**PRESENTATION**

Monetizing Open Network APIs:
Learning from API Success Stories

**NOEL WIRZIUS**

**Telcos** for Developers: Why we need to develop APIs together

**Noel Wirzius**
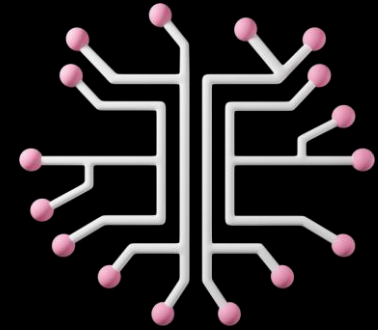
Product Manager Deutsche Telekom
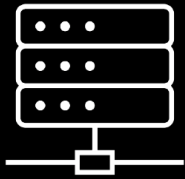
# Telco Capabilities


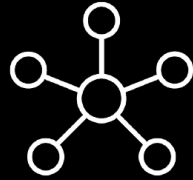
Tarif Information

Sim-Card Information

Network Information

Telcos hold a lot of data about devices and the network, and this information is being made available to developers via APIs. APIs are simple interfaces that provide access to extract and manage data.

# Quality on Demand
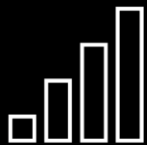
Best EDGE/Server

QoD in the backbone

QoD in WIFI

QoD in the mobile
network

# Check Device


Connection Status


Connection Quality


Prediction


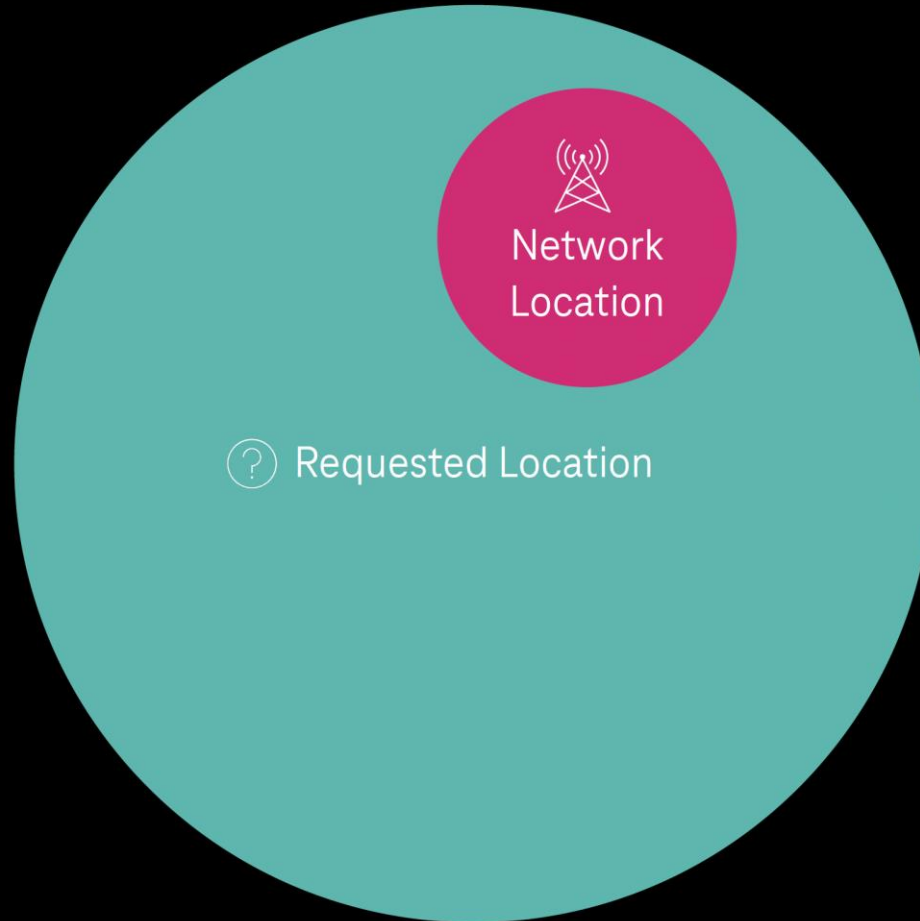Wake Up

# Location Verify

# Motion Data



activities in the TC500 tile with the ID = 298 in Cologne

these are the daily activities (counts) in tile 298 for a selected week

these are the hourly activities (counts) in tile 298 for a selected week

# Complex Telco World nobody will understand

**AsSessionWithQoS API SCS/AS level GET Operation** ⌃

`GET` `/{scsAsId}/subscriptions` read all of the active subscriptions for the SCS/AS ⌄ 🔒

**AsSessionWithQoS API Subscription level POST Operation** ⌃

`POST` `/{scsAsId}/subscriptions` Creates a new subscription resource ⌄ 🔒

**AsSessionWithQoS API Subscription level GET Operation** ⌃

`GET` `/{scsAsId}/subscriptions/{subscriptionId}` read an active subscriptions for the SCS/AS and the subscription Id ⌄ 🔒

**AsSessionWithQoS API subscription level PUT Operation** ⌃

`PUT` `/{scsAsId}/subscriptions/{subscriptionId}` Updates/replaces an existing subscription resource ⌄ 🔒

**AsSessionWithQoS API subscription level PATCH Operation** ⌃

`PATCH` `/{scsAsId}/subscriptions/{subscriptionId}` Updates/replaces an existing subscription resource ⌄ 🔒

**AsSessionWithQoS API Subscription level DELETE Operation** ⌃

`DELETE` `/{scsAsId}/subscriptions/{subscriptionId}` Deletes an already existing subscription ⌄ 🔒

```
  "qosReference": "string",
  "altQoSReferences": [
    "string"
  ],
  "disUeNotif": true,
  "ueIpv4Addr": "string",
  "ipDomain": "string",
  "ueIpv6Addr": "string",
  "macAddr": "string",
  "usageThreshold": "string",
  "sponsorInfo": "string",
  "qosMonInfo": {
    "reqQosMonParams": [
      "string"
    ],
    "repFreqs": [
      "string"
    ],
    "repThreshDl": "string",
    "repThreshUl": "string",
    "repThreshRp": "string",
    "waitTime": "string",
    "repPeriod": "string"
  },
  "localNotifInd": true,
  "tscQosReq": {
    "reqGbrDl": "string",
    "reqGbrUl": "string",
    "reqMbrDl": "string",
    "reqMbrUl": "string",
    "maxTscBurstSize": "string",
    "req5Gsdelay": "string",
    "priority": "string",
```
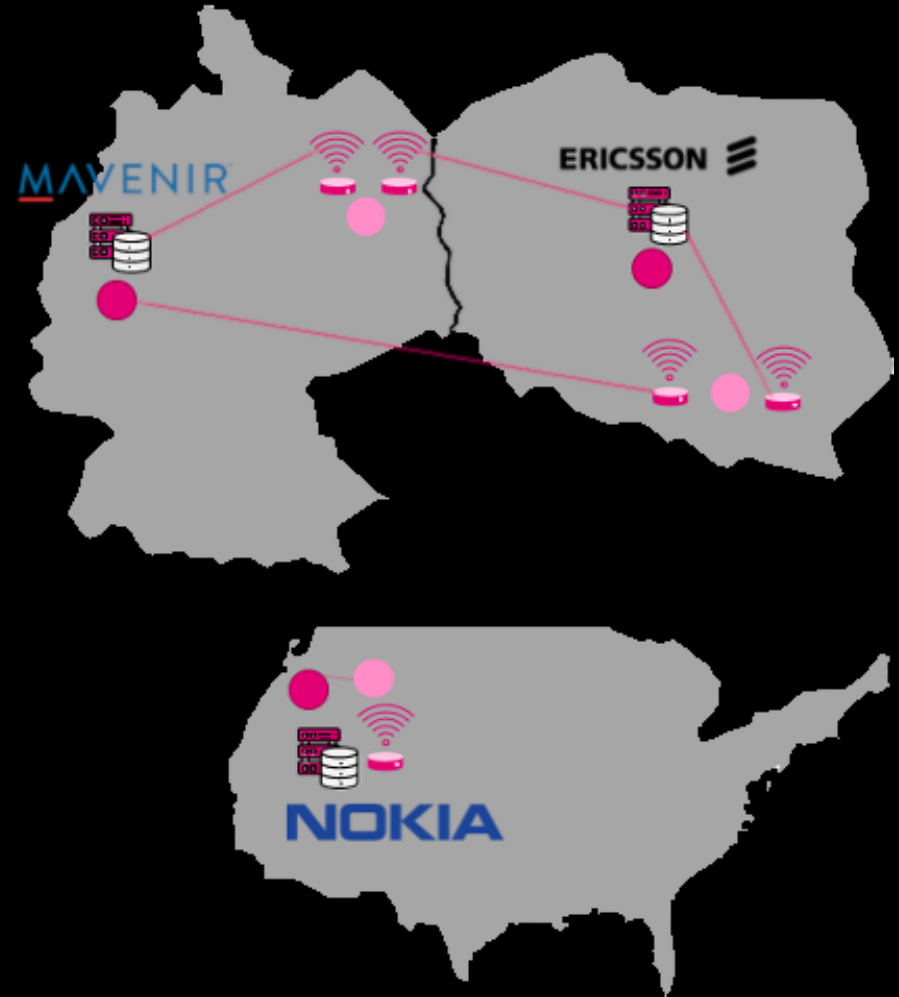
# Our First Concept

## QoS sessions

| POST | /sessions | Reserve resources for QoS session |
|------|-----------|-----------------------------------|
| GET | /sessions/{sessionId} | Get session information |
| DELETE | /sessions/{sessionId} | Free resources related to QoS session |

```
{
    "duration": 86400,
    "ueAddr": "192.168.0.1",
    "asAddr": "192.168.0.1",
    "uePorts": "5010-5020,5021,5022",
    "asPorts": "5010-5020,5021,5022",
    "protocolIn": "TCP",
    "protocolOut": "TCP",
    "qos": "LOW_LATENCY",
    "notificationUri": "https://application-server.com/notifications",
    "notificationAuthToken": "c8974e592c2fa383d4a3960714"
}
```
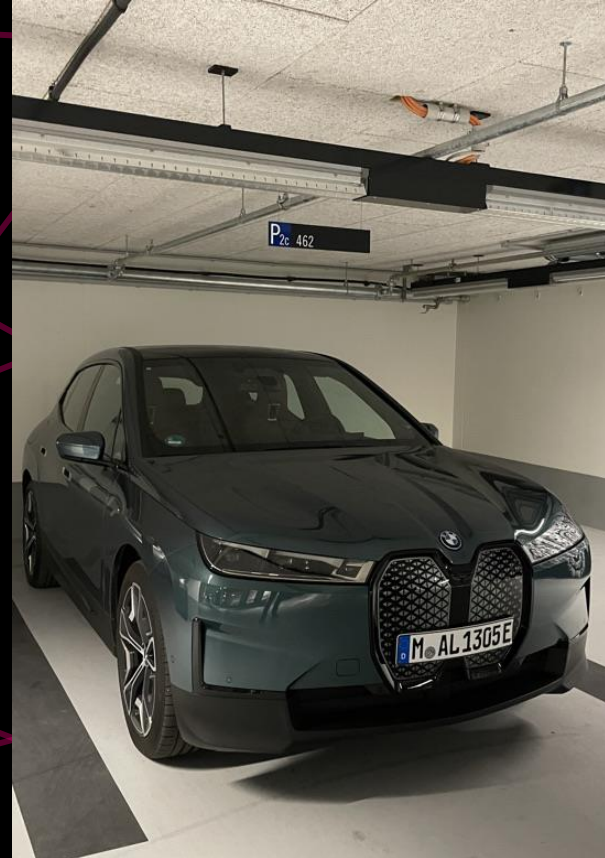
# Labs

- **Deutsche Telekom and T Mobile PL and T Mobile US**

- **Builders of developer communities everywhere**

- **Provider of test beds**
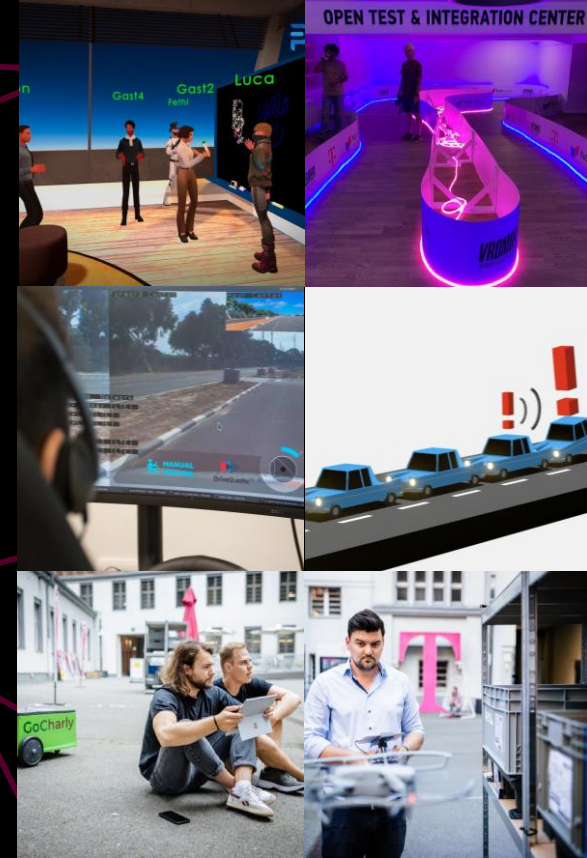
- **Design & UX researchers**

# Massive teamwork allows us to be successful



Remote Maintenance

Automated Valet Parking
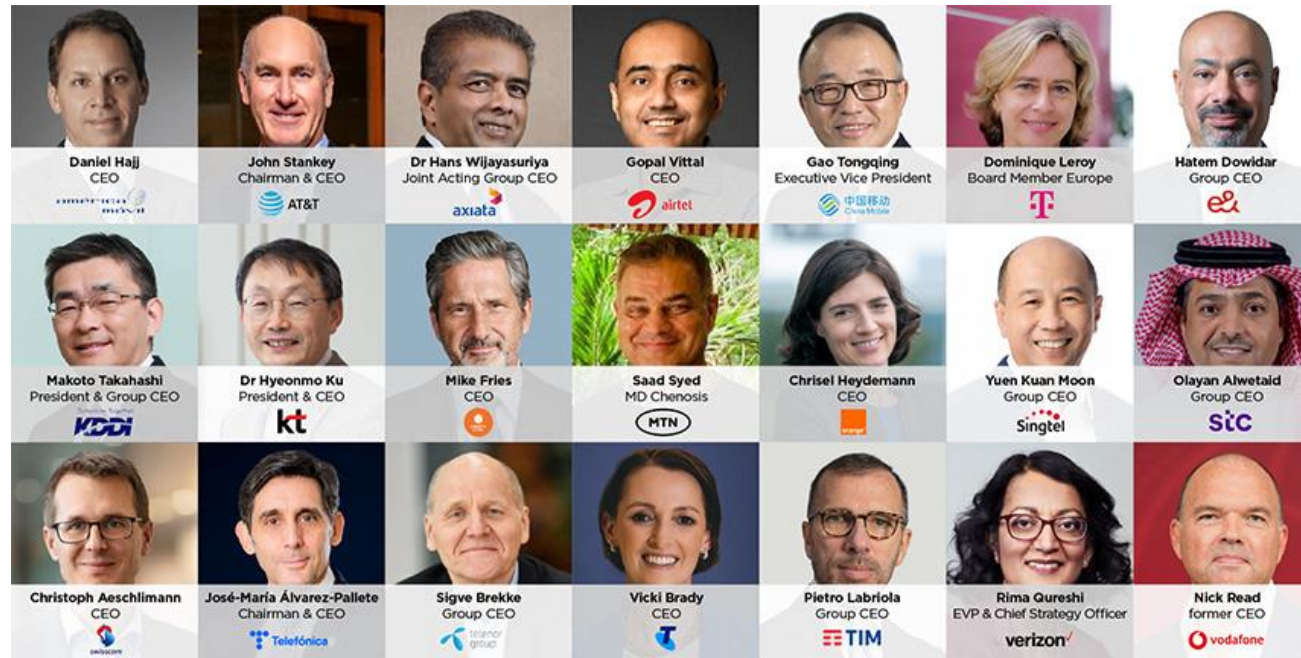
Early Access Programs

# CAMARA



## CAMARA

- 77 Named Partners
- 214 (+105) companies participating in CAMARA
- 130+ regular participants in Open Steering Calls
- 625 (+624) people joined CAMARA
- Development "home" for GSMA Open Gateway
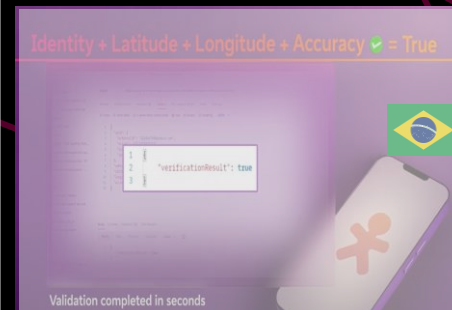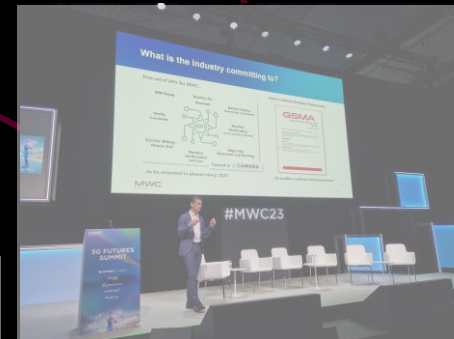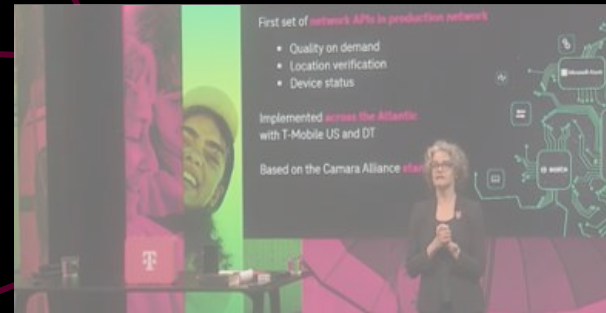
# Open Gateway

## Open Gateway

- Based on CAMARA
- East/West
- Service Annex
- Aggregator
- 21 Telcos

# But we are not alone

- **MWC Coverage of Network APIs**
  - **3,374 pieces of media coverage,**
  - **105 media outlets**
- **18 Operators showing Network APIs**
- **Every major telco even looking for Network API presentations**
- **All the big analyst firms writing report on Network APIs**

# Telco Marketplace



Accelerate the development of immersive technologies and services such as industrial systems, fintech, identity, smart mobility, gaming and further Web 3.0 innovation

**Developers / Enterprise IT**

CAMARA
THE TELCO GLOBAL API ALLIANCE

**Operator Federation & Interconnection**

**MNO API Gateways**

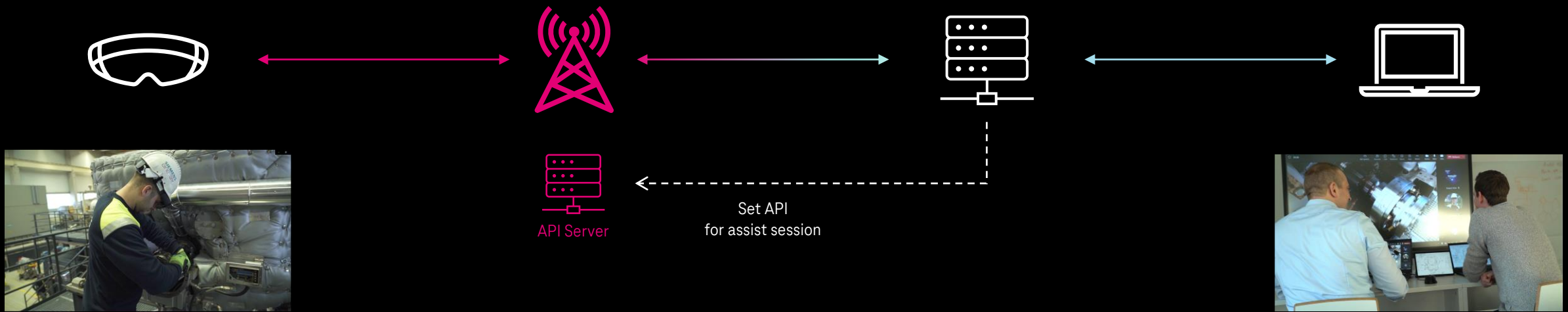# Aggregation

# Solution



Set API
for assist session

API Server

**SIEMENS energy**

A Siemens Energy field engineer is fixing a machine and requires real time technical assistance over mobile network

DT/TMUS network assigns the IP flow a higher priority to ensure better and steadier latency

Cloud application calls DT/TMUS API to request QoS on the mobile connection.

The remote assistant server receives high-quality pictures with low latency, significantly increasing service quality

**SIEMENS energy**

Siemens Energy technical experts remotely assists the field engineer

# Stay in Contact



Let's connect

Noel Wirzius – noel.wirzius@telekom.de

Product Manager Deutsche Telekom



slack