Telco Global API Alliance

26.05.2021

A global partnership could address much of the challenges in scaling API services across heterogenous operator architectures.

The development of open, global, and interoperable API solutions could benefit customers and developer ecosystems by giving access to capabilities in whatever network customers are in and therefore allow applications to run consistently between telco networks and countries. A new form of collaboration between various players (telcos, ISVs, device manufacturers, hyperscalers, etc.) could advance the connectivity industry towards a more robust and faster core network, encourage the faster adoption of capabilities and as a result create value for the entire tech industry.

1. Accelerate technology development

- Build sustainable ecosystems around collaborative projects across industries.
- Drive industry alignment by facilitating industry discussions with telcos, ISVs, device manufacturers, hyperscalers, etc.

2. Standardization of APIs

- Standardize and convert APIs to a user understandable format called “Service APIs”.
- Achieve standardization through working code vs. documents.
- Implementation experience should guide standardization process.
- Enable interoperability (e.g. API roaming).

3. Education and promotion

- Actively promote Service APIs via various forums, events, conferences, ecosystems and social media.
- Promote best practices by aggregating and publishing lessons learned.

4. Accelerate commercial adoption

- Create awareness around use cases and services.
- Minimize implementation effort though standardized Service APIs.
- Provide customer service and support.

APIs grouped by services and bundled up into “Service APIs” reduce the complexity of accessing capabilities for developers and enterprises.

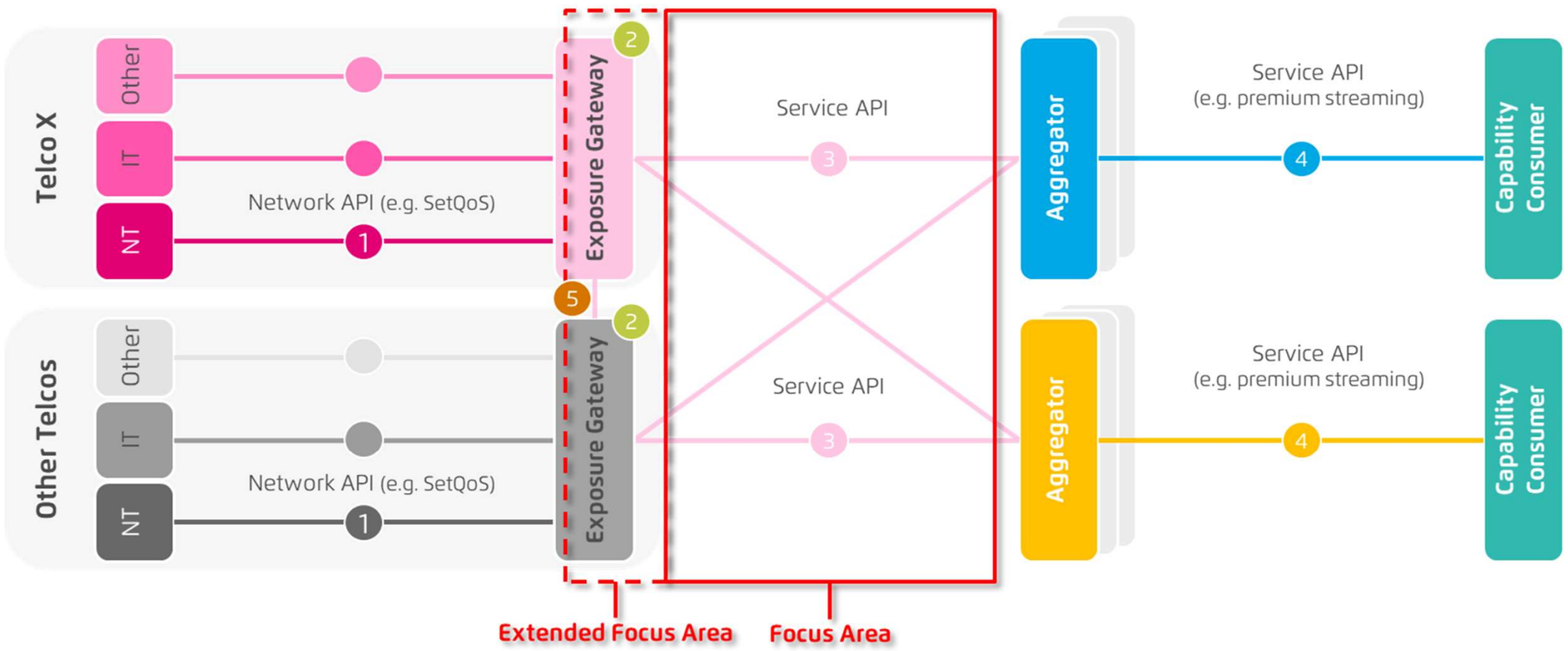
1 **Capabilities**
Exposable via Network APIs e.g. slicing, positioning, managed QoS, IDM etc.

2 **Exposure**
Abstraction of internal API to Service APIs. Common means of access across all operators

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

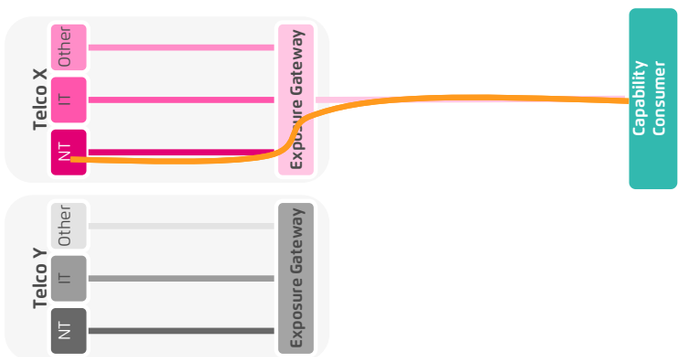
4 **Technical Aggregation (optional)**
Enrichment to Service API e.g. hyperscalers, MEX etc.

5 **Interoperability**
e.g. API roaming, etc.

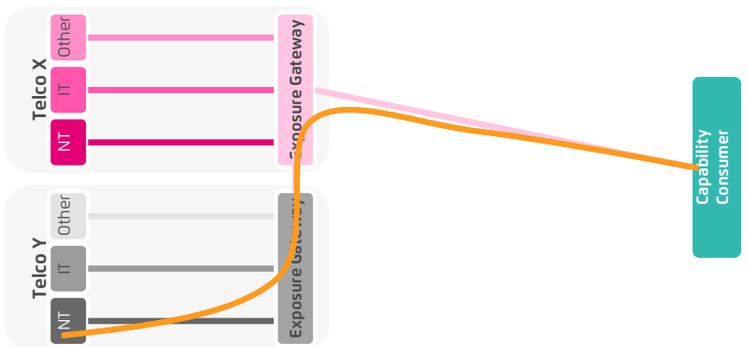


API distribution options.

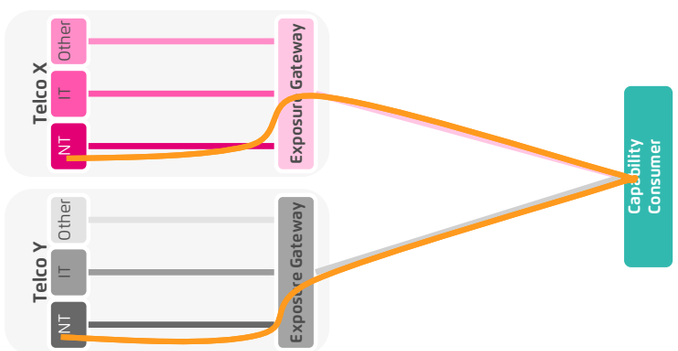
A. Single-Operator Relationship



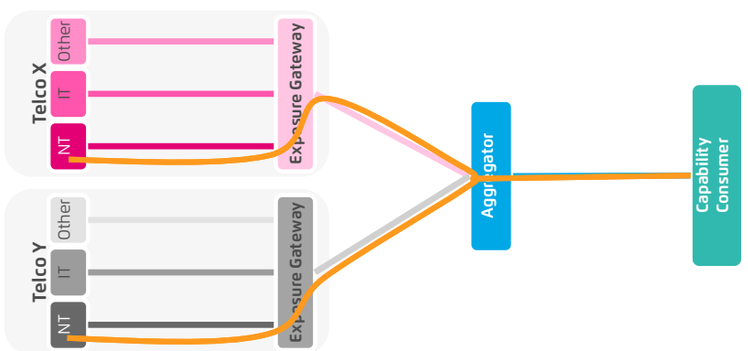
B. Single-Operator "API Roaming"



C. Multi-Operator Relationship

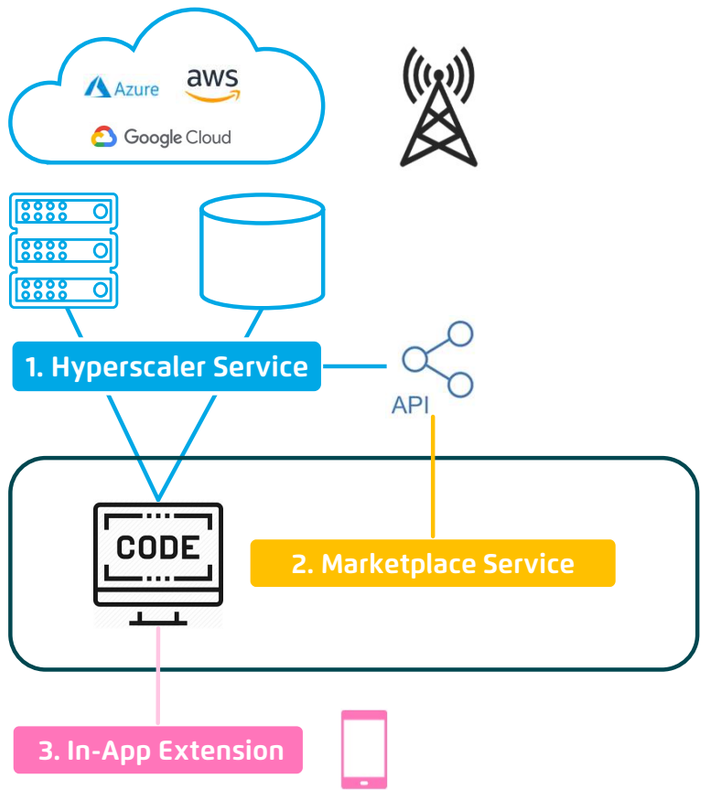


D. Operator Aggregation



API consumption models via hyperscalers.

- Developers build their application by using the entire ecosystem of the public clouds
- To make network APIs a success they must be made easily accessible for the developer



1. Wholesale model

- Hyperscalers might integrate the APIs as an underlying capability in their platform
- E.g. an instance with low latency connectivity to the end-user

2. B2B2B Model

- APIs are available as a marketplace service within the ecosystem
- The access can be purchased directly within the ecosystem
- APIs are first class citizens in the hyperscaler API (same IAM, etc)

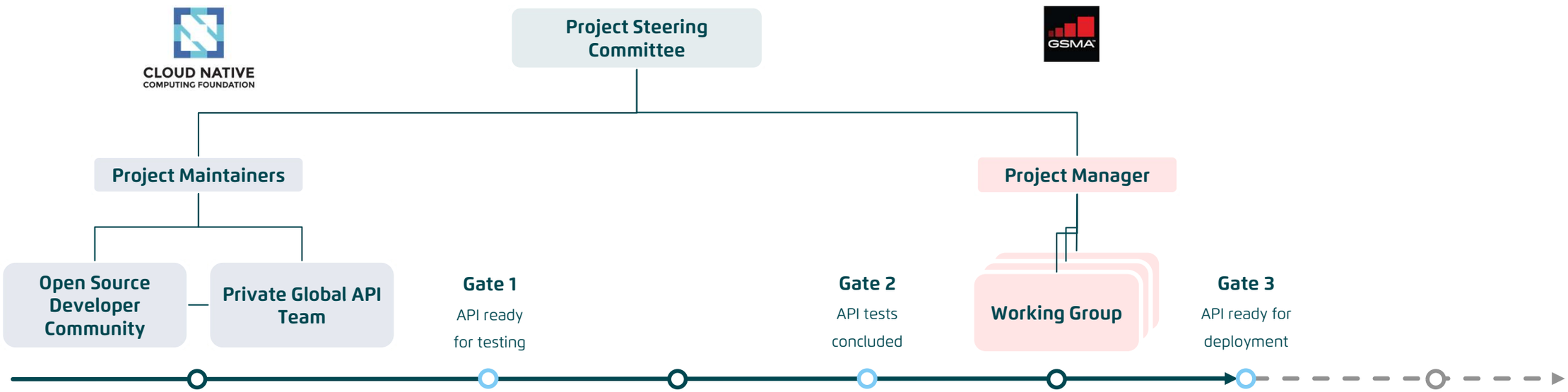
3. B2B2C Model

- Optional model to support differences between operators
- In-app purchase to generate revenue for the app-developer

DT has evaluated three options to start the alliance.

	Independent Entity	GSMA	Hybrid Approach "CNCF & GSMA"	
	▪ As an independent Foundation the Global API Alliance is able to create its own governance structure, operating model, rules and community.	▪ Objective: Facilitate collaborative projects driven and resourced by GSMA Members ▪ Activities are governed by the overall GSMA regulatory framework but not subject to the general rules of participation associated with other GSMA activities.	▪ The CNCF hosts critical components of the global technology infrastructure. ▪ CNCF brings together the world's top developers, end users, and vendors and runs the largest open-source developer conferences. ▪ CNCF is part of the nonprofit Linux Foundation. ▪ + GSMA	
			GSMA	CNCF
Steering and Gov. Bodies	?	✓	✓	✓
Regulatory Guidance	?	✓	✓	?
Open-Source Development	?	?	?	✓
Marketing	?	✓	✓	✓
Billing & Charging	?	✓	✓	?
Roaming	?	✓	✓	?
Community Adoption	?	✓	✓	✓
Pros & Cons	– Completely Independent. – Slow setup. – Bureaucratic and legal overhead costs for launch. – Actively responsible for following regulations concerning unfair competition and antitrust law.	– Easy and fast setup. – No bureaucratic and legal overhead costs for launch. – Ideal for collaborative projects. – Limited to the hosts rules and conditions. – Does not provide the infrastructure for API development.	– Easy and fast setup. – No bureaucratic and legal overhead costs for launch. – Provides the infrastructure for API development and collaborative projects. – Limited to the hosts rules and conditions.	

A hybrid approach (GSMA + CNCF) might be a reasonable solution.



1. Develop pre-standards APIs in CNCF

- Create visibility with target developers
- Provide intent-based APIs through familiar technologies (etc, NATS)
- Showcase operator partnerships to rest of the industry

2. Test the pre-standards with Telcos

- Identify developer pain, performance bottlenecks, and poor scaling
- Adjust protocols and implementations as problems arise
- Engage with projects through Linux membership or CNCF End User Community

3. Publish APIs in GSMA

- Document APIs and releases in parallel to development
- Define use cases

API deployment and go-to-market (Out of scope)

Next steps

1. **Reach agreement with partners on the approach to take.**
2. **Reach out to GSMA and CNCF to start the processes.**
3. **Define collaboration structure.**
   - Define communication between CNCF and GSMA.
   - Identify stakeholders.
   - Define stakeholder responsibilities.
   - Define project governance.
4. **Define project name.**