

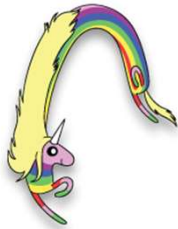


CAMARA Project

EuCNC Gothenburg 2023

Special Session: Evolution of network exposure from 5G to 6G

The Issues Achieving NaaS. A Rationale



Scale



Consistency



Simplicity

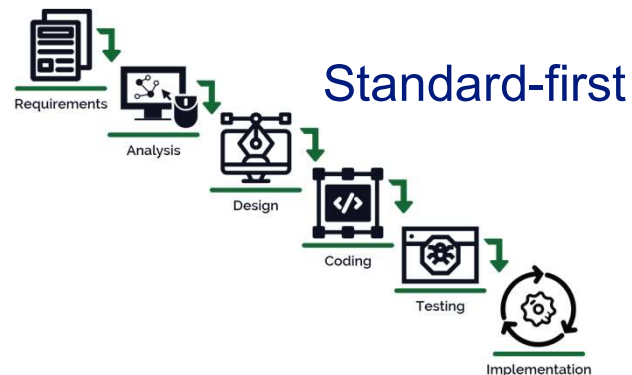


Accessibility

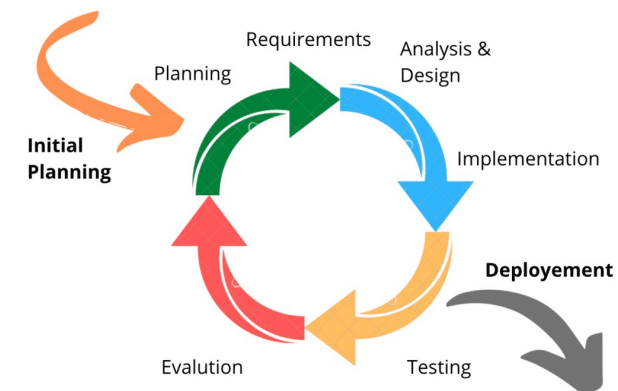


Demand driven

Traditional telco standards are not fast enough.



Code-first

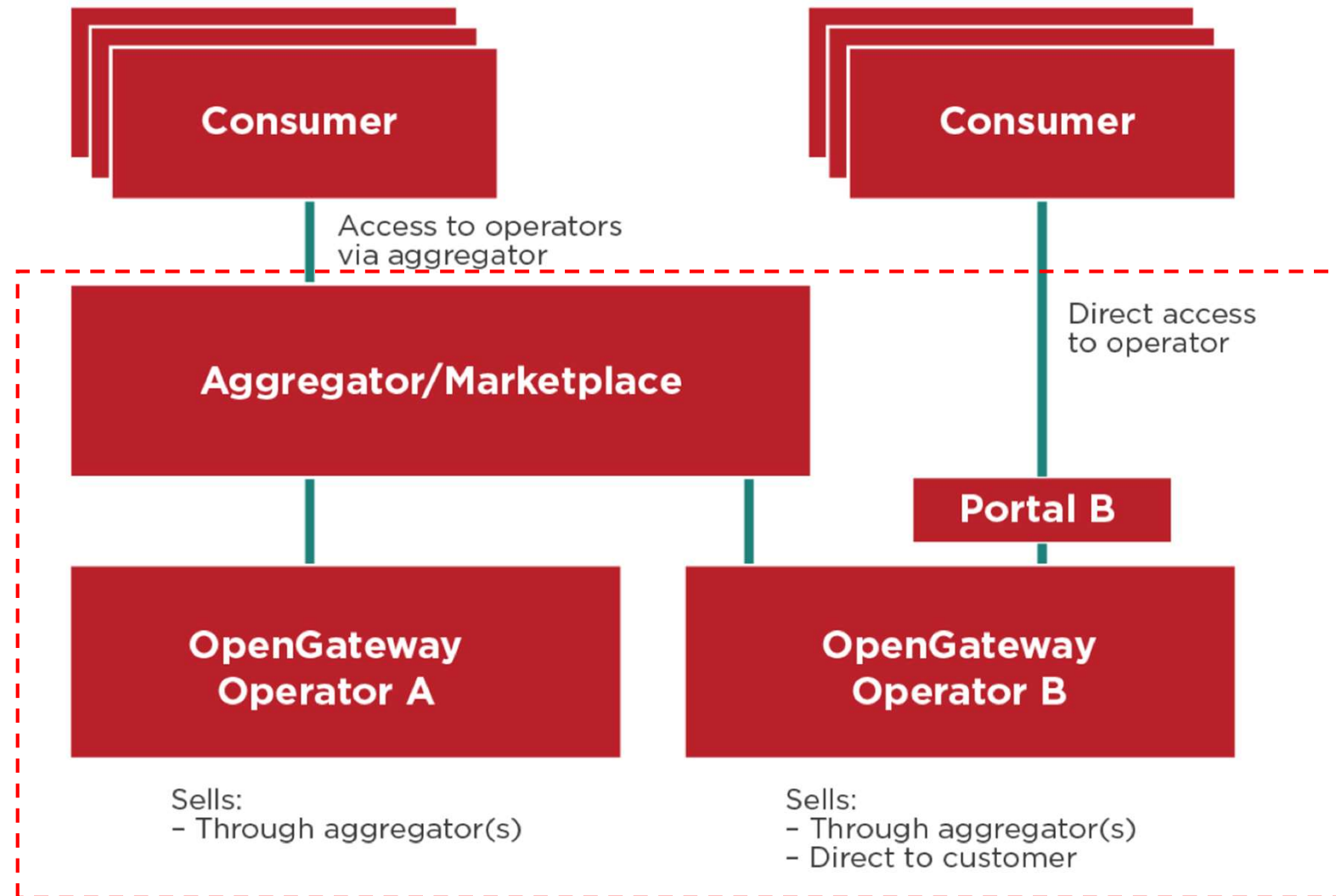


The Main Roles in Network-as-a-Service (NaaS)

The **Consumer** is a Developer, Application Service Provider (ASP), ISV, Enterprise customer, that creates code that invokes the APIs

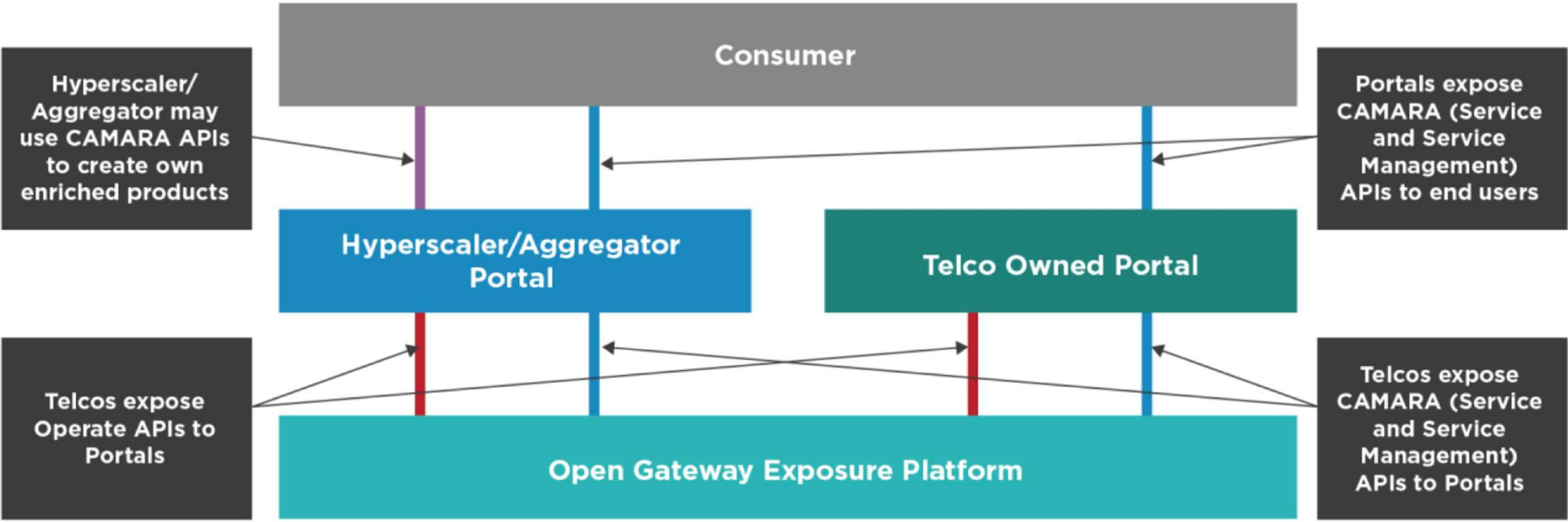
The **Aggregator** may be an hyperscaler, OTT or an operator. It sells on behalf of the Open Gateway community and is effective when it represents a high number of operators.






Each **Operator** sets its own T&Cs with the channels, but there needs to be full alignment on product (standard APIs) and business framework (agreement templates, charging models)



GSMA™ OPENGATEWAY

APIs for Network-as-a-Service (NaaS)



Industry forum	Legend	Scope	Description
		Service API	QoD, Device Location, Device Status, SIM Swap, OTP Validation, Carrier Billing,.
		Service Mgmt API	Service execution validation, service status, service consumption, service ticketing
		Operate APIs	Service LCM, Developer/customer/merchant LCM, assurance, billing.
		Enhanced CAMARA APIs	Hyperscaler/OTT may use CAMARA APIs (service & service mgmt APIs) to create own enriched products

The CAMARA Project Consortium

In just one year

Where we started

- Launched at MWC Barcelona 2022
- 22 Launch Partners
- Simple idea to standardize developer facing apps
- Supported by GSMA and Linux Foundation

Where we are now

- 77 Named Partners
- 214 companies participating
- 12 Active API development repos
- 625 people joined CAMARA
- Development home for GSMA Open Gateway



The CAMARA Project

Scope

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

The following deliverables are provided by CAMARA Project:

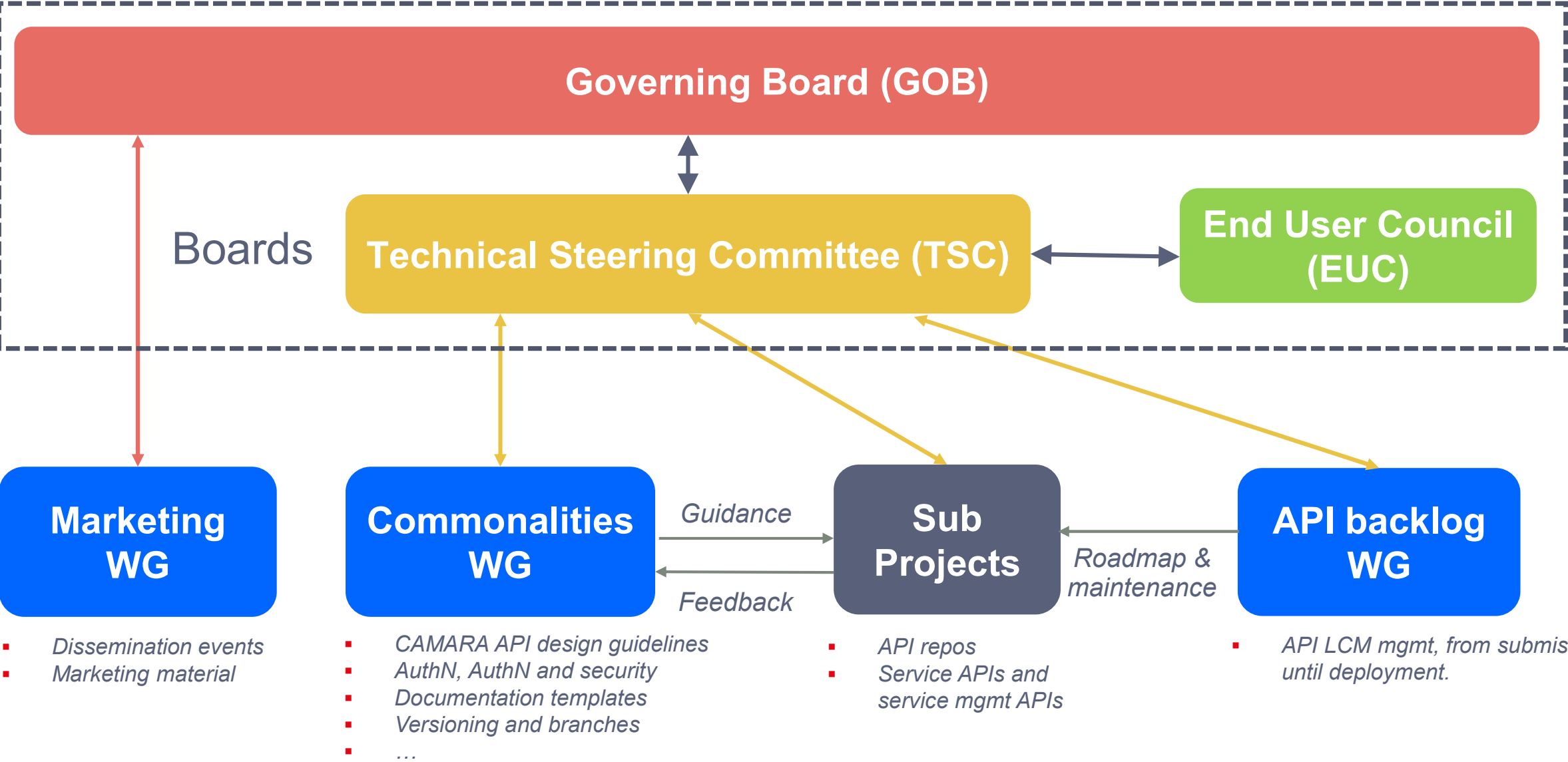
- **API definitions, code and documentation**
- Test plan, cases and tools for in-scope APIs both contained in deployment packages



<https://github.com/orgs/camaraproject/repositories>

The CAMARA Project










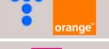






Structure and Ways of Working



CAMARA Project: API families

Sub-Projects

Work so far focused only on Service APIs
 - Service mgmt APIs to be available soon.

#	Open Gateway service	Owner	API definition (YAML)	Version	1	2	3	4	5	6	7	8	9	10	11
1	Quality On Demand - Mobile		qod-api	0.9.0	C										
2	Edge Cloud		Simple-edge-discovery	0.8.1											
			MEC-experience-mgmt	0.8.1											
			traffic-influence	0.8.1											
3	Device Status (Connected or Roaming Status)		check-device-connectivity	0.5.0											
4	Device Location (Verify Location)		device-location	0.2.0											
5	SIM Swap		sim-swap-mobileconnect	0.1.0											
			sim-swap	0.4.0											
6	Number Verification (www.numberverify.org)		number-verify-mobileconnect	0.1.0											
			number-verify	0.3.0											
7	OTP Validation		otp-validation-api	0.5.0											
8	Carrier Billing		Carrier-billing-checkout	0.7.0											
			Carrier-billing-payment	0.7.0											
9	Quality on Demand - Home		home-devices-qod	0.2.0											
10	Device Identifier		device-identifier	0.0.2											
11	Identity and Consent		N/A	N/A											

1 - SubProject Established
 2 - User Stories Available
 3 - API Scope Agreed

4 - API Parameters Agreed
 5 - API Flow Agreed
 6 - YAML Created

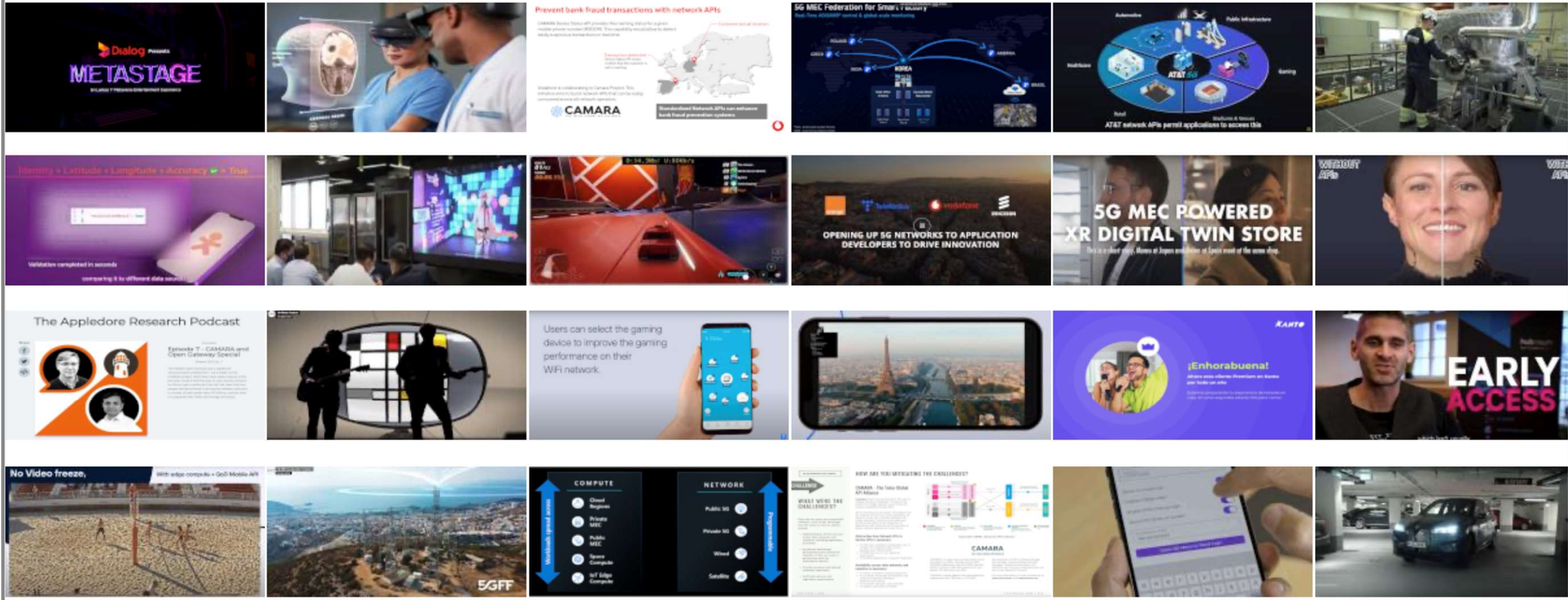
7 - YAML Consolidated
 8 - API Documentation available
 9 – CAMARA Security Compliant

10 – Draft Published
 11 – Test complete



CAMARA Project

API showcases



CAMARA in Telefónica

Two separate yet intertwined tracks

Innovation track



Early Adopter Programme (EAP)

Research and Innovation track





Telefónica