Project NGCOR – Next Generation Converged Operations Requirements

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San Francisco, 26.07.2011

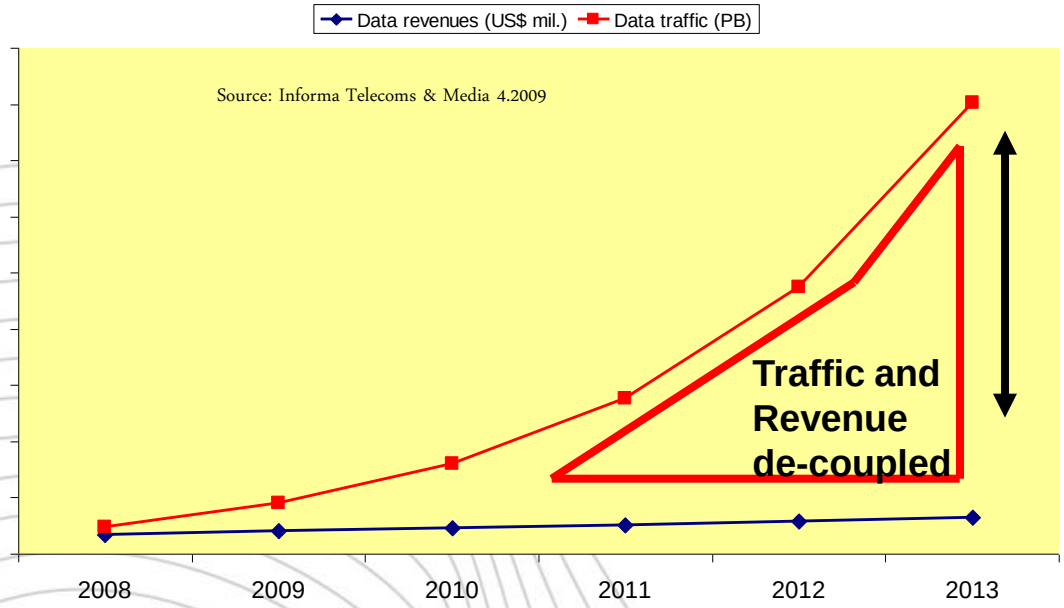
Multi SDO Meeting

Content

- Current Situation
- NGCOR
- Expectation
- Next steps

Business Situation (1)

Global mobile data revenues and data traffic, 2008-2013

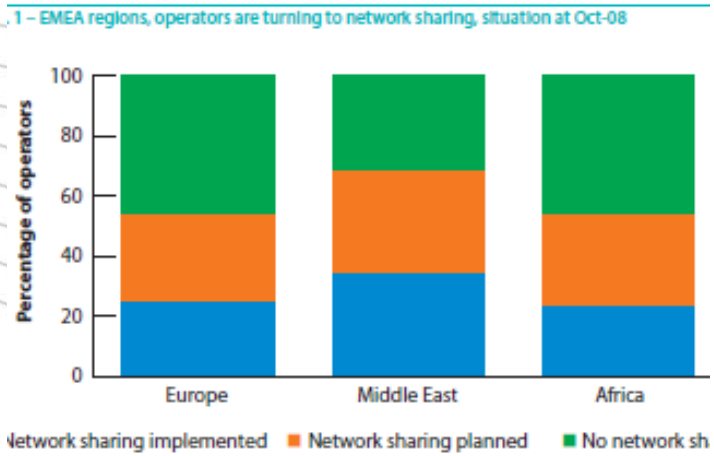


- **Data traffic grows rapidly** – Voice traffic continues at high volumes
- **Disproportional costs vs network revenue gain**
- **Risk – Loss of Service Revenue**

- **The complete operations concept has to be changed**

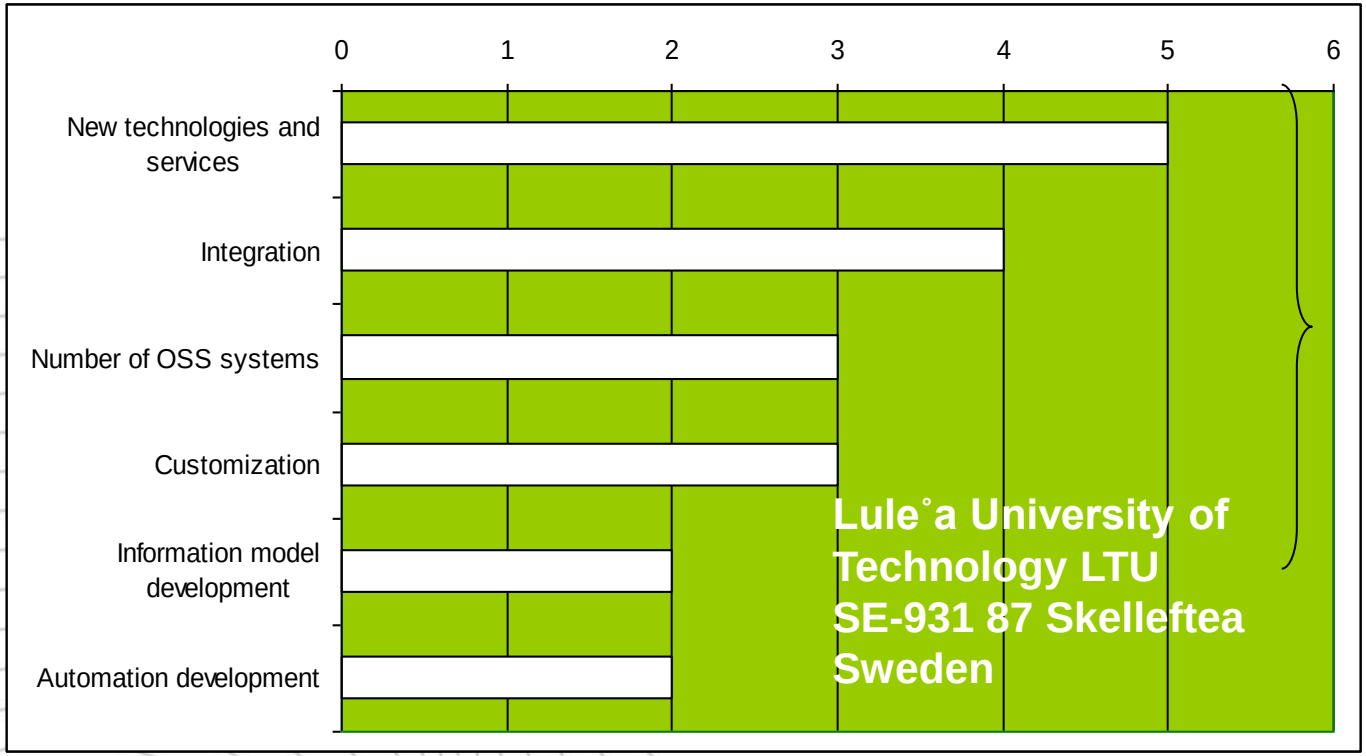
Business Situation (2)

- **What are the options for OPEX and CAPEX savings?**
  - for the Operators:
    - Network sharing
    - Managed Services
    - Outsourcing



- **Automation is key. Done by**
  - **Harmonized OSS**
  - **Standardized Processes**
  - **Standardized O&M Capabilities**

Cost drivers for OSS



Caused by less or diverse OSS Standards

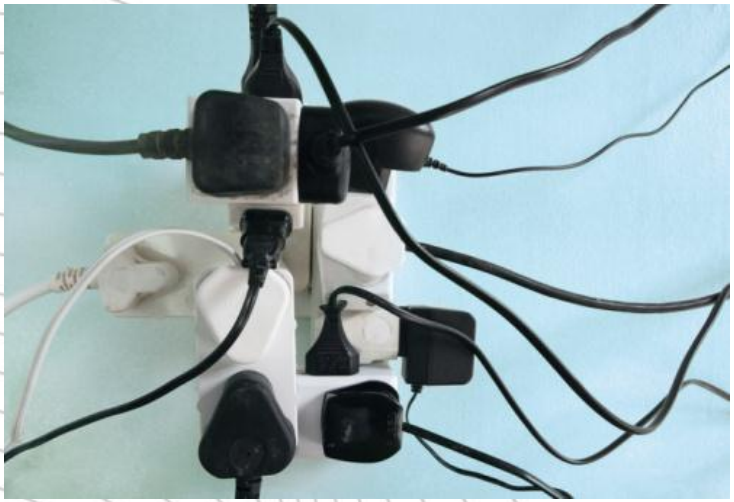
What is about the current situation ?

….in the future one network

Standardization

Standardization

….from an Operator perspective



NGCOR

ngmn
the engine of broadband wireless innovation

The Project Next Generation Converged Operations Requirements

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Bell
BT
中国移动通信 CHINA MOBILE 移动信息专家
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kpn
KT
LG TeleCom
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TELECOM ITALIA
Telefónica
TeliaSonera
Telstra
TELUS
T
vodafone

actix
Airvana Mobile Broadband. Everywhere.
Alcatel·Lucent
Anritsu Discover What's Possible
Cambridge Broadband Networks
CETECOM
CISCO
Communology
大唐移动 DTmobile
ERICSSON
FUJITSU
HITACHI Inspire the Next
HUAWEI
ICERA
Juniper Networks
LG Life's Good
MIMOON
MOTOROLA
NEC
NOKIA
Nokia Siemens Networks
Potevio 中国普天
Powerwave Technologies
QUALCOMM
RIM
ROHDE&SCHWARZ
SAMSUNG
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ubidyne
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ZTE中兴
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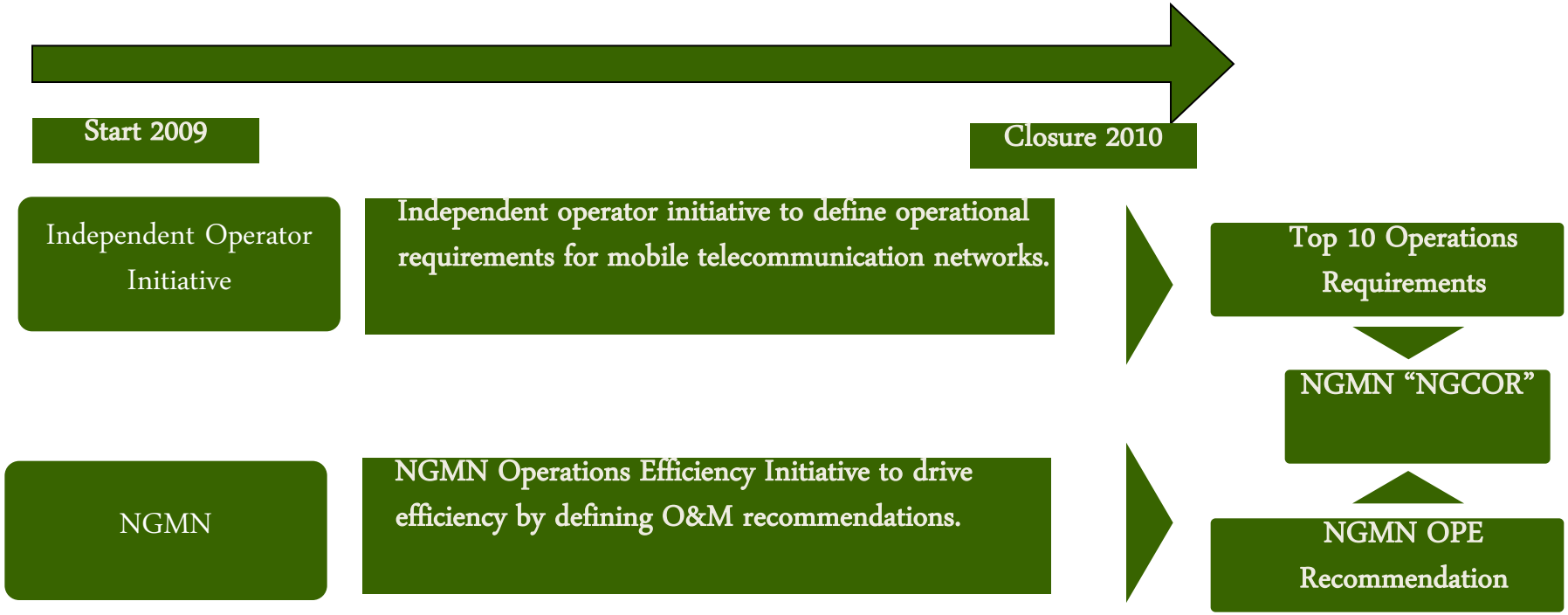
Where we coming from



Next Generation Converged Operations Requirements

Problem Statement & Business Rationale

- The main important future O&M Requirements are specified and defined in the NGMN Top OPE Recommendations.
- Those requirements need further enhancement with more details for guiding towards well standardized interfaces and interworking solutions throughout O&M/OSS.
- Resolving misalignments and open questions in the standardization of the area need immediate actions. There is the need to give guidance to SDOs and Industry bodies (e.g. 3GPP or TMF) in order to prioritize the work, i.e develop the solutions for most important requirements first and specify the recommendations for the best solutions
- The NGMN Top OPE Recommendations are dealing with wireless requirements mainly. Wireline and wireless networks will be merged in the near future. There is a need for the definition of Converged O&M requirements.

Scope & Objectives & Challenges

In scope: OSS Requirements for the Northbound Interface / Operations Requirements for converged networks / Fixed-mobile-framework management interface specifications (model) / Inventory O&M Requirements / NGMN Top OPE Recommendations (where needed) This are the first tasks based on the priority. Requirements regarding e.g. CM , PM may come in a possible second phase

Out of scope: Requirements related to BusinessSupportSytems layer e.g. CRM, charging and billing

Objectives: Detailed refined requirements and recommendation for new requirements

Top Challenges: Alignment between SDOs and Industry Fora and Implementation in wireless and wireline networks

TG Operator OC Owner: Walter Grethe (Deutsche Telekom)

Task Force Leader: Klaus Martiny (DT) **Task Force Co-Leader:** Willi Siebert (Vodafone)

Next Generation Converged Operations Requirements

Target

- Harmonization of Interfaces and Processes
- Higher grade of automation

Outlook

- OPEX Reduction in the long run
- Reduce Time to market

Task setup

Task Next Generation Converged Operations Requirements

OC Owner Walter Grethe (Deutsche Telekom)
Task Leader Klaus Martiny (Deutsche Telekom)

Sub Task Converged Oper. Requirements

Sub Task Leader : T. Benmeriem (FT)

Sub Task Fault Managemnt

Sub Task Leader : W. Siebert (VF)

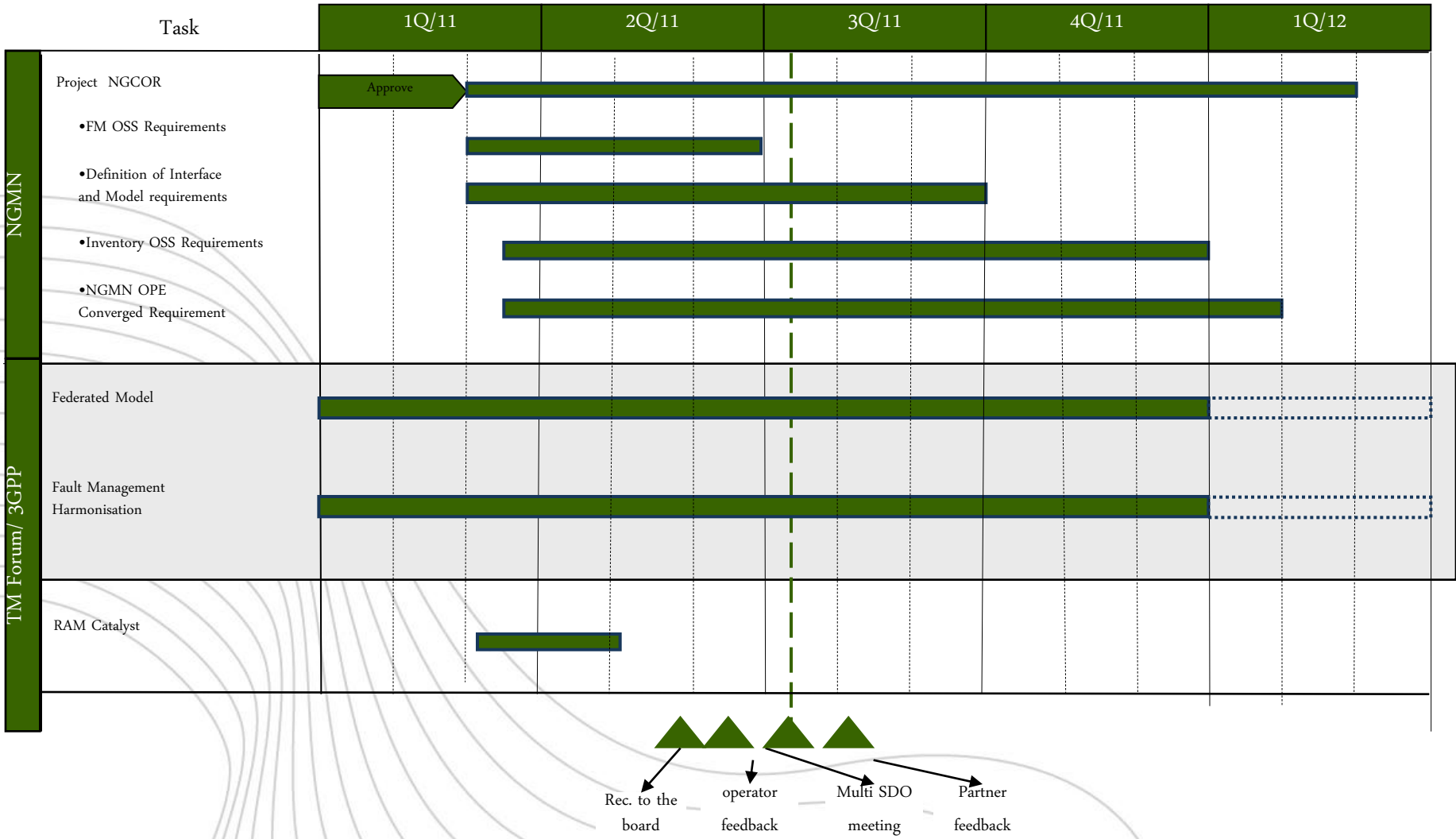
Sub Task Operator Governance and tooling requirements

Sub Task Leader : K.Martiny (DT)

Sub Task OSS Requirements for inventory management

Sub Task Leader : P.Olli (TeliaSonera)

Time-schedule NGCOR



Expectations

- Northbound Interface has to be standardized
- Existing Standards has to be consider (best effort); e.g. as the basis for a common / federated model
- Effort reduction concerning interface adaption
- Development time has to be reduced in order to shorten time to market
- Automation has to be improved

Next Steps

- Start of the Discussion about a new way of network operations
- Bring it to real based on agreed
  - working packages
  - with an agreed delivery timeline

- Because, the time is running and the window of opportunities gets smaller and smaller

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Thank you.

Next Generation Converged Operations Requirements (Scope & Objectives & Challenges)

Sub-Tasks: Fault Management

In scope: OSS Requirements including Northbound Interface and EMS (Network management level)

Objectives: Delivery of the OSS Requirements for FM on the Northbound interface

- Finalization of the harmonized FM Interface standard (preferred TIP)
- Focus on EMS < -- > NMS Interface
- Further detailing of Chapter 8 from the NGMN Top OPE Recommendations
- Delivery non-functional and functional requirement
- Delivery of use cases

Lead: Vodafone

Duration: 7 Month

Sub-Tasks: OPE Converged Recommendation for converged networks

Objectives: Identify possible key domains for harmonization
Define OSS requirements for the harmonized domains

Lead: France Telecom

Duration: 12 Month

TG Operator OC Owner: Walter Grethe (Deutsche Telekom)

Task Force Leader: Klaus Martiny (DT) **Task Force Co-Leader:** Willi Siebert (VF)

Next Generation Converged Operations Requirements (Scope & Objectives & Challenges)

Sub-Tasks: Operator Governance and tooling requirements for converged aligned management interface specifications

In scope: Recommendation for management interface and data model requirements

Objectives:

- Requirement Definition of overarching backplane and adapter
- GAP analysis between existing solutions and requirements
- possible recommendations

Lead: Deutsche Telekom

Duration: 8 Month

Sub-Tasks: Delivery of OSS Requirements for inventory management

Objectives:

- Definition of inventory Requirements
- Delivery of a proposed model
- Use case specification and installation (e.g. Catalyst Project)

Lead: TeliaSonera

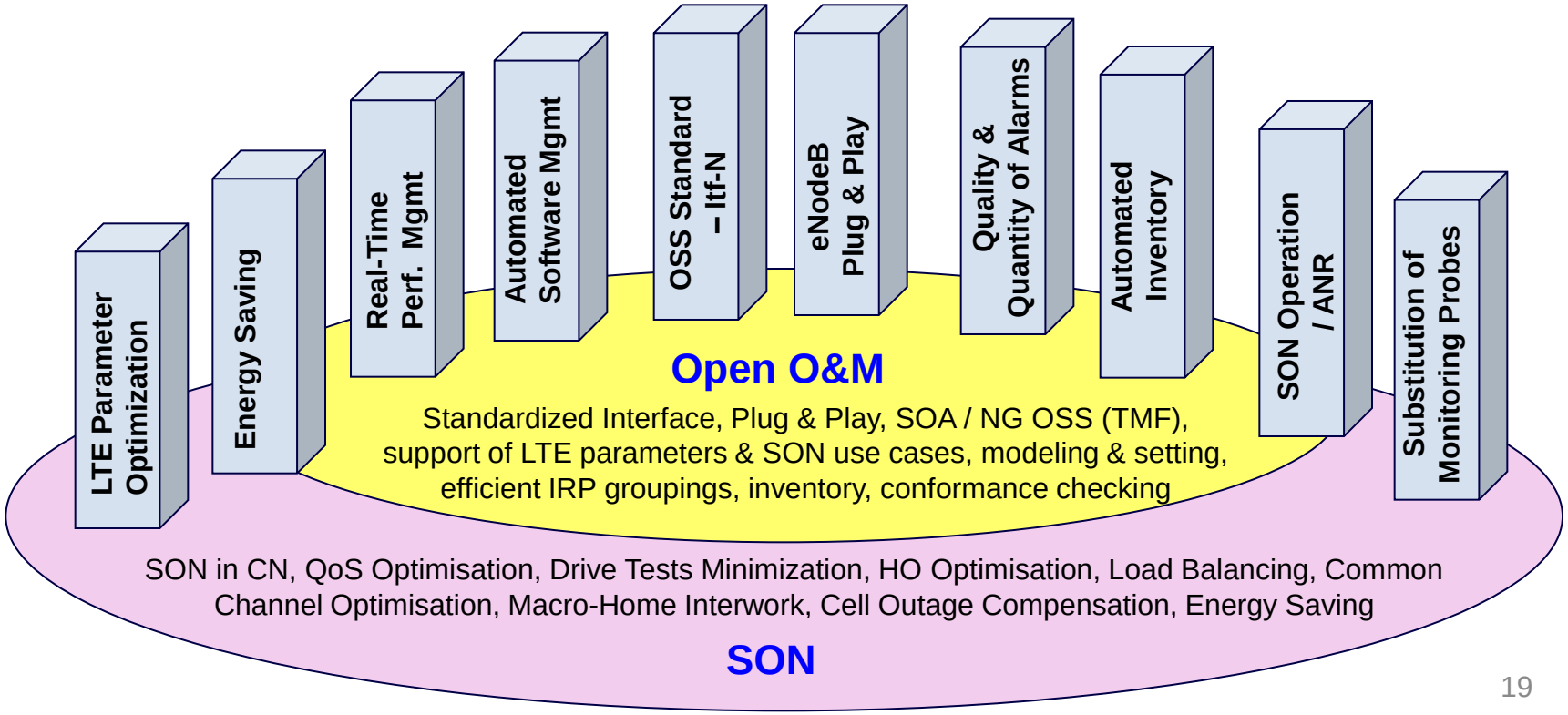
Duration: 6 Month

TG Operator OC Owner: Walter Grethe (Deutsche Telekom)

Task Force Leader: Klaus Martiny (DT) **Task Force Co-Leader:** Willi Siebert (VF)

NGMN Operational Efficiency Project gives guidance to industry with Top Requirements

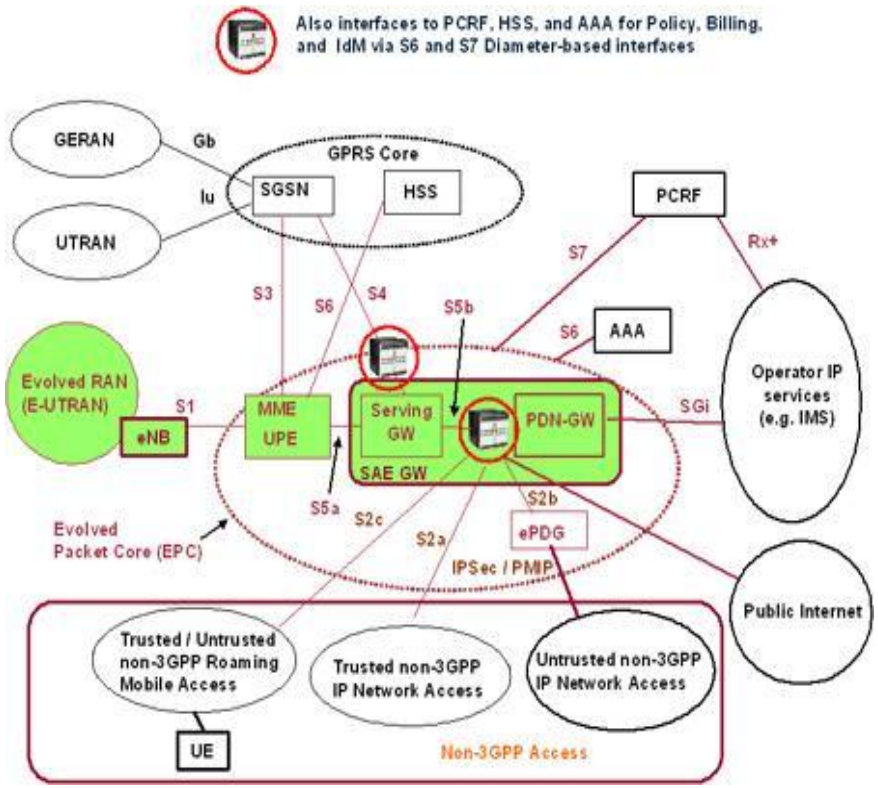
- **NGMN SON has formulated use cases and NGMN O&M has outlined both direct requirements (e.g. standardized interface) & themes (e.g. NG-OSS, efficient groupings, optimized modeling, plug and play etc.) applicable to specific cases**
- **NGMN Top OPE requirements are natural & specific consequence of Open O&M & SON formulations, while using their content to further mature**



What is about the current situation ?

From GSM/GPRS/EDGE via UMTS/HSPA to NGMN...

- Parallel operations of multi-generation infrastructure for the next couple of years
- various network management systems
- complex architecture
- E2E monitoring isn't possible
- Operations have to be simplified...



Source: Light Reading