

# 5G and the edge for Internet of Things

**Verizon 5G Edge with AWS Wavelength brings intelligence and unparalleled responsiveness to devices everywhere**

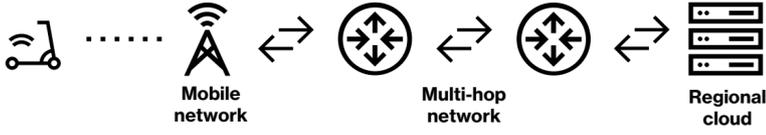
## Network-connected devices enrich consumer and business experiences

Digital transformation enabled by Internet of Things (IoT) technology brings value to many industry verticals and use cases, including:

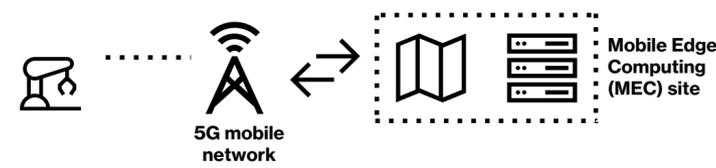


IoT devices rely on the cloud to capture, store and analyze sensor data. The cloud also supports intelligent control and monitoring of devices. With the availability of big data analytics, artificial intelligence and machine learning (AI/ML) services, enterprises can unlock more value from the rapidly increasing number of IoT data streams.

**Mobile-enabled IoT devices provide deployment flexibility but incur multi-hop network latency when communicating with the cloud.**



**5G and the mobile edge enable innovative low-latency IoT applications by reducing end-to-end delays and packet loss rates.**



- Near real-time observability, rapid analysis and decisioning supports autonomous IoT devices across many industry use cases.
- Minimal network hops to MEC site provides low-latency communication with powerful computing resources, including AI/ML services

## 5G and edge expands IoT capabilities

**Ultra-low latency:** Close proximity of edge computing to the mobile user provides the lowest possible latency between computing and IoT devices.

**Ultra-high bandwidth:** Data transfer between the edge computing resource and IoT devices reduces potential constraints in the backhaul or core network.

**Reliability:** Reduced number of network hops between the mobile devices and computing resources helps ensure a reliable connection with reduced variability.

**Powerful computing:** AWS Wavelength provides access to powerful Amazon EC2 instances that can accelerate AI/ML training and inferring with IoT sensor data.

**Scalability:** AWS cloud services can be scaled up or down as needed based on customer workloads. Pay-as-you-go pricing provides added financial flexibility.

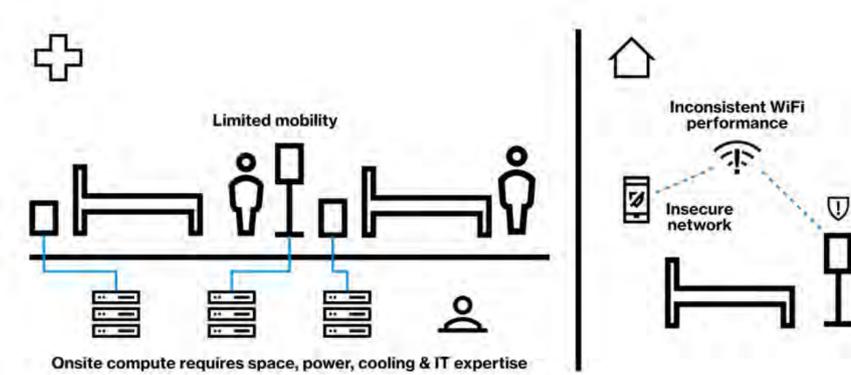
## Internet of Medical Things example

Healthcare is being reshaped by IoT. Sensor-enabled Internet of Medical Things (IoMT) has been used to monitor patients for many years. Implanted devices and wearables deliver critical information on patient health.

5G and edge computing can improve IoMT device mobility, security and enable new capabilities by reducing access latency to powerful compute and AI/ML services. Applying AI/ML to IoMT data can bring unprecedented insight, improving the quality and timeliness of healthcare decisions.

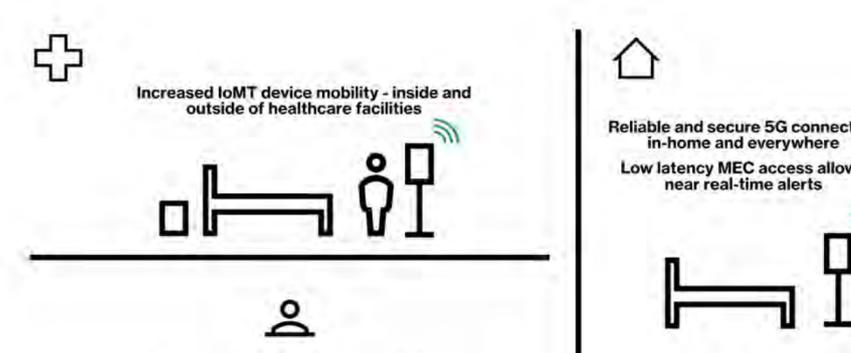
### Without 5G and edge computing:

- Costly and expensive-to-maintain computing equipment onsite or in private data centers
- Relying on public cloud for IoMT applications involves delays that prevent real-time use cases such as vital sign monitoring
- Limited mobility of IoMT devices – either wired, or WiFi restricts them to in-facility use
- IoMT devices that follow patients home are subject to insecure home WiFi networks with spotty network performance



### With 5G and edge computing:

- 5G-enabled IoMT devices provide increased mobility inside and outside facilities, including at field hospitals and patient homes
- IoMT on 5G networks can be more reliably connected and better protected than on insecure home WiFi networks
- 5G and MEC enable low-latency near real-time IoMT use cases like monitoring patient vitals
- Use of MEC computing facilities reduces need for onsite compute, increasing the number of facilities that can benefit from low-latency IoMT



## Intelligent IoT using Verizon 5G Edge with AWS Wavelength

Explore how high-performance and reliable mobile technologies coupled with strategically-located edge computing resources can bring innovative IoT solutions to enterprises and consumers everywhere.

AWS Wavelength is located with Verizon's 5G mobile core, providing the lowest latency and most reliable access to cloud computing for data processing and storage.

Verizon 5G Edge is protected from direct internet access and relies on secure mobile identity management, providing increased security.

IoT applications can use Verizon Edge Discovery Service (EDS) in real-time to find the closest AWS Wavelength instance.

Developers can use familiar AWS console, APIs and AWS services for development, with access to powerful EC2 instances for AI/ML training or inferring using IoT data.

Full-access to rich computing resources enables rapid analysis of IoT data for quick decisioning and near real-time controls.

Edge-based applications can continue to process data even if upstream network connections are down, improving network resiliency and IoT application availability.

## Get started.

**Verizon 5G Edge with AWS Wavelength delivers low-latency IoT with a smaller onsite footprint, a lower starting cost, pay-as-you-go pricing, and comes with a large ecosystem of developer and professional services support.**

### Learn more

[verizon.com/5gedgeaws wavelength](https://verizon.com/5gedgeaws wavelength)

