6G-IA Vision & Smart Networks and Services Research and Innovation

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5G and GovTech Event
Wednesday, 25 October 2023, Athens, Greece

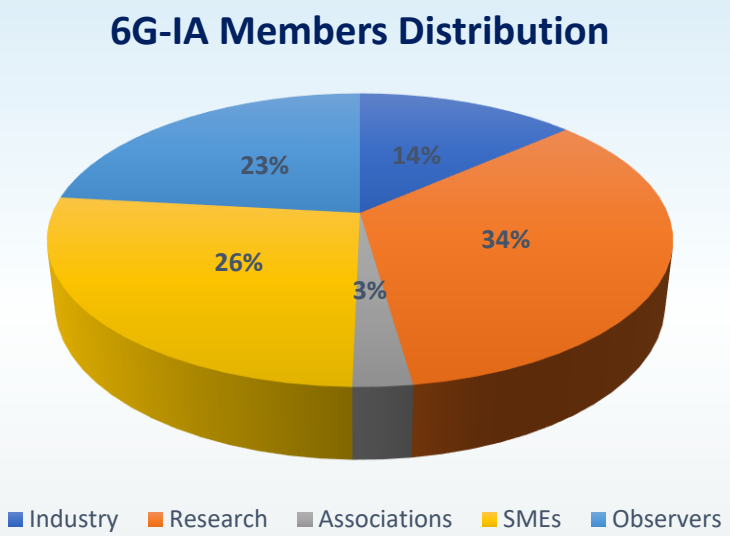
6G Industry Association (6G-IA) – In a nutshell

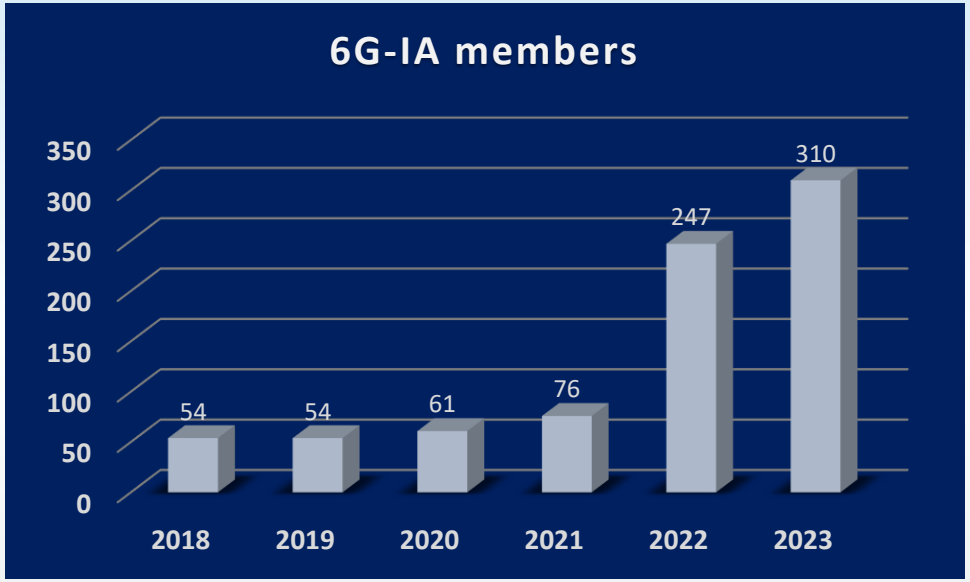
The Voice of European Industry and Research for Next Generation Networks and Services

6G-IA members

The Voice of European Industry and Research for Next Generation Networks and Services

As of September 2023: 310 6G-IA members, including 238 full members and 72 Observer (Associated) members





6G-IA members include all main vendors, European operators, top universities and research centers, a significant number of SMEs, and other associations related to the ICT domain.

Critical mass of members for impactful results has been achieved
- needs to be maintained

6G-IA International MoUs

SNS CSA Projects

Partnership with Vertical Industries

5G AUTOMOTIVE ASSOCIATION
Automotive

EUROPEAN CYBERSECURITY ORGANIZATION
Cybersecurity

EUROPEAN INTELLIGENT TRANSPORTATION SYSTEMS AND SERVICES
Transportation

PUBLIC SAFETY COMMUNICATION EUROPE
Public Safety

NEW EUROPEAN MEDIA
Media

EUROPEAN BROADCASTING UNION
Media

5G ALLIANCE FOR CONNECTED INDUSTRY AND AUTOMATION
Smart Manufacturing

ALLIANCE FOR INTERNET OF THINGS INNOVATIONS
Internet of Things

EUROPEAN SPACE AGENCY
Space

EUROPEAN TELECOMMUNICATIONS STANDARDS INSTITUTE
Standards

TRANSCONTINUUM INITIATIVE
Digital Services

NETWORLD EUROPE
Communications Networks & Services

NEXT GENERATION MOBILE NETWORKS ALLIANCE
Network Infrastructure & Services

ASSOCIATION FOR EUROPEAN NANO-ELECTRONICS ACTIVITIES
Micro Electronics

SMART CONNECTIVITY DIGITAL INNOVATION HUB NETWORK
DIH

CELTIC-NEXT (EUREKA CLUSTER)
ICT

SNS JU Overview

The Voice of European Industry and Research for Next Generation Networks and Services

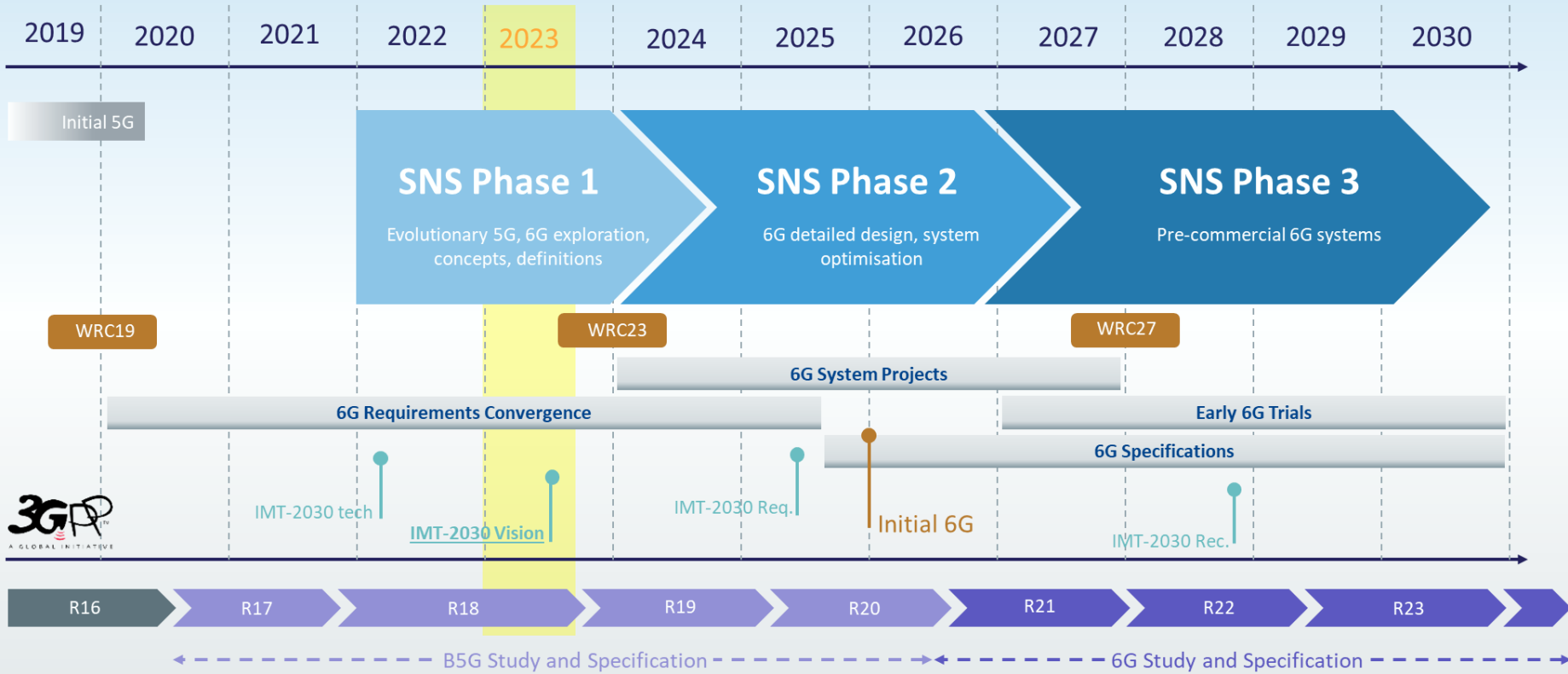
SNS JU Overview (1/2)

- The Smart Networks and Services Joint Undertaking (**SNS JU**) is a partnership between
  - the Public Sector - European Commission (EC)
  - the Private Sector - 6G-IA.
- The program fosters and promotes EU Research & Innovation activities on the greater ICT sector focusing on B5G and 6G technologies (taking over from 5G PPP)
- Public & private sector funds are used to support Work Programs of multiple targeted Research and Innovation Actions (Projects)
  - SNS JU → 2022 - 2030
- SNS projects began on 01/01/2023 under the Horizon Europe Framework

SNS JU Overview (2/2)

6G SNS

- 6G SNS is planned in 3 phases, funding R&I projects under 4 different Streams in a programme of ~1.8€ Billion (more info here)
- First 35 projects of Phase 1 started on 01/01/2023
- Another 27 projects (Phase 2) will start on 01/01/2024



SNS Research & Innovation Work Programme

2021-2022 Overview

The Voice of European Industry and Research for Next Generation Networks and Services

SNS R&I Work Programme 2021-22

STREAM A (RIA): Smart communication components, systems and networks for 5G mid-term Evolution systems

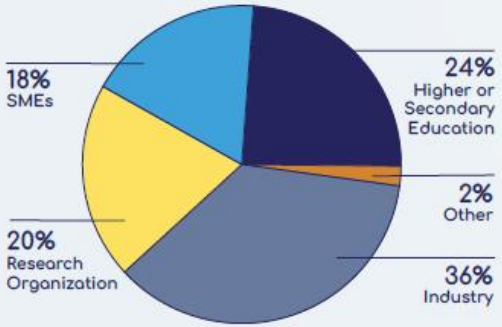
STREAM D (IA): Large Scale SNS Trials and Pilots with Verticals

STREAM B (RIA): Research for Revolutionary 6G Technology and systems

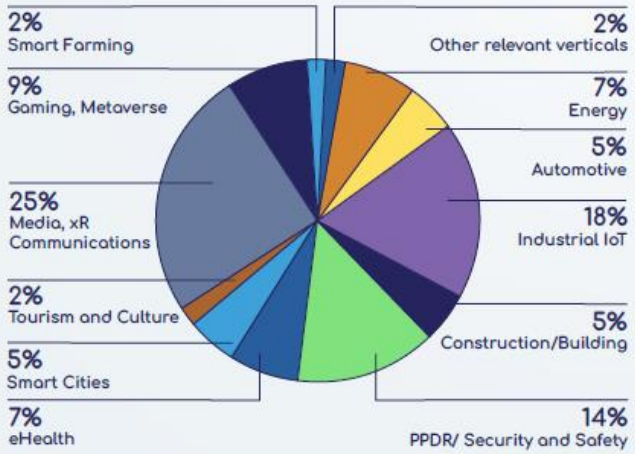
STREAM C (RIA): SNS experimental infrastructures

Phase 1 Projects Started on 1/1/2023

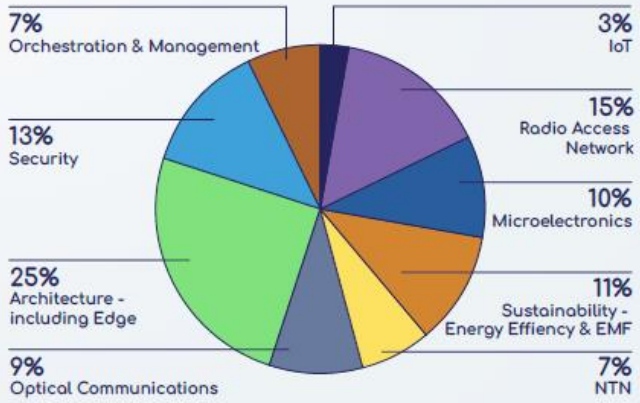
35 R&I projects – 9 Key Technological Areas – 250 M€ Investment



BENEFICIARIES DISTRIBUTION



PHASE 1 SNS VERTICALS COVERAGE



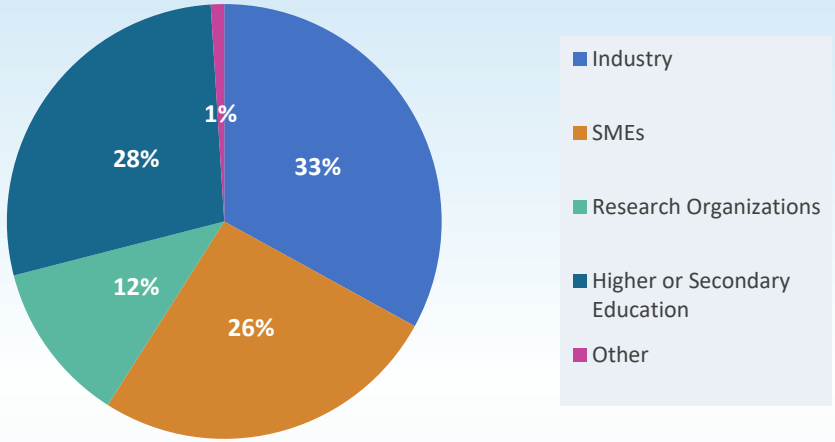
PHASE 1 SNS TOPICS COVERAGE

- 288 unique beneficiaries
- ~30% not 6G-IA members
- Covering 10+ different Vertical Industries

Entire portfolio of SNS JU phase 1 projects available here:
https://smart-networks.europa.eu/sns-phase-1/

SNS R&I Work Programme 2022-23 (Call 2)

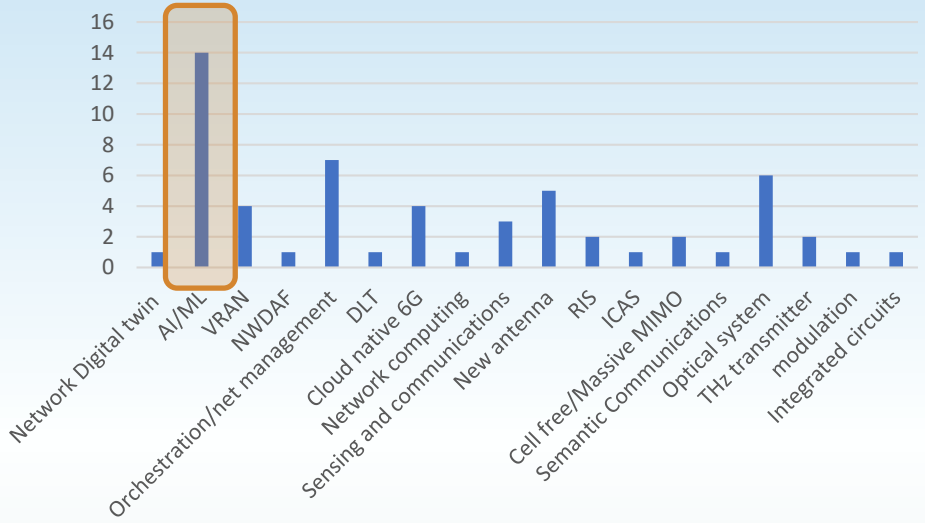
Beneficiaries distribution



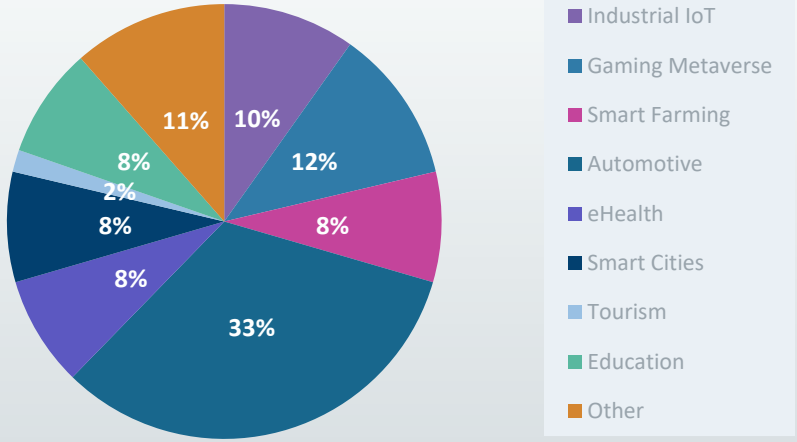
Second portfolio of 27 projects
to start in January 2024 - 130 M€

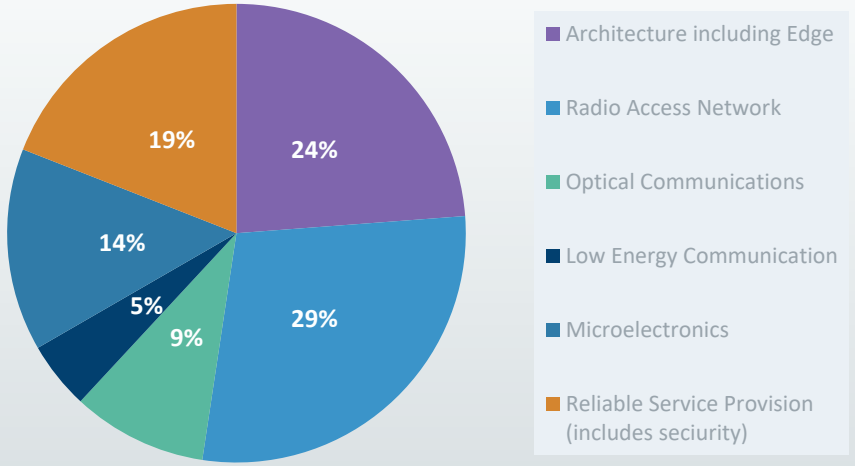
218 unique beneficiaries
34% not 6G-IA members

Technological Enablers

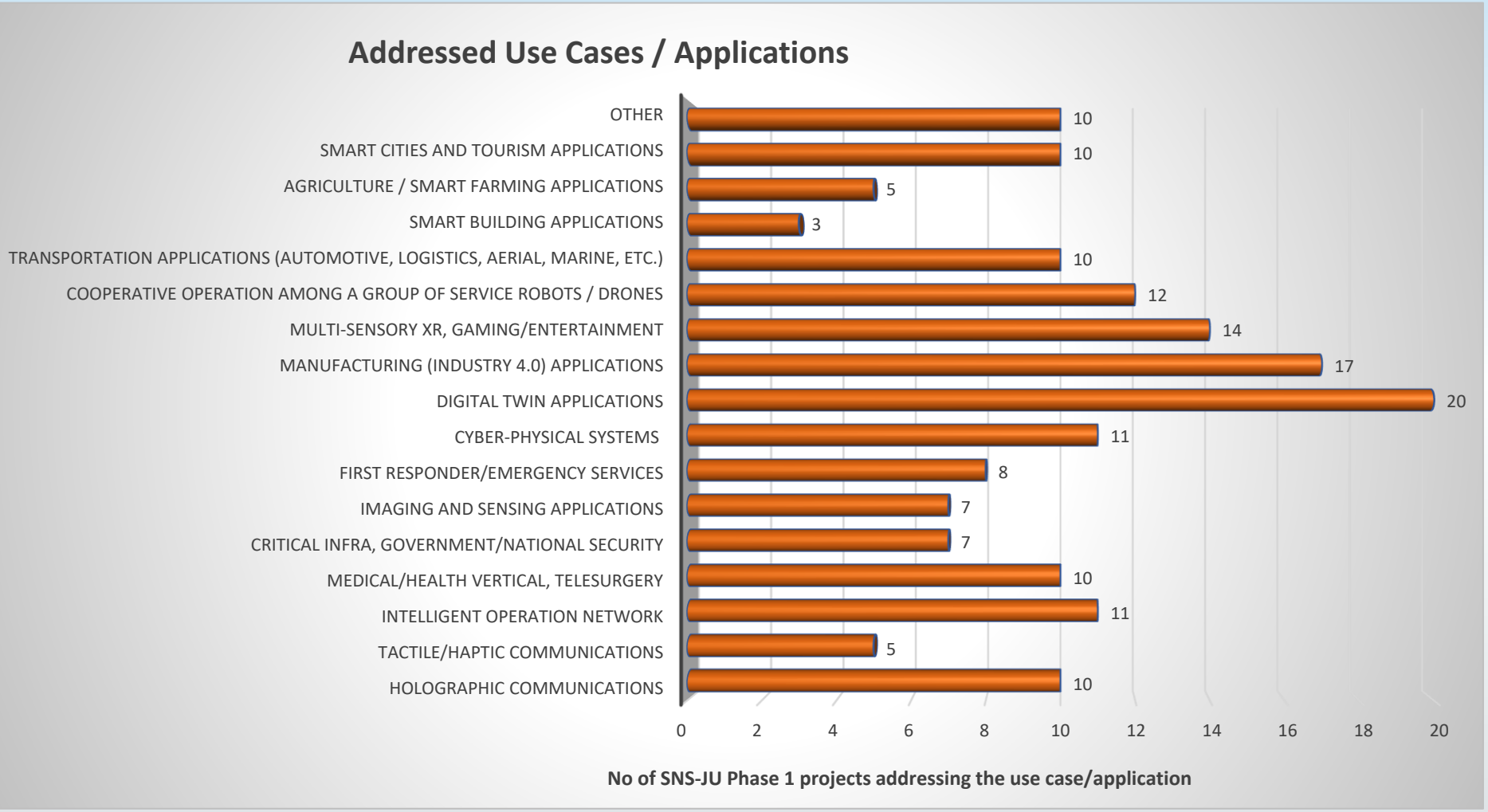


Verticals in call 2023





Use cases / Applications targeted by Phase 1 projects



- Digital Twin applications are very popular
- Additional UCs mentioned:
  - Virtual Desktops (DaaS- Desktop as a Service), Predictive maintenance (airline fleet), End to end energy measurement and conservation system,
- Additional UCs expected from open calls (Streams C & D)

SNS Research & Innovation Work Programme

2023-2024 Structure & Funding

The Voice of European Industry and Research for Next Generation Networks and Services

SNS R&I Work Programme 2023-2024

2023	2024 *(129M€)*	2024
Low TRL topics (+ not covered in 1st call) • Architecture • Wireless • Infrastructure & devices • Security & Service Provision • Micro-electronics for 6G	**Stream B** *(~89M€ - RIA)* Research for technology advancement towards 6G	**PoC and Standardization** • Architecture • Wireless • Infrastructure & devices • Security & Service Provision • Collaboration JP&SK • Sustainability lighthouse • Reliable AI for 6G networks & services
• 1 complement Phase 1 • 1 federation & EU-US cooperation	**Stream C** *(~10M€ - RIA)* SNS experimental infrastructures	• Microelectronics for 6G lighthouse
• Automotive • Health, Smart Cities, Farming, Education (one or more)	**Stream D** *(~26M€ - IA)* Large Scale SNS Trials and Pilots with Verticals	• Vertical use cases implementing 6G Vision – Target results on sustainability
✓ Societal impact	**CSA** *(~4M€)* Support Action	✓ SNS Operational Support

SNS Phase 1 projects

2023 Open Call funding opportunities

The Voice of European Industry and Research for Next Generation Networks and Services

Information on Open Call Opportunities

- Seven SNS projects to run open calls for additional ***functions, services and capabilities***
- Different Open Calls have varied ***targets/scope*** including
  - Development & integration of additional technologies/components
  - Extension of functionalities of the developed infrastructure
  - Additional trials & pilots for various vertical sectors
  - Validation of Novel (vertical) applications
- Total ***available budget*** for cascade funding via the SNS Phase 1 projects is ***€27 Million***
  - Upper limits per proposal/beneficiary apply per project
- Open Call deadlines spread out between ***June 2023 and February 2025***
- Ideal for participation of innovative SMEs

SNS Phase 1 Projects – Open call opportunities

Open Call Overview Information

Project	Available Budget	High level scope	Important dates	More information
6G-BRICKS	**€1,680,906** (€120,000/ proposal)	***Experiments on 6G-BRICKS devices and components*** via O-RAN xAPPs, different vertical applications	1st call: December 2023 - January 2024 2nd call: June 2024 – July 2024	www.6g-bricks.eu
6G-SANDBOX	**€1,700,000** (€60,000/ proposal)	***Technologies to augment the testbed*** (Ray tracing, mmW, measurement solutions) ***Experimentation*** (RF/Microwave, RIS, RIC Xapp, ORAN)	Call opening: March 2023 1st submission deadline: June 2023	www.6G-SANDBOX.eu
6G-XR	**€1,800,000** (€60,000/ proposal)	***Extension of 4 research infrastructures*** (Networking and Computing enablers, XR enablers, RAN enablers, Sustainability enablers)	Call opening: June 2023 1st submission deadline: September 2023	www.6g-xr.eu
FIDAL	**€6,000,000** (€150k-250k/ proposal)	***New use cases and pilots for*** media, entertainment, time critical services and PPDR; ***infrastructure and testing facilities*** to perform new pilots	Call opening: September 2023 Submission deadline: December 2023	https://fidal-he.eu
IMAGINE-B5G	**€4,400,000** (€60k–150k/ proposal)	Validation of ***novel vertical applications*** (pilots & trials), provision of ***novel features*** (HW/SW extensions), incorporation of ***tools from Stream A/B projects***	1st call: June 2023 - August 2023 2nd call: June 2024 – August 2024 3rd call: December 2024 – February 2025	https://imagineb5g.eu/
TARGET-X	**€6,000,000** (€60,000/ beneficiary)	***Trials & pilots for 5G/6G*** ecosystem in the manufacturing, automotive, energy, and construction verticals, ***Testing or implementation of technologies***	1st call: May 2023 - July 2023 2nd call: November 2023 – January 2024	www.target-x.eu
TRIALSNET	**€5,580,900** (€200k-300k/ proposal)	New ***6G use cases and pilots*** (complementing the TrialsNet UCs), ***Infrastructure*** to complement the TrialsNet set of infrastructure, complementary ***network assets*** to the available infrastructure	Call opening: November 2023 Submission deadline: February 2024	www.trialsnet.eu

Relevant links & reading material

- ***R&I Work Programme*** 2024
  - To be published end of October / beginning November (stay tuned)
- Important Background Reading: **FAQ**'s
  - https://smart-networks.europa.eu/faq-2/
- SNS Phase 1 project ***Open Calls***
  - https://smart-networks.europa.eu/open-calls-from-sns-projects/
- Smart Networks and Services – Joint Undertaking: https://smart-networks.europa.eu/
- 6G-Industry Association: https://6g-ia.eu/

Thanks for your attention!

Kostas Trichias

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