Enable seamless access to 4G/5G network capabilities

CAMARA
The Telco Global API Alliance

4G/5G network capabilities exposed by APIs provide a large benefit for customers. Covering telco complexity behind APIs and making the APIs available across telco networks and countries CAMARA enables an easy and seamless access.

5G network capabilities Intoduction

5G network capabilities are the new functions of the 5G network that will be key to delivering enhanced customer experience in the 5G era. Network capabilities can be divided into 2 groups: Capabilities for getting information out of the network like device location or the number of devices in a geographic region, and capabilities to configure the network's behavior for specific applications and subscribers like quality on demand.
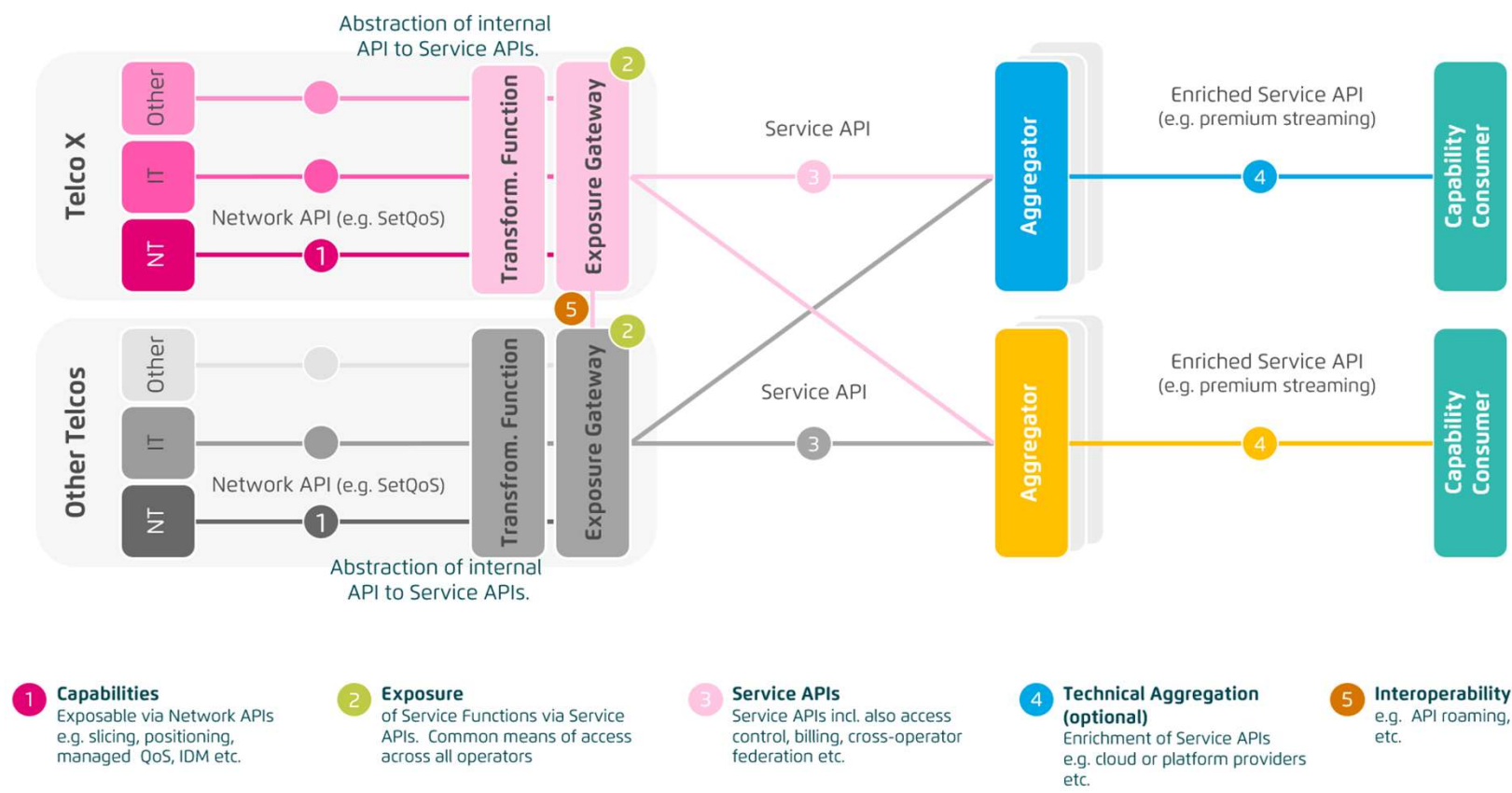

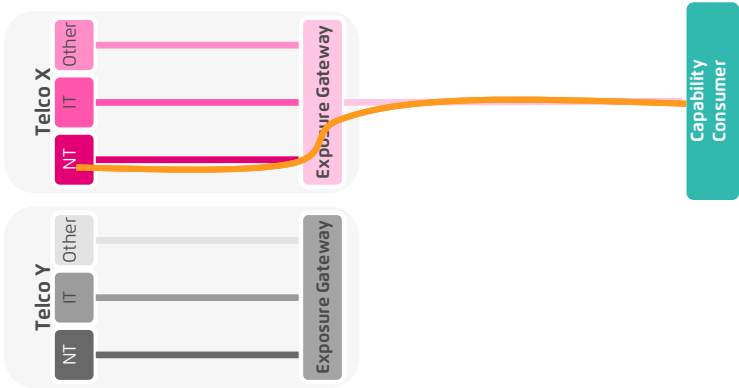Low Latency

Aggregation API Architecture

Aggregation from network APIs to service APIs is necessary:
- To cover telco complexity and make the APIs easy to consume
- To fulfil data privacy und regulatory requirements
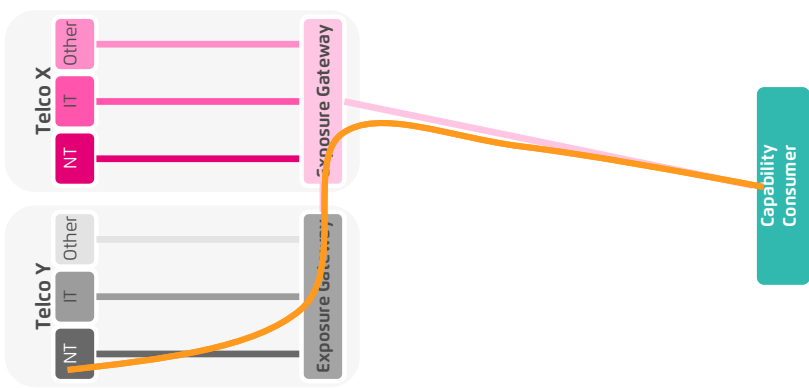- To enable a more robust and faster core network

Abstraction of internal API to Service APIs.

Telco X

Network API (e.g. SetQoS)

Transform. Function

Exposure Gateway

Service API

Aggregator

Enriched Service API (e.g. premium streaming)

Capability Consumer

Other Telcos

Network API (e.g. SetQoS)

Transform. Function

Exposure Gateway

Abstraction of internal API to Service APIs.

Service API

Aggregator

Enriched Service API (e.g. premium streaming)

Capability Consumer

1 Capabilities
Exposable via Network APIs e.g. slicing, positioning, managed QoS, IDM etc.

2 Exposure
of Service Functions via Service APIs. Common means of access across all operators

3 Service APIs
Service APIs incl. also access control, billing, cross-operator federation etc.

4 Technical Aggregation (optional)
Enrichment of Service APIs e.g. cloud or platform providers etc.

5 Interoperability
e.g. API roaming, etc.

Aggregation
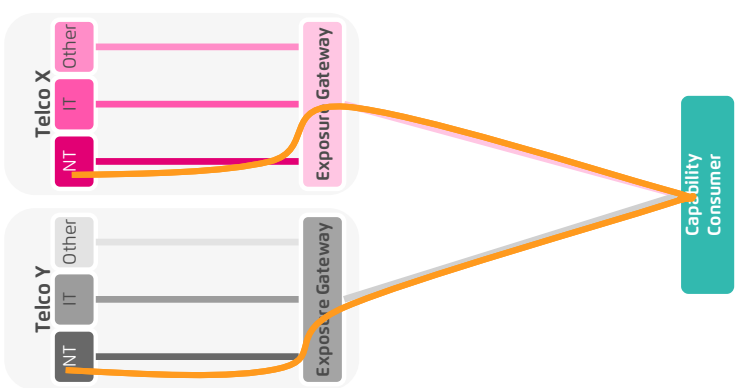# API Distribution Options

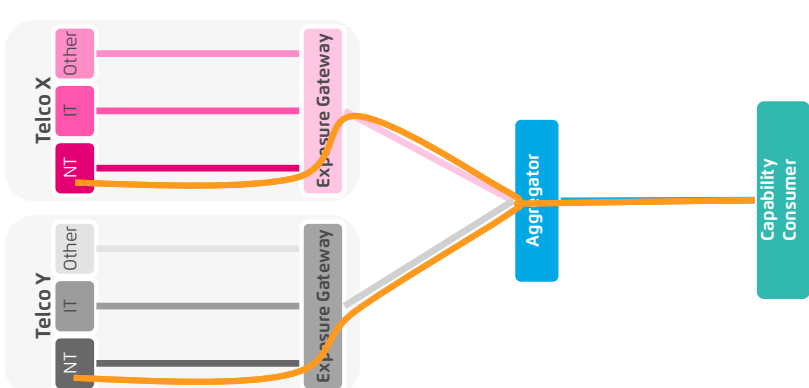**A. Single-Operator Relationship**

B. Single-Operator "API Roaming"

C. Multi-Operator Relationship

D. Operator Aggregation

Availability Benefit

Availability across telco networks and countries is necessary:
- To ensure seamless customer experience
- To accelerate technology development and commercial adoption (minimize implementation effort)
- To accelerate education and promotion
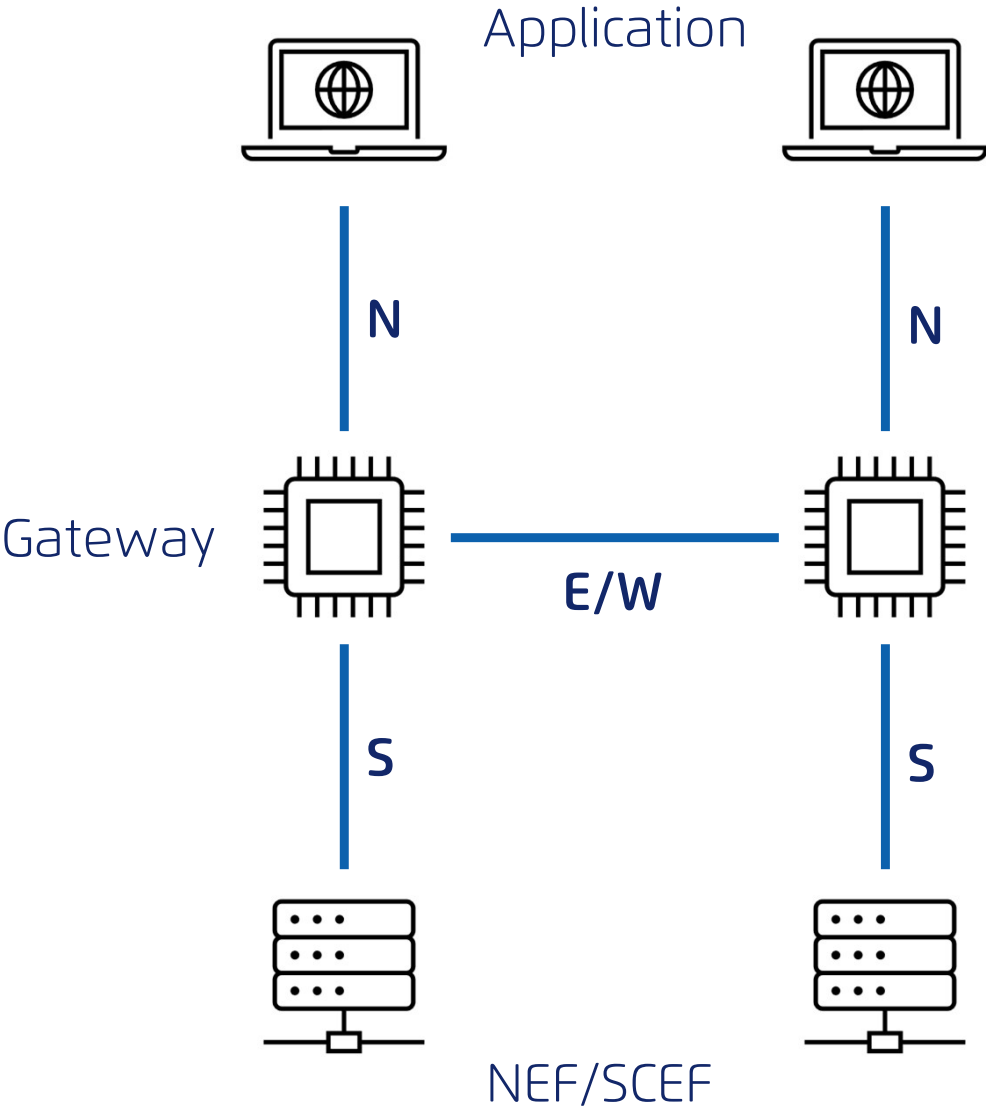- To support scalability

CAMARA Mission

CAMARA is an open source project within Linux Foundation (later CNCF) to specify, develop and test the APIs. CAMARA works in close collaboration with the GSMA OPAG subgroup to align API requirements and publish API specs and APIs to the GSMA operator platform group. Harmonization of APIs is achieved through fast and agile created working code rather than through time consuming discussed documents. API specs and reference implementations are free to use (Apache2.0 license).

CAMARA Scope

Application

N   N

Gateway   E/W

S   S

NEF/SCEF

From functional perspective the scope is limited to **telco APIs**, that means APIs in the domain of telco mobile networks, telco fixed line networks or supporting these.

Thereby the focus is on the **northbound interface** (between telco operator and aggregator or customer). To enable API roaming also the **east-/westbound interface** (telco operator to telco operator) is considered.

CAMARA
Scope

CAMARA
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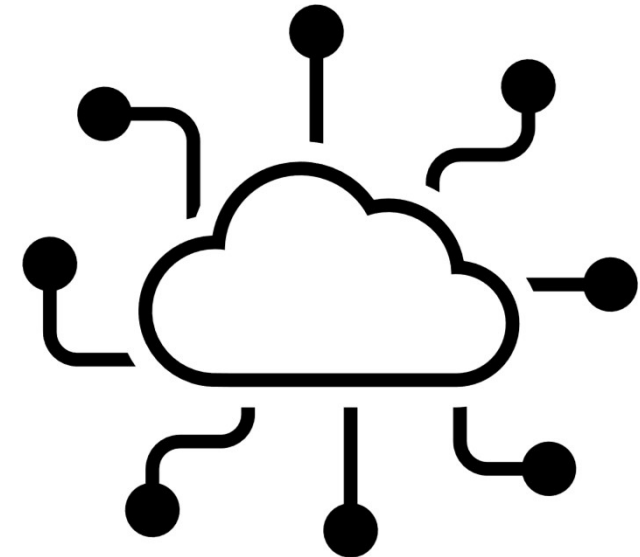The scope of the CAMARA Project is limited to the following activities:
- **Collect API requirements** from GSMA OPG subgroup and other sources
- **Specify Service APIs**
- Create test plan / cases / tools from a business and customer perspective
- **Develop and test Service APIs**
- Create **documentation** for Service APIs

The following deliverables are provided by the CAMARA Project:
- **Service API code and documentation** and
- Test plan, cases and tools for service APIs
both contained in deployment packages.

Project resources can be found in the **GitHub repository**:
https://github.com/camaraproject/rep_main

CAMARA
Logos