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Realising the Private 5G Opportunity

A webinar presented by Kaleido Intelligence and iBASIS

15th June 2022

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Speakers

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Kaleido Intelligence

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Founder & Research Lead

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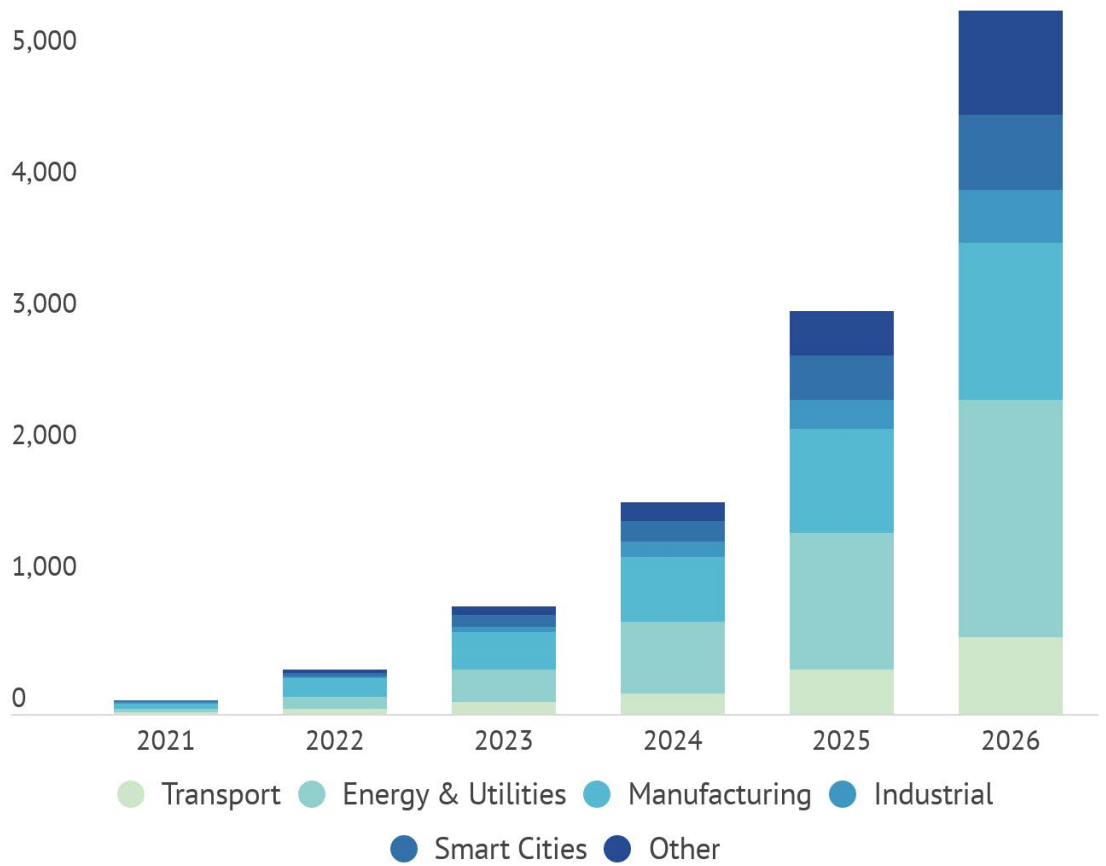
Private 5G Growth Drivers

Private 5G Capabilities

- 10x connected device capacity per cell.
- Gigabit throughput using a single antenna, as opposed to 4 antennae using LTE.
- Potential for sub-millisecond latency in optimal conditions and 10x reduction in latency compared to LTE on average.
- Improved mobility and throughput reliability due to handover commands being issued earlier.
- Support for network slicing models for the use of existing, but logically separated public radio spectrum.
- Improved device positioning accuracy, with 3m indoor and 10m outdoor accuracy achievable 80% of the time.

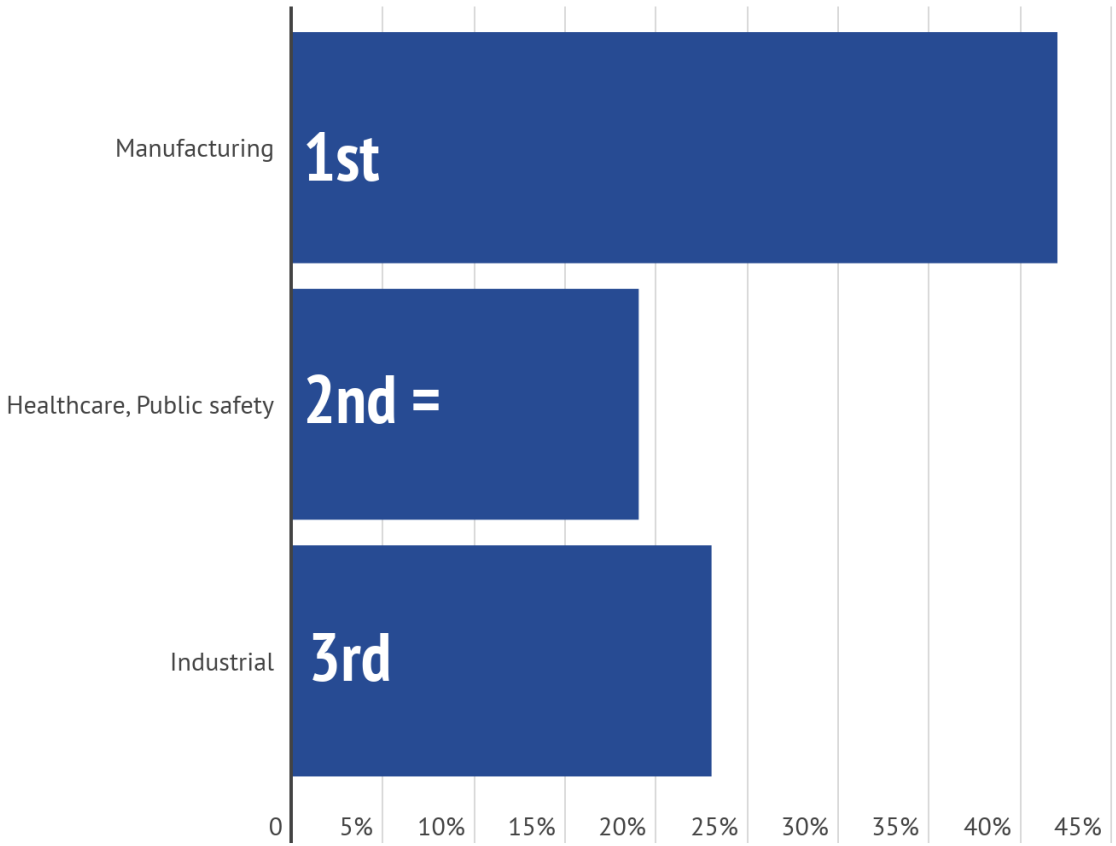
Global Private 5G Site Deployments, 2021-2026



Source: Kaleido Intelligence

Private 5G Growth Drivers

What are the top 3 segments that you believe have the highest potential for private 5G network deployments?



Source: Kaleido Intelligence

- Densification
- Throughput
- Latency

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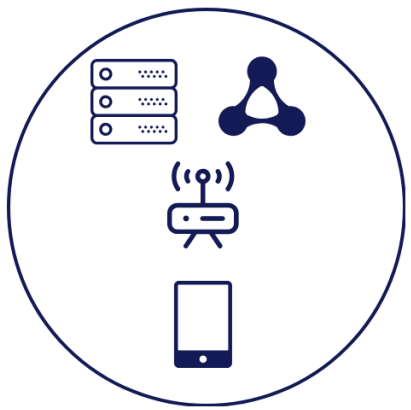
Private Network Evolution

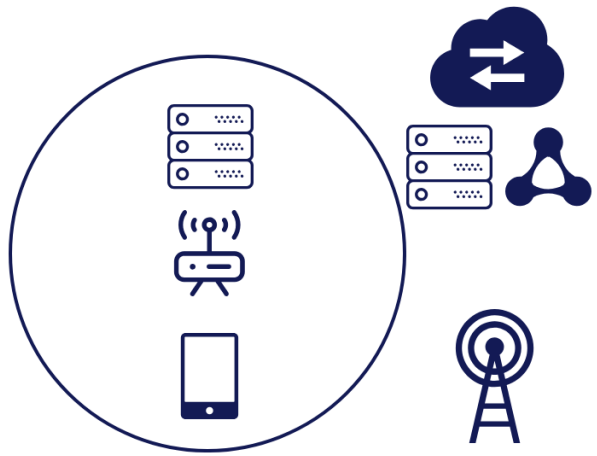
Standalone



Fully-isolated core, network & RAN

Managed services likely required

Hybrid



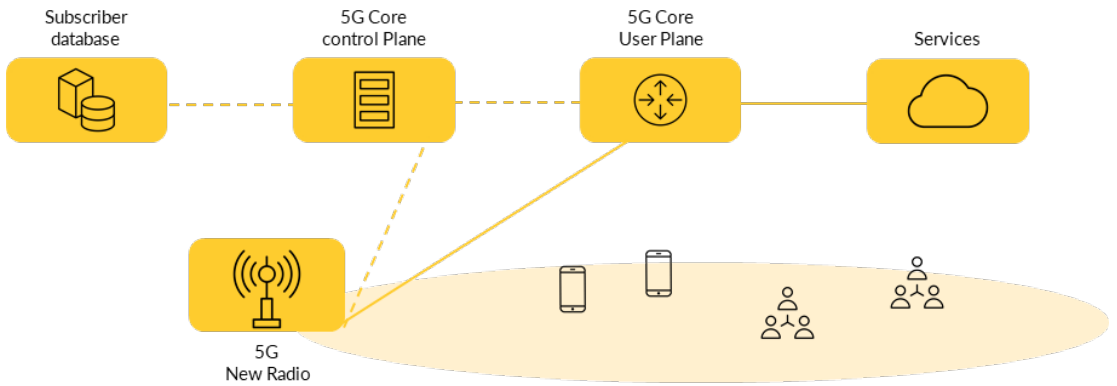
Cloud/virtualised core, may use shared RAN

User plane can be isolated for security

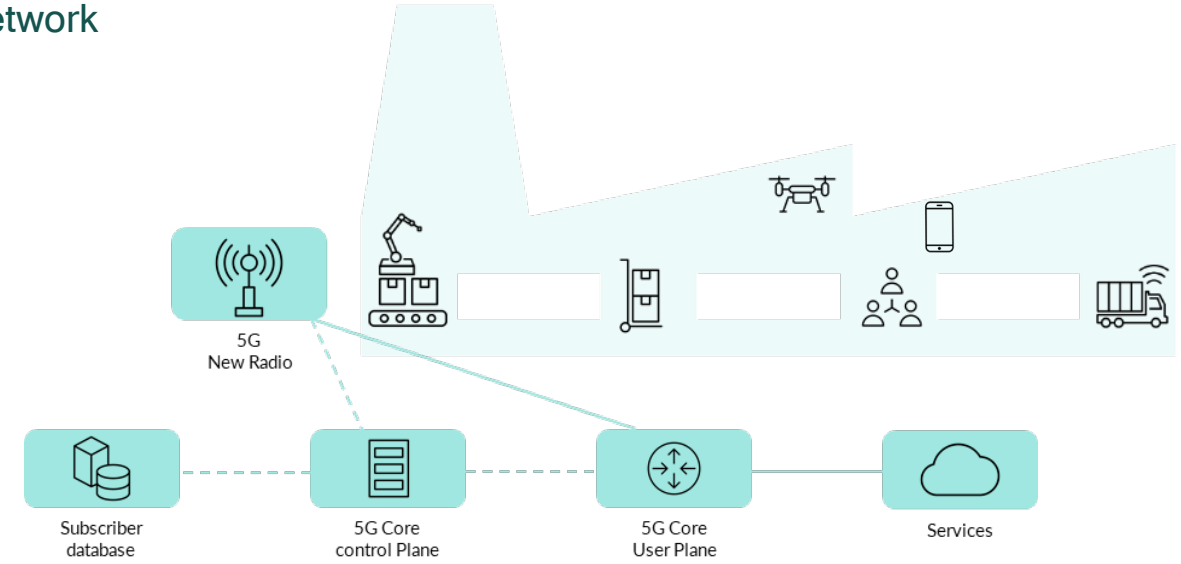
Roaming, authentication, security are key considerations in hybrid deployments

STANDALONE PRIVATE NETWORK

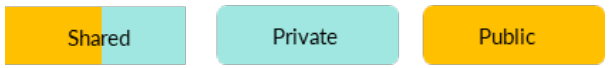
Public Network



Private Network

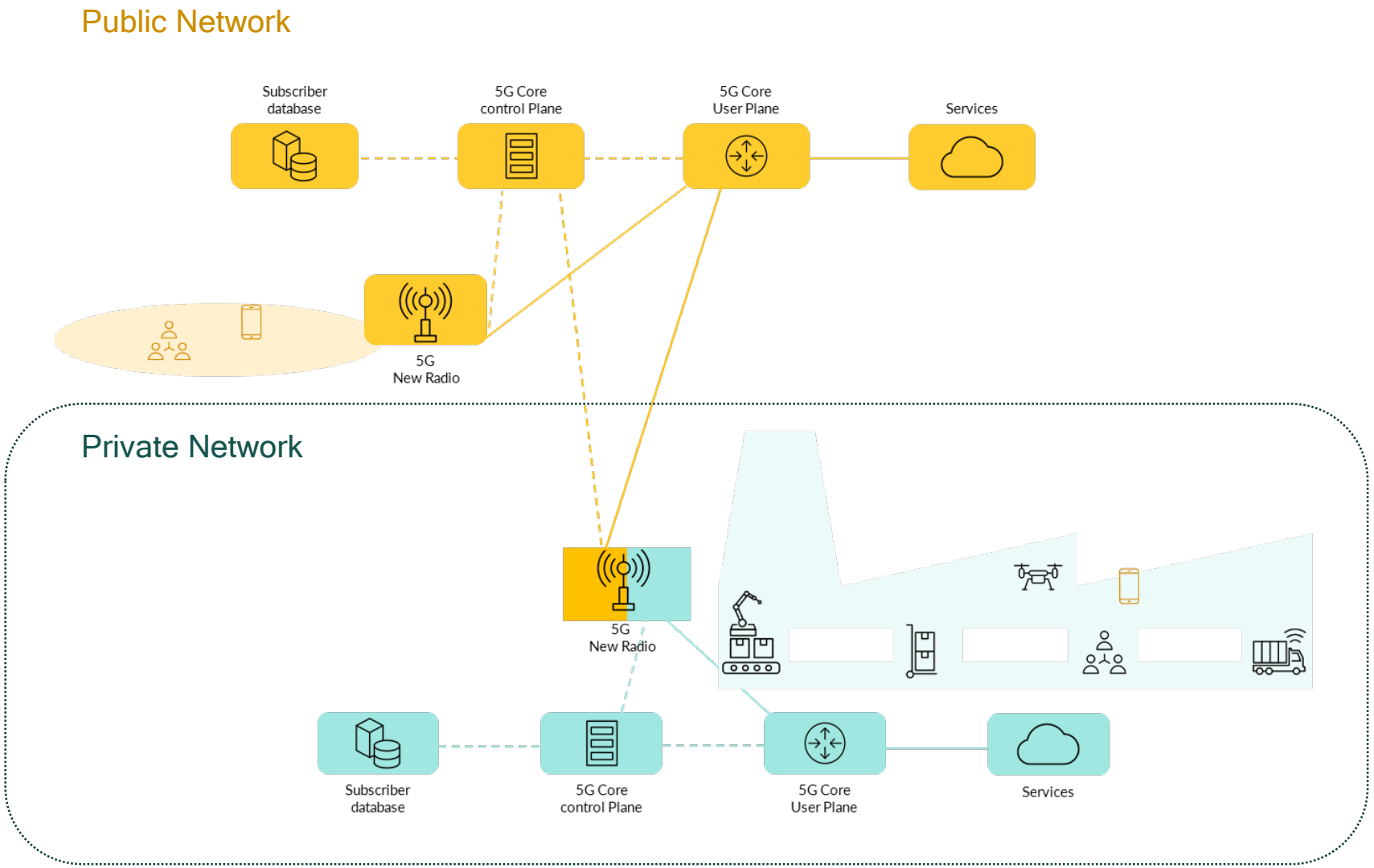


- Full isolation
- Private Spectrum
- On-premise
- Control of security and privacy
- Customization of QoS
- Low Latency
- Reliability



PRIVATE NETWORK WITH SHARED RAN

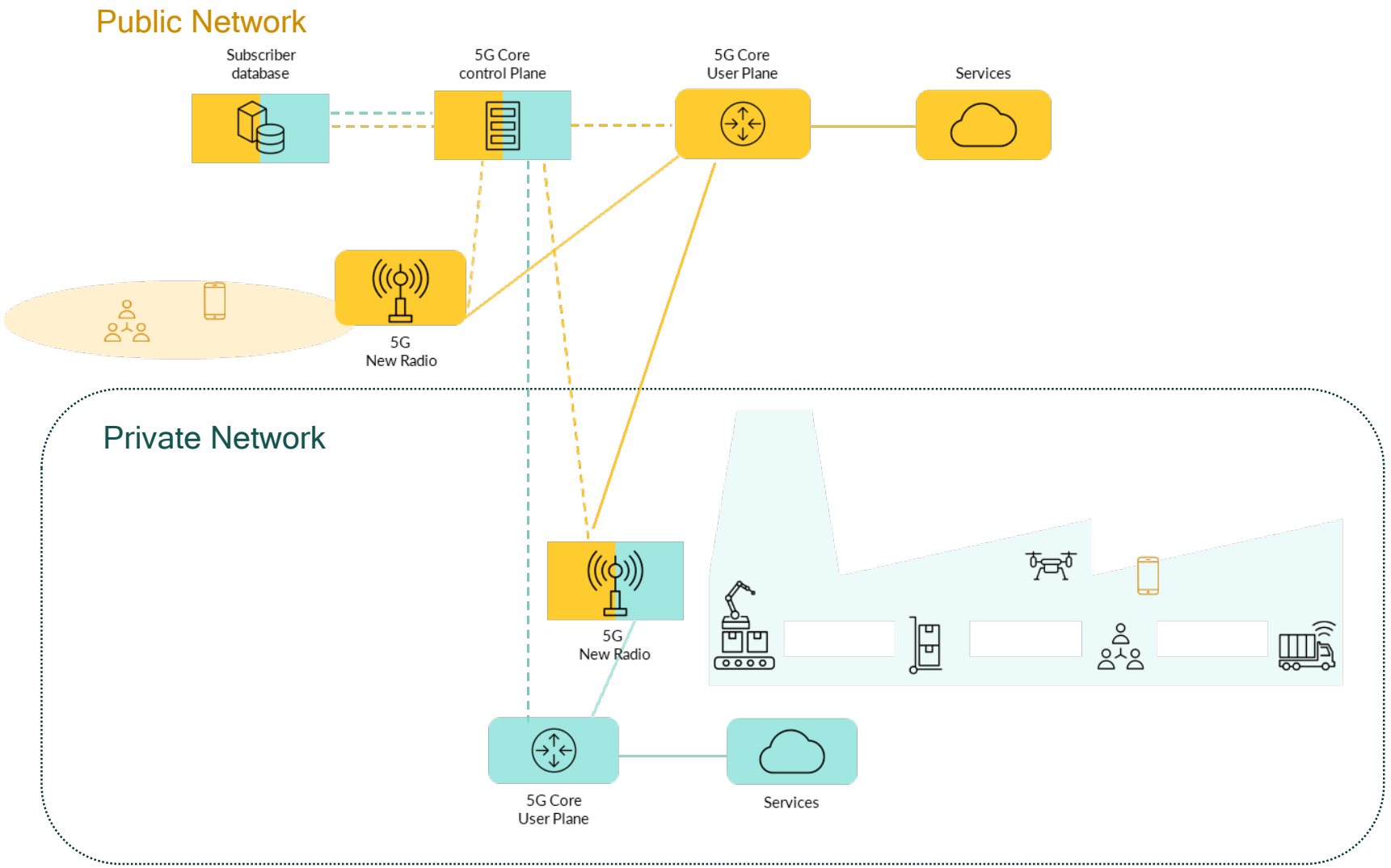
- RAN sharing
- Local Private spectrum or MNO's Licensed Spectrum
- On-premise Network Functions
- Confidentiality
- Security



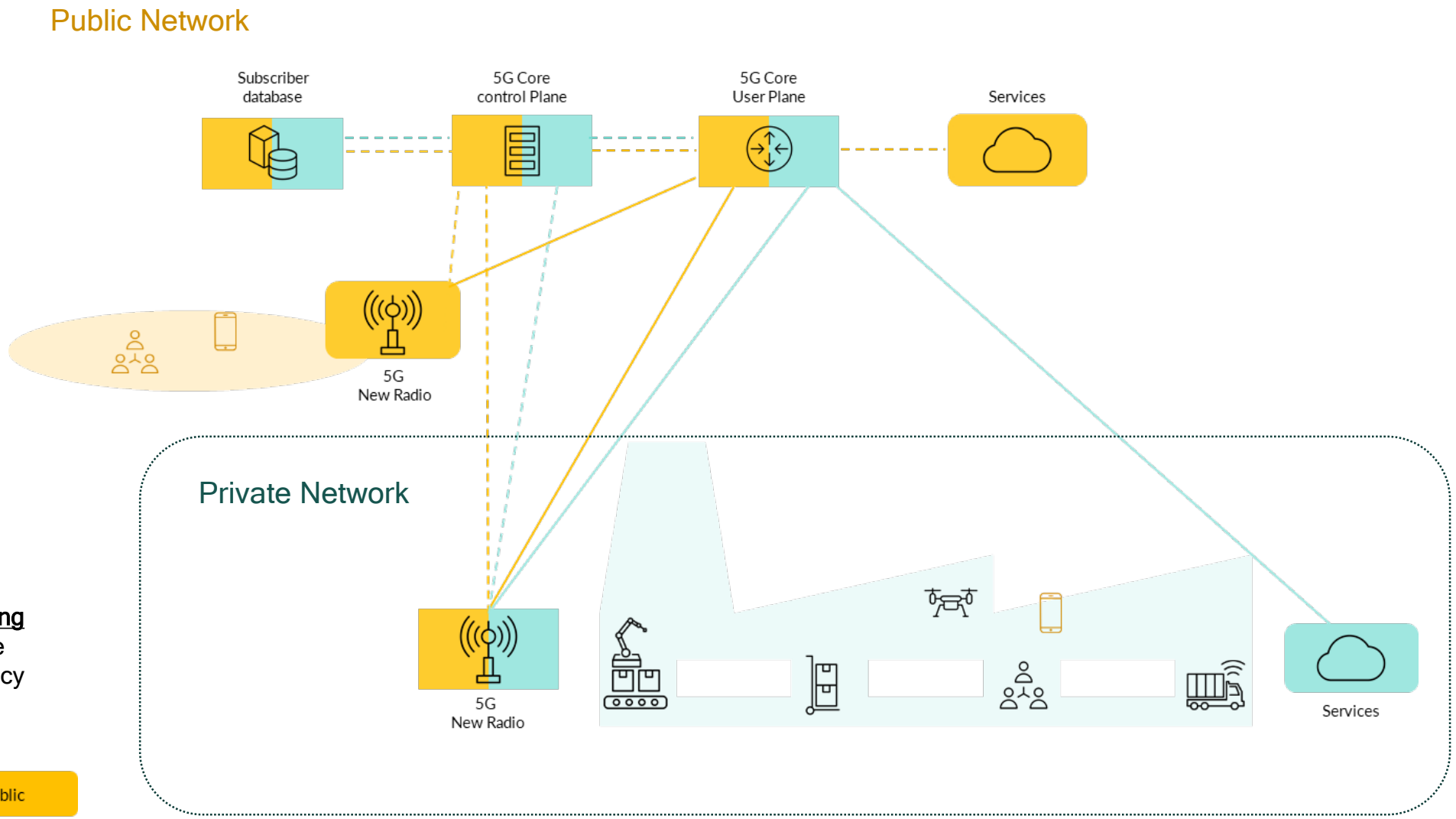
Shared | Private | Public

PRIVATE NETWORK WITH SHARED RAN AND CONTROL PLANE

- RAN sharing
- Local Private spectrum or MNO's Licensed Spectrum
- On-premise Data Plane
- Control Plane in the public MNO domain
- Devices are MNO's subscribers
- Operations information stored in MNO's domain
- Mobility and continuity of service



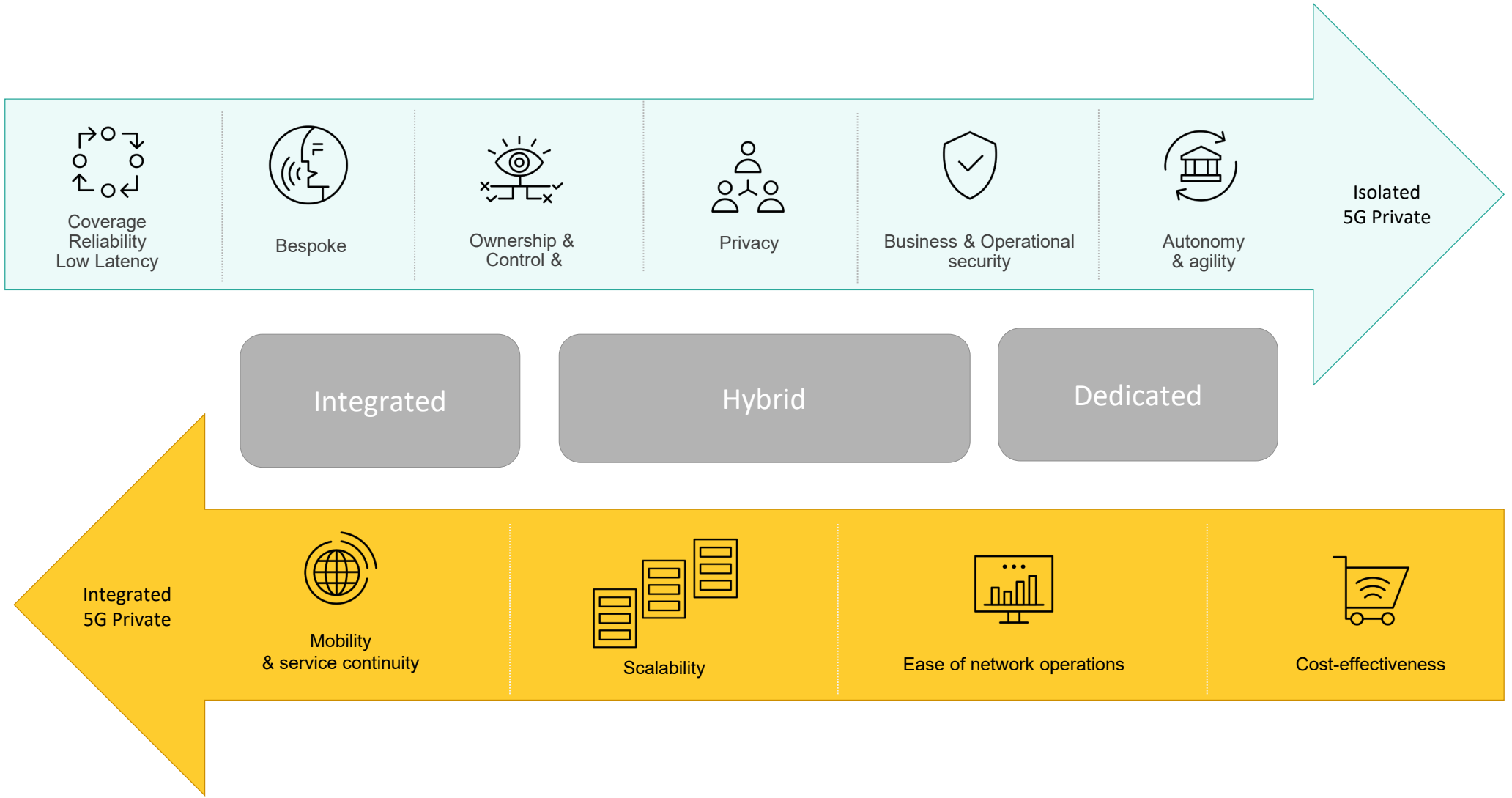
INTEGRATED PRIVATE NETWORK : SLICING



- RAN sharing
- MNO's Licensed Spectrum
- Entirely hosted Private Network
- Only 5G radio on-premise
- Logic separation of Private and Public traffic via **end-to-end slicing**
- Mobility and continuity of service
- MNO controls security and privacy
- Only OPEX

Shared | Private | Public

SMARTLY BUILDING 5G PRIVATE NETWORKS



Q&A

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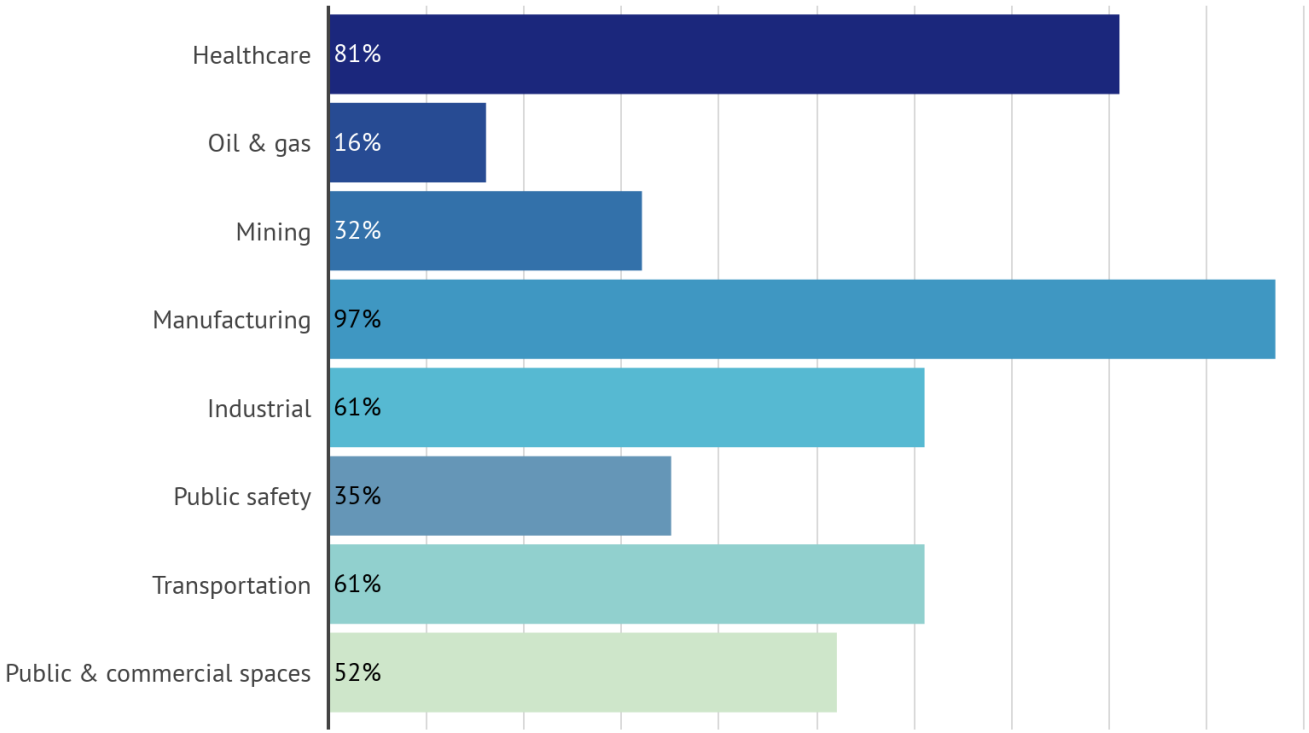
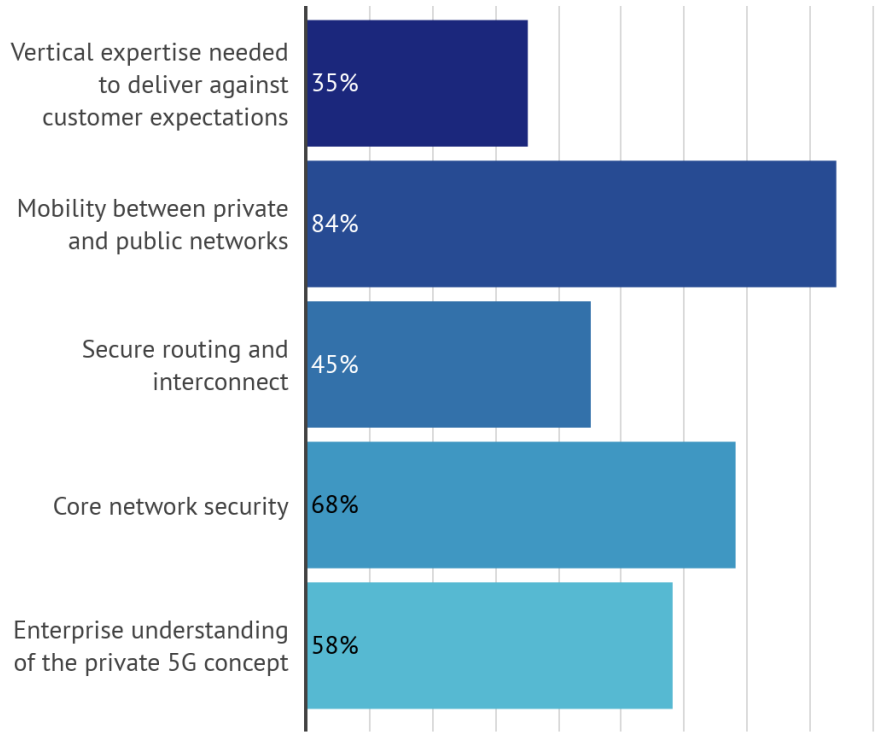
Private 5G Interconnect & IPX Role

Which 5G Private Network segments do you believe are most likely to require interconnect through IPX?



Source: Kaleido Intelligence

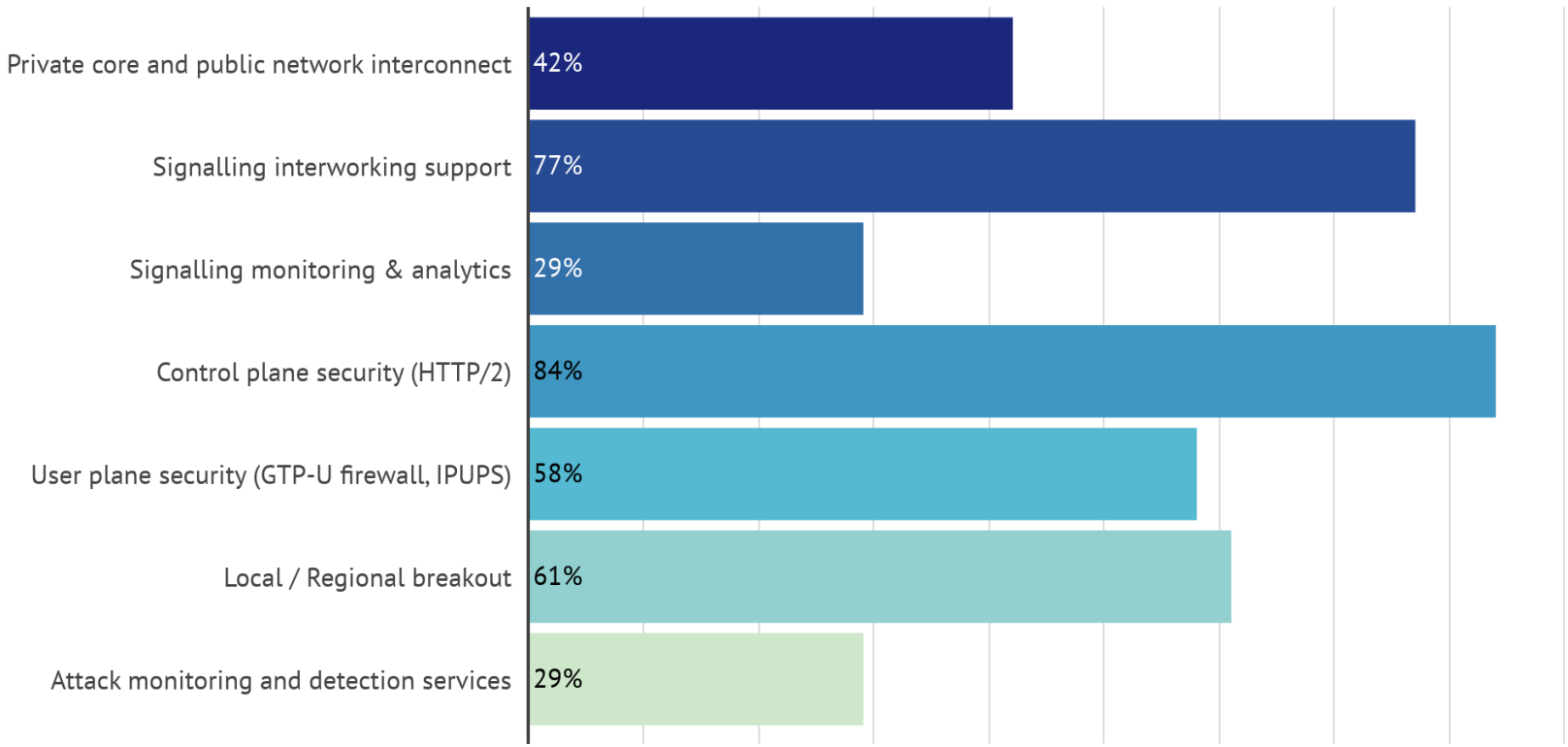
Aside from spectrum and hardware availability, what do you see as the main challenges in serving and deploying private 5G networks?



Source: Kaleido Intelligence

Private 5G Interconnect & IPX Role

What services do you expect from your IPX provider to support private 5G use cases?

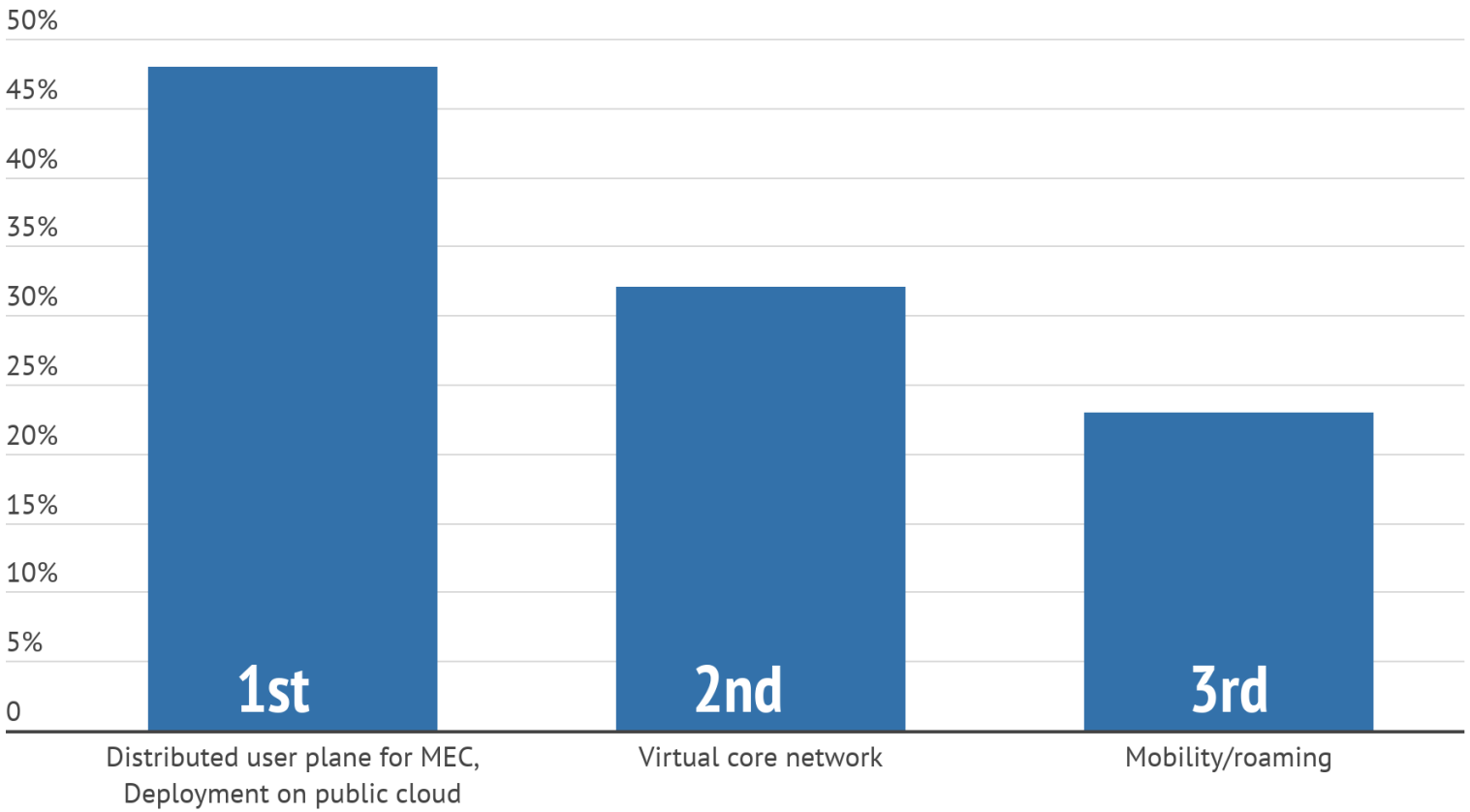


Source: Kaleido Intelligence

Control plane security, signalling interworking & local/regional breakout were viewed as key IPX services by survey respondents

Private 5G Security Challenges

What are the top 3 elements of a private 5G network deployment that you perceive as the most challenging to mitigate in terms of security risk?



Source: Kaleido Intelligence

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Private Cellular Network use cases are evolving and becoming more complex, while requirements are driving 5G demand over LTE. The IPX must be considered as a fundamental partner to aid in addressing connectivity and security requirements.

About the White Paper

This Private 5G Roaming white paper from iBASIS and Kaleido Intelligence highlights how CSPs must aim to understand the need for Private 5G over Private LTE, how the market in terms of verticals will adopt Private 5G, and what this means in terms of solution development and partnership requirements.. Kaleido Intelligence surveyed nearly 100 respondents across tier-1 operators around the world to learn about their 5G roaming, security and private network go-to-market strategies, and commercial and technical requirements from an IPX and security perspective.

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Q&A

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