



Key Emerging P5G Use Cases and Business Outcomes



Cisco Knowledge Network

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Today's Presenters



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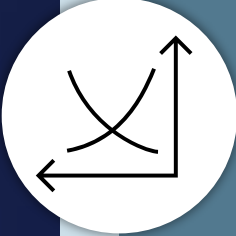
Webinar



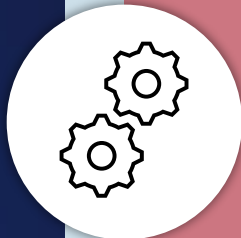
Unlock the power of private 5G: top applications and key business outcomes



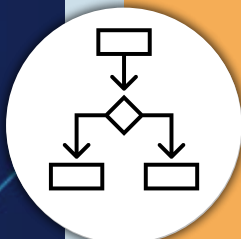
Ibraheem Kasujee
Senior Analyst



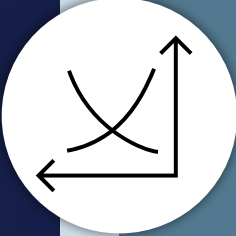
Private networks: market overview



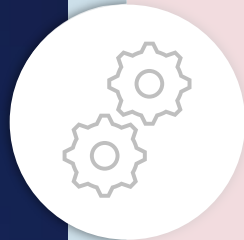
Private 5G: key sectors and applications



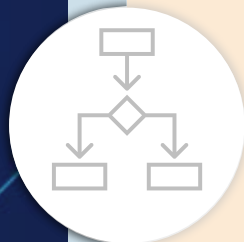
Private 5G: key business outcomes



Private networks: market overview



Private 5G: key sectors and applications



Private 5G: key business outcomes

Analysys Mason tracks the private LTE/5G networks market in our Private Networks programme



Data trackers

- Data sheets that collect key public metrics and information on private networks
- Short reports that analyse the key trends emerging from our trackers



Forecasts

- Forecasts for number of private networks and private network spend, split by region, technology and sector

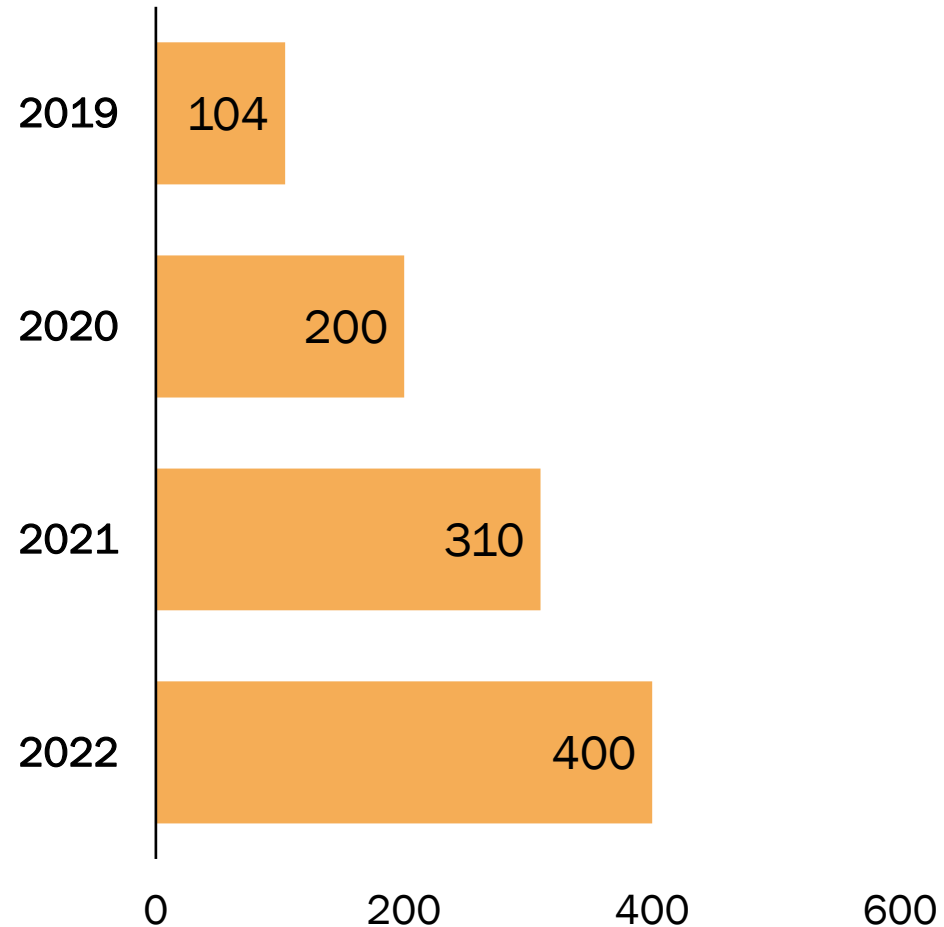


Strategy reports and commentary

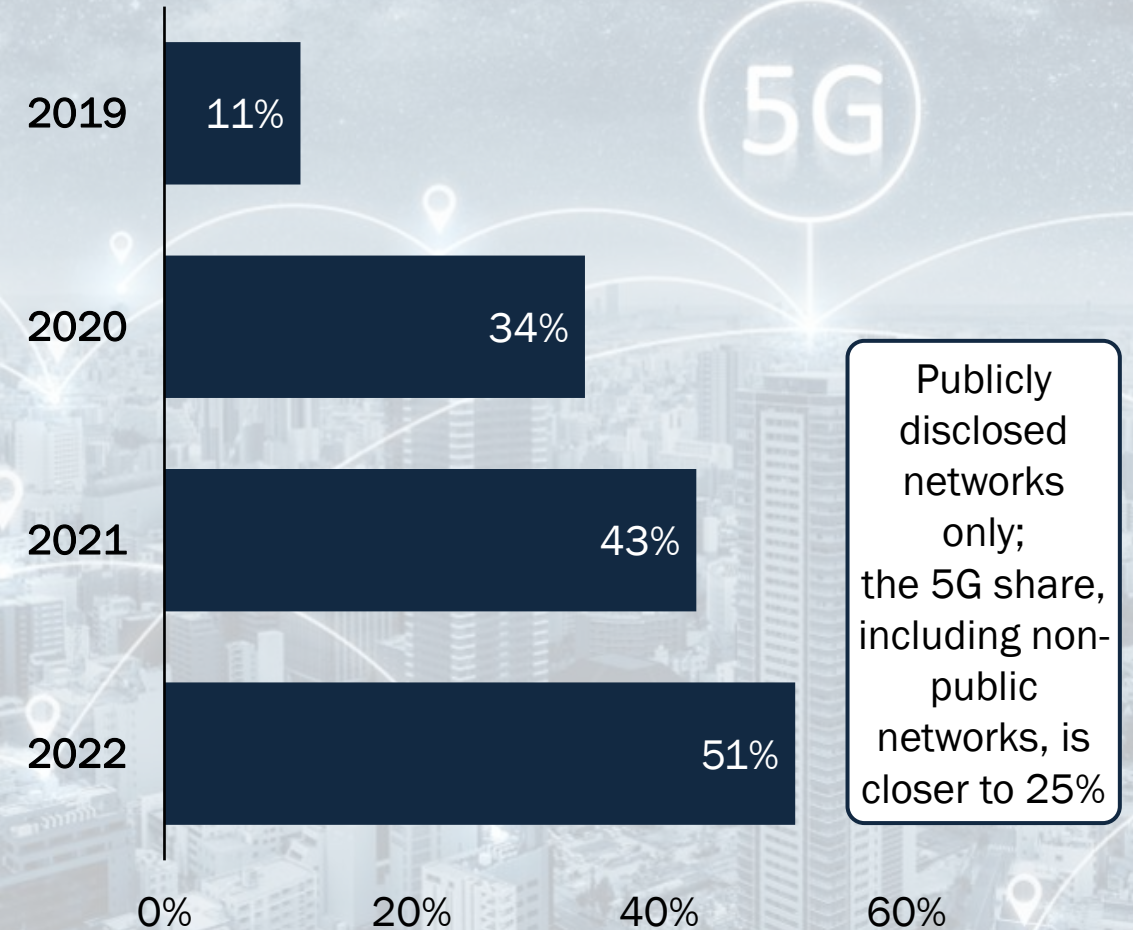
- Strategy reports on private networks ecosystem, sector insights and adjacent technologies
- Surveys and interviews of enterprises
- Operator and vendor case studies

The private networks market is nascent, but is growing rapidly

Number of private network announcements in the public domain, worldwide, 2019–2022



5G share of total private network announcements, worldwide, 2019–2022



The private networks market is nascent, but is growing rapidly

Number of networks worldwide

2021: 1900
networks

CAGR
65%

2027: 39 000
networks

Regional share of networks in 2027

North America

7000

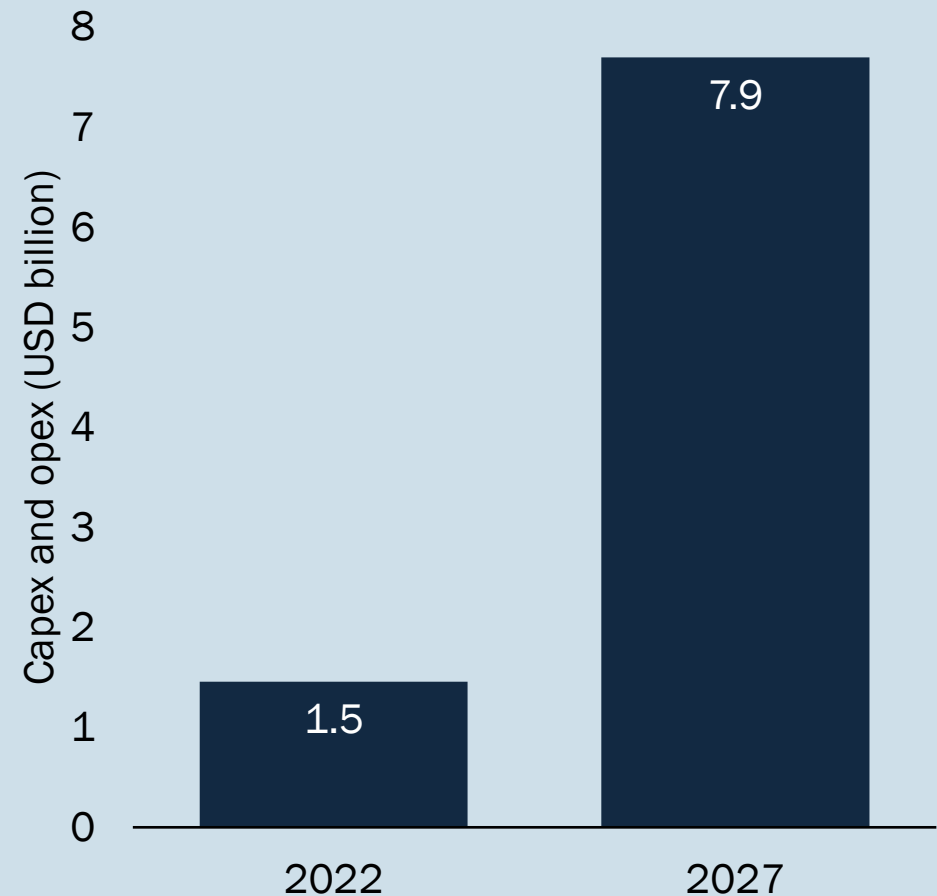
Western Europe

8000

Emerging
Asia-Pacific

16 000

Network spend on private LTE/5G networks, worldwide, 2022 and 2027



Enterprises are using private networks to digitise their operations and to connect new applications

Drivers



Digitisation



Replace aging technology



Connect new applications



Boost IoT growth

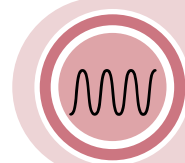
Barriers



Cost



Device availability



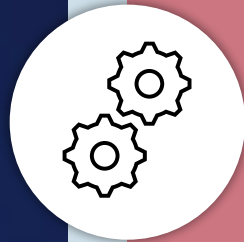
Spectrum availability



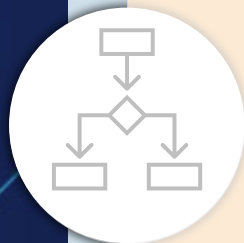
Scalability



Private networks: market overview



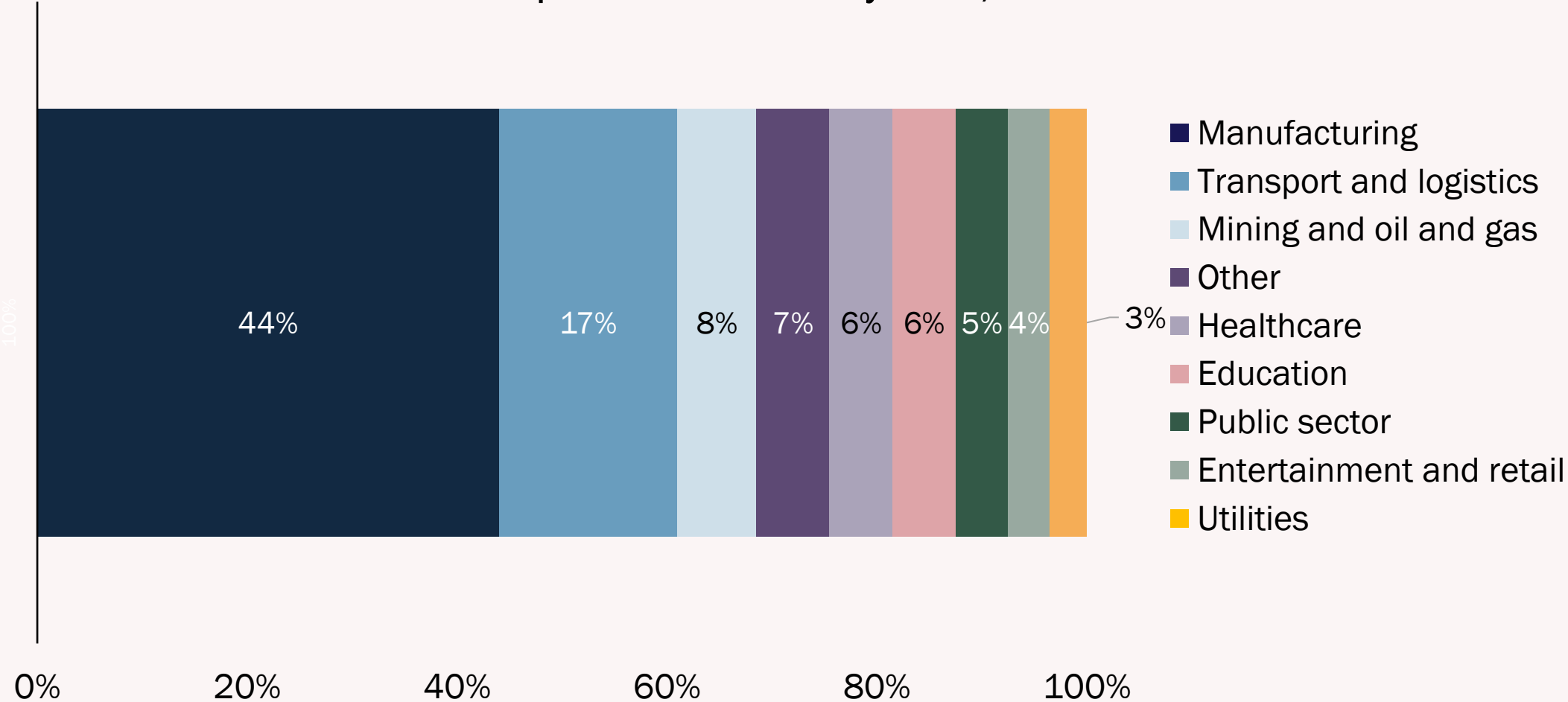
Private 5G: key sectors and applications








Private 5G: key business outcomes

Manufacturing, transport and logistics account for over 60% of private 5G deployments

Share of private 5G networks by sector, 2022



Industrial sectors lead the private 5G market today, but other sectors will follow

	Example use cases
Manufacturing 	AGVs, inspection cameras, machine tools and robotics
Transport and logistics 	AGVs, asset tracking and industrial equipment
Mining and oil and gas 	AGVs, autonomous vehicles and push-to-talk/voice communications
Healthcare 	Connected medical devices, remote examinations and remote surgery
Public sector 	Occupancy management, drones and security cameras

Why is private 5G suited to these sectors?



Manufacturing

- High-bandwidth, low latency use cases
- Large, multi-national enterprises



Transport and logistics

- Need outdoor coverage
- Separate passenger and worker connectivity
- Automated vehicles and machinery



Mining and gas and oil

- Remote locations; extensive coverage needed
- Worker safety and security are concerns



Healthcare






- Difficulty using public cellular
- New applications – high bandwidth and low latency



Public sector

- Coverage requirements in campuses and public areas
- Added security of a dedicated network

Private 5G is particularly suited to use cases with high bandwidth and low latency requirements

	Typical services	Sectors
Industrial equipment 	Connected cranes, machine tools and robotics	Manufacturing, mining and oil and gas and transport and logistics
Automated/autonomous vehicles 	AGVs and autonomous vehicles	Manufacturing, mining and oil and gas and transport and logistics
Location services 	Baggage trackers and monitoring tags	Public sector, mining and oil and gas and transport and logistics
Massive data download 	CCTV cameras, drones and medical devices	Healthcare and public sector
Sensors and inspection 	Production line sensors, Inspection cameras	Manufacturing and transport and logistics

Why is private 5G suited to these use cases?



Industrial equipment

- Automation
- Cheaper than wired machinery



Autonomous vehicles

- Wi-Fi/fixed connectivity can be limited
- Outdoor vehicles



Location services

- 5G can provide location to within centimetres
- Outdoor coverage



Massive data download

- 5G backhaul
- Real-time data download of high bandwidth applications

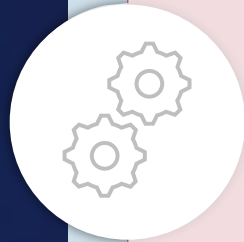


Sensors and inspection

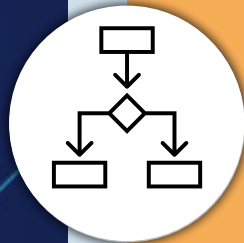
- Automate production line processes
- Remote inspections of sites



Private networks: market overview



Private 5G: key sectors and applications



Private 5G: key business outcomes

Private 5G can enable automation and bring significant cost savings

Production line improvements



Use 5G-connected sensors on factory production lines to identify and resolve issues on the production line in real time.

- **Steel manufacturer in the USA.** Reduced the unplanned downtime in the manufacturer's scrap yard by approximately 70%.
- **Large manufacturer in India.** Reductions in the mean time to repair (MTTR) and the mean time between failures (MTBF).

Automation



Reduce the number of workers that are needed on factory floors or remote locations (such as oil rigs). Large vehicles and machinery such as cranes can be operated remotely.

- **Mining firm in Latin America.** Autonomous drills/trucks: 15% increase in equipment useful life.
- **Shipbuilding firm in China.** Saved CNY10 million (USD1.5 million) a year in labour and raw material costs.

Private 5G can help to improve worker safety and reduce the energy consumption of sites and buildings

Safety and security



Track workers in remote or dangerous locations and provide reliable push-to-talk and voice communications.

Use automated vehicles and equipment instead of human operators to remove workers from risky areas.

- **Chemical manufacturer in South Korea.** Real-time tracking of all workers in a chemical factory, and connected access beacon for evacuation communications.

Energy savings



Reduce the energy consumption of industrial sites. Connect lighting, energy meters, HVAC equipment and monitor water consumption to realise energy savings.

- **Factory in France.** Potential reduction in energy consumption of 50%.
- **Network equipment provider in Europe.** 25% decrease in energy consumption; 75% decrease in wastewater at factory.

Conclusion

Why should enterprises invest in private 5G now?



Many enterprises that have deployed commercial networks are already realising benefits of private 5G, ranging from automation-related savings to improved energy efficiency

1



Understand the technical requirements of private networks and how to tackle them, which will put enterprises in a strong position to scale up when the market matures

2



Opportunity to develop new applications

3



First-mover advantage: get ahead of the competition

4

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Analysys Mason is the world's leading management consultancy focused on TMT, a critical enabler of economic, environmental and social transformation.

We bring together unparalleled commercial and technical understanding to deliver bespoke consultancy on strategy, transaction support, transformation, regulation and policy, further strengthened by globally respected research.

Our clients value our advice which combines deep domain knowledge with global reach and local insight into markets to help them achieve meaningful business results.

We are committed to our clients, employees and communities – contributing to a world where technology delivers for all.

Our research services



Consumer Services

- Fixed Broadband Services
- Mobile Services
- Fixed-Mobile Convergence
- Smart Devices
- Future Comms
- Video, Gaming and Entertainment
- Digital Services



Networks

- Next-Generation Wireless Networks
- Wireless Infrastructure Strategies
- Fibre Infrastructure Strategies
- Operator Investment Strategies
- Telecoms Strategy and Forecast
- Transport Network Strategies



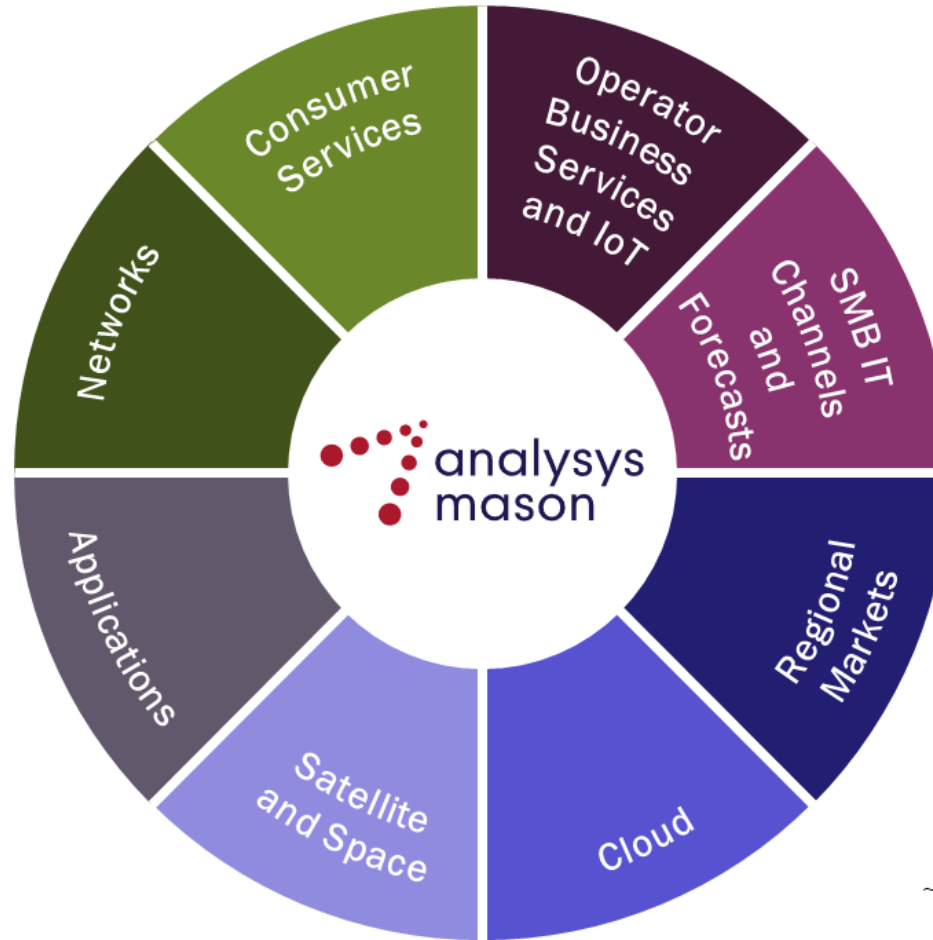
Applications

- Network Automation and Orchestration
- Customer Engagement
- Monetisation Platforms
- Digital Experience
- Automated Assurance
- Service Design and Orchestration
- Telecoms Software Market Shares



Satellite and Space

- Satellite Communications
- Space Applications and Infrastructure



Operator Business Services and IoT

- Enterprise Services
- SME Services
- IoT Services
- Private Networks



SMB IT Channels and Forecasts

- Cyber Security
- SMB Technology Forecaster



Regional Markets

- Global Telecoms Data and Financial KPIs
- Americas
- Asia-Pacific
- Middle East and Africa
- European Core Forecasts
- European Telecoms Market Matrix
- European Country Reports



Cloud

- Cloud Infrastructure Strategies
- Data, AI and Development Platforms
- Edge and Media Platforms
- Multi-Cloud Networking



DataHub

- ~2800 forecast and 280+ historical metrics
- Regional results and worldwide totals
- Operator historical data



analysismason.com/what-we-do/practices/research

Our areas of expertise



Strategy

- Corporate growth strategy
- Business unit strategy
- Infrastructure strategy



Regulation and policy

- Network and platform
- Public sector broadband intervention
- Accelerating digital transformation of society
- Price controls and cost modelling
- Regulatory accounting
- Regulatory benchmarking and analysis
- Spectrum management and policy
- Expert witness and litigation support
- Postal regulation and policy



Transaction support

- Commercial due diligence and market review
- Technical due diligence
- Post-merger integration
- Periodical business monitoring and loan technical advisory
- Opportunity scouting and pre-deal support



Transformation

- Business transformation
- Digitalisation
- Operational excellence
- Data, BI, steering and insights
- Change and programme management
- Sustainability



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Cisco Private 5G

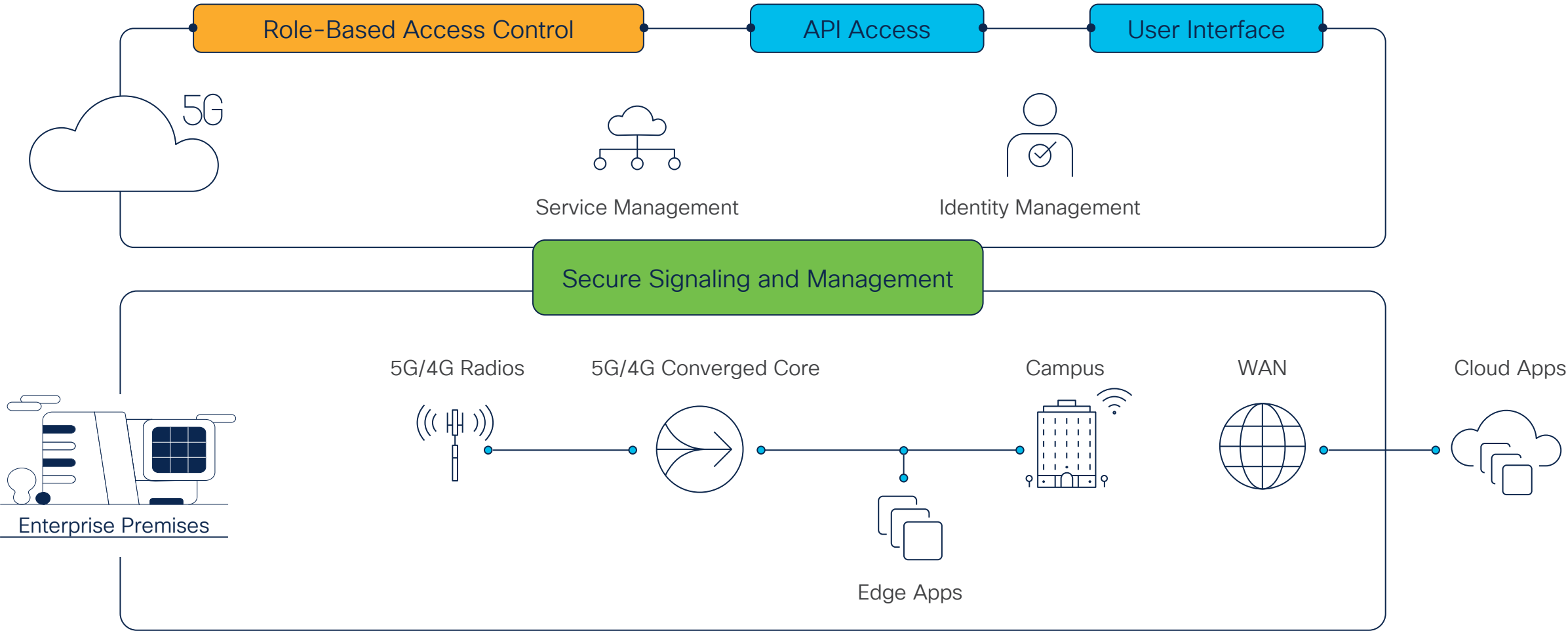
Simple. Intuitive. Trusted.

Rick Galatioto, Engineering Product Manager

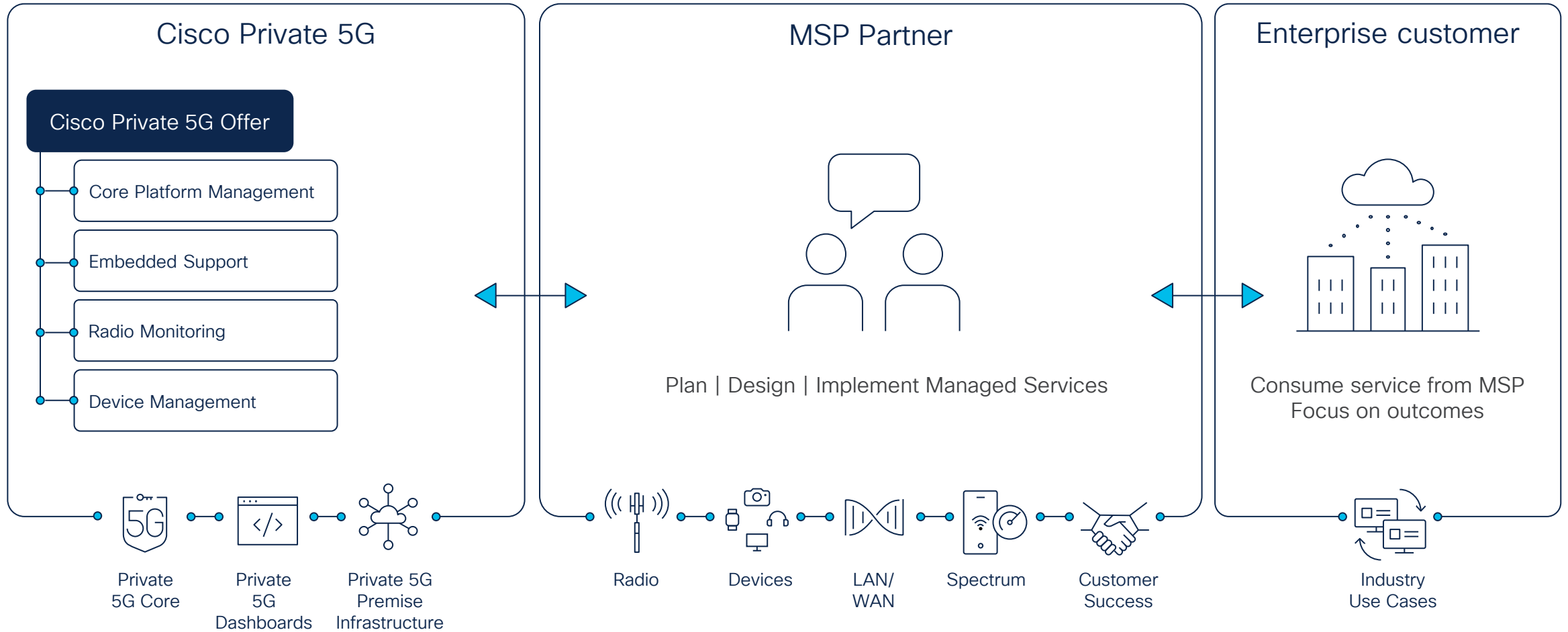
April 2023



Making Private 5G simple and secure

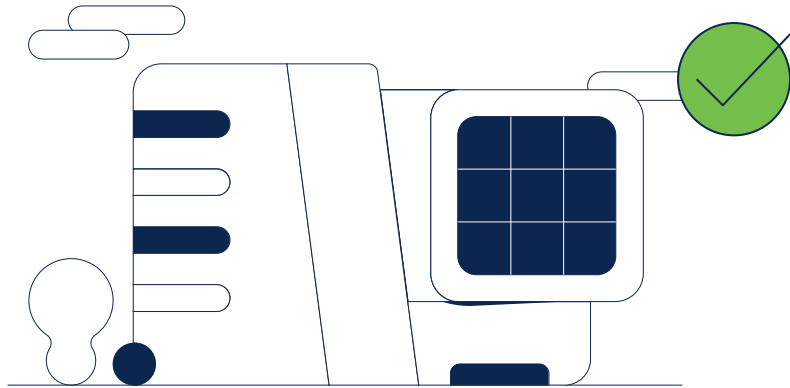


Partner-led GTM



Designed for the enterprise and ready to integrate

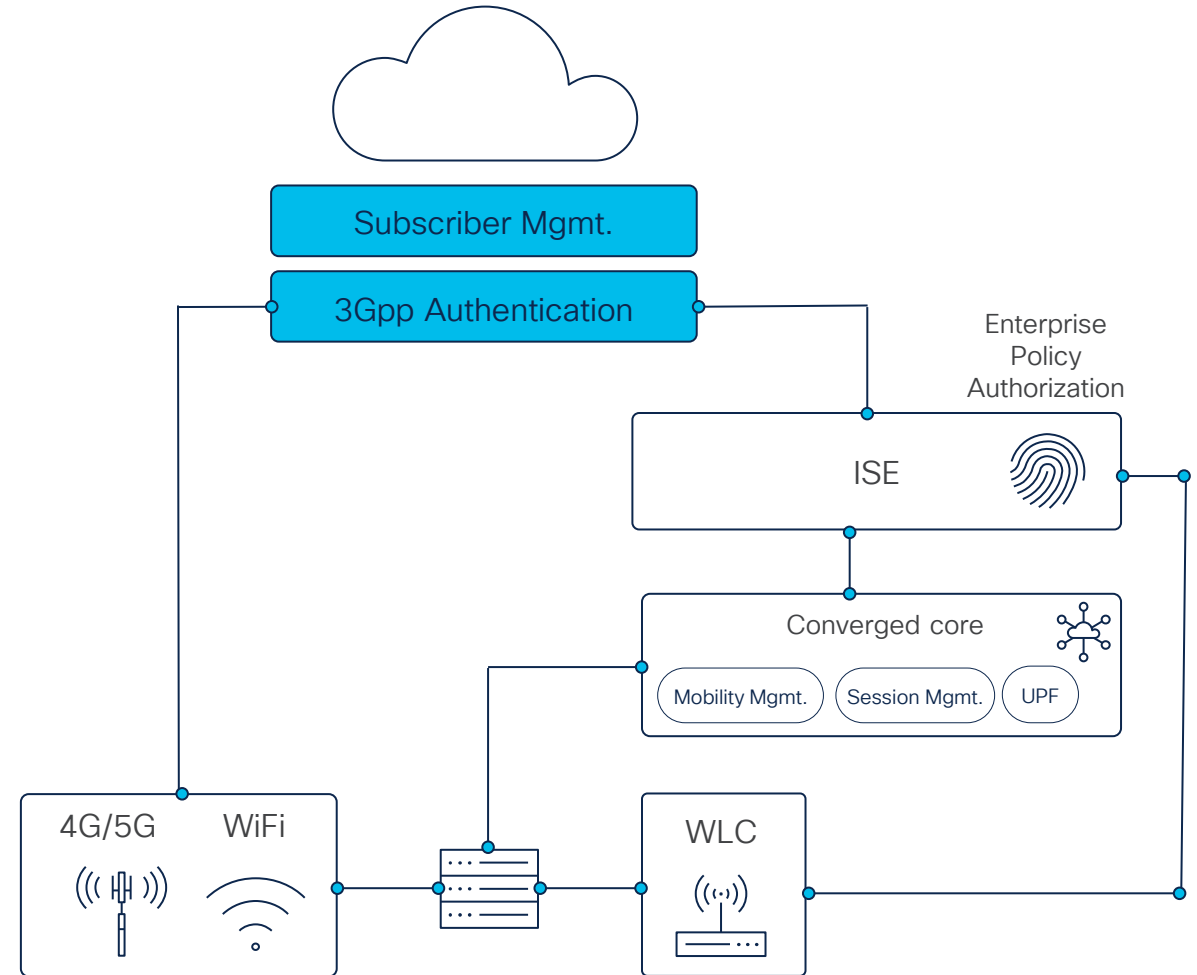
For example: Identity and Policy



Unified enterprise policy

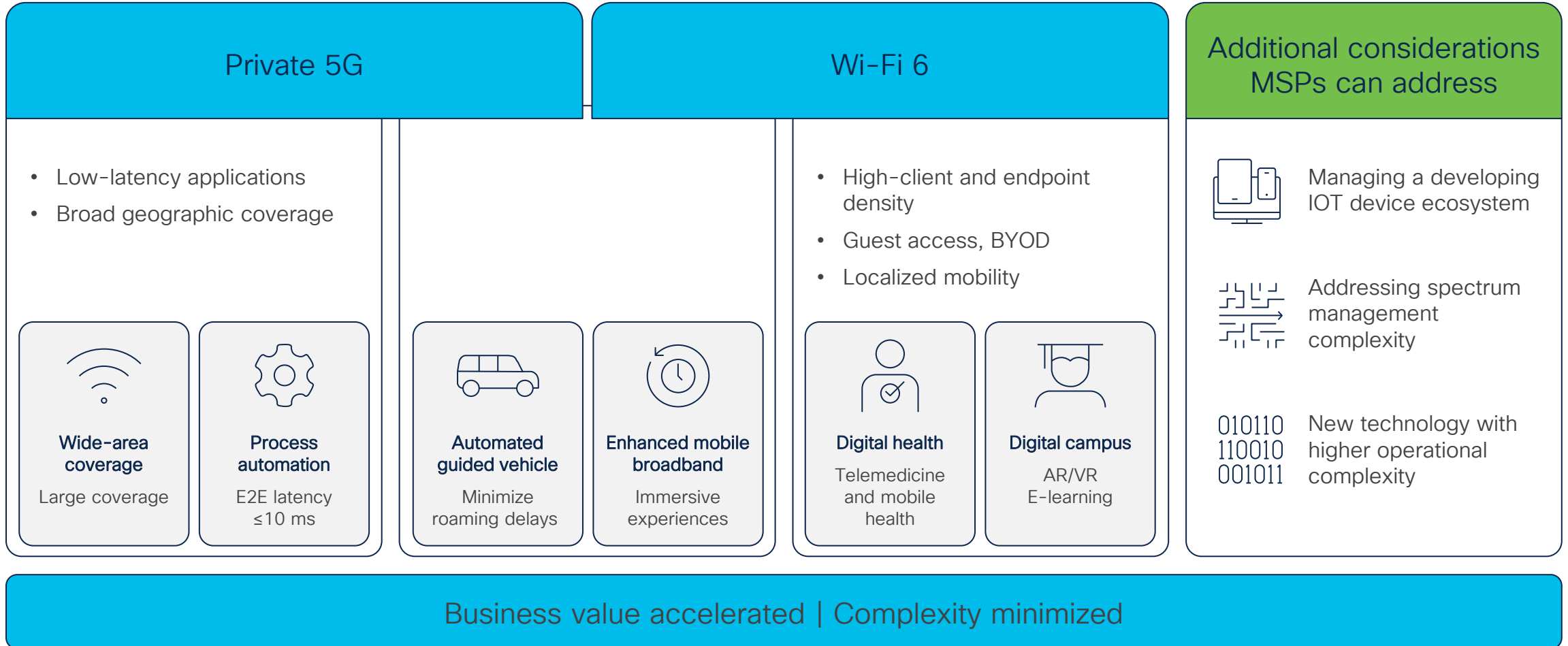
Single point for identity-based enterprise policies

- For Private 5G, Wi-Fi, and Wired Networks

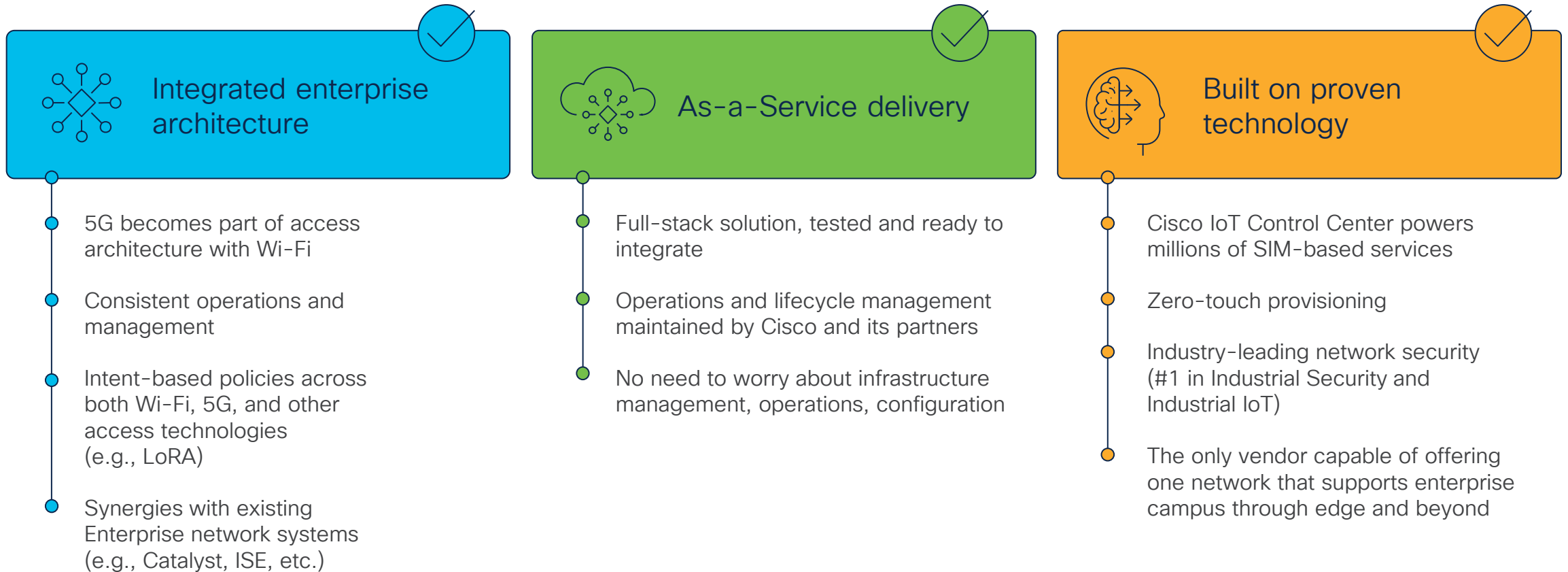


Complementary technologies

Wi-Fi and Private 5G



The Cisco differentiator for Private 5G



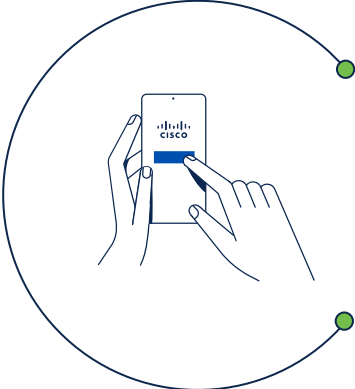
Summary



Enterprise-ready private 5G network



Simple like Meraki Wi-Fi



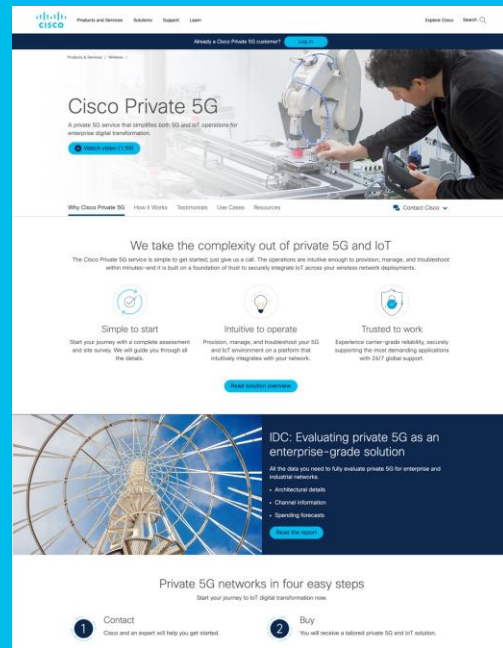
Trusted by enterprises with unified identity and policy via ISE



Expertise delivering mission-critical use cases

For more information visit

cisco.com/go/private5g



Unlock the Power of Private 5G: Top Applications and Key Business Outcomes

Sponsored by Cisco



Ibraheem Kasujee and Tom Rebbeck



Questions?





The bridge to possible