

APIs enabling seamless access to Telco network capabilitites





Telco network capabilities exposed through APIs provide a large benefit for customers. By simplifying telco network complexity with APIs and making the APIs available across telco networks and countries, CAMARA enables easy and seamless access.

5G network capabilities Introduction





Telco network capabilities are functions partly available already in 4G but new and much more powerful in the 5G network. These functions enable to get information out of the network but also to configure the network.

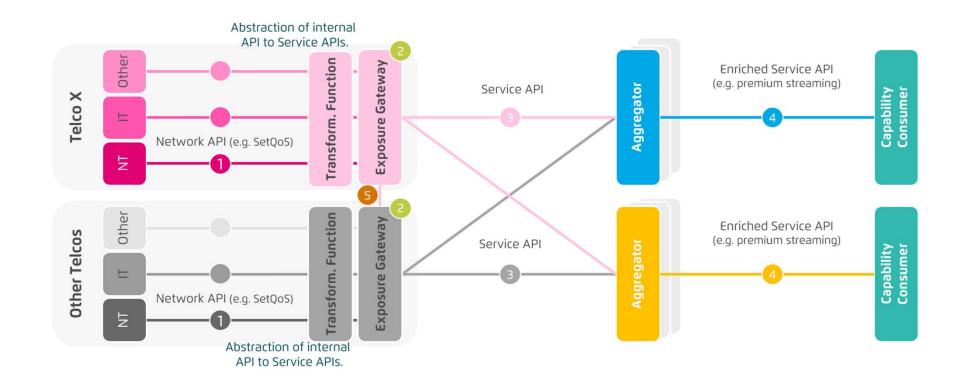
The on-demand, secure and controlled exposure of these capabilities pave the way for transforming operator networks into service enablement platforms, facilitating the application-to-network integration, which will be key to deliver enhanced and service-tailored customer experience in the 5G era.

Abstraction API Architecture



Abstraction from Network APIs to Service APIs is necessary:

- To simplify telco complexity making APIs easy to consume for customers with no telco expertise (user-friendly APIs)
- To satisfy data privacy and regulatory requirements
- To facilitate application to network integration



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

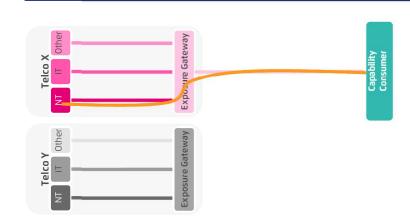
Technical Aggregation (optional)
Enrichment of Service APIs e.g. cloud or platform providers

Interoperability
e.g. API roaming,
etc.

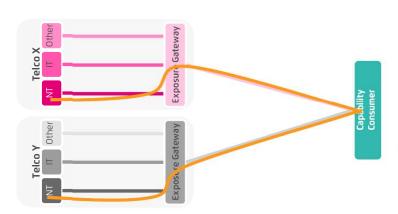
Abstraction API Distribution Options

CAMARA THE TELCO GLOBAL API ALLIANCE

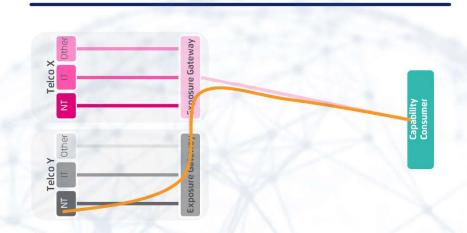
A. Single-Operator Relationship



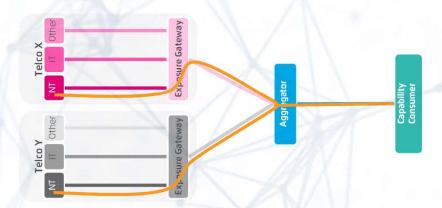
C. Multi-Operator Relationship



B. Single-Operator "API Roaming"



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 application portability

CAMARA Mission





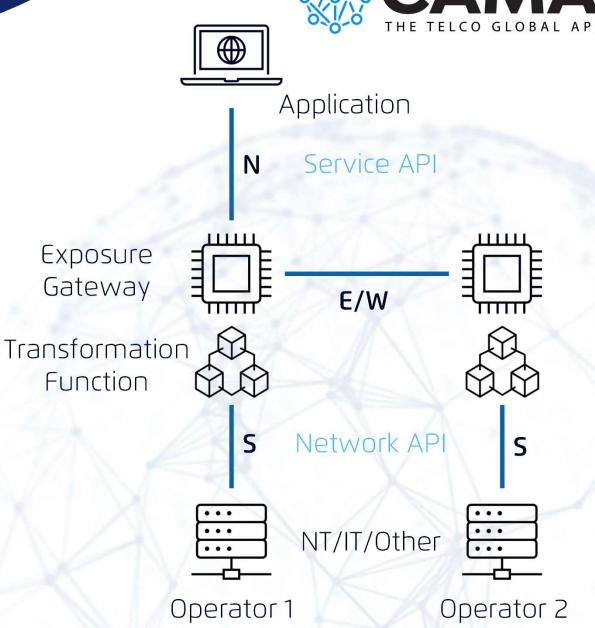
CAMARA is an open source project within Linux Foundation to define, develop and test the APIs. CAMARA works in close collaboration with the GSMA Operator Platform Group to align API requirements and publish API definitions and APIs. Harmonization of APIs is achieved through fast and agile created working code with developer-friendly documentation. API definitions and reference implementations are free to use (Apache2.0 license).



CAMARA Scope

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 capability consumer). To enable API roaming also the **east-/westbound interface** (telco operator to telco operator) is in scope.



CAMARA Scope



The scope of the CAMARA Project is:

- Collect API requirements from GSMA Operator Platform Group and other sources
- Define Service APIs
- Create test plan / cases / tools from an API consumer perspective
- Develop and test Service APIs
- Create developer friendly documentation for Service APIs



- Service API definitions, code and documentation
- 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





















































































































Current Network API Families



Anonymised Subscriber ID

Identify a client device trying to access network services

Device Status

Check the network connection and roaming status of a device

Number Verification

Allows users to verify the phone number of the connected device

Carrier Billing CheckOut

Purchase, pay, and follow up on fulfilment of products

Edge Cloud

Provide and manage network and compute resources for an application

OTP Validation

To offer secure user authentication to service providers.

Device Identifier

Check the identity of the subscribers' device

Home Devices QoD

Request prioritization of traffic on a specific device on the home network.

Quality on Demand

Allows users to set mobile connection quality and get notifications

Device Location

Check the location of a device.

Identity and Consent Mgmt

Provides solutions to capture, store and manage user consent

SIM Swap

Allows users to get information on SIM pairing changes

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CAMARA Contacts



Customers (enterprises and startups), aggregators, cloud operators, telco operators, and network equipment vendors are welcome to join CAMARA. Participation is free, without any fees or obligation to work.

If you are interested in joining CAMARA, please subscribe to <u>all+subscribe@lists.camaraproject.org</u>. You may unsubscribe from CAMARA and these communications at any time.

In case of further questions please don't hesitate to use our contact page at https://camaraproject.org/contact/.



