

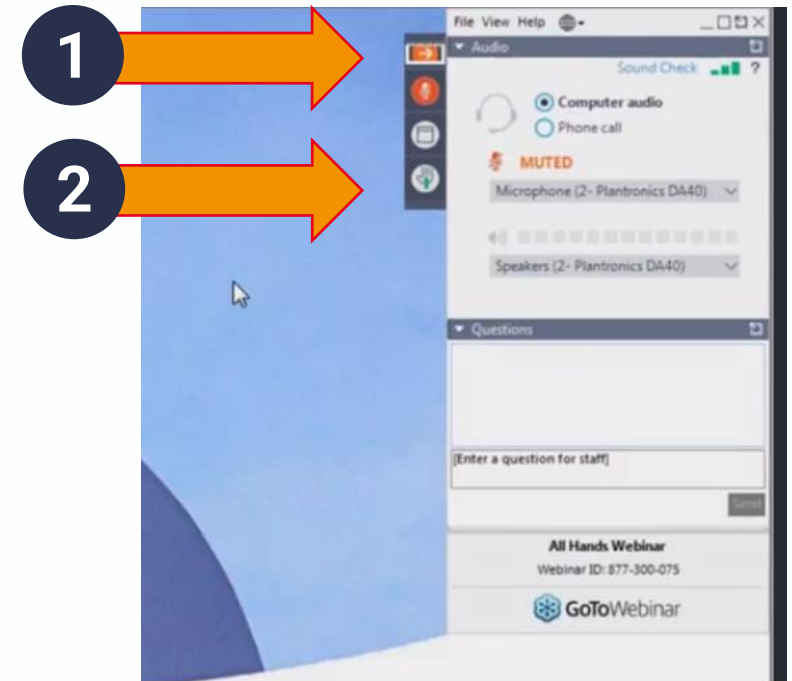
Telco and hyperscaler strategies: how to co-exist?

Webinar

2nd June 2021

GoToWebinar

- You're in listen only mode
- If you need us, please type a comment
- Feel free to type questions throughout the session for Q&A at the end
- We'll send you the slides and a recording shortly after the session - do share with colleagues
- On Twitter? Tweet us @STLPartners #STLthinks



Our speakers



Yesmean Luk

Senior Consultant

STL Partners



Grace Donnelly

Senior Consultant

STL Partners



David Martin

Associate Senior Analyst

STL Partners

Our session is based on our ongoing research and work in telco cloud and edge computing



Telco Cloud

Edge computing



Our executive summary



Both telecoms operators and hyperscalers are increasingly moving from a **horizontal to vertical growth strategy**. Telcos want to **grow revenues beyond connectivity** and hyperscalers can be a means of achieving that, while **hyperscalers see telcos as customers and as partners**.



Telcos are increasingly seeing **hyperscaler partnerships as inevitable**. There are a number of partnership options / potential business models that the hyperscalers are addressing, but **each of them are doing so in different ways**.



The primary concerns around partnering with the hyperscalers are both strategic (“**how do I do this without ceding value to the hyperscalers?**”) and technical (“**how do I make things work on public cloud infrastructure?**”)



Compared with AWS and Google, Microsoft is addressing more types of potential partnership with telcos and appears to be **more focused on enabling telco cloud**, rather than **equipping telco networks as an extension of the hyperscale cloud**.

Our executive summary



Both telecoms operators and hyperscalers are increasingly moving from a **horizontal to vertical growth strategy**. Telcos want to **grow revenues beyond connectivity** and hyperscalers can be a means of achieving that, while **hyperscalers see telcos as customers and as partners**.



Telcos are increasingly seeing **hyperscaler partnerships as inevitable**. There are a number of partnership options / potential business models that the hyperscalers are addressing, but **each of them are doing so in different ways**.



The primary concerns around partnering with the hyperscalers are both strategic (“**how do I do this without ceding value to the hyperscalers?**”) and technical (“**how do I make things work on public cloud infrastructure?**”)

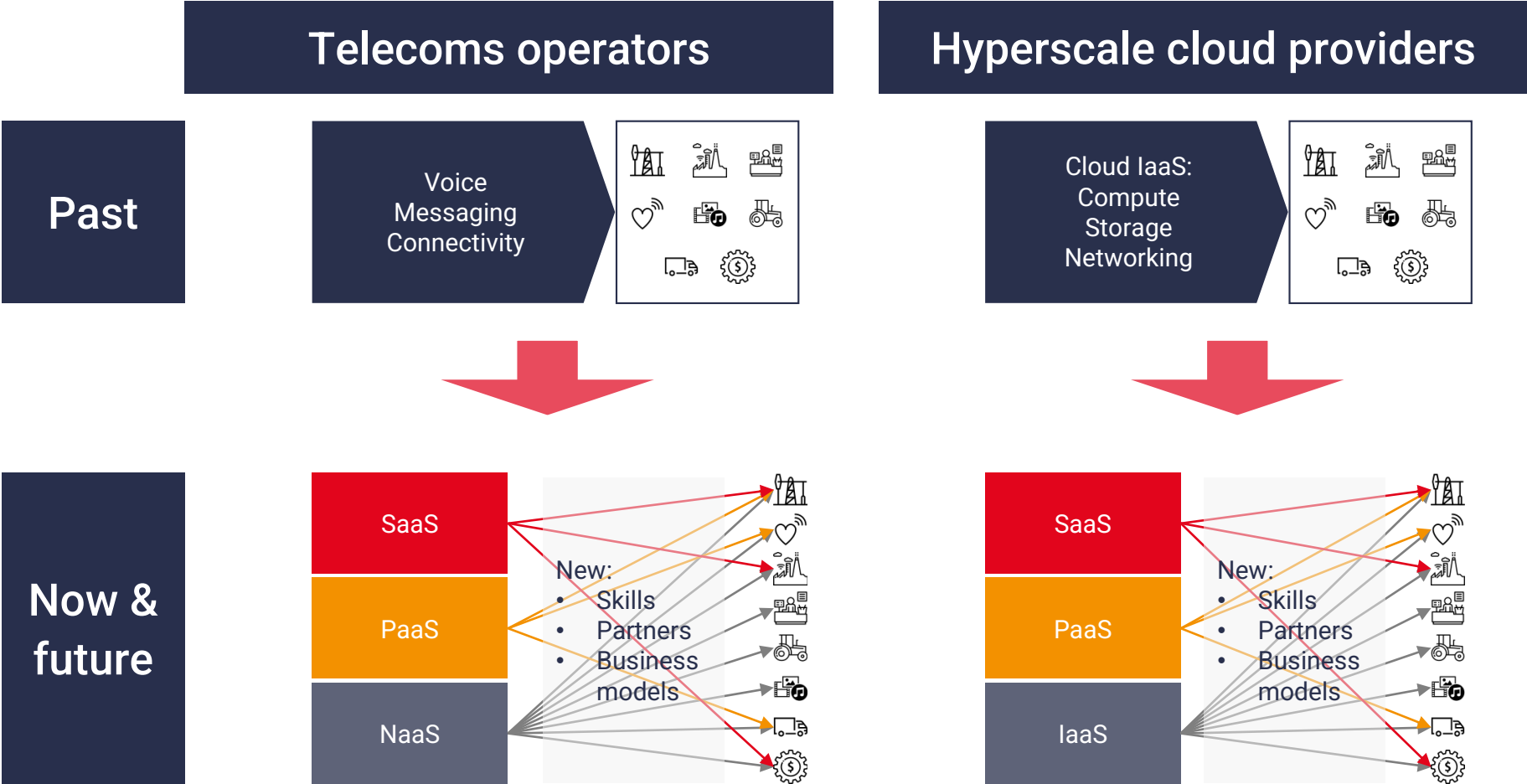


Compared with AWS and Google, Microsoft is addressing more types of potential partnership with telcos and appears to be **more focused on enabling telco cloud**, rather than **equipping telco networks as an extension of the hyperscale cloud**.

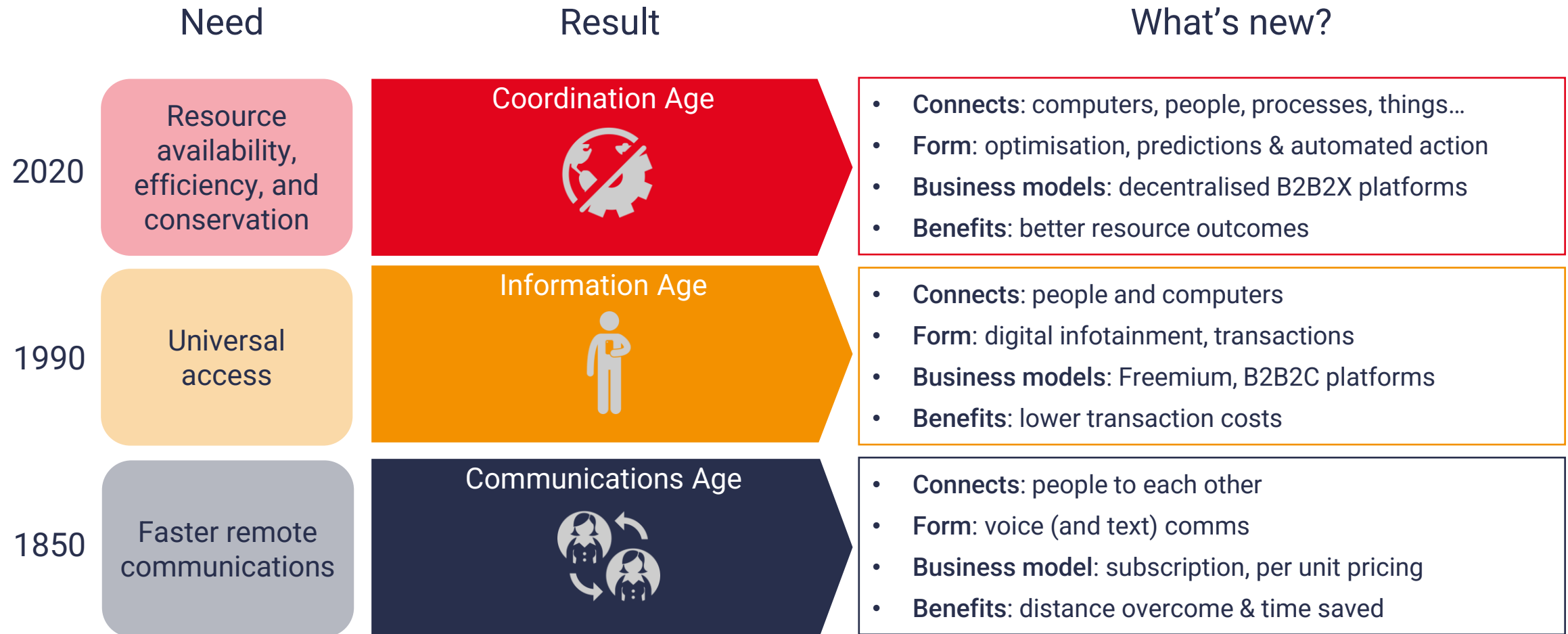
“It is not a question of if we are going to partner, it’s how...”

Like operators, historically hyperscalers have had a horizontal growth strategy and are now starting to verticalise

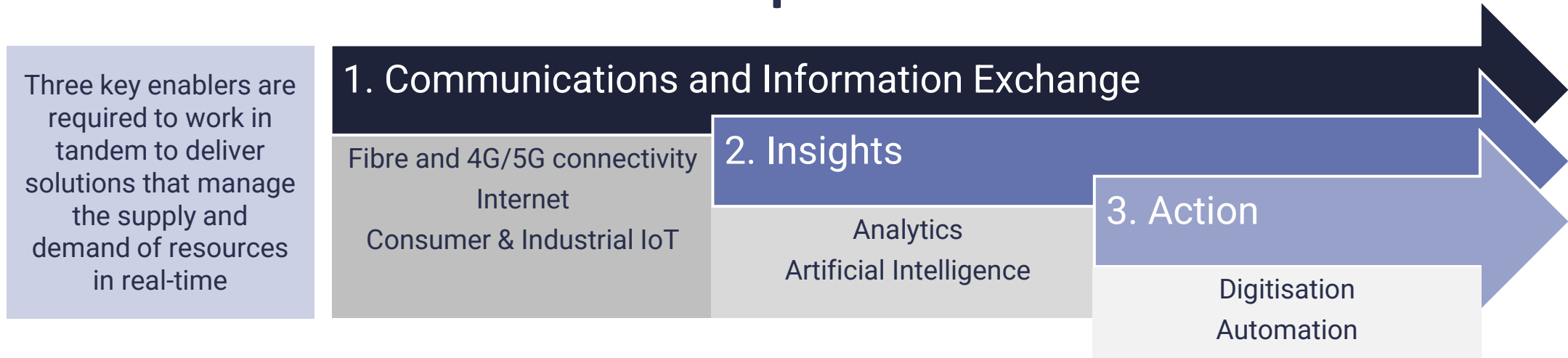
From large-scale standardised commodity products for all...



This is part of the new role that telco operators are looking to play in the Coordination Age



The telecoms industry is well positioned to help customers coordinate their activities and processes



The processes and technologies that underpin the three enablers are now maturing, making it possible to coordinate resources in a way that has not been possible before

Why telcos?



Real-time data is an essential enabler of coordination. Telco networks carry, and can provide, a lot of that data.



Telcos' national operating boundaries allow useful alignments with government, legal and regulatory frameworks for data use.



Telcos can collectively connect and manage a large percentage of IoT sensors and systems, giving them a vast quantity of unique insight



With the adoption of 5G, edge compute, NFV/SDN, and IoT, telecoms operators are building the agility, flexibility and skills necessary to help solve their customers' challenges

Although telcos and hyperscalers have different objectives, they are pushing these to meet in the middle



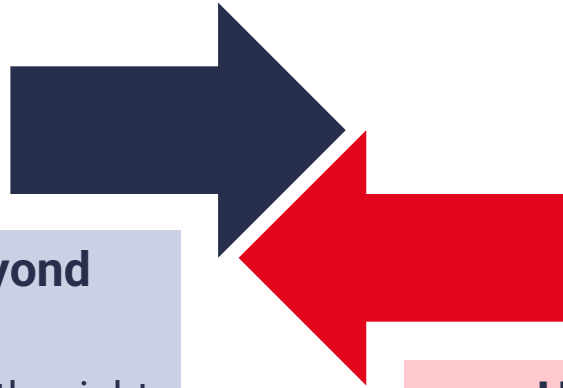
Telcos want to grow revenues beyond connectivity, but...

Significant investment is needed to build the right capabilities (incl. platforms, applications and services)

They do not have a strong developer ecosystem and customer base

Lack of scale and the right skillset (and operational models)

+ large perceived risk of not partnering with a hyperscaler



Hyperscalers want to get into telco

Huge opportunity to provide IaaS for telecoms 'OT' (network infrastructure)

Historically, relationship has been in IT, rather than networks

MEC provides a stepping stone into networks

Our executive summary



Both telecoms operators and hyperscalers are increasingly moving from a **horizontal to vertical growth strategy**. Telcos want to **grow revenues beyond connectivity** and hyperscalers can be a means of achieving that, while **hyperscalers see telcos as customers and as partners**.



Telcos are increasingly seeing **hyperscaler partnerships as inevitable**. There are a number of partnership options / potential business models that the hyperscalers are addressing, but **each of them are doing so in different ways**.



The primary concerns around partnering with the hyperscalers are both strategic (“**how do I do this without ceding value to the hyperscalers?**”) and technical (“**how do I make things work on public cloud infrastructure?**”)



Compared with AWS and Google, Microsoft is addressing more types of potential partnership with telcos and appears to be **more focused on enabling telco cloud**, rather than **equipping telco networks as an extension of the hyperscale cloud**.

There are different drivers for operators to partner with hyperscalers at the edge, network or IT level of the stack



Edge

Enables operators to grow new revenue streams beyond connectivity services

Operators can deploy computing resources at the network edge

Operators lack the platform stack to enable delivery at the edge. Partnering can extend the cloud platform

Operators can build and provide edge locations, but sites and services are expensive



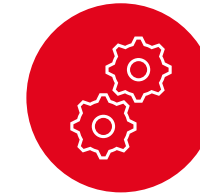
Network

Operators have network capabilities to support end users, hyperscalers have massive cloud infrastructure

Operators looking to create vertically bespoke offerings including enterprise-specific private networks

Shorten the development cycle for cloud native

Cloud-delivered NFV MANO and AI: cost reduction and consolidate operational tasks



IT

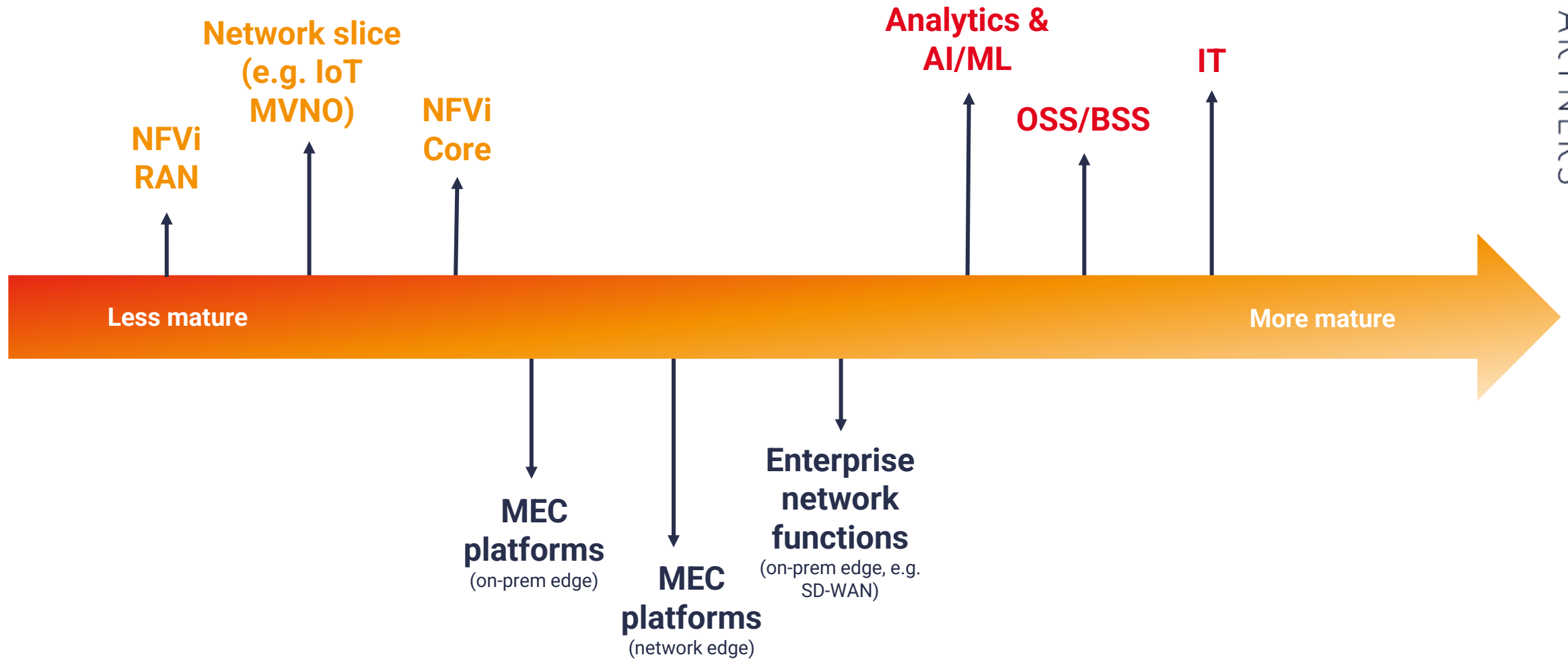
Ability to build multi-cloud capabilities

Telcos can act as multi-cloud enablers for enterprise clients through SDN-enabled cloud interconnectivity

Co-creation can drive innovation, reduce costs and time to market

Cloud-delivered BSS / OSS: cost reduction and consolidate operational tasks

The maturity of telcos' adoption of public cloud infrastructure for their network infrastructure stack



There are a few different potential business models that the hyperscalers are addressing; this is how they might work

1



A classic vendor–telco relationship

Helping telcos to evolve their own CNFs, cloud infrastructure and operations

2



Network Functions-as-a-Service' (NFaaS)

Delivery and management of VNFs and CNFs as a cloud service, or NFaaS

3



Telco-orientated Platform-as-a-Service (PaaS)

Providing a common hosting & development environment for telco internal apps, APIs, and analytics and AI: enables enhanced network and service management; creates GTM platform; multi-cloud orchestration and connectivity

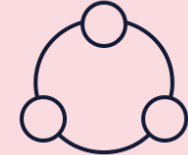
4



Network-as-a-Cloud Platform' (NaaCP)

Provision of edge-cloud data centres into telco and enterprise edge locations to serve as a cloud delivery platform for third party application developers, providing low latency dependent services, NaaCP

5



Net compute

Enabling intelligent, autonomous, physical processes and systems by a tight coupling of 5G, advanced computing / AI, and cloud-native application and network-function software. Delivered via hybrid of telco, on-premise and third-party edge cloud

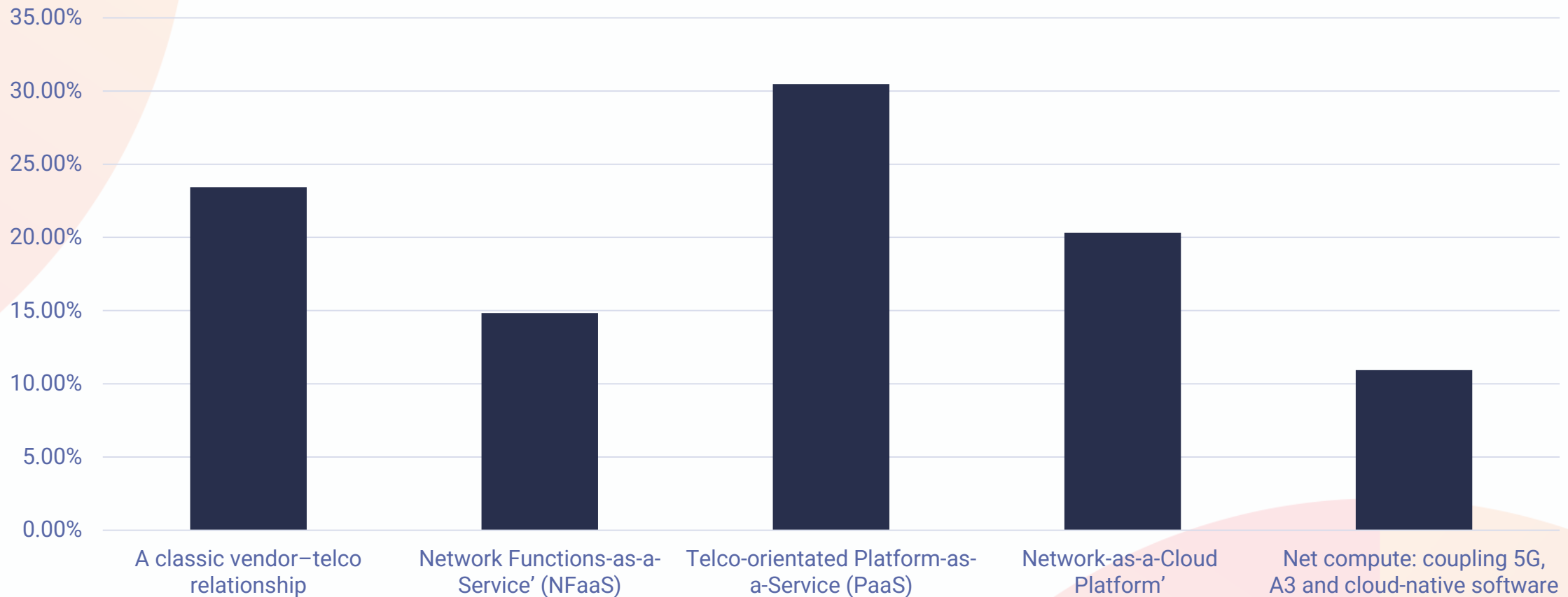


Audience poll: In your opinion, which of the five partnership model will be the most widely adopted in the short term?

1. A classic vendor–telco relationship
2. Network Functions-as-a-Service' (NFaaS)
3. Telco-orientated Platform-as-a-Service (PaaS)
4. Network-as-a-Cloud Platform' (NaaCP)
5. Net compute

Poll results

In your opinion, which of the five partnership model will be the most widely adopted in the short term?



Our executive summary



Both telecoms operators and hyperscalers are increasingly moving from a **horizontal to vertical growth strategy**. Telcos want to **grow revenues beyond connectivity** and hyperscalers can be a means of achieving that, while **hyperscalers see telcos as customers and as partners**.



Telcos are increasingly seeing **hyperscaler partnerships as inevitable**. There are a number of partnership options / potential business models that the hyperscalers are addressing, but **each of them are doing so in different ways**.



The primary concerns around partnering with the hyperscalers are both strategic (“**how do I do this without ceding value to the hyperscalers?**”) and technical (“**how do I make things work on public cloud infrastructure?**”)



Compared with AWS and Google, Microsoft is addressing more types of potential partnership with telcos and appears to be **more focused on enabling telco cloud**, rather than **equipping telco networks as an extension of the hyperscale cloud**.

Although partnering with the hyperscalers has significant benefits, there are concerns about the potential risks



Accelerating time to market with new services

Access to developer ecosystem/community

Access to established customer base

Access to software skills and capabilities (AI/ML)

Strength of public cloud offerings



Risk of being relegated to role of connectivity provider

Risk to ability to compete and build distinct (edge) offerings

Dependency as a new form of vendor lock-in

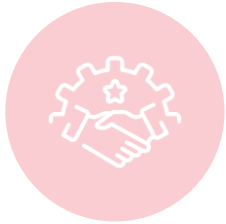
Unproven benefits on TCO savings with public cloud-delivered network functions

Potential loss of control over core network functions

Our executive summary



Both telecoms operators and hyperscalers are increasingly moving from a **horizontal to vertical growth strategy**. Telcos want to **grow revenues beyond connectivity** and hyperscalers can be a means of achieving that, while **hyperscalers see telcos as customers and as partners**.



Telcos are increasingly seeing **hyperscaler partnerships as inevitable**. There are a number of partnership options / potential business models that the hyperscalers are addressing, but **each of them are doing so in different ways**.



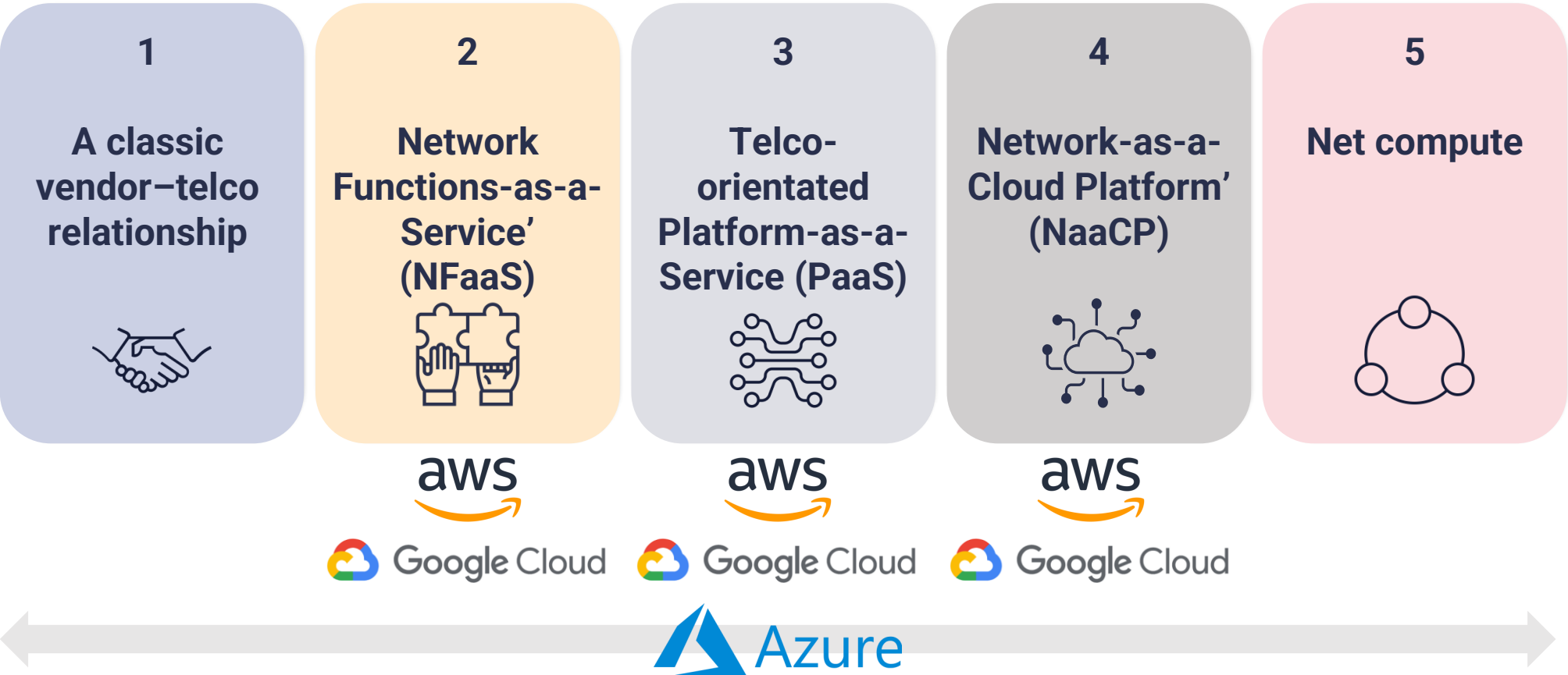
The primary concerns around partnering with the hyperscalers are both strategic (“**how do I do this without ceding value to the hyperscalers?**”) and technical (“**how do I make things work on public cloud infrastructure?**”)



Compared with AWS and Google, Microsoft is addressing more types of potential partnership with telcos and appears to be **more focused on enabling telco cloud**, rather than **equipping telco networks as an extension of the hyperscale cloud**.

Microsoft enables telco cloud; AWS and GC enable telco as their cloud

Microsoft proposes five different business models in terms of partnerships with telcos;
AWS and Google Cloud offer only three



We look at three different hyperscaler partnerships to explore each partnership model in more detail

Case study 1



2

Network Functions-as-a-Service' (NFaaS)



4

Network-as-a-Cloud Platform' (NaaCP)



Case study 2



Google Cloud



3

Telco-orientated Platform-as-a-Service (PaaS)



Case study 3



Azure



AT&T

5

Net compute



AWS and Dish: Move to “cloud telco”

What has happened?



- April 2021, announced that Dish will be using Amazon Elastic Compute Cloud to host a fully virtualised 5G network on public cloud
- 2 of the 3 major RAN functions will run on AWS. It will be the first standalone, cloud-based 5G open RAN in the US

How does the partnership work?



- Dish is leveraging AWS's edge computing portfolio to accelerate 5G rollout
- AWS will enhance Dish's fully automated OSS/BSS
- Dish dependent on AWS's backbone to transfer data from Local Zones into AWS regions

What does this mean?



- ✓ Speed
- ✓ Cost efficiency
- ✓ Access to AWS's developer ecosystem

However...

- Infrastructure and network on AWS edge and central cloud
- Dish may become over-dependent on AWS
- AWS creating a platform to expand into edge and telco service delivery
- Lock-in to proprietary telco-cloud platforms and vendor-supported best-of-breed network functions

Orange and Google Cloud: Enabling edge, AI and data analytics cloud-based services

What has happened?



- Orange and Google Cloud announced their partnership to accelerate the transformation of Orange's IT infrastructure and the development of future cloud services
- The collaboration will help deliver cloud capabilities at the edge of Orange's network

How does the partnership work?



- Google Cloud provides expertise in cloud technology, analytics and AI tools, digital transformation methodology and dedicated resources
- Orange brings expertise in information and communication technology services and network infrastructure

Other examples



Microsoft and AT&T: Delivering network-intelligent services to enterprises with 5G and edge

What has happened?



- July 2019, Microsoft and AT&T announced their partnership
- Co-developed use cases: AI-powered voice translation, drone tracking
- 'Microsoft HoloLens' provides 3D schematic overlays for technicians making repairs to aeroplanes and other industrial equipment

How does the partnership work?



- Azure has been co-developing with AT&T, with the latter playing a hands-on part in developing use cases rather than simply providing the connectivity that enables third-party apps

What does this mean?



- Network intelligence in drones as a key use case
- AT&T is present as an equal, indispensable partner
- AWS Wavelength Zones via the Verizon 5G network, in which Verizon provides only the 5G connectivity



We highlight three key recommendations for telco operators

Infrastructure play

- **Commercial angle:** Consider hyperscaler partnerships to accelerate infrastructure deployments and edge locations to serve as a cloud delivery platform for low latency enterprise services
- **Operational angle:** Understand where the hyperscalers play in your wider telco cloud strategy, whether you are going down a DIY best of breed, or a vendor-supported best of breed

Platform play

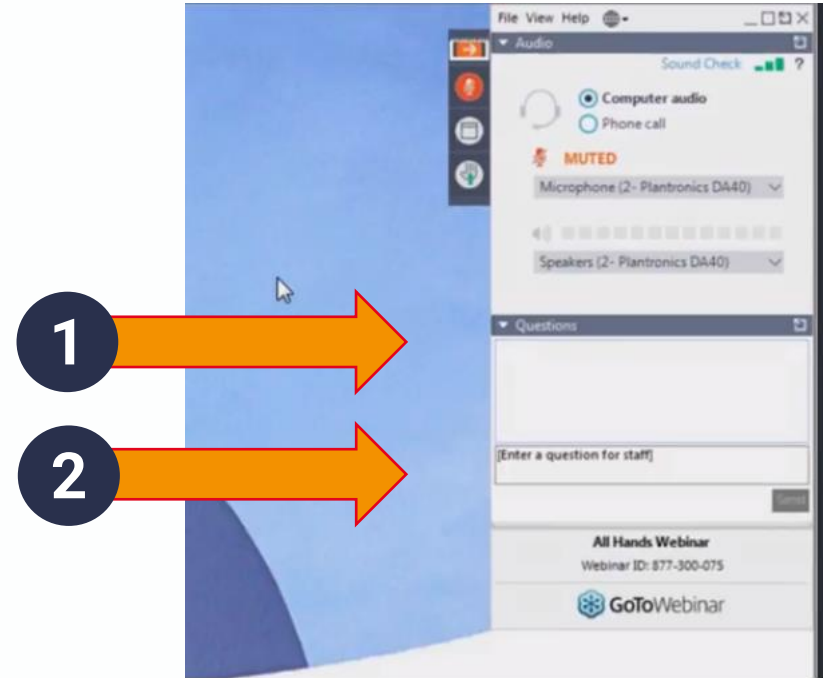
- **Consider a multi-platform strategy**
- Leverage hyperscaler or third party (edge) cloud platforms as a means of entering the market quickly, with lower CAPEX and risk as the market evolves
- ...but see this as a stepping stone **to developing your own platform stack**, while you build up the expertise, know-how and ecosystems required

(Vertical-specific) Application play

- Leverage hyperscaler ecosystems to address specific verticals but **invest in building out your own capabilities, expertise and ecosystems too**
- Understand what the key pain points are for specific target industries and how different technologies can address these/provide value (e.g. edge, private cellular, IoT etc.)
- As part of providing value to ecosystem partners, **focus on providing greater network intelligence and insights to application developers** through greater network accessibility, programmability and instructibility

Q&A session

Please submit any questions using the GoToWebinar control panel



Our upcoming webinars this month

Wednesday 16th June
4pm CEST, 10am ET

Seizing the 5G enterprise opportunity: How to drive operator agility



Philip Laidler
Consulting Director
& Partner
STL Partners



Yesmean Luk
Senior Consultant &
Telco Cloud Practice Lead
STL Partners



Rose-Marie Jurinic Nyman
Head of Agile Transformation,
Product Area Communications
Telia



Ehtisham Ali Khan
Ecosystem Architect
STC



Miriam Deasy
BSS Senior Solutions
Marketing Manager
Ericsson Digital Services

Free webinar
Wednesday 16th June
3pm BST | 4pm CEST | 10am EST

STL PARTNERS

[Link to register here](#)

Thursday 24th June
4pm CEST, 10am ET

Driving innovative 5G monetization and user management



Philip Laidler
Partner & Consulting
Director
STL Partners



Darius Singh
Senior Consultant &
Digital Health
Practice Lead
STL Partners



Anthony Boyd
Consultant
STL Partners

Free webinar
Thursday 24th June
3pm BST | 4pm CET | 10am EST

STL PARTNERS

[Link to register here](#)

Thank you for joining!

All registrants will be receiving the recording and slides shortly to watch back or to share with colleagues, plus a Q&A write up in due course.

For any other questions, please contact:

contact@stlpartners.com

For information on our work in telco cloud, please visit :

stlpartners.com/telcocloud/