Project NGCOR Phase 2 – Next Generation Converged Operations Requirements

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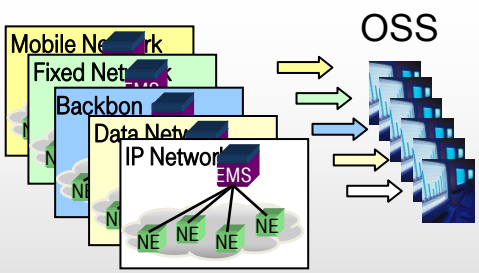
NGCOR Rational and Objectives

Business Drivers



Challenges:

- Vendor specific
- Technology specific
- Too many proprietary interfaces
- Growing complexity
- Information overflow

- less standardization in the area of OSS causes high investment (integration & adaptation) and maintenance
- no common O&M standards for converged networks

Issues for all Telecommunication Operators

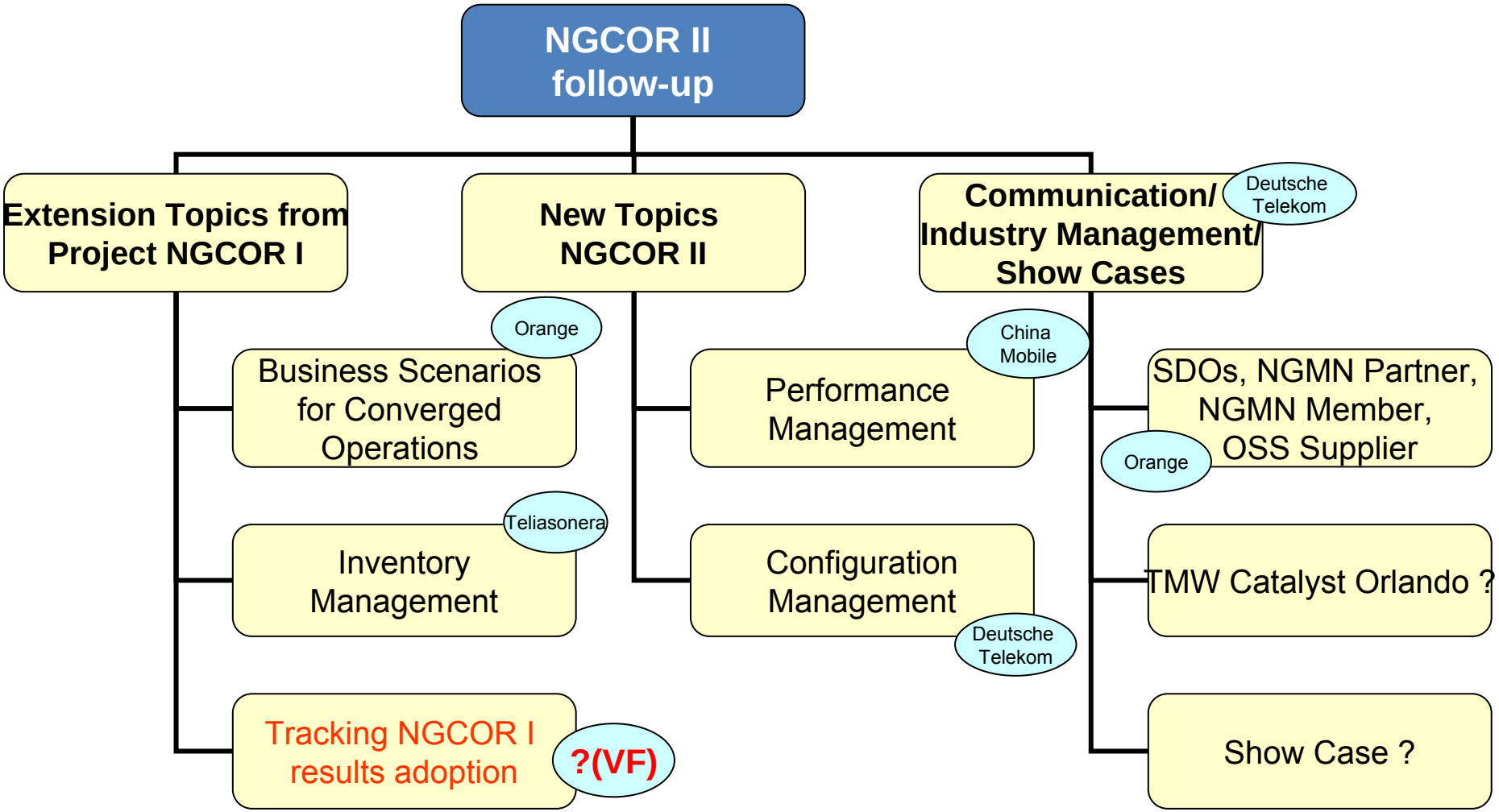
Cost impact

- Millions of Euros integration cost
- High maintenance & adaption cost per year
- Less automation -> process cost
- Less flexibility concerning the introduction of new network services

Definition of requirements for

- Harmonized Fault Management Interface ✓
- Modelling and Tooling ✓
- Resource Inventory Management ✓
- Service Inventory Management **new**
- Converged Operations Requirements (Business Scenarios) **extension**
- Performance Management **new**
- Configuration Management **new**

Outlook NGCOR phase II
Content & Structure



Content of Deliverable (Lead: France Telecom)

- Network Sharing Scenarios
- RAN Sharing with converged EMS Scenario
- RAN sharing with dedicated Core Networks Scenario
- Mobile EPC Network as converged Core Network and Migration paths
- scenarios: Operators' Operations strategy
- Core Network Sharing with converged EMS & NMS Scenario
- Core Network Sharing in Multi-Country & Multi-Affiliates Scenario with
- Shared EMS, NMS and converged Northbound Interface

Sub sections of each scenario

- Describe Business Scenario
- Describe the Business Converged Operations Scenarios
- Propose related Architectures Scenarios as illustration
- Derive high-level requirements relative to convergence of Management
- Identify the expected benefits in terms of CAPEX / OPEX reduction
- Towards whom the requirements are addressed

Content of Deliverable (Lead: TeliaSonera)

- Extending inventory management requirements to cover in more detail also service management area (high level view produced in NGCOR phase 1)
- Definition of service inventory management use cases and related detailed requirements.
- Complementing OSS architecture reference model definition especially concerning relations between resource inventory management and service inventory management

Scope and content of the InvM deliverable

Scope: NGCOR phase 2 elaborates more thoroughly how Inventory Management supports e2e processes on service management level and how service inventory in more detail is a relevant part of overall OSS architecture on top of resource inventory.

The main function of service inventory management is to manage and store information of all service definitions, service models and implemented services. The Service Inventory holds an abstraction layer between products (owned & managed by BSS) and resources (owned & managed by OSS). To enable collaboration between different functional domains, service inventories need to be harmonized. An agreement on a common service model (service specifications) for all involved functional domains is essential.

Objectives and content of the subtask

–Extending inventory management requirements to cover in more detail also service management area (high level view produced in NGCOR phase 1)

–Definition of service inventory management use cases and related detailed requirements.

–Complementing OSS architecture reference model definition especially concerning relations between resource inventory management and service inventory management

Content of Deliverable (Lead: China Mobile)

- Services scenarios definition in an hybrid environment of converged heterogeneous networks

  Background: As various technologies have developed over time, the monitoring of the performance of services provided over a network has to evolve accordingly. End-to-end performance indicators are getting more and more important for the converged network where cohexist 3G, 4G, copper and optical networks. These scenarios and use case will cover both the wireline and the wireless domain and future as well as existing technologies.

- <u>Sub sections of each scenario:</u>
  - Service Scenario description
  - Related high level architecture for the scenario
  - High level requirements (modeled KPIs)

Note: In the second part of the subtask timeframe (e.g. in January 2013) it will be evaluated to extend the scope of the subtask to cover also the following objective: According to the identified Service Scenarios, a gap analysis of what already existing on PM (mainly in 3GPP & TMF) will be provided. Based on this analysis, a set of KPIs of interest for the various network technologies will be selected and high level requirements will be defined.

NGCOR phase 2 sub-task
Configuration Management (3)

Content of Deliverable

- Elaborating OSS requirements for a highly efficient and flexible & adaptable configuration management for 3G and 4G RAN
- Definition of configuration management use cases and related the related detailed requirements
- Provide input for standardization bodies and vendors to deliver a standardized / operational CM interface specification resp. implementation in line with the operational needs of SP´s to improve the efficiency (time and costs) of CM interface implementations.

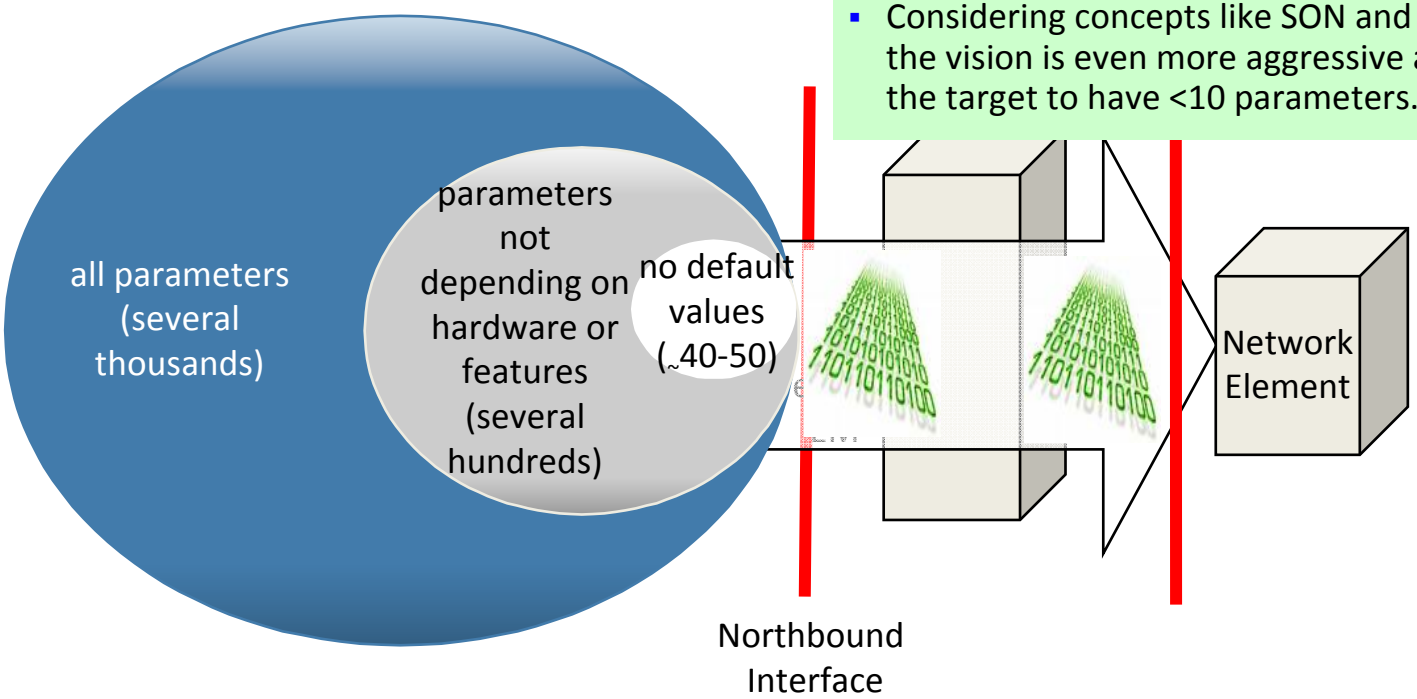
- Scope
  - Parameter set classification during the elements lifecycle to identify the potential for parameter reduction on the interface
  - EMS ↔ NMS Configuration Management Interface & Information services on the CM interface for Radio and Transport (RAN) respecting also in SON Plug & Play scenarios
  - Focusing on mechanisms for the configuration of the essential parameters so that a minimum number of parameter must be set by the operator and all other parameters are managed by the system transparently.
  - Requirements & feasibility of template oriented mechanisms.
  - Complementing OSS architecture reference model definition especially concerning relations between configuration management and configuration inventory
  - Configuration of ePC in a SON environment.

NGCOR phase 2 sub-task
Configuration Management

Content of Deliverable (Lead: Deutsche Telekom)

- Elaborating OSS requirements for a highly efficient and flexible & adaptable configuration management for 3G and 4G RAN
- Definition of configuration management use cases and related the related detailed requirements
- Provide input for standardization bodies and vendors to deliver a standardized / operational CM interface specification resp. implementation in line with the operational costs) of CM interface implementations.

- **Reduce Parameters to a set of 50 Parameter**.
- Considering concepts like SON and Plug'n Play the vision is even more aggressive and define the target to have <10 parameters.



We are on a journey.
With the deliveries of the NGCOR I results we achieved a plateau on the way to the top.

The deliveries of the NGCOR II results will lead us to the next plateau.

Thank you for your attention