MEF

Service Orchestration of Complex Networks and Virtualized Services

MEF's activities in the context of 5G

MEF

MEF Created $80B* Carrier Ethernet Market

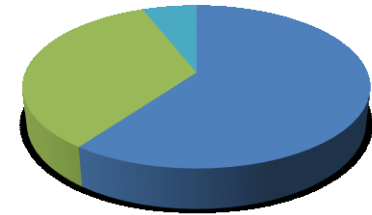## The foundation for agile, assured and orchestrated services

*IHS Markit

CE 2.0 MEF CERTIFIED

~90 CE 2.0 SPs

MEF CECP — CARRIER ETHERNET Certified Professional
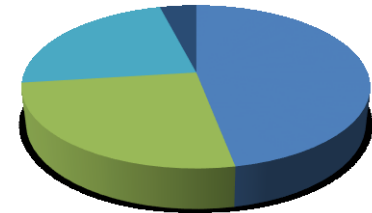
5,000 MEF-CECPs

■ SPs ■ Vendors ■ Others

210+ Member Companies

■ NA ■ EMEA ■ APAC ■ CALA

Global Contributions

MEF

ITU

Service Orchestration and LSO Framework
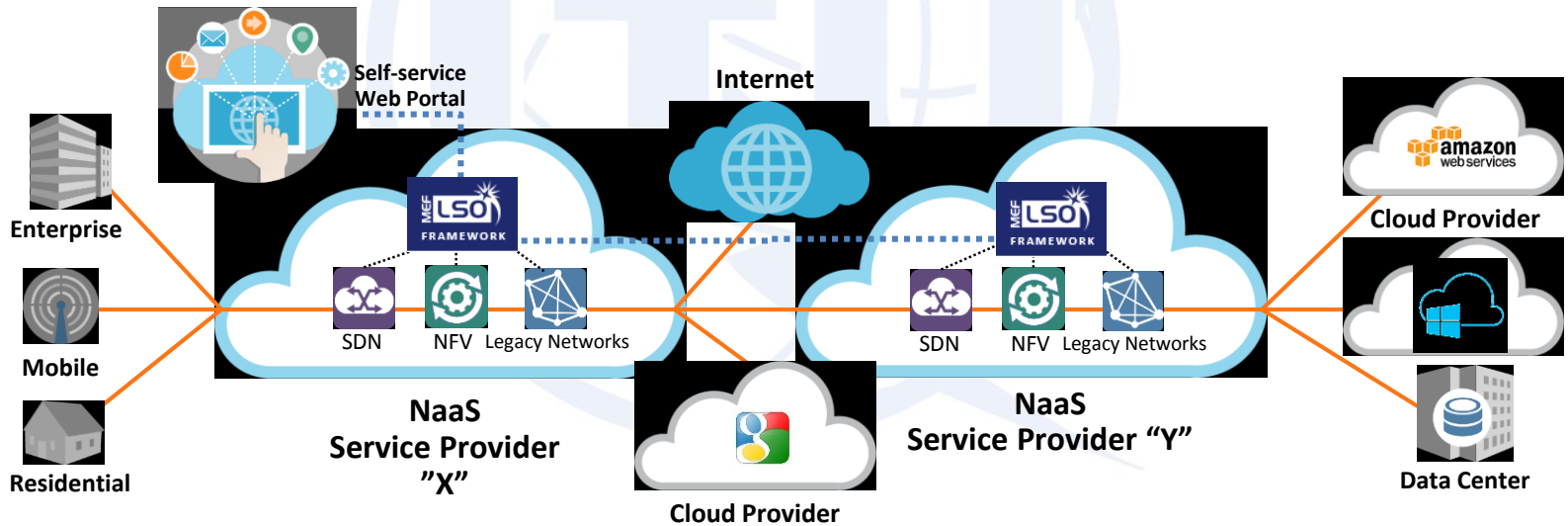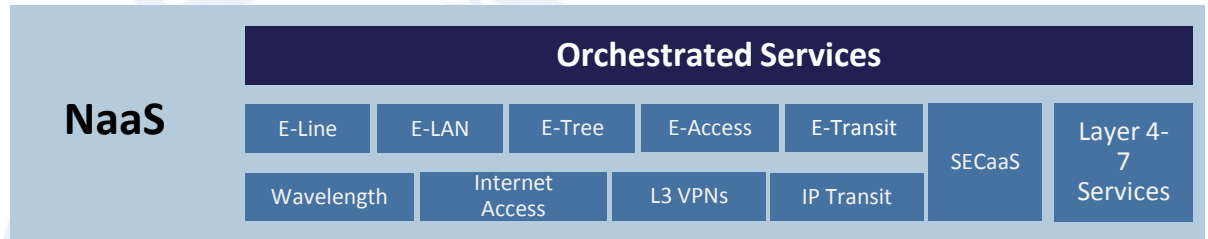
Specs and Implementations

- Service Reference Architectures and Service Connectivity Frameworks
- Service Definitions
- Industry Coordination and Collaboration
- Use Cases
- Reference Implementations
- Reference Points
- Hackathons
- Information Models
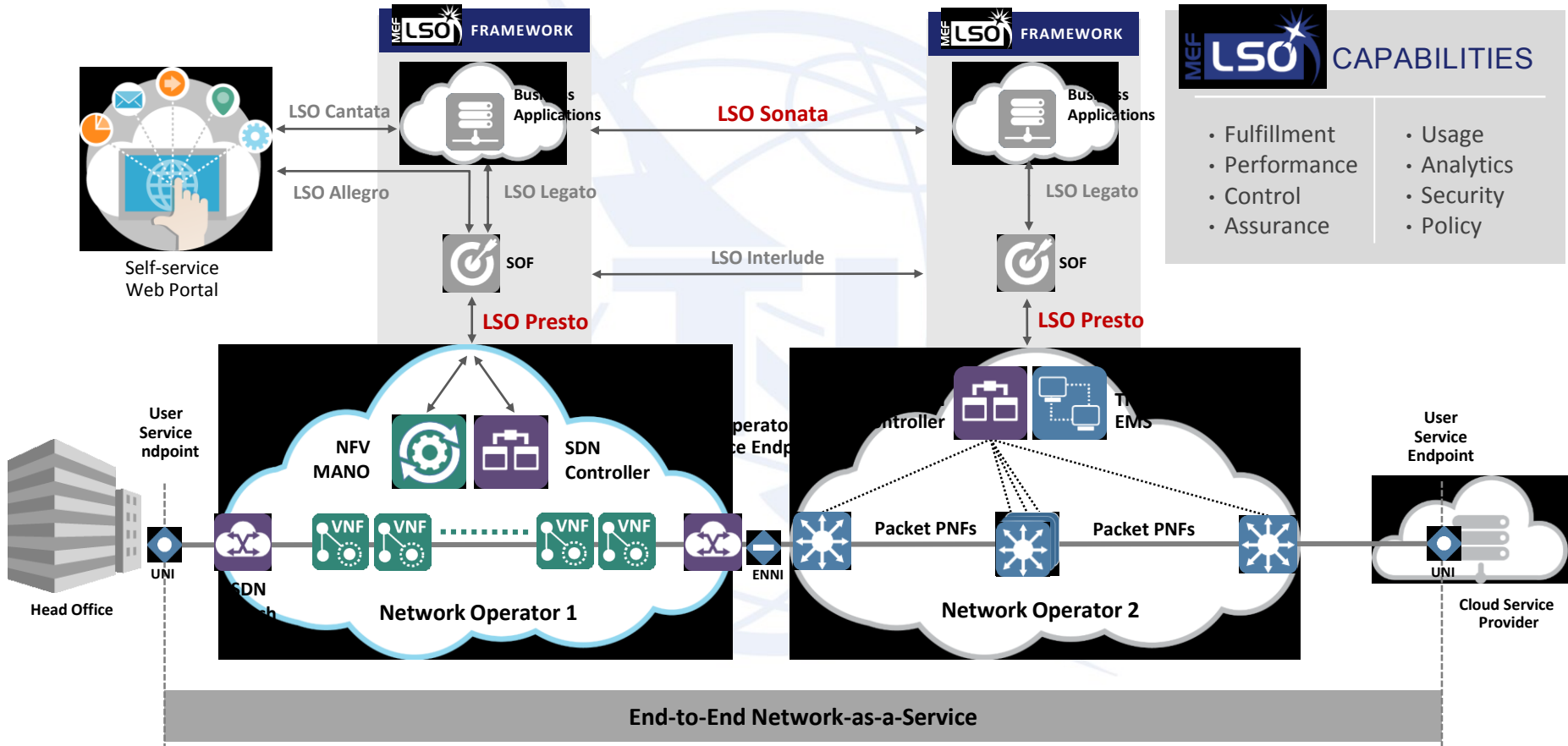- Certifications
- Data Models
- APIs

MEF

ITU
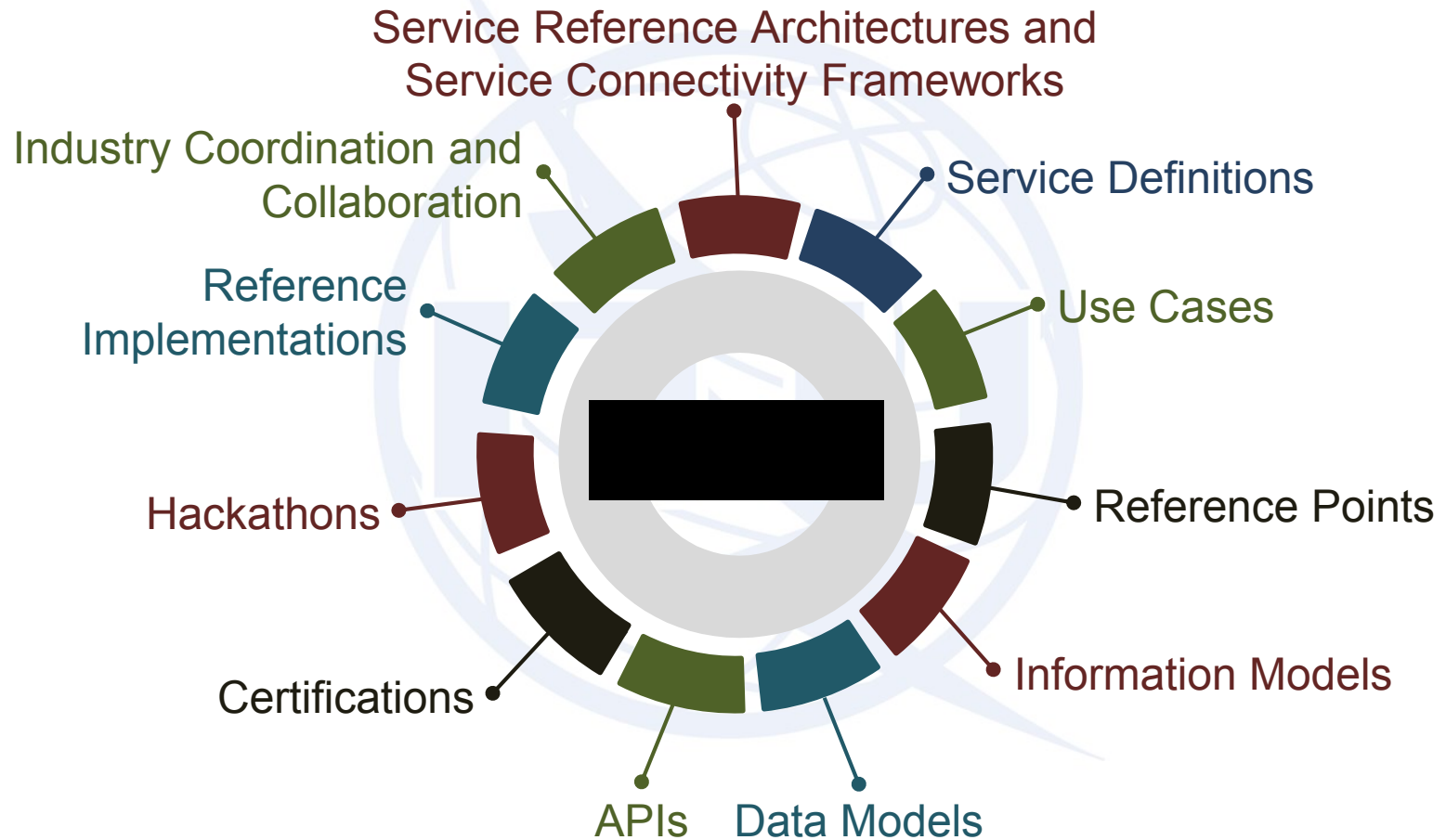
5G and MEF Specs

- MEF 22.x.y – Transport for 5G

  - 5G-oriented MEF Implementation Agreement
    - Enhanced mobile backhaul supporting
      - 5G use cases (e..g. Network slicing)
      - Cloud-based infrastructure and networking
      - Reduced latency and improved synchronization
    - Mobile fronthaul supporting
      - Mobile fronthaul interfaces (e.g. CPRI/eCPRI)
  - Based on existing MBH IA work
  - Uses MEF-defined services and attributes
  - References work from ITU-T, IEEE 802, BBF, NGMN

MEF

5G and MEF Implementation

- Ensuring 5G-based services can be fully orchestrated through SDN controllers as part of
  - Heterogeneous connectivity service
    - Multi-Operator
    - Multi-Technology
  - Full service lifecycle
    - Network resource provisioning
    - Service OAM and SAT
    - Service assurance (e.g. Zero touch telemetry, closed loopback control)

- OpenCS 5G project
  - Defining use cases, epics and user stories
  - Use case -> Information Model -> Data Model -> standardized open northbound APIs for 5G environments

MEF

MEFnet and Reference Implementations

LSO CAPABILITIES

- Fulfillment
- Performance
- Control
- Assurance

- Usage
- Analytics
- Security
- Policy

LSO Cantata

LSO Sonata

LSO Allegro

LSO Legato

LSO Legato

LSO Interlude

LSO Presto

LSO Presto

Self-service Web Portal

Business Applications

Business Applications

SOF

SOF

User Service Endpoint

NFV MANO

SDN Controller

VNF VNF .... VNF VNF

Operator Service Endpoint

Controller

EMS

User Service Endpoint

Packet PNFs

Packet PNFs

Head Office

UNI

SDN Switch

Network Operator 1

ENNI

Network Operator 2

UNI

Cloud Service Provider

End-to-End Network-as-a-Service

EMS: Element Management System   PNF: Physical Network Function   SOF: Service Orchestration Function

MEF

ITU

MEF and ITU-T Collaboration

- Frequent liaisons

- ITU-T G.8011 series (SG15) uses set of MEF documents for definition and specification of Carrier Ethernet

- Shared active engagement (e.g. Ericsson)

- 5G is major opportunity to leverage work of ITU-T into implementation projects that touch LSO, SDN and NFV for L1-L3 connectivity services!

MEF

Next Steps

- Transport for 5G Implementation Agreement (MEF 22.x.y)

- Definition and integration of 5G BH & FH use cases into MEF Core Model and open APIs

- Integration of 5G experimental implementations into live collaborative MEFnet projects with service providers and vendors

MEF