Net neutrality and 5G

Presented by

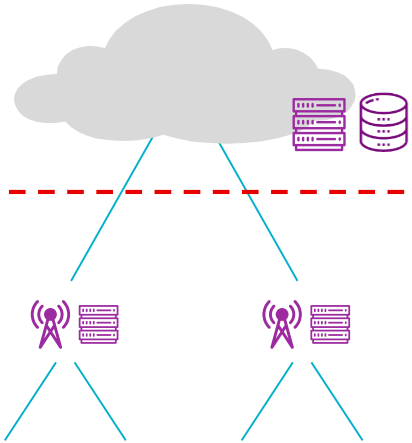
Lisa Felton, Head of Services Regulation

Jennifer Gill, Head of Cloud

25 May 2019

Multi-access edge computing

Edge Computing: illustration and descriptions



- **Cloud computing** has become the de-facto standard for developers and enterprises due to its **scalability**, **flexibility** and **cost efficiency**

- **Edge computing** augments cloud capabilities by processing data closer to the end device/user

Multi-access Edge Computing (MEC) refers to computing at the edge of the telco network (both fixed and mobile)

- Applications with high demand in terms of **latency**, **data volumes** and **data privacy** will leverage MEC e.g. real-time and/or local data processing, M2M comms, data caching, etc.

MEC can be a dedicated service or shared infrastructure

Dedicated

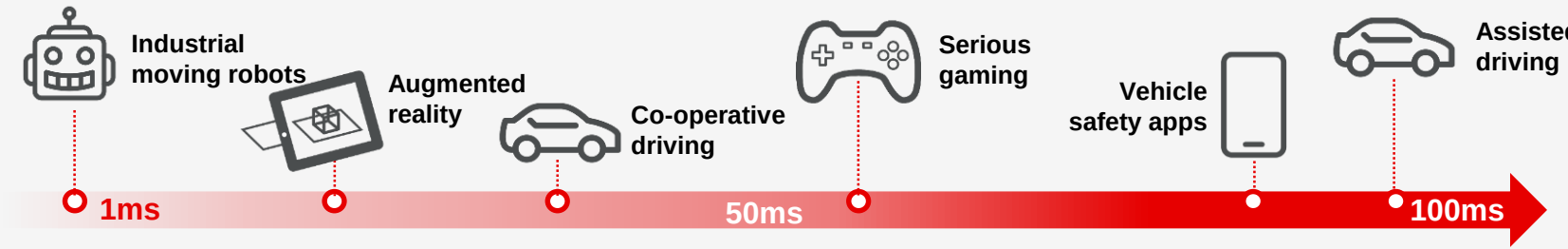
- Deployed at a customer site
- Bundled with Private LTE or 5G slicing
- Delivers rich cloud functionality dedicated to customers
- Allows customer to keep data locally and have a single provider responsible from the device through to the application

Distributed

- Embedded in the wide area network (4G or 5G)
- Combined with 5G, enables super-fast connection and super-low latency (<10ms between base station and application vs 50-100ms today)
- Supports multiple customer workloads

MEC delivers a number of customer benefits

1 Low latencies enable powerful new use cases



2 Localised Decision Making

As remote sensors and local data increases, **locally hosted applications are a much more efficient option** than transferring data to the centre

3 Streamlined Devices

As processing moves from device to edge, **sophisticated services can reach 'simpler' devices**, reducing cost and battery requirements

4 Privacy, Security & Resilience

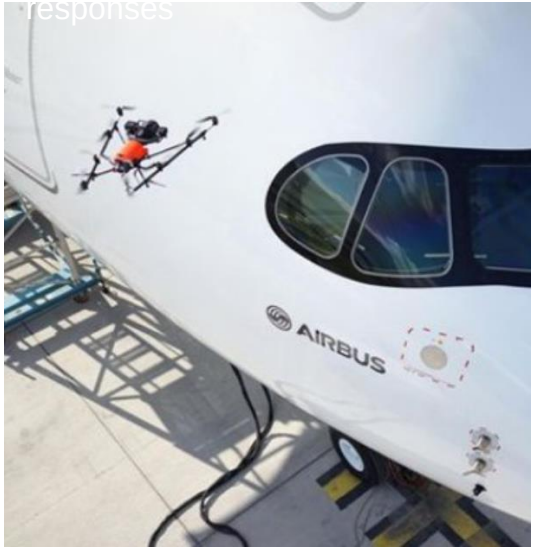
Edge enables more flexibility for **data privacy** and provides a **resilient backup option** for applications within a central data centre

Multi-access edge computing will remove barriers to

BEFORE

Real time video analytics were impractical from a cost and latency perspective. So camera is analysed offline and after the fact

Video is downloaded after the drone flight. Slowing down turnaround time and real time responses



Augmented reality in lower resolution

With MEC

Video is processed and analysed at the edge, saving bandwidth and allowing real time command and control

A step change in experience

A Ready Business places intelligence where it is needed

Short-term data
Accidents
Fault handling
CCTV triggers
Car telemetry

Local processing
AI
Video Analytics
JIT inventory
IoT anomaly detection
Security policy enforcement
Augmented & virtual reality

Long-term data
Health records
Traffic patterns
Billing
Data <> Insights

Proposed recommendations to enable 5G services

Innovation by permission → innovation first principle

There should be no change to assessment of specialized services after launch

“Necessity” should be based on the requirements of the content, applications or services for a specific level of quality

Dedicated/private services are not covered by the Open Internet Regulation

5G increases network investment and improves overall quality