



Unlocking Private 5G Use Cases for Enterprises & Industry 4.0

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Global 5G Enterprise Market
to **\$4.92 Bn** in 2024 &
\$82.67 Bn by 2034

Enterprise spending on 5G is
expected to hit **\$4.5T/year**
by 2030

5G will add **\$13.1T** to global
economic output by 2035



Network efficiency:

Optimizing network energy consumption with more efficient processing.



Spectrum efficiency:

Achieving even more bits per Hz with advanced antenna techniques.



Connection density:

Enabling more efficient signaling for IoT connectivity.



Traffic capacity:

Driving network hyper-densification with more small cells everywhere.



Experienced throughput:

Bringing more uniform, multi-Gbps peak rates.



Decrease in latency:

Delivering latency as low as 1 ms.

Next-Gen Customer & Network Experiences Powered by Private 5G

5G

Private Networks

AI -Driven Orchestration

- Automated provisioning, scaling, fault recovery & service lifecycle
- Automated configuration and service rollout acceleration
- Consistent performance across devices, apps, and services

Closed-Loop Autonomous Operations

- Continuous monitoring with automated feedback loops
- Self-optimizing, self-healing network behavior

Real-Time Analytics & Predictive Intelligence

- Auto detection & resolution of traffic congestion & faults
- Automated assurance before issues impact customers

Enhanced Customer Experience + Network Intelligence

- Real-time network insights enriching omnichannel customer journeys
- 360° customer visibility enables faster issue resolution

Partner & Wholesales Services

- Wholesale slicing for SIs
- Co-monetization with IoT / AI / Cloud partners
- Use-case marketplace revenue sharing

Enterprise Edge Services

- Edge compute hosting (AI/ML workloads)
- Application marketplace for Industry 4.0
- Data-as-a-Service (analytics, dashboards)
- Video analytics & computer vision service

Enterprise Connectivity Services

- Campus-wide Private 5G subscription bundles
- Multi-site enterprise charging
- SLA-based premium charging (latency, reliability)

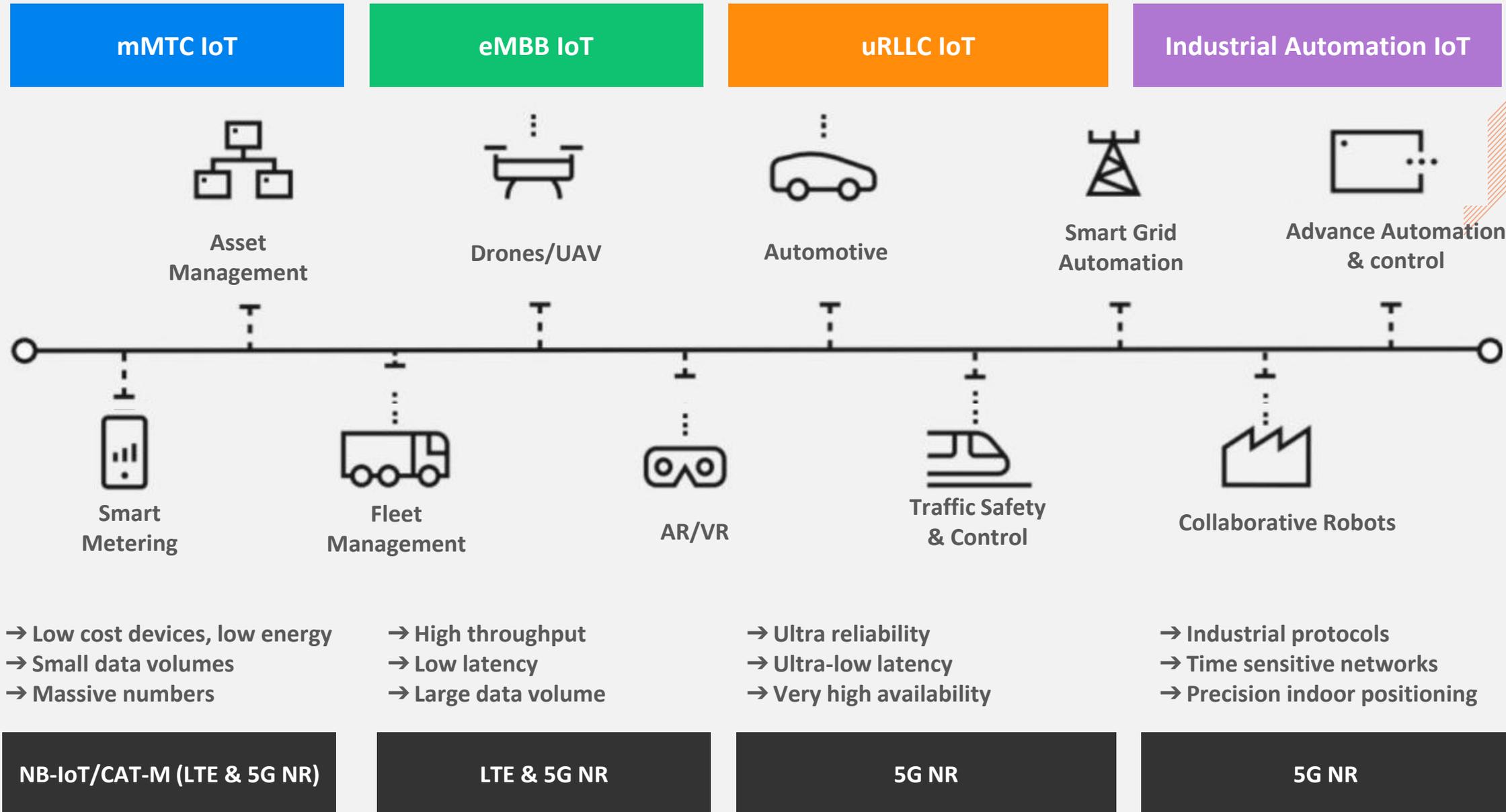
Network- as- a- service(NaaS)

- Private 5G delivered as a managed service
- Network slicing on-demand
- On-prem + hybrid private/public bundles



5G

Enterprise IoT use cases powered by Private 5G deployments



Next-Generation IoT Use Cases Enabled by 5G Networks

	Future of manufacturing	Smart Mobility (V2X)	Agritech	Connected Commerce	Immersive Learning
eMBB	<p>Remote Factory Command Center – Live multi-camera plant dashboard; (Edge video switch, Secured Operations Centre (SOC)-secured access)</p>	<p>Fleet Manager Live View – Multi-camera HD fleet monitoring; (Edge AI object detection, Cloud video archive, Route optimization API)</p>	<p>AI-Powered Pest Detection – Regular pest-detection scans; (Azure FarmBeats, Per-hectare scanning, Analysis Dashboards, Recommendations)</p>	<p>Virtual Try-On Mirror – 4K interactive fitting; (Edge Compute, Inventory & Customer Profile APIs)</p>	<p>Virtual Classrooms – Immersive 3D Classes, Virtual Sessions. (MEC nodes, Per device BW)</p>
URLLC	<p>Automated Tooling Safety Lock – Immediate tool interlock; (Edge safety actuator, on-device PKI, SOC supervision)</p>	<p>Autonomous Convoy Control – Synchronized platooning of trucks with sub-10 ms latency; (MEC path computation engine, Blockchain route consensus)</p>	<p>Precision Spraying Systems – Based on the events/analysis; (spot spraying triggers, Chemical optimization, Audit APIs)</p>	<p>Smart Checkout – Realtime Billing & Payments; (RFID API, Secure Payments)</p>	<p>Offshore Crane Operations – Remote precision lifting on oil rigs; (URLLC slice, Edge robotics controller, AI safety monitor)</p>
mMTC	<p>Per-Asset Consumption Metering – Real-time energy per machine; (Edge energy aggregator, Cloud usage billing, API to retrieve sensor details)</p>	<p>Fleet Sensor Mesh – Low-power tracking of 10,000+ vehicles; (MQTT broker, AWS IoT Core, LPWAN backup, AI anomaly alerts)</p>	<p>Smart Farming Grid – Soil Sensors, Livestock Tracking, Livestock Feed Inventory tracking and so on; (Monitoring, GPS, AEP)</p>	<p>Smart Store Mesh – Shopping Cart Trackers, Temp Sensors and so on; (APIs, Dashboards, AI Analysis)</p>	<p>Attendance Tracking – Teachers, Non-Teaching Staff, Students; (AEP APIs)</p>
NR-Lite/RedCap	<p>Minimal Telemetry Tag – Periodic machine health pings; (Edge ping aggregator, Cloud monitoring)</p>	<p>Rural Bus Tracker – Minimal-bandwidth GPS & text alerts; (NB-IoT failover, SMS API, Encryption & Security Enabled)</p>	<p>Inventory Monitoring – Meters, Levels, Spares, Feed and so on; (Edge Monitoring)</p>	<p>POS/Kiosks Fleet – (Diagnostics, Device Management, Payment APIs)</p>	<p>Rural School Education Terminals – e-learning devices; (MEC caching, Content filtering API)</p>

New Age Monetization Models : B2B2X, IoT as a Service, API Monetization, Revenue Share

IoT Value Chain with Private 5G



Catering to global market needs

Private 5G–Enabled IoT Capabilities

- Ultra-reliable, low-latency connectivity for industrial and mission-critical IoT
- Network slicing support for differentiated IoT service tiers

Unified IoT Control & Device Visibility

- Single management layer across heterogeneous IoT networks
- Out-of-the-box APIs for integrating CMP, device management & billing

Advanced Analytics & Operational Insights

- Real-time dashboards for IoT device performance & network KPIs
- Anomaly detection for utilities, industry, smart cities & logistics

Developer-Ready & Integration-Friendly

- Plug-and-play onboarding for IoT marketplace apps
- Modular architecture for new industrial IoT use cases

5G + IoT Use Cases Across Enterprise Verticals



Smart Health

- **Connected ambulances** with real-time imaging (CT/MRI streaming to MEC)
- **Remote-assisted surgery** inside hospital private network
- **Connected medical wearables** inside hospital campus



Industry 4.0

- Real-time **robotics** & automation
- **AR-assisted maintenance** for technicians
- **Connected AGVs/AMRs** for factory floor movements
- **Digital twins** for simulation & optimization



Retail/ Logistics

Smart Retail/Logistics

- Smart inventory tracking using **RFID-over-5G**
- 5G-enabled warehouse **digital twins**
- Autonomous delivery **drones & vehicles**
- Cold-chain monitoring with real-time IoT sensors



Agriculture

- **Drone-based crop scanning** + AI analytics via 5G uplink
- Autonomous **tractors/harvesters** guided by Private 5G
- Predictive irrigation using **real-time soil sensors**



Utility/ Smart Grid

- Smart substation operations using **5G URLLC**
- Grid fault detection & alerting in real time
- **Advanced Metering Infrastructure (AMI)** Over Private 5G



Defense / Public Safety

- Deployment **5G-in-a-Box** for Disaster Zones
- Real-Time **GIS Mapping & Geolocation** Tracking
- **AI video analytics at the edge** (intrusion, weapons, anomalies)



 canvas

 magik

 ventas

 infinity

 lynx

 aureus

Smart *Ideas*, Delivered

Thank You

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