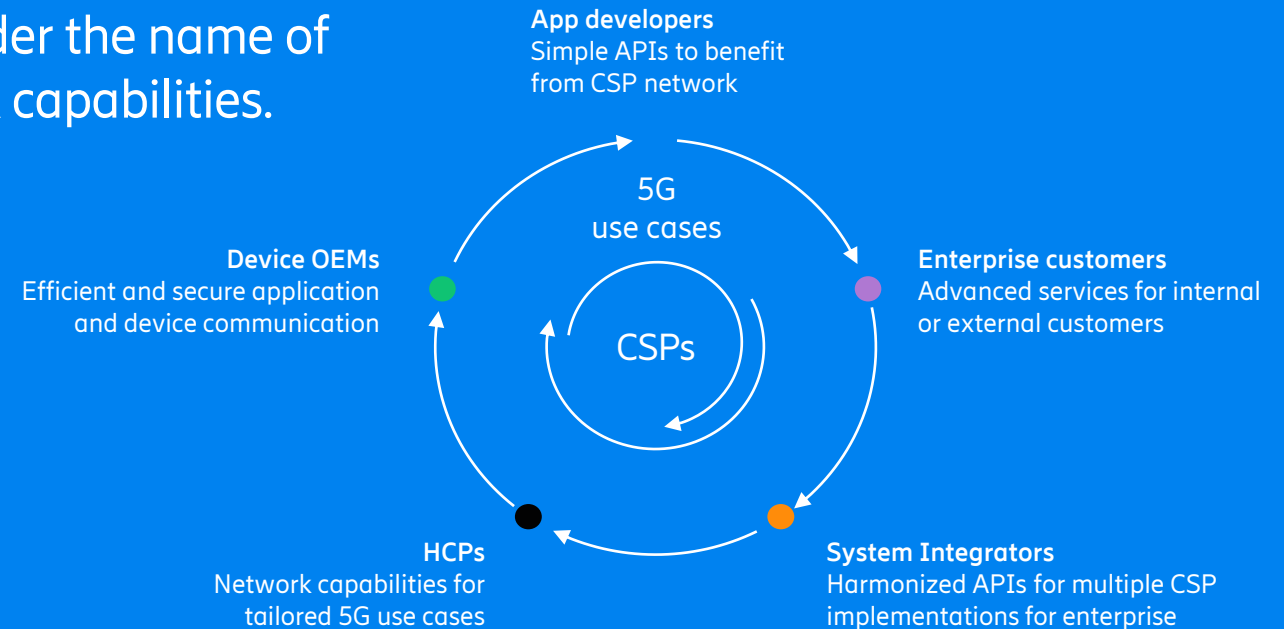# 5G Enablement through Industry standardized APIs
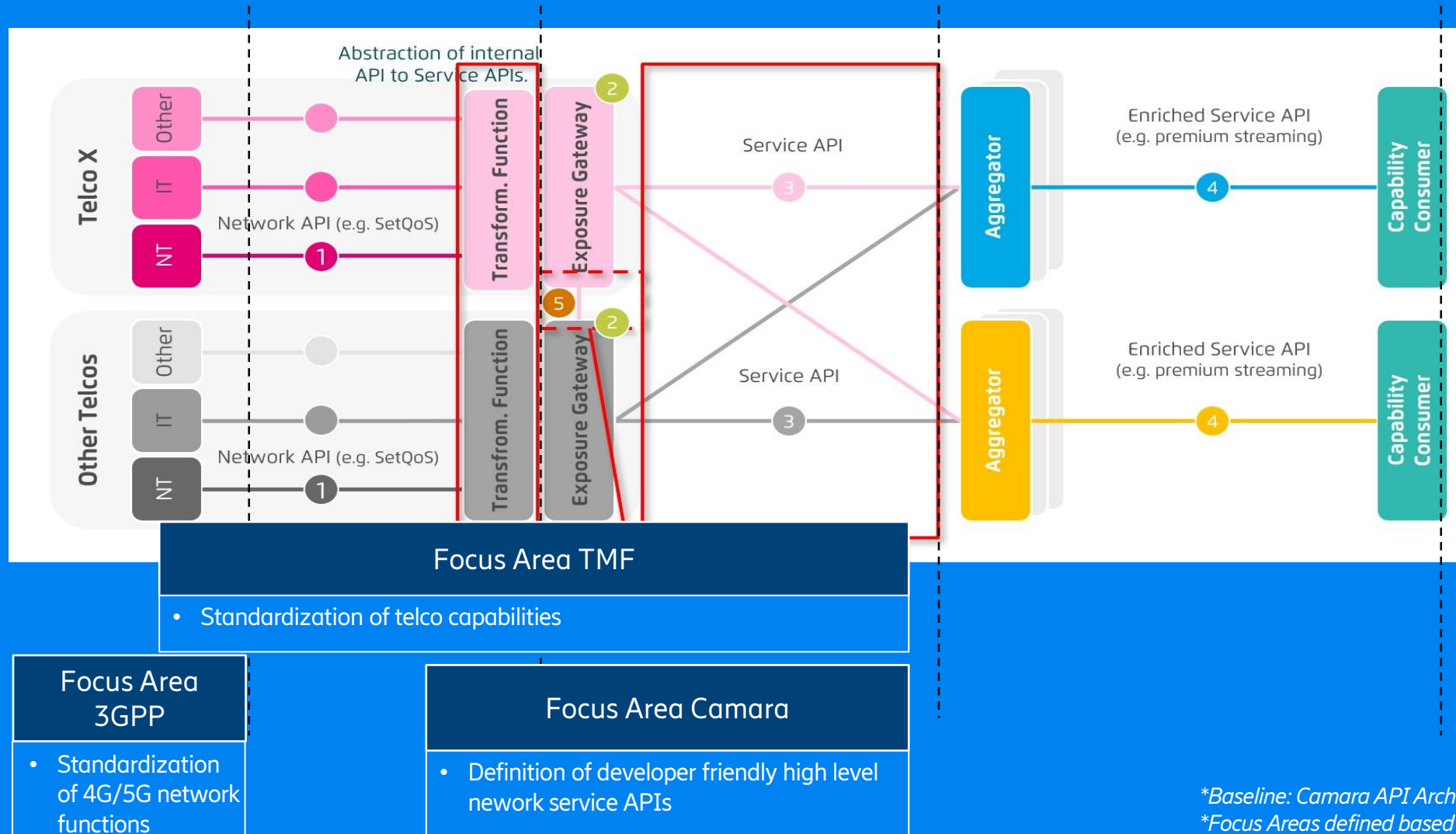
Catalyst Project Brief

Problem Statement

- Adopting Standardized exposure is a key decision for CSPs in their evolution journey and can be a success differentiator in the ecosystem.

- There is an initiative from Linux Foundation under the name of CAMARA to define APIs to expose CSP network capabilities.

- Without clear segregation (between CAMARA , 3GPP, and TM Forum), exposing APIs to 3PPs, enterprises and developer community becomes a clear challenge.

App developers
Simple APIs to benefit from CSP network

5G use cases

Device OEMs
Efficient and secure application and device communication

CSPs

Enterprise customers
Advanced services for internal or external customers

HCPs
Network capabilities for tailored 5G use cases

System Integrators
Harmonized APIs for multiple CSP implementations for enterprise

Camara, 3GPP and TMF synergies and demarcation view

Abstraction of internal API to Service APIs.

Telco X
- Other
- IT
- NT

Network API (e.g. SetQoS)

Other Telcos
- Other
- IT
- NT

Network API (e.g. SetQoS)

Transform. Function

Exposure Gateway

Service API

Service API

Aggregator

Enriched Service API (e.g. premium streaming)

Enriched Service API (e.g. premium streaming)

Capability Consumer

Capability Consumer

Focus Area TMF
- Standardization of telco capabilities

Focus Area 3GPP
- Standardization of 4G/5G network functions

Focus Area Camara
- Definition of developer friendly high level nework service APIs

*Baseline: Camara API Architecture
*Focus Areas defined based on each SOD view

Catalyst Participants

Catalyst as a solution

- Vision
  - Vision is to define a unified API specification across TMF and CAMARA that enable exposure of 5G scenarios for an enhanced customer experience

- The catalyst addresses three pain points

  1. The CSPs various partners and OTT providers require multiple integration projects for various solutions increasing the project cost as well as operational maintenance cost
     - The CSPs unification of the interactions with various 3PPs and OTT providers would reduce project and maintenance cost and promote for easier reusable no-touch revenue models.
     - Such standardization requires alignment and demarcation where standards from different standardization bodies (CAMARA and TMForum) are followed.

  2. The end-user dissatisfaction with the CSPs provided data service quality
     - The CSP will now have a more satisfied customer base by achieving seamless enhanced experience

  3. limited possibility to monetize the direct customer need for better data quality
     - New partner revenue streams monetizing customer needs

Enhanced Video Conferencing

Market Segment	Mobile Broadband
Industry Segment	Multi-Industry
Business Model	B2B2X

Scenario:

Operators can provide a QoS API to enabling partner app to automatically boost traffic for its enterprise customers based on user policy or via boost button which is presented in the UI.

B2B Customer Onboarding
End User is subscribed to CSP's standard 5G data plan

B2B Customer Base PO Ordering
End User is subscribed to CSP's B2B 5G data plan

B2B Partner Onboarding
Video Conferencing Partnership established

(1) —— **(2)** —— **(3)**

(4)

B2B Partner Agreement
Align the catalog shared offers with the partner

Offer presentment
Partner offers the boost possibility to the end user. Can either be through already purchased PO (boost action only), or through a new PO offering

(7) **(6)** **(5)**

User Eligibility check
Partner checks the eligibility of the user for premium upgrade offer

Customer App Subscription
End User subscribes to Video Conferencing services

Product Order
Optional Partner submits a request for a Boost Order

(8) **(9)** **(10)** **(11)**

🟢 CSP Relevant Use-case
⚪ CSP Non-Relevant Use-case

Connectivity Boost
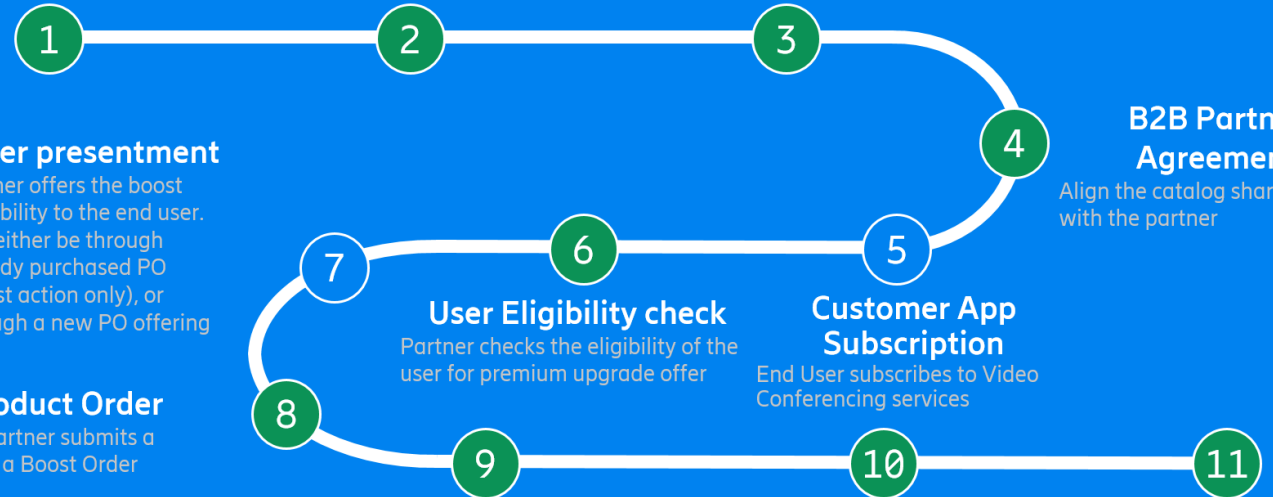Partner submits a request for a QoS during AF session

Product use
End user gets higher Quality of Service for the session

Revenue Sharing
End user is charged, and revenue shared as agreed with the partner

Journey Break-down

① B2B Customer Onboarding **② B2B Customer Base PO Ordering**	**③ B2B Partner Onboarding** **④ B2B Partner Agreement**
• Onboarding an enterprise full hierarchy • Activating subscriptions base plans • (Optional) Activating 5G PO with boost enablement	• Onboarding Partner • (Optional) Creating the network slice & PO association • Creating a partner Agreement
⑥ User Eligibility check ⑧ Product Order **⑨ Connectivity Boost**	**⑩ Product Use** **⑪ Revenue Sharing**

• Checking B2B subscription
   • Eligibility for boost against existing PO
   • Eligibility for boost against current network parameters
   • Eligibility for new 5G PO with boost enablement
• (Optional) Activating 5G PO with boost enablement
• Applying boost action
	• Utilizing boosted quality
	• B2B subscription charging/billing
	• Partner/CSP Settlement and revenue sharing

Priority 1 | Priority 2 | Out Of Scoop

Summary

- Exposure is key to monetization. E2E view is essential to monetize the opportunities and players with standardize integration will automatically benefit of a competitive advantage in the ecosystem

- Exposure APIs need to be simplified to best serve 3PPs, enterprises and developers needs. Current TMF APIs do not fully cover the spectrum of simplified APIs to meet consumers requirements.

- Ericsson and TM Forum agreed that a catalyst project will be run to answer the question, how will the external simplified CSP APIs be created, and how will various initiatives and standards be synergized to reach customer benefit with defined demarcation for areas of coverage.