NBYCOMP
NearbyComputing

Edge Orchestration and **Infrastructure Management**:

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The NearbyONE Orchestrator

Nearby Computing SL

Based in Barcelona, Spain.

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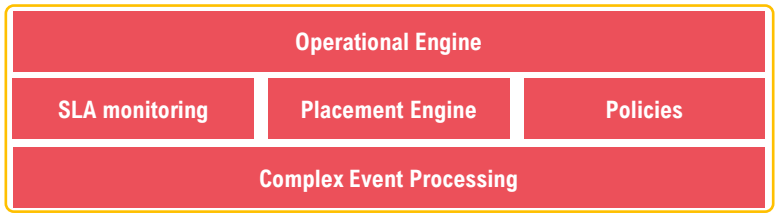
Incorporated in 2018 as a spin-off of the Barcelona Supercomputing Center, a leading research center in Europe.

NearbyOne is the product based on our own IP on macro and micro-orchestration methods, a software platform enabling multi-domain end-to-end orchestration advanced services, on top of industry-leader solutions.

We deploy our technology through selected vendors and system integrators, fully supporting them through all the implantation and maintenance processes.

Nearby One – Multi-tenant Orchestration



End-to-end Orchestration
Infrastructure
Network
VNFs/APPs

Lifecycle Management
SLA monitoring
Business Policies

Key Shareholders

Strategic

cellnex driving telecom connectivity
Lenovo
RED ELÉCTRICA DE ESPAÑA

Research Institutions

BSC Barcelona Supercomputing Center Centro Nacional de Supercomputación
UPC UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

Partners

Lenovo Global Partner & Reseller
intel
minsait An Indra company

H2020 consortiums

5GMED
AFFORDABLE5G
SmART5GRID

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MAIN OBJECTIVES

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1

Understanding the basics of Edge Computing and how it relates to Infrastructure

2

Discovering how NearbyOne can solve challenges around provisioning and managing.

NEW CHALLENGES FOR A NEW ERA OF EDGE APPLICATIONS

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A new set of technologies are bringing the possibility to consumers and enterprises to **access a new generation of powerful applications** that require to run as close as possible to the data source.

Traffic control, connected vehicle

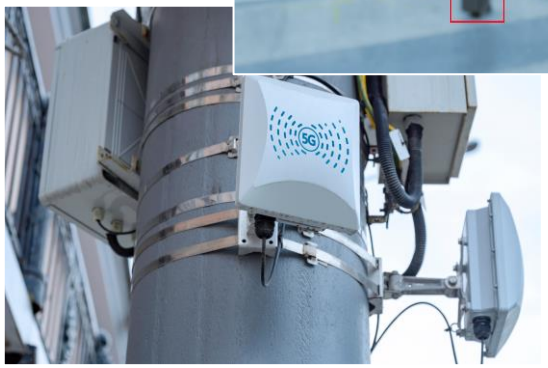
Mission critical, real-time sensor-based analytics.

Video analytics security

People detection and counting

Industrial Augmented Reality

Online gaming



Private Connectivity and teamworking

Content Delivery

HOW USERS CONSUME APPLICATIONS

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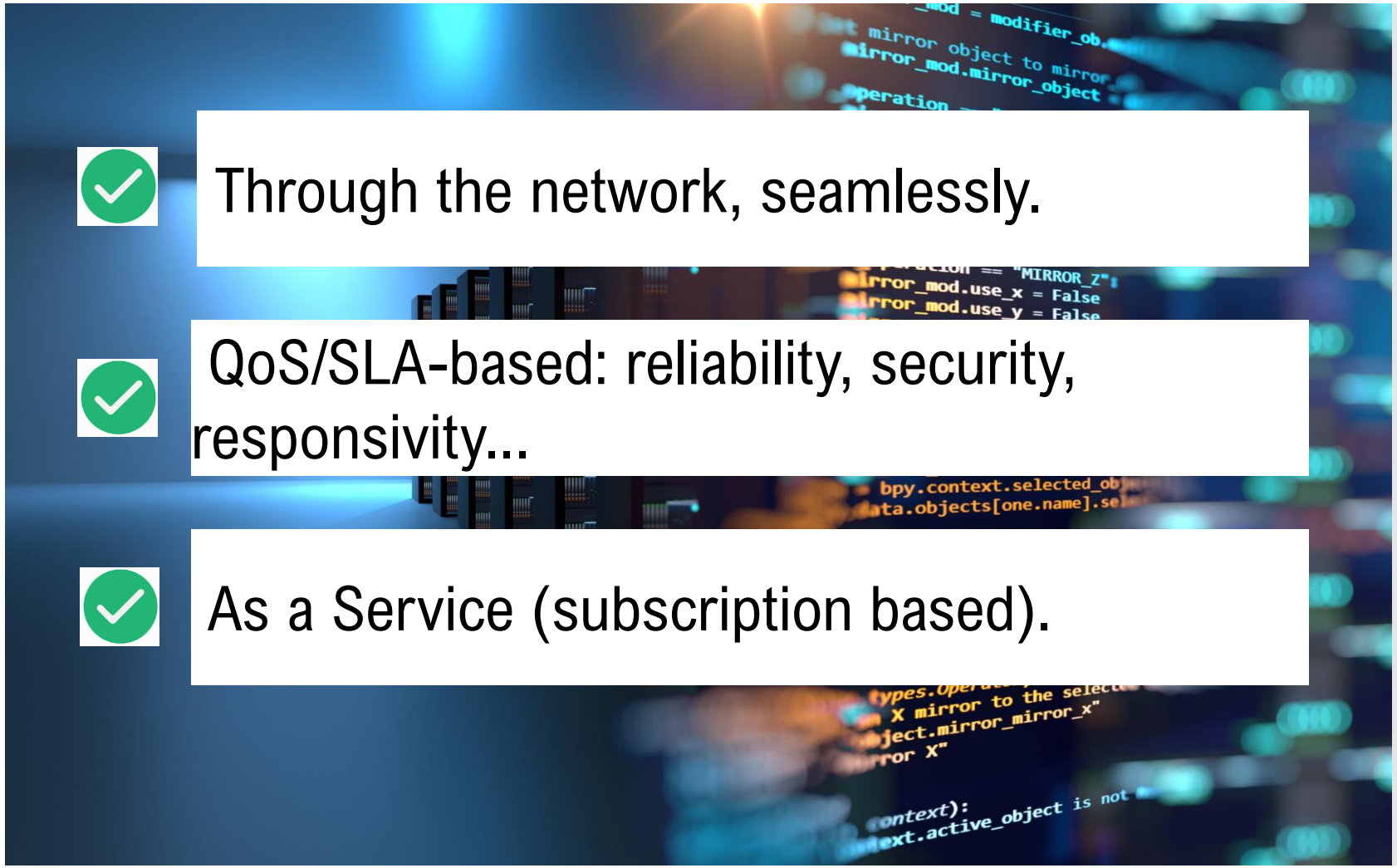

- Through the network, seamlessly.
- QoS/SLA-based: reliability, security, responsivity...
- As a Service (subscription based).

Edge Computing enables a joint management of IT systems and access networks, solving a complex set of challenges so **users can enjoy Edge applications like Cloud ones.**

What is the EDGE?

Edge Computing cannot be addressed from a single point of view

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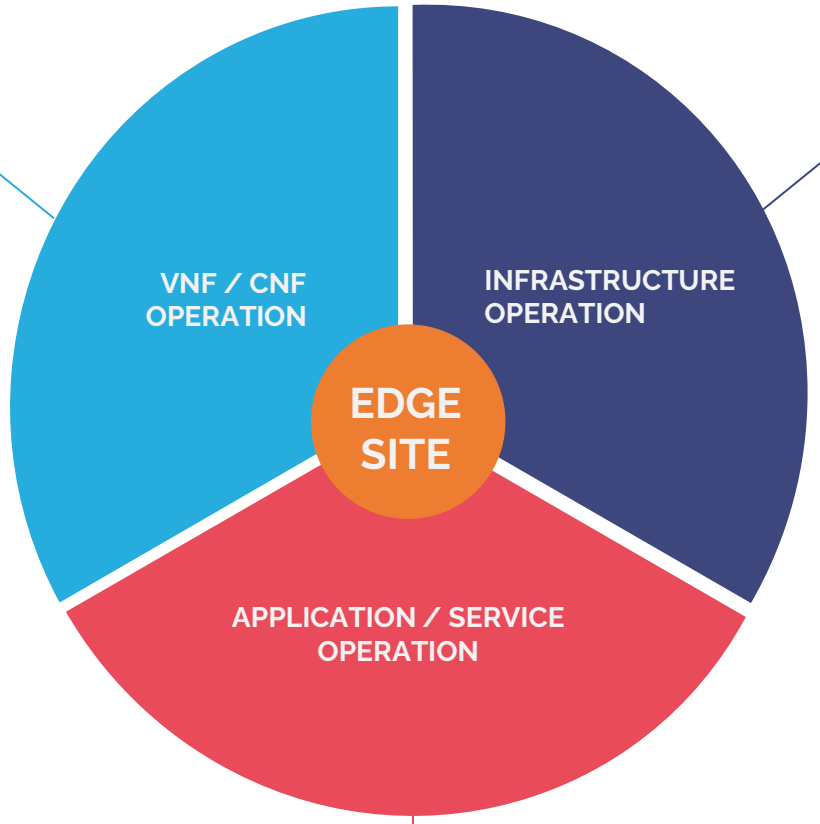
Edge Computing is
not network centric but
requires deep network visibility



Edge Computing must
be hardware agnostic but
requires infrastructure awareness

Edge Computing
is driven by applications

NearbyOne

The **most complete Orchestrator**

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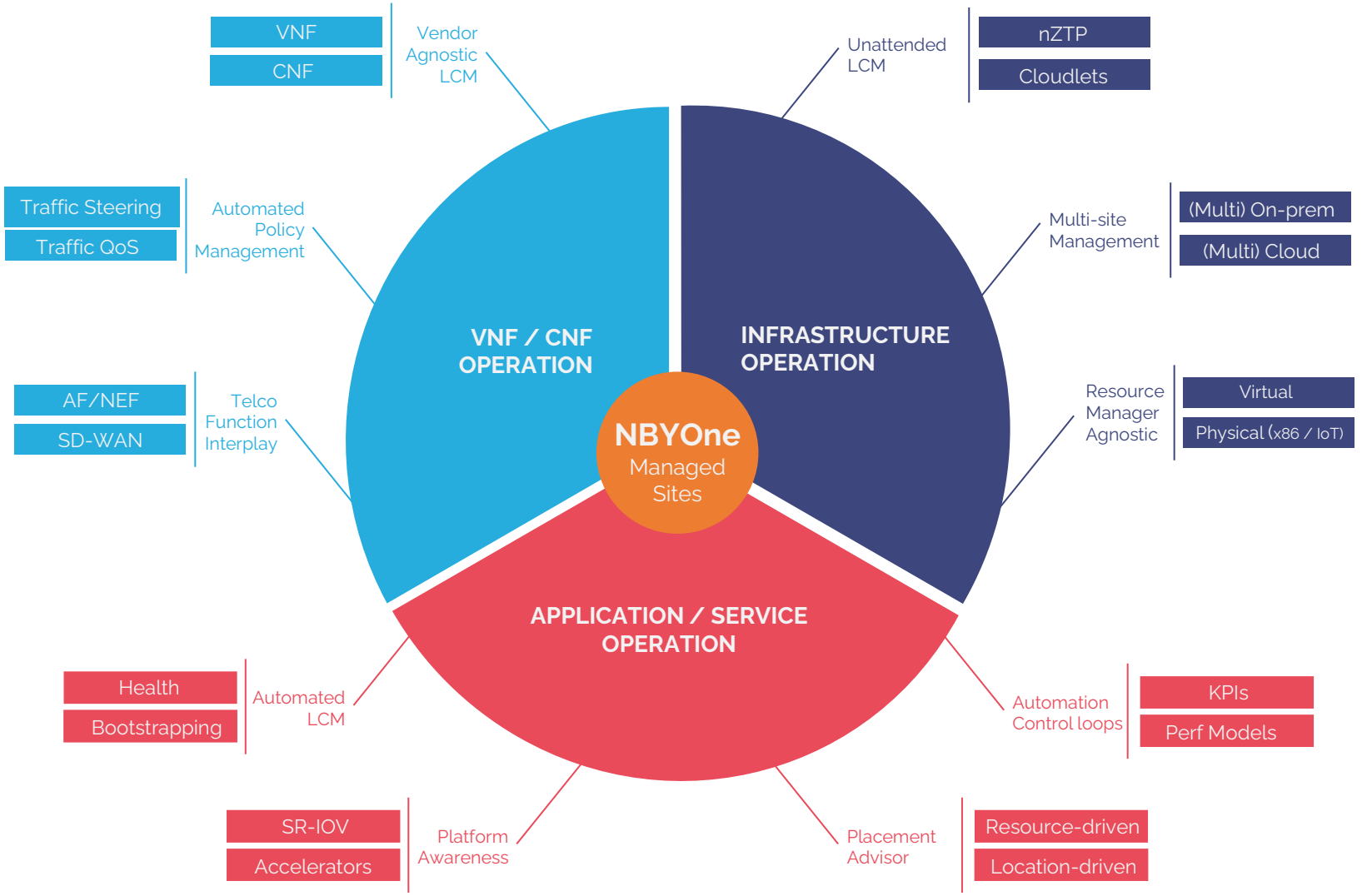

Single pane of glass

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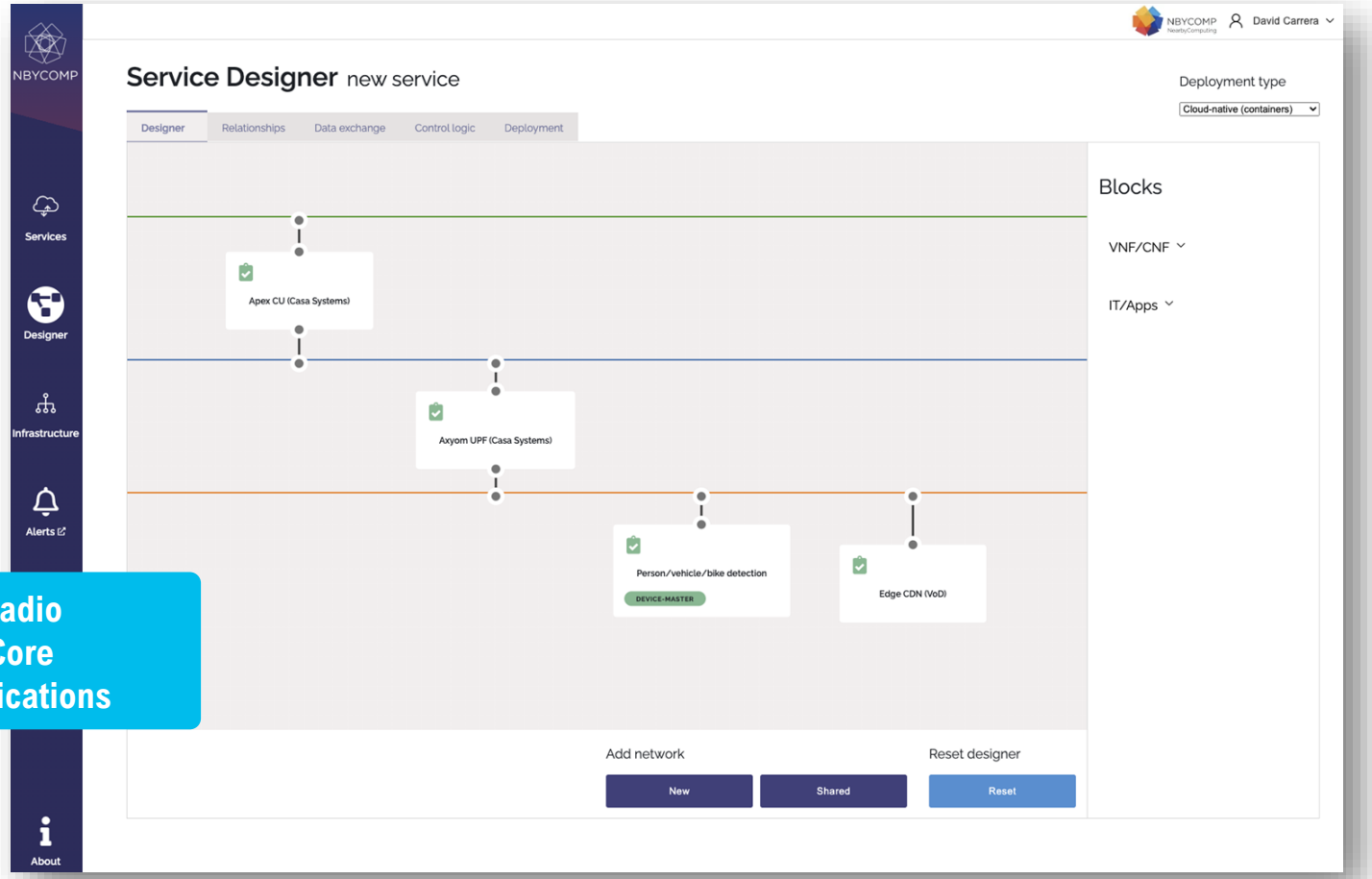
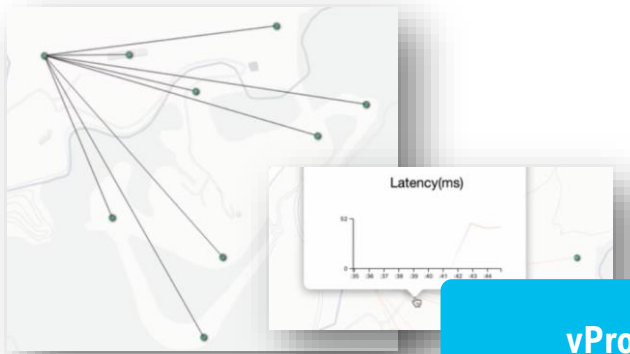
Drag-and-drop access to a catalog of ISV Edge Apps and VNFs



Radio Core Applications



vProbes Compute Nodes

Unpacking the Edge

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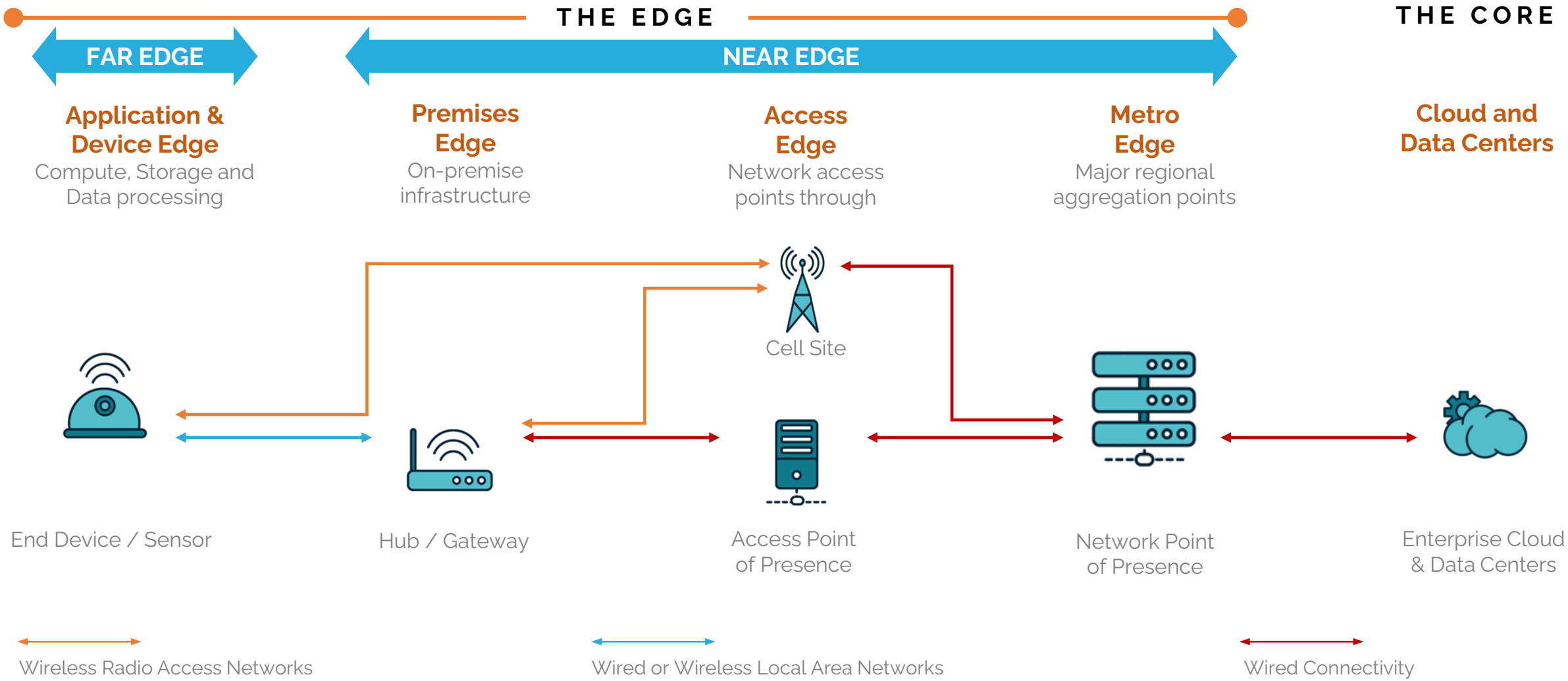

THE TRANSITION FROM CLOUD TO EDGE

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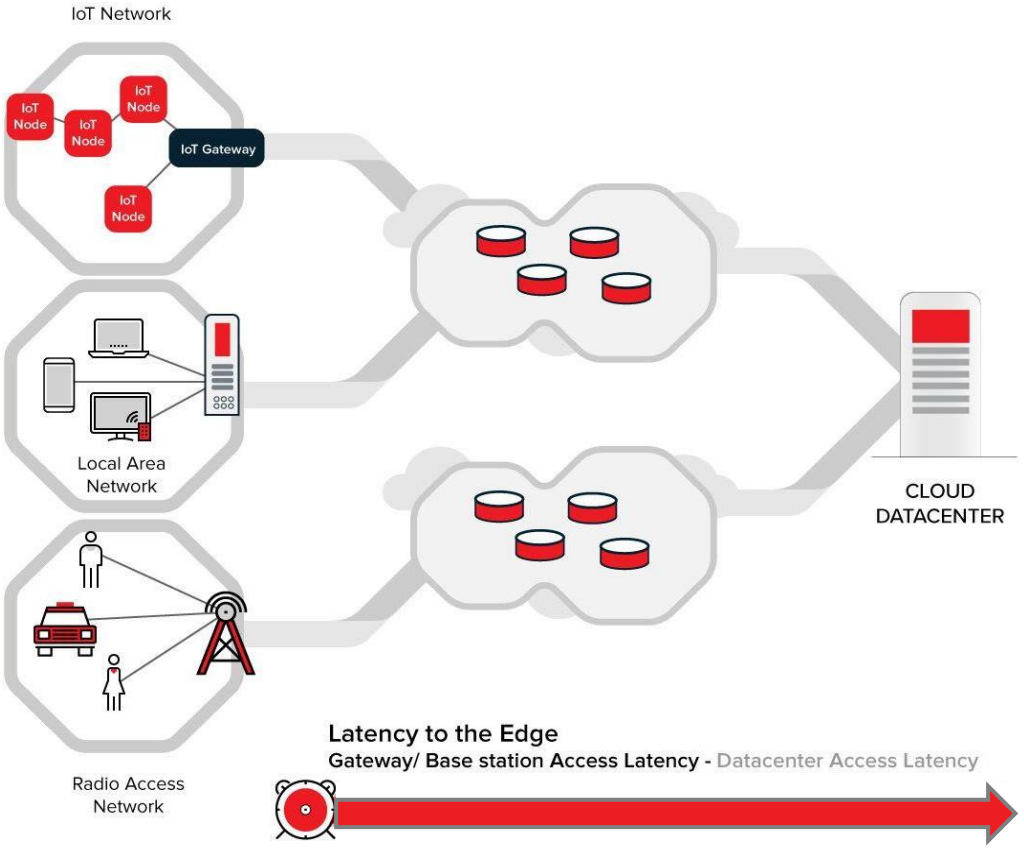
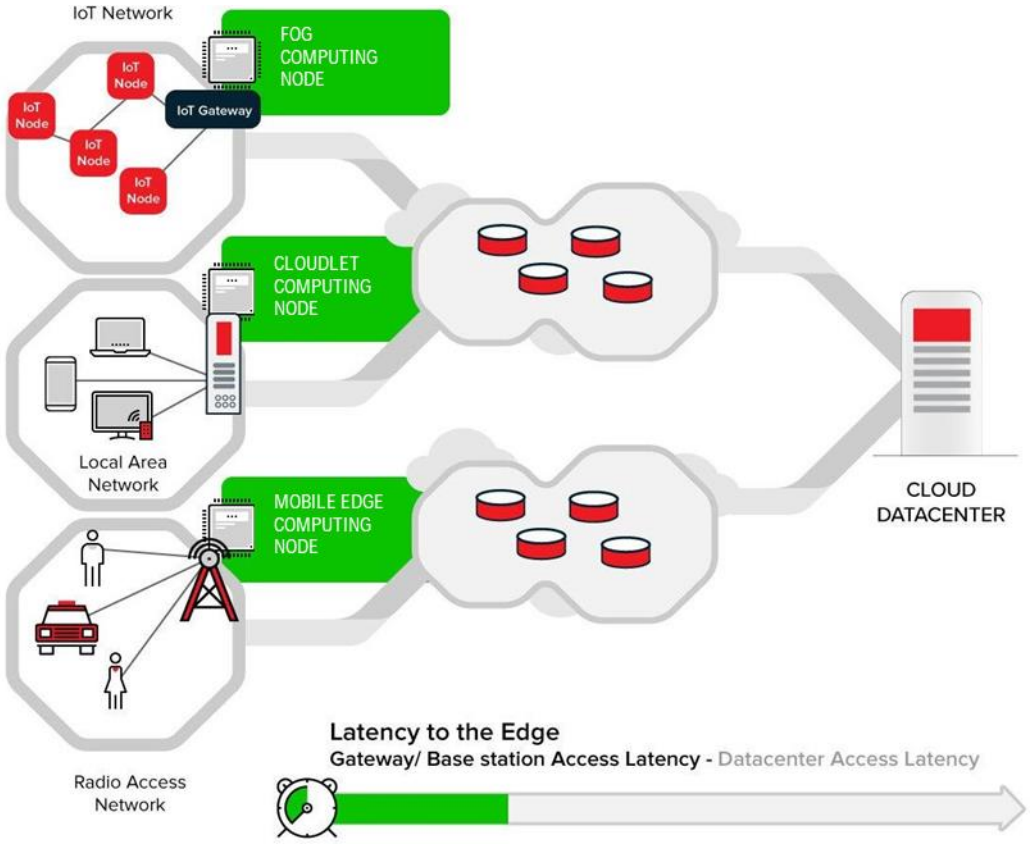
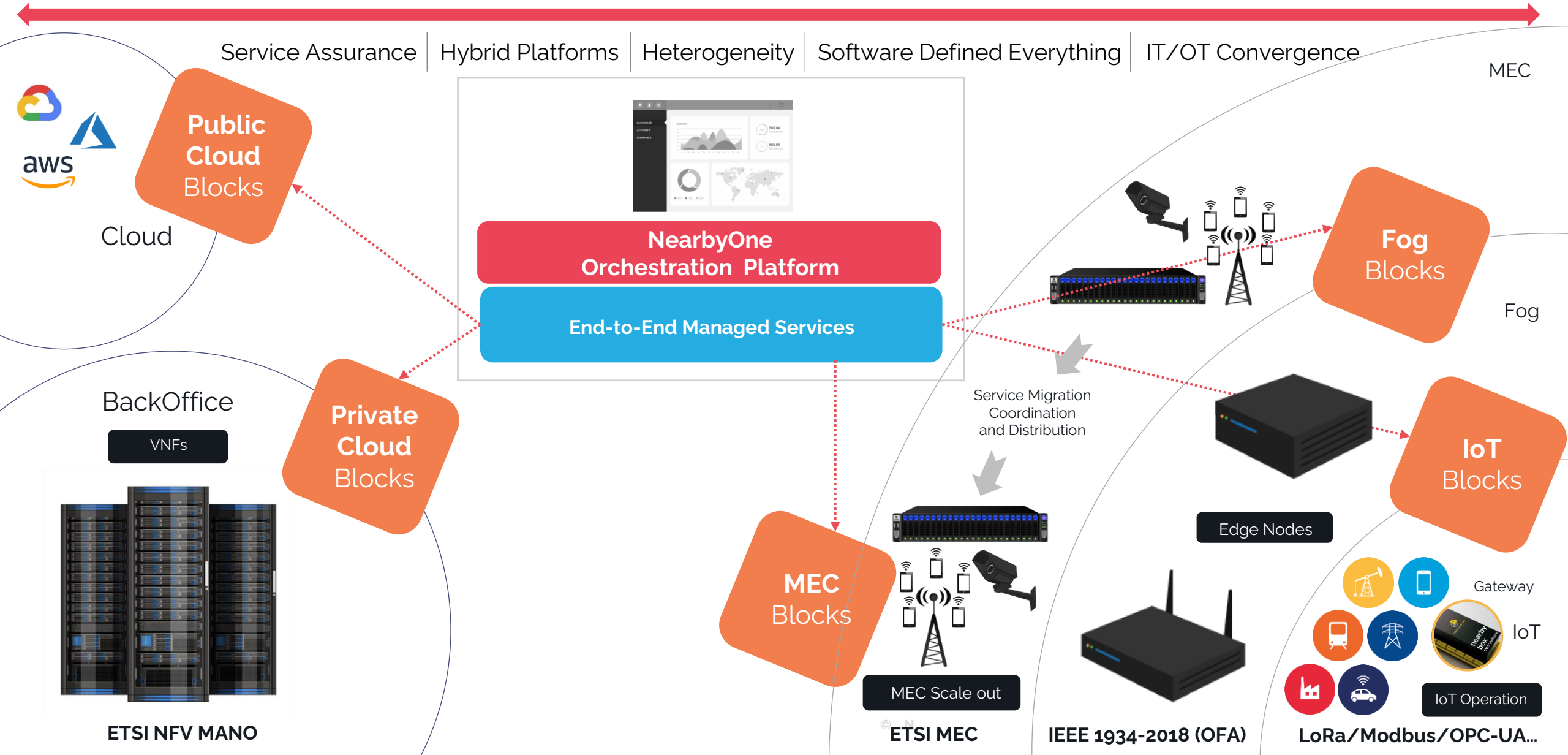


Computation takes place in the cloud
Potential Loss of Data
Longer Outage Time
Data Vulnerability



Computation takes place at the source data is generated
Low Latency and Reduced Bandwidth
Better User Experience
Higher Security

E2E Cross-domain or Domain-specific Orchestration



Onboarding Edge Nodes

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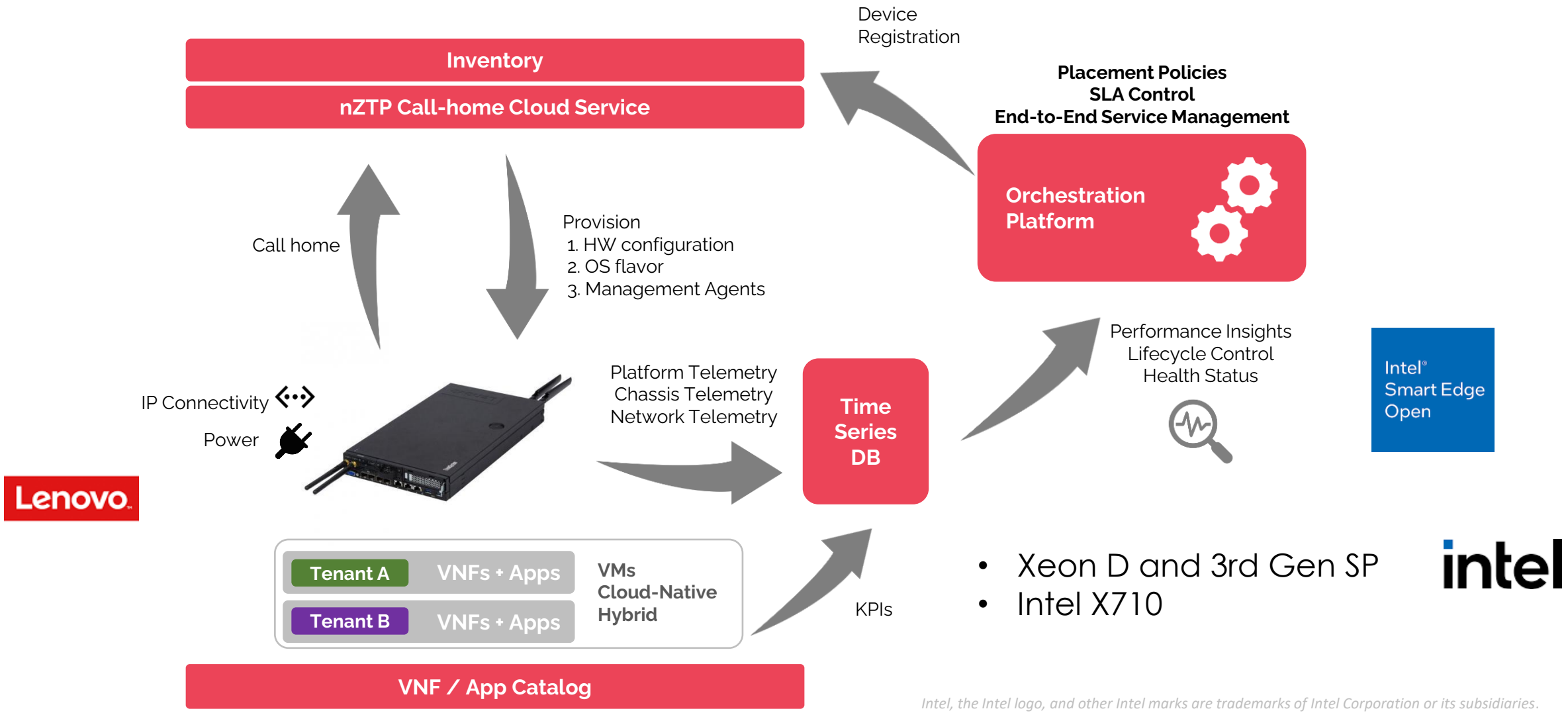

- Xeon D and 3rd Gen SP
- Intel X710

intel

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KEY PLAYERS IN THE EDGE COMPUTING STACK

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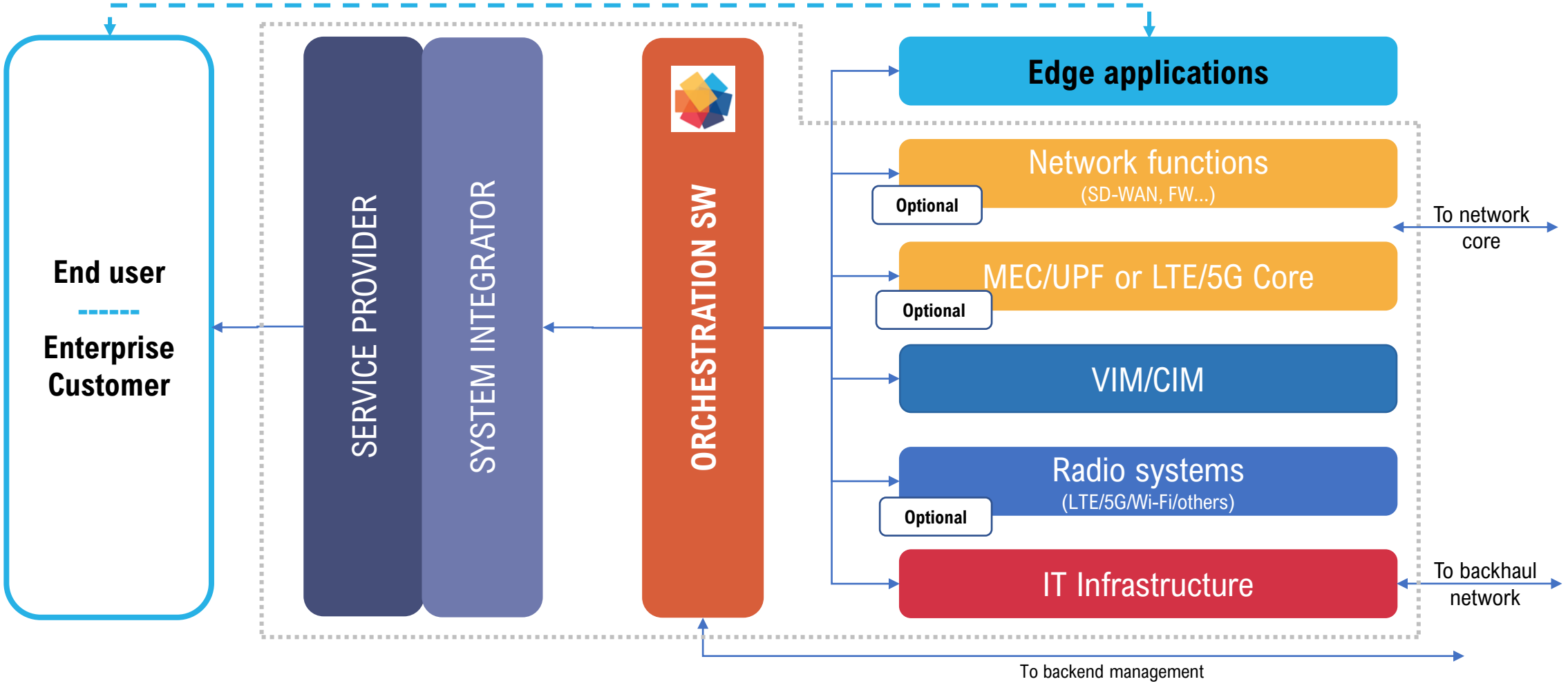

Quantifiable & Measurable Impact

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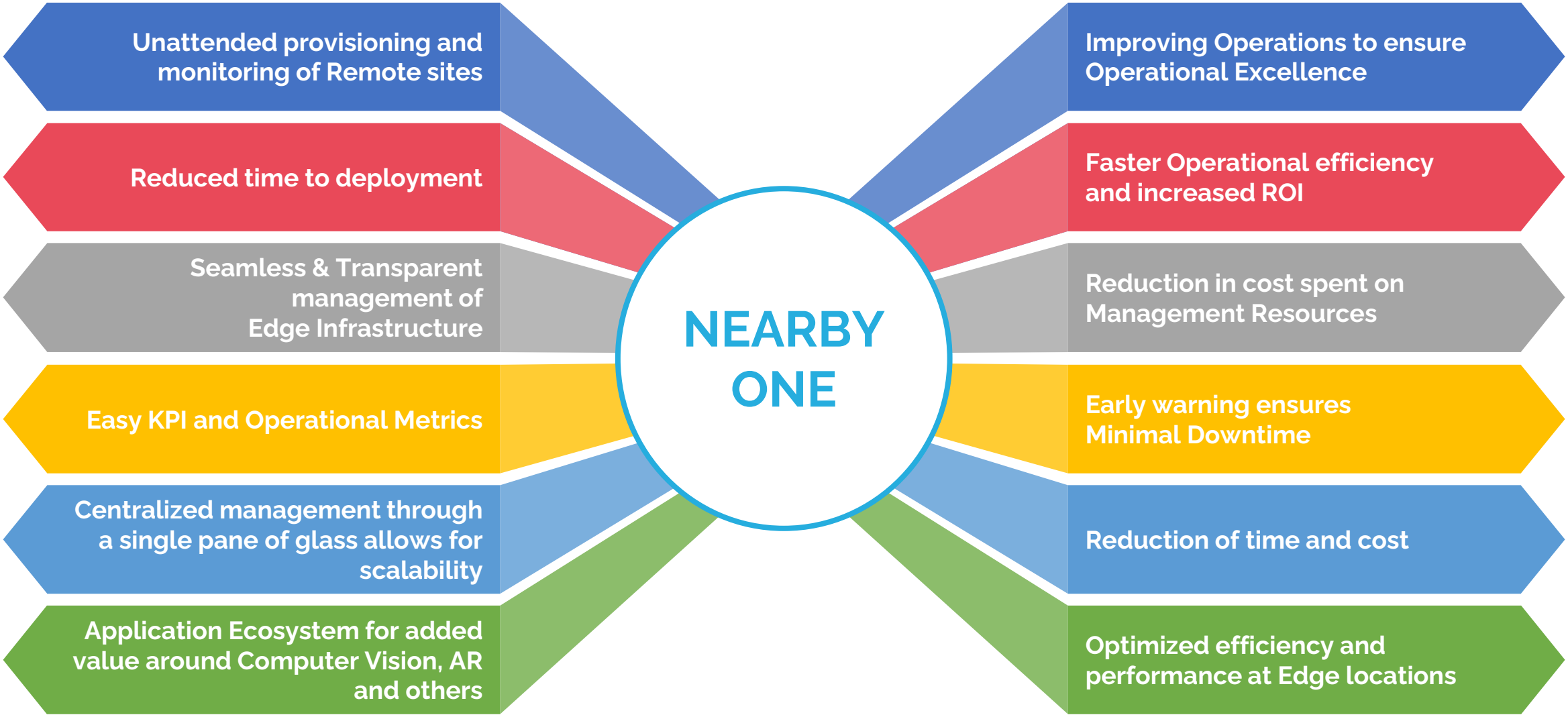

Infrastructure Use Cases

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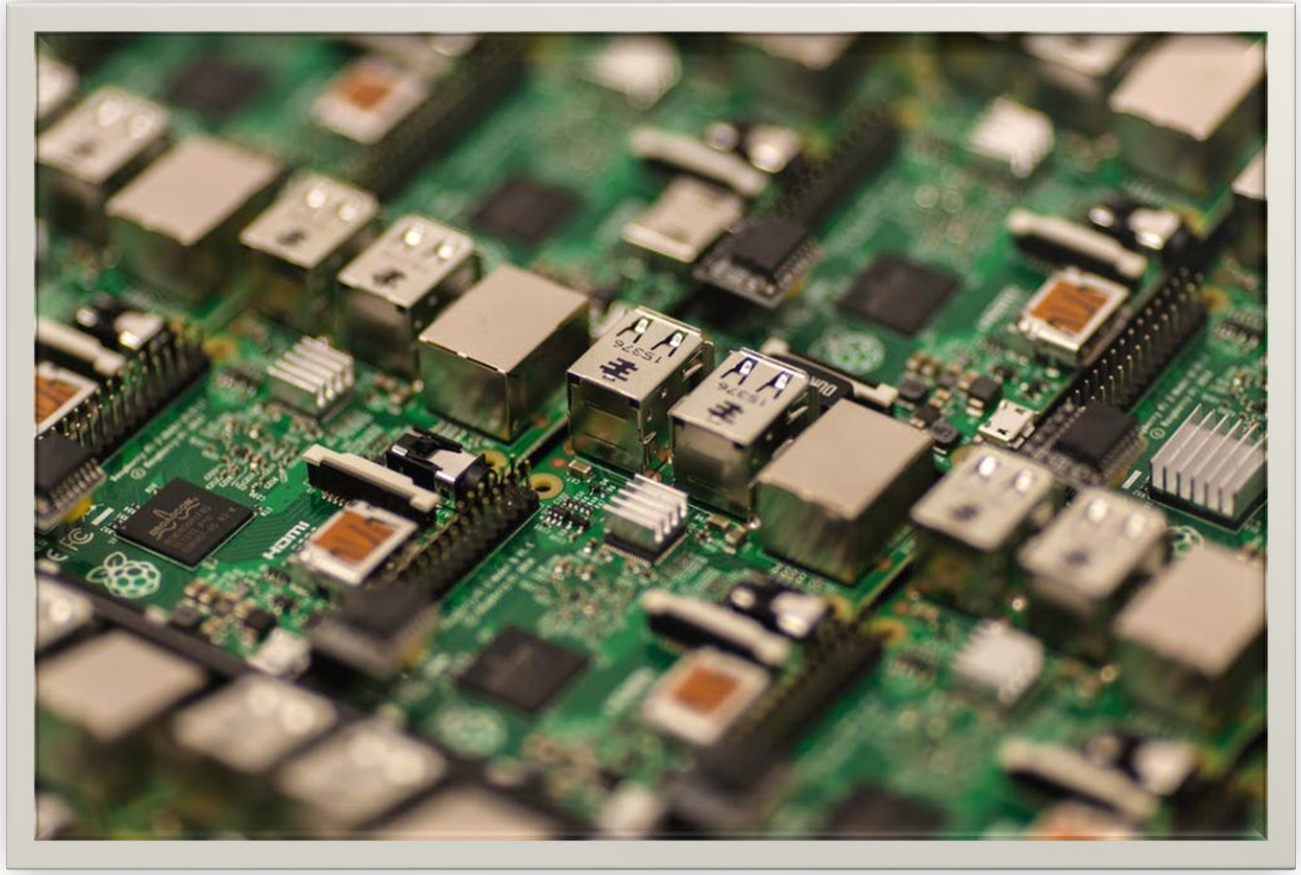
- IOT Networks
- Remote Offices
- Distributed Sites



Thank you

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