

# Quick Answer: Should I Deploy Wi-Fi 6, Wi-Fi 6E or Wi-Fi 7?

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Initiatives: [I&O Platforms](#); [Compose Platforms that Adapt to Business Needs](#)

Many networking vendors are marketing Wi-Fi 7 as the new way forward for enterprise wireless LANs. This research enables I&O leaders to make informed decisions for supporting their mid- and long-term Wi-Fi requirements.

## Quick Answer

### Should I deploy Wi-Fi 6, Wi-Fi 6E or Wi-Fi 7 for my enterprise wireless LAN?

- Wi-Fi 6 should be used as the default decision for enterprise wireless; some scenarios may require an exception, but should be reviewed independently.
- Deploy Wi-Fi 6E for specific use cases. When selecting Wi-Fi 6E, enterprises must assure endpoints will support 6 GHz, and it is recommended to align infrastructure upgrades and endpoint refresh on a matching time horizon. Enterprises must also verify that their country has adopted and approved regulatory support for 6 GHz bands.
- Don't wait for Wi-Fi 7. Wi-Fi 7 (802.11be), with theoretical speeds of up to 40 Gbps, is expected to become an approved standard by the end of 2024. However, endpoint devices supporting Wi-Fi 7 will not be common before 2026, restricting real-world functionality.

## More Detail

Enterprise WLAN refreshes are justified by the need to future-proof the performance and latency needs of current and new applications, or through a specific business or technical use case. However, the options for Wi-Fi technology can be confusing, causing I&O leaders to contemplate whether they should opt for 6, 6E or wait for 7.

## Select Wi-Fi 6 by Default

The main advantage of Wi-Fi 6 (802.11ax) over previous generations, such as Wi-Fi 5, is its improved performance characteristics, such as lower latency and higher throughput, and its ability to support more devices per access point. Wi-Fi 6 is also the first standard where the network determines the connectivity to the access point, which eliminates weak signals or hidden clients that can plague older installations. Enterprises with a business requirement to upgrade their wireless LAN should choose Wi-Fi 6. However, we recommend opportunistic replacement at refresh versus a wholesale swap of existing infrastructure, if there is useful life remaining on previous generation WLAN deployment.

## Deploy Wi-Fi 6E for Specific Use Cases

Gartner client inquiries reveal that Wi-Fi 6E enterprise upgrade projects are being commissioned to acquire 6-GHz-capable access points, with future-proofing as the primary justification, even though organizations may not have equivalent 6 GHz endpoint devices or upstream wired connectivity to support the larger wireless pipe.<sup>1</sup> It is rare for an infrastructure and operations (I&O) leader to outline a specific business or technical use case for deploying Wi-Fi 6E that would justify the price premium, which for some vendors can exceed a 40% to 50% increase, compared to like-for-like Wi-Fi 6 models from that same vendor.<sup>2</sup> Cases in which a technology-future-proof justification is outlined are usually in the healthcare or manufacturing verticals. These cases can also occur in other verticals where there is a need to address latency requirements, and where the network infrastructure installation remains in place for five to seven years or longer. **Clients are advised to not pay premium prices when selecting Wi-Fi 6E.**

The potential of Wi-Fi 6E to revolutionize Wi-Fi will yield substantial impact over time; however, realizing the promise of Wi-Fi 6E and its increased performance in the uncrowded 6 GHz bands today requires the following:

- Adoption and regulatory approval in your country
- Access points with radio hardware supporting the bands
- Client devices with radio hardware that support the bands (such as the latest Apple iPhone 15)
- A wireless survey and correct physical placement of access points to support the signal propagation
- Automated frequency coordination (AFC) services operating within your regulatory domain (country), in order to use standard power and/or outdoor Wi-Fi 6E.

## Don't Wait for Wi-Fi 7

Infrastructure vendors shipping Wi-Fi 7 in late 2023, and those shipping by mid-2024, will create buyer uncertainty and challenge financial justification before standards and certifications complete. Gartner anticipates flagship IT endpoint products that feature Wi-Fi 7 will start to ship in late 2024, accounting for less than 20% of the new products entering the market. <sup>3</sup> Broad support for Wi-Fi 7 in endpoint devices will not become common before 2026. The need to upgrade the wired LAN network increases as bandwidth scales with delivered support for prominent Wi-Fi 7 features, such as multilink operation (MLO). It must also be noted that increased power requirements for Wi-Fi 7 access points, beyond 802.3bt Power over Ethernet (PoE) (>30 watts), will also drive investment requirements in wired LAN upgrades. Therefore, enterprises with wireless refresh projects should proceed with available Wi-Fi 6 for most projects and Wi-Fi 6E, leveraging 6 GHz operation where available. **Do not rush to deploy early and prestandard Wi-Fi 7 products.**

## Evidence

<sup>1</sup> Over 1,100 Gartner client inquiries on the topics of WLAN refresh and upgrading to Wi-Fi 6E or Wi-Fi 7 in the past 24 months.

<sup>2</sup> Gartner regularly reviews network vendors' existing offers and discusses infrastructure upgrade strategies directly with vendors.

<sup>3</sup> See [Semiconductors and Electronics Forecast Database, Worldwide, 3Q23 Update](#).

## Document Revision History

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