



Azure private MEC & Private 5G Core

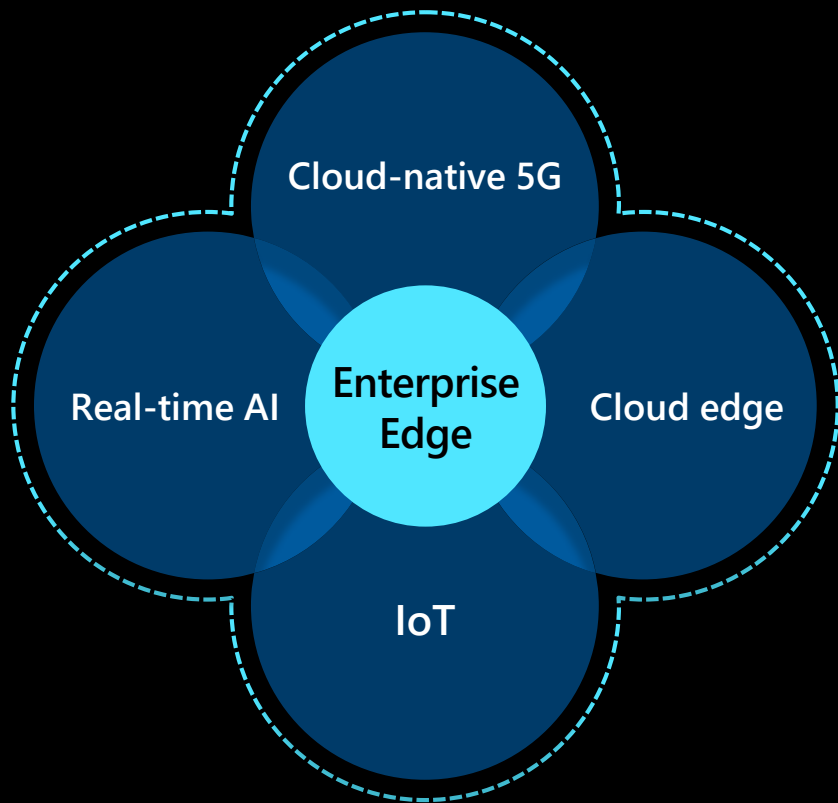
Azure for Operators

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Technology meets Industry 4.0 at the edge



Enterprise edge combines technology innovations to deliver real business value

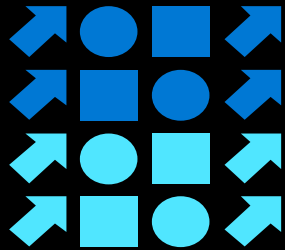
75% of data will be produced and analyzed at the edge by 2025¹

1000+ private networks already deployed, growing to 16000+ by 2025²

1. Today around 10% of enterprise-generated data is created and processed outside a traditional centralized data centre or cloud. By 2025, Gartner predicts this figure will reach 75%.

2. Private LTE and 5G Networks 2021 - Kaleido_Intelligence_July 2021

Azure value for enterprise delivery



Automated service delivery
and lifecycle management
across 100-100K sites



Consistent management
experience across all Azure
platforms and services



Device to cloud Zero Trust
Security frameworks, data
privacy and SW compliance

*Azure provides trusted global delivery and automation at scale for enterprises,
hard to replicate by traditional be-spoke solutions*

Introducing Azure private MEC

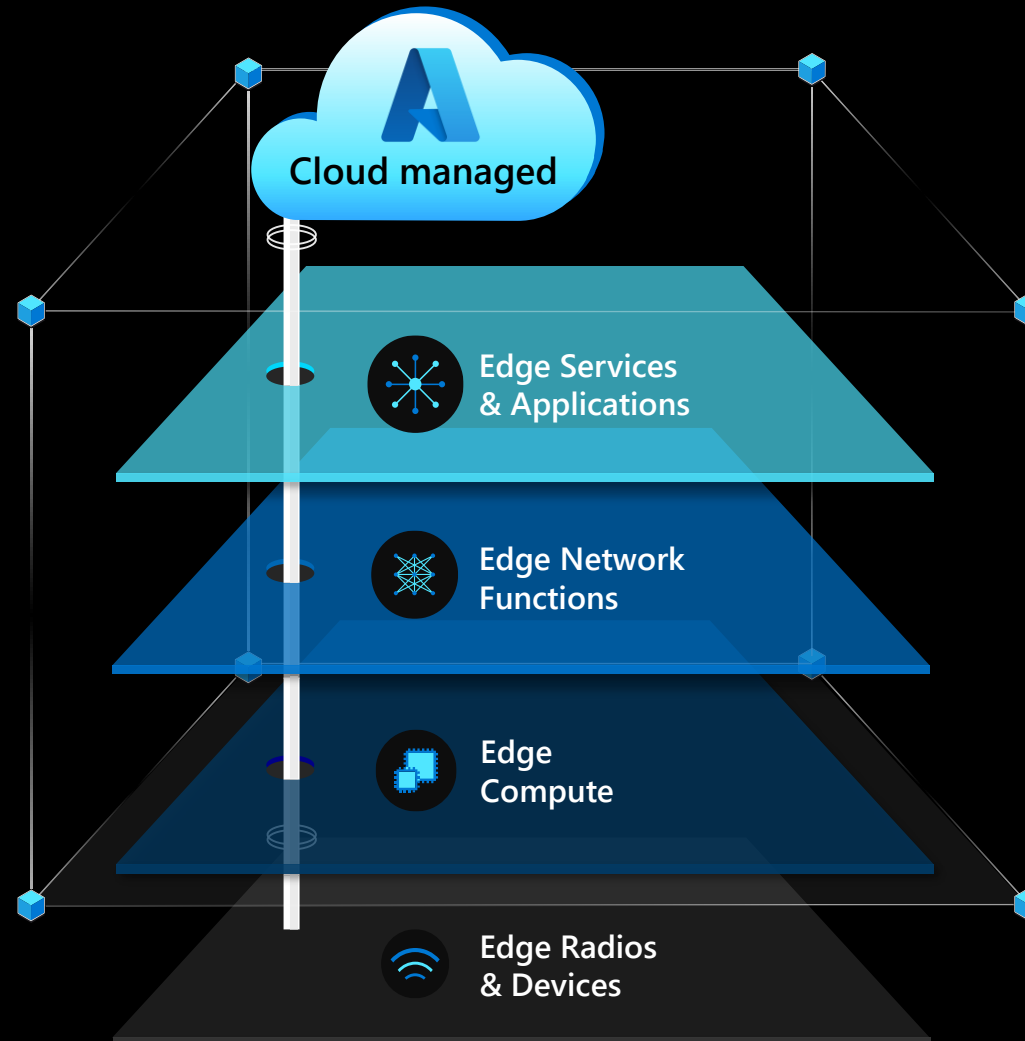
Mission:

Simplify the development, deployment and management of secure private mobile 4/5G networks for latency-sensitive applications



What is Azure private MEC?

- 1 Flexible solution for integrating edge compute, networking and applications on choice of edge platforms
- 2 Designed for operators and system integrators to deliver high performance MEC use cases to enterprises



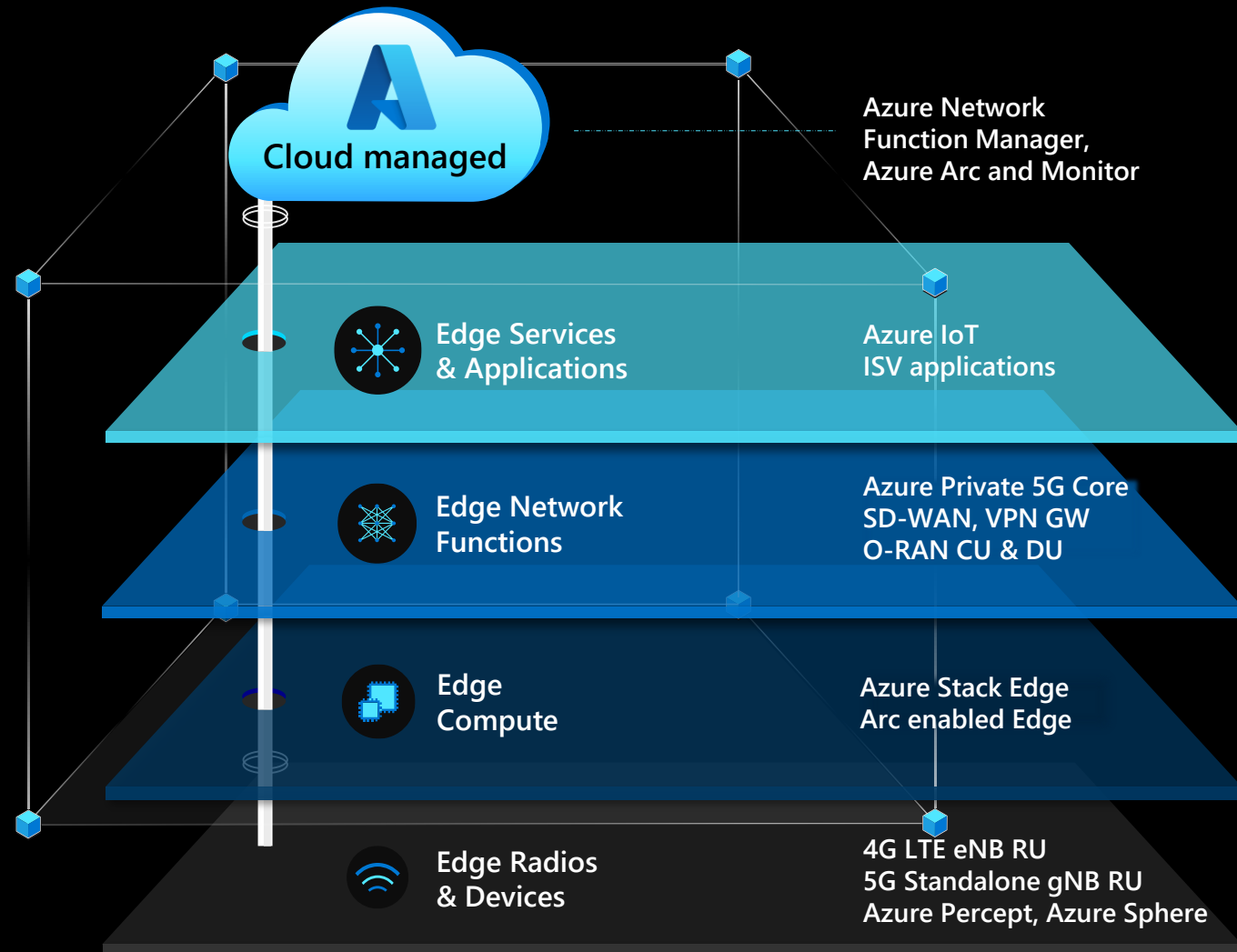
Azure private MEC value

Rapidly deploy edge-enabled Azure services and partner solutions

Simplify integration complexity

Securely manage services from cloud

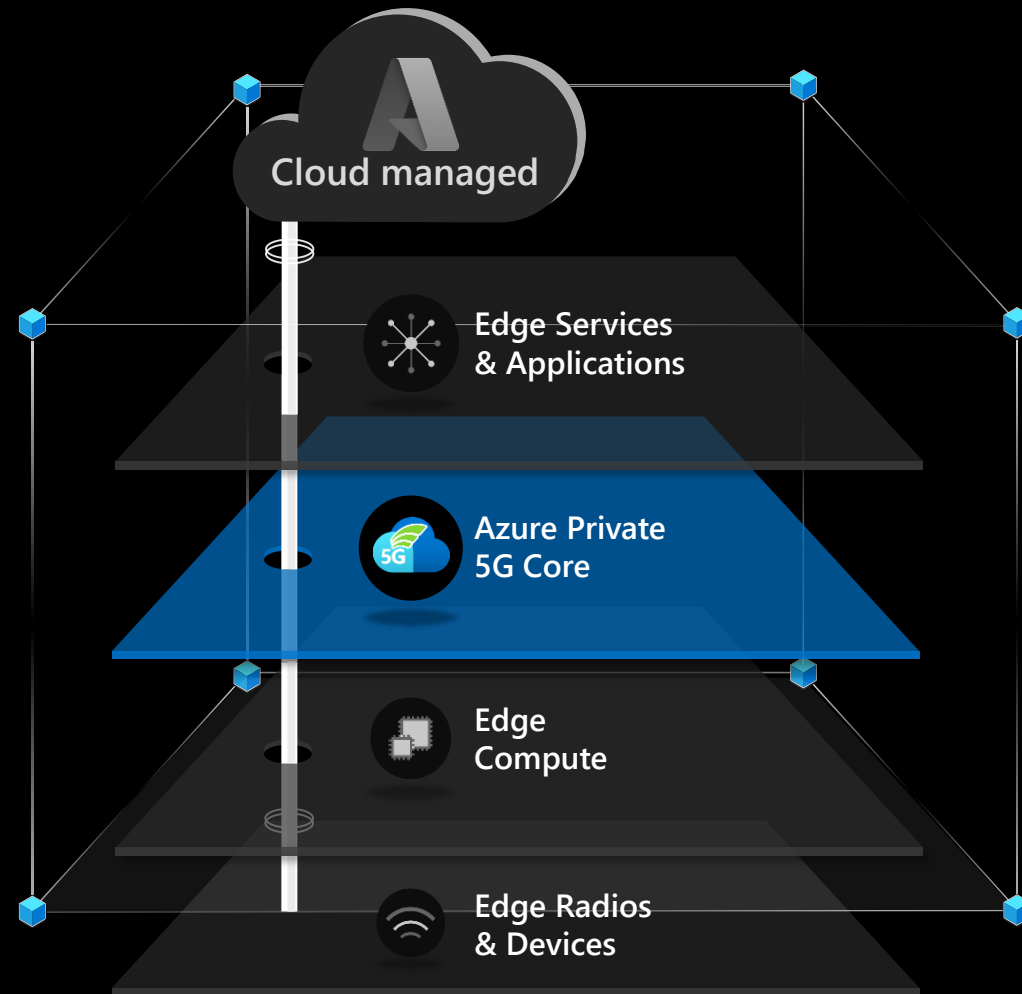
Flexibility to choose the right connectivity and edge platform to meet enterprise needs



Introducing Azure Private 5G Core

The new Microsoft Azure mobile 5G network core service:

- Smallest HW footprint in the Industry, very high performance
- RAN agnostic
- No cloud dependency for critical operation (full core on prem)
- Cloud managed and orchestrated



Azure Private 5G Core value

Simplify delivery of 4G/5G networks on a small footprint edge

Speed network deployment to minutes

Scale globally with unified cloud management and partner solutions

Secure private wireless networks with industry-leading Azure security



On-cloud

On-premises

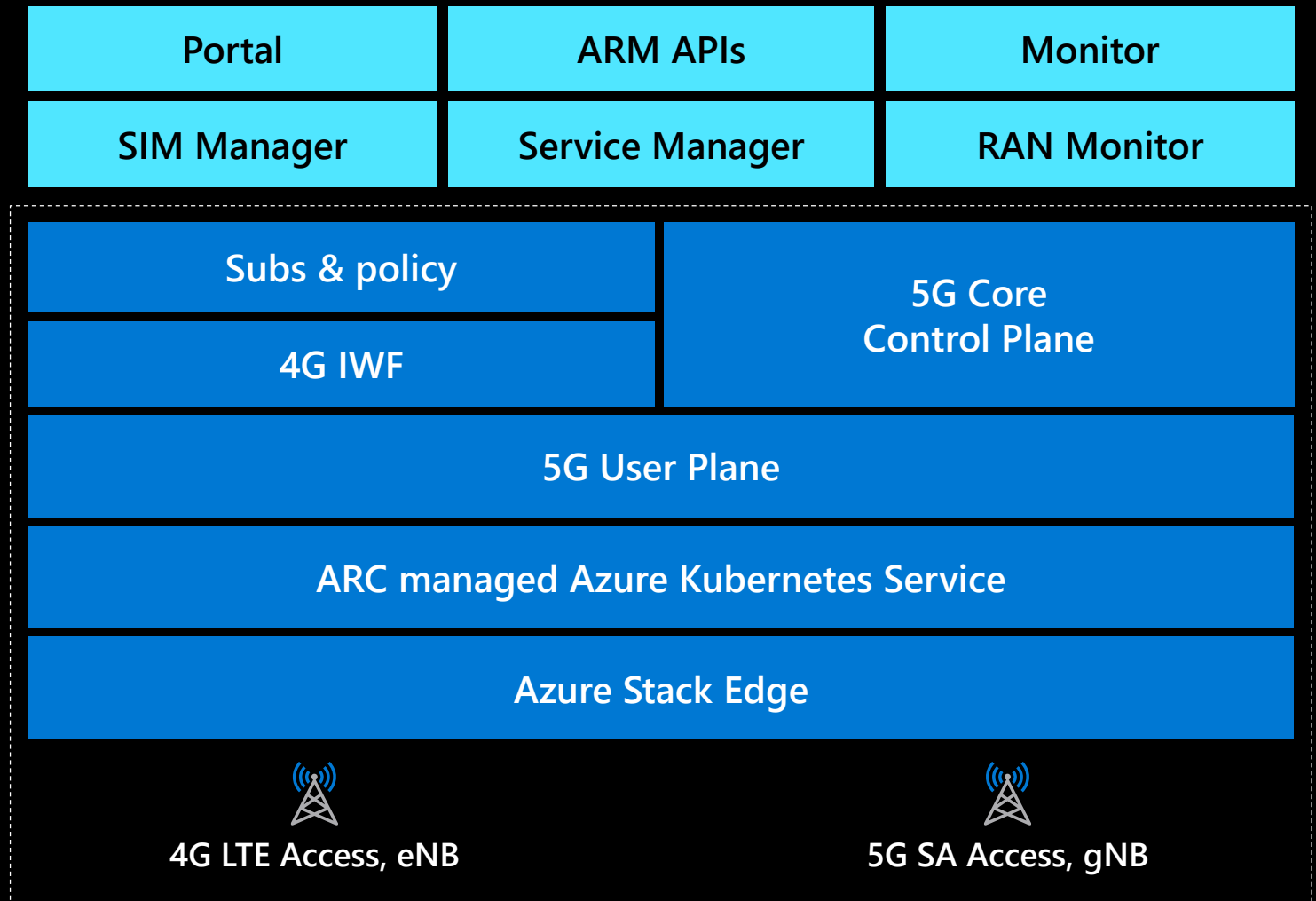
Azure Private 5G Core capabilities

Complete 5G core CNFs delivered on edge as a service

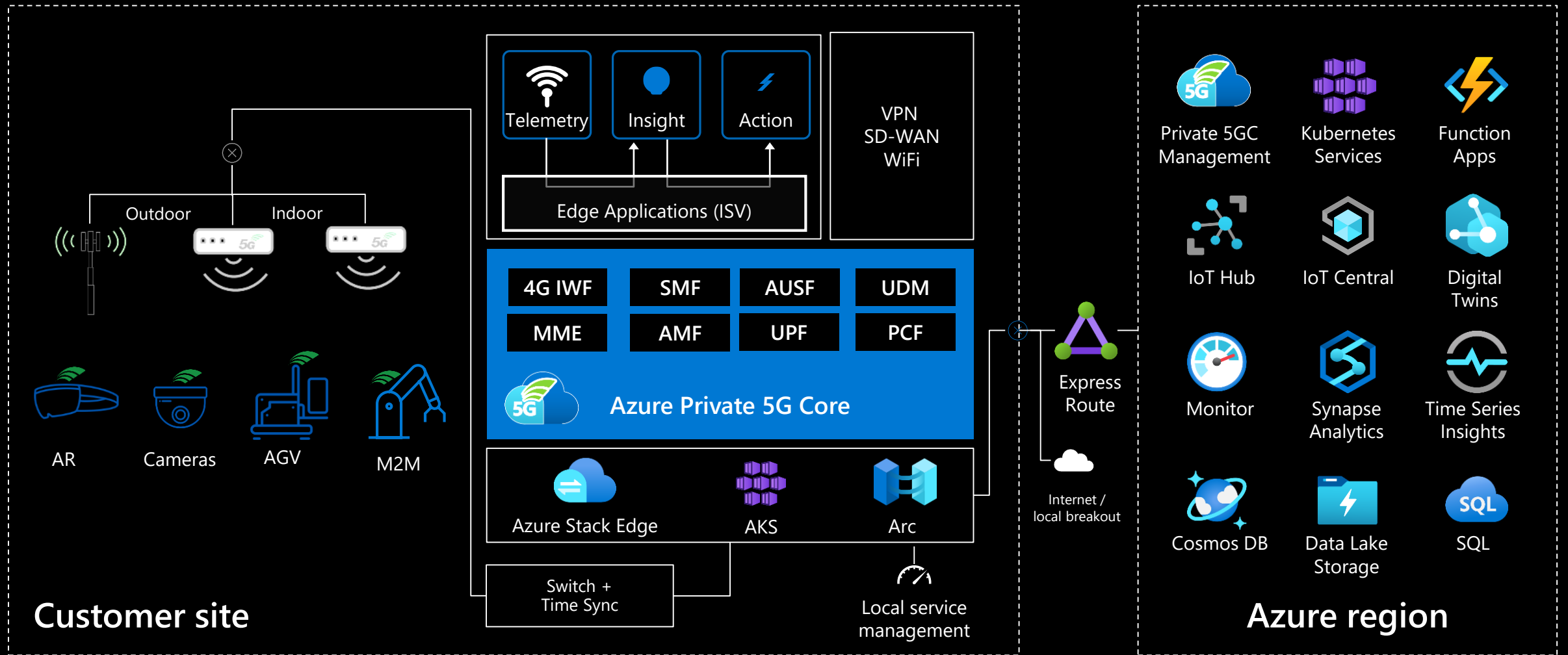
Cloud orchestration and service management

Delivered with Azure Kubernetes Service on Azure Stack Edge

Integration with choice of RAN and SIM services partners

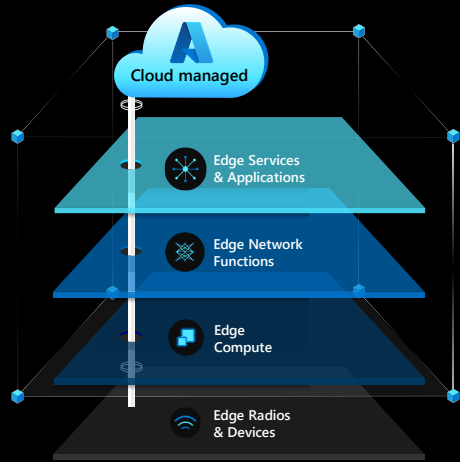


Azure PMEC Solution Architecture



Azure private MEC – GTM strategy

Azure private MEC



Operators and system integrators

Global/Vertical Industry Solutions
Local Country Solutions
Specialized or Embedded Solutions

Enterprises



Simplifies procurement, deployment & management of compute, networking & applications for intelligent edge

Empowers partners to deliver curated and managed global solutions from a growing list of technology and service options

Accelerates Industry 4.0 transformation for enterprises & government

Engagement Snapshots



Manufacturing (electronics)



Smart spaces (airports)



Energy (oil & gas)



Manufacturing (automotive)



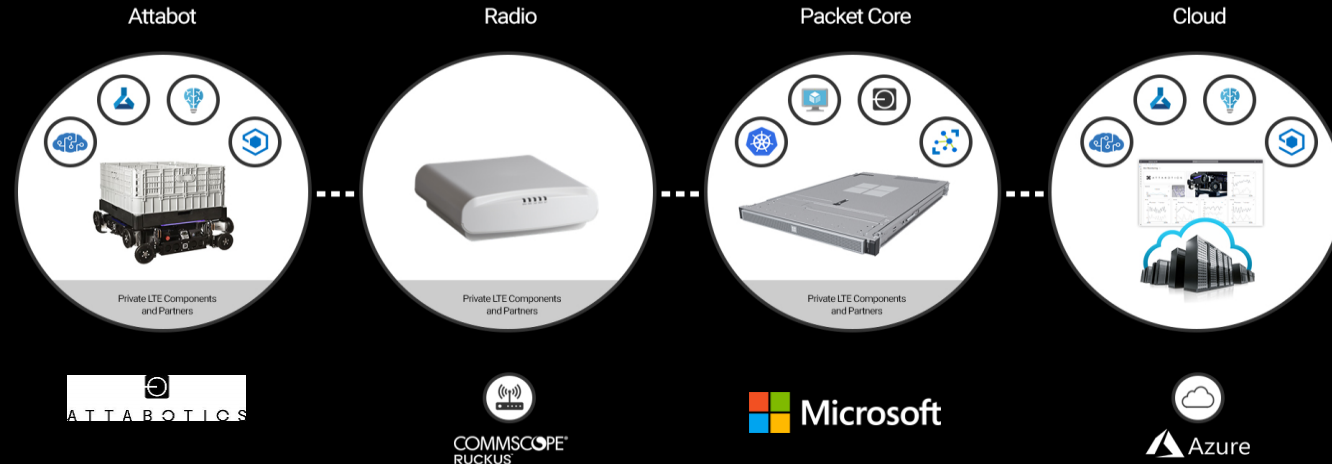
Smart cities (stadium)



Government (defense)

E-Retail Fulfilment with Commscope and Microsoft

5G RETAIL



BUSINESS CHALLENGES

- Need to optimize storage given cost pressures and growth
- Need to maximise productivity and reduce labour costs
- Complex business processes add costs and complexity
- Need flexible and scalable storage to meet ever changing demands

SOLUTION

- 3D robotic goods-to-person storage, retrieval and real-time order fulfilment
- Azure PMEC with Azure Stack Edge server
- Azure IoT central for provisioning, reporting, AI and predictive maintenance
- Azure Sphere encryption
- Commscope Radio Access Network (RAN)

BENEFITS

- Reduce supply chain footprint by 85%
- Fewer product touches, improved throughput and automation improves productivity and reduces labour costs
- Streamlined business processes reduce costs and improved agility
- Ability to scale to increasing business demands

Milton Keynes Stadium 5G test bed

5G SMART VENUE



BUSINESS CHALLENGES

- Need to maximise productivity and reduce labour costs
- Improve transport links and reduce people driving to stadium
- Identify new revenue opportunities specially around VIP and other in stadium events
- Adjusting to Post Covid increased pressures on resourcing and revenue

USE CASES

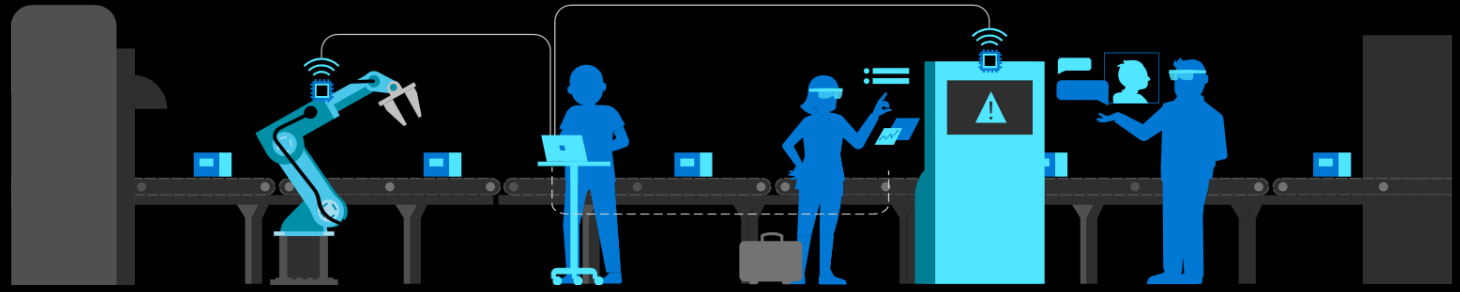
- Robotics – assistance at hotel and restaurant
- Autonomous pods for VIP transport around the Stadium and autonomous buses for fixed routes to and from large car parks
- Remote driven vehicles to and from town
- Video analytics for crowd control around the entrance and for car park optimisation
- Drones for optimised stadium maintenance
- Real time audio editing for music events

SOLUTION CHALLENGES

- Laying out cable is costly and takes too much time– e.g. wired vs. wireless cameras
- Congestion of the Macro network
- Wifi coverage is not cost effective in a large venue and difficult to optimise
- Mobile Data costs are too high
- Private vs. Public integration for consumer experiences

Inventec Smart Factory with Microsoft

5G MANUFACTURING



Inventec^{5G}

BUSINESS CHALLENGES

- Need to improve production quality and efficiency
- Labour challenges (increased due to COVID)
- Complex business processes add costs and complexity

SOLUTION

- 5G SA network deployed
- Azure PMEC with Azure Stack Edge server
- Production machines now connected wirelessly to central server
- Enables AI Based AOI (Automatic Optical Inspection)

BENEFITS

- First Pass Yield (FPY) improved from 70% to 85%
- Fewer product touches, improved throughput and automation improves productivity and reduces labour costs
- Streamlined business processes reduce costs and improved agility
- Ability to scale to increasing business demands

Datwyler Q-tainer



With the Q-tainer, the Rhomberg Group and Datwyler IT Infra AG bring digitalization to the construction site.

The 20-foot container is a mobile EDGE data center that allows you to analyze and evaluate data and video streams on site as quickly as possible and without high latency

With video analytics, we ensure that all construction workers are wearing helmets. Routing tracking of heavy machinery or measure the working time and distance traveled by construction machines. Video analytics to detect material theft and determine the location or amount of material on the construction site. Drone control to create 3D models of the construction site and determine volume measurements and construction progress.

Sample list of Private 5G Core partners

Solution partners



Telefonica

accenture

amdocs

Atos

Capgemini

Cognizant

FUJITSU

HCL



NORTHROP GRUMMAN

Tech Mahindra

tcs | TATA CONSULTANCY SERVICES



Technology partners



COMMSCOPE

FUJITSU

CI US

NOKIA

Parallel WIRELESS

QUALCOMM

SAMSUNG

Azure Private 5G Core closing remarks



Azure managed 5G Core service for the edge



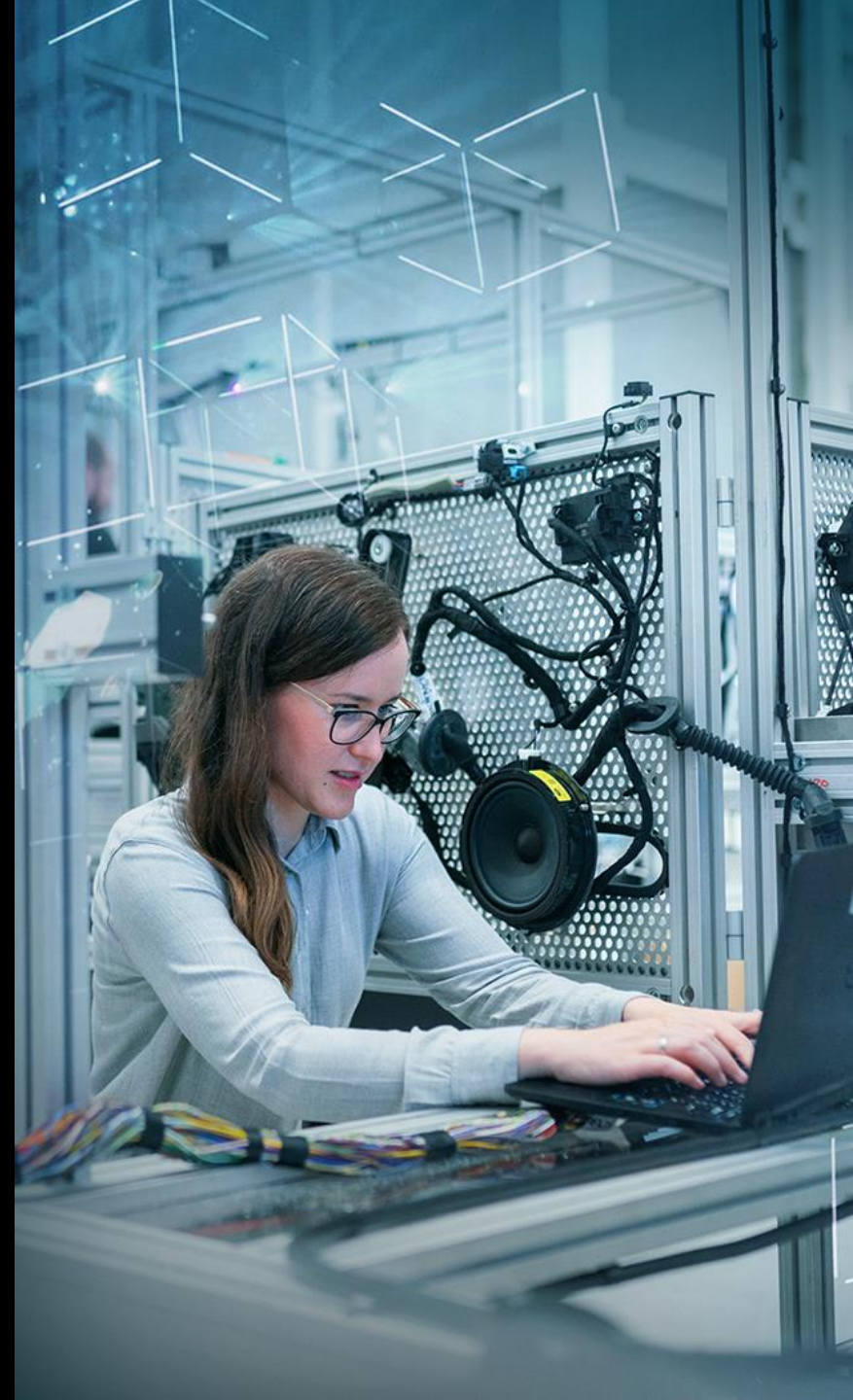
Integrate with Azure services to deliver end to end solutions



Available today from a range of partners to build your own enterprise edge solutions



Learn more about Azure private MEC here:
[Aka.ms/AzurePrivate5GCore](https://aka.ms/AzurePrivate5GCore)



Thank you

[Learn more about Azure private MEC](#)

[Learn more about Azure Private 5G Core](#)