



# Nearby One

*The “Smart” Way of Orchestrating the Edge  
for Telco and Enterprise*

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# Intel<sup>®</sup> Smart Edge



intel<sup>®</sup>

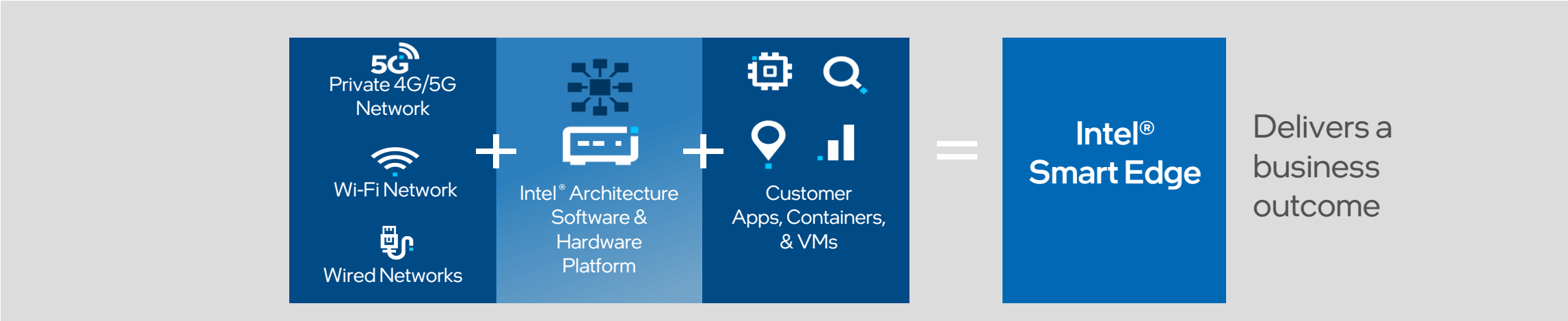
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# Intel® Smart Edge

Build edge solutions with faster Time to Market and lower Total Cost of Ownership

Simplify edge networking and application deployment with Intel® Smart Edge, a software-defined platform that uses a certified Kubernetes engine to manage workloads, networking and abstract device complexities.



Economics, Ease of Use, and Experience for Customers

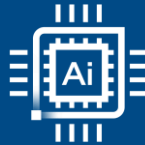
Enable Critical Capabilities at the Edge



Security



5G & Network Functions



AI



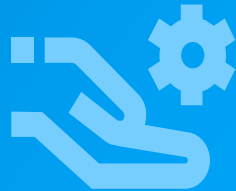
Media

# Intel® Smart Edge Benefits

## Ease of Use

### Containerized framework

- Easy deployment of applications through Kubernetes
- Easy management of the edge platform through telemetry tuned for the edge
- Easy enhancement on a CNCF certified platform



## Economics

### Highly-tuned edge infrastructure to speed time-to-market

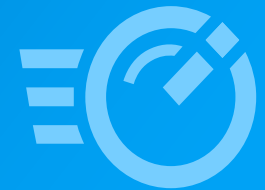
- Experience Kits for general-purpose and segment-specific deployment
- Licensed commercial offering for select enterprise deployment
- Reference Implementations to speed solution development



## Experience

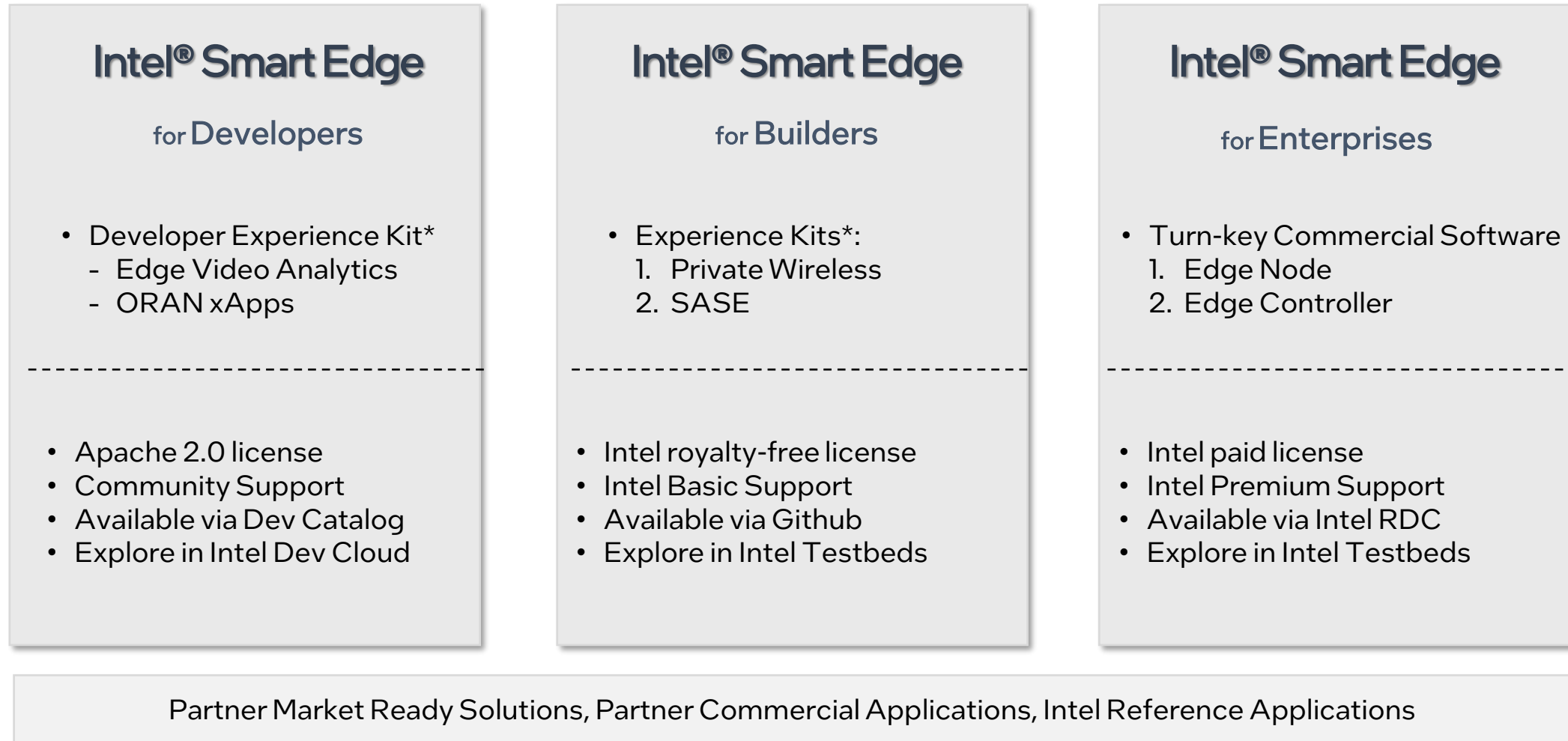
### More deployment choices

- Flexibility to deploy into different edge environments
- Catalog of applications in the Intel® Developer Catalog and market-ready solutions in the Intel® Marketplace
- Standards aligned: 3GPP, ETSI MEC, ORAN, GSMA, OPG, and WiFi



Build edge solutions faster and at lower cost

# Intel® Smart Edge – Meeting Diverse Needs



\* Consumable as integrated platforms or composable building blocks

# Intel® Smart Edge

## Edge native software to unleash services at the Edge

### Optimized Performance



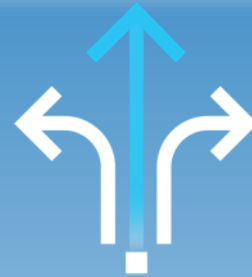
Supercharge investments

### Secure by Design



Protect workloads and data

### Orchestration and Manageability



Enable customers

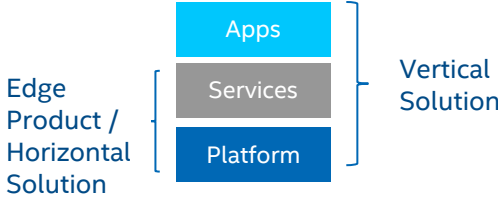
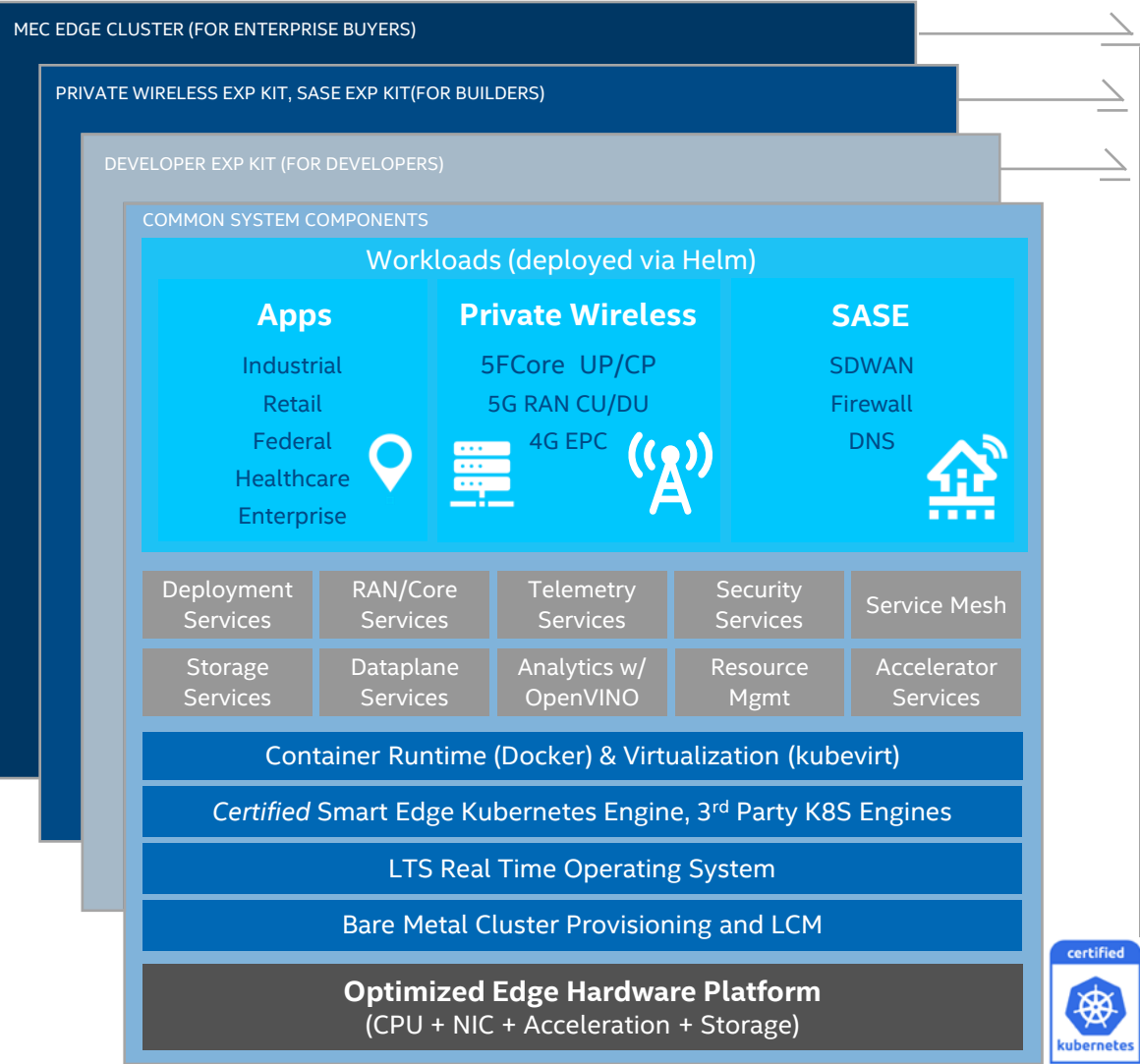
### Sustainable



Lower Carbon Footprint

# Intel® Smart Edge Architecture

## Edge Cluster



## Edge Controller

FOR ENTERPRISE BUYERS

ZERO TRUST SECURITY MODEL

End-to-End Controller Platform



- Private Wireless Experience
- Node & Application Life Cycle Mgmt
- Platform Monitoring & Alerting
- Secure Node Attestation & Onboarding
- Catalog of Apps & Services
- Topology Orchestration
- Unified Multi-Node/Cluster/Multi-Site Mgmt
- Multi-Tenancy w/Role-Based Access
- Network Policy Management
- Scheduling Policy Management



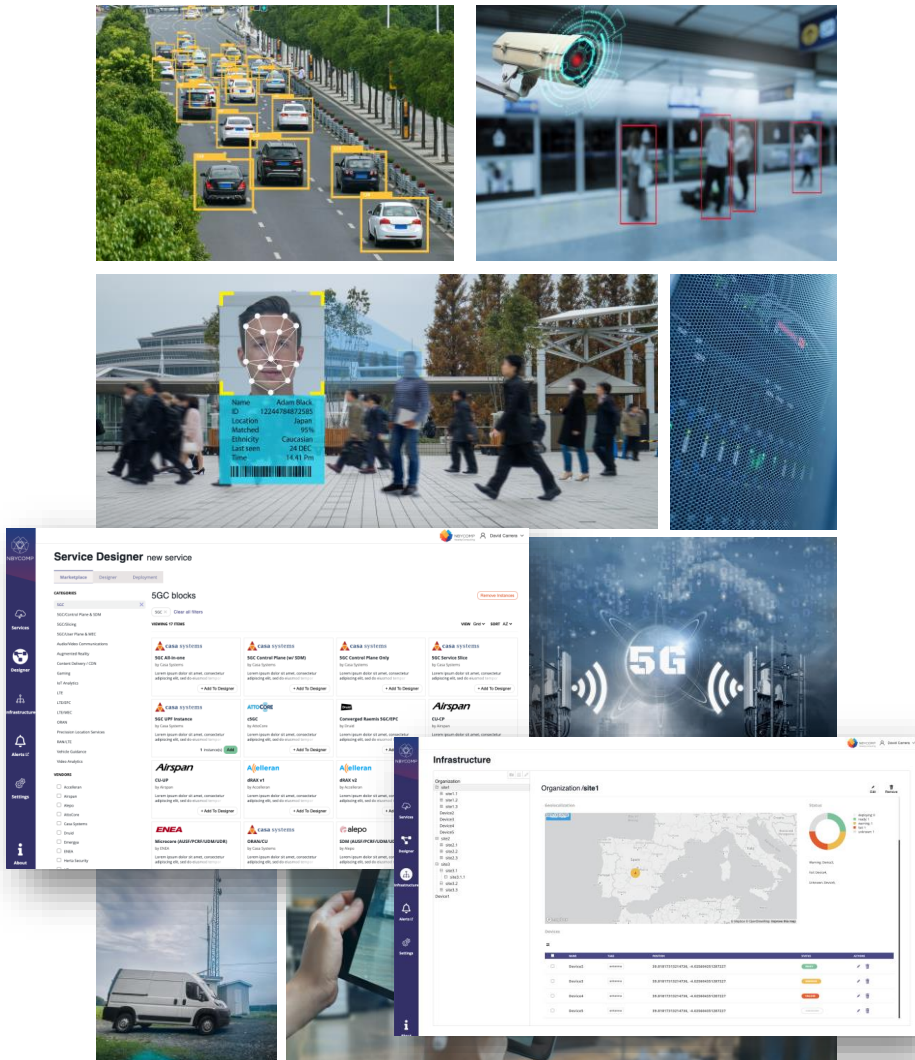


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# Nearby One

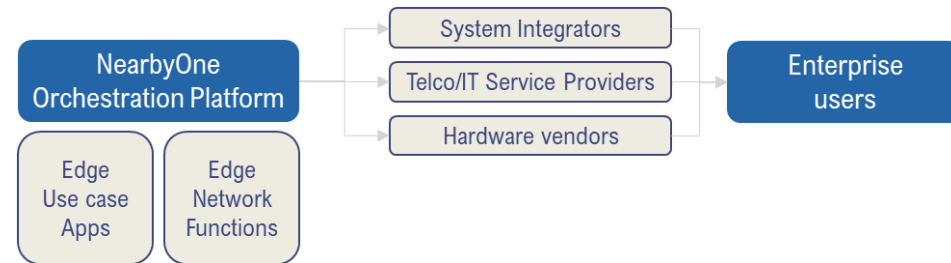


# At the heart of EDGE COMPUTING



**Nearby Computing** is a company based in Barcelona, Spain, delivering Edge Computing end-to-end **management and automation** solutions through **its own orchestration platform *NearbyONE***.

NearbyONE has proved to be **the most complete, versatile and performant edge automation tool in the market**.



Key Company Stakeholders

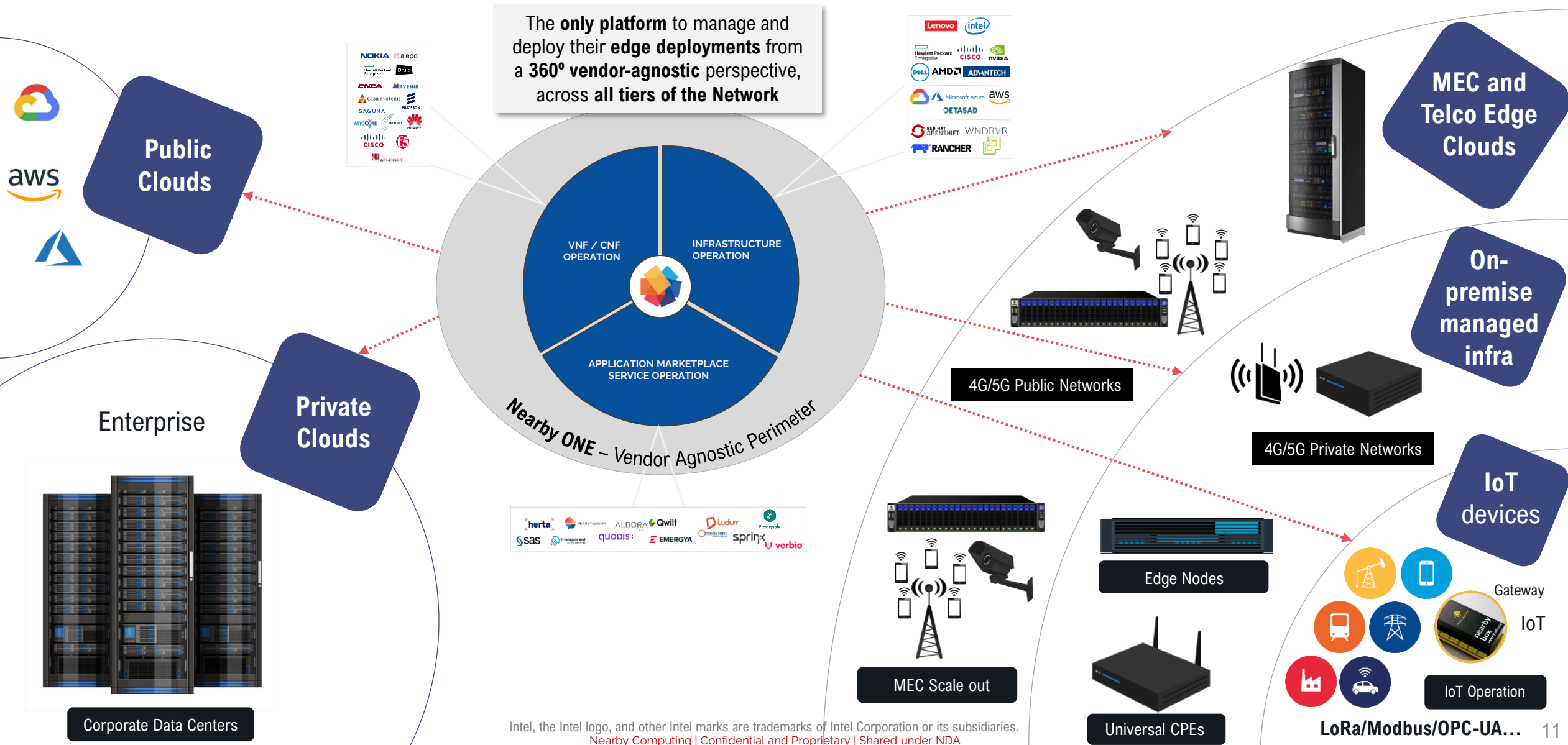
Strategic Shareholders

Partners



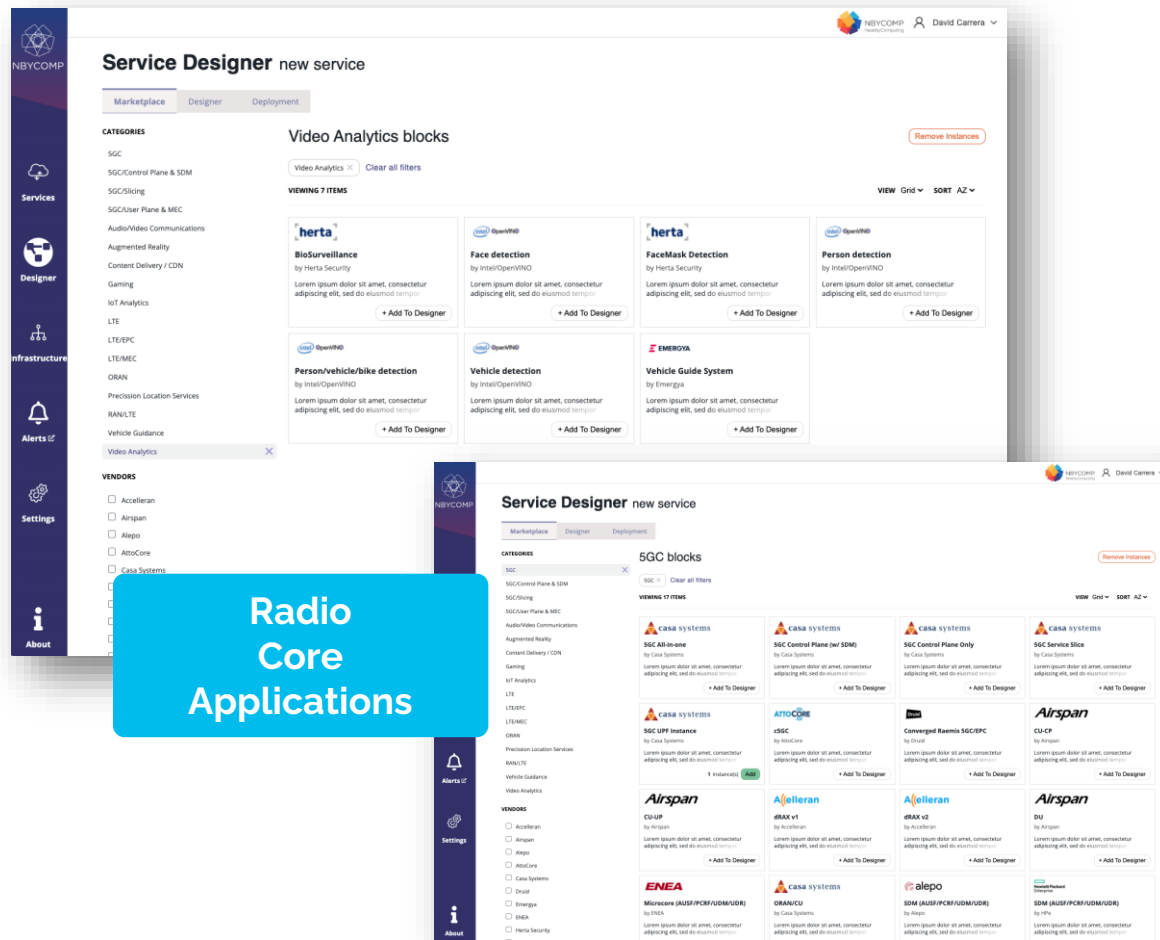
Global Partner & Reseller

# Nearby One: One-stop-shop for Edge Operations



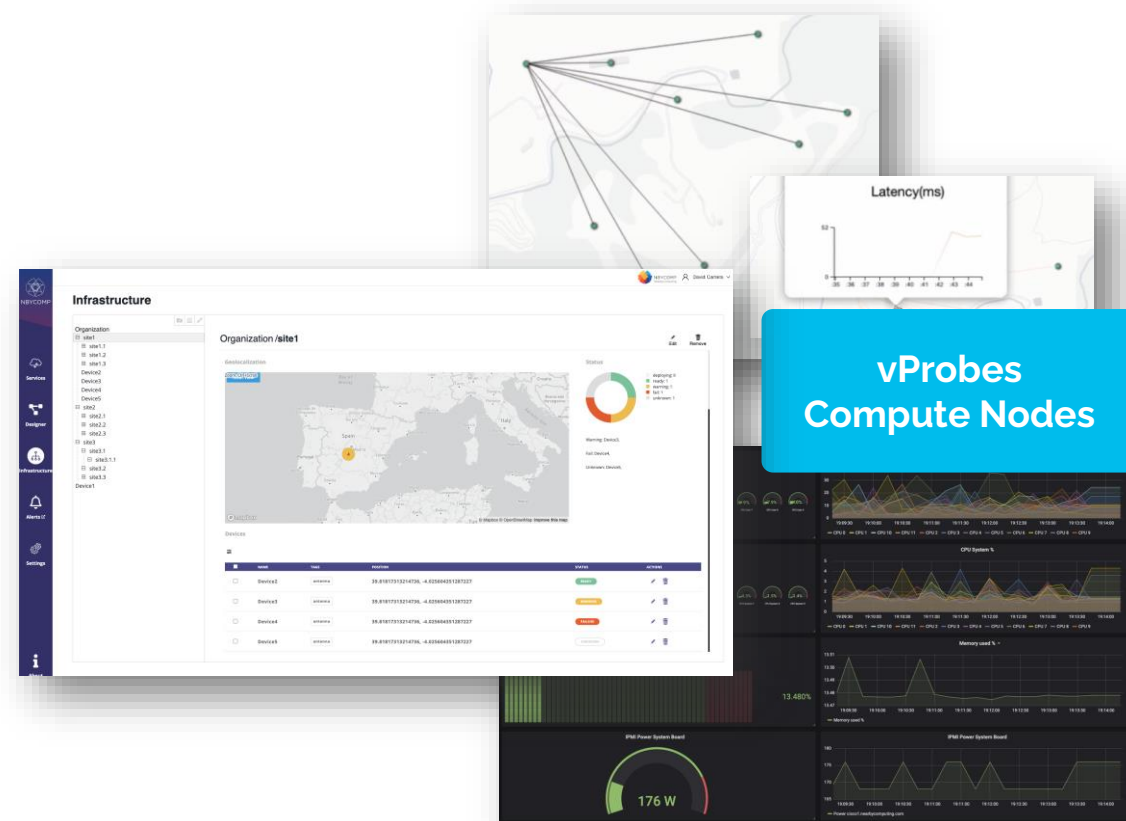
# Single pane of glass

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



The screenshot shows the 'Service Designer' interface with two panels. The top panel displays 'Video Analytics blocks' with a grid of applications including BioSurveillance, FaceMask Detection, Person detection, and Vehicle detection. The bottom panel displays 'SGC blocks' with applications like SGC All-in-one, SGC Control Plane (or SDM), Converged Raemis SGC/PCF, and CU-UP.

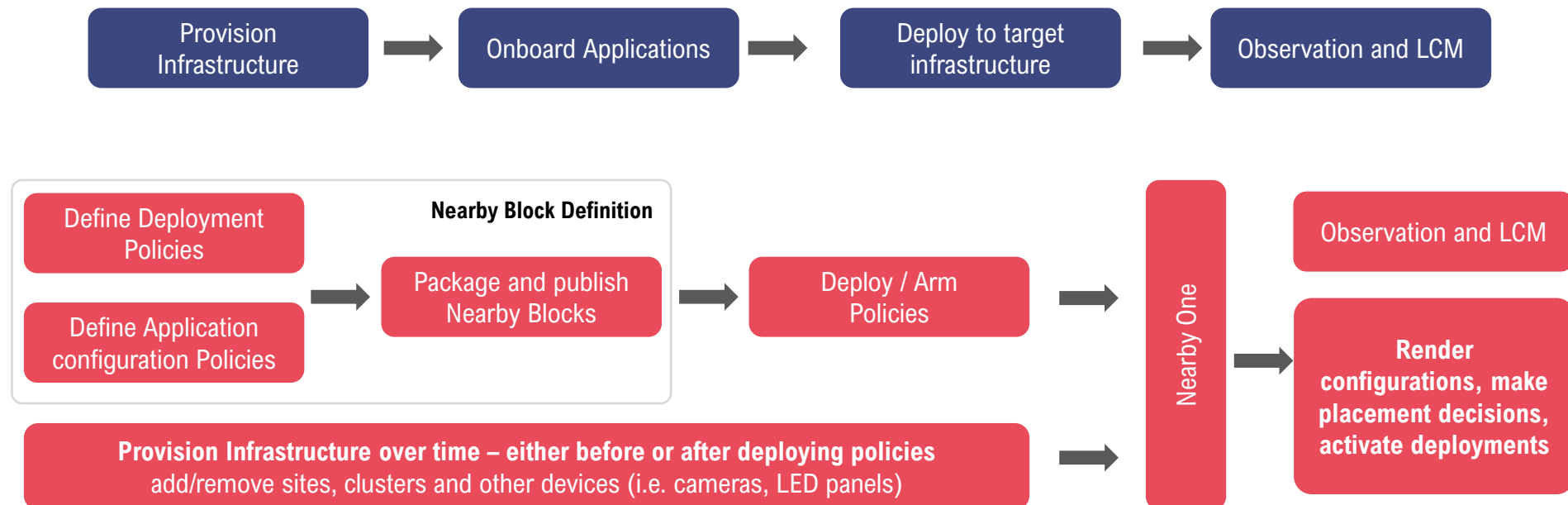
Radio Core Applications



The screenshot shows the 'Infrastructure' monitoring dashboard. It includes a map of Europe with a location marker, a 'vProbes Compute Nodes' section, and several performance graphs for Latency (ms), CPU System %, Memory used %, and PIM Power System Board (176 W).

# Deployment by policy

- Paradigm shift: decoupling deployment/configuration from infrastructure

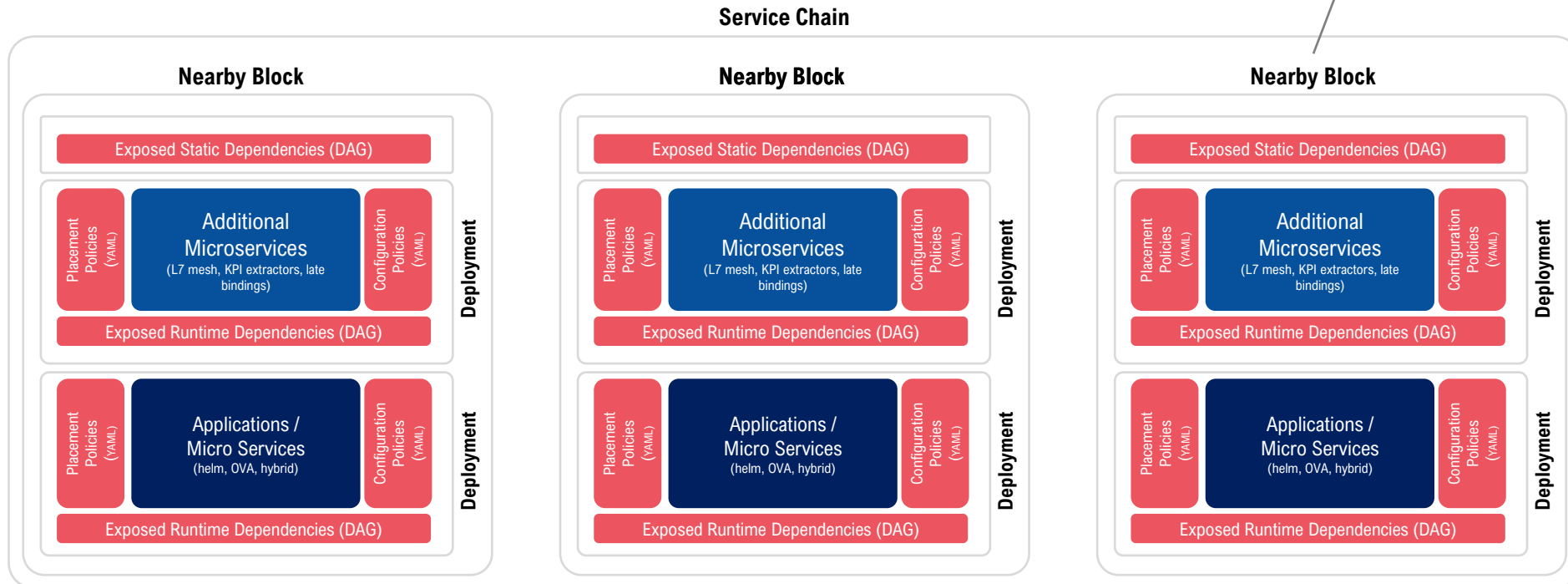
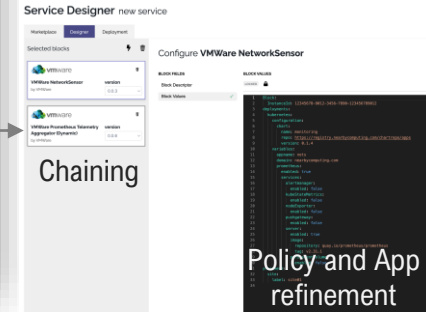
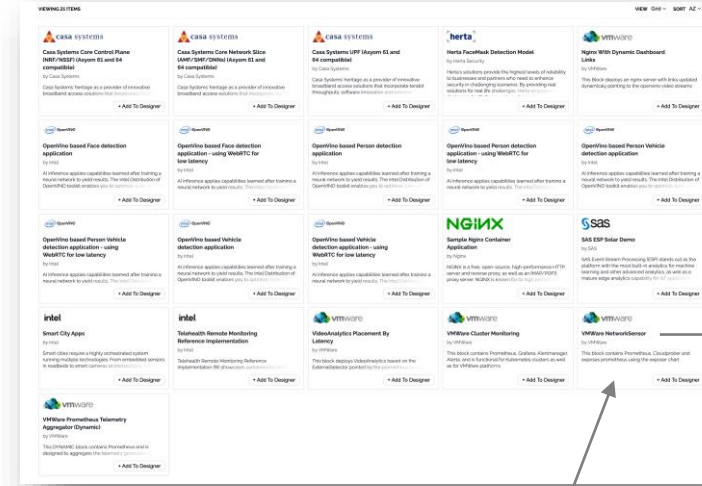


Example  
of use

Deploy a service policy (even before any cluster or site is registered) to make sure there is one video analytics instance up and running for each camera located in any of my customer sites (i.e. store, fuel station, telco edge site), and ensure each instance will run in the closest cluster to the associated camera

# Onboarding framework

- Self contained packaging
  - Helm compatible / zero coding



- Nearby ONE
- ISV
- Community

# Real Use Cases: **The Real EDGE**

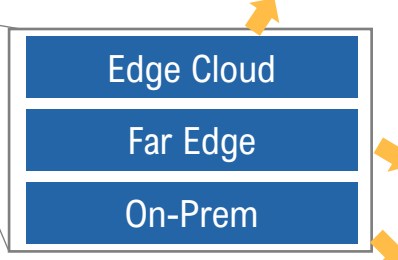


**Data Centre**

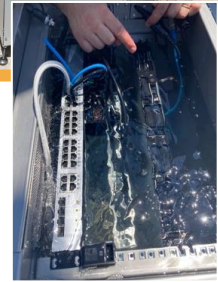
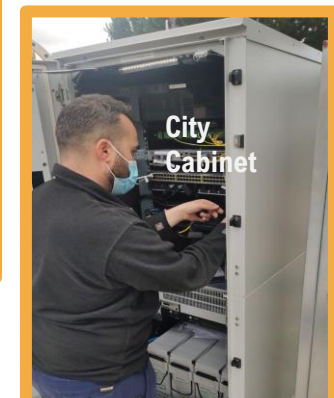
**Edge**

**Beware: Edge Cloud is still App-centric!**

CDN    Gaming    IoT Analytics



Latencies	Homogeneous	Heterogeneous
Equipment Diversity	Discretized space	Almost continuous
Location / Transport Network	Availability Zones / Owned Transport	Distributed Sites / Mixed Owned + OTT
Resource Availability	Virtually Unlimited	Geolocated, Limited, Fragmented
Access Technology	Grouped by Services	Completely mixed Multi-Access Services
Cost of field technicians	Minutes / Present on site	Hours / Long distance away
Orchestrated Workload	Mainly MANO VNF management	CNFs and K8s Apps Multiple Tiers





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# Converged solution





## Vendor Ecosystem

## Open-Source Community

## Commercial Support

**intel**

Lab Validation

SR-IOV | MACVLAN

github.com/kubernetes  
**kubernetes**

upstream

github.com/smart-edge-open

**Intel® Smart Edge Open**

Validated configurations

Validated configurations  
upstream

ESP (provisioner)

Ansible Playbooks

Experience Kits

Testing | PoC

Edge Orchestration > Infra | xNF | Apps

**Nearby One**

Automated Deployment Configuration

**Nearby Kubernetes Stack (NKS)**

Nearby Container Platform

Powered by Intel® Smart Edge Open

Commercial Support

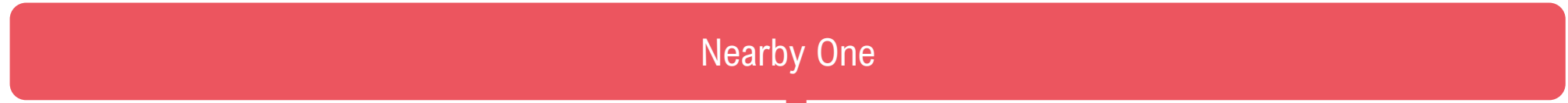
Vendor Marketplace



Vendor Onboarding: Configuration Policies | Placement Policies | Automation Control Loops

# Nearby Kubernetes Stack

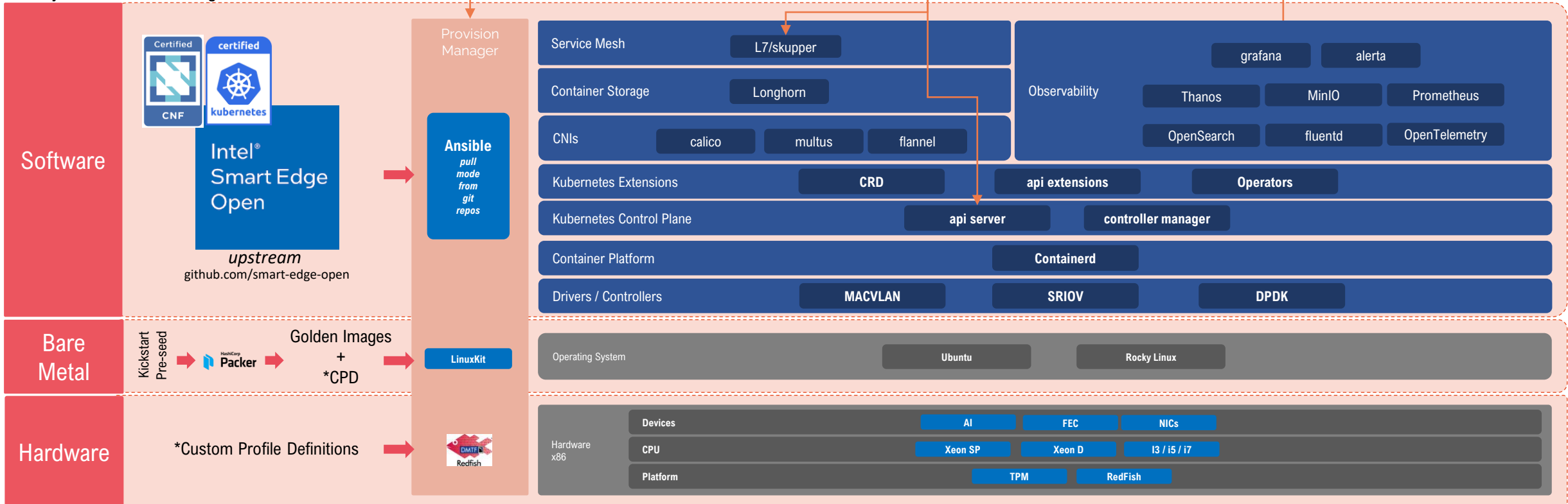
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Nearby One

Nearby Block Logic

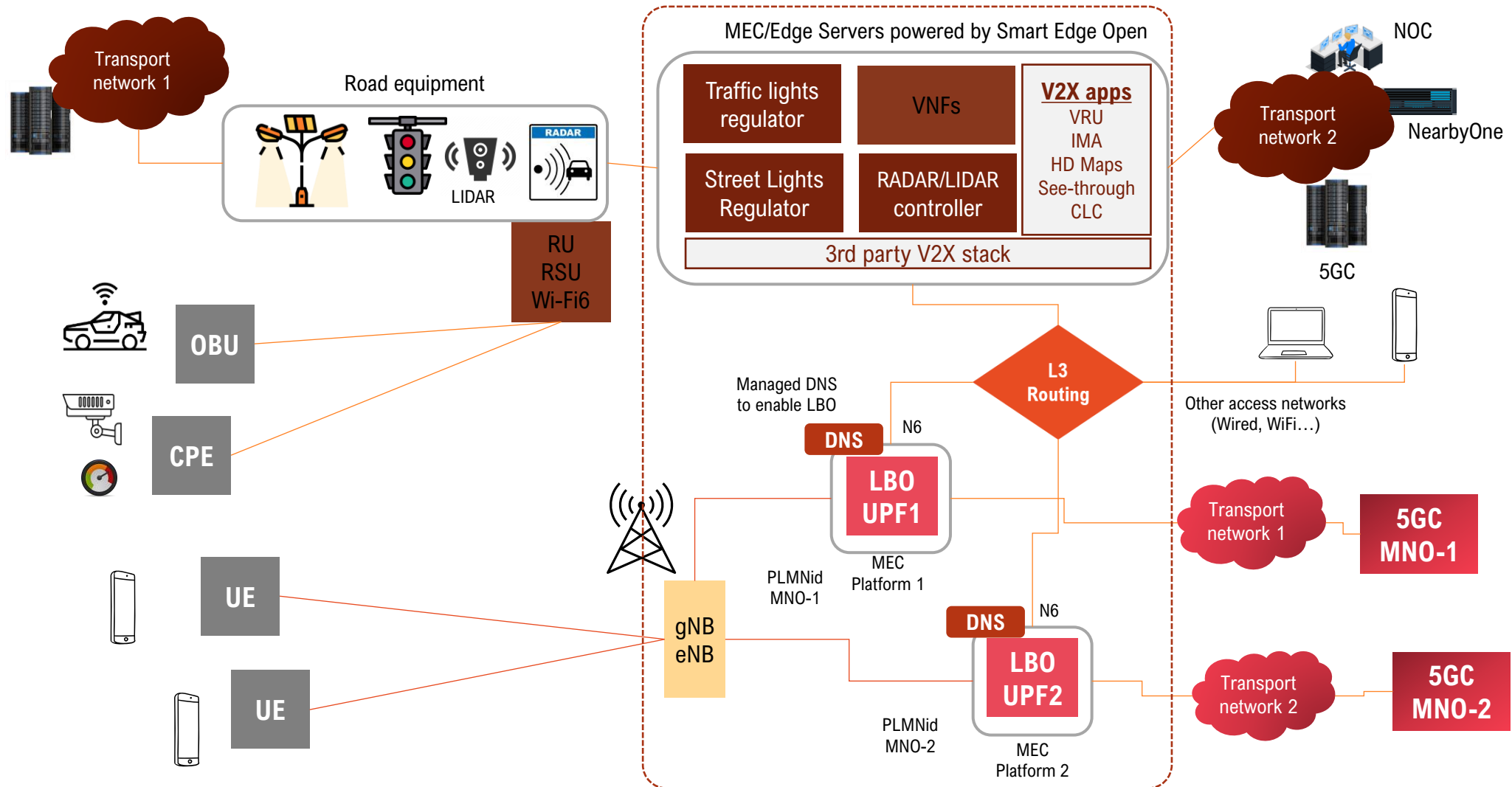
Nearby One Provisioner Stages



\*CPD / Custom Profile Definitions (YAML) – provide information on specific server configurations, like IP addresses, partitioning strategies, NIC and Disk mappings, or SW components to configure

# Generic Example

## MEC Neutral Hosting for V2X services orchestrated by NearbyOne





# Q and A?



Thank you.



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