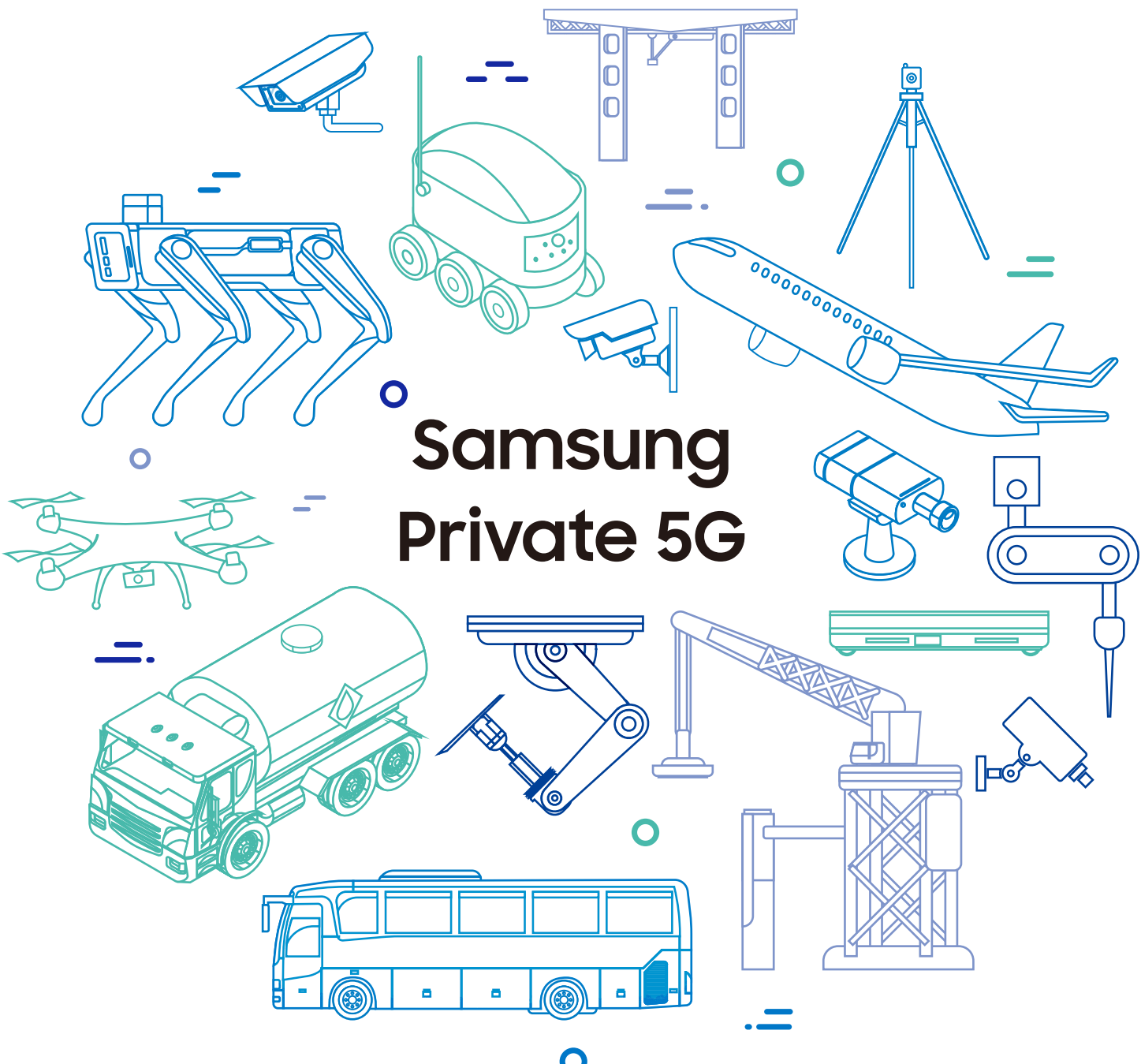
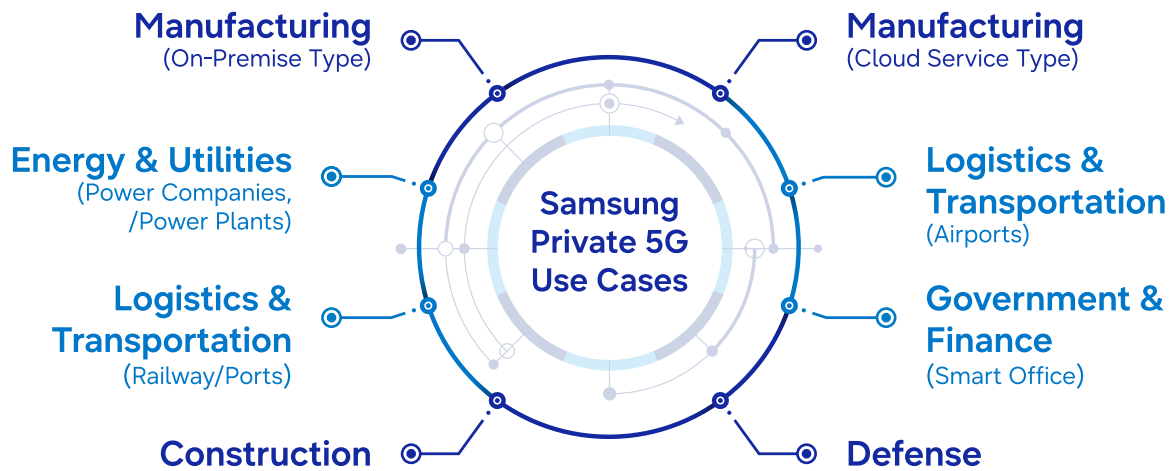




Samsung Private 5G

Networks Business
Samsung Electronics

Samsung Private 5G, Use Cases across Industries



Powered by Samsung's industry-leading mobile communications expertise and proven experience, Samsung Private 5G delivers a next-generation network solution for enterprises.

It seamlessly connects devices, applications, and data with reliable high-capacity wireless connectivity — anytime, anywhere. Transform your operations with Samsung Private 5G.

Samsung Private 5G – Key Service Mapping by Vertical Market

Private 5G		Vertical Market	Manufacturing	Energy & Utilities	Logistics & Transportation (Airport)	Logistics & Transportation (Ports)	Government & Finance	Construction	Defense
Network Features	Reliability		○	○	○	○	○	○	⊙
	Security		⊙	⊙	⊙	⊙	⊙	⊙	⊙
	Mass Uplink Data		⊙	⊙	○	○	○	○	⊙
	Seamless Device Connection		⊙	⊙	○	○	○	○	⊙
	Low-power IoT (5G RedCap)		⊙	⊙	⊙	○	○	○	○
Key Use Cases	AGV / AMR		✓	✓					✓
	Autonomous Vehicle		✓	✓	✓	✓			✓
	Patrol Robot / Drone		✓	✓	✓	✓		✓	✓
	Remote Control Crane					✓			
	CCTV (FHD)		✓	✓	✓	✓	✓	✓	✓
	IoT Sensor		✓	✓	✓	✓		✓	✓
	Data Scanner		✓		✓				
	(MC) PTX		✓			✓		✓	✓
	Smartphone		✓			✓	✓		✓
	Business PC / Tablet		✓				✓	✓	

Samsung Private 5G Deployment Solution

Radio Unit



B48/n48(3.5GHz CBRS) 4T4R
Outdoor RU (20W)



n78(3.7GHz) 4T4R
Outdoor RU (40W)



n79(4.7GHz) 4T4R
Outdoor RU (10W)



Indoor RU & RHU
(B48,n48/n78/n79)

* n78 ORU available on 27.4Q

* n78 IRU available on 28.4Q

Digital Unit



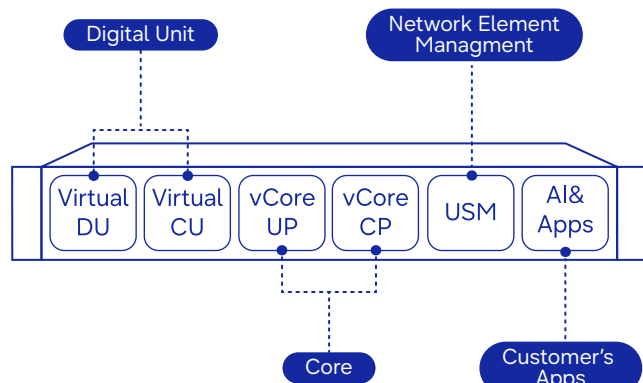
* vDU : Virtual DU



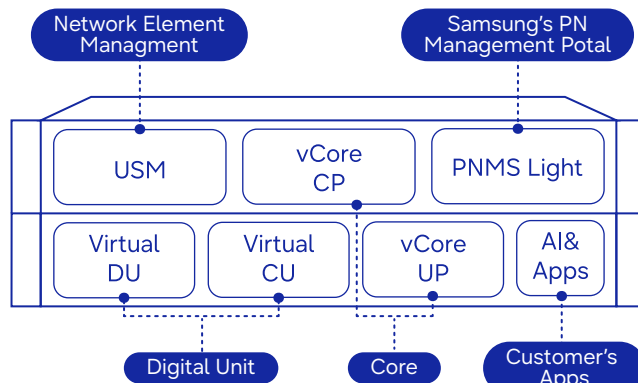
vCU + vDU
(Virtual CU/DU in a Server)

* vCU : Virtual CU

Network In a Server (NIS)



One server type



Separated server type

Core (LTE/5G support)



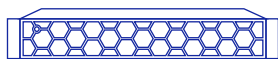
vCore CP



vCore UP



vCore CP + USM



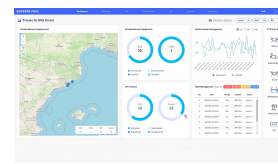
vCore UP + vCU

* vCore CP : AMF, MME, SMF/GW-C, AUSF, HSS, UDM, UDR, PCRF/PCF

Management System



USM



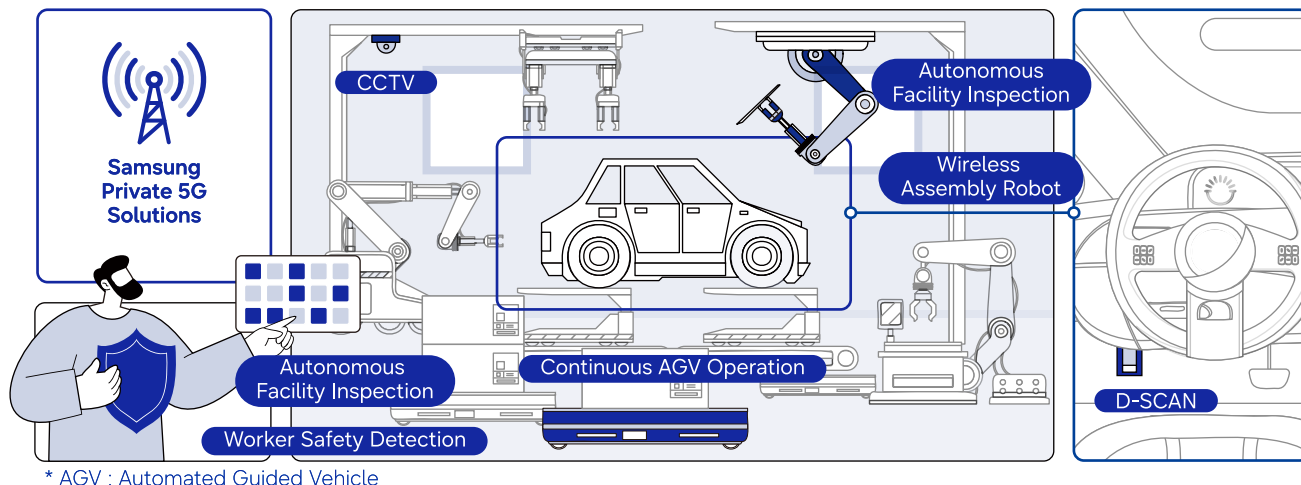
PNMS

* USM(Unified System Management): Fault, Configuration, Alarm, Performance, Security of Samsung Private Network

* PNMS(Private Network Management System): Samsung Portals for UE/SIM/Device management, API GW, etc. for operators, tenants

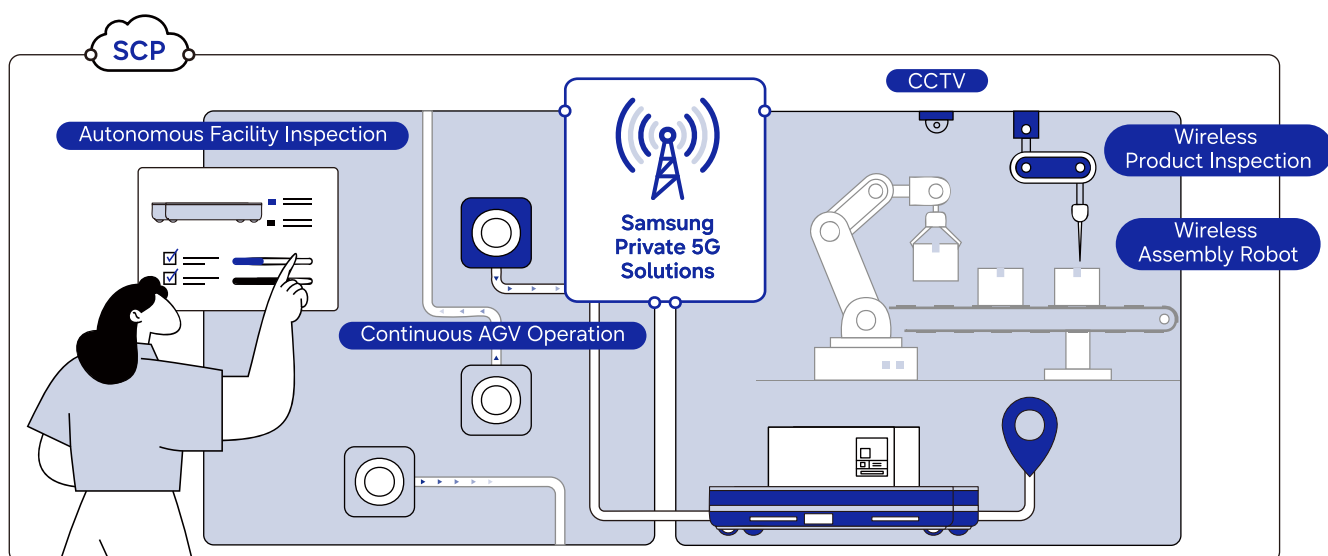
Manufacturing On-Premise Type

Customer A initially operated AGVs in an automotive manufacturing plant using a Wi-Fi wireless network. As the number of AGVs increased, connectivity interruptions during Wi-Fi AP roaming caused unexpected downtime, impacting time-sensitive production operations.



After adopting Samsung Private 5G, Customer A achieved a significant reduction in AGV downtime through seamless connectivity. Leveraging 5G RedCap technology, the network efficiently supported increasing volumes of control and vehicle inspection data, improving manufacturing efficiency and productivity.

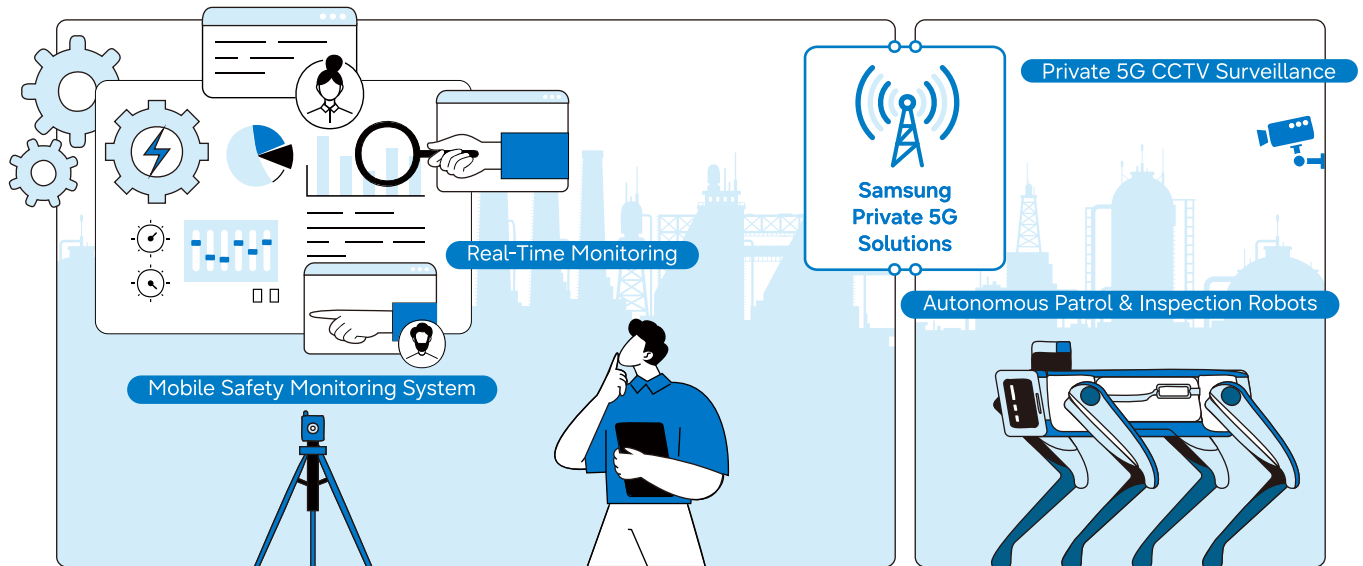
Manufacturing Cloud Service Type



By adopting cloud-based Samsung Private 5G (SCP, Samsung Cloud Platform), Customer B significantly reduced initial investment costs. The introduction of a 5G wireless network to previously wired-only manufacturing lines reduced production line layout change time from 5 days to 2 days, significantly shortening production downtime. In addition, improved productivity was confirmed through efficient AGV control enabled by the low-latency capabilities of 5G.

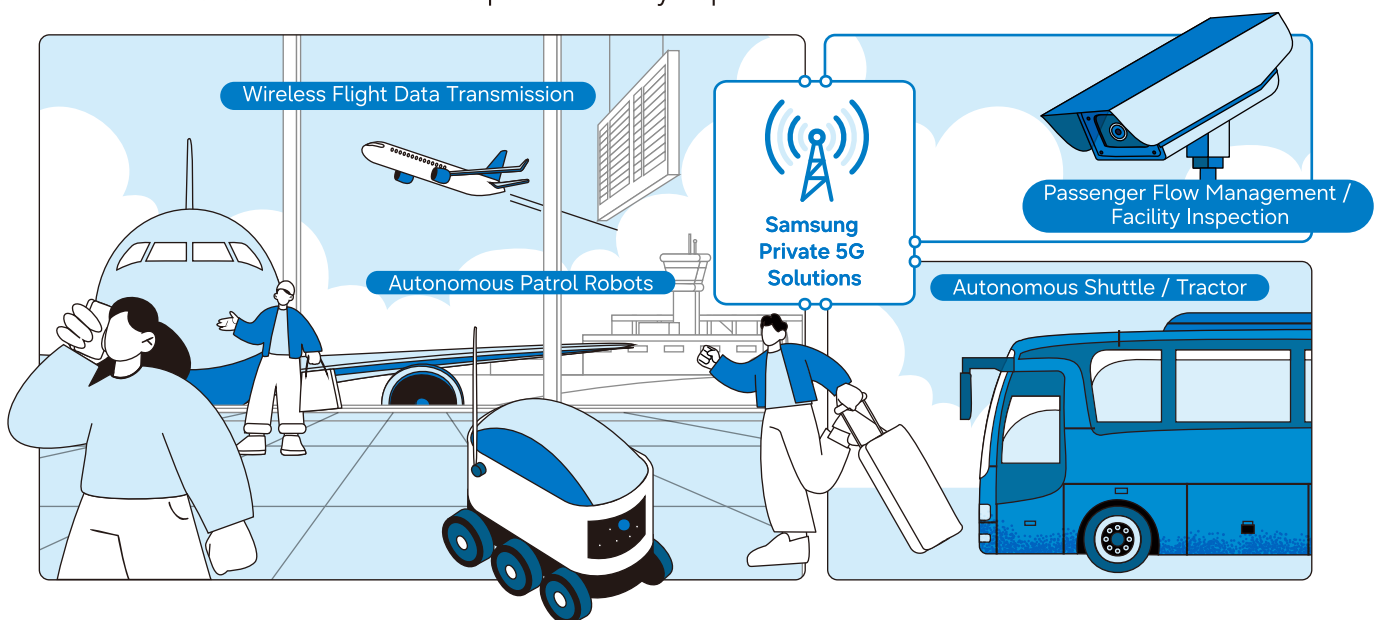
Energy & Utilities Power Plants

With the introduction of Samsung Private 5G, Customer C improved asset availability by more than 20% through real-time monitoring and analysis, as well as preventive management of critical facilities such as transformers. Customer C reduced maintenance time by more than 50% and minimized power loss while enabling remote monitoring of renewable energy facilities.



Logistics & Transportation Airports

Through Samsung Private 5G, Customer D was able to deliver and analyze AI sensor and CCTV data from the airport in real time, enabling faster passenger processing and improved airport congestion management. In addition, manual patrol inspections of airport airside facilities, such as airfield lighting, were replaced with autonomous vehicles. AI-based real-time video analysis enabled immediate responses to emergency situations. Real-time management of high-quality video data from robots and drones enabled periodic facility inspections.

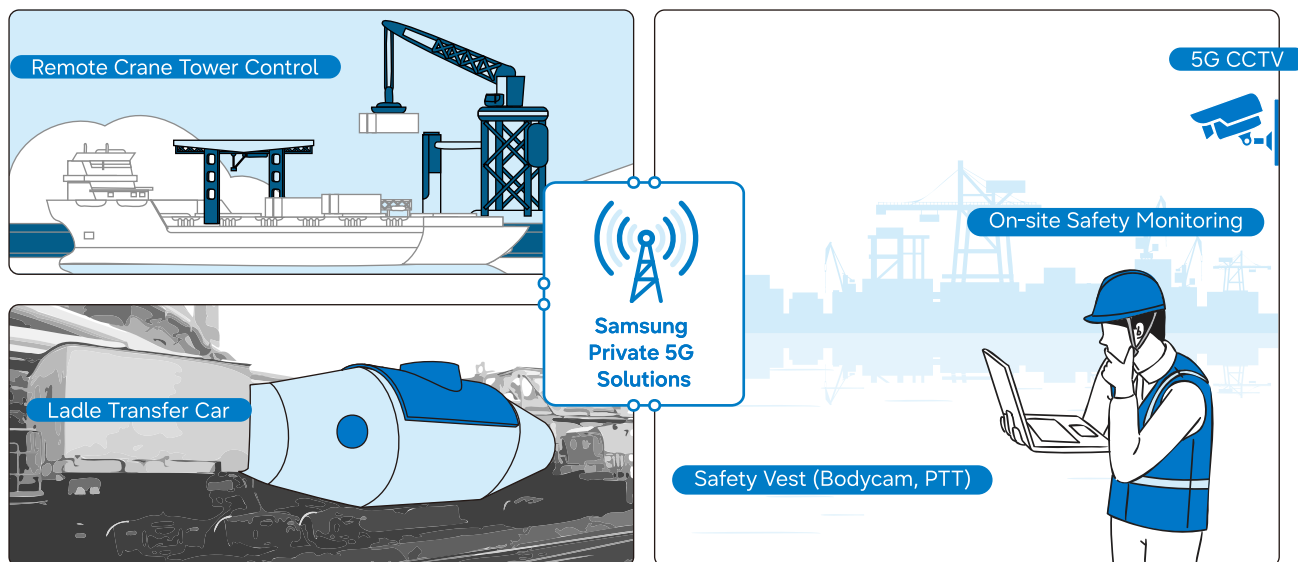


Logistics & Transportation

Railway/Ports

Use Case

Introducing Samsung Private 5G, Customer E was able to transit the Ladle Transfer Car, which carried a high risk of accidents under manual operation, to autonomous driving. In addition, transport cranes that previously required onboard operators have been changed to be controlled unmanned and remotely. These changes significantly enhance operational stability and productivity through precise control enabled by ultra-low latency.

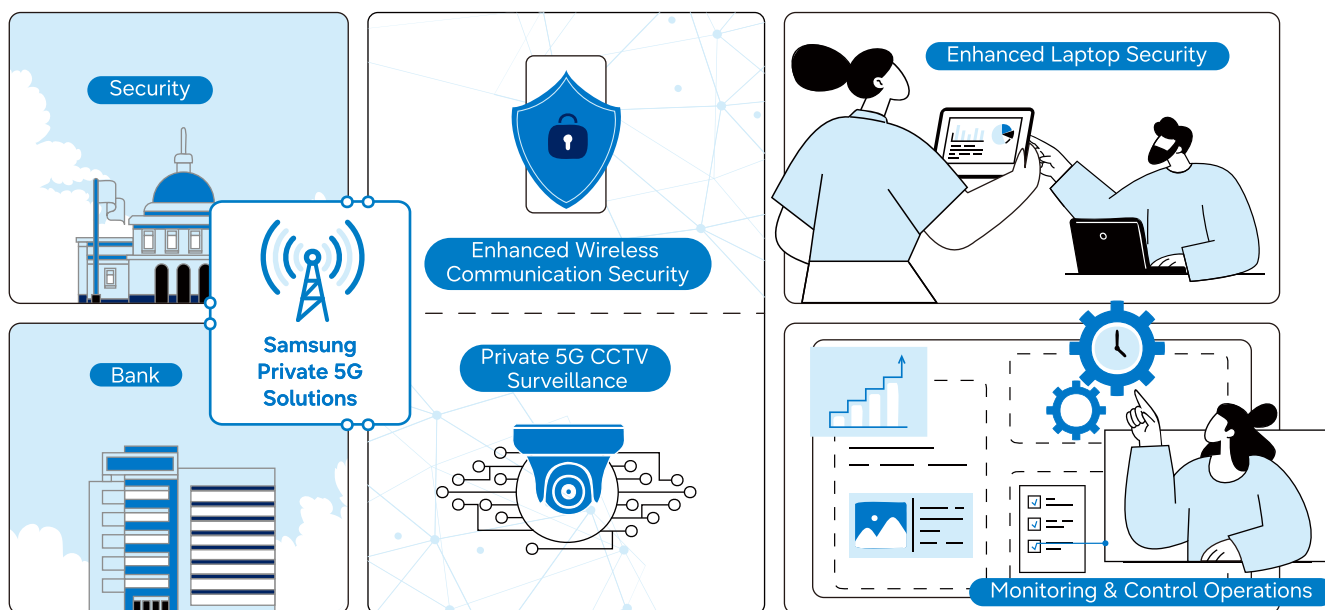


* PTT : Push To Talk

Government & Finance

Smart office

Use Case



Traditionally, government and financial institutions have avoided Wi-Fi networks in favor of wired intranets due to strict security requirements. By adopting Samsung Private 5G, Customer F was able to secure wireless communications and laptop security, while also managing monitoring and control operations through real-time CCTV video.

Construction

Due to frequent site changes and network blind spots, establishing stable connectivity in construction sites was highly challenging. Samsung Private 5G solved this problem for Customer G by enabling FHD CCTV site monitoring, equipping 5G safety vests (HD camera / PTT) on hazardous areas, and managing on-site 5G tablets for supervision – ultimately driving down installation and operational costs by over 30%.



* HD (High Definition) : 1280x720 Pixel / FHD (Full High Definition) : 1920x1080 Pixel

Defense

Samsung Private 5G enabled real-time tactical control for Customer H through FHD vehicle CCTV, location tracking, and video display integration. Replacing wired sensors with wireless ones at military fuel depots also enabled real-time fuel monitoring, even for mobile tanks. Furthermore, 5G IoT sensors enabled real-time collection and management of detailed data from chemical safety equipment and indoor air quality monitoring systems, which were previously managed through wired on/off-level controls.



SAMSUNG

Private 5G Use Case



Homepage

www.samsung.com/global/business/networks



YouTube

[Youtube.com/SAMSUNG5G](https://www.youtube.com/SAMSUNG5G)

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