

Solution Brief

Private 5G: Use Cases, Applications, and Opportunities

in Industrial, Supply Chain, Hospitality, Utilities,
Education, and More





The Opportunity of Private 5G

IoT is poised to transform a range of industries, from the industrial sector to the public sector to hospitality to healthcare and education. Through the convergence of IT and OT, new use cases and applications will give rise to new opportunities, possibilities, and competitive angles – but taking full advantage of this burgeoning megatrend requires the low latency and high bandwidth offered by private 5G.

With private 5G networks, forward-thinking organizations can build out custom use cases, drive efficiency and automation, generate more value for customers, and even create a competitive advantage.

The right private 5G solution delivered by the right IT solution provider can help accelerate digital transformation in every industry, including manufacturing, distribution, energy and utilities, hospitality, education, research, and mining, oil, and gas.

Private 5G from Logicalis + Cisco

Logicalis provides a fully customized, subscription-based, full-stack private 4G/5G solution integrated with Cisco networking and security technologies at the core, delivered as a service. Ideal for distributed operations or IoT-heavy environments, Logicalis' private network solution provides the connectivity, reliability, and flexibility that customers need to take the next step in their IoT journey.

Use Cases for Private 5G

IoT and private 5G is already dramatically enhancing day-to-day operations through applications such as:

Asset Tracking and Inventory Management

Private 5G enables asset tracking and inventory management that goes far beyond geolocation. With the coverage, bandwidth, and low latency offered by private 5G networks – as well as advanced analytics tools – it is possible to gain valuable data for improving operational efficiency.¹

AGVs and AMRs

A private 5G network offers the coverage, bandwidth, reliability, and seamless connectivity needed for automated guided vehicles (AGVs) and automated mobile robots (AMRs) to traverse sprawling indoor and outdoor facilities. Now, with private 5G and other advancements in the space, AGVs and AMRs can surpass the limitations of legacy technologies, such as Wi-Fi, to become truly autonomous.^{3,4}

Collaborative Robotics

Collaborative robots, sometimes called “cobots,” are smarter robots that can operate autonomously and interact with humans. A private 5G network can transmit the huge volumes of data needed for these robots to operate effectively, safely, and across large spaces.^{6,7}

Augmented Reality and Virtual Reality

Augmented reality (AR) and virtual reality (VR) can be used for remote training, guidance, maintenance, design, and, in the case of customer-facing industries such as hospitality, unique and delightful customer experiences. As with other emerging technologies, AR and VR depend on the speed and bandwidth offered by 5G.^{8,9}

Maintenance and Lifecycle Management

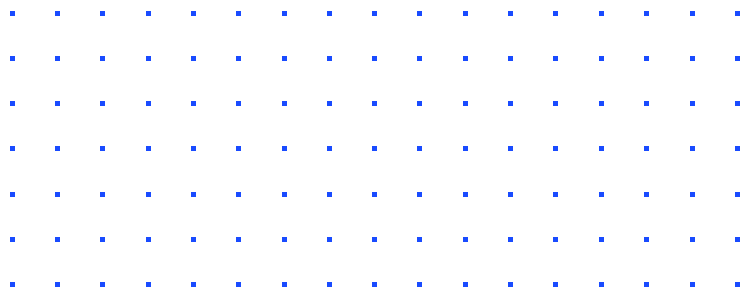
Private 5G, along with edge cloud, machine intelligence, and IoT sensor data, allows data to be collected, analyzed, and responded to in near real-time in order to prevent failure. This enables a shift away from costly unplanned downtime and “just in case” maintenance to the cost savings offered by preventative and predictive maintenance.²

Real-Time Video Analytics

The ultra-low latency and high-bandwidth capabilities of private 5G – along with technologies such as connected cameras, sensors, video analytics, and multi-access edge computing (MEC) – can support the massive number of sensors and connected cameras needed to perform tasks such as automated quality inspection, surveillance, safety protocol adherence, and fire hazard alerts.⁵

Worker and Customer Safety

Improving safety is one of the most compelling use cases for private 5G and 5G-enabled technologies. Private 5G allows for the monitoring of the work environment through technology such as wearable technology, sensors, connected cameras, AI video analytics, drones, and microphones.⁸



1. <https://www.cascadiacapital.com/story/asset-tracking-and-remote-monitoring-the-value-of-connectivity-and-the-future-with-5g/>
2. <https://stlpartners.com/articles/private-cellular/private-5g-use-cases/>
3. <https://www.ericsson.com/en/enterprise/cellular-curious/automated-guided-vehicles-and-autonomous-mobile-robots/>
4. <https://www.rcrwireless.com/20210802/5g/5g-manufacturing-use-case-spotlight-automated-guided-vehicles/>
5. <https://www.rcrwireless.com/20210811/5g/5g-manufacturing-use-case-spotlight-real-time-video-analytics/>

6. <https://www.rcrwireless.com/20210924/5g/5g-manufacturing-use-case-spotlight-collaborative-robotics/>
7. <https://www.ericsson.com/en/blog/2021/6/using-5g-network-exposure-to-mitigate-risks-in-industrial-cobot-environments/>
8. <https://www.t-mobile.com/business/trends-insights/5g/construction/how-5g-improves-construction-safety/>
9. <https://hospitalitytech.com/case-5g-hospitality>

Transform Your Future with Private 5G from Logicalis and Cisco

Cisco, a global leader in networking solutions, is pioneering a flexible, scalable, future-ready private 5G solution for forward-thinking enterprises in every industry.

Logicalis, as one of the first Cisco partners authorized to provide Cisco Private 5G, has the expertise and capabilities to design, deploy, and help you maximize the benefits of Cisco Private 5G.

With Logicalis and Cisco, you can develop your own custom use cases and applications, tap into private 5G's performance, cost, and efficiency gains today, and pave the way for innovative, advanced applications tomorrow.

Take the Next Step with Private 5G
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