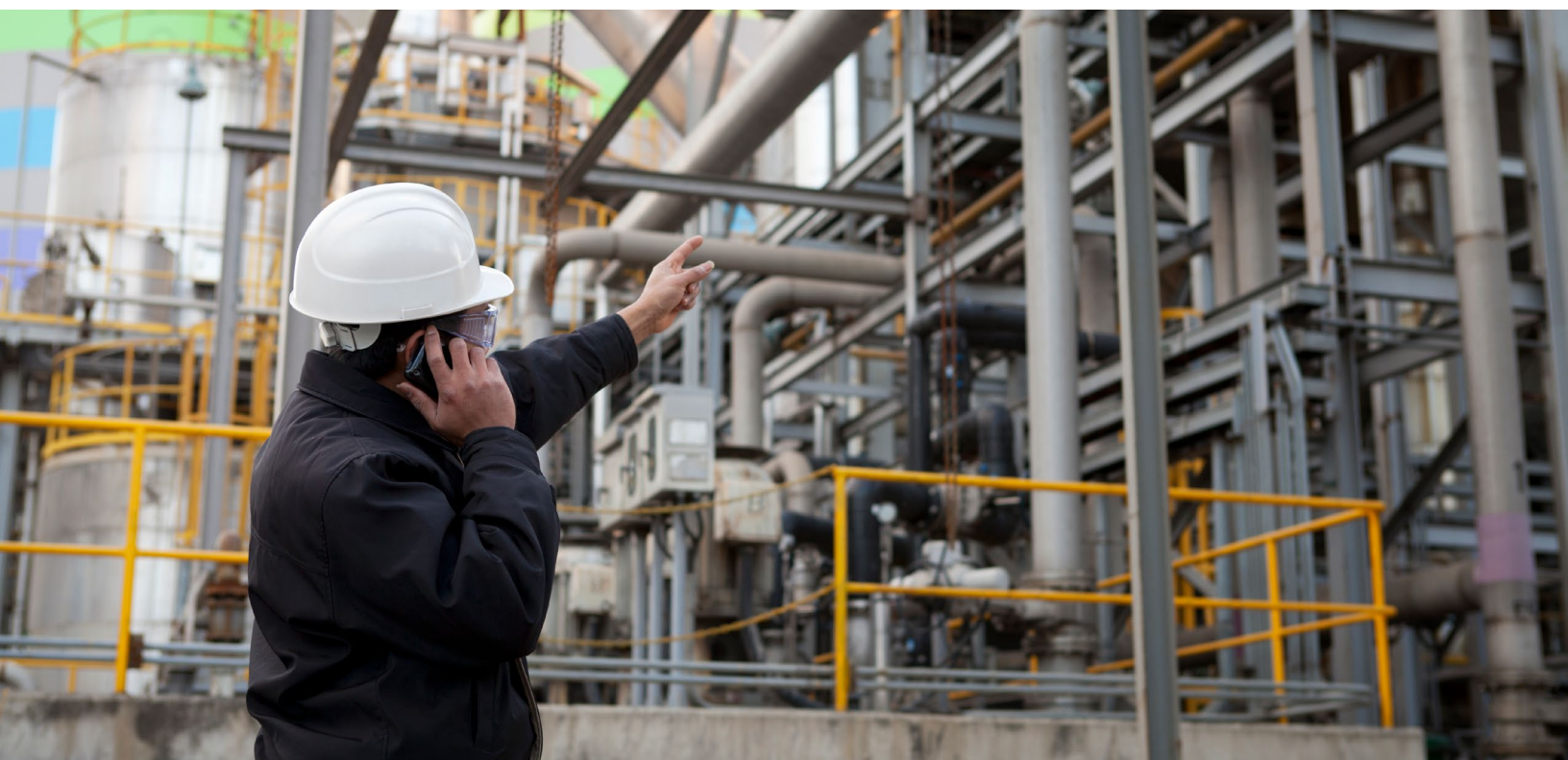


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Enterprises prioritize cellular connectivity

A Fierce Network survey of executives, directors and managers of IT and operations underscores the importance of wireless connectivity to business success.

Sponsored by Wilson Connectivity, the survey asked respondents about their priorities, the challenges they face and strategies they are employing to optimize cellular connectivity.

The survey was conducted online between June 4 and Sept. 10, 2024. A total of 86 respondents from 10 diverse industry sectors completed the survey. More than half worked in healthcare, manufacturing and professional services. A similar percentage worked for organizations with annual revenue between \$11 million and \$1 billion.

By title, half identified themselves as executive/director-level IT or executive/director-level operations. Nearly 30% identified as manager-level IT or operations.

Respondents were directed to choose all answers that applied to their organizations for each question, meaning totals add up to more than 100%.



Executive Summary

The lack of consistent cellular connectivity is one of the biggest obstacles to productivity facing organizations today. Stymied by legacy infrastructure, signal-blocking building materials and ever-increasing data demands, enterprises are hunting for reliable 5G connectivity solutions, according to a recent Fierce Network survey sponsored by Wilson Connectivity.

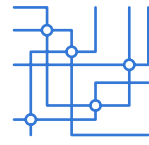
Key findings:

- 5G deployment headed the list of priorities as respondents seek faster data throughput and more ubiquitous coverage to meet the voice and data requirements of their organizations.
- Upgrading infrastructure to support 5G deployments, including private 5G networks and enhanced security, is a major priority.
- Businesses are using both CapEx and OpEx strategies to pay for cellular connectivity optimization.

Despite the connectivity issues facing enterprises, many still aren't adopting forward-thinking strategies to solve them. Only 27% of respondents are taking a proactive approach to connectivity planning, with 23% relying on a reactive approach and 35% using a mix.

Additional findings:

- Organizations are experiencing several cellular connectivity pain points, including interruptions in mobile communications that impact staff coordination, slow app performance and hinder productivity.
- Keeping up with rapidly emerging challenges and adding on to infrastructure to address those issues remains a concern.
- When it comes to modernizing infrastructure, organizations are focused on better device support, upgrades to support 5G, signal coverage consistency and the ability to power automation and monitoring systems.
- Unauthorized access to wireless networks and insufficient security protocols for IoT devices top the list of security concerns.



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Business drives the demand for better connectivity

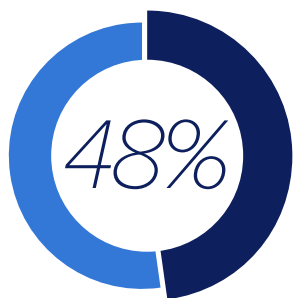
A key driver of business success is reliable cellular connectivity. Not only does it enable employees to meet their productivity metrics, but it also helps satisfy customer expectations and deliver solutions on time.

For at least a decade, dropped calls have been among the prime motivators for optimizing cellular connectivity. However, with the move to smart buildings, increased automation and reliance on a constant stream of mission-critical data, simply addressing dropped calls is waning as a driver for connectivity optimization.

Organizations are instead looking to public and private 5G networks to better support more devices and real-time applications — particularly in dense, congested areas. Why? Because they offer higher data capacity, lower latency, increased bandwidth and faster speeds.

It's no surprise then that public and private 5G infrastructure deployment was most frequently identified as the top priority for organizations in terms of cellular connectivity optimization.

Other initiatives for improving wireless connectivity include enabling mobile and productivity apps (29%), increasing data speeds (27%), enabling two-factor authentication (29%), supporting bring your own device efforts (26%) and electric vehicle charging stations (22%). And while not true across the board, we know that in certain industries such as education (K-12 and college campuses) and parking environments, access to reliable 911 calls is critical, as is planning for additional security platforms.



48% of IT and operations executives say 5G deployment is their organization's key wireless connectivity priority.

5G deployment tops organizational connectivity initiatives

5G networks can provide latency under 10 milliseconds, compared to between 50 and 100 milliseconds (or sometimes more) for 4G networks. And 5G speeds can be up to 20 times faster than 4G. So it's not surprising that 5G deployment topped the list of priorities as respondents seek faster data throughput and more ubiquitous coverage to meet the voice and data requirements of their organizations.

About half of the IT and operations executive survey respondents said 5G deployment is the key connectivity priority when it comes to wireless. Enterprises are considering strengthening public 5G infrastructure to provide broader and more reliable access. Private 5G infrastructure upgrades are also on the table as organizations look to provide secure, controlled coverage to employees and guests.

Private 5G is a top investment priority

Spending priorities align with this emphasis on 5G; 41% of respondents identified private 5G networks as a top business initiative for investment.

Additional spending priorities include remote work solutions (49%), mobile apps/services (47%), modern security systems (45%) and transaction processing (37%). Looking to the future, businesses report that these investments will remain priorities.



Keeping up with changing demands

The biggest challenges organizations face with improving cellular connectivity have to do with changing demands. More than a third of IT and operations executives report that their biggest obstacles to improving cellular connectivity are the difficulties adding on to existing infrastructure, keeping up with the pace of new connectivity needs, and speed of installation.

Satisfying the connectivity demands of employees, guests and tenants is an obvious reason for organizations to invest in wireless technology.

Frequently, expectations revolve around staying up to date with new technology and boosting productivity. More than half of the IT and operations executive respondents said they expected their organizations to install new technologies. Nearly half also said they expect to see improvements in employee productivity as a result of their organization's investment.

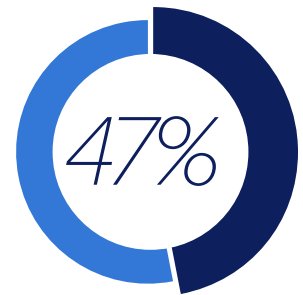
Modern building materials and limited coverage continue to be challenges. Energy-efficient glass, concrete and steel can interfere with wireless signals and degrade their performance.

Multicarrier environments, insufficient bandwidth and poor quality during peak usage periods are additional obstacles as well. It's proving difficult to keep up with changing connectivity demands.

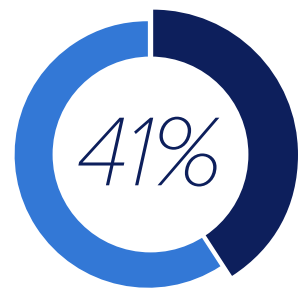
53% of IT and operations executives say limited coverage in certain areas of a building or campus has caused wireless connectivity issues.



The top obstacles to improving cellular connectivity are the difficulties of adding on to existing infrastructure



and keeping up with the pace of new connectivity needs



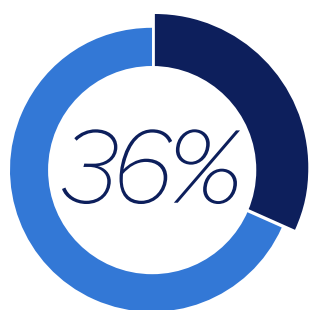
Changing attitudes toward planning and investment

There needs to be an ongoing transformation in how organizations approach cellular connectivity problems. For years, the approach was reactionary: If employees encountered connectivity problems, organizations would respond with a fix.

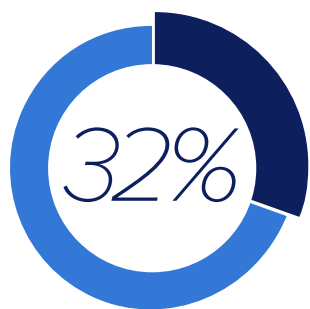
However, as cellular service has become a fixture in the everyday lives of employees and customers alike, some organizations are adopting a proactive mentality aimed at addressing issues before they become major problems. And others are relying on a mix of reactive and proactive approaches.

How organizations approach investment in these technologies is evolving as well. Some are relying upon CapEx and OpEx equally (36%), while nearly equal amounts are beginning to focus on OpEx more (32%) or CapEx more (31%). In other words, there is no clear winner in how spending is approached.

And there are tradeoffs that every enterprise must consider. Prioritizing OpEx by working with a managed services provider may provide for more financial flexibility and predictability, for example, whereas a CapEx-first approach may allow for greater control.



36% of IT and operations executives say their organizations are relying on CapEx and OpEx equally.



32% of organizations are focusing on OpEx as they invest in cellular connectivity improvements.

Meeting the challenges: Today and tomorrow

Enterprise challenges can fall into three categories: essential communication, modernizing buildings and facilities, and safety and security.

The top issues surrounding essential communication experiences included: interruptions in mobile communications impacting staff coordination (44%), slow app performance hindering productivity and task management (42%), unreliable connectivity affecting guest/patient check-in and check-out services (40%) and connectivity issues disrupting real-time data syncing (37%).

Issues regarding modernizing buildings and facilities for the future included: better supporting devices and machines to improve productivity and efficiency (47%), upgrading infrastructure to support 5G technology (45%), ensuring consistent signal coverage throughout facilities (44%) and being able to power greater automation and monitoring systems (42%).

And top safety and security issues included: unauthorized access to wireless networks (53%), insufficient security protocols for IoT devices (51%), compliance with data protection regulations such as GDPR and HIPAA (39%) and inadequate encryption standards (33%).



Hopes for the future

When looking to the future, many organizations share the same expectations for the benefits they will derive from the technologies and companies they select to improve or optimize cellular connectivity in their buildings and facilities. Those expectations include being less expensive (51%) and easier to build upon (47%), install (45%) and use (49%).

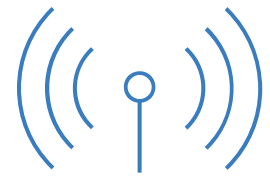
The last word

Nearly half of the IT and operations executives responding to the survey identified 5G infrastructure deployments and upgrades as a top cellular and wireless connectivity priority in their organizations. Improving worker productivity was another top priority.

Given the reliability and higher data capacity of 5G, it only makes sense that many of the organizations that identified 5G as a key technology also place a high priority on boosting employee productivity. Faster, more consistent connectivity empowers distributed workers to collaborate more efficiently and communicate more effectively — all while experiencing less downtime.

Beyond the role 5G can play in alleviating slow app performance that hinders productivity, it also offers organizations a solution to the problems of network congestion and poor quality of service in specific building locations and campus areas with poor coverage.

Paying for 5G and other connectivity enhancements will rely on a mix of CapEx and OpEx strategies in the short and longer term. But what are organizations looking for from the technologies they select and the partners they choose to work with? Respondents selected lower costs, easier installation, ease of use and being easier to build upon as their top picks.



47%

*hope in the
future that
cellular
optimization
technologies
will be
easier to
build upon.*

Key takeaways:

- Some IT and operations executives are adopting a more proactive approach to potential problems, choosing to head off issues during the planning phase for new technology, buildings and facilities.
- Keeping up with the pace of change and adding the infrastructure that's required remains a challenge that likely will continue to face organizations as they adjust their business strategies.
- Enterprises are well aware of the safety and security challenges they face with regard to cellular connectivity and have identified key vulnerabilities, such as unauthorized network access and insufficient security protocols for IoT devices, that must be addressed.
- Adding to existing infrastructure ranks among the biggest challenges facing organizations with regard to their wireless and cellular networks.

The challenges posed by smart buildings, the desire to increase the use of automation and the need to deliver a constant, reliable stream of data for mission critical applications have emerged as key considerations in wireless connectivity. The market is maturing, and more organizations are recognizing that their future success depends on their cellular network infrastructure's ability to enable increased productivity in a consistent, secure and cost-effective manner.

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About Wilson Connectivity

A leader in in-building wireless communication technology, Wilson Connectivity consistently reinvents solutions that put 5G to work. With 24 years of innovation, 200+ patents, and top solutions including weBoost, Zinwave, and Private 5G, Wilson Connectivity has advanced indoor and outdoor amplification. For businesses, this means easier adoption of 5G solutions; for consumers, uninterrupted, connectivity everywhere. Wilson Connectivity designs, assembles, and supports its products in the U.S. and U.K. for use at work, home, and on the road—paving the way for a seamlessly connected world.