



Open Source
MANO

Towards Real 5G with OSM

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Factories of the Future

- 1 Time-critical process control
- 2 Non time-critical factory automation
- 3 Remote control
- 4 Intra/Inter-enterprise communication
- 5 Connected goods

Energy

- 1 Grid access
- 2 Grid backhaul
- 3 Grid backbone

e-HEALTH

- 1 Assets and interventions management in Hospital
- 2 Robotics
- 3 Remote monitoring
- 4 Smarter medication

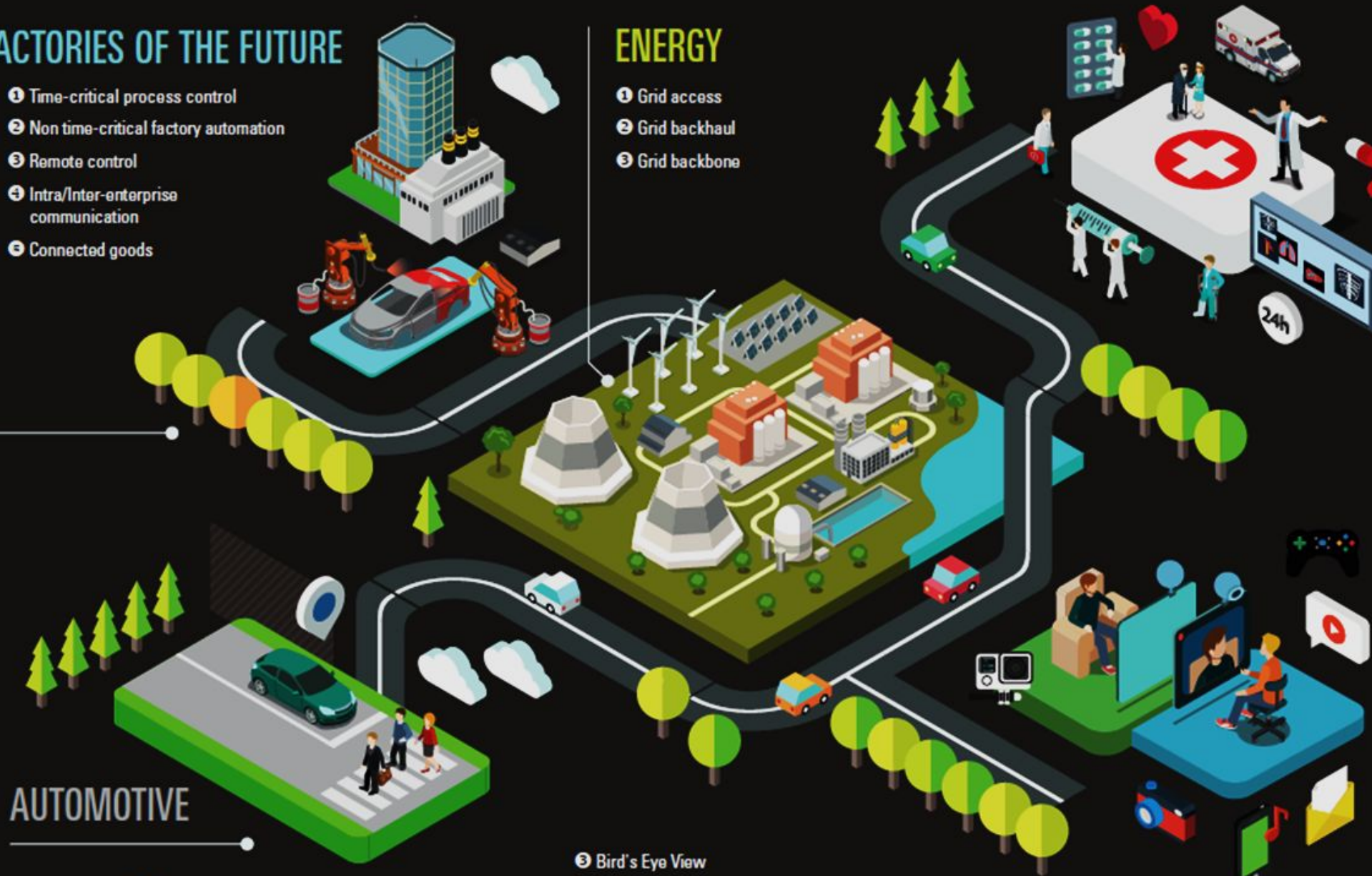
MEDIA & ENTERTAINMENT

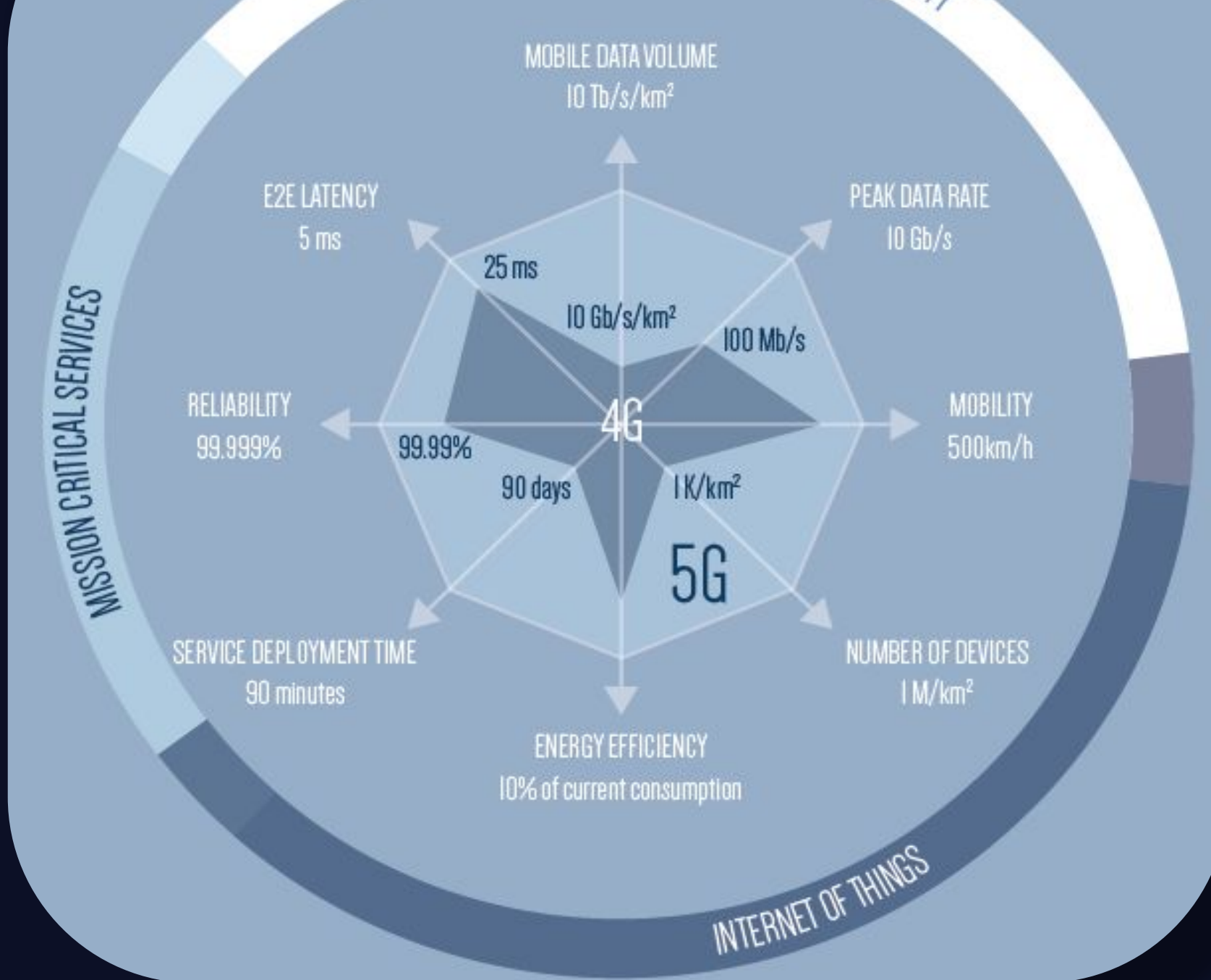
- 1 Ultra High Fidelity Media
- 2 On-site Live Event Experience
- 3 User/Machine Generated Content
- 4 Immersive and Integrated Media
- 5 Cooperative Media Production
- 6 Collaborative Gaming

AUTOMOTIVE

- 1 Automated driving
- 2 Share My View

- 3 Bird's Eye View
- 4 Digitalization of Transport and Logistics
- 5 Information Society on the road



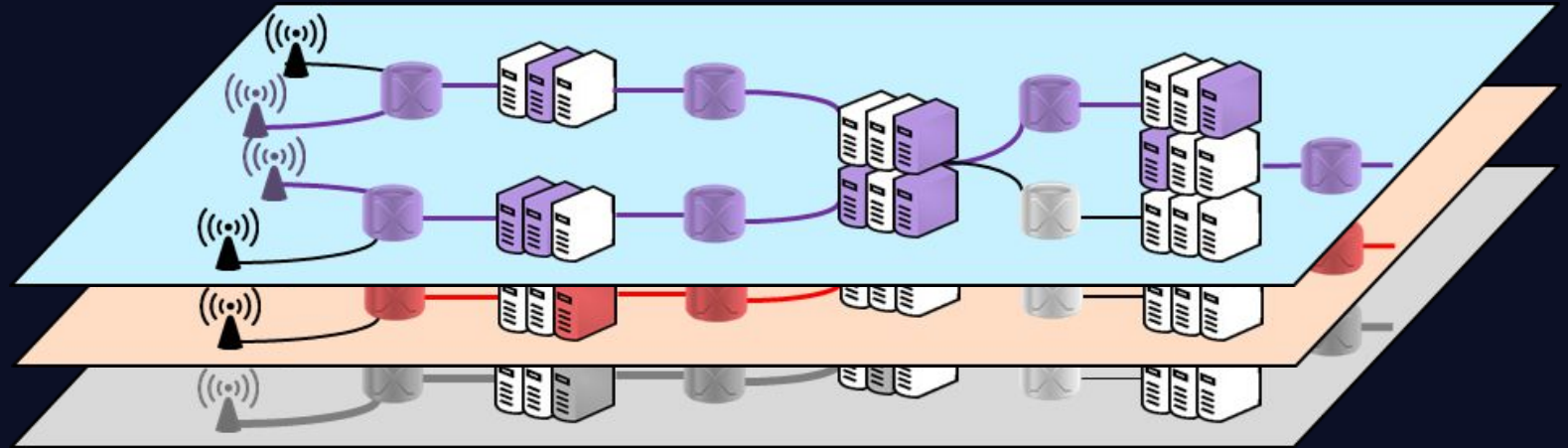


Network Slices, or logical networks, will be used to deliver services to multiple industry verticals over the 5G infrastructure

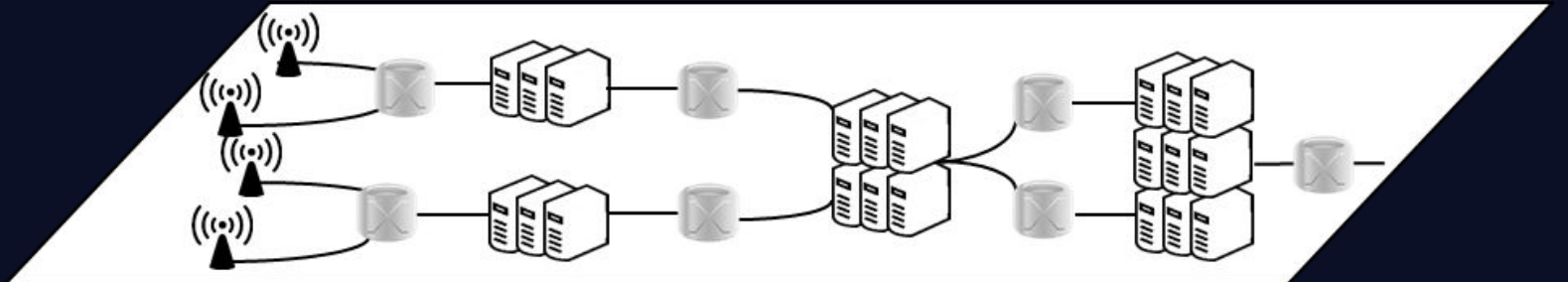
FACTORIES OF THE FUTURE
Time-critical process control

e-HEALTH
Robotics

AUTOMOTIVE
Automated driving



Physical 5G Network
Infrastructure

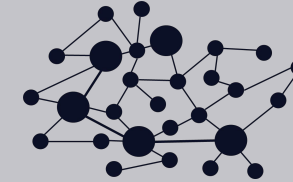


To realize 5G we need support in all domains



E2E Orchestration and Automation

(Slicing support, Automation, Assurance, Fulfilment)



Terminals



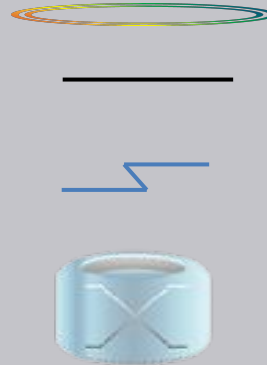
- New 5G terminals
- Smartphones and specialised terminals

Base stations



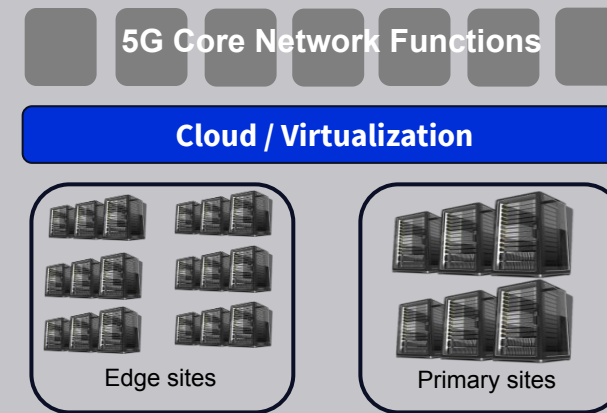
- New spectrum
- New 5G radio units
- New antennas

Transport



- High capacity and low latency
- Fibre
- Time sync

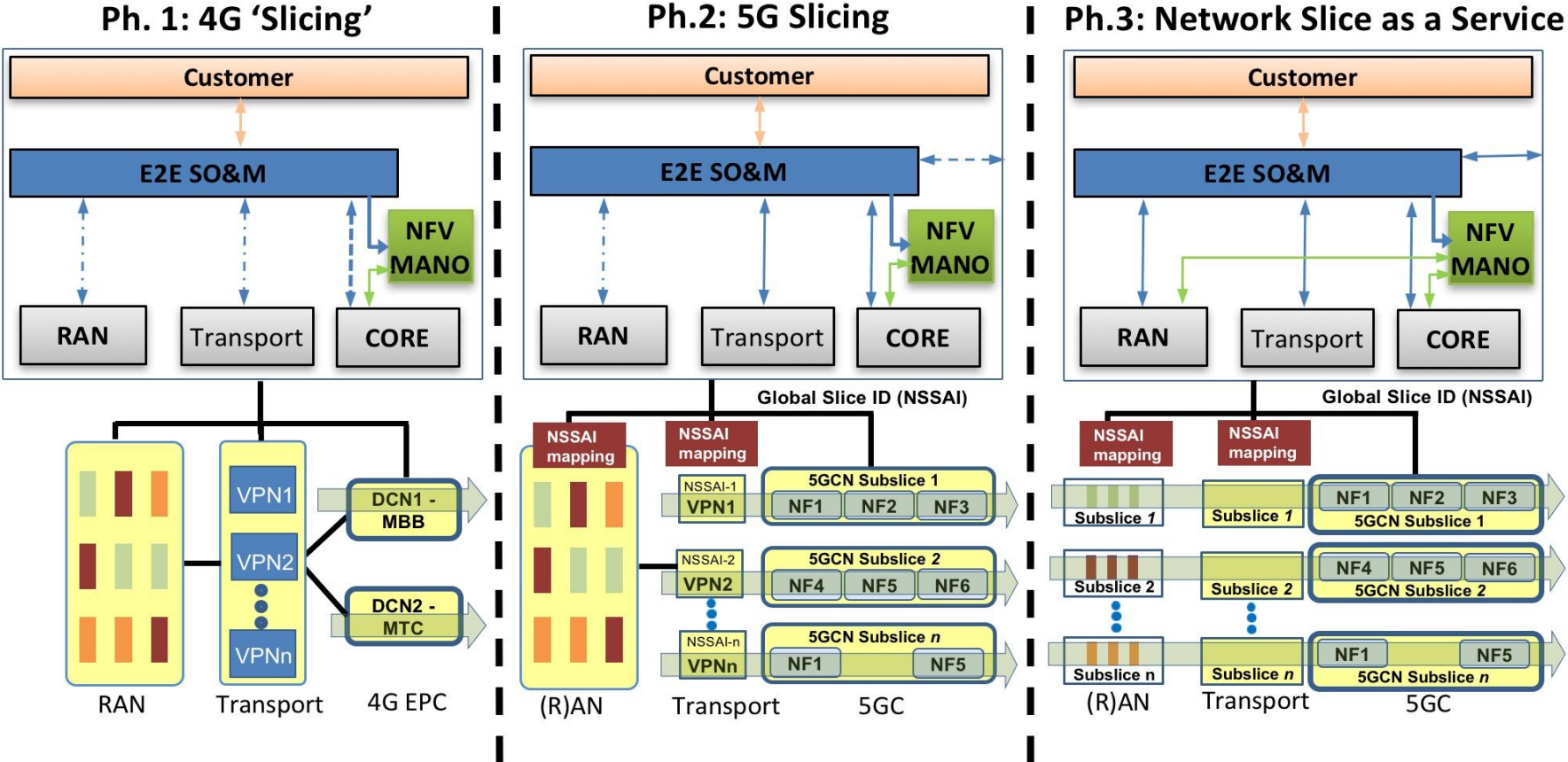
Core network



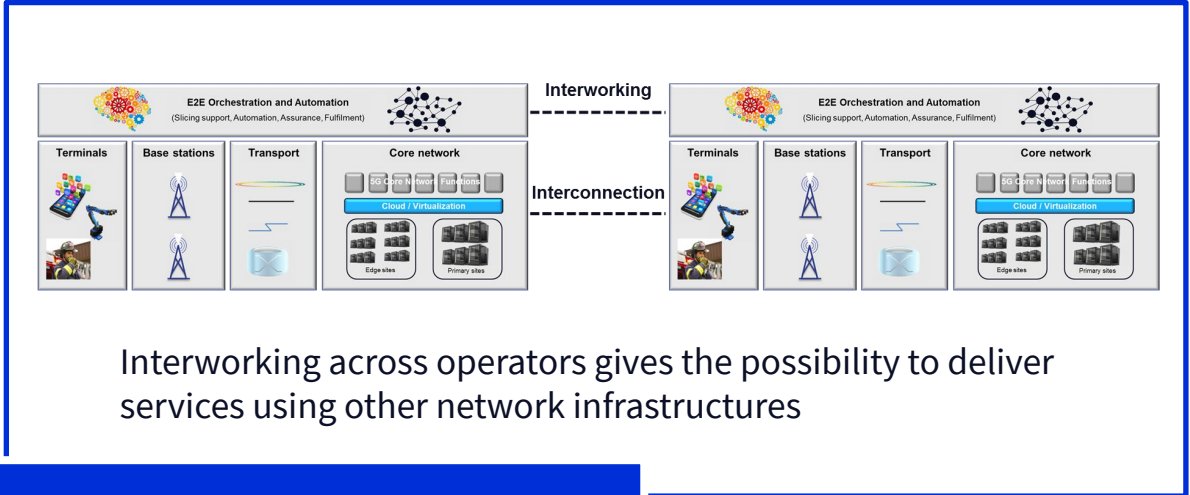
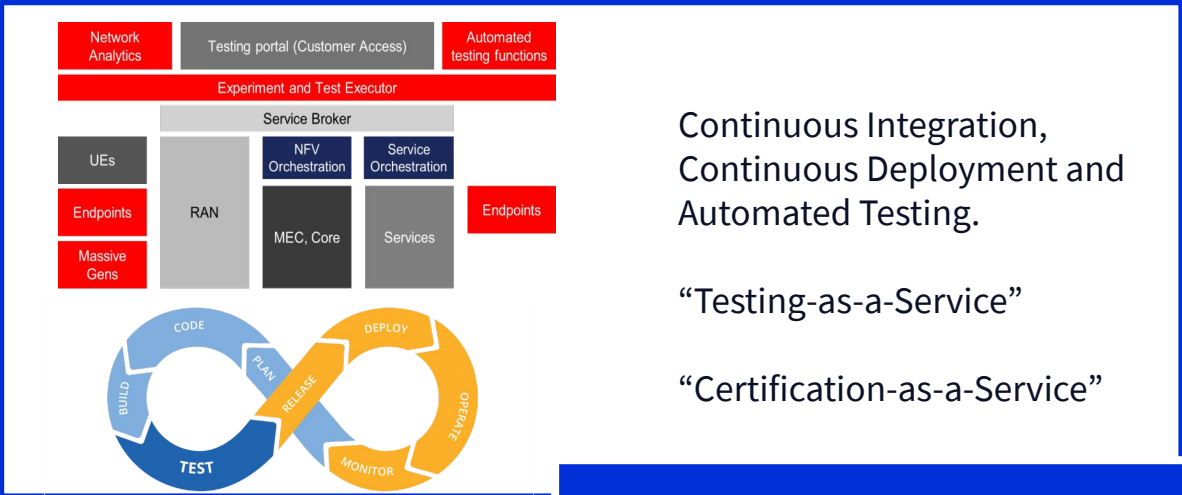
- New 5G core network
- Virtualized infrastructure (Cloud Native, NFV, SDN)
- Distributed sites



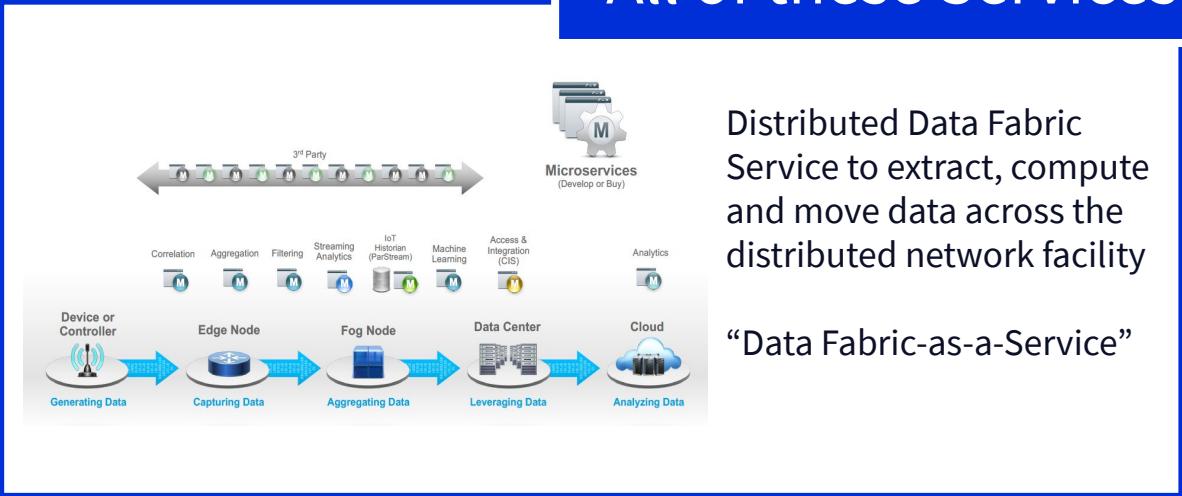
Slice life cycle management and orchestration roadmap



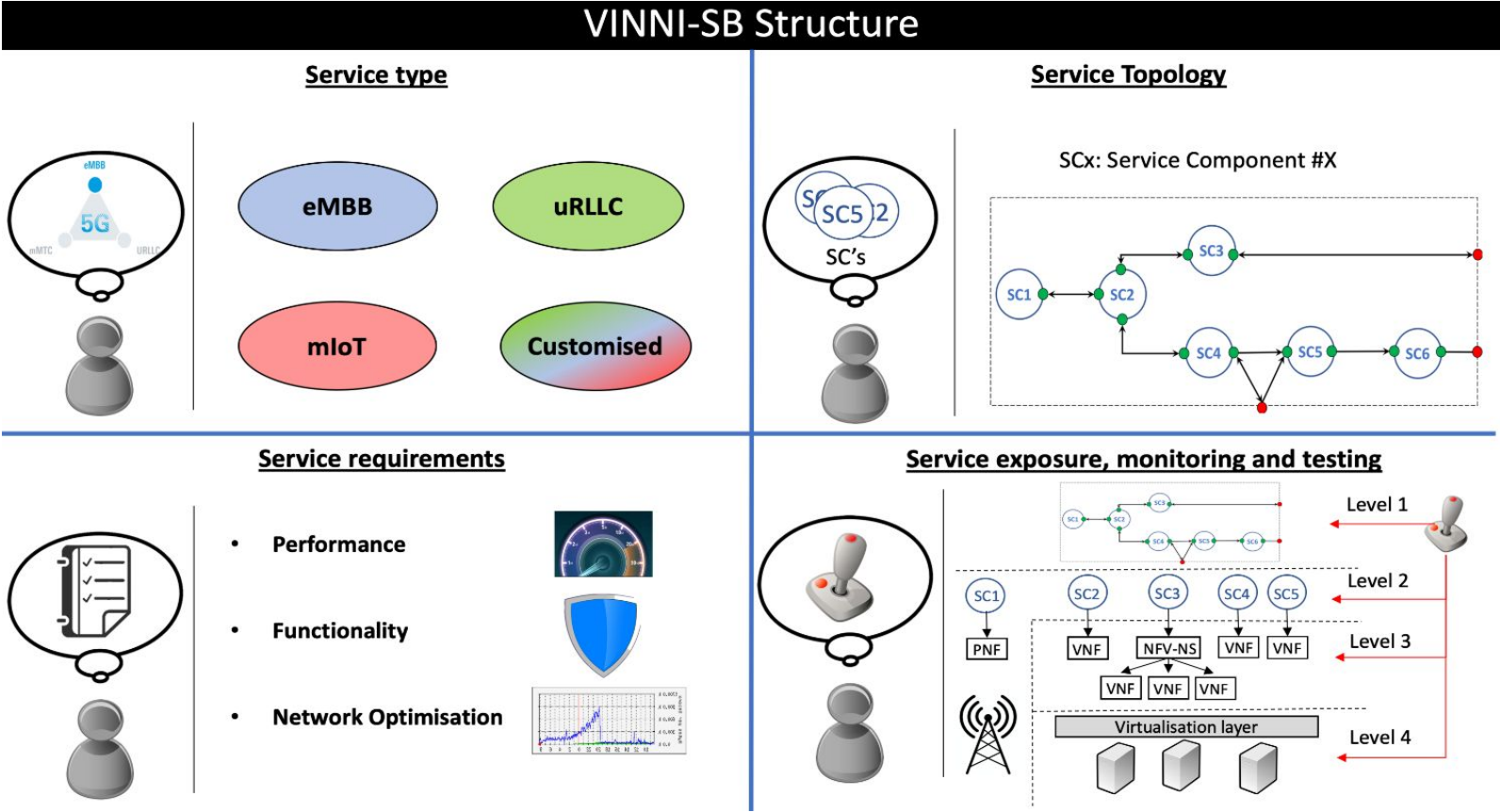
Some key 5G as-a-service concepts



All of these Services must be Orchestrated!



Service Blueprint

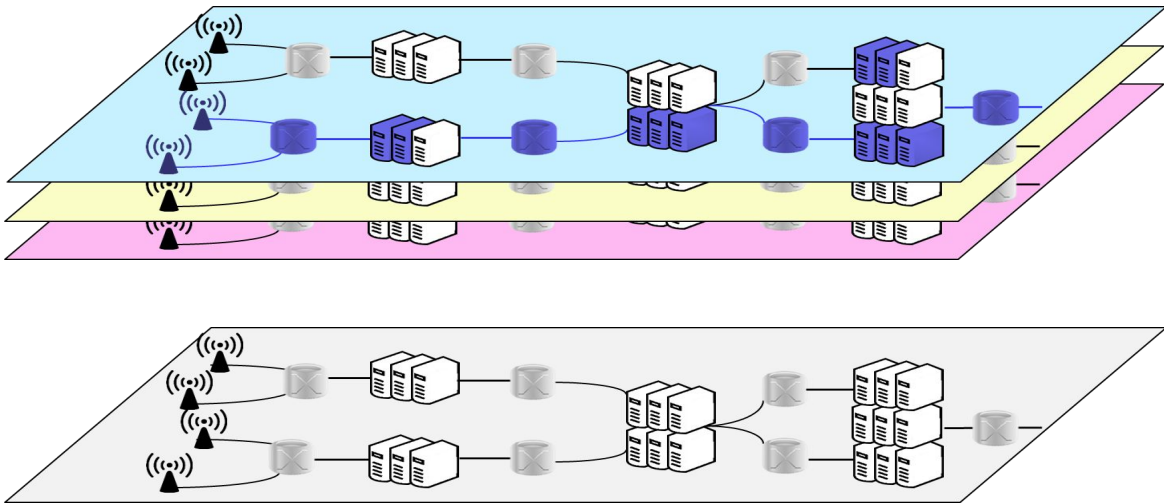


Highlighted Slicing PoCs using OSM

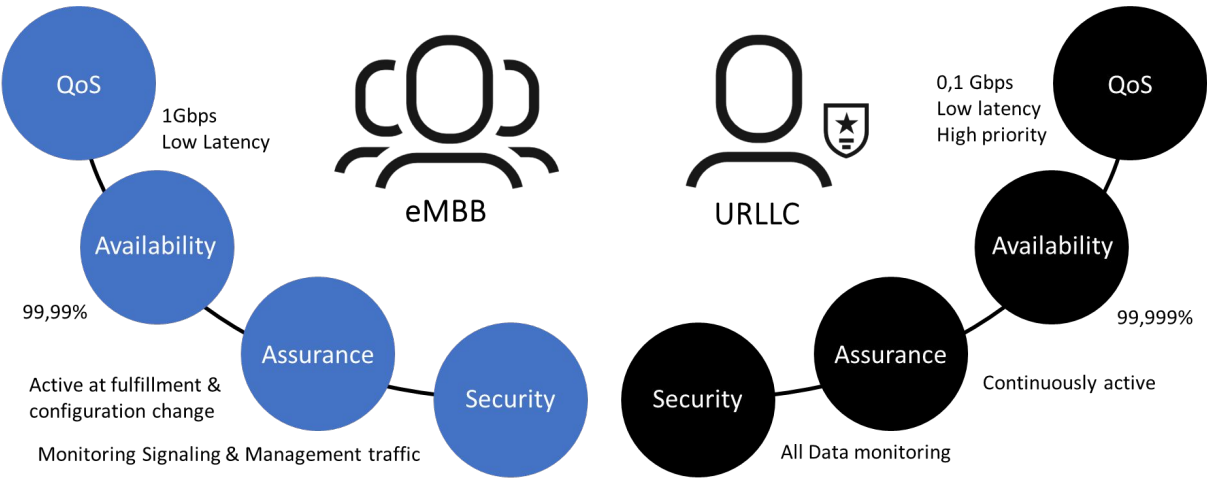
1. Operationalizing Network Slicing
2. Security-as-a-Service in Network Slices
3. Testing-as-a-Service in Network Slices



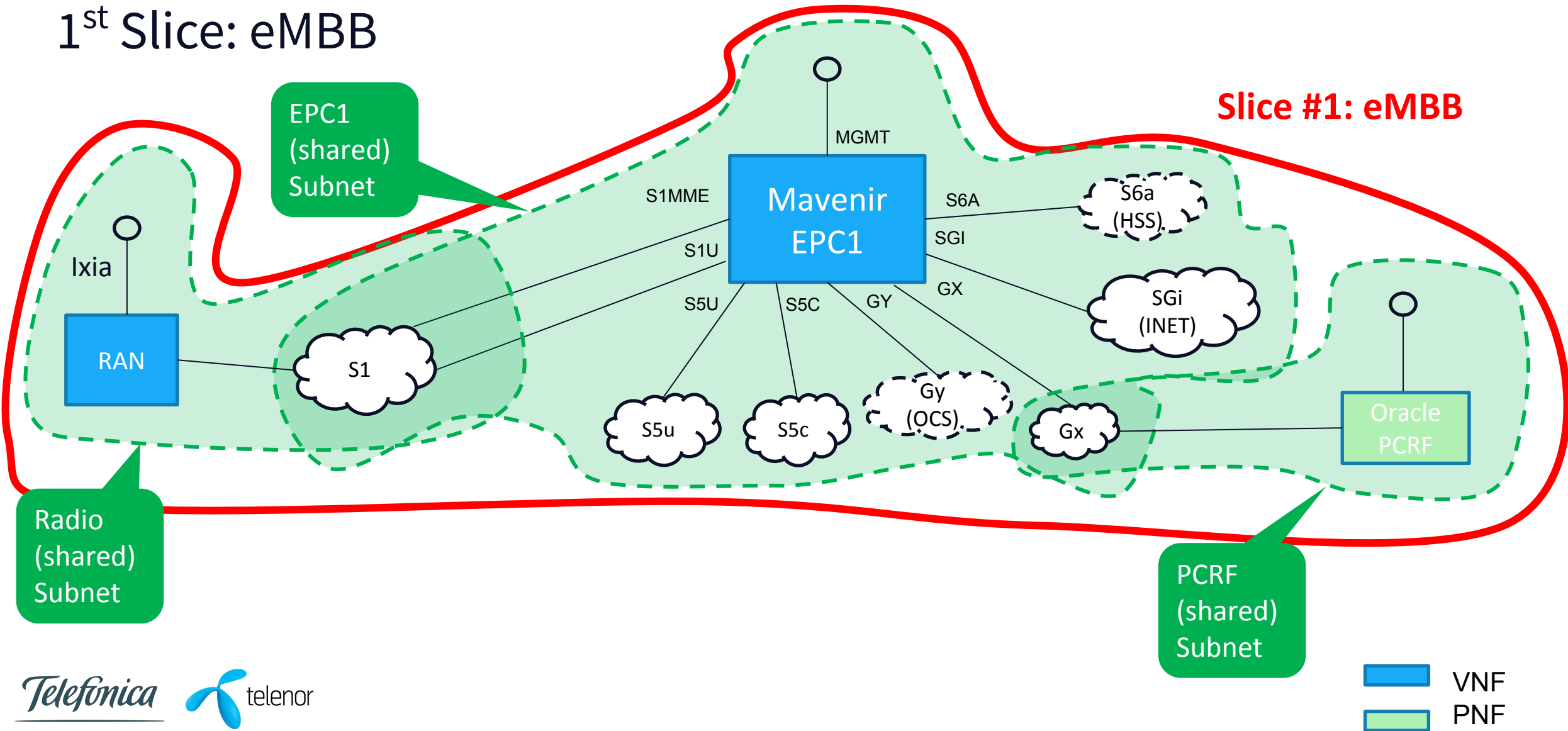
Joint PoC to operationalize Network Slicing with coexistence of eMBB and URLLC services using OSM



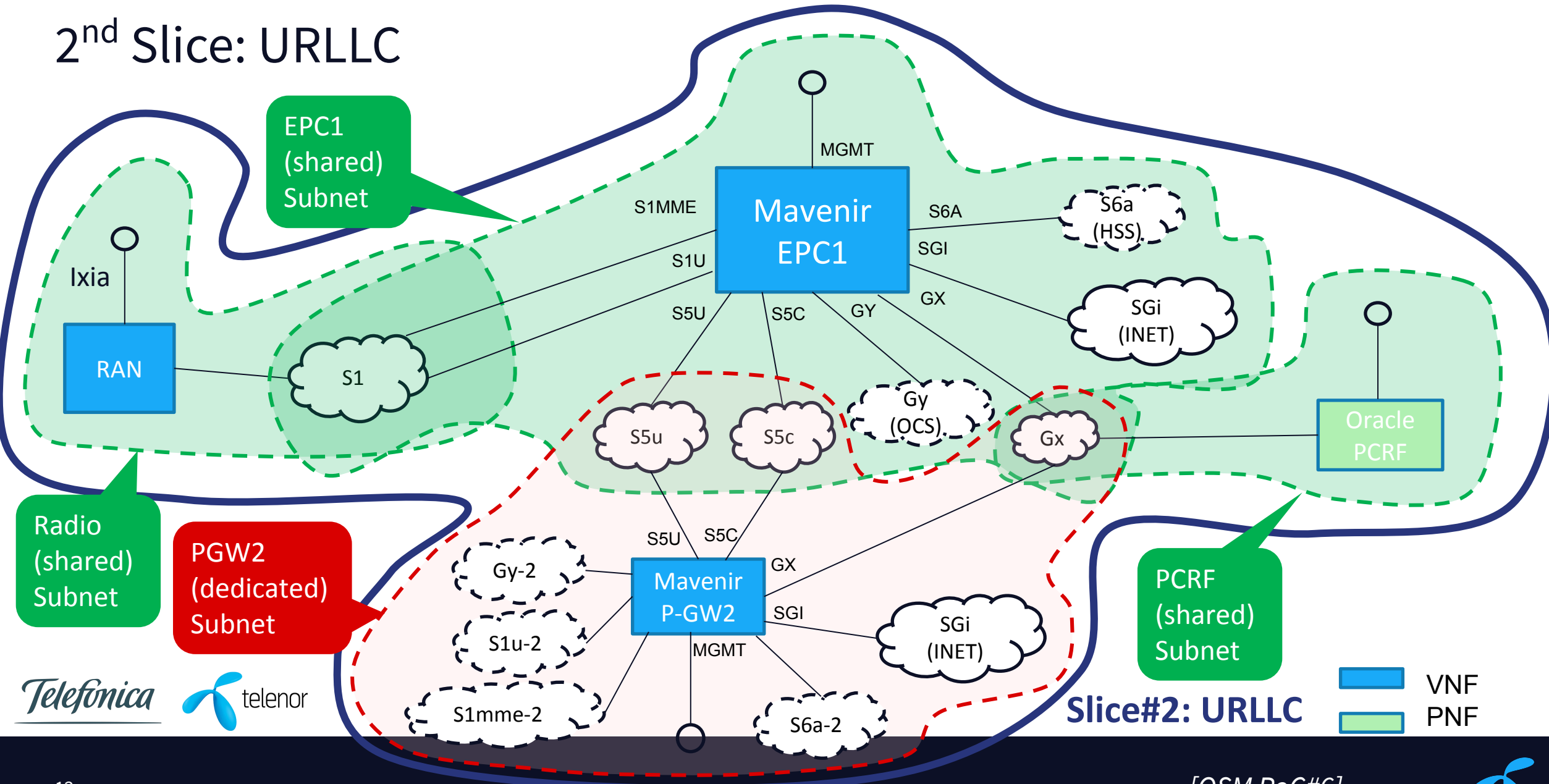
1st step. OSM to orchestrate and manage delivery of Slices with differentiated QoS, Availability, Assurance and Security (across **ONE** network)



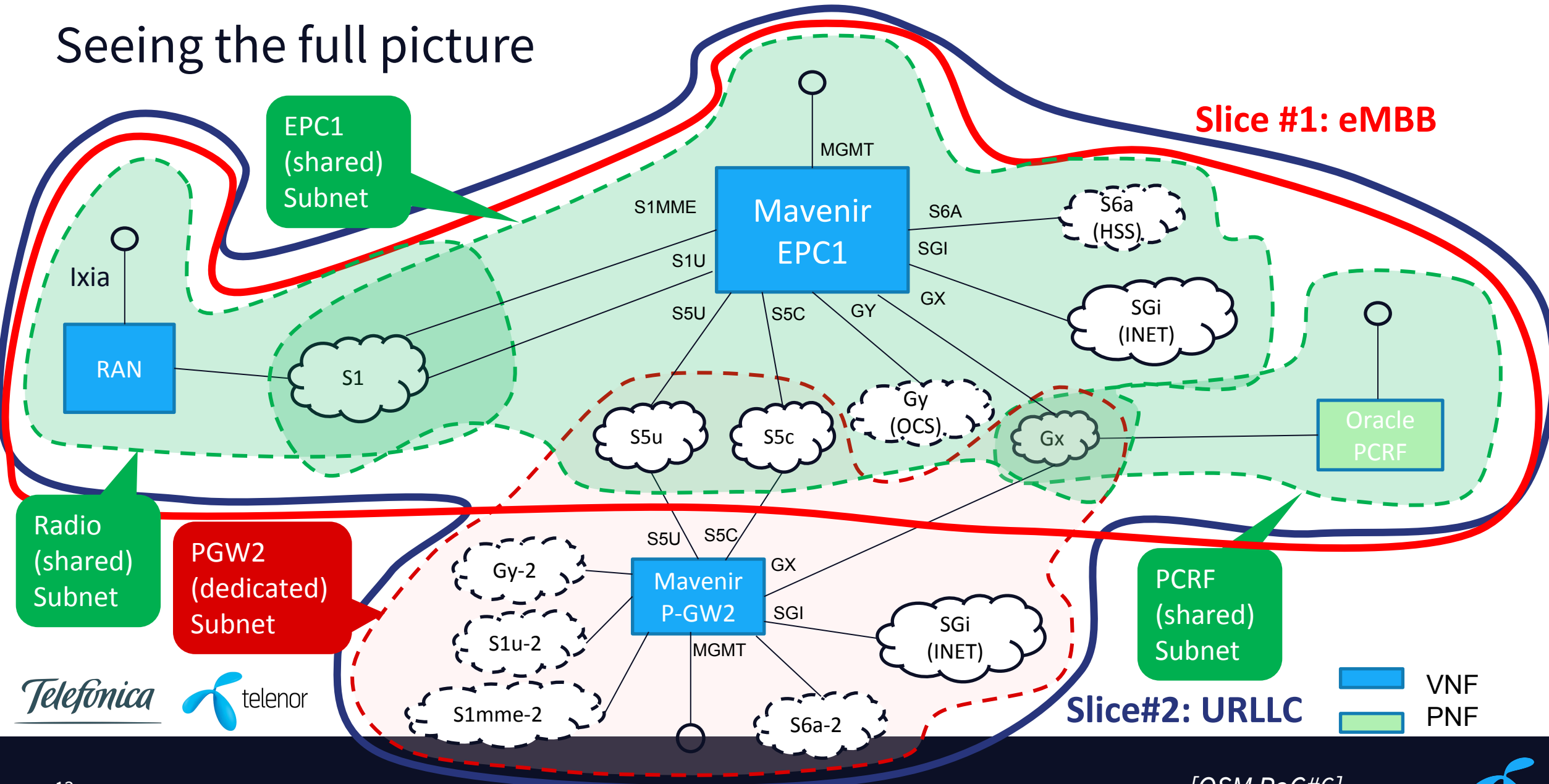
1st Slice: eMBB



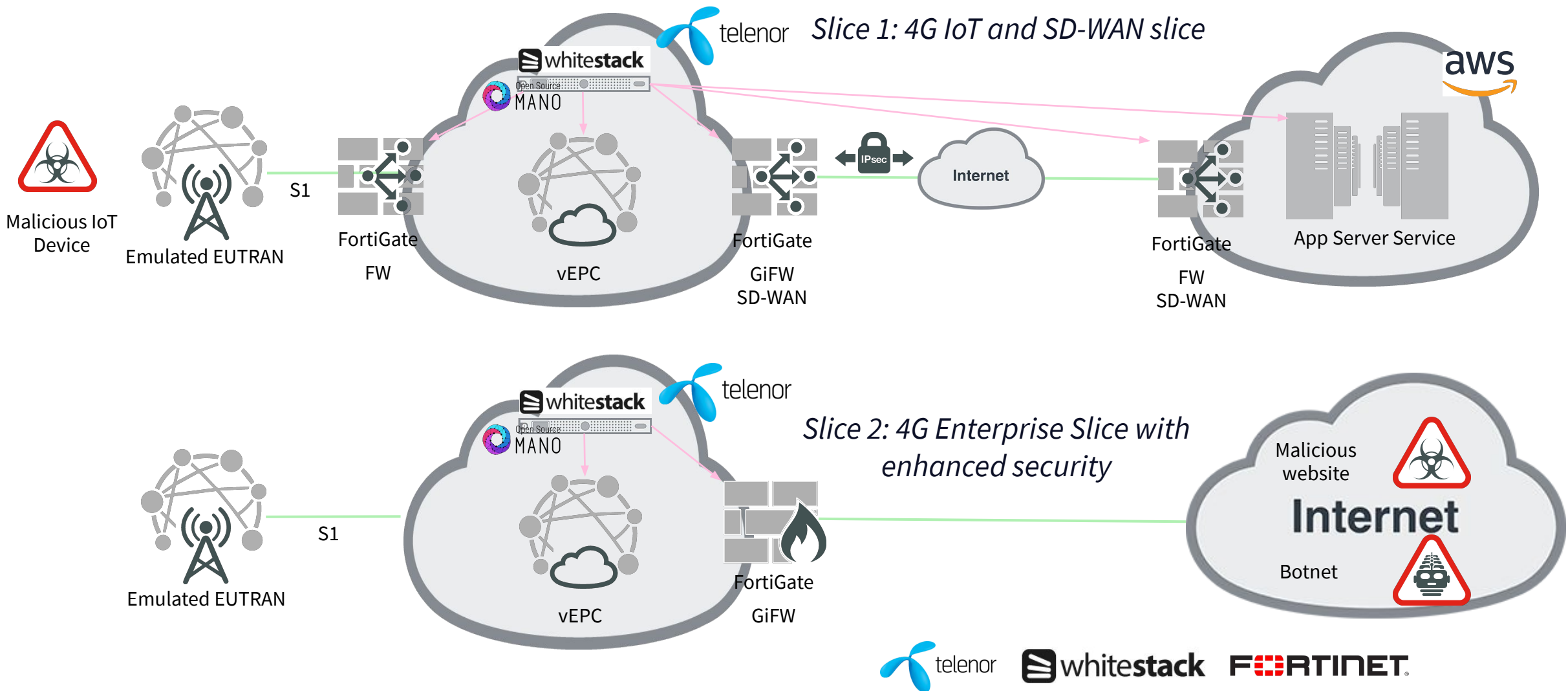
2nd Slice: URLLC



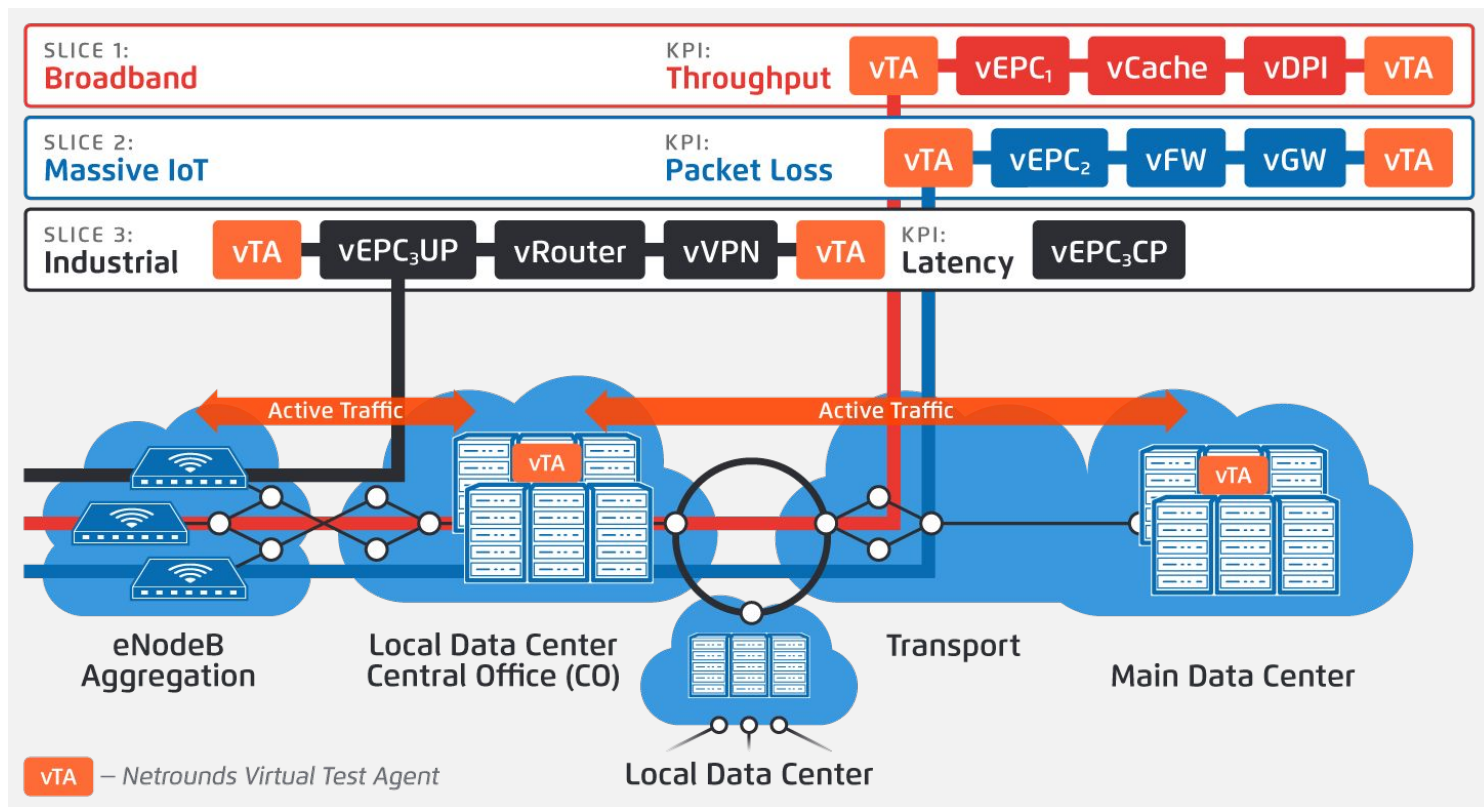
Seeing the full picture



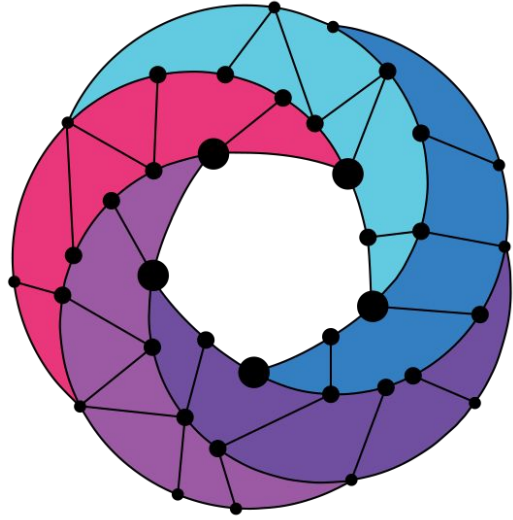
Orchestration and Automation of Security in Network Slices using OSM



Orchestrated Service Assurance with OSM using virtual Test Agents (vTAs) in Network Slices



In Summary, OSM is key to realize the 5G vision



Open Source MANO

Some keywords to underpin this statement:

orchestration, automation, network slicing, life cycle management, VNF onboarding, multi-vendor, open source, community and ecosystem, VNF/CNF/PNF/HNF, multi-VIM, private/public/hybrid cloud, cloud native, efficient and fast deployment, service assurance, etc ...

