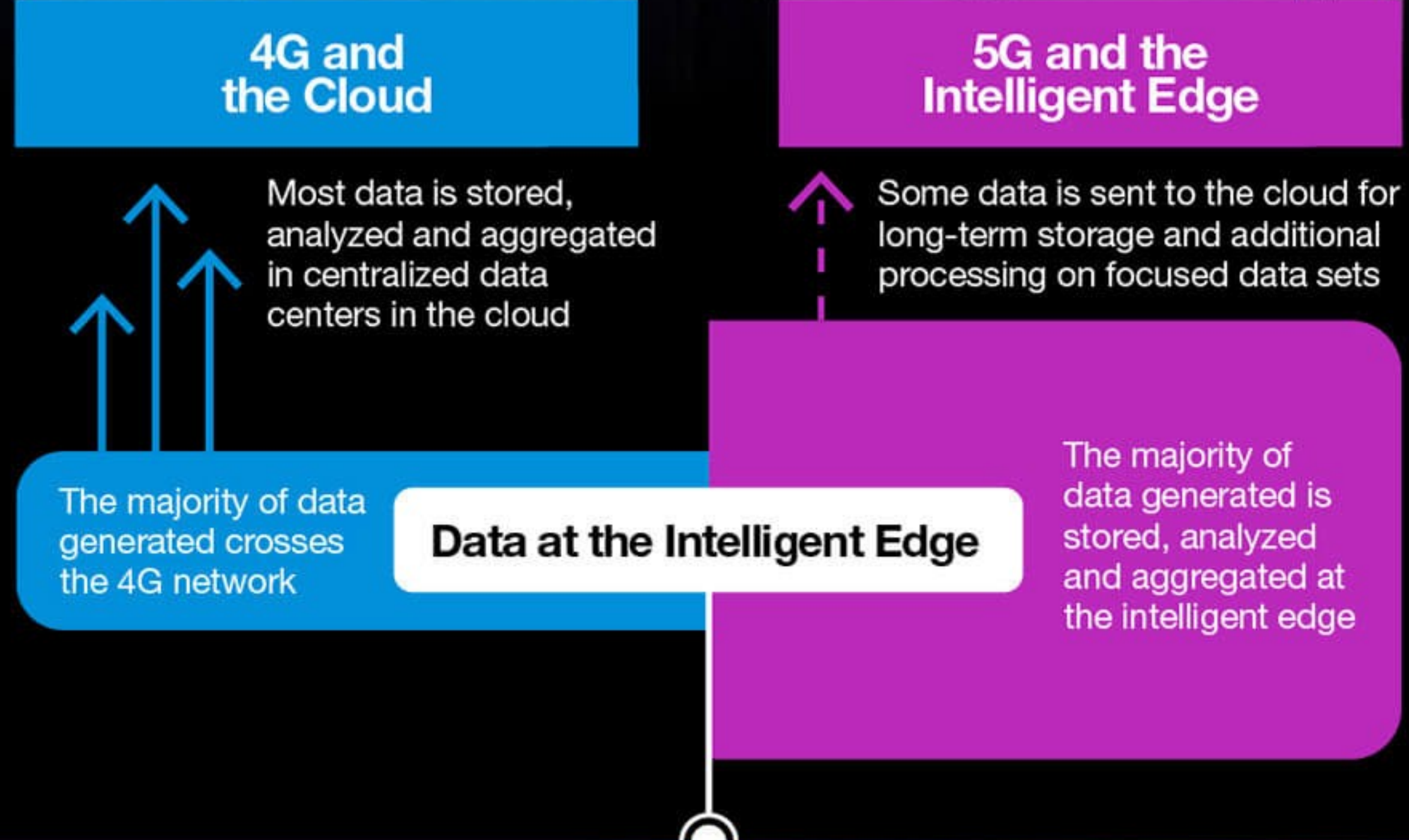




Solve 5G Data Challenges With More Intelligence at the Edge

The effects of 5G will be felt far beyond blazing fast data for mobile phones — speeds that enable HD movie downloads in seconds.¹ As 5G exponentially increases the amount of data we use, generate and store, compute must continue expanding beyond the cloud — to the physical network and devices at the network edge.

5G Expands Where Compute Happens

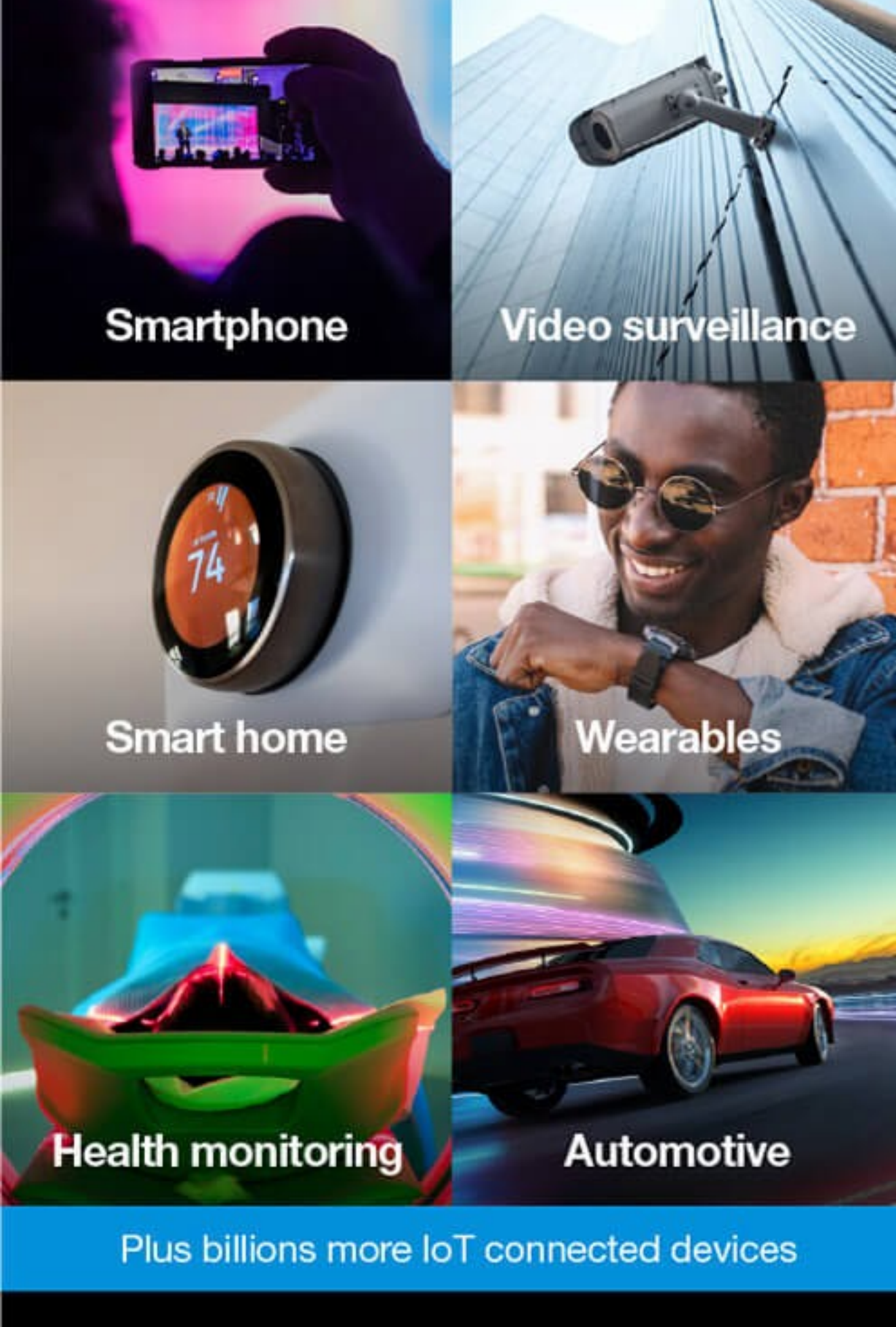


What Is the Intelligent Edge?

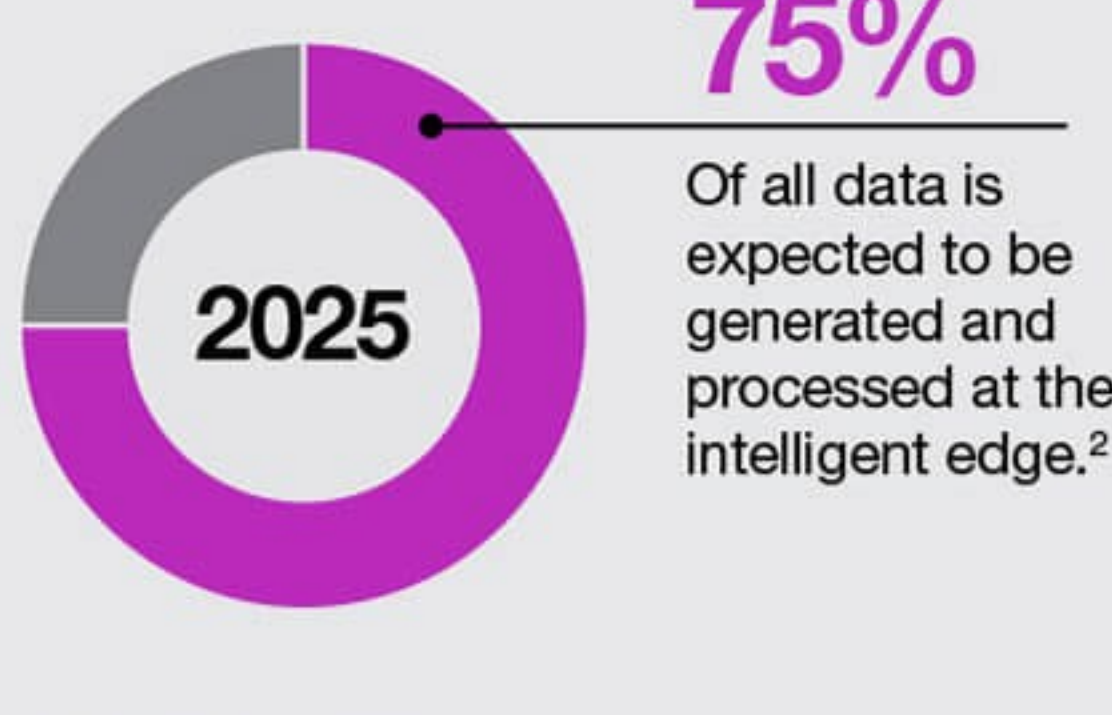
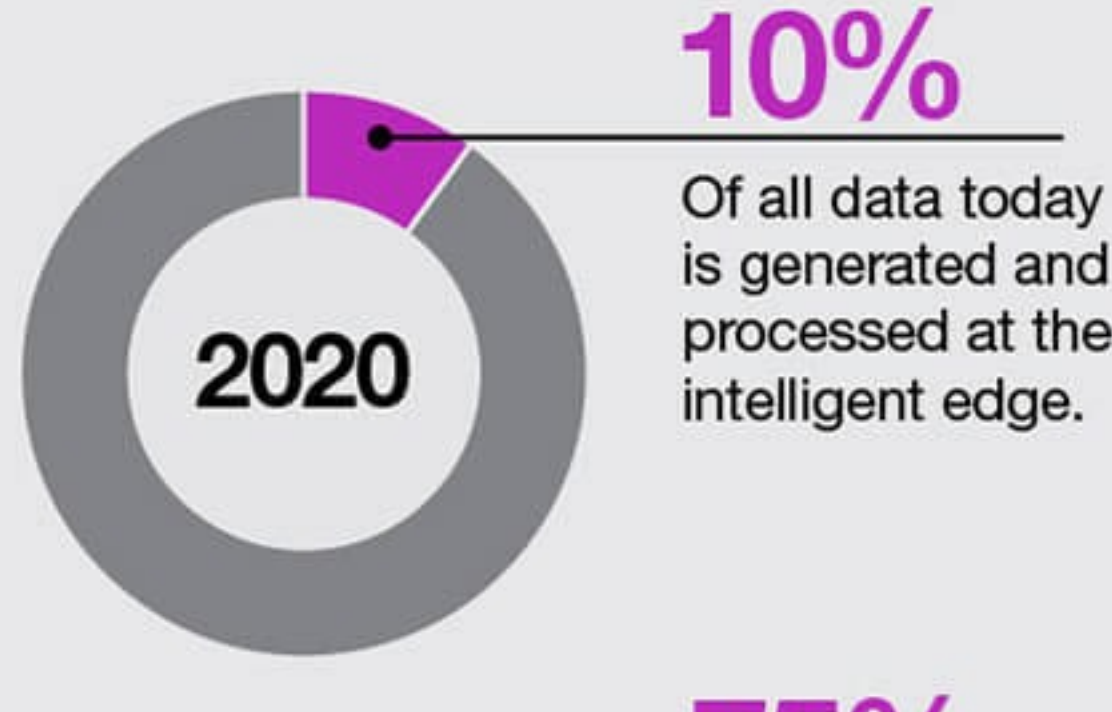
This is the growing set of connected systems and devices at the physical network edge where data is analyzed and aggregated close to where it is generated.

Edge Devices

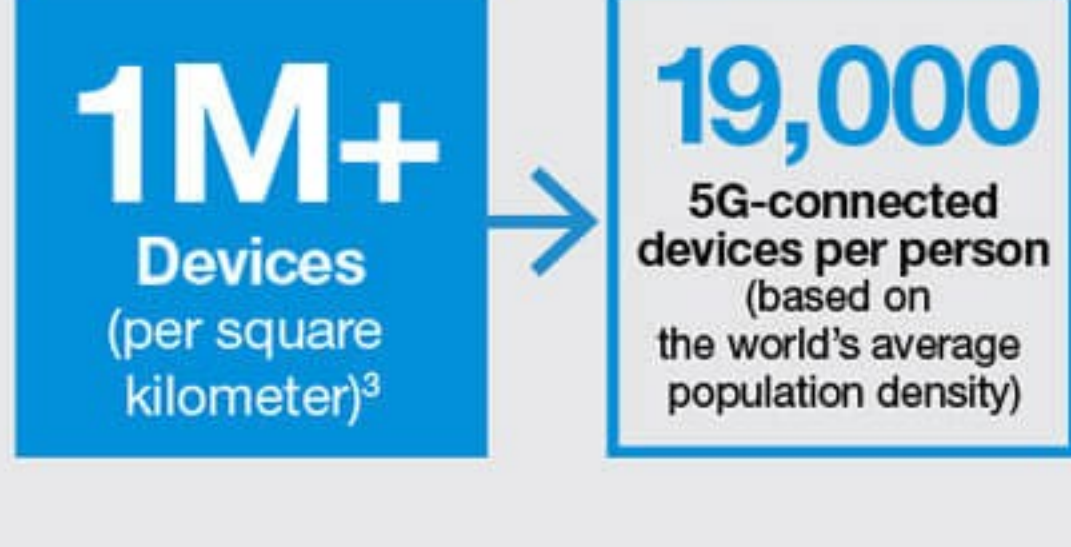
Expanding intelligence means giving 5G-connected edge devices and the internet of things (IoT) the computing horsepower that was once exclusive to servers, PCs and smartphones.



Facts About Data at the Edge

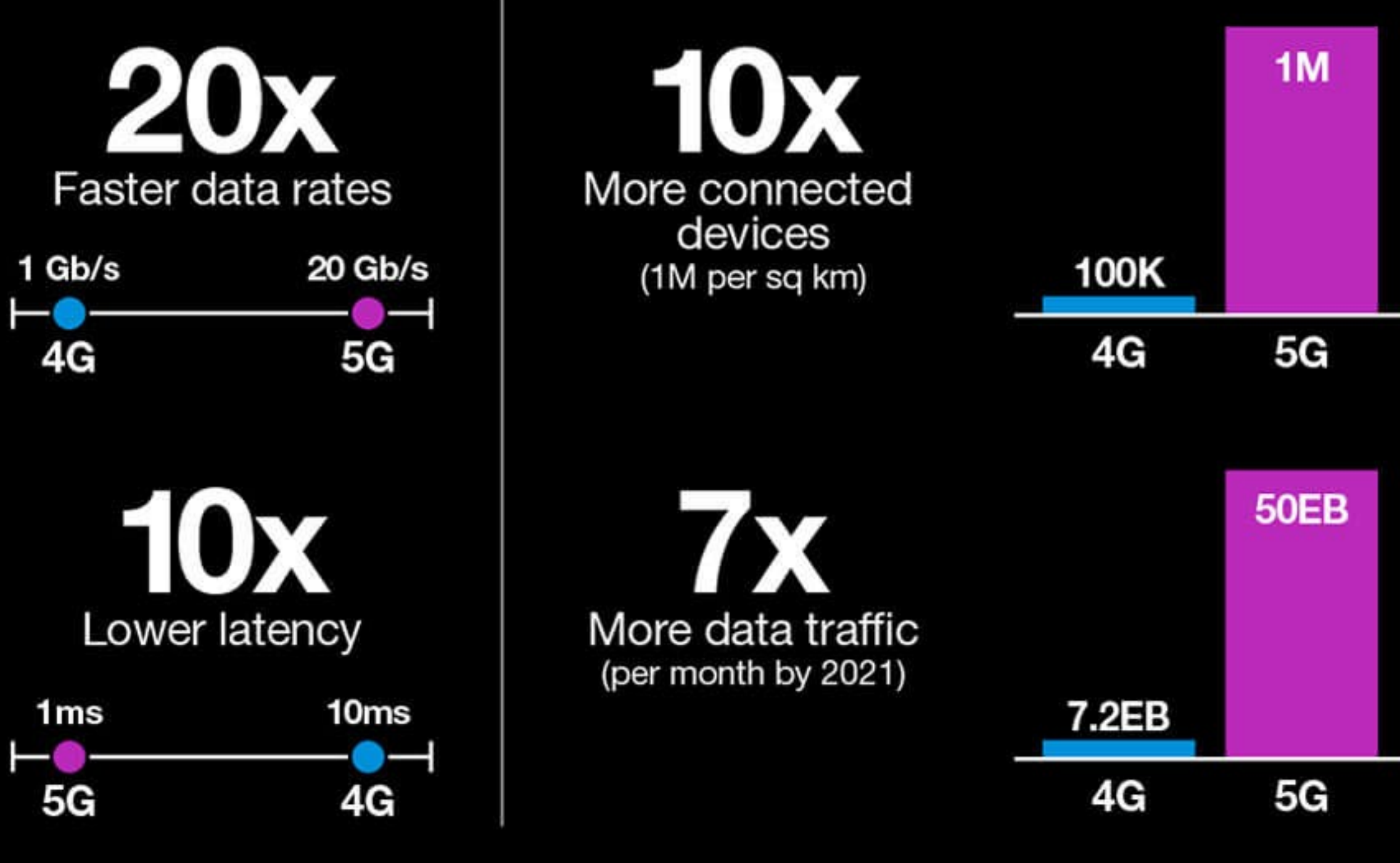


A 5G cell is expected to support



5G Generates More Data Faster

The massive amounts of data from 5G-enabled devices make edge intelligence critical to avoid overwhelming data centers with mountains of data.⁴



More Memory and Storage Are Needed to Overcome 5G Data Challenges at the Edge

Data challenges have extended beyond the cloud. They can be solved with advanced memory and storage at the network edge.

	Challenge	Solution
Data and Device Volume	Unprecedented amounts of data will be generated from more connected 5G devices.	Scalable, high-bandwidth storage and memory are needed to keep growing quantities of data moving fast.
Responsiveness	Processing data in the cloud delays the real-time response (low latency) required for 5G-connected edge devices.	High-bandwidth, low-latency memory and storage in edge devices enable near-real-time analysis and processing.
Data Security	That data must be protected where it was generated.	Security embedded directly in flash memory hardware helps protect data where it is created and consumed.

Micron Memory and Storage Are the Heart of the Intelligent Edge

The key to creating more intelligence in 5G-connected edge devices lies in enabling data to be stored, moved, processed and secured efficiently. Micron's expansive portfolio of memory and storage products helps solve 5G's data challenges.

- Low-power DRAM**
High-performance memory quickly processes data in battery-powered devices so they can return to an energy-efficient sleep mode.
- NOR flash memory**
Low-latency, high-endurance memory delivers reliable code and data storage for applications requiring fast boots, low-read access and low-density data storage.
- Automotive-grade memory**
Multichip packages and low-power DRAM are suitable for advanced driver-assistance systems (ADAS) and levels 4 and 5 autonomous vehicles.
- MicroSD cards**
Consumer- and industrial-grade storage cards deliver blazing fast file transfers with high endurance and video recording redundancy.
- Micron Authentia™ technology**
Chip-level security guards 5G-enabled devices against unauthorized access and malware.
- Mainstream DRAM**
Affordable memory provides high-speed data retrieval for edge devices.
- 3D managed NAND**
High-capacity and high-performance storage holds massive amounts of 5G data where it is created.

Learn more: micron.com/5gmemory

Sources

- ¹ Let's Talk, "5G vs. 4G"
- ² Gartner, "What Edge Computing Means for Infrastructure and Operations Leaders"
- ³ Lifewire, "5G Speed: How to Understand the Numbers"
- ⁴ Qorvo, "Getting to 5G"

