5G alapú felhőalkalmazások

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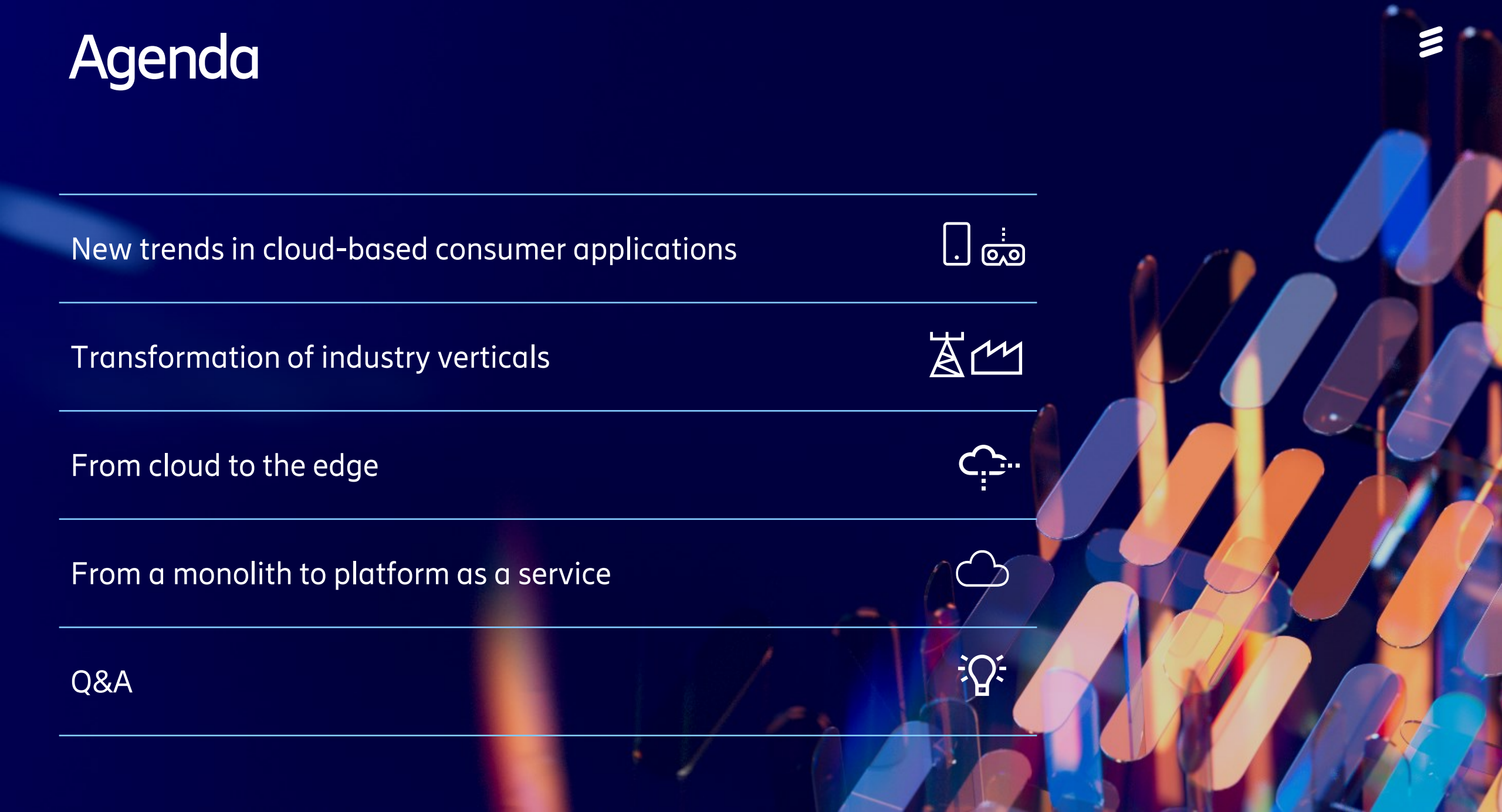
Agenda



- New trends in cloud-based consumer applications
- Transformation of industry verticals
- From cloud to the edge
- From a monolith to platform as a service
- Q&A

Streamed gaming offers the most flexibility in terms of devices and cost

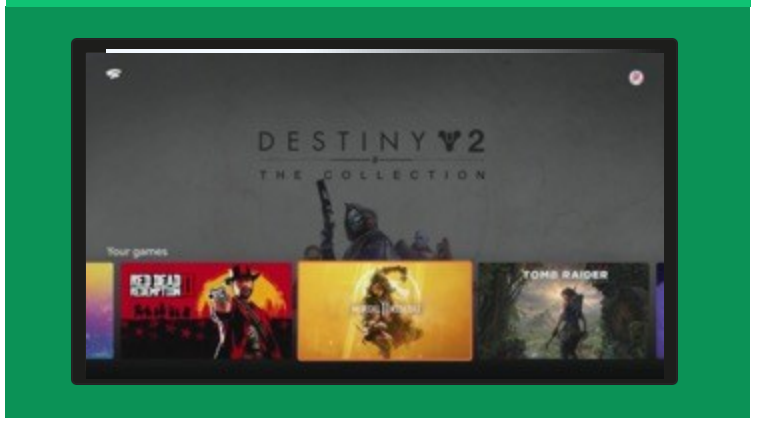
Downloaded games

- All games to date
- Very little bandwidth needed, except when downloading
- Taxing on device; battery/performance

Source: www.knowtechie.com

Streamed gaming

- Hundreds to thousands of games titles
- Varying multi-platform availability, typically available on all devices
- Any device, anywhere, anytime (using platform-specific game streaming app)
- Nvidia, Microsoft, Blacknut and a number of other players (including Netflix)
- High bandwidth (15-30Mbps)



Source: www.egmnow.com

VR/XR gaming/next-gen streaming

- Device dependent – currently Wi-Fi only
- Very tough latency requirement for playability
- Very high to extreme bandwidth required

Cloud gaming to take advantage of 5G

>2x

The gaming market is worth more than twice the music and movie industries combined.

32m

By the end of 2022, cloud gaming had 32 million players and was generating USD 2.4 bn

41

A total of 41 service providers have launched cloud gaming with a platform partner, 1H 2023.

20%

Around 20 percent of cloud gaming is mobile.

"...We compete with, and lose to, Fortnite not HBO"*

* Netflix CEO during capital market info 2019 financials
Ericsson analysis of Newzoo, Ericsson study 2022

Industry transformation, enabled by 5G

Manufacturing

Processing industries

Ports

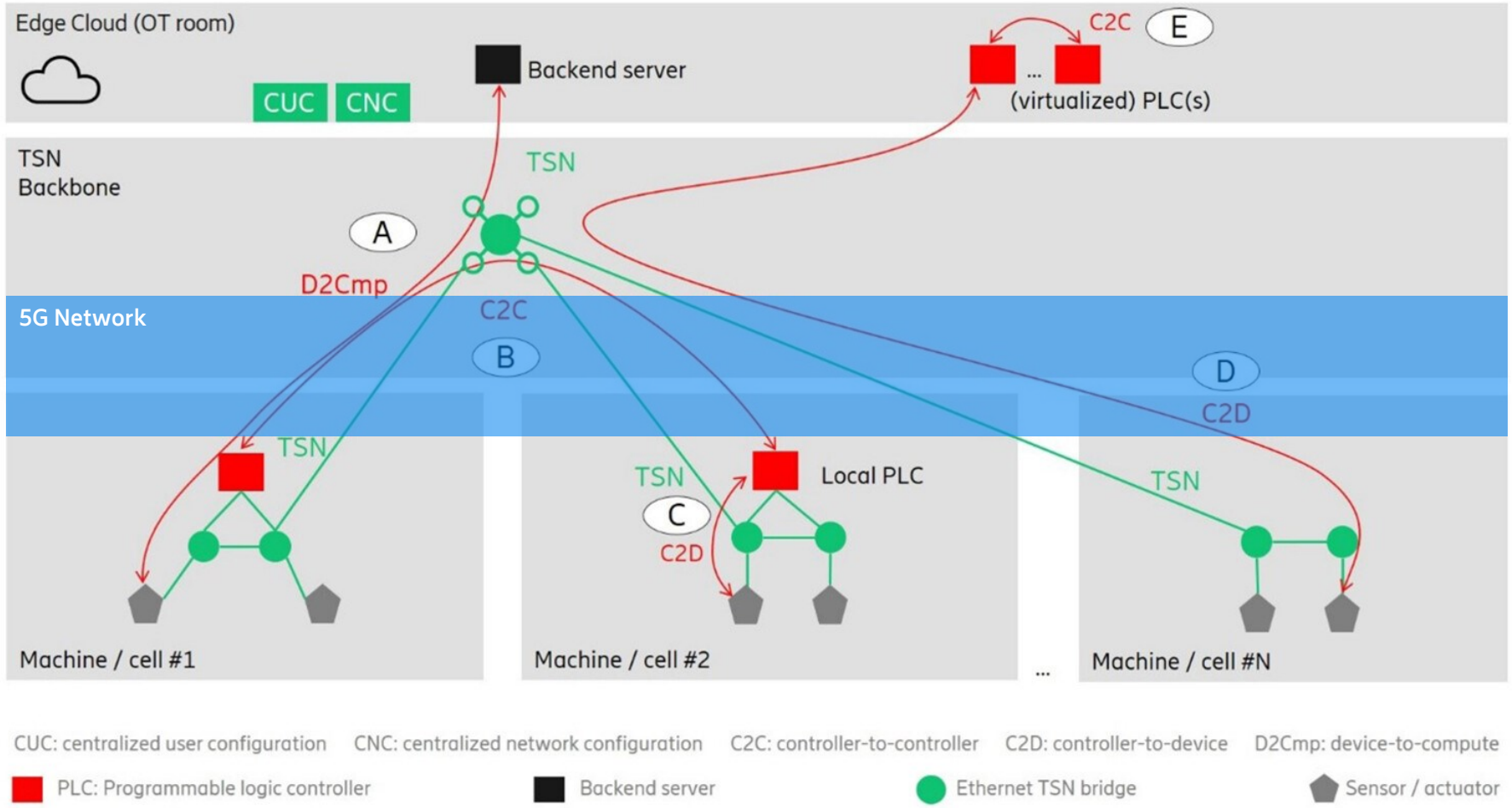
Mining

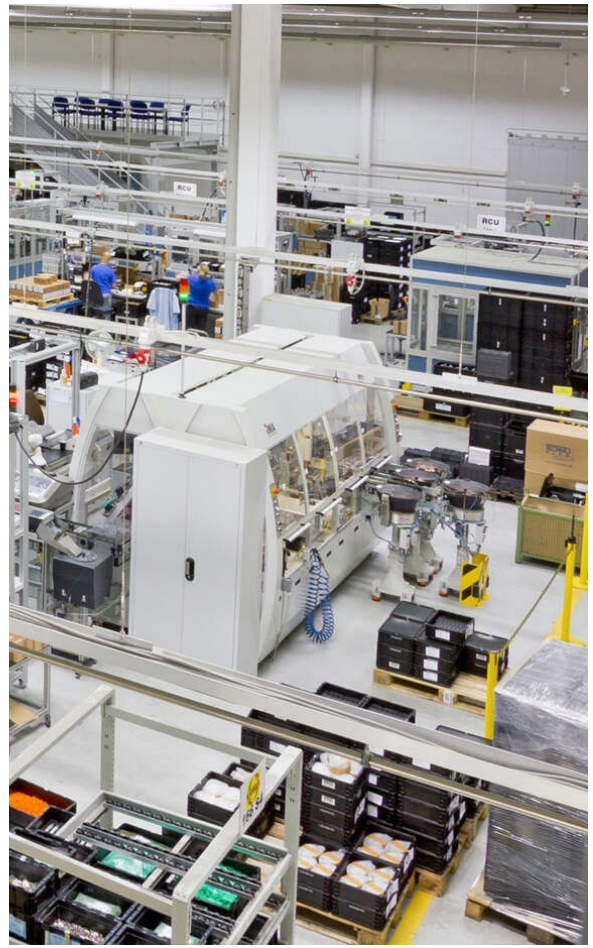
Offshore

Power utilities

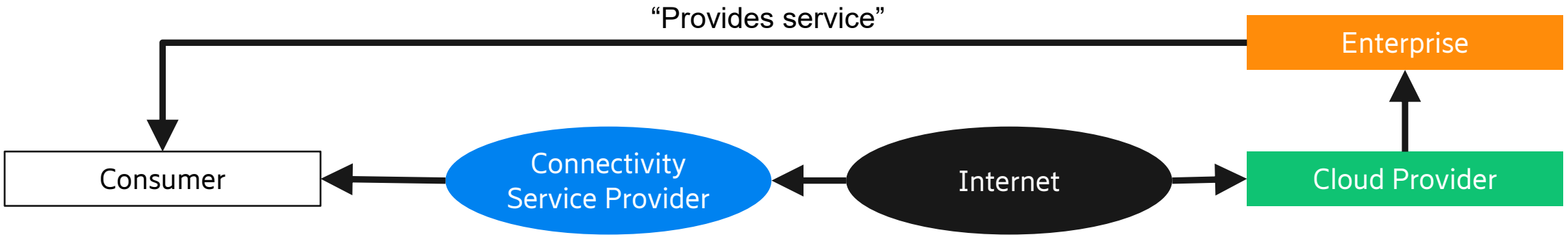
Airports

Industrial controllers move to the edge cloud

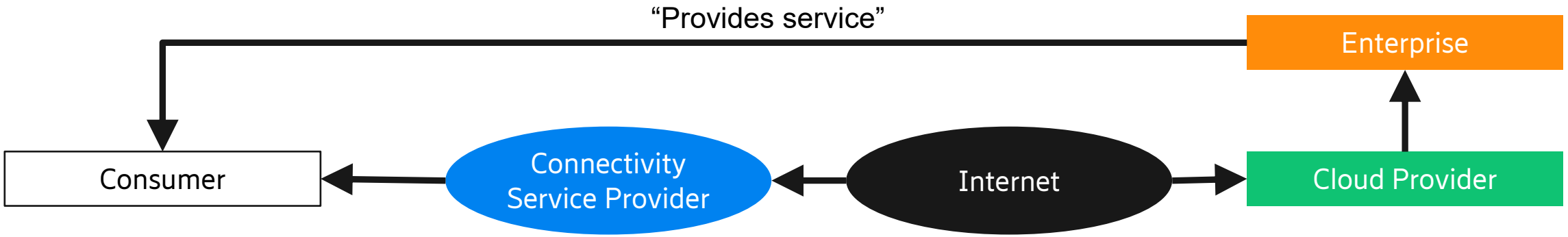


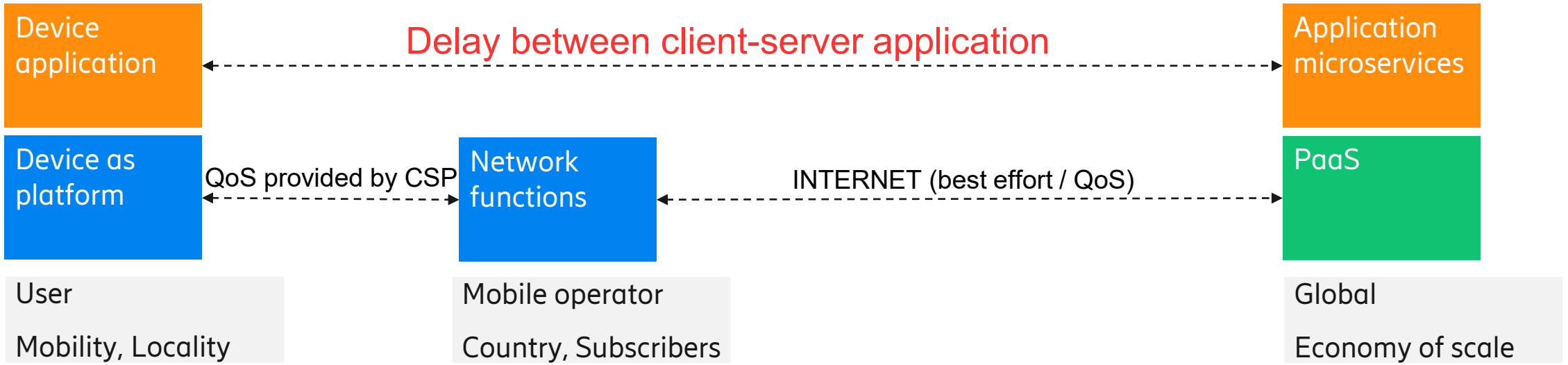


Applications in a cloud-based world



Delay and latency is a problem





Example: META

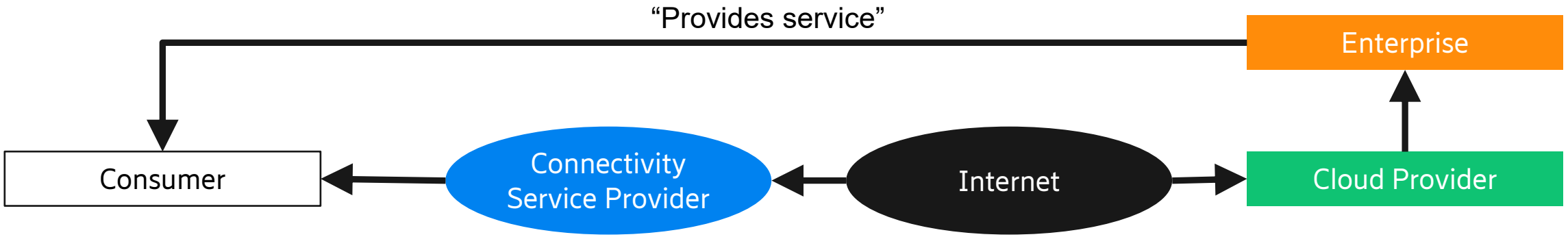
- Zuckerberg describes the metaverse, which he sees as the next generation of the internet, as a virtual environment that will allow people to be present with each other in digital spaces.

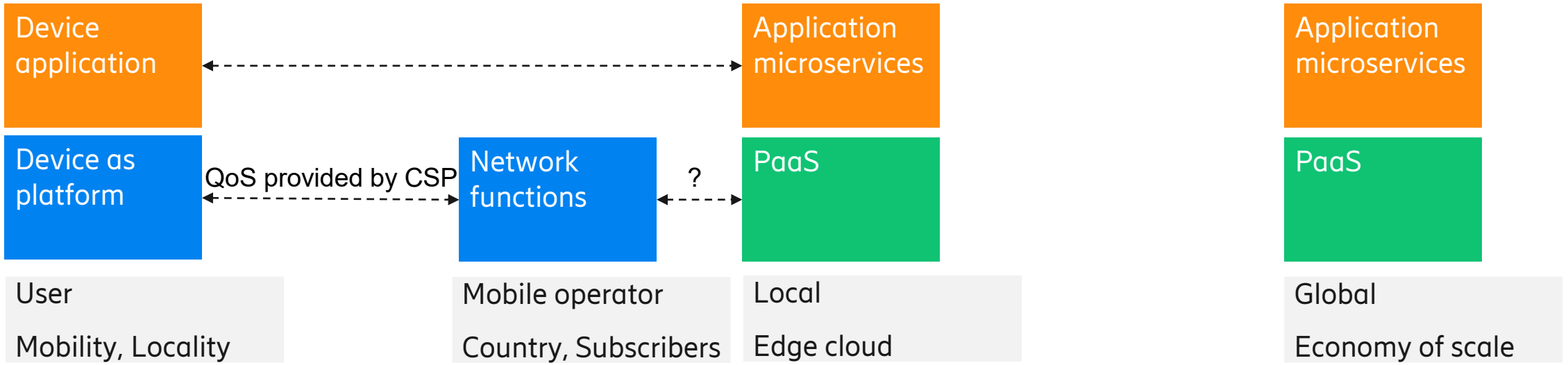
Enterprise
=
Meta

Requires
low latency
connectivity

- Meta joined telecom standardization bodies to standardize the 6G ultra-low latency infrastructure

Cloud players starting distribution of their services





Hyperscale Companies
AWS, Google, MS Azure, Meta

AWS Outposts

Run AWS infrastructure and services on premises for a truly consistent hybrid experience

Get started with AWS Outposts | Contact Sales

Anthos

Anthos unifies the management of infrastructure and applications across on-premises, edge, and in multiple public clouds with a Google Cloud-backed control plane for consistent operation at scale.

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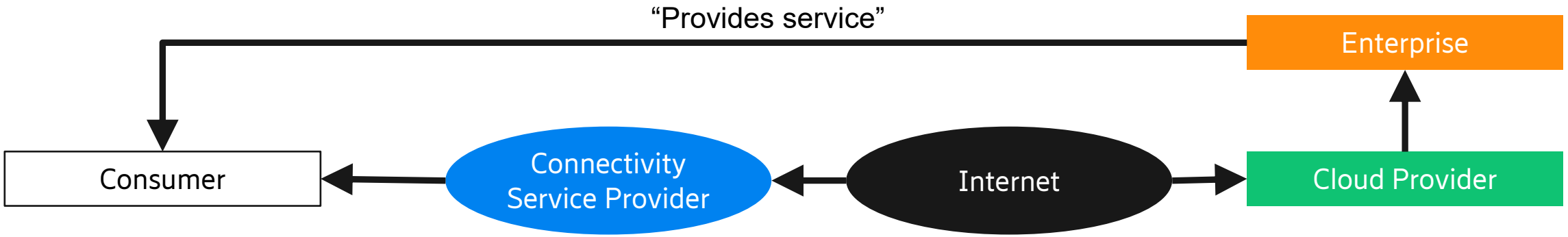
— **Managed, local HW** with full* support of AWS services

— Managed cloud environment for **private** infrastructures

CLOUD PLATFORM

Mobile players implement application platforms



Device application

Device as platform

Network functions

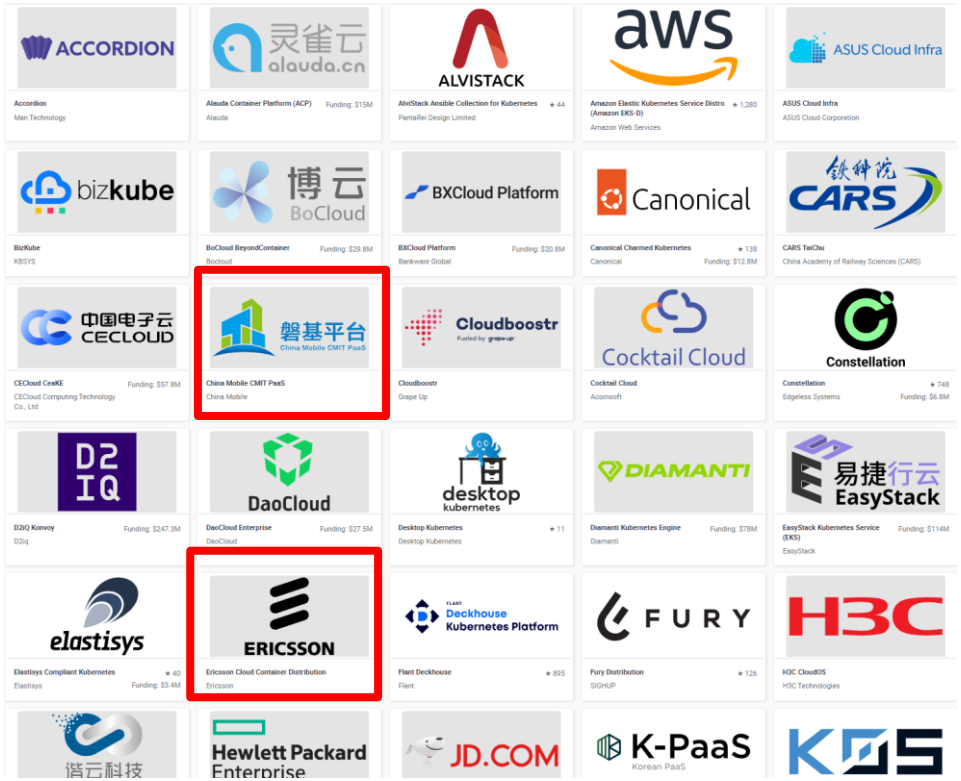
Network PaaS (Cloud)

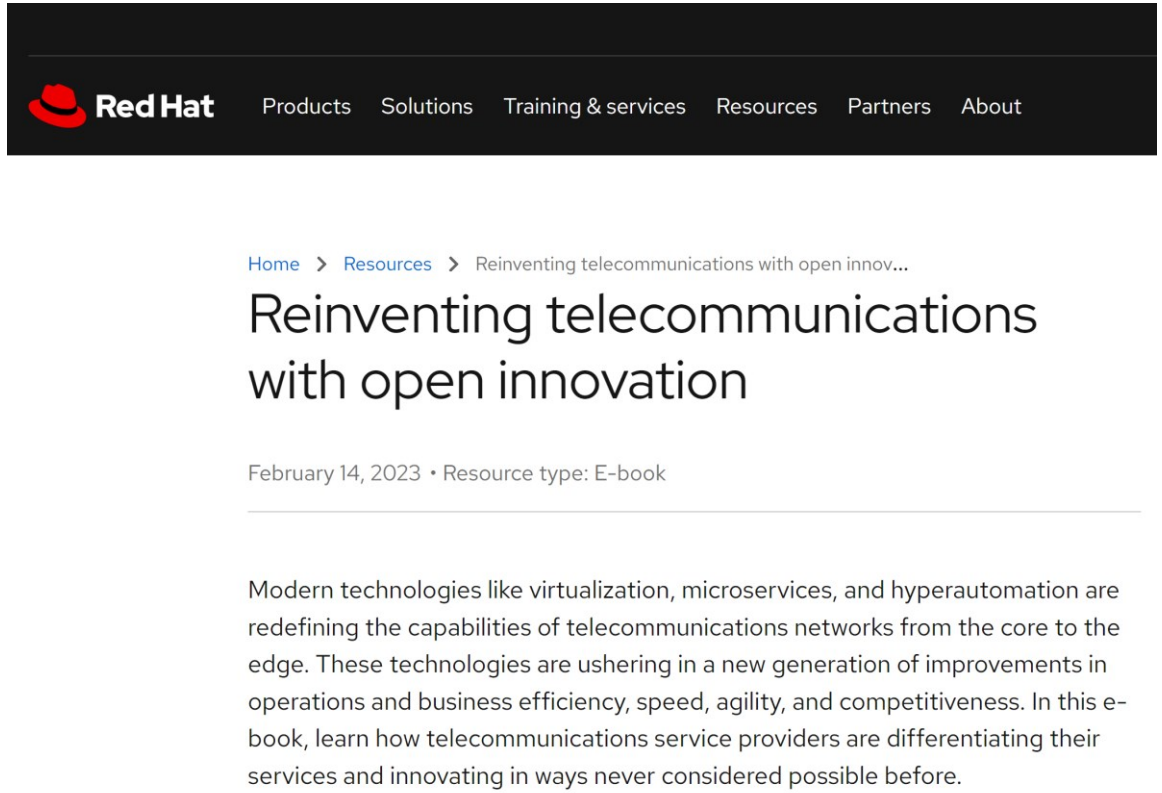
Telecommunication is using latest cloud technology to implement network functions

User	Local	Local	Global
Mobility, Locality	Edge cloud	Edge cloud	Economy of scale

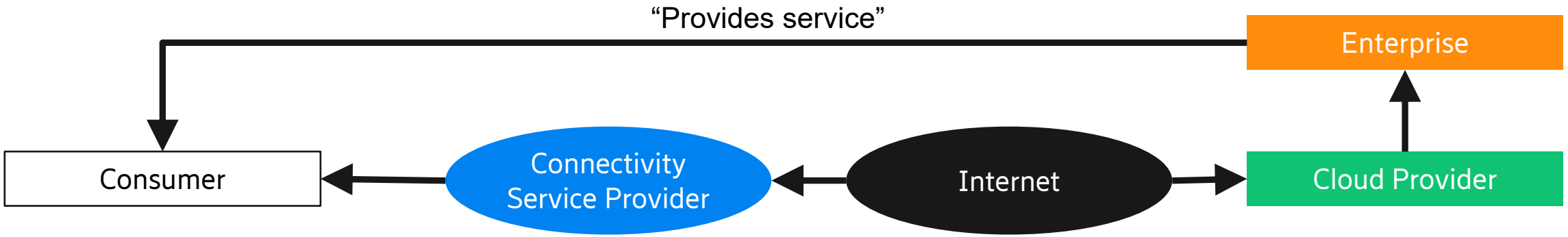
Examples

- Cloud Native Computing Foundation certified Kubernetes and many extension projects





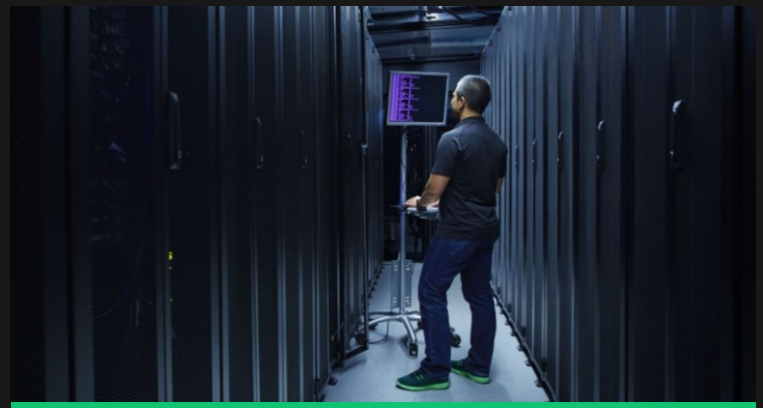
Next steps?



Device application	Network functions	Application microservices	Application microservices
Device as platform	Network PaaS (Cloud)	PaaS (Cloud)	PaaS (Cloud)
User	Local	Local	Global
Mobility, Locality	Edge cloud	Edge cloud	Economy of scale

Conclusion

Cloud-based applications are already dominating



Both telecommunication network functions and end user applications are going to be Cloud Native

Edge cloud will play a key role for performance, privacy and legal reasons

Image source: www.engadget.com

ericsson.com/en/edge-computing