IMT-2020/5G Workshop and Demo Day

5G Network Slicing Management concept and demo

Wei Chen
China Mobile

5G Design: New Architecture and Technology

Leveraging IT tech(e.g., NFV/SDN) to achieve a customizable, programmable and service-based 5G network to support the cases of huge traffic, large connection and low latency with big increase of resource utilization

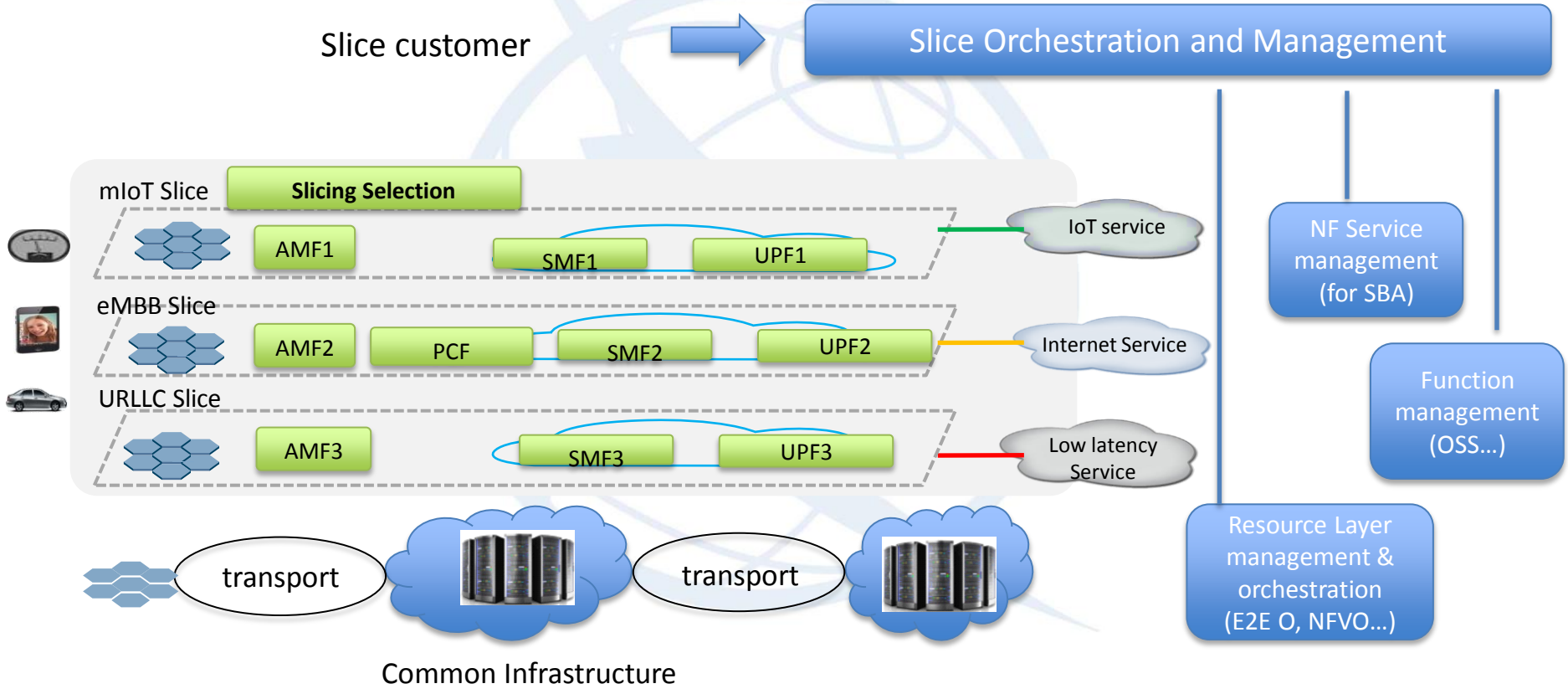
Architecture Characteristics

C/U separation	•Control and User plane functionality split is the basis for network function optimization and flexible deployment
Service-based Architecture	•Service based architecture design can be beneficial to cloud native and customizable 5G NFs
Network Slicing	•Network Slicing provides **E2E logical isolated network, dedicated** for vertical customers

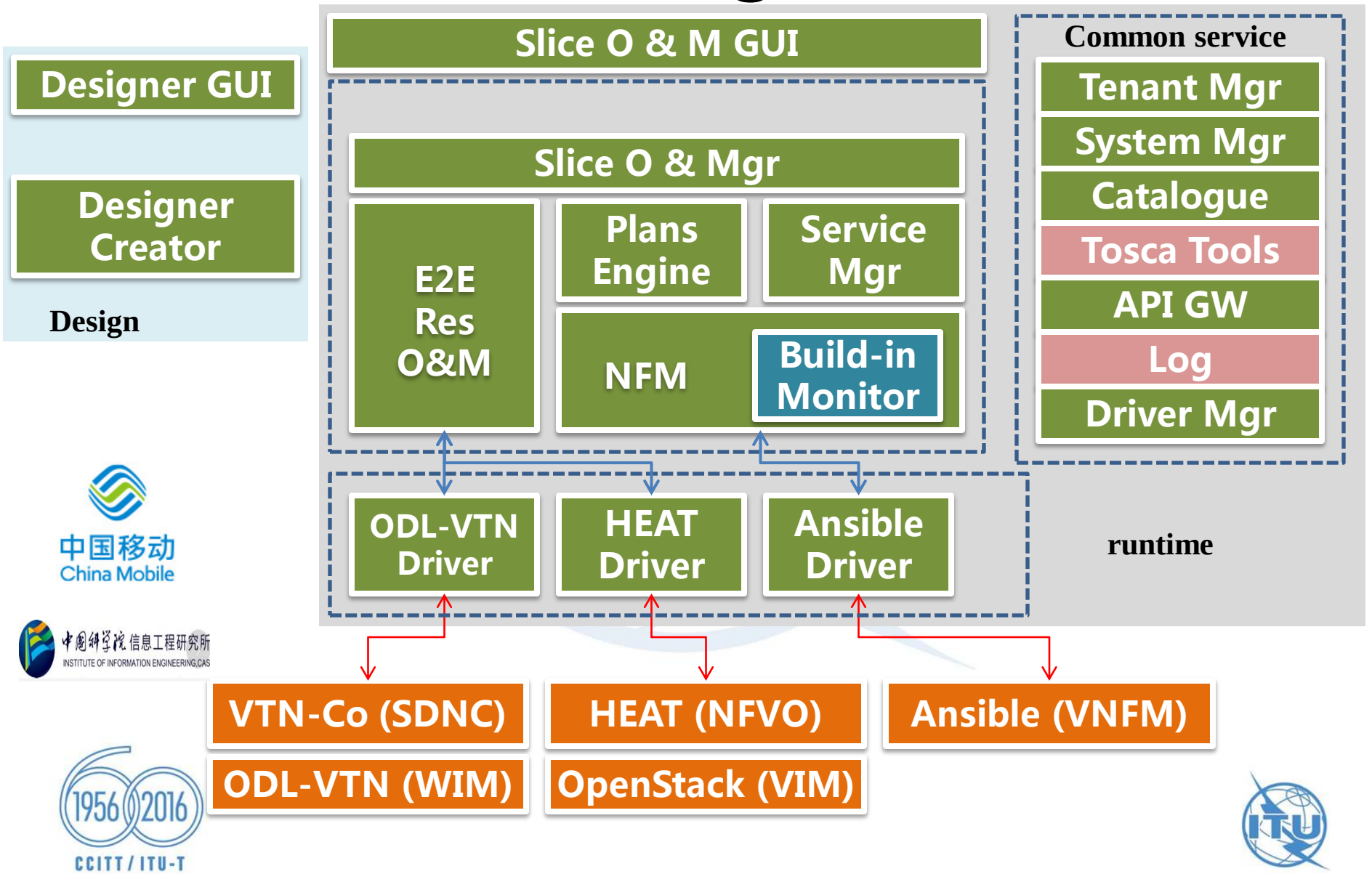
Key technology

1. Slice selection, slice management and orchestration
   - ✓ a logical network that provides specific network capabilities and network characteristics
2. QoS
   - ✓ remove bearer concept, use flow based QoS mechanism
3. Mobility management
   - ✓ new MM state RRC inactive to reduce the assess time and power consumption; On-demand Mobility
4. Session management
   - ✓ SM separated with UP, SM separated with MM
5. Flexible user plane
   - ✓ support edge computing, On-demand session continuity
6. Network intelligence
   - ✓ introduce Network Data Analytics (NWDA)
7. Fix Mobile convergence
   - ✓ natively support unified authentication and non-3GPP access
8. Stateless NFs
   - ✓ the "compute" resource is decoupled from the "storage" resource.

Network slicing needs the support of softwarized network in multi layer and domain



5G network slicing M&O demo



中国移动 China Mobile

中国科学院信息工程研究所 INSTITUTE OF INFORMATION ENGINEERING,CAS

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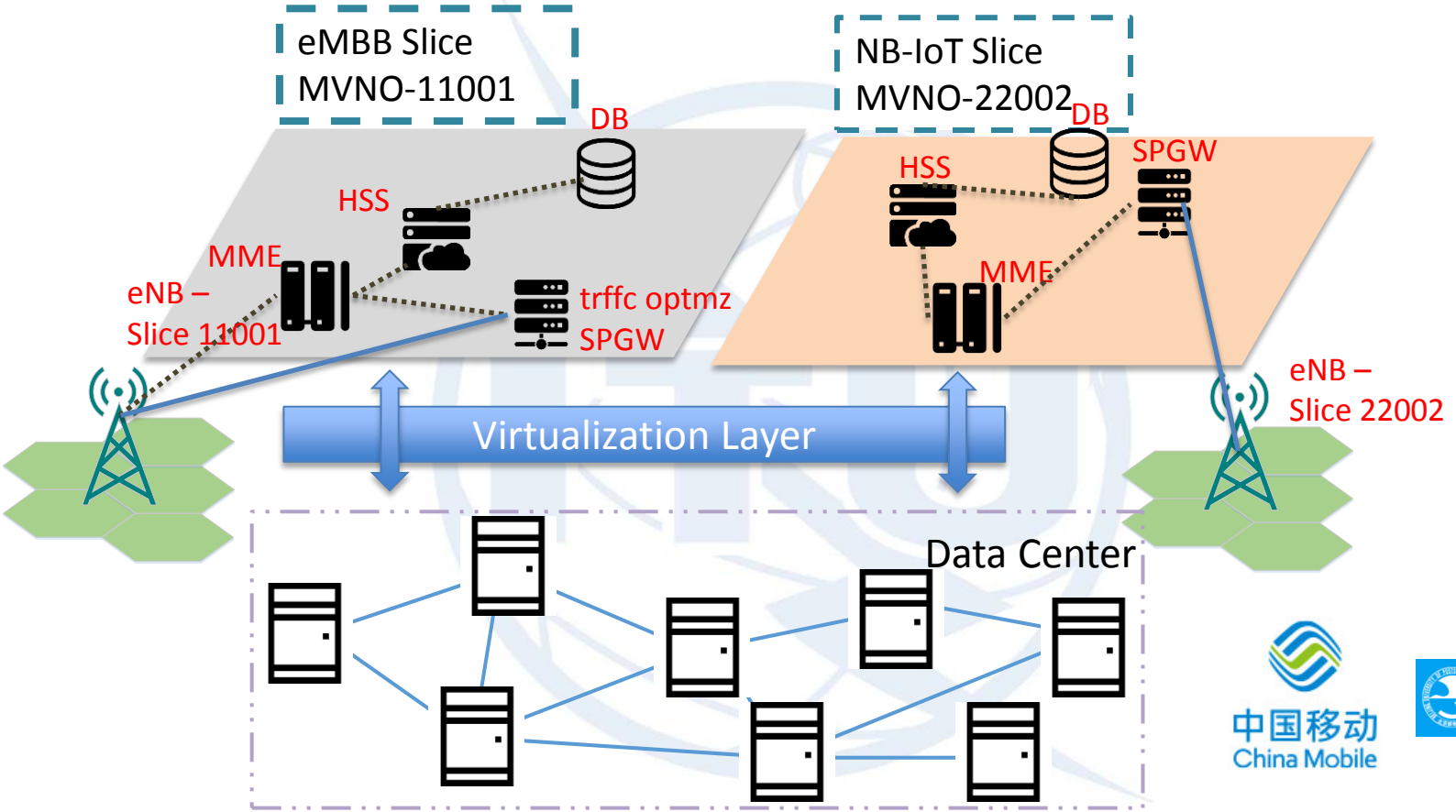
Slice management and orchestration system based on OAI with creating two slices



中国移动
China Mobile

北京郵電大學

中国科学院信息工程研究所
INSTITUTE OF INFORMATION ENGINEERING,CAS

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Thanks!