



SAND
BOX

6G-SANDBOX project overview

Pedro Merino, pmerino@uma.es

Technical Manager, University of Málaga

JU SNS Webminar 15/2/2023

6G-SANDBOX main figures

Particip. No.	Participant organisation name	Country
1 (PC)	Keysight Technologies Belgium BV (KEYB)	Belgium
3 (TM)	Universidad de Malaga (UMA)	Spain
2	Keysight Technologies Denmark AsP (KEYD)	Denmark
4	Fogus Innovations & Services (FOG)	Greece
5	Infolysis (INF)	Greece
6	Boreal Technology & Investments (OWO)	Spain
7	Telefonica (TEL)	Spain
8	National Centre of Scientific Research "Demokritos" (NCSR)	Greece
9	COSMOTE (COS)	Greece
10	Nokia (NOKIA)	Spain
11	Oulu University (OULU)	Finland
12	Ictficial (ICTF)	Finland
13	OpenNebula (ON)	Spain
14	Eurescom (EURE)	Germany
15	IS-Wireless (ISR)	Poland
16	Franhoufer (FOKUS)	Germany
17	Lenovo (LNV)	Germany
18	The Queen's University of Belfast (QUB)	UK

Project Information

6G-SANDBOX
Grant agreement ID: 101096328

DOI
[10.3030/101096328](https://doi.org/10.3030/101096328)

Start date 1 January 2023 **End date** 31 December 2025

Funded under
Digital, Industry and Space

Total cost
€ 8 546 551,53

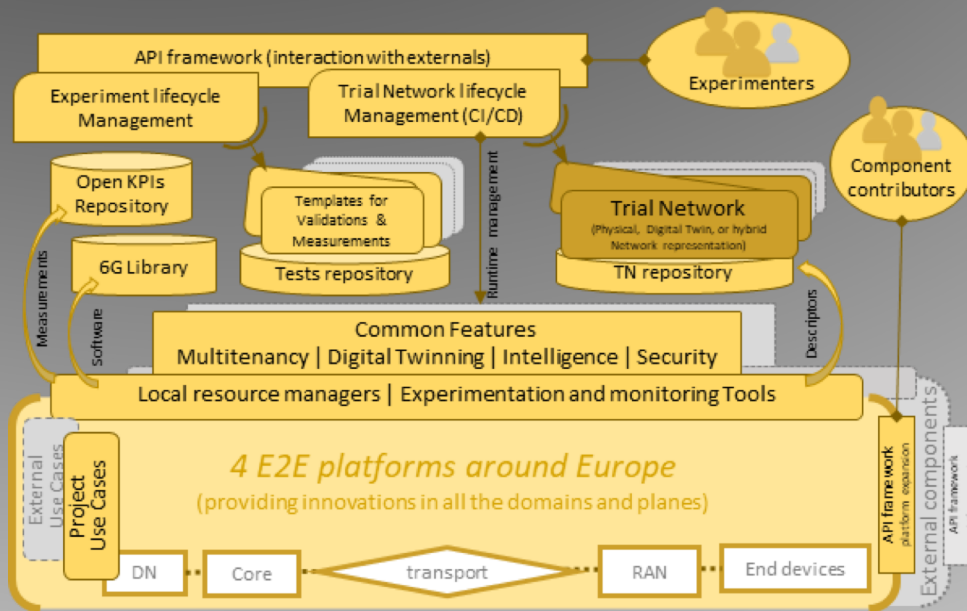
EU contribution
€ 8 039 821,26



Coordinated by
KEYSIGHT TECHNOLOGIES BELGIUM
Belgium



6G-SANDBOX Concept



(6G-SANDBOX) TRIAL NETWORK: fully configurable, manageable and controllable network which combines digital and physical nodes and provides services for 6G technology validation and 6G KPI measurements

- the experimenter can manage the lifecycle of the experiment and the trial network
- the open calls target both experimenters and component contributors

The 6G-SANDBOX Objectives

Objective 1 (Obj.1): Define and release the **architecture** and the **processes/methodology** of an experimentation facility towards 6G

Objective 2 (Obj.2): Develop and integrate the 6G-SANDBOX end-to-end physical connectivity infrastructure around Europe, which incorporates **6G technologies**

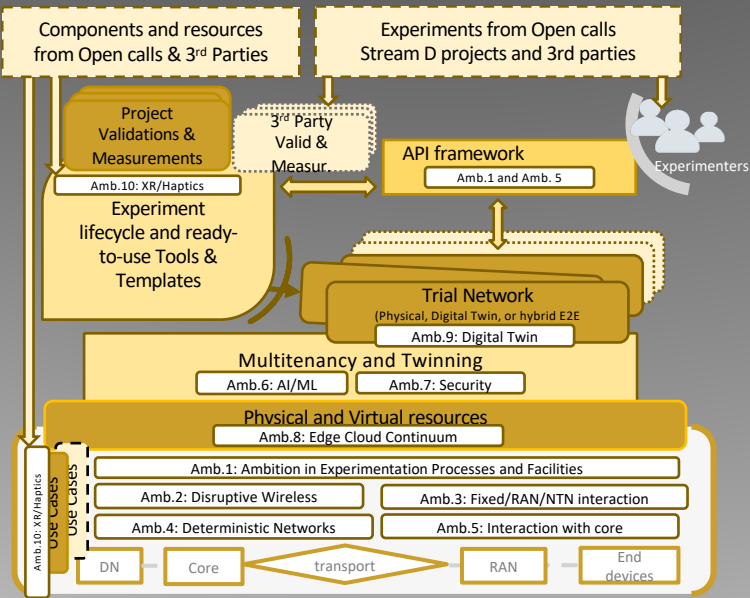
Objective 3 (Obj.3): Develop and integrate the 6G-SANDBOX resource management framework to efficiently deploy trial networks and to control multi-domain virtualized resources - “**Infrastructure as a Code**”

Objective 4 (Obj.4): Develop and integrate a framework for performing automated experimentation as a service on 6G-SANDBOX trial networks tailored to the **6G KPIs and KVIs**

Objective 5 (Obj.5): Create an ecosystem under the SNS JU umbrella, that will allow the adoption of innovative components from **Stream B projects** and also enable the hosting of 6G use cases (**open calls and Stream D projects**).

Objective 6 (Obj.6): Create tangible socioeconomical impact as well as maximize technological and business potential through targeted **communication, dissemination, and standardization**

The 6G-SANDBOX Ambitions

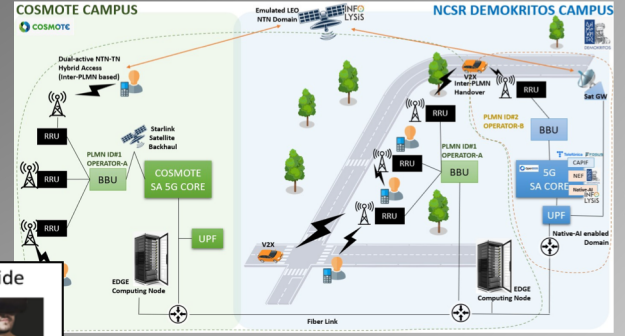


- Amb.1: Ambition in Experimentation Processes and Facilities
- Amb.2: Disruptive Wireless
- Amb.3: Fixed/RAN/NTN interaction
- Amb.4: Deterministic Networks
- Amb.5: Interaction with core
- Amb.6: AI/ML
- Amb.7: Security
- Amb.8: Edge Cloud Continuum
- Amb.9: Digital Twin
- Amb.10: XR/Haptics

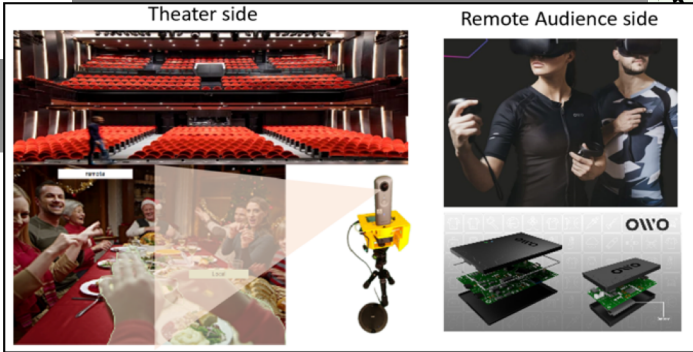
The 6G-SANDBOX Initial deployments and use cases



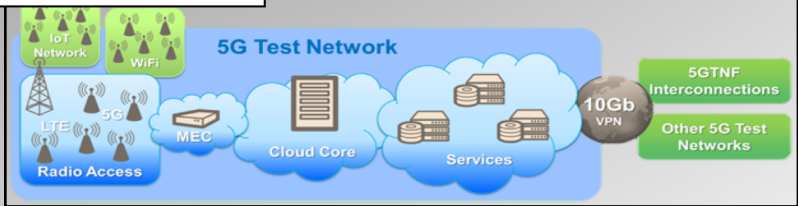
Malaga Platform



Athens Platform



Berlin Platform



Oulu Platform

Answers to key questions

- What are the target 6G KPIs and KVIs you plan to address?
 - *SRIA 2021-2027*
 - *the 6G-IA white paper from the VSC Work*
- Will your platform be fine-tuned for specific vertical use cases or will it be able to support multiple 6G use cases?
 - *No, open to any use case*
- How do you plan to support openness to your platform and modularity for potential future upgrades?
 - *Trial Networks (infrastructure as a code), 6G Library, Open APIs, CI/CD applied to TNs*
- Will your platform be available only through the open calls?
 - *No, OCs will happen in 2023 and 2024, but we expect more stakeholders to join*
- What will you be looking to get out of the open calls to enhance your platforms?
 - *6G technologies (mainly from Stream B), 6G use cases, new sites*
- When will your platform will be ready for testing and how do you plan to disseminate this information to the public?
 - *Ready to start now !!*