COREDGE

Cloud Native Approach to 5G

Enabling Network and Infrastructure automation

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# What is Cloud Native ?

Cloud Native Applications

Independence: Their architecture makes it possible to build cloud native applications independently of each other.

Resiliency: A well-designed cloud native application is able to survive and stay online even in the event of an infrastructure outage.

Standards-based: For interoperability and workload portability, cloud native services are often based on open source and standards based technology.

Business agility: Cloud native applications enable flexible deployment options across the network, and are also smaller than traditional apps, which makes them easier to develop, deploy, and iterate.

Automation: Cloud native applications use DevOps automations features and enable continuous delivery and deployment of software changes that get released on a regular basis. Additionally, developers can use methodologies like blue-green and canary deployments to make improvements to the apps without any disruption to the user experience.

No downtime: Thanks to container orchestrators such as Kubernetes, you can deploy a software update with essentially zero downtime.

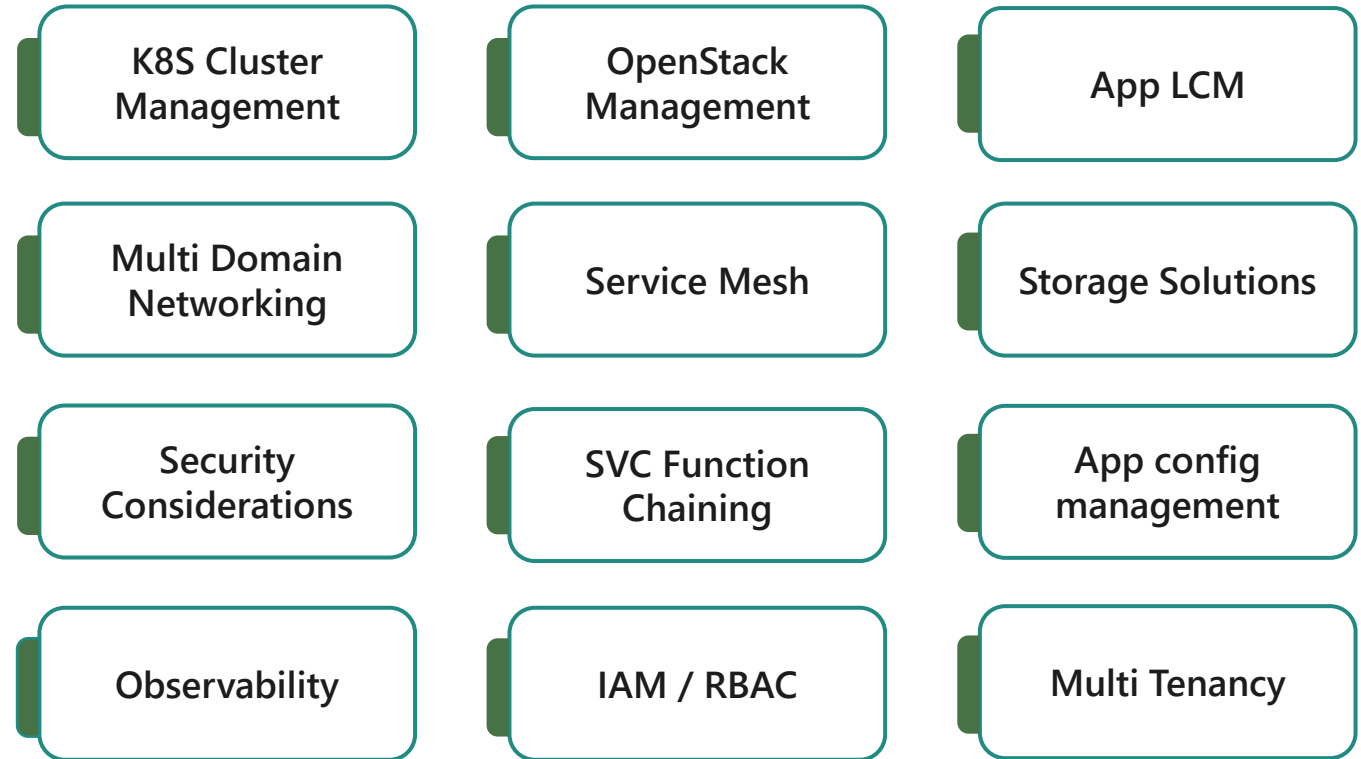# Typical 5G Core Components and Connections
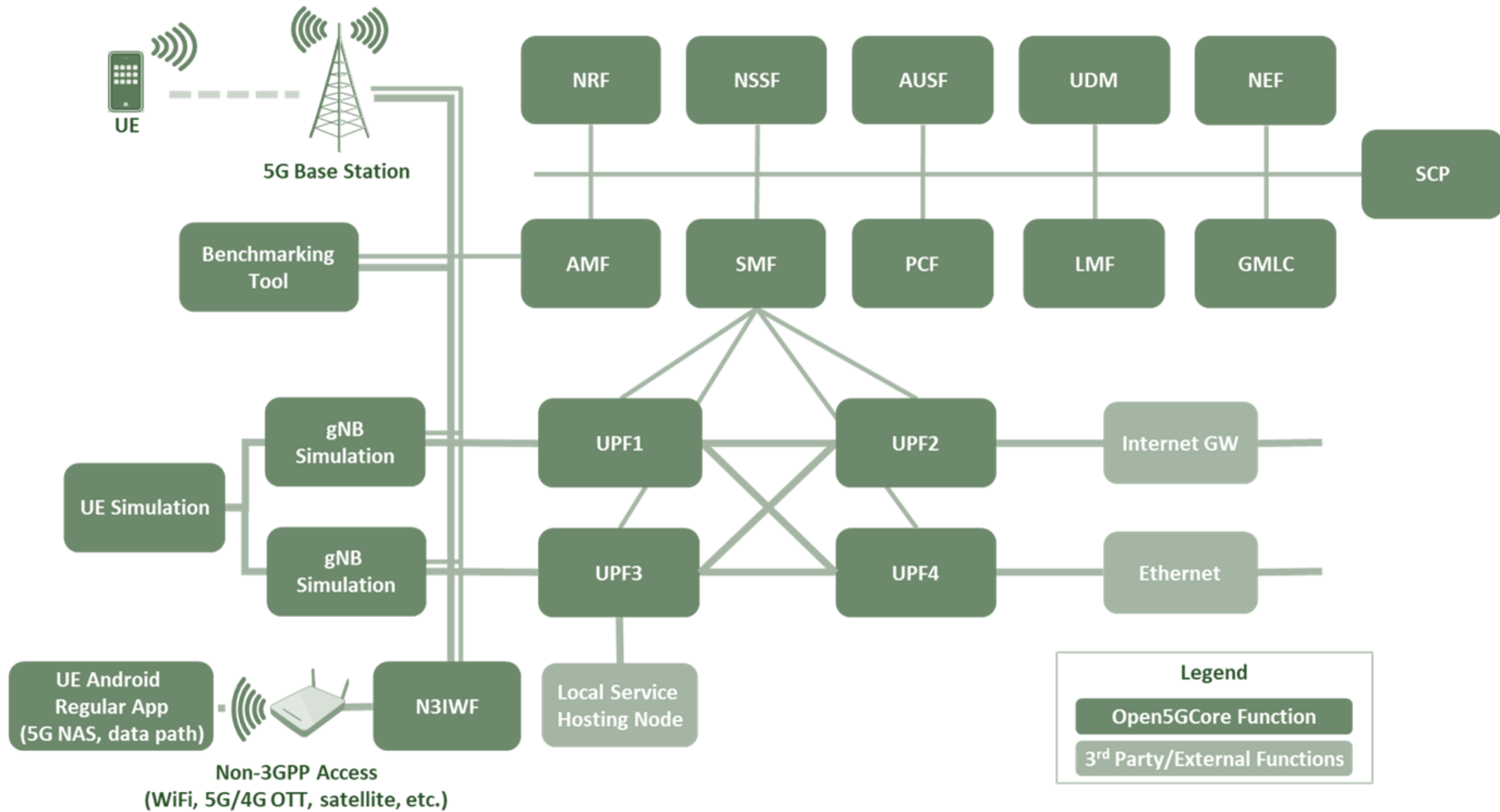
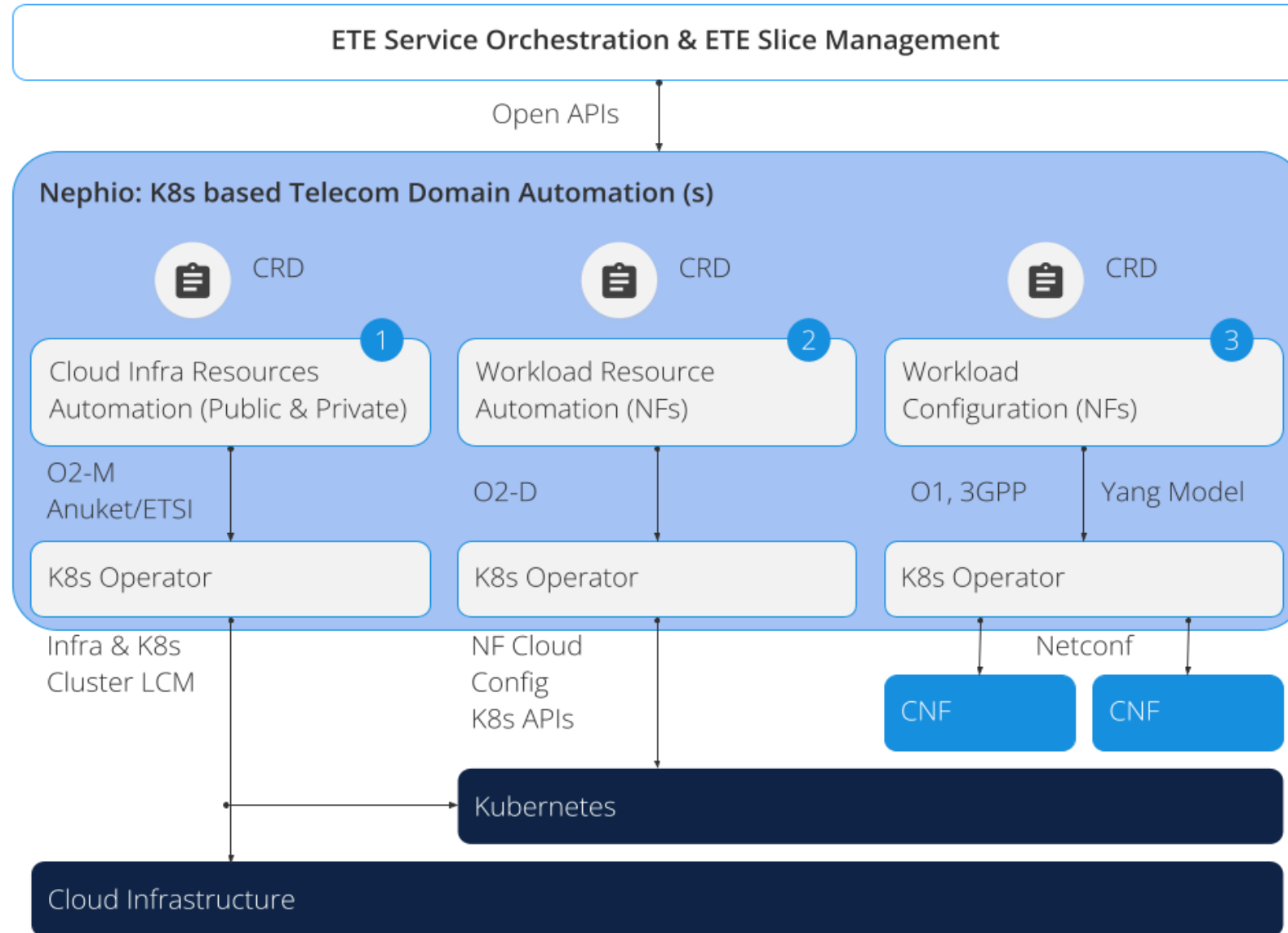# 5G Core – Different Deployment Strategies
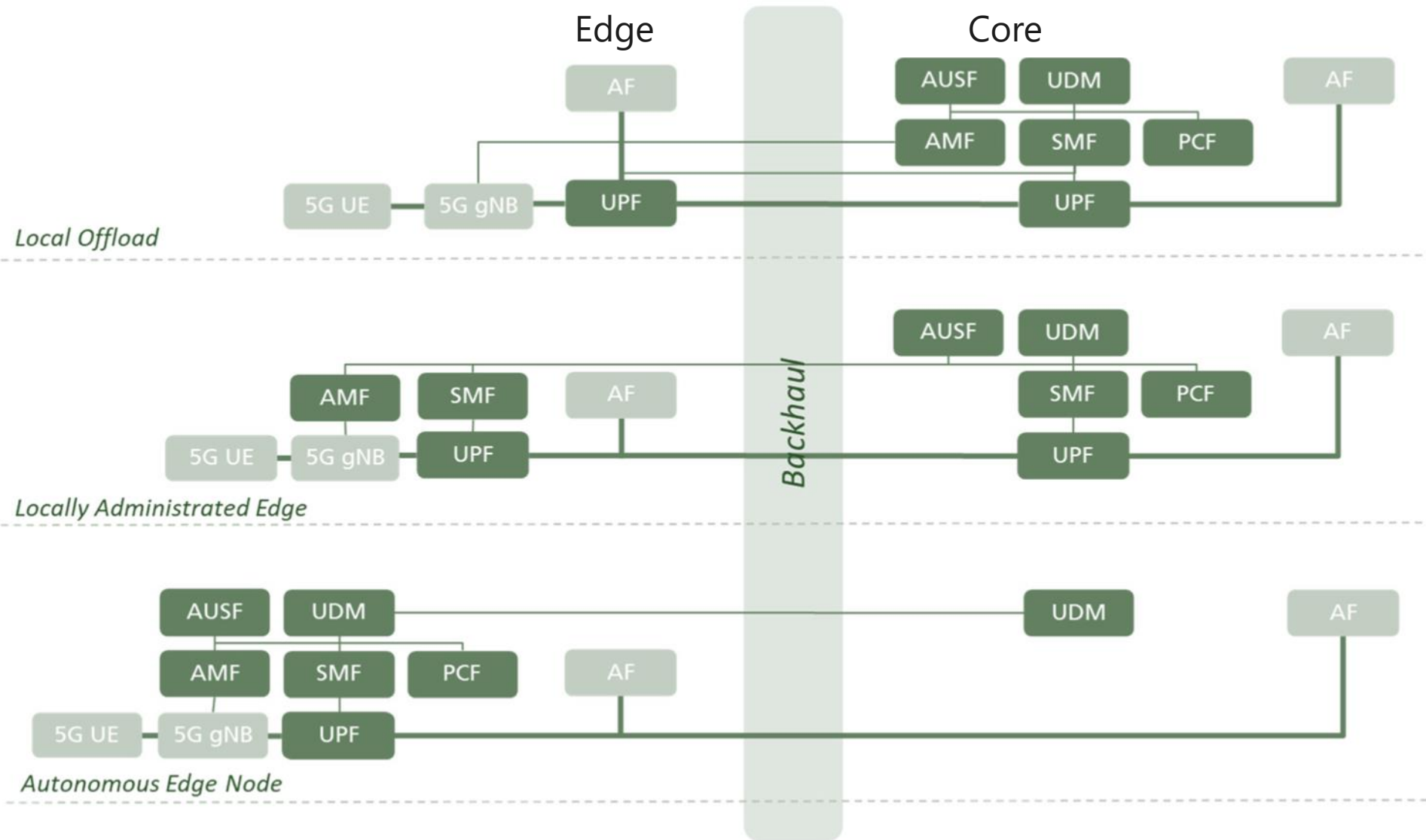
Challenges

- Easier said than done

- Questions feasibility at Edge

- Cost of operations with Public Cloud Infrastructure usage

- Telco Infrastructure might require additional hyper-scaler equivalent operation capability

K8S Cluster Management	OpenStack Management	App LCM
Multi Domain Networking	Service Mesh	Storage Solutions
Security Considerations	SVC Function Chaining	App config management
Observability	IAM / RBAC	Multi Tenancy

Skillset required managing each Edge Site

Nephio – Approach

Hybrid Edge Cloud Platform

Cloud Compass

➡ Infrastructure Management

➡ Multi Cloud Orchestration

➡ Uniform IAM & RBAC

➡ Audit & Security

Cirrus Cloud Platform

➡ Observability & Telemetry

➡ Closed loop automation

➡ Day 2 Operations

➡ Rating & Metering

**Applications
5G core, O-RAN,
vFW, CDN, IOT**

NETWORK

Open vSwitch

Istio

Neutron API   NETCONF

INFRASTRUCTURE

GKE

AKS

EQUINIX METAL

Amazon EKS

OPENSHIFT

DELL

vmware

Data Lakes

THANK YOU