

# Verizon using AI to built out its midband 5G networks at scale

Article



**The news:** Verizon is enlisting AI models to help place thousands of 5G wireless transmitters for optimal performance, [per](#) The Wall Street Journal. This coincides with the company's [rollout](#) of its midband spectrum that can ostensibly expand the reach of Verizon's existing ultra wideband networks in dense city centers and beyond.

**More on this:** Verizon, T-Mobile, and AT&T are in a long-standing [race to 5G](#). Industry-wide adoption has been met with various [delays](#) and the interminable jockeying for more 5G spectrum. As it stands, **5G connectivity is not yet [widely available](#)** even as 5G-enabled smartphones have been on the market for years. AI can help speed up 5G expansion or at least better optimize existing installations.

**How it works:** Verizon, the largest US carrier, began using AI models in 2018 to determine the best spots to install transmitters for its ultra-wideband spectrum and is now employing AI again to optimize the range of its midband spectrum. Verizon [doubled](#) its midband spectrum for 5G in March, and expects to [cover 100 million subscribers](#) with midband spectrum by March 2022.

- Verizon's AI system employs computer vision technology in relation to **small-cell 5G transmitters**—backpack-sized antennas installed on buildings and utility poles. AI is used to point out the best location for these antennas by weighing various factors, resulting in optimal 5G coverage.
- “AI can **analyze spatial and geographic elements like bridges, trees, and building heights** around specific intersections in various ZIP codes,” [said Shankar Arumugavelu](#), senior vice president and global CIO of Verizon. “Without AI, we would not be able to do this. Period.”

**Why this could succeed:** Other carriers like T-Mobile are also [using AI](#) in their 5G deployment plans. In T-Mobile's case, **AI models helped engineers prioritize locations for upgrading 4G gear to 5G.**

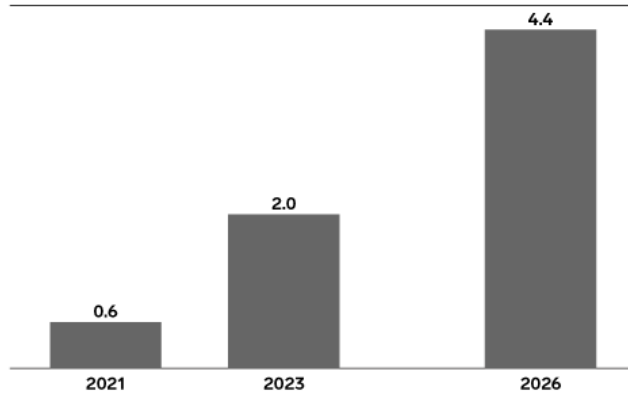
**AI's ability to optimize the location of existing and new transmitters might help carriers provide the 5G that was promised.** Namely, faster and more consistent 5G service even in higher-density city locations which currently suffer from [poor 5G connectivity](#).

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## 5G Mobile Connections Worldwide, 2021, 2023, & 2026

billions

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Source: Omdia and 5G Americas, June 24, 2021

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