

5G

5G is the latest generation of cellular technology with benefits that will enable an expansive range of new use cases across the world of IoT.

Currently 5G coverage is focused around major cities and the consumer smartphone market but global 5G deployments are accelerating with China and South Korea leading the way.

The GSMA have forecast that 40% of the world's population will have coverage by 2025 - what does this mean for the IoT market?





Faster Speeds and Higher Bandwidth

Complementing fixed line connectivity or as a high performance alternative, 5G offers a failover solution for fixed line. In some cases it will support fixed line replacement.



Ultra Reliable and Low Latency Communications

Enabling safety critical applications that require ultra-low latency (URLLC).



Connecting huge numbers of devices

Connecting vast numbers of devices concurrently through 'Massive IoT'.



Advanced Critical Communications

Capabilities such as network slicing and autonomous vehicle (AV) control.



Private Mobile Networks

Sites which have a high concentration of devices and need for low latency, reliable data transfer can be served by dedicated 5G network infrastructure. This includes sites like manufacturing, ports, agriculture and distribution centres.

Considerations around the current 5G network landscape

- **Coverage focused in urban areas**
Most initial 5G network rollouts are driven by the consumer 5G smartphone market and coverage is focused around cities and major towns.
- **Full 5G benefits still to come for many**
Most initial 5G network rollouts saw new radio (basestation) technology deployed using available spectrum and connected into 4G core network infrastructure. While that offers higher speed (up to 1Gbps) the full benefits of 5G come from dedicated core network infrastructure and new high band (24G-50GHz) spectrum.
- **Super fast connectivity**
The initial 5G networks can offer higher speed connectivity and enhanced mobile broadband capability for uses cases in sectors such as security, retail and transport.
- **Opening new opportunities**
5G will ultimately enable the innovation and growth of the IoT through applications that do not exist today. Remote control of vehicles, surgical procedures, machine vision and augmented reality applications will be possible thanks to ultra-reliable and low latency communications.
- **Alternatives to 2G and 3G**
Businesses whose applications use 2G or 3G services will eventually need to upgrade their technology. It is worth looking at 4G LTE including LPWAN technologies like NB-IoT and LTE-M as well as 5G for a future proofed solution. Existing technologies will address the needs of the majority of IoT applications.
- **5G isn't right for every use case**
Existing 4G LTE networks already have high speed and resilient options available and well established roaming agreements. Migrating to 5G means new hardware and might actually not be required.



5G is powering innovation across different sectors

Use cases benefitting from 5G capabilities



Internet & Comms Service Providers

Enhancing SD-WAN and mobile broadband networks, using the faster, higher bandwidth 5G for primary and/or fixed line failover.



Remote Healthcare

Ultra-low latency and reliability could enable mission critical use cases such as remote surgery and connectivity for emergency services.



Public Transport WiFi

Enhancing the speed and bandwidth of public WiFi on trains, buses, trams and other forms of public transport.



Autonomous Vehicles

Autonomous vehicles at scale will be enabled through vehicle to vehicle capabilities, EDGE computing and the high reliability of 5G.



CCTV and Surveillance

Ultra-High definition (8k) streaming will enable augmentation of high resolution CCTV feeds for applications for health and security purposes.



Industry 4.0

Real-time remote control of machinery in manufacturing can help lower costs and create more dynamic systems. Ultra-low latency will be key for safety.



Retail Advertising

Low latency and edge computing will enable real-time immersive advertising opportunities for media/content providers.



Private 5G Networks

Manufacturing, ports, agriculture, distribution or transport hubs and health/education campuses will benefit from dedicated private 5G network infrastructure.



Live Broadcasting

Reliability and increased bandwidth make high quality, real-time broadcasting a possibility for media and individuals.



Massive Deployments

Applications such as metering, wearables, lighting, sensors, alarms, will ultimately require higher connection densities which 5G can address. 4G LTE technologies like LTE Cat-1 or LTE-M already support these use-cases well.

Why Wireless Logic for 5G?



Flexible Solutions

Operator and technology agnostic solutions, with pricing that scales with your business.



Secure and Resilient

Private infrastructure in 15 major data centres - transmitting data reliably from device to end-point.



5G Ready Core Network

Our advanced mobile core network is purpose built for large scale IoT applications and is 5G ready.



Managed Services

SIMPro is our 5th generation connectivity management platform which integrates connectivity, eSIM profile, device and security management.



Expert Support

20+ years' experience in helping our customers choose the right technologies and services to design, deploy and manage IoT applications.

Contact us today...

Talk to one of our IoT solution experts or get a quote

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