**A new, fifth generation of wireless technology (5G) is coming to market, with wide-ranging impact predicted on global supply chain management.**

Limited 5G network deployments have begun in some markets in 2019, with widespread rollout expected to take place through the 2020s. The 5G wireless technology promises to accelerate data speeds, improve quality, and reduce latency in the world’s mobile networks—all of which means higher performance than today’s broadband wired networks.1 “5G will be a game changer because it’s 100 times faster and will support 100 times more devices than current 4G networks,” according to the Cellular Telecommunications Industry Association.2

The technology is expected to fuel the growth of innovations such as the Internet of Things (IoT), robotics, and drones in the supply chain. More generally, it promises to trigger a wave of new applications and services that cuts across all industries—examples include payments and retail—as it wirelessly connects countless devices to clouds of data via more intelligent and dynamic networks.

**5G Technology Impact on Supply Chain Management**

[IoT technologies can enhance supply chain management](https://www.americanexpress.com/us/foreign-exchange/articles/impact-of-IoT-on-international-supply-chain-management/) using identity chips, sensors, communication devices, cloud computing networks, and data analytics engines all working together to fuel automation, continuous feedback, and better decision-making. With 5G, billions more IoT devices can be connected to the global network, according to Ericsson, a telecommunications equipment manufacturer.3

With 5G, IoT devices will proliferate since they require less power, cost less, and last longer, according to Patrick Waldemar of the Telenor Research think tank. In the supply chain, “when everything is labeled, tracked, and recorded automatically, gone will be the days of losing cargo, misplacing containers, and losses due to manual inefficiency and labor,” he said. His list of potential 5G benefits also includes automatic data sharing among all supply chain parties, streamlined operations, accelerated production, cost-cutting, and “peace of mind.”4

In warehouses and distribution centers, 5G will allow “faster updates and access to more computational power for myriad industrial and warehouse-centric use cases,” according to Honeywell, a systems manufacturer. Among Honeywell’s current 5G initiatives is one working to reduce latency and enhance capabilities for warehouse workers equipped with voice headsets to interact with central servers using speech recognition and text-to-speech.5 On the factory floor, 5G networks can help managers better monitor quality, increase speed, respond to supply fluctuations, and simplify workflows, according to Verizon.6 Cloud-based, virtually controlled industrial robots are being tested by Ericsson.7

**5G Impact on Trade Finance**

In addition, 5G IoT is seen addressing some [age-old problems of trade finance](https://www.americanexpress.com/us/foreign-exchange/articles/trade-finance-survey/), particularly in conjunction with the blockchain distributed ledger technology, according to a report from Holland & Knight LLP, an international law firm. “In isolation, either technology implemented by itself is capable of incrementally improving the industry; but, when taken together, they may significantly improve and alter existing processes,” the report said.8

In any trade, the parties involved must be able to determine with relative certainty whether certain conditions have been satisfied. A letter of credit, for example, is often honored only when accompanied by papers including the bill of lading. “These manual processes and controls can be a cumbersome and fragmented process for lenders, sellers, and buyers,” according to Holland & Knight. With 5G IoT and blockchain, a digital bill of lading could automatically transfer to the buyer when a ship reaches port, with the seller automatically receiving the purchase price.9

**5G Impact in Other Industries—Payments and Retail**

Adjacent business sectors, such as payments, could also get a boost from 5G. “For mobile banking to become ubiquitous, the development of 5G technology is paramount,” according to G2 Crowd, business solutions review site. “5G tech reduces latency and transaction times, which is key to ensuring the network can handle the amount of transactions at scale.”10 In addition, “with the 5G network firmly established, micro-payments could be possible—this the notion of paying exactly according to what is used,” according to a report in the 5G.co.uk newsletter.11

In the retail industry, “initially, it’s expected to greatly improve all the things retailers do now with 4G to make money, save money, be more competitive, and offer shoppers superior in-store and online experiences,” according to a report in *Retail Leader*. “And then, after a period of maturity, it will open the doors to a whole new age of capabilities ... savvy retailers will utilize high-resolution video, augmented reality, and even virtual reality to differentiate themselves from the competition.”12

**Related Links**

[International Payments for Business](https://www.americanexpress.com/us/foreign-exchange/international-payments/)

[Business Payment Methods and Solutions](https://www.americanexpress.com/us/foreign-exchange/international-payments/products/)

[Frequently Asked Questions](https://www.americanexpress.com/us/foreign-exchange/international-payments/faq/)

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are also expected to emerge, and as with any technology, many will be hard to imagine until 5G is actually in the field. The supply chain is seen as a particularly strong candidate for 5G innovation, including IoT devices for better monitoring, control, and even financing.



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