

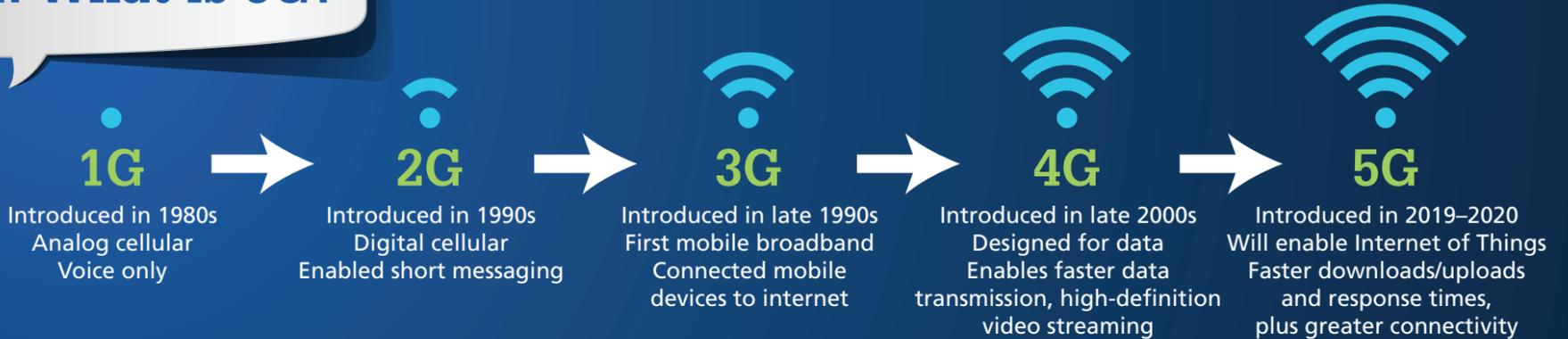
5 questions about 5G

There's been a lot of chatter about the new 5G cellular wireless network and standards, but it can be hard to cut through the noise and figure out what it means for logistics and supply chain operations. Here are answers to five basic questions about 5G.



1. What is 5G?

5G is the **fifth generation** of wireless cellular technology. Each generation of wireless technology has brought leaps in **data-transmission speeds** and innovations in encoding methods. Here's a quick recap:



2. How will 5G be better than 4G?

5G will provide **"astounding improvements"** over existing 4G networks, according to a report by CSCMP's *State of Logistics Report*.¹ Here are some examples:

- ▶ You'll be able to send **billions of bits of data per second** versus the hundreds of millions of bits you can send today.
- ▶ You'll be able to **download 20 videos** in the time it takes to download one today.
- ▶ Your **sensor batteries will last 10 years** instead of one.
- ▶ You'll be able to **connect up to 1 million devices** per square kilometer with 100 times more capacity than today.

3. Why does this matter?

Some of the most compelling new technologies out there require a **hyper-fast network** with little to no latency (or lag in response) for proper operation. Also, as the number of "smart" devices grows, the wireless network will need to provide greater **"device density,"** or the ability to connect more smart devices in one place.

As a result, 75 percent of industrial companies see **5G as a key enabler** of their digital transformation, according to a report by CapGemini.²

4. What are some use cases for supply chain?

5G will help enable:

- 📍 **Assisted driving** and augmented driver dashboards
- 📍 **Virtual reality** for warehouse planning
- 📍 A **sensor network** enabling predictive maintenance and alerts for crucial equipment
- 📍 Unassisted supply chain planning and management using **artificial intelligence**
- 📍 High-speed **drone delivery** for the last mile
- 📍 **High-security encryption** across the supply chain

5. When will this happen?

Many cellular networks are just beginning to roll out 5G. According to the CapGemini report, two-thirds of industrial companies want to implement 5G within two years of its availability, but telecommunications companies will need at least three years to roll out all 5G features.²



¹ A.T. Kearney, "Cresting the Hill," CSCMP's Annual State of Logistics Report, 2019: <https://cscmp.org/store/detail.aspx?id=SOL-19>

² CapGemini, "5G in Industrial Operations," 2019: <https://www.capgemini.com/research/5g-in-industrial-operations/>