6GHz Wi-Fi: Powering the Future of Enterprise Connectivity

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In This InfoBrief

The Wi-Fi industry is at a milestone moment. A significant amount of new spectrum has recently been enabled for Wi-Fi to use in the 6GHz unlicensed band, which is causing organizations across the globe to reconsider their investment priorities for this critically important technology.

IDC recently surveyed IT and line-of-business leaders to examine the current state of and future opportunities for enterprise-class 6GHz Wi-Fi. This InfoBrief provides a detailed analysis of the survey results showing the significant potential 6GHz Wi-Fi has in driving an organization's future connectivity strategy.

This research is meant to be a guidebook for organizations considering investments in 6GHz Wi-Fi and provide an assessment of how their future Wi-Fi strategy compares to peers across the globe.

Details of the Survey Demographics:

The study included global respondents from North America (51%) and Europe (49%) (n = 416).

Respondents came from a range of company sizes based on the number of employees and vertical industries, including retail, finance services, transportation/logistics, healthcare, and education.

All respondents are expert or highly knowledgeable on their organization's use of, management of, and investments in WLAN/Wi-Fi network infrastructure and are actively using, or planning to use, 6GHz Wi-Fi.

Notes for all data in this document: Managed by IDC's Global Primary Research Group. Some data in this document are multiple dichotomous tables; totals may not sum to 100%. Data weighted by IT spending by country or region.
All data in this document: n = 416; Source: IDC's *Cisco Qualcomm 6GHz Wi-Fi Survey,* July 2024.

6GHz: A New Era for Wi-Fi

Ninety-two percent of enterprises agree that 6GHz Wi-Fi is a significant advancement, while 80% agree that 6GHz is integral to powering future connectivity.
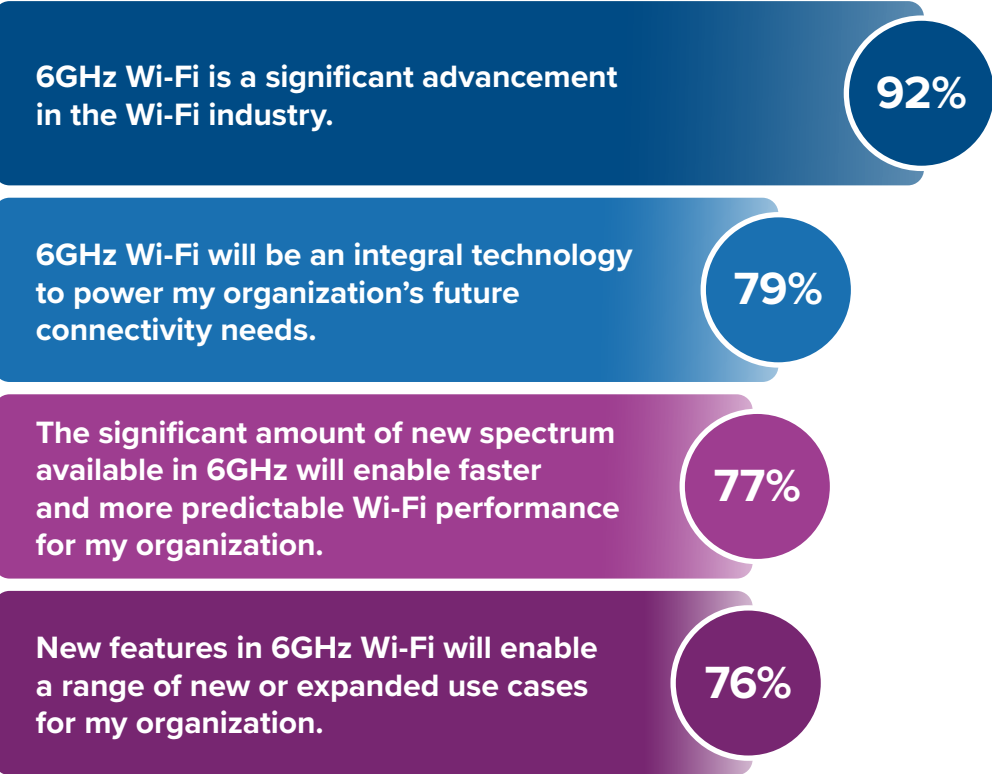
Wi-Fi is a key connectivity technology for businesses and consumers around the globe. The introduction of 6GHz Wi-Fi is a watershed moment in the networking industry.

Wi-Fi 6E and Wi-Fi 7 expand the unlicensed spectrum available for Wi-Fi into the 6GHz band, **enabling as much as three times more capacity** for Wi-Fi. This builds on Wi-Fi's historical use of the 2.4GHz and 5GHz unlicensed bands.

6GHz Wi-Fi has the potential to unlock powerful new and expanded wireless use cases for enterprises and consumers alike. An overwhelming majority of organizations agree that 6GHz is a significant advancement for the Wi-Fi industry.

100% of **current 6GHz users** agree or strongly agree: 6GHz is a **significant advancement** in the Wi-Fi industry.
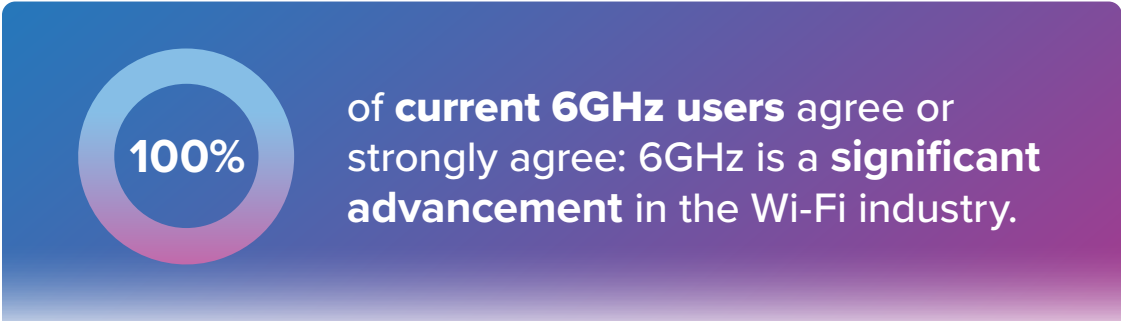
Percentage of **total** respondents who agree or strongly agree with each of the following statements:

6GHz Wi-Fi is a significant advancement in the Wi-Fi industry. — **92%**

6GHz Wi-Fi will be an integral technology to power my organization's future connectivity needs. — **79%**

The significant amount of new spectrum available in 6GHz will enable faster and more predictable Wi-Fi performance for my organization. — **77%**

New features in 6GHz Wi-Fi will enable a range of new or expanded use cases for my organization. — **76%**

The Importance of Wi-Fi

Wi-Fi is a ubiquitous technology that powers everyday and mission-critical communications for businesses and consumers around the world.

Wi-Fi's long history as an enterprise-class connectivity technology stems from the myriad advantages this technology enables, including:

▶ Seamless mobility

▶ Longstanding enterprise and consumer familiarity with the technology

▶ Broad device support

▶ Backward compatibility and investment protections

▶ Ease of management, including self-deployment capabilities

▶ Advanced, enterprise-grade security

▶ AI-enhanced management capabilities

▶ The ability to leverage an unlicensed spectrum

▶ Enterprise-class integrated Wi-Fi systems

The Importance of Wi-Fi (continued)

A wide range of clients, IoT endpoints, and edge infrastructures rely on Wi-Fi as a primary connectivity method, and the ever-growing demands of connectivity will continue to drive Wi-Fi investments in the future.

The introduction of 6GHz spectrum **ensures Wi-Fi can meet the demands of worldwide connectivity into the future.**

45% of respondents report that **more than half** of their devices rely on Wi-Fi.
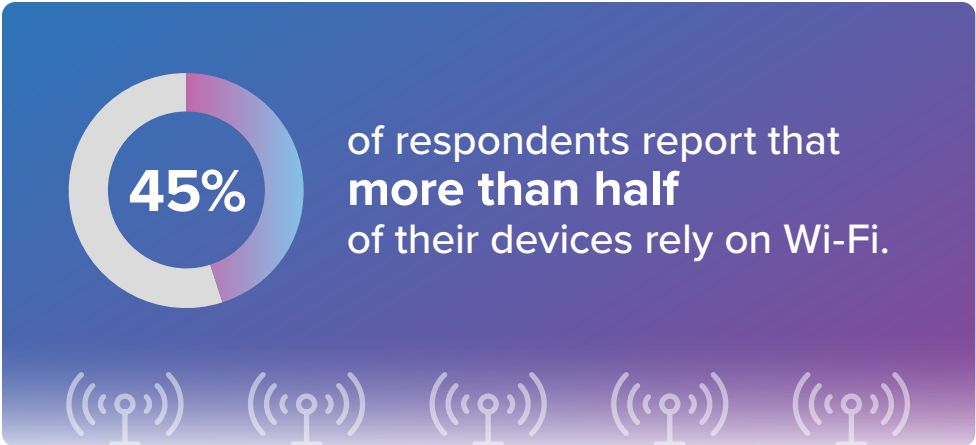
What percentage of your organization's users and devices leverage Wi-Fi as their primary access-layer connectivity today?

2%	14%	29%
100%	76%–99%	51%–75%

37%	17%	1%
26%–50%	10%–25%	Less than 10%
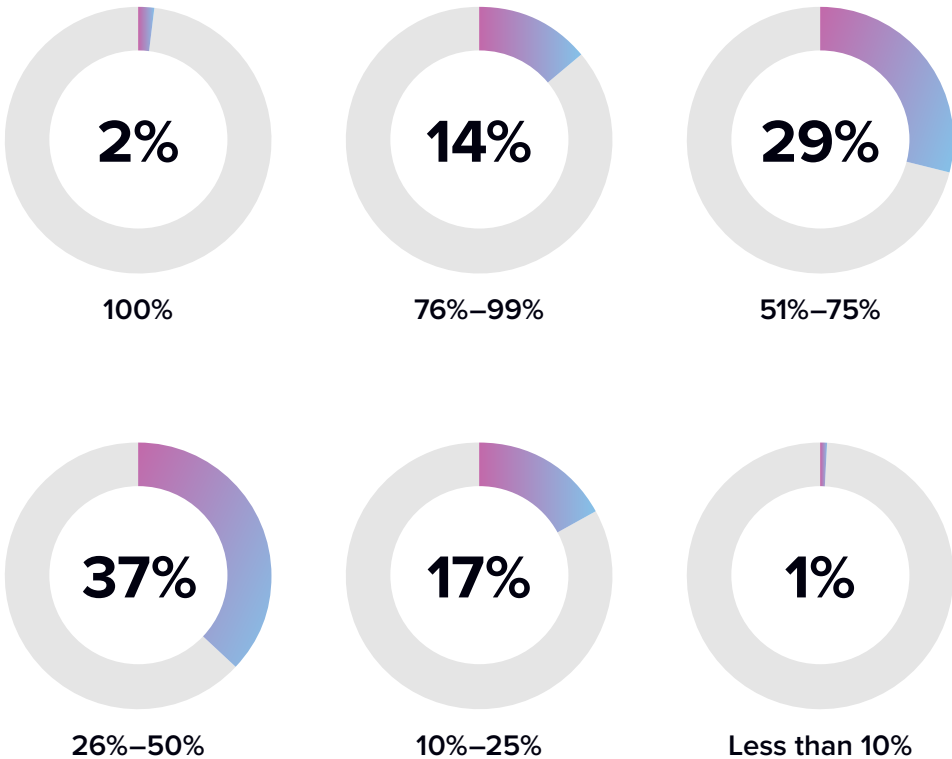
Wi-Fi as a Top Connectivity Priority

Across regions and most vertical industries, respondents rank Wi-Fi as a consistent connectivity priority today and in two years.

Where does Wi-Fi rank as a connectivity priority today and in two years?
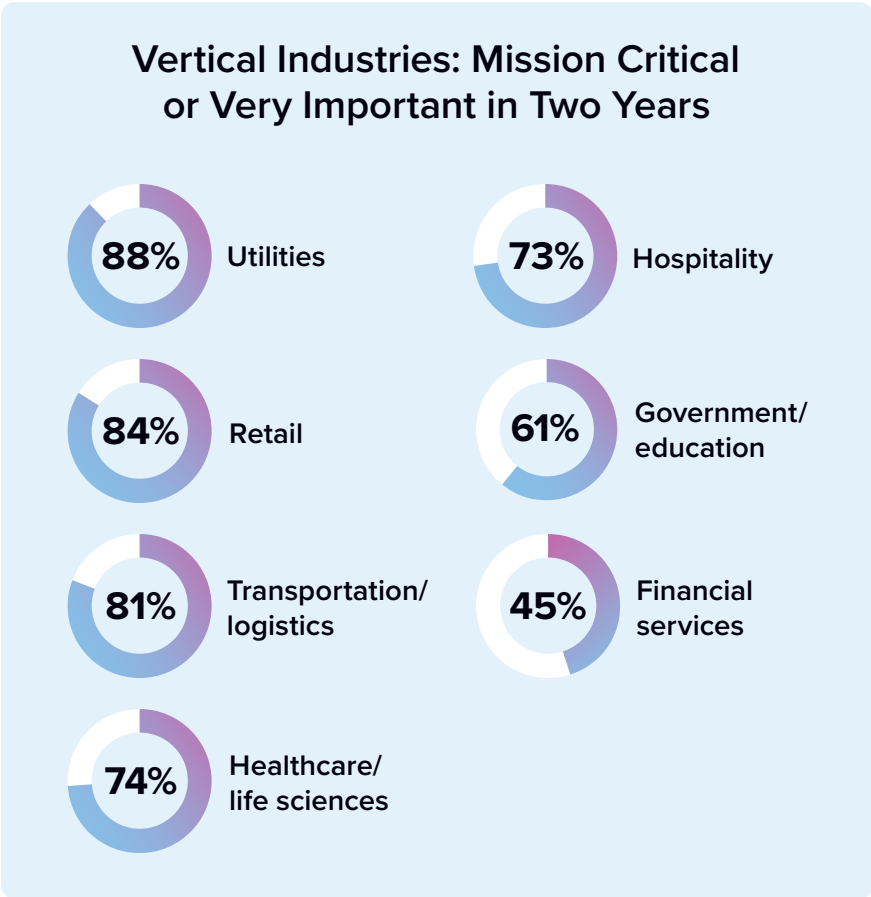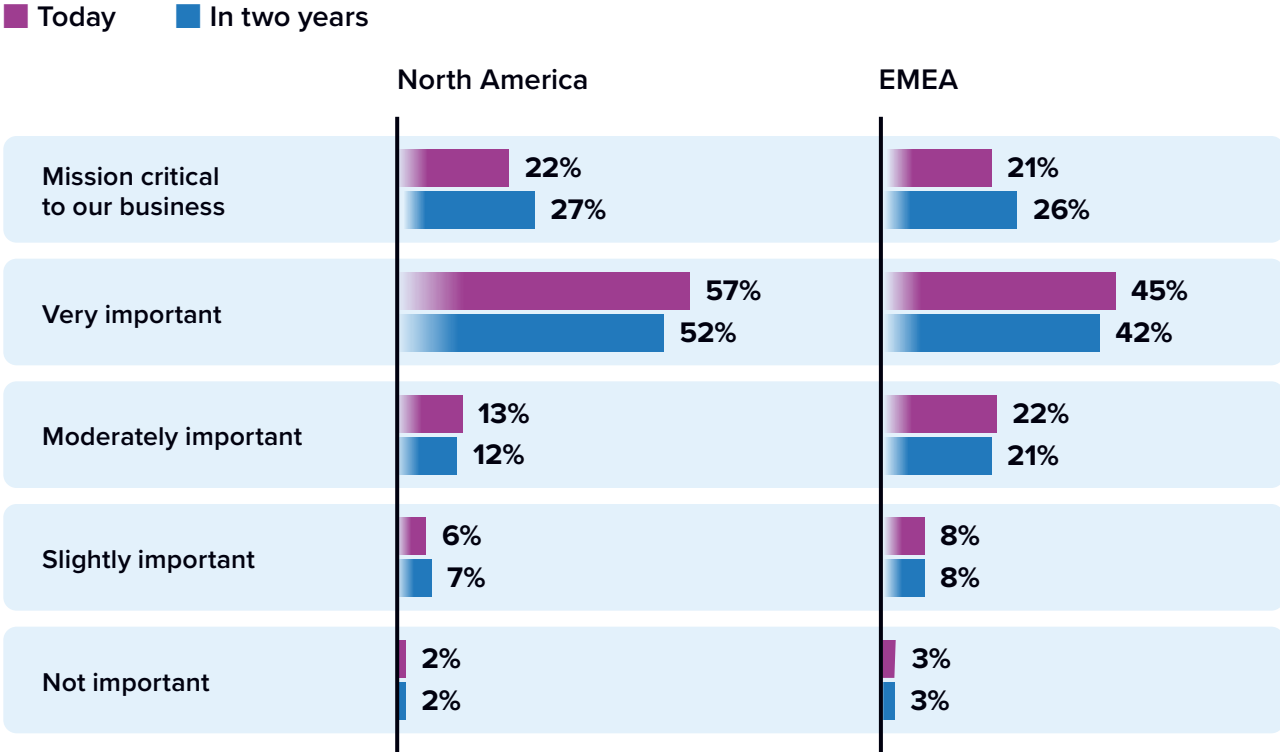
■ Today   ■ In two years

	North America	EMEA
Mission critical to our business	22% / 27%	21% / 26%
Very important	57% / 52%	45% / 42%
Moderately important	13% / 12%	22% / 21%
Slightly important	6% / 7%	8% / 8%
Not important	2% / 2%	3% / 3%

Vertical Industries: Mission Critical or Very Important in Two Years

- **88%** Utilities
- **84%** Retail
- **81%** Transportation/ logistics
- **74%** Healthcare/ life sciences
- **73%** Hospitality
- **61%** Government/ education
- **45%** Financial services

For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Top Features of Modern, Enterprise-Grade Wi-Fi Infrastructure

Overall, speed, security, and performance data and analytics are critical, but larger and more mature Wi-Fi users prioritize AI-powered Ops (AIOps) functionality.

Wi-Fi is a critically important technology for organizations around the globe. However, not all Wi-Fi networks are the same.

There are important differences between enterprise-class and consumer-grade Wi-Fi. **Advanced security, powerful management tools, and AI-enhanced functionality** in enterprise-class Wi-Fi enable businesses to use this technology for mission-critical use cases.
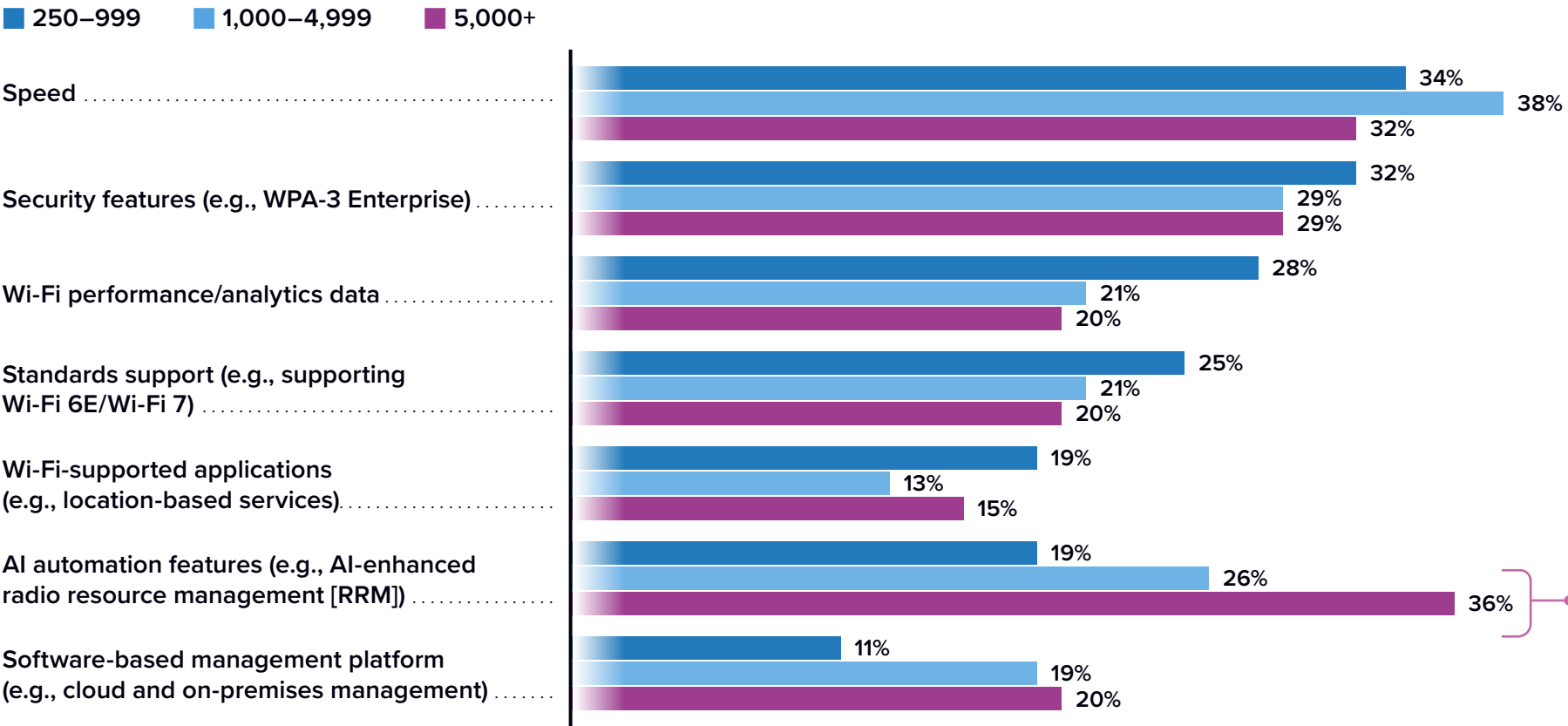
Respondents to IDC's survey report that the most important characteristics of a modern, enterprise-grade Wi-Fi system are **speed, security, and Wi-Fi performance/analytics data.**

Top Features of Modern, Enterprise-Grade Wi-Fi Infrastructure (continued)

Which of the following are the most important features of a modern, enterprise-grade Wi-Fi system?

(Company size by number of employees)

■ **250–999**   ■ **1,000–4,999**   ■ **5,000+**

Speed
- 250–999: 34%
- 1,000–4,999: 38%
- 5,000+: 32%

Security features (e.g., WPA-3 Enterprise)
- 250–999: 32%
- 1,000–4,999: 29%
- 5,000+: 29%

Wi-Fi performance/analytics data
- 250–999: 28%
- 1,000–4,999: 21%
- 5,000+: 20%

Standards support (e.g., supporting Wi-Fi 6E/Wi-Fi 7)
- 250–999: 25%
- 1,000–4,999: 21%
- 5,000+: 20%

Wi-Fi-supported applications (e.g., location-based services)
- 250–999: 19%
- 1,000–4,999: 13%
- 5,000+: 15%

AI automation features (e.g., AI-enhanced radio resource management [RRM])
- 250–999: 19%
- 1,000–4,999: 26%
- 5,000+: 36%

Software-based management platform (e.g., cloud and on-premises management)
- 250–999: 11%
- 1,000–4,999: 19%
- 5,000+: 20%

The largest organizations (5,000+ employees) rank **AI-enhanced automation** features as the most important ones that make Wi-Fi enterprise grade.

For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Current Wi-Fi Environments

Enterprises typically have a mixed environment of Wi-Fi standards. Survey results show growing use of Wi-Fi 6E and Wi-Fi 7, both of which support 6GHz Wi-Fi.

Wi-Fi 6E products first appeared in 2022, but enterprises accelerated adoption in 2024.

IDC's WLAN Infrastructure Tracker found that, **in the second quarter of 2024 (2Q24), 24% of new enterprise-class access point sales were Wi-Fi 6E,** indicating it becoming the de facto standard in the enterprise class of the Wi-Fi market.

IDC survey data shows that Wi-Fi 6E and Wi-Fi 7 still make up a minority of existing Wi-Fi environments, but **adoption of 6GHz Wi-Fi is expected to grow markedly in the coming years.**
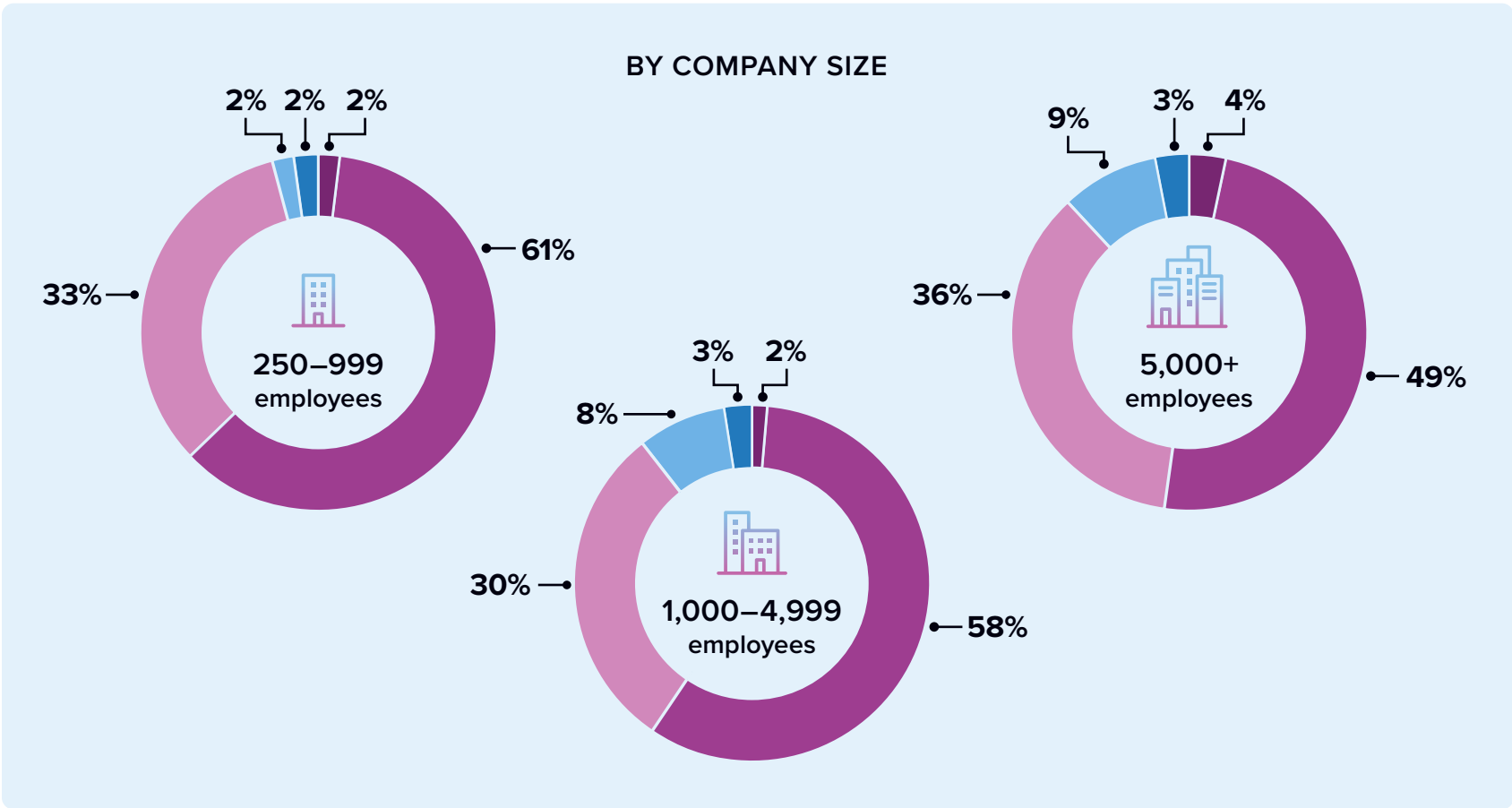
Large companies (those with 5,000+ employees) are the **earliest adopters of Wi-Fi 6E.**

Current Wi-Fi Environments (continued)

What percentage of the Wi-Fi environment uses each of the following Wi-Fi standards today?

■ Wi-Fi 4 ■ Wi-Fi 5 ■ Wi-Fi 6 ■ Wi-Fi 6E ■ Wi-Fi 7
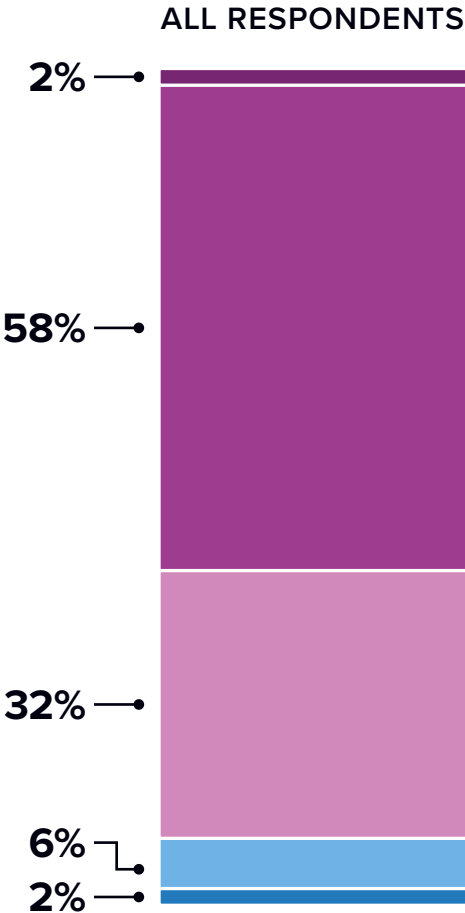
ALL RESPONDENTS

2%
58%
32%
6%
2%

BY COMPANY SIZE

250–999 employees
2% 2% 2%
61%
33%

1,000–4,999 employees
3% 2%
8%
58%
30%

5,000+ employees
9% 3% 4%
49%
36%

For an accessible version of the data on this page, see Supplemental Data in the Appendix.

6GHz Wi-Fi Usage

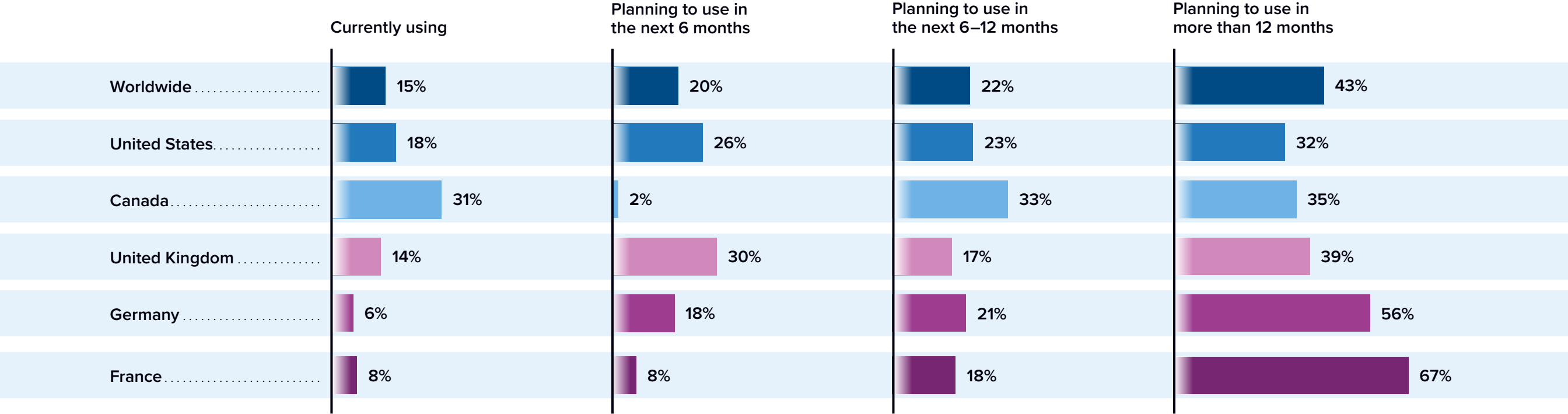**Canadian businesses are the earliest adopters, with the United States and the United Kingdom having faster timelines to increase adoption than France and Germany.**

Are you using or planning to use 6GHz Wi-Fi within your organization?

	Currently using	Planning to use in the next 6 months	Planning to use in the next 6–12 months	Planning to use in more than 12 months
Worldwide	15%	20%	22%	43%
United States	18%	26%	23%	32%
Canada	31%	2%	33%	35%
United Kingdom	14%	30%	17%	39%
Germany	6%	18%	21%	56%
France	8%	8%	18%	67%

For an accessible version of the data on this page, see Supplemental Data in the Appendix.

6GHz Brings a Range of New Features and Capabilities to Wi-Fi

6GHz Wi-Fi, which is supported in the Wi-Fi 6E and Wi-Fi 7 standards, has important enhancements over previous Wi-Fi standards.

6GHz Wi-Fi has a significant amount of new spectrum, additional wider Wi-Fi channels, and enhanced security through the WPA-3 standard.
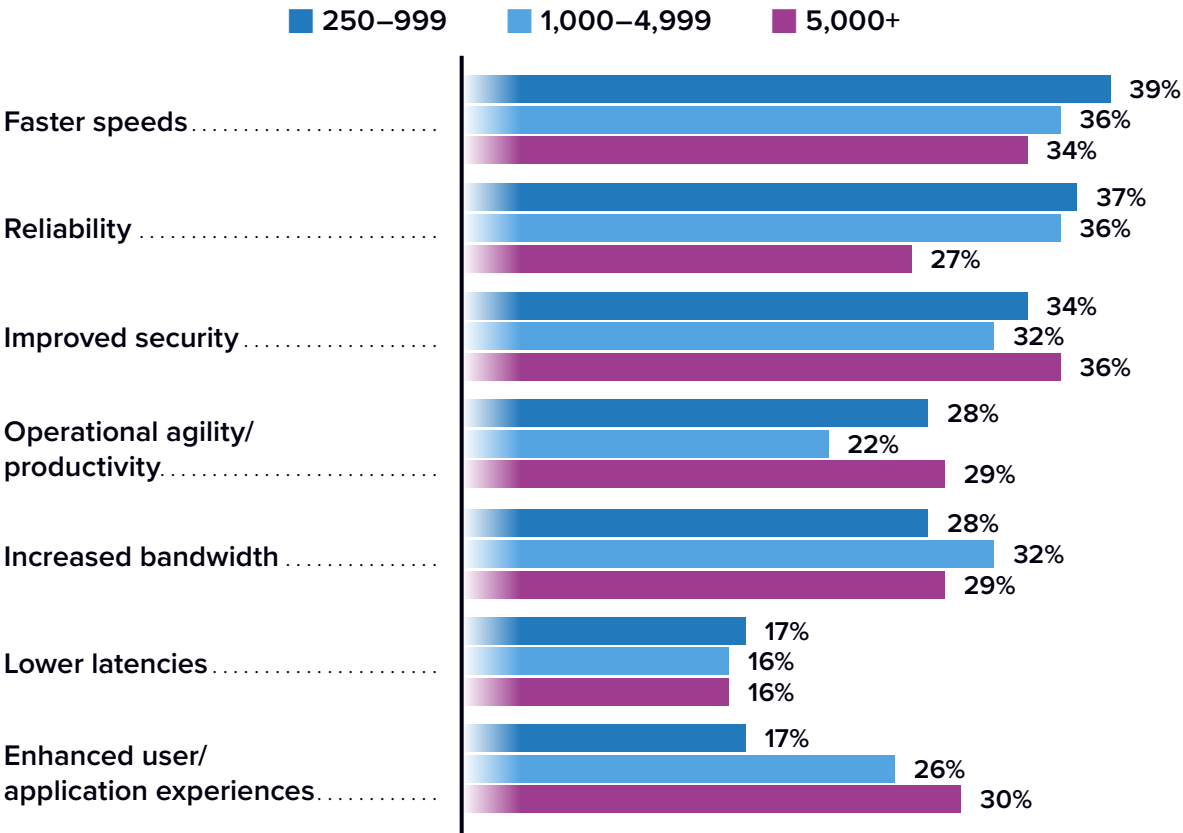
What is the importance of 6GHz band for Wi-Fi to your organization today?
(Percentage of respondents who chose "important" or "very important")
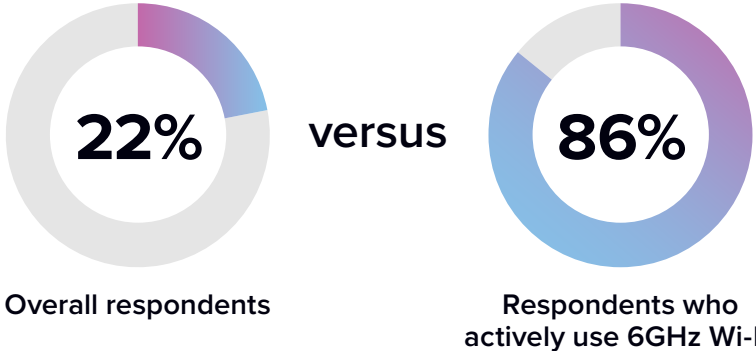
22%
Overall respondents

versus

86%
Respondents who actively use 6GHz Wi-Fi

What are the top two realized or expected benefits of 6GHz Wi-Fi?
(Company size by number of employees)

■ 250–999   ■ 1,000–4,999   ■ 5,000+

Benefit	250–999	1,000–4,999	5,000+
Faster speeds	39%	36%	34%
Reliability	37%	36%	27%
Improved security	34%	32%	36%
Operational agility/productivity	28%	22%	29%
Increased bandwidth	28%	32%	29%
Lower latencies	17%	16%	16%
Enhanced user/application experiences	17%	26%	30%

For an accessible version of the data on this page, see Supplemental Data in the Appendix.

What's New in Wi-Fi 7?

Wi-Fi 6E was the first Wi-Fi standard to support 6GHz Wi-Fi. **Wi-Fi 7 is the latest** commercially available Wi-Fi standard, which continues to advance Wi-Fi technology with important new features that increase throughput and efficiency.

Wi-Fi 7 Enhancements

Wi-Fi 7 is built off the 802.11be Extremely High Throughput standard and has a variety of technology feature enhancements, including:

Greater efficiency through a 20% increase in transmission rates with 4K quadrature amplitude modulation (QAM)

**Superwide 320MHz channels** in the 6GHz band, enabling more data to be transmitted at once

Multi-Link Operation (MLO), a novel Wi-Fi feature that allows Wi-Fi infrastructure to simultaneously use multiple channels across 2.4, 5, and 6GHz bands simultaneously

Deterministic latency, a combination of enhancements to Wi-Fi 7 that enables access points and devices to schedule traffic more efficiently, enabling increased quality of service for supporting high-bandwidth applications, especially in dense environments
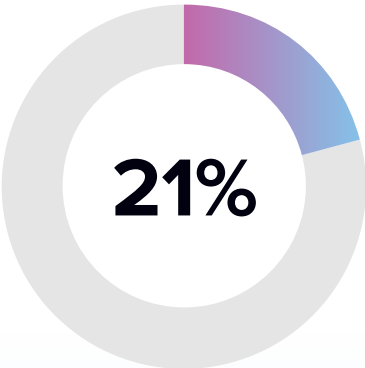
What's New in Wi-Fi 7? (continued)

What are the top two realized or expected benefits from Wi-Fi 7?

25%
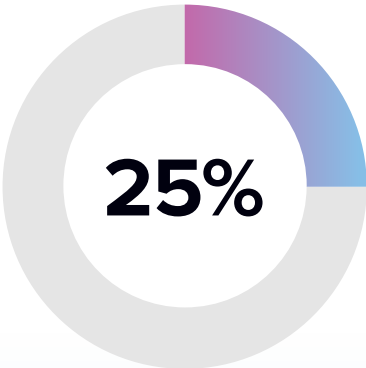
Higher transmission rates

4K QAM achieves 20% higher transmission rates than Wi-Fi 6's 1024 QAM for greater efficiency.

21%

Improved throughput

320MHz "superwide" channels enable multigigabit Wi-Fi device speeds.

20%
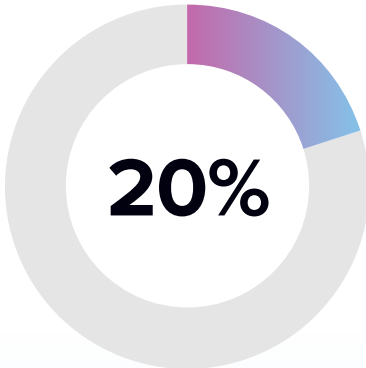
More efficient load balancing of traffic among links

MLO enables increased throughput and enhanced reliability.

19%
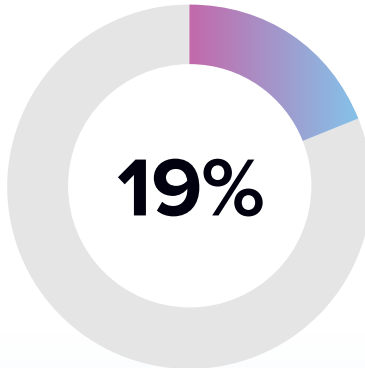
Reduced impact of interference with channel slicing

Preamble puncturing allows for the use of as much of the spectrum in the channel as possible.

16%
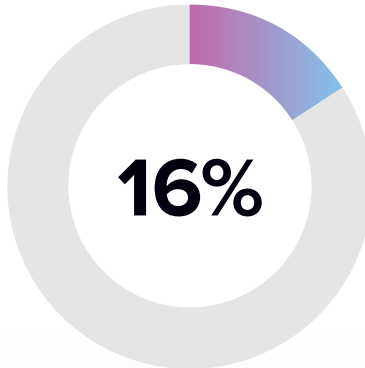
Improved flexibility for spectrum resource scheduling

Multiple RUs to a single STA enhances spectrum efficiency.

Top Use Cases for Wi-Fi 6E and 7 Today and in Two Years

Video/collaboration, IP voice, and the transition from wired to wireless are the top Wi-Fi 6E/7 use cases today, and new device/app creation is the top future use case.

Recent enhancements to Wi-Fi, notably the unlocking of the 6GHz spectrum, **are set to enable a range of expanded use cases.**

IDC survey data shows that top Wi-Fi use cases for current 6GHz users in two years include **supporting IoT devices and sensors and supporting point of sales and payment systems.**
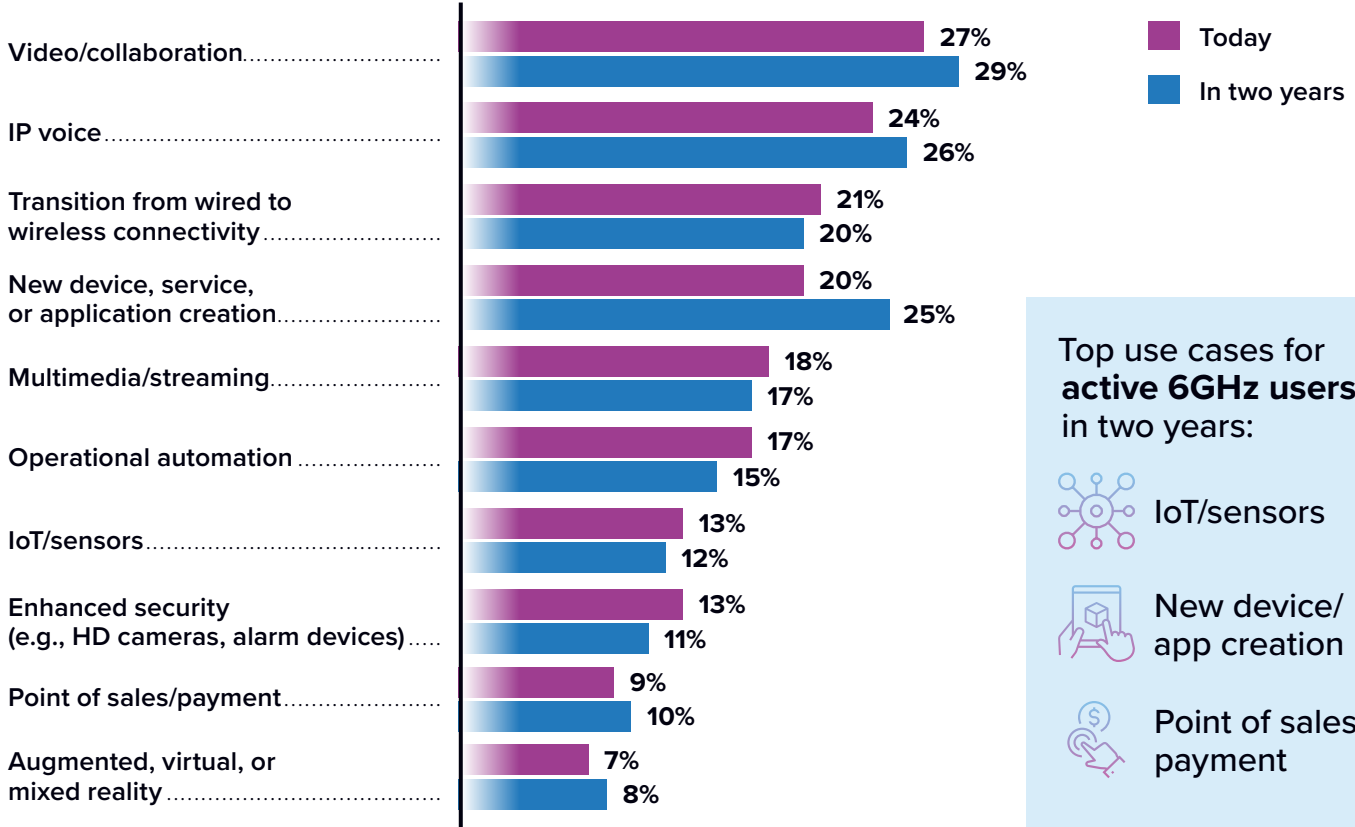
What are your organization's top use cases for Wi-Fi 6E and Wi-Fi 7 today, and what do you expect them to be in two years?

Use case	Today	In two years
Video/collaboration	27%	29%
IP voice	24%	26%
Transition from wired to wireless connectivity	21%	20%
New device, service, or application creation	20%	25%
Multimedia/streaming	18%	17%
Operational automation	17%	15%
IoT/sensors	13%	12%
Enhanced security (e.g., HD cameras, alarm devices)	13%	11%
Point of sales/payment	9%	10%
Augmented, virtual, or mixed reality	7%	8%

Top use cases for **active 6GHz users in two years:**

- IoT/sensors
- New device/ app creation
- Point of sales/ payment

For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Key Investment Drivers for 6GHz Wi-Fi

Key investment drivers for 6GHZ Wi-Fi include increased speed and reliability, improved security, and enhanced coverage. The largest organizations surveyed cite enabling new business applications as a top investment driver for 6GHz Wi-Fi.

Various business factors are driving budget increases and investment in 6GHz Wi-Fi, including:

▶ **New business use cases** that require high-bandwidth, low-latency connectivity

▶ **Better support for user experiences** such as video and streaming applications

▶ **New connected IoT endpoint devices** that must be supported
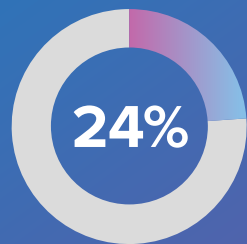
24% of large enterprises noted that **enabling new applications and services** was a key reason for investing in 6GHz Wi-Fi.

Key Investment Drivers for 6GHz Wi-Fi (continued)

Which of the following are the top two reasons your organization is investing in 6GHz Wi-Fi?
(Company size by number of employees)

■ 250–999   ■ 1,000–4,999   ■ 5,000+

Increase network speeds and reliability ....
- 250–999: 38%
- 1,000–4,999: 35%
- 5,000+: 38%

Improve security ....
- 250–999: 32%
- 1,000–4,999: 32%
- 5,000+: 32%

Improve coverage ....
- 250–999: 23%
- 1,000–4,999: 24%
- 5,000+: 18%

Reliably support more devices on the network ....
- 250–999: 22%
- 1,000–4,999: 21%
- 5,000+: 21%

Reduce latency ....
- 250–999: 21%
- 1,000–4,999: 20%
- 5,000+: 16%

Ensure alignment of network capacity with future business needs ....
- 250–999: 17%
- 1,000–4,999: 21%
- 5,000+: 21%

Part of regular investment cycle of new Wi-Fi standards ......
- 250–999: 16%
- 1,000–4,999: 20%
- 5,000+: 16%

Enable new business applications and services ....
- 250–999: 19%
- 1,000–4,999: 13%
- 5,000+: 25%

Access new spectrum capacity ...
- 250–999: 14%
- 1,000–4,999: 14%
- 5,000+: 13%

For an accessible version of the data on this page, see Supplemental Data in the Appendix.

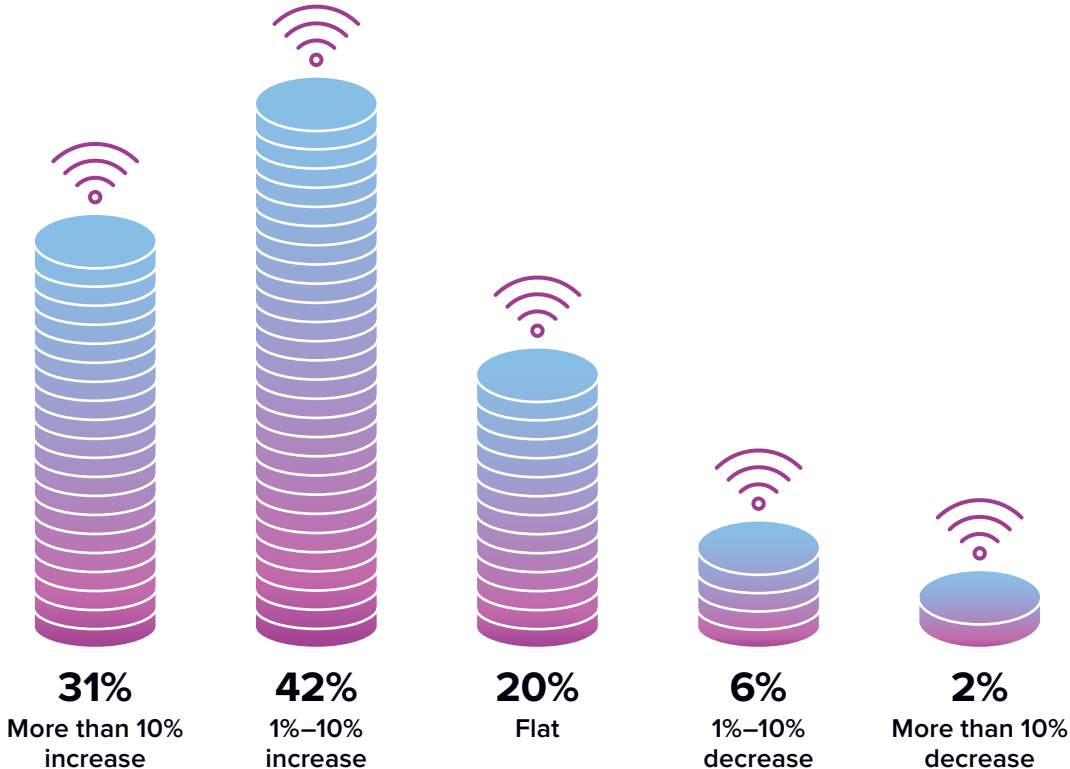# Wi-Fi Investment Data: Budgets by Region

Over 72% of organizations increased their budgets for Wi-Fi in 2024, with over three in 10 businesses in France and Germany increasing their budget by more than 10%.

How has your organization's budget for Wi-Fi changed compared to a year ago?

31% More than 10% increase	42% 1%–10% increase	20% Flat	6% 1%–10% decrease	2% More than 10% decrease

Wi-Fi Budget Increase for 2024 in Select Countries

	1%–10%	More than 10%
United States	50%	28%
United Kingdom	39%	26%
France	34%	33%
Germany	37%	31%
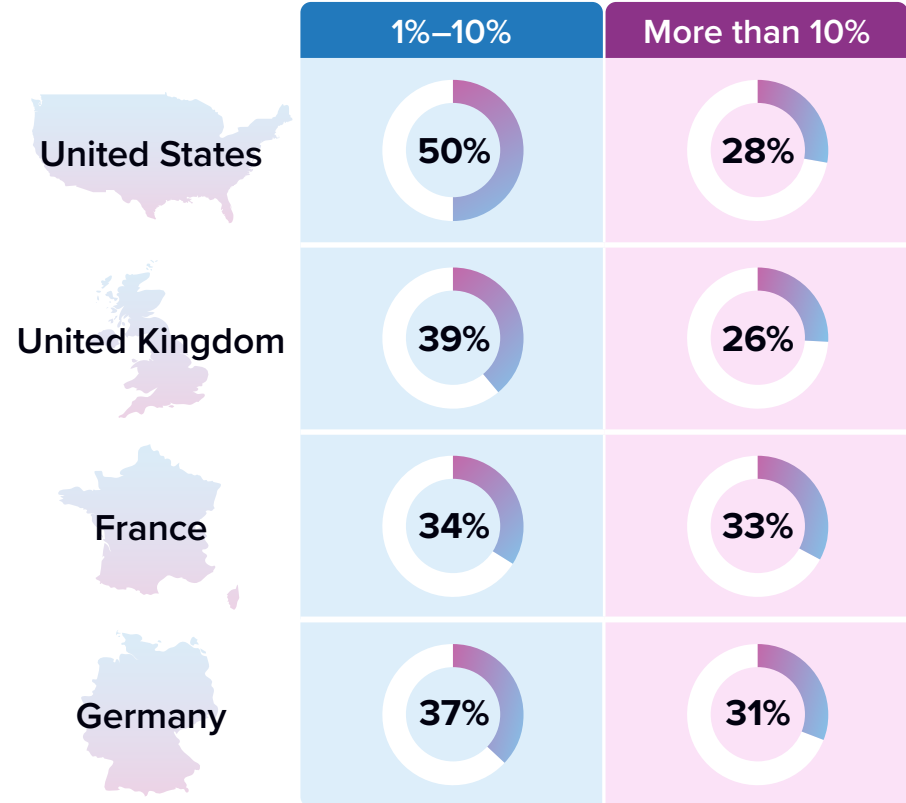
Top Areas for Wi-Fi-Related Investments

UK businesses lean more heavily into support services, and U.S. businesses lean more into investment in software and AI.

Which of the following is the greatest area of investment in Wi-Fi/WLAN?

- ■ **Wi-Fi-based applications** such as location-based services (e.g., wayfinding, asset tracking)

- ■ **Wi-Fi-related support services** (e.g., deployment, management, optimization)

- ■ **Wi-Fi-related security tools**

- ■ **New or expanded software,** including AI automation

- ■ **New access points or controllers** (e.g., Wi-Fi 6E/Wi-Fi 7)

United States
16% / 23% / 15% / 26% / 19%

United Kingdom
24% / 40% / 18% / 13% / 4%

France
24% / 16% / 24% / 18% / 18%

Germany
13% / 22% / 22% / 20% / 24%

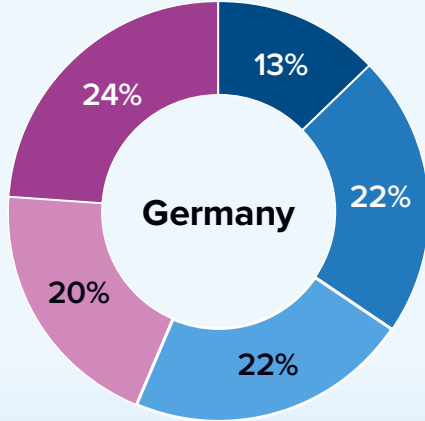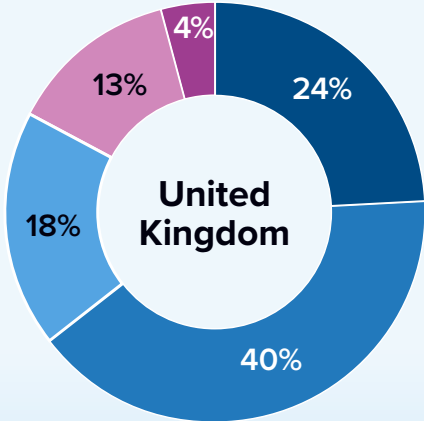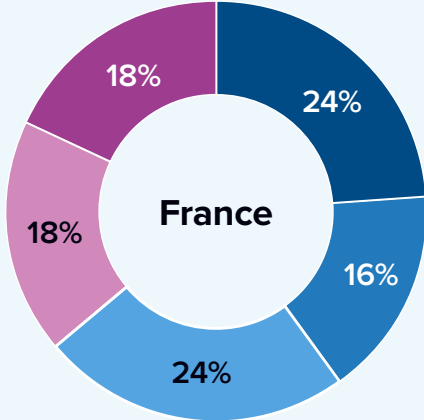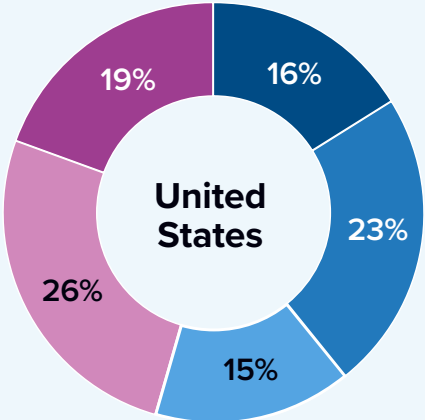For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Network Refresh Cycle Timelines

Most organizations follow a cycle of 3–4 years. Almost 20% of large enterprises tend to refresh in less than two years.

What is your organization's typical refresh cycle for mission-critical network and connectivity-related technologies and infrastructure?

(Company size by number of employees)

■ 250–999   ■ 1,000–4,999   ■ 5,000+

	Every year	Every 1–2 years	Every 2–3 years	Every 3–4 years	Every 4+ years
250–999	4%	3%	22%	39%	11%
1,000–4,999	3%	4%	20%	45%	9%
5,000+	11%	7%	14%	39%	10%
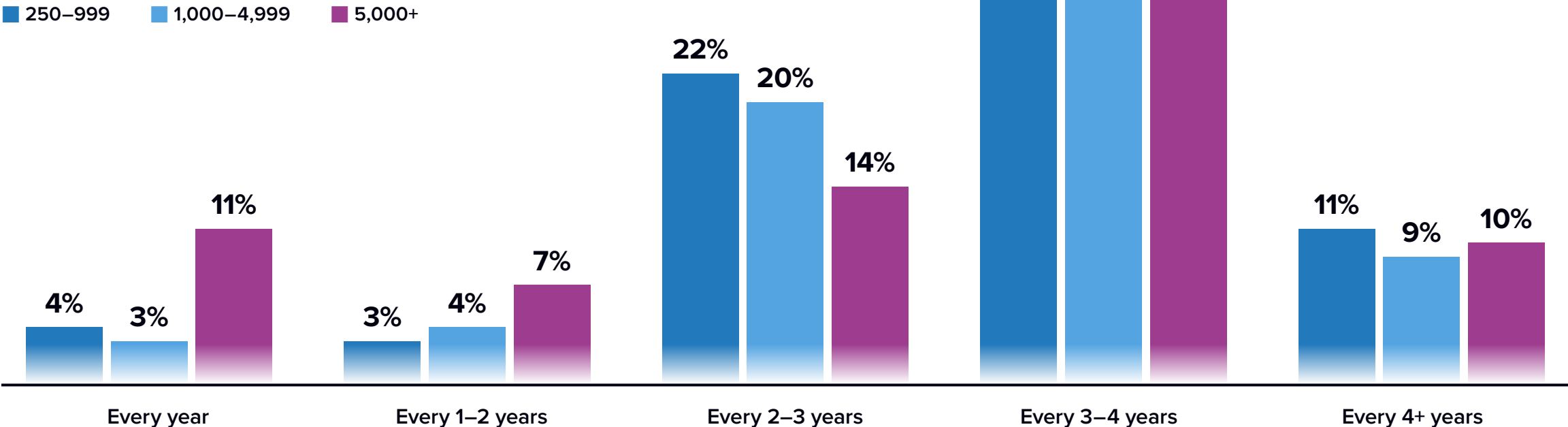
For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Most Valuable Integrated Wi-Fi Features

The most valuable integrated features include highly integrated systems, automatic problem remediation, and AIOps location services.
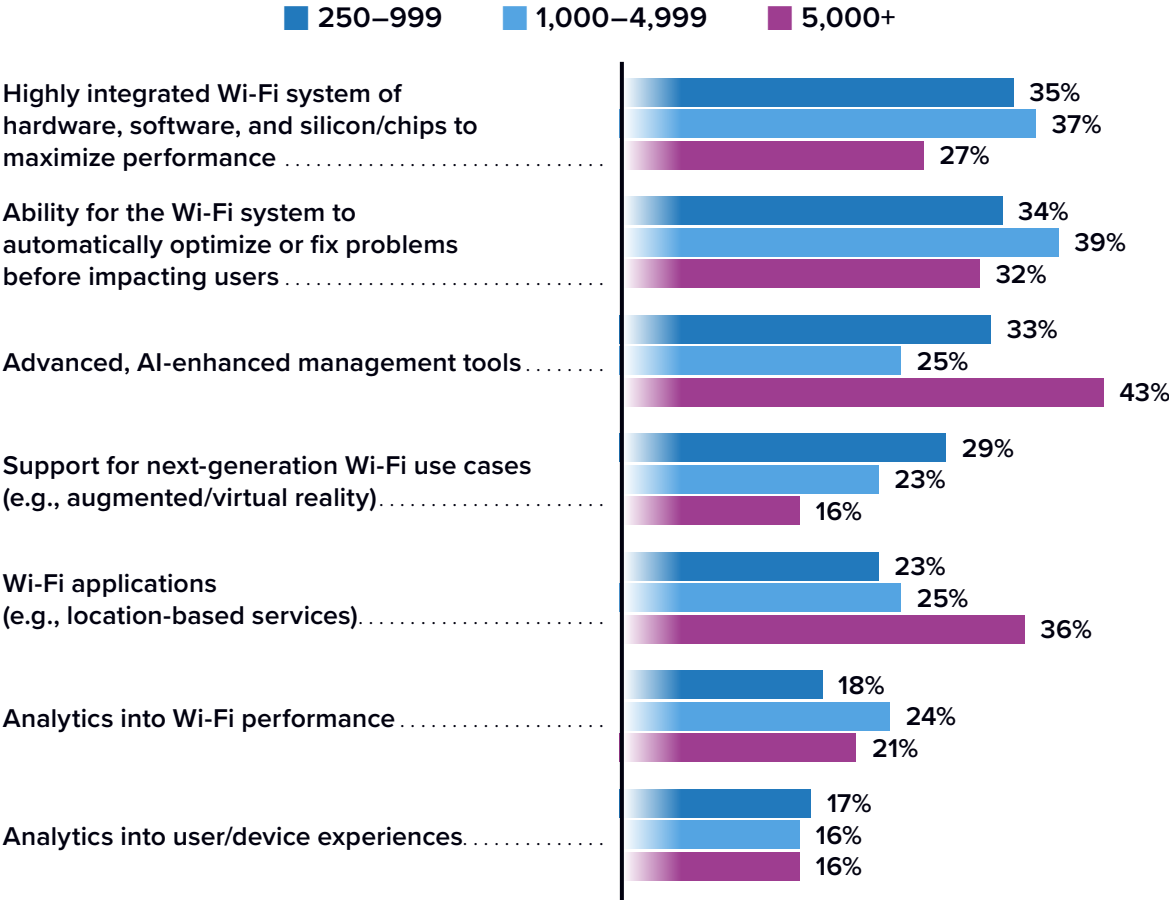
Enterprise-grade Wi-Fi systems have a variety of **advanced features and integrated functionality available natively** within Wi-Fi system management software, which is widely deployed at enterprises across the globe.

Some compelling new features of Wi-Fi in recent years have been the use of **AI-enhanced automation to improve the operational efficiency of Wi-Fi and enhance end-user experiences.** For example, AI-enhanced radio resource management (RRM) can more dynamically and automatically optimize Wi-Fi radio frequencies to enhance user and device experiences.

Other important features include having **highly integrated systems, ranging from silicon to hardware and software,** all designed to cohesively maximize Wi-Fi performance.

Which of the following integrated features of a Wi-Fi system are most valuable for your organization?

(Company size by number of employees)

Legend: 250–999 | 1,000–4,999 | 5,000+

Highly integrated Wi-Fi system of hardware, software, and silicon/chips to maximize performance: 35%, 37%, 27%

Ability for the Wi-Fi system to automatically optimize or fix problems before impacting users: 34%, 39%, 32%

Advanced, AI-enhanced management tools: 33%, 25%, 43%

Support for next-generation Wi-Fi use cases (e.g., augmented/virtual reality): 29%, 23%, 16%

Wi-Fi applications (e.g., location-based services): 23%, 25%, 36%

Analytics into Wi-Fi performance: 18%, 24%, 21%

Analytics into user/device experiences: 17%, 16%, 16%

For an accessible version of the data on this page, see Supplemental Data in the Appendix.
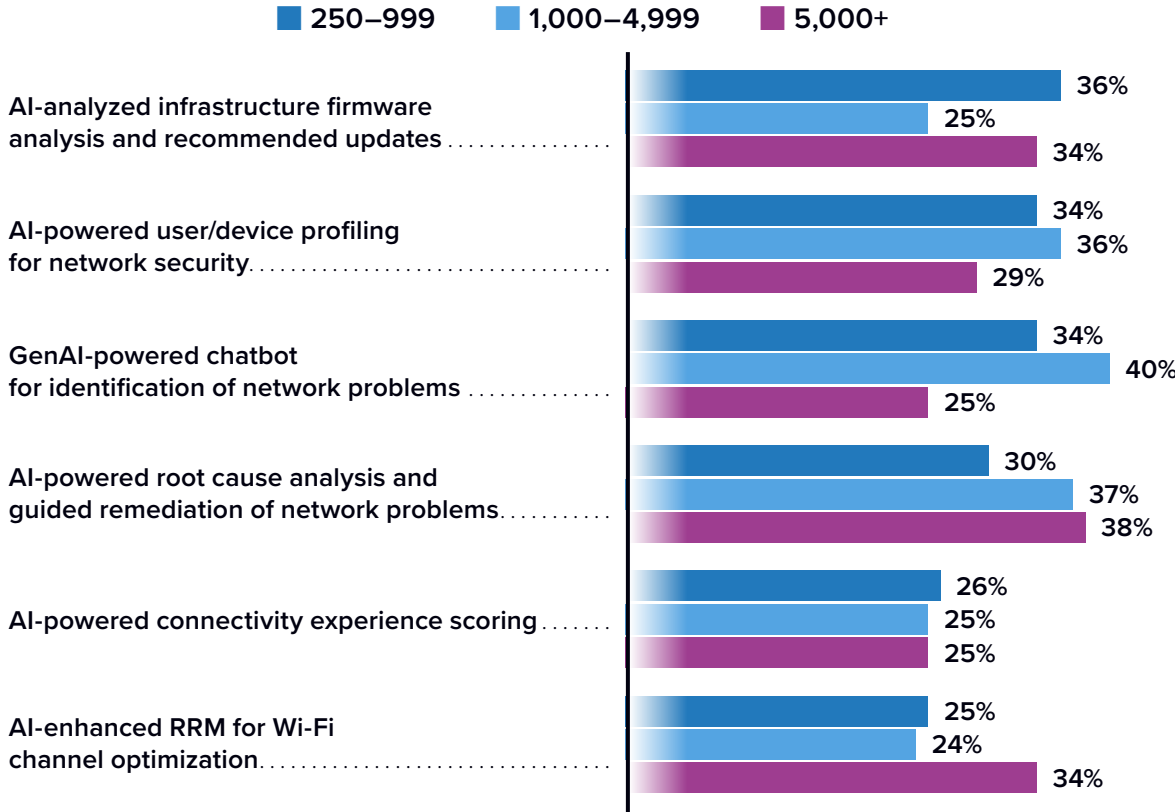
AIOps Use Cases for Wi-Fi Management

Chatbots and device profiling are top, but larger enterprises prioritize RRM and firmware management.

A key development in the Wi-Fi industry in recent years has been the **increased use of AI models** to improve Wi-Fi networks' management and operations.

There are a variety of ways that AIOps can be applied to Wi-Fi management, including by **using chatbots** so users can more effectively understand what's happening in the Wi-Fi network and **AI-powered user/device profiling. AI-enhanced troubleshooting of network problems** is another top area that survey respondents noted.

Which of the following examples of AIOps capabilities would you find the most valuable for optimizing the management of your Wi-Fi network?

(Top two responses by company size)

Legend:
- ■ 250–999
- ■ 1,000–4,999
- ■ 5,000+

AI-analyzed infrastructure firmware analysis and recommended updates
- 250–999: 36%
- 1,000–4,999: 25%
- 5,000+: 34%

AI-powered user/device profiling for network security
- 250–999: 34%
- 1,000–4,999: 36%
- 5,000+: 29%

GenAI-powered chatbot for identification of network problems
- 250–999: 34%
- 1,000–4,999: 40%
- 5,000+: 25%

AI-powered root cause analysis and guided remediation of network problems
- 250–999: 30%
- 1,000–4,999: 37%
- 5,000+: 38%

AI-powered connectivity experience scoring
- 250–999: 26%
- 1,000–4,999: 25%
- 5,000+: 25%

AI-enhanced RRM for Wi-Fi channel optimization
- 250–999: 25%
- 1,000–4,999: 24%
- 5,000+: 34%

For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Top Connected Devices Enterprises Support

The advancements in Wi-Fi technology in recent years related to improved speed, performance, and efficiency are critical to supporting an organization's connectivity needs.

Organizations support a range of connected devices in their enterprise environments. While desktop and laptop PCs remain the top devices organizations rely on, there are others, including VoIP phones, mobile devices, IoT devices, security cameras, and tablets. IDC survey data shows that **large organizations (5,000+ employees) have higher rates of supporting IoT devices, security cameras, and digital reality-based (XR) devices than smaller organizations.**

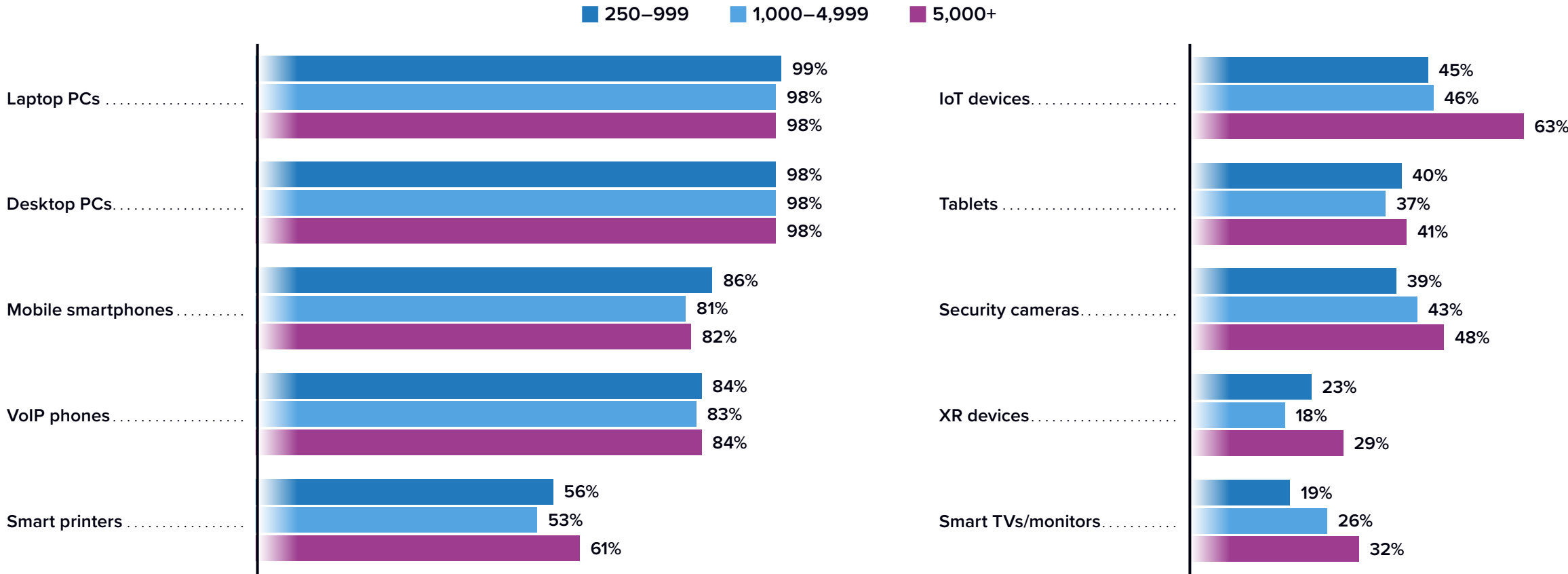It's also not just about the number and range of devices within an enterprise environment that Wi-Fi must support, but **these devices are increasingly accessing bandwidth-intensive applications**—such as video calls, XR, and streaming—which heighten the need for high-quality and reliable connectivity.

North American businesses and large enterprises show greater usage of **IoT and XR devices.**

Top Connected Devices Enterprises Support
(continued)

Which of the following devices are currently part of your connected business footprint?

(Company size by number of employees)

■ 250–999   ■ 1,000–4,999   ■ 5,000+

Laptop PCs
- 99%
- 98%
- 98%

Desktop PCs
- 98%
- 98%
- 98%

Mobile smartphones
- 86%
- 81%
- 82%

VoIP phones
- 84%
- 83%
- 84%

Smart printers
- 56%
- 53%
- 61%

IoT devices
- 45%
- 46%
- 63%

Tablets
- 40%
- 37%
- 41%

Security cameras
- 39%
- 43%
- 48%

XR devices
- 23%
- 18%
- 29%

Smart TVs/monitors
- 19%
- 26%
- 32%

For an accessible version of the data on this page, see Supplemental Data in the Appendix.

6GHz Wi-Fi Outdoors

More than 70% of organizations plan to use 6GHz Wi-Fi outdoors. On average, it will be deployed in the next 18 months, expanding the range of use cases and benefits.
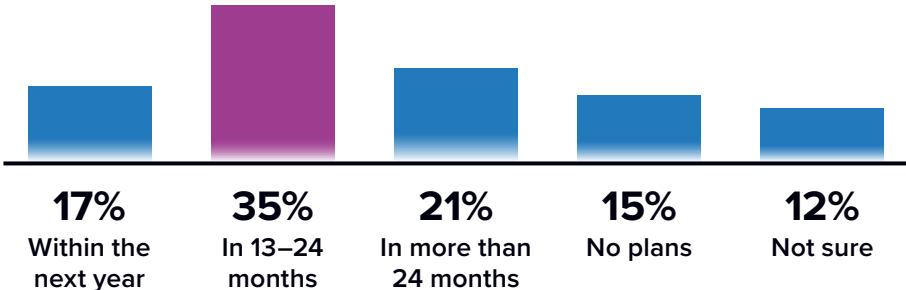
Of respondents who are currently using 6GHz Wi-Fi, on average, they plan to deploy 6GHz outdoors in 10 months. Twenty-eight percent of current 6GHz users plan to use 6GHz Wi-Fi outdoors in the next six months (versus 6% worldwide).

Extending the use of 6GHz from indoors to outdoors enables a range of benefits for organizations, including:

▶ Enabling greater capacity of outdoor connectivity by leveraging the 6GHz spectrum outdoors

▶ Leveraging the same management platforms for data and analytics indoors and outdoors

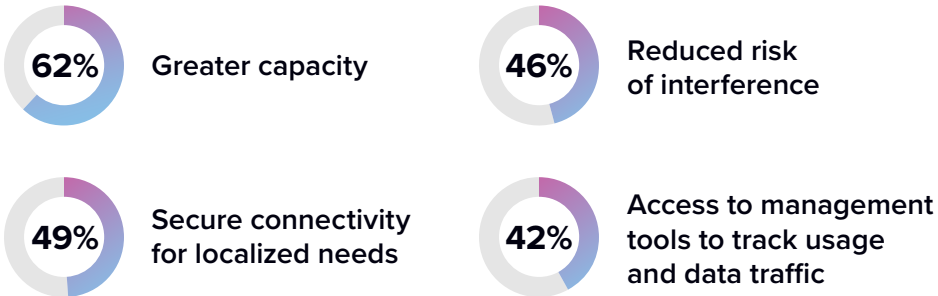▶ Creating secure connectivity for localized needs

Organizations around the globe are working with regulators to deploy 6GHz outdoors using automated frequency control (AFC) systems to operate 6GHz Wi-Fi outdoors at full power.

Note: Survey was conducted in July 2024.

When do you expect to use 6GHz Wi-Fi outdoors?

17%	35%	21%	15%	12%
Within the next year	In 13–24 months	In more than 24 months	No plans	Not sure

What are the benefits of using 6GHz Wi-Fi outdoors?

(Choose two responses)

62% Greater capacity

46% Reduced risk of interference

49% Secure connectivity for localized needs

42% Access to management tools to track usage and data traffic
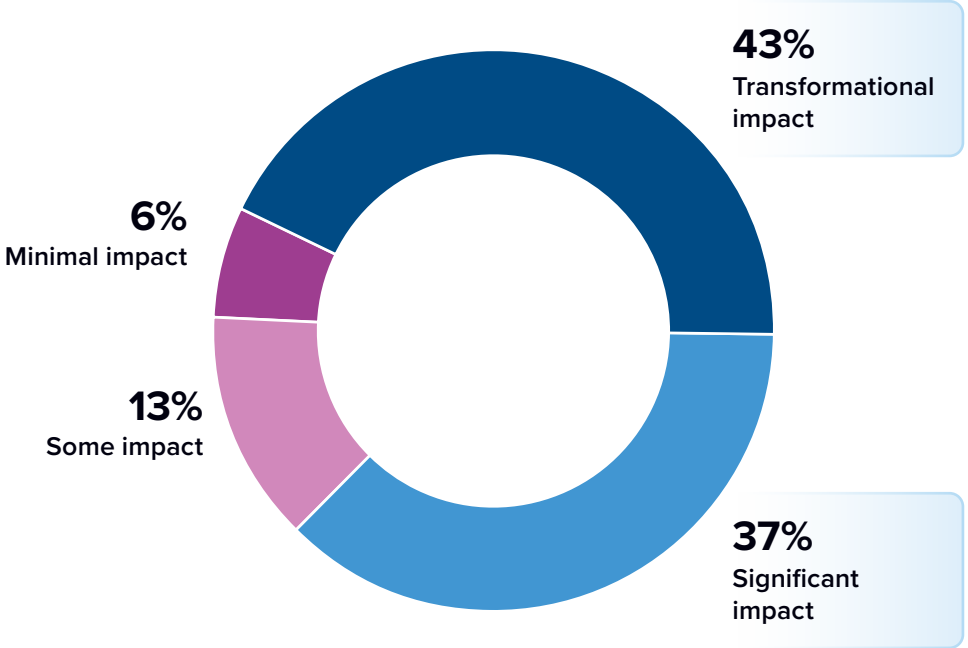
6GHz Wi-Fi's Impact on Wired LAN

Organizations are considering a more integrated and platform-based approach to investing in technology.

The platform-based approach typically includes deploying Wi-Fi with Ethernet switching and integrated management capabilities across wired and wireless LAN. From an Ethernet switching perspective, organizations should ensure that the wired LAN access, core, and distribution layers are not a bottleneck to their Wi-Fi. Hence, as organizations invest in Wi-Fi, they are increasingly considering how wireless LAN will impact their wired LAN. The ability of 6GHz Wi-Fi to process more data at faster speeds means organizations will have to ensure their Ethernet switching infrastructure can adequately support 6GHz Wi-Fi traffic.
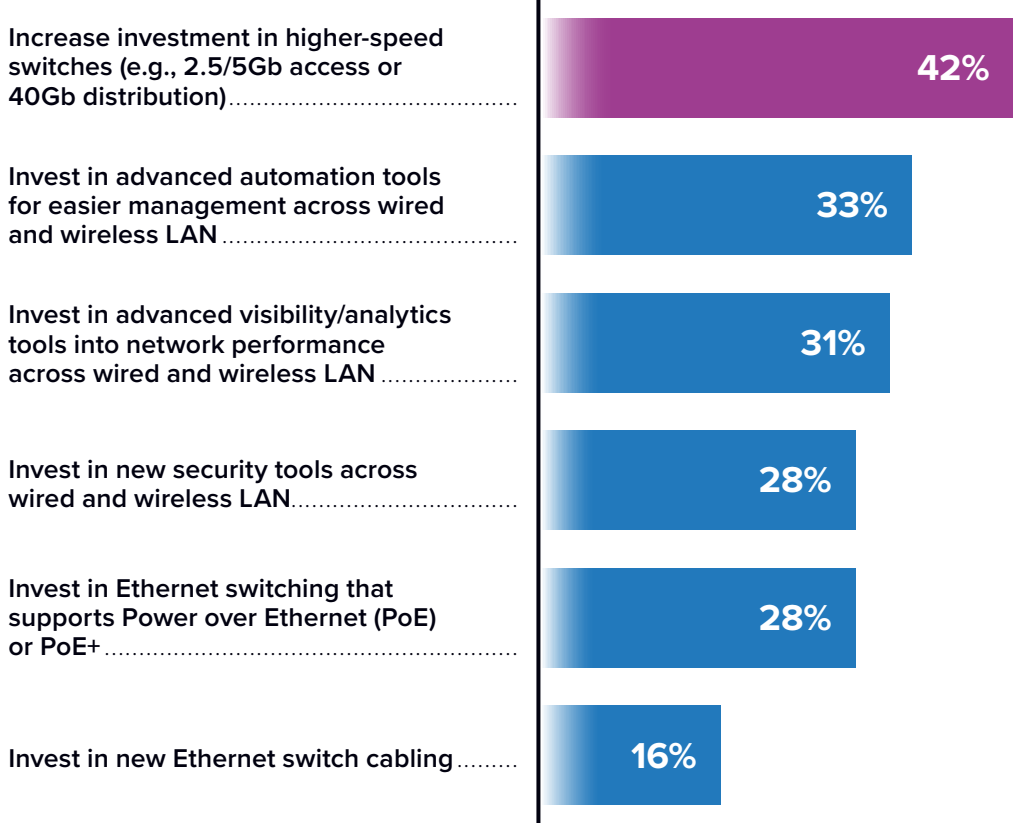
43% of respondents expect 6GHz to have a **"transformational" impact on LAN** and cite the need for **higher-speed switching and advanced automation.**

6GHz Wi-Fi's Impact on Wired LAN (continued)

What impact will 6GHz Wi-Fi have on your organization's wired LAN infrastructure, including network and cabling design?

43% Transformational impact

6% Minimal impact

13% Some impact

37% Significant impact

80% of respondents report that 6GHz Wi-Fi will have a **significant or transformational impact** on their wired LAN infrastructure.

How will 6GHz Wi-Fi impact your wired LAN infrastructure?

Increase investment in higher-speed switches (e.g., 2.5/5Gb access or 40Gb distribution)........................ **42%**

Invest in advanced automation tools for easier management across wired and wireless LAN **33%**

Invest in advanced visibility/analytics tools into network performance across wired and wireless LAN **31%**

Invest in new security tools across wired and wireless LAN.......................... **28%**

Invest in Ethernet switching that supports Power over Ethernet (PoE) or PoE+ **28%**

Invest in new Ethernet switch cabling **16%**

Essential Guidance

Don't be left behind the 6GHz Wi-Fi wave

The 6GHz spectrum is a significant advancement for the Wi-Fi industry and enterprise networks, opening up a new, clean spectrum for a range of use cases. As organizations consider their Wi-Fi investments, it's important to also consider ways to incorporate 6GHz technology via Wi-Fi 6E and Wi-Fi 7 deployments.

Consider platform-based approaches to Wi-Fi

Enterprise-class Wi-Fi has a range of valuable features, from integrated hardware, software, and silicon systems to advanced, AI-enhanced software and security management capabilities, as well as additional tools such as Wi-Fi-enabled location-based services. Consider how Wi-Fi can be a vertically integrated platform that can enable new revenue generation from next-generation business applications.
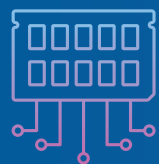
Assess for access switching upgrades

To get the full advantage of Wi-Fi 6E and Wi-Fi 7 APs, ensure the backend wired infrastructure is robust enough; in some cases, this may require an upgrade to multi-gigabit access switching and cabling.

Essential Guidance (continued)

Explore outdoor use of 6GHz Wi-Fi

6GHz Wi-Fi can now be used outdoors at full power with the appropriate AFC systems in place. With 6GHz Wi-Fi now available outdoors, consider use cases your organization may have for extending Wi-Fi across indoor and outdoor campus or branch environments.

Focus on the business use cases

No technology investment should be made in a vacuum; rather, they should be driven by business use cases. Consider your organization's broader business goals and initiatives, then consider what technology can help accelerate the achievement of those goals. Consider ways of tying Wi-Fi investments into future connectivity use cases (e.g., supporting the increased mobility of users and devices and supporting high-bandwidth traffic applications).

Appendix: Supplemental Data

The tables in this appendix provide accessible versions of the data for the complex figures in this document. Click "Return to original figure" below each table to get back to the original data figure.

SUPPLEMENTAL DATA FROM PAGE 7

Where does Wi-Fi rank as a connectivity priority today and in two years?

	North America today	North America in two years	EMEA today	EMEA in two years
Mission critical to our business	22%	27%	21%	26%
Very important	57%	52%	45%	42%
Moderately important	13%	12%	22%	21%
Slightly important	6%	7%	8%	8%
Not important	2%	2%	3%	3%

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Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 9

Which of the following are the most important features of a modern, enterprise-grade Wi-Fi system?

(Company size by number of employees)

	250–999	1,000–4,999	5,000+
Speed	34%	38%	32%
Security features (e.g., WPA-3 Enterprise)	32%	29%	29%
Wi-Fi performance/analytics data	28%	21%	20%
Standards support (e.g. supporting Wi-Fi 6E/Wi-Fi 7)	25%	21%	20%
Wi-Fi-supported applications (e.g., location-based services)	19%	13%	16%
AI automation features (e.g., AI-enhanced radio resource management [RRM])	19%	26%	36%
Software-based management platform (e.g., cloud and on-premises management)	11%	19%	20%

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Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 11

What percentage of the Wi-Fi environment uses each of the following Wi-Fi standards today?

(Company size by number of employees)

	250–999	1,000–4,999	5,000+
Wi-Fi 4	2%	2%	4%
Wi-Fi 5	61%	58%	49%
Wi-Fi 6	33%	30%	36%
Wi-Fi 6E	2%	8%	9%
Wi-Fi 7	2%	3%	3%

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Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 12

Are you using or planning to use 6GHz Wi-Fi within your organization?

	Currently using	Planning to use in the next 6 months	Planning to use in the next 6–12 months	Planning to use in more than 12 months
Worldwide	15%	20%	22%	43%
United States	18%	26%	23%	32%
Canada	31%	2%	33%	35%
United Kingdom	14%	30%	17%	39%
Germany	6%	18%	21%	56%
France	8%	8%	18%	67%

Return to original figure

Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 13

What are the top two realized or expected benefits of 6GHz Wi-Fi?

(Company size by number of employees)

	250–999	1,000–4,999	5,000+
Faster speeds	39%	36%	34%
Reliability	37%	36%	27%
Improved security	34%	32%	36%
Operational agility/productivity	28%	22%	29%
Increased bandwidth	28%	22%	29%
Lower latencies	17%	16%	16%
Enhanced user/application experiences	17%	26%	30%

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Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 16

What are your organization's top use cases for Wi-Fi 6E and Wi-Fi 7 today, and what do you expect them to be in two years?

	Today	In two years
Video/collaboration	27%	29%
IP voice	24%	26%
Transition from wired to wireless connectivity	21%	20%
New device, service, or application creation	20%	25%
Multimedia/streaming	18%	17%
Operational automation	17%	15%
IoT/sensors	13%	12%
Enhanced security (HD cameras, alarm devices)	13%	11%
Point of sales/payment	9%	10%
Augmented, virtual, or mixed reality	7%	8%

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Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 18

Which of the following are the top two reasons your organization is investing in 6GHz Wi-Fi?

(Company size by number of employees)

	250–999	1,000–4,999	5,000+
Increase network speeds and reliability	38%	35%	38%
Improve security	32%	32%	32%
Improve coverage	23%	24%	18%
Reliably support more devices on the network	22%	21%	21%
Reduce latency	21%	20%	16%
Ensure alignment of network capacity with future business needs	17%	21%	21%
Part of regular investment cycle of new Wi-Fi standards	16%	20%	16%
Enable new business applications and services	19%	13%	25%
Access new spectrum capacity	14%	14%	13%

Return to original figure

Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 20

Which of the following is the greatest area of investment in Wi-Fi/WLAN?

	United States	United Kingdom	Germany	France
Wi-Fi-based applications such as location-based services (e.g., wayfinding, asset tracking, etc.)	16%	24%	13%	24%
Wi-Fi-related support services (e.g., deployment, management, optimization)	23%	40%	22%	16%
Wi-Fi-related security tools	15%	18%	22%	24%
New or expanded software, including AI automation	26%	13%	20%	18%
New access points or controllers (e.g., Wi-Fi 6E/Wi-Fi 7)	19%	4%	24%	18%

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Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 21

What is your organization's typical refresh cycle for mission-critical network and connectivity-related technologies and infrastructure?

(Company size by number of employees)

	250–999	1,000–4,999	5,000+
Every year	4%	3%	11%
Every 1–2 years	3%	4%	7%
Every 2–3 years	22%	20%	14%
Every 3–4 years	39%	45%	39%
Every 4+ years	10%	9%	10%

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Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 22

Which of the following integrated features of a Wi-Fi system are most valuable for your organization?

(Company size by number of employees)

	250–999	1,000–4,999	5,000+
Highly integrated Wi-Fi system of hardware, software, and silicon/chips to maximize performance	35%	37%	27%
Ability for the Wi-Fi system to automatically optimize or fix problems before impacting users	34%	39%	32%
Advanced, AI-enhanced management tools	33%	25%	43%
Support for next-generation Wi-Fi use cases (e.g., augmented/virtual reality)	29%	23%	16%
Wi-Fi applications (e.g., location-based services)	23%	25%	36%
Analytics into Wi-Fi performance	18%	24%	21%
Analytics into user/device experiences	17%	16%	16%

Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 23

Which of the following examples of AIOps capabilities would you find the most valuable for optimizing the management of your Wi-Fi network?

(Top two responses by company size)

	250–999	1,000–4,999	5,000+
AI-analyzed infrastructure firmware analysis and recommended updates	36%	25%	34%
AI-powered user/device profiling for network security	34%	36%	29%
GenAI-powered chatbot for identification of network problems	34%	40%	25%
AI-powered root cause analysis (RCA) and guided remediation of network problems	30%	37%	38%
AI-powered connectivity experience scoring	26%	25%	25%
AI-enhanced RRM for Wi-Fi channel optimization	25%	24%	34%

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Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 25

Which of the following devices are currently part of your connected business footprint?

(Company size by number of employees)

	250–999	1,000–4,999	5,000+
Laptop PCs	99%	98%	98%
Desktop PCs	98%	98%	98%
Mobile smartphones	86%	81%	82%
VoIP phones	84%	83%	84%
Smart printers	56%	53%	61%
IoT devices	45%	46%	63%
Tablets	40%	37%	41%
Security cameras	39%	43%	48%
XR devices	23%	18%	29%
Smart TVs/monitors	19%	26%	32%

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About the IDC Analysts

Paul Hughes
Research Director, Future of Connectedness, IDC

Paul Hughes is a research director leading IDC's Future of Connectedness Agenda program. He is also a key member of IDC's larger Worldwide Telecom Research Team. In this role, Paul is responsible for research related to the future innovation and transformation of how data and connectivity impact people, things, applications, and processes used by enterprises and end users. Within the Future of Connectedness practice, he also publishes thought leadership on how the Connectedness ecosystem – including communications service providers, cloud providers network equipment vendors, IT hardware vendors, software vendors and systems integrators – must develop solutions to meet future technology needs of businesses and consumers.

More about Paul Hughes

Brandon Butler
Senior Research Manager, Enterprise Networks, IDC

Brandon Butler is a senior research manager covering enterprise networks within IDC's network infrastructure group. His research focuses on market and technology trends, forecasts, and competitive analysis in enterprise campus and branch networks. His coverage includes technologies used in local and wide area networking such as Ethernet switching, routing/SD-WAN, wireless LAN, and enterprise network management platforms. While contributing to ongoing forecast and market share updates, he also assists in end-user surveys, interviews, and advisory services and contributes to custom projects for IDC's Consulting and Go-To-Market Services practices.

More about Brandon Butler

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