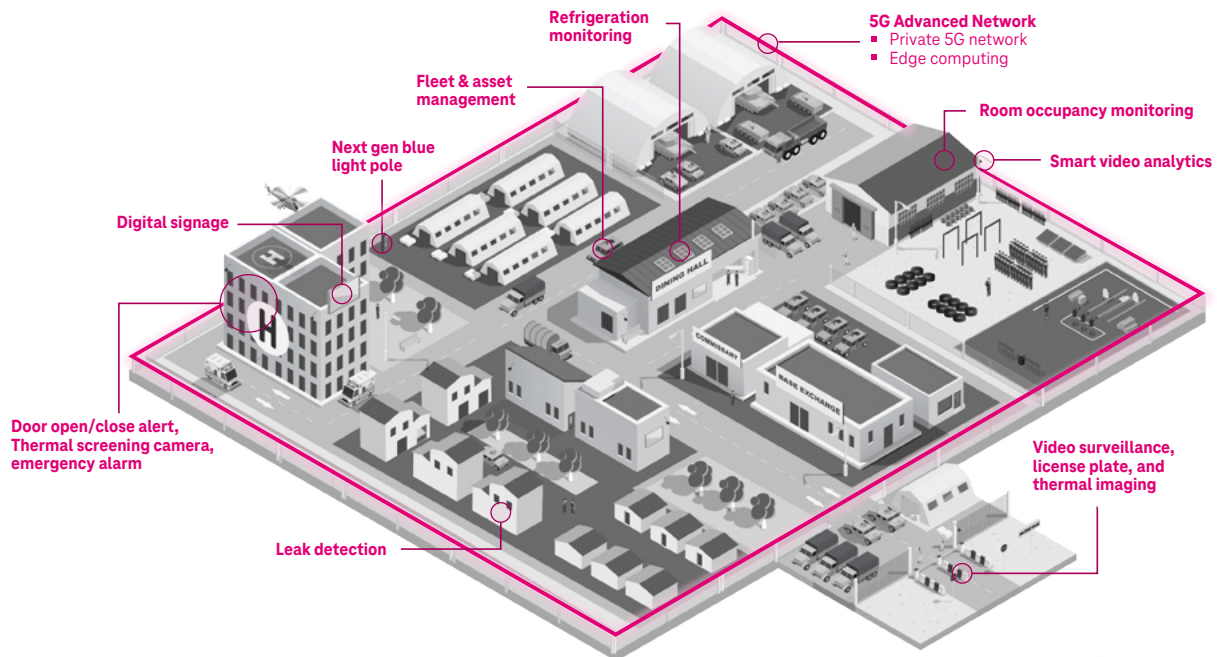


5G-POWERED GOVERNMENT ENHANCES MISSION OUTCOMES

The logistics team that sends supplies to first responders at a flood site; the port security agents who act on intel to stop an incoming drug shipment; the maintenance team on a military flightline who keep repair and inventory data at their fingertips to turn around aircraft faster—**when every second matters, how quickly information can reach the people and systems who need it can make all of the difference.**

Wireless connectivity is not just about what people and systems are doing to advance the mission, but where and when. Increasingly, the answer is “any time, anywhere.”



5G delivers the speed, reliability, and security demanded of today’s missions. It’s a platform that supports networked functions across the enterprise, connecting people, information, applications, and more. But not all 5G solutions are equal.

How can you best use 5G to help your agency meet your mission—and empower innovation and optimization across your organization?

Maximizing power, speed, and reliability to drive the mission forward

5G can do more than accelerate connectivity, however. Its power makes possible dozens of new capabilities for distributed missions. 5G can also spark innovation, becoming a force multiplier and enabling any number of potential uses, such as:



Body-worn biometric, environmental, and ISR sensors that deliver near real-time situational awareness.



AR-supported flight line maintenance that improves turnaround times to get grounded aircraft back in service faster.



Near real-time identity verification and database access that improves citizen experience by streamlining delivery of services, from healthcare to Social Security to child services.



AI-based predictive capabilities, collecting data from sensors, satellites, and on-the-ground personnel to alert residents to destructive weather before it hits.

While many essential functions—from security to facility operations to supply chain automation—are common to both civilian and DoD organizations, how these needs are fulfilled can vary dramatically from agency to agency. Speed, reliability, latency, and security must be balanced in order to reap the most reward from 5G.

Weighing the impact of these components, among others, directly informs how and where to use 5G for measurable improved outcomes and ROI.

Selecting the right 5G solution

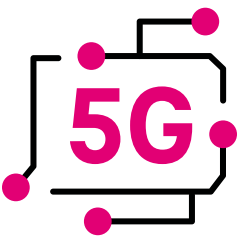
There are three basic approaches to architecting a 5G solution, each with distinct advantages, depending on mission needs and practical considerations. Here's a closer look at the benefits and uses of each 5G approach:

The most appropriate 5G network architecture for each use case and environment can differ dramatically, based on factors that include:

- Internet access demands
- Mobile coverage, even in rural, mountainous, or austere locations
- Edge computing needs
- The mix of classified and non-classified data
- Autonomous and Internet of Things (IoT) devices in use
- “Bring your own device” (BYOD) policies
- Access controls and security protocols

Commercial 5G networks can deliver the speed, reliability, and availability needed to support both a local and a mobile workforce at a lower cost, without the need for additional internal infrastructure.

Public-facing 5G networks can support applications that include smart meters, tracking optimization, traffic management, environmental sensors, and more. Hyper-connected smart cities, bases, and campuses can use sensor networks to enable near-instant awareness of infrastructure issues—from power and utilities to road maintenance—empowering faster, more cost-effective responses.



Private 5G networks can deliver ultra-low latency and maximum security, while also empowering mobility within a facility or campus. Private 5G enables more efficient ways to deliver services where they are needed most within the private network.

5G Core's service-based architecture makes 5G networks faster to deploy, manage, and adapt to changing needs.

For users, this means faster connections and throughput. For network owners, this means higher quality service and security, less complexity, and a virtually future-proof platform that easily supports new wireless services.

For secure DoD operations, a private 5G network enables sovereignty over data, keeping it within DoDIN; this is critical for base operations or advanced military strategy. And in environments where terrain, weather, or interference impede wireless access, portable private 5G networks can deliver connectivity for greater situational awareness, supporting rapid decision-making that can save lives.

Civilian agencies can also take advantage of private 5G for secure, low-latency connectivity. Port and border operations, logistics, and IoT devices, including drones and sensors, can all benefit from a private 5G network. Along with speed and security, 5G's capacity enables connectivity on an exponentially greater scale.

Massive sensing draws on millions or even billions of small, inexpensive sensors that generate data from office buildings, depots, electrical grids, and other infrastructure. This is not unlike today's Internet of Things, but with significantly more endpoints.

Massive sensing makes capturing data, for fleet and asset management, wearable health monitors, or granular control of smart buildings and bases. This is ultimately possible because of the network speed and capacity attributed to 5G.

Hybrid 5G networks deliver a variety of benefits: high speed, cost-savings, reliability, and low latency in a secure environment when needed.

A hybrid 5G solution can seamlessly hand off from private to public networks. A security camera on base may only be on the private network, but for the workforce that goes home at night, the system could allow users to switch from private to public based on their location and the agency's security policy. In fact, different parts of a secure base or campus could have different levels of access based on policy, IL4-6 requirements, and application demands.

Picture a depot moving critical supplies and maintenance parts to ensure vehicles and aircraft are always mission-ready. Using 5G, logistics managers can track each part in real time, from the warehouse to the transport truck to its destination—keeping an eye on the condition of both the vehicle and the cargo to ensure safe delivery. 5G's ability to support a high-speed, secure environment—on-site,

regionally, or across the country—is crucial to getting mission-dependent components where they need to be in time to matter.

Unconventional thinking supports unlimited possibilities

While some carriers approach every opportunity with pre-defined solutions, we see each agency as unique. That's the motivation behind T-Mobile 5G Advanced Network Solutions—using our enterprise-grade commercial and private 5G infrastructures as building blocks, supported by our forward-thinking team, we deliver tailored 5G solutions as unique as your mission.

Our Advanced Network Solutions are built from the ground up to support your priorities, goals, and the way you operate, bringing innovation and agility to every mission—from virtually anywhere.



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