IMAGINE-B5G
Advanced 5G Open Platform for Large Scale Trials and Pilots across Europe

SNS Lunchtime Webinar 1
Prof. David Gomez-Barquero
15th February 2023

New SNS Projects Webinar 1/4

Grant Agreement No.: 101096452
Call: HORIZON-JU-SNS-2022
Content

- Fact Sheet
- Objectives
- Methodology
- Platform
- Facilities
  - Norway, France, Portugal, Spain
- Cascade funding
- Use cases
  - Vertical Stakeholder Advisory Board
**IMAGINE-B5G fact sheet**

- **Call:** HORIZON-JU-SNS-2022-STREAM-D-01-01
- **Project type:** Innovation Action (IA)
- **Project number:** 101096452
- **Max grant amount:** 11M€
  - Cascade funding: 4.6M€
- **Consortium:** 17 partners (9 countries)
  - Project coordination: UPV (Spain)
  - Technical manager: Telenor (Norway)
  - Innovation manager: Airbus (France)
  - Open-calls Technical Manager: UiO (Norway)
  - Open-calls Admin Manager: SETU (Ireland)
- **Project duration:** 36 months
  - (Jan. 2023 – Dec. 2025)
- **Verticals**
  - PPDR
  - Education
  - Industry 4.0
  - Media
  - eHealth
  - Agriculture & forestry
  - Transportation & logistics
To implement a secure, open, multi-stakeholder E2E 5G platform for large-scale trials and pilots

**IMAGINE-B5G objectives**

- **Obj #1**: To identify KPIs & KVIs and define novel business models for B5G vertical use cases
- **Obj #2**: To build a secure, large-scale E2E B5G facility to on-board innovative vertical UCs
  - Norway, Spain, France, Portugal
- **Obj #3**: To develop APIs towards 3rd parties and developers to create an open testbed
- **Obj #4**: To develop open-source advanced 5G tools and modules
- **Obj #5**: To attract partners for platform validation and vertical use case on-boarding
- **Obj #6**: To perform advanced 5G large-scale trials, pilots and showcases with verticals
- **Obj #7**: To validate the platform and core technologies across application, management, and societal domains
- **Obj #8**: To maximise the impact of B5G solutions

Norway, Spain, France, Portugal
IMAGINE-B5G Methodology

3 PHASES → 3 platform releases & 3 open calls for vertical experiments

OPEN CALLS
- 1st ROUND: Platform extension Application
- 2nd ROUND: Platform extension Application
- 3rd ROUND: Application

VERTICAL USE CASE BLUEPRINT
- KPI - KVI
- Media
- eHealth
- Industry 4.0
- Agriculture/Forestry

PLATFORM DEVELOPMENT, INTEGRATION & READINESS

VERTICAL APPLICATION ONBOARDING

LARGE-SCALE TRIALS & PILOTS
- Technical Trials
- Pilots

VALIDATION
- Management
- Technological & Application
- Societal & Business

B5G FACILITIES
- Spain
- Norway
- France
- Portugal

Sustainable operation of facilities during SNS and beyond

Funded by the European Union 6G SNS
IMAGINE-B5G PLATFORM

Designed in layers at service, network, and functional levels

Network Slice as a Service

API Exposure

3GPP APIs (CAPIF) and Network as a Code

E2E Service Orchestration & Assurance Federation Manager

Network Orchestration

API Exposure

Local Breakout

Edge Sites

Autonomous

Central Site

Public Cloud

Cloud Automation

5G Core

Facility 1

Facility 2

Facility 3

Facility 4

Network Security

PPDR

eHealth

Factory 4.0

Smart Port

Verticals

Open Calls

Vertical Use Case Application Development

RAN/Core Development and Testing

3GPP APIs (CAPIF) and Network as a Code

Facility 2

x 4 premium facility sites:
Norway, Spain, Portugal and France

as frontrunners providing Testing as a Service (TaaS) framework for test and KPI validation

5G RAN / Open RAN

Transport

Local Breakout

Vertical Apps

UPF

Autonomous

Vertical Apps

5G Core

Central Site

Vertical Apps

5G Core

Public Cloud

5G Core

Test and Validation

PPDR

eHealth

Factory 4.0

Smart Port
Norway Facility – Infrastructure

Telenor Next Generation Platform

Network on Wheels

5G Indoor Private Networks
French Facility

- Aerial and remote sites
- Short-range links for lower-latency services
- Advanced relaying Rel17/18 IAB extension
- Rel 17 short-data transmission
- OpenRAN testing

INRIA DC

R2lab

Eurecom

600 Gpbs
Portuguese Facility
Geographical Overview

5GPP Projects
Utilizing the Facilities

Experimentation Site
Central Facility Data Centre
Spanish Facility experimentation sites

Partners:

- Telefónica
- Fundación Valenciaport
- Universitat Politècnica de València
- Nokia
- Keysight Technologies
## Vertical stakeholder AB

**x15** vertical associations and companies

### Role:
- Define the vertical **use cases** for the open-calls and their **KPIs & KVIs**
- Participate in the **user selection** *(if no conflict of interest is present)*
- Possibility of participating in the large-scale **trials** and pilots *(for vertical companies)*

Expressed interest: **ABB, NDMA, NRK, RTVE, ISTEC, LLW, ITACYL and VPA**

- Promote the participation of their affiliates in the open-calls for vertical experiments *(for associations)*
- Validate the **results** obtained in the project

⚠️ AB members cannot participate in the open calls

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Name</th>
<th>Logo</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDMA</td>
<td>Norwegian Defence Materiel Agency</td>
<td></td>
</tr>
<tr>
<td>ISTEC</td>
<td>ISTEC</td>
<td>istec.</td>
</tr>
<tr>
<td>INOVA</td>
<td>Associação de Empresas para uma Rede de Inovação em Aveiro</td>
<td>inovaria</td>
</tr>
<tr>
<td>VSA</td>
<td>Valencian Shipping Association</td>
<td></td>
</tr>
<tr>
<td>PSCE</td>
<td>Public Safety Communication Europe</td>
<td></td>
</tr>
<tr>
<td>VPA</td>
<td>Valencian Port Authority</td>
<td></td>
</tr>
<tr>
<td>EBU</td>
<td>European Broadcasting Union</td>
<td>EBU</td>
</tr>
<tr>
<td>NRK</td>
<td>Norwegian Norsk rikskringkasting</td>
<td>NRK</td>
</tr>
<tr>
<td>RTVE</td>
<td>Radio Televisão Española</td>
<td>rtve</td>
</tr>
<tr>
<td>DC</td>
<td>Digital Catapult</td>
<td></td>
</tr>
<tr>
<td>TICE</td>
<td>The National Portuguese ICT Cluster</td>
<td>tice.pt</td>
</tr>
<tr>
<td>ABB</td>
<td>ABB</td>
<td></td>
</tr>
<tr>
<td>AIOTI</td>
<td>Alliance for Internet of Things Innovation</td>
<td>AIOTI</td>
</tr>
<tr>
<td>LLW</td>
<td>La Loba Winery</td>
<td></td>
</tr>
<tr>
<td>ITACYL</td>
<td>Technical Institute of Castilla y León</td>
<td></td>
</tr>
</tbody>
</table>
### IMAGINE-B5G Verticals & Stakeholders

**List of AB stakeholders and related verticals**

<table>
<thead>
<tr>
<th>Vertical</th>
<th>Norway</th>
<th>Spain</th>
<th>Portugal</th>
<th>France</th>
<th>Vertical Stakeholders (AB &amp; Partners)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPDR</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>NDMA, ISTEC, INOVA, VPA, FV, PSCE</td>
</tr>
<tr>
<td>Media</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>EBU, NRK, RTVE, ISTEC, INOVA, DIGICAT</td>
</tr>
<tr>
<td>Transport &amp; Logistics</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>VPA, VSA, TICE</td>
</tr>
<tr>
<td>Industry 4.0</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>ABB, AIOTI, INOVA, TICE</td>
</tr>
<tr>
<td>Education</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>UPV, UiO, SETU, AUEB</td>
</tr>
<tr>
<td>Agriculture &amp; Forestry</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>LLW, ITACYL</td>
</tr>
<tr>
<td>eHealth</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>AIOTI, INOVA, TICE</td>
</tr>
</tbody>
</table>

(*) In bold vertical stakeholders willing to participate in large-scale trials and pilots.
Open Calls

- **Budget**: 4.6 M€ (40% of the proposal budget)
  - 2.3 M€ for SMEs, scaleups and start-ups (i.e., 50% of the total open-call budget, 20% of the total project funding)

- **Objective**:
  - To enable European-led innovation, fast track adoption
  - To stimulate private sector investment, across verticals towards the conceptualization, development, experimentation, and validation of novel vertical applications in the current and the future B5G ecosystem

- **Around 50 projects** through FSTP open-calls.
  - for **platform extension** (9 - 13 projects)
  - for **vertical experiments** (34 - 44 projects)

- **3 rounds of open-calls**
  - associated with a release of the platform
  - M6 (June 2023), M18 (June 2024), M24 (December 2024)

### Call Details

<table>
<thead>
<tr>
<th>Call #</th>
<th>Type of call</th>
<th>Number of Funded projects</th>
<th>Grant per project [up to]</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC1 - published at M6 with a start date in M10</td>
<td>Vertical Experiments (Trials and Pilots) - up to 12 months</td>
<td>11-15</td>
<td>€100,000</td>
<td>€2,000,000</td>
</tr>
<tr>
<td>OC1-Ver</td>
<td>Platform Extensions (HW&amp;SW) - up to 18 months</td>
<td>4-7</td>
<td>€150,000</td>
<td></td>
</tr>
<tr>
<td>OC2 - published at M18 with a start date in M22</td>
<td>Vertical Experiments (Trials and Pilots) - up to 12 months</td>
<td>13-17</td>
<td>€100,000</td>
<td>€2,000,000</td>
</tr>
<tr>
<td>OC2-Ver</td>
<td>Platform Extensions (Stream A &amp;B) - up to 12 months</td>
<td>5-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OC3 - published at M24 with a start date in M28</td>
<td>Vertical Experiments (Trials and Pilots) - 6 months until the end of the project</td>
<td>10-12</td>
<td>€60,000</td>
<td>€600,000</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td></td>
<td>€4,600,000</td>
</tr>
</tbody>
</table>
Project Kick-Off Meeting

1st – 2nd February 2022
UPV Campus | Valencia, Spain

35 attendees

Ciudad Politecnica de la Innovacio (CPI) | Innova Meeting Room
Cami de Vera, s/n Valencia, Spain, 46022
https://goo.gl/maps/MbcoVRVcWc2t8T197
Local Organizer: David Gomez-Barquero | dagobar@iteam.upv.es
Thanks for your attention!

If interested, follow us:

- www.imagineb5g.eu
- https://www.linkedin.com/showcase/imagine-b5g/

Prof. David Gomez-Barquero
dagobar@iteam.upv.es