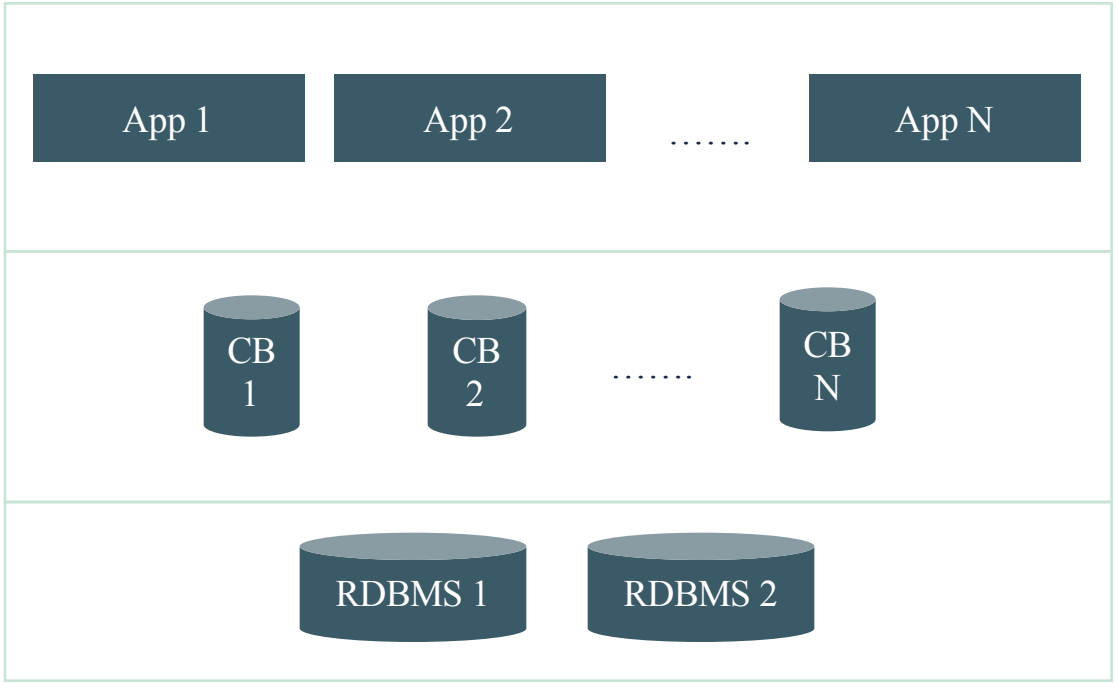
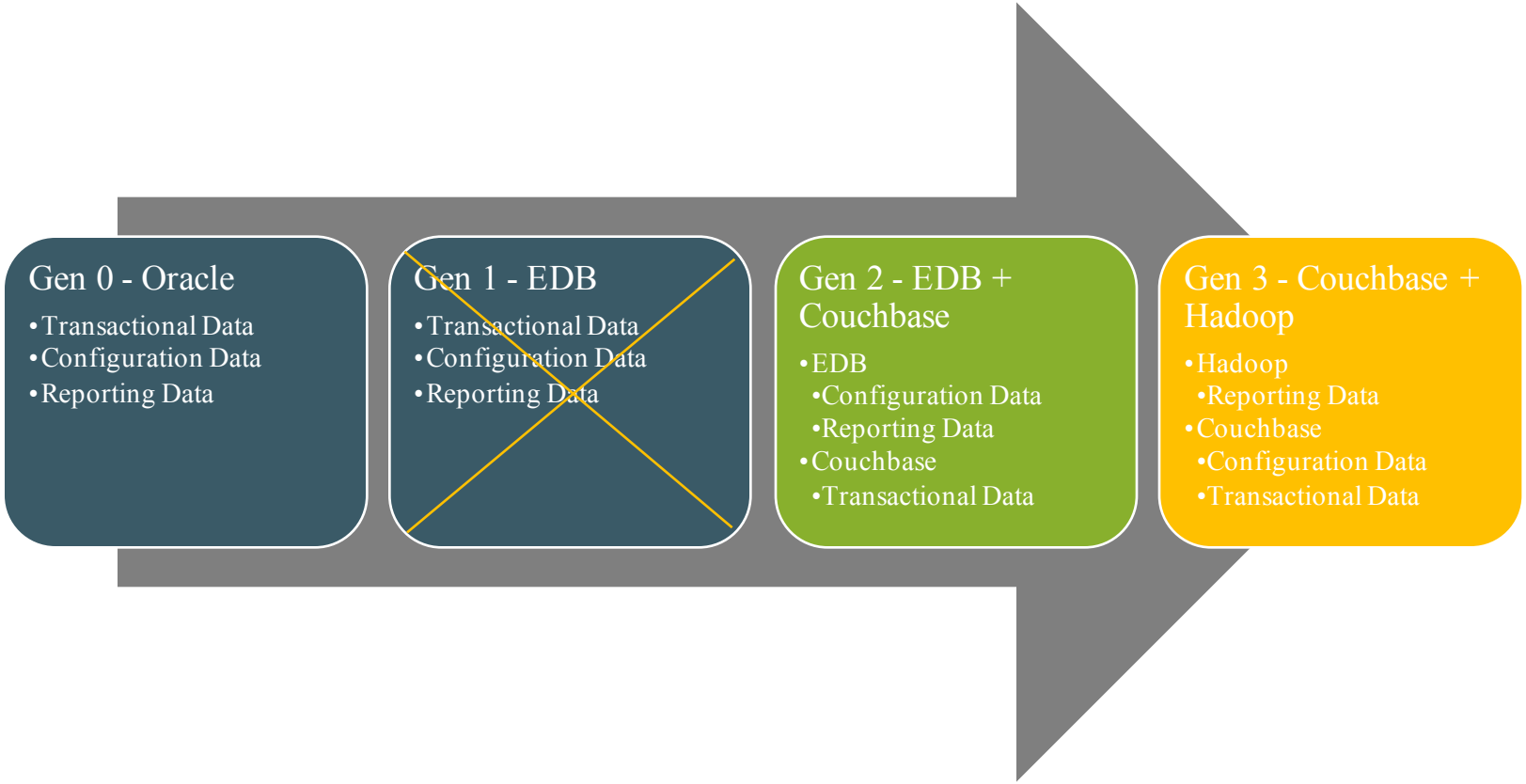
Next Gen Data Store Architecture

Why In-Memory Cluster?

- Independent scaling of App Layer
- Improving Resiliency & Availability
- Improving Throughput & Latency



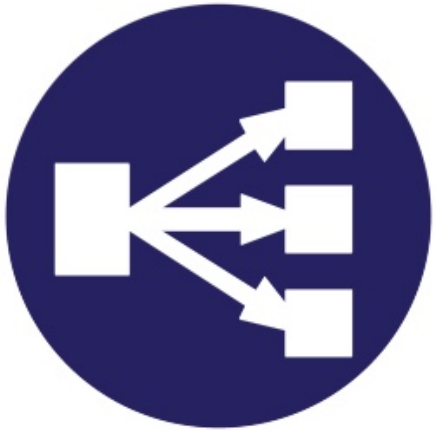
Data Store Architecture Evolution – NFV



Load Balancers in Active & Passive Signaling

Network Independent scaling of:

- Probe
- Active signalling
  - SSTP
  - SDRA



- Multiple VNFs / Applications can register / deregister with Load Balancer
- Helps load share signalling traffic across multiple applications / VNFs
- Retains Application to Subscriber Binding
- Automatic redistribution based on arrival / departure of instance
- Dynamic Traffic Distribution.

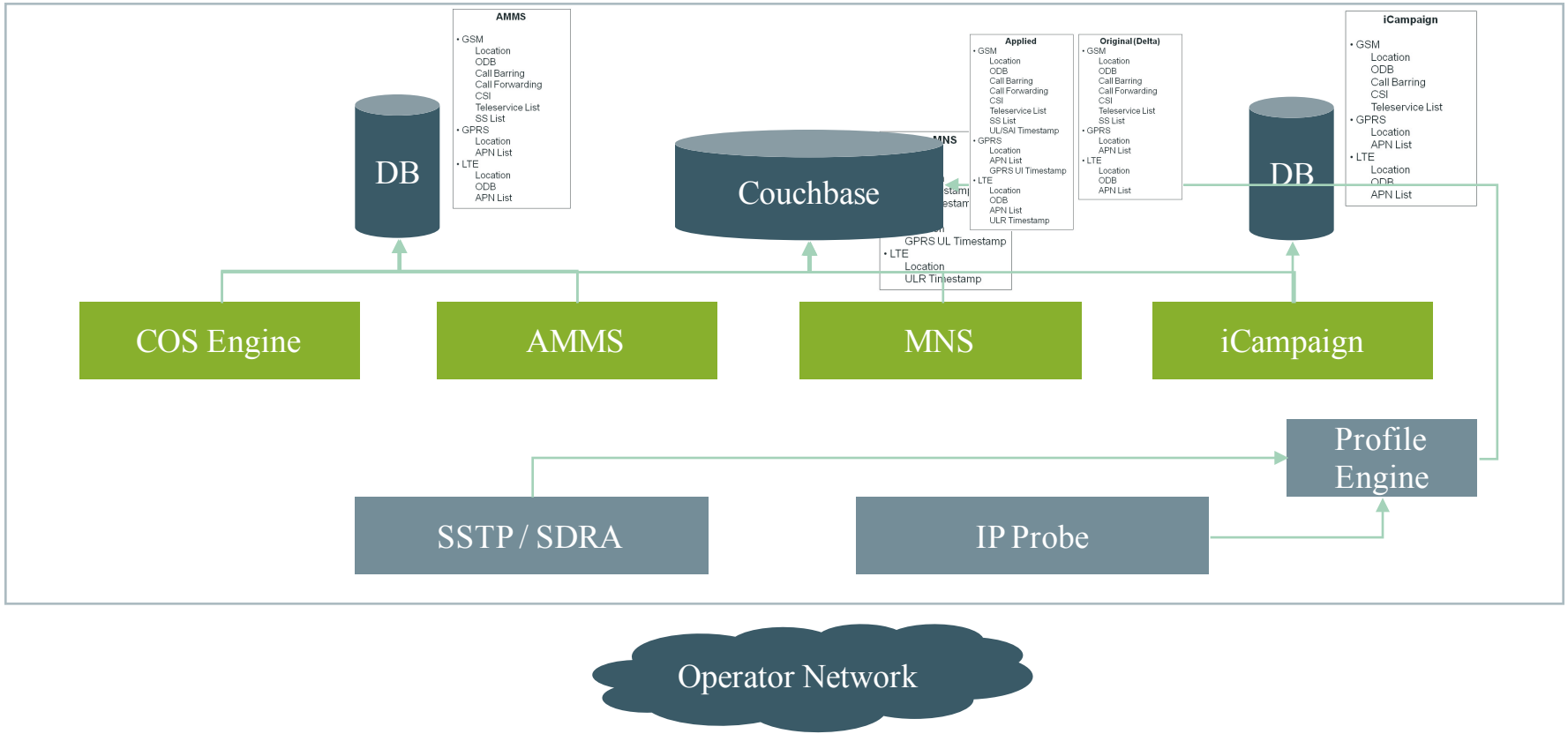
Centralized COS Engine

Why Centralized COS Engine ?

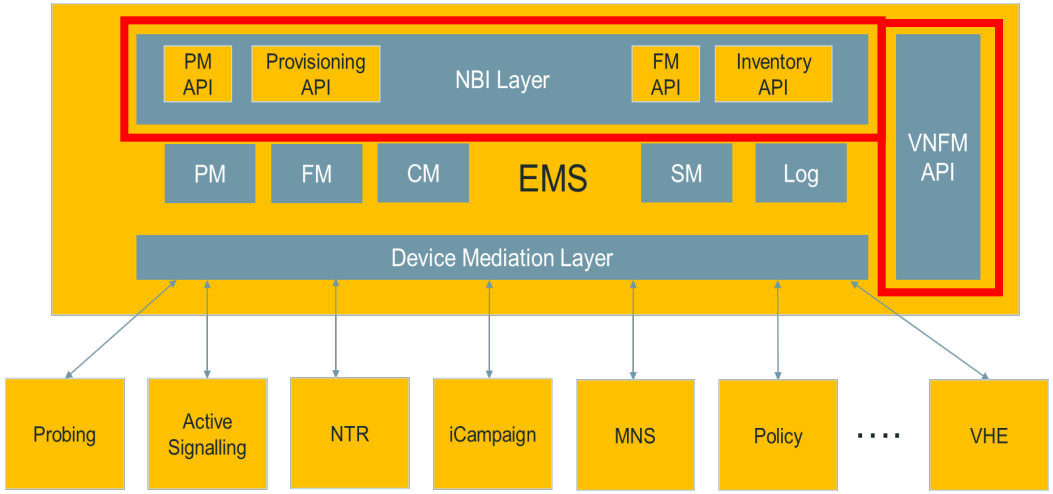
- Single Touch Point to CRM
- Centralized COS definitions across applications

- Centralized Platform COS segmentation for VAS services
- VAS service can connect to engine and retrieve generic COS
- COS engine is couchbase compliant
- COS engine supports feature based configuration
- Features can be tenant or service based or combination of the two

Centralized Profile Engine



Standard APIs



- EMS NFV Integration – Compliance to the latest version of the Ve-VNFM API specification from ETSI
- EMS NBI APIs made TMF standards compliant
  - FM API
  - PM API

Mobileum @ ETSI NFV Plug Test

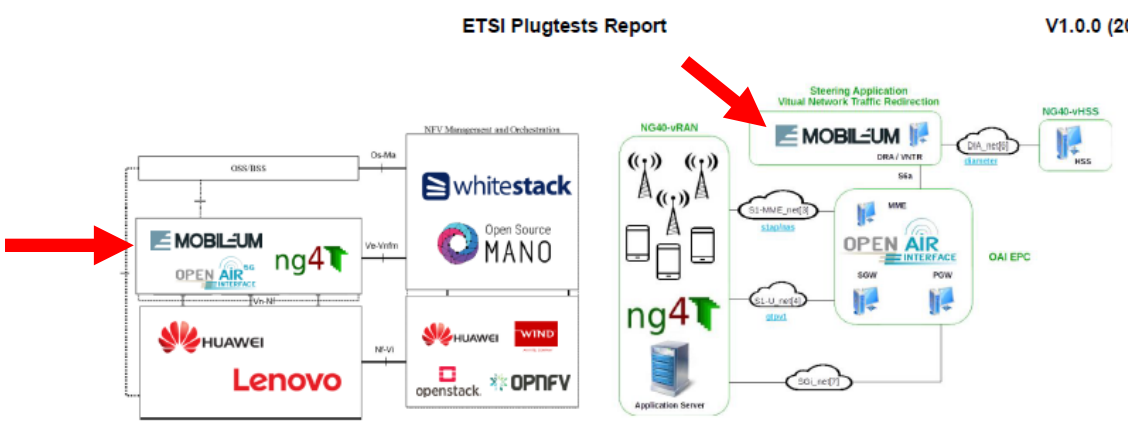


Figure 46. Demo 3: 4G Mobile Network Orchestration

ETSI NFV 3rd
tests - Multi NS Den

Joan Triay, the chair of ETSI NFV TSC, employee of Docomo Labs appreciated
The whole team

Mobileum @ ETSI NFV Plug Test

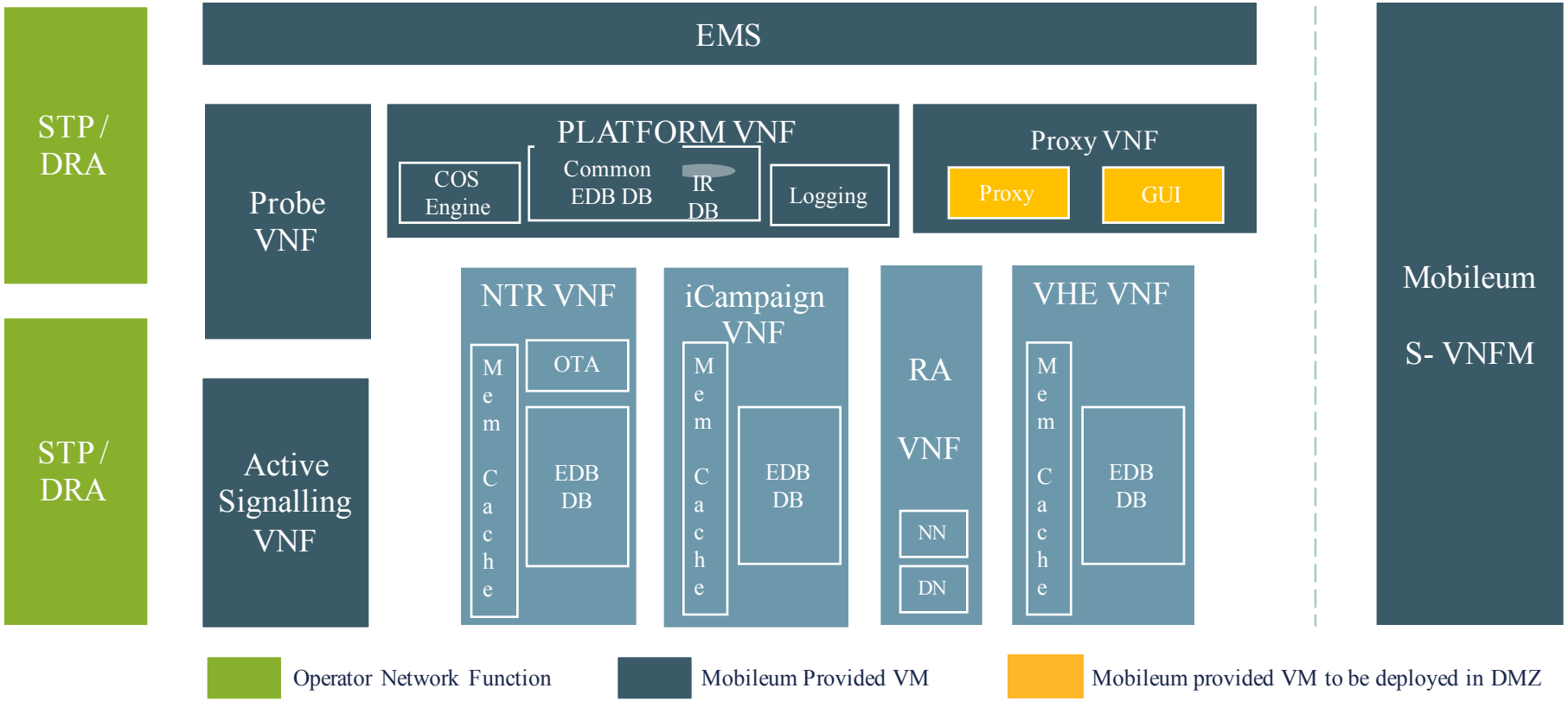
Key Learning

- Standardization is in progress – Need more time for standards to stabilize
- Significant time for seeing adoption of currently defined standards
- Interworking is APIs to be stabilized

Highlights

- As it can be seen in the report section 4.3.2, Mobileum got an opportunity to participate in 12-13 test session with various MANO and VIM vendors
- Acknowledge by all MANO and VIM providers that we had advanced VNF composition
- Only VNF provider to test Ve-VNFM API track
- Tested out Scale out
- Multi VNF Network services was tested.

Mobileum VNFs – Deployment Option



NFV ROADMAP

EMS NFV

- EMS NFV – Compliance to latest Ve-VNFM API Specs

EMS Traditional

- EMS – Enhancements to Centralized Fault, performance, security management.
- TMF Compliance for EMS NBI Interface

G-VNFM support

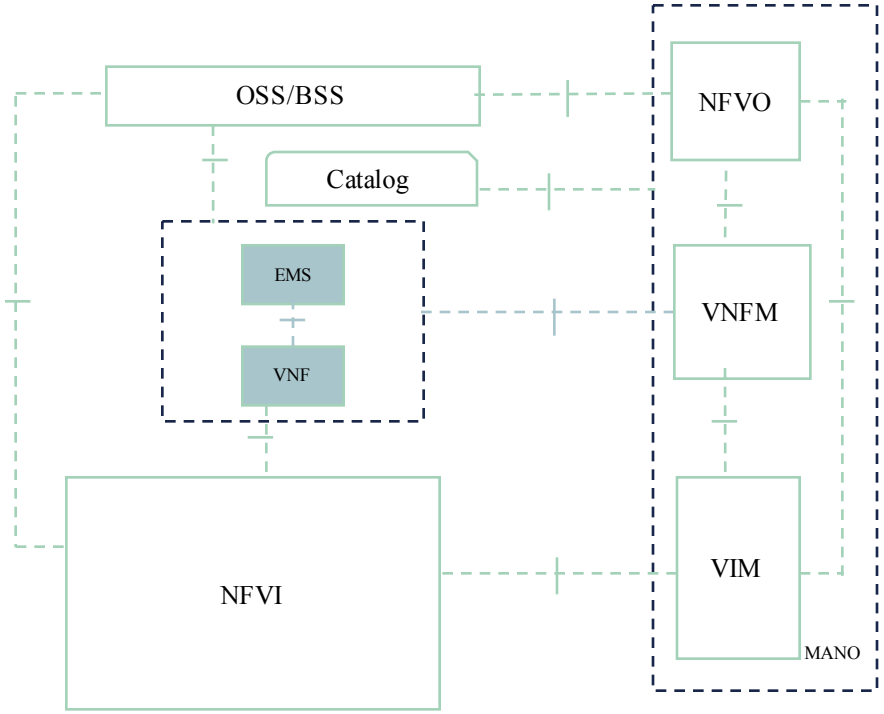
- Additional G-VNFM and S-VNFM partner ecosystem development
- ONAP Support and Compliance

Containerized Deployment

- Container based deployment of Mobileum VNFs
- NBI extension for

Tentative plan. Could change subject to re-prioritization

Mobileum Recommended Deployment Model - 1



Operator to Provide:

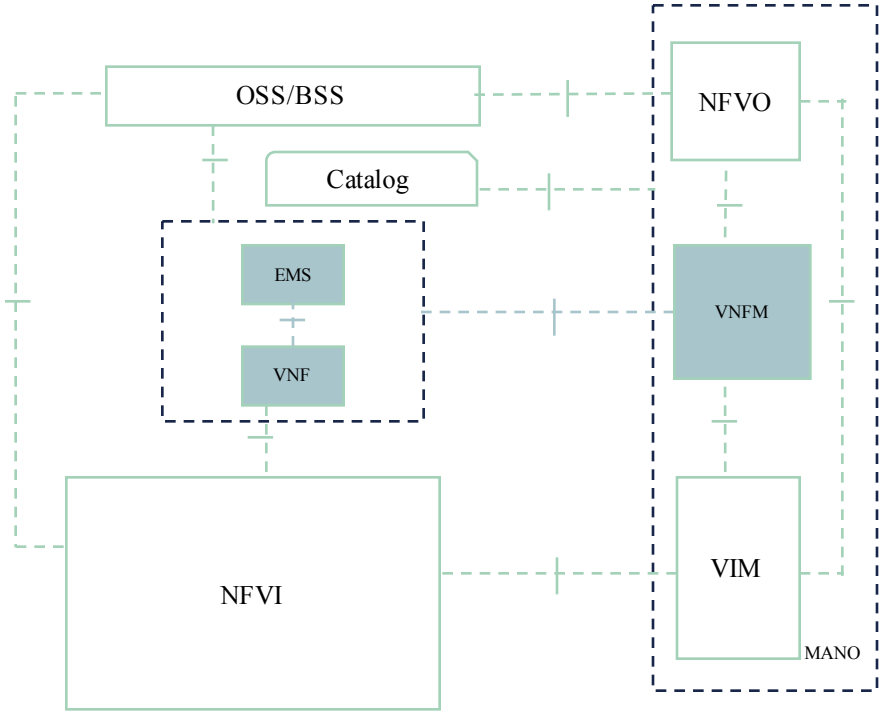
- NFVO
- Generic VNFM
- NFVI, VIM
- OSS/BSS

Mobileum:

- VNF's
- EMS
- Integrate with VNFM

Mobileum

Mobileum Recommended Deployment Model - 2



Operator to Provide:

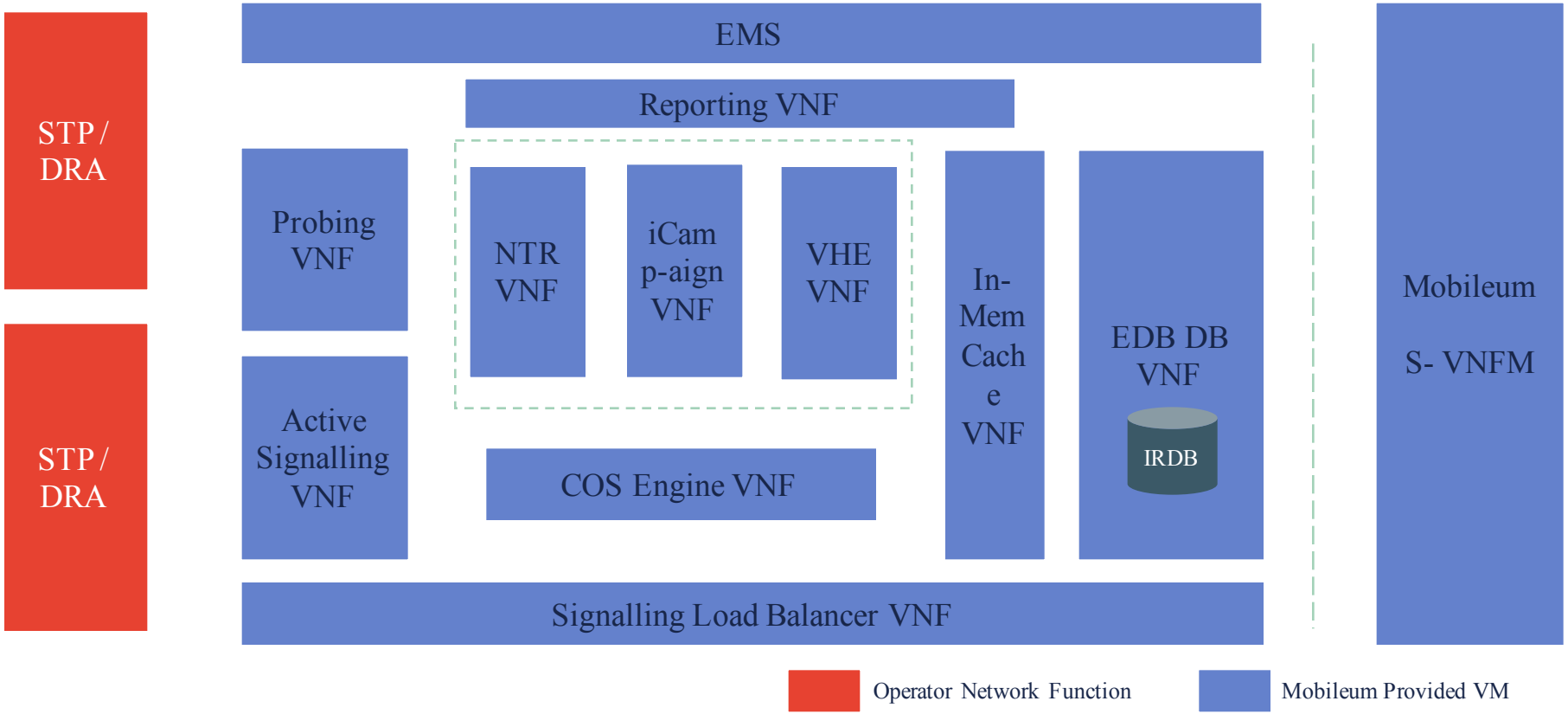
- NFVO
- NFVI, VIM
- OSS/BSS

Mobileum:

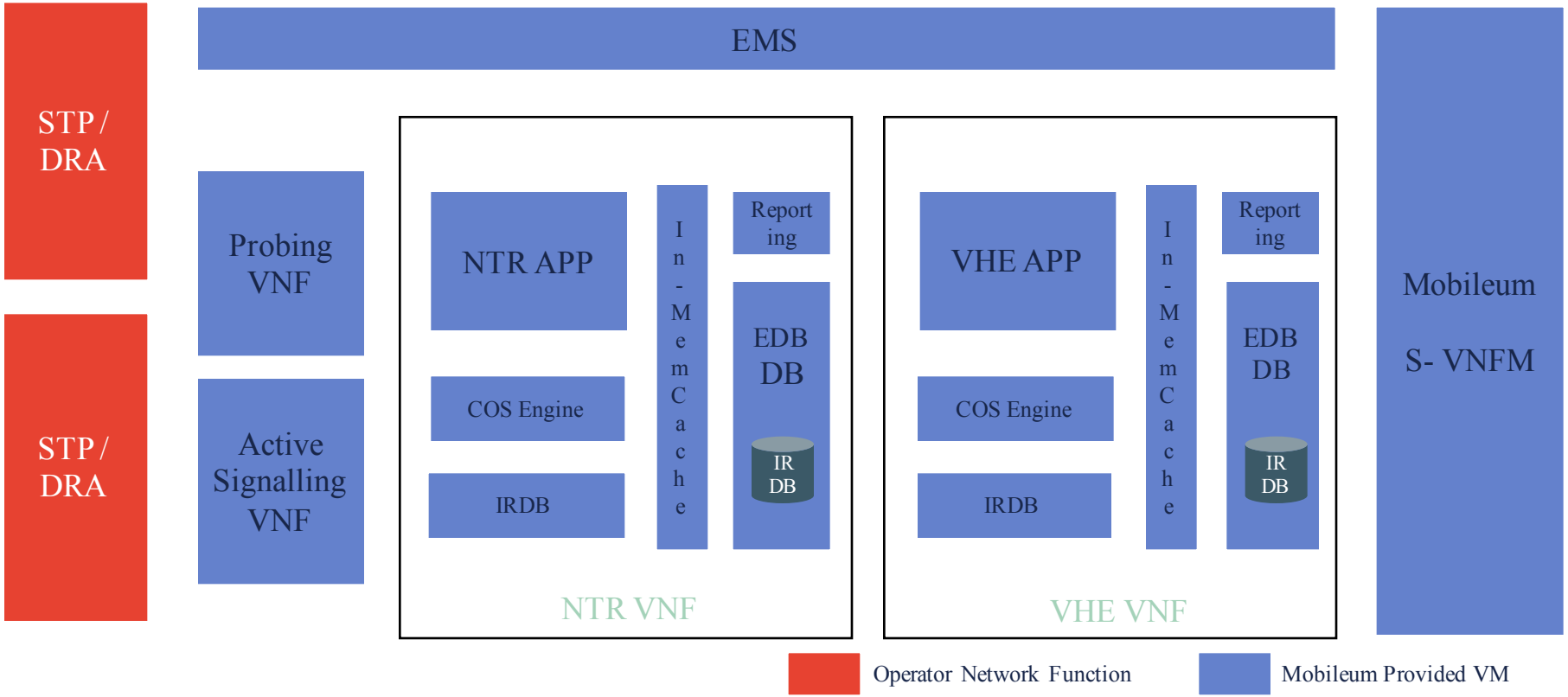
- VNF's
- EMS
- Specific VNFM
- Integration of VNFM to VIM & NFVO

Mobileum

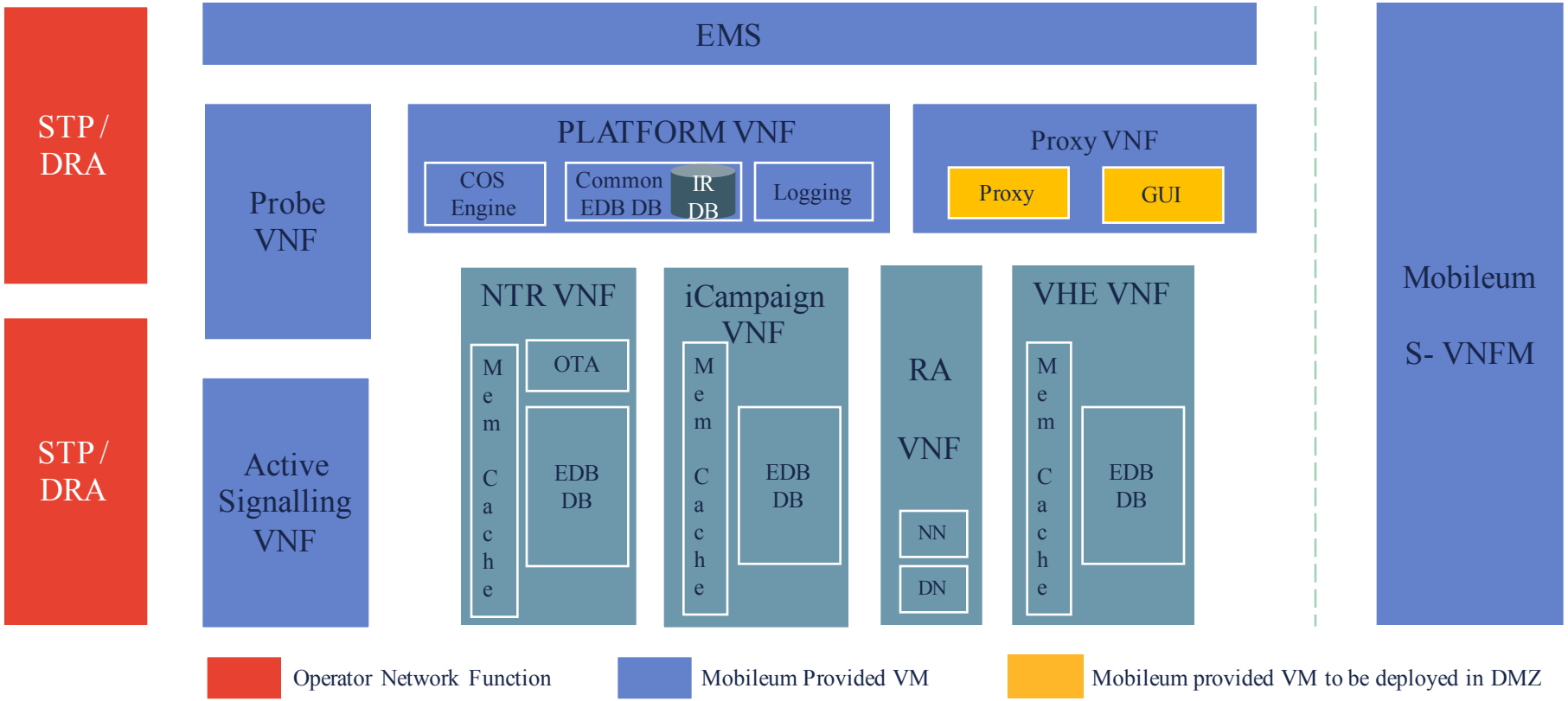
Mobileum VNFs – Deployment Option 1



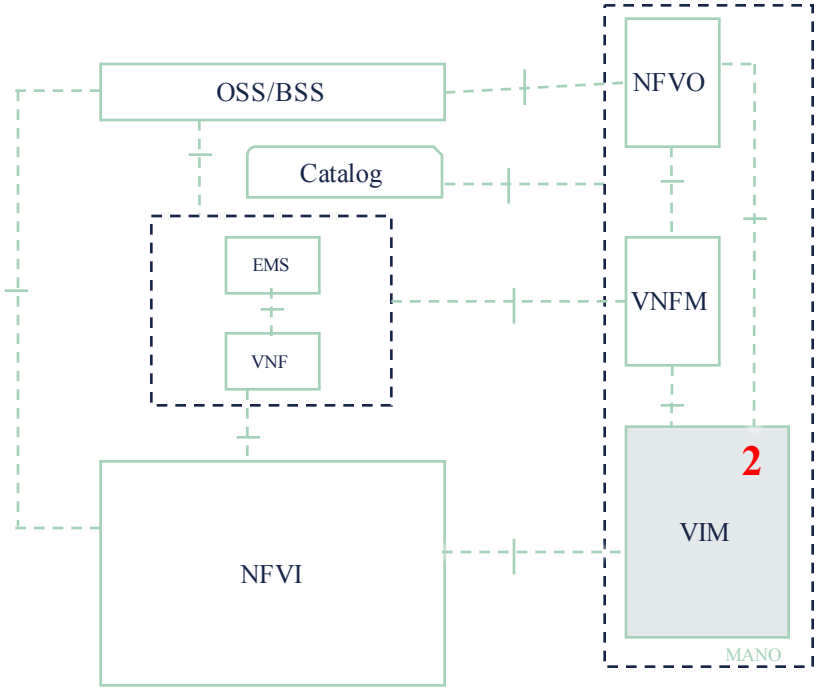
Mobileum VNFs – Deployment Option 2



Mobileum VNFs – Deployment Option 3



VIM Deployment Options



Commercial:

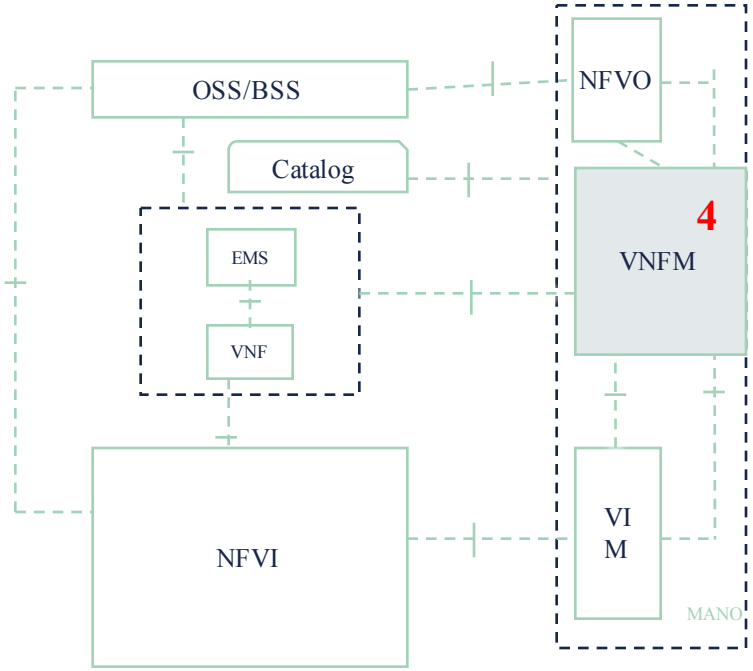
- Vmware vCloud Director
- Openstack
  - RedHat
  - Mirantis
  - Windriver
  - Whitestack
  - Vmware Integrated Openstack(VIO)

Open Source:

- Openstack community
- OpenVIM
- OPNFV

Operator Deployment Ongoing Mobileum Lab/ETSI Plug Testing In progress dmap

VNFM Deployment Options



Commercial:

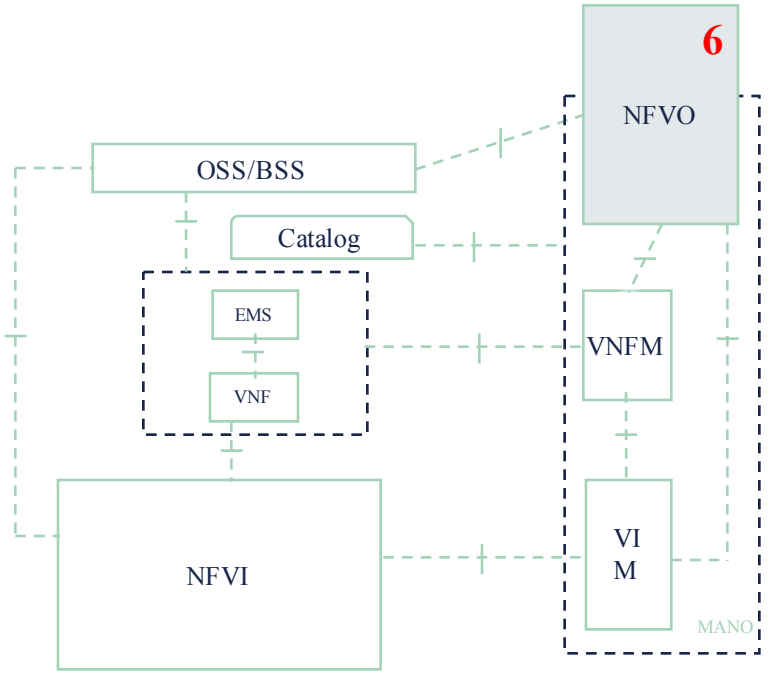
- Nokia Cloud band
- Ericsson Cloud Manager
- HP NFV Director
- Whitestack
- ZTE
- Cisco Tail-F
- Rift.io

Open Source:

- Tacker
- OSM
- ONAP

Operator Deployment Ongoing | Under Evaluation | Mobileum Lab/ETSI Plug Testing In progress | oadmap

NFVO Deployment Options



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