SNS JU and AWP 2027

Presentation to France 6G Ecosystem

Javier Albares, Head of Program, SNS JU

28 October 2026, Paris

Agenda

1

- Overview of **SNS JU**
- What our **program portfolio** looks like
- How **France** is already **participating**

2

- Why **6G matters**
- Orientations of our **AWP 2027**
- Q&A

Europe's flagship public-private partnership for 6G research

A 50/50 public–private partnership aligning Member States, stakeholders and global partners



European Commission

DG CNECT

€900m EU funding, Horizon Europe (public side)

50/50

6G-IA

Smart Networks and Services Industry Association

416 members: operators, vendors, research, verticals, SMEs (private side)

GOVERNING BOARD

Final decision-maker

Co-decide on:

- Strategic orientation and roadmap
- Annual work programmes and calls
- €900m Horizon Europe: matched by industry
- Long-term commitment, planning to implementation

advice

advice

States Representatives Group

EU Member States and Horizon Europe associated countries (UK since 2024)

Strategic guidance; links SNS JU with national 6G priorities, pilots and pre-deployment

Stakeholders Group

16 members across vendors, operators, aerospace, IT services, standards and cybersecurity

e.g. Nokia, Ericsson, Airbus, Orange, Capgemini, ETSI, ECSO, Connect Europe

COLLABORATES

National 6G plans

Synergies with **national 6G R&I plans and investments**, e.g. DE, FI, FR, ES; coordinated EU pilots and pre-deployment through the States Representatives Group

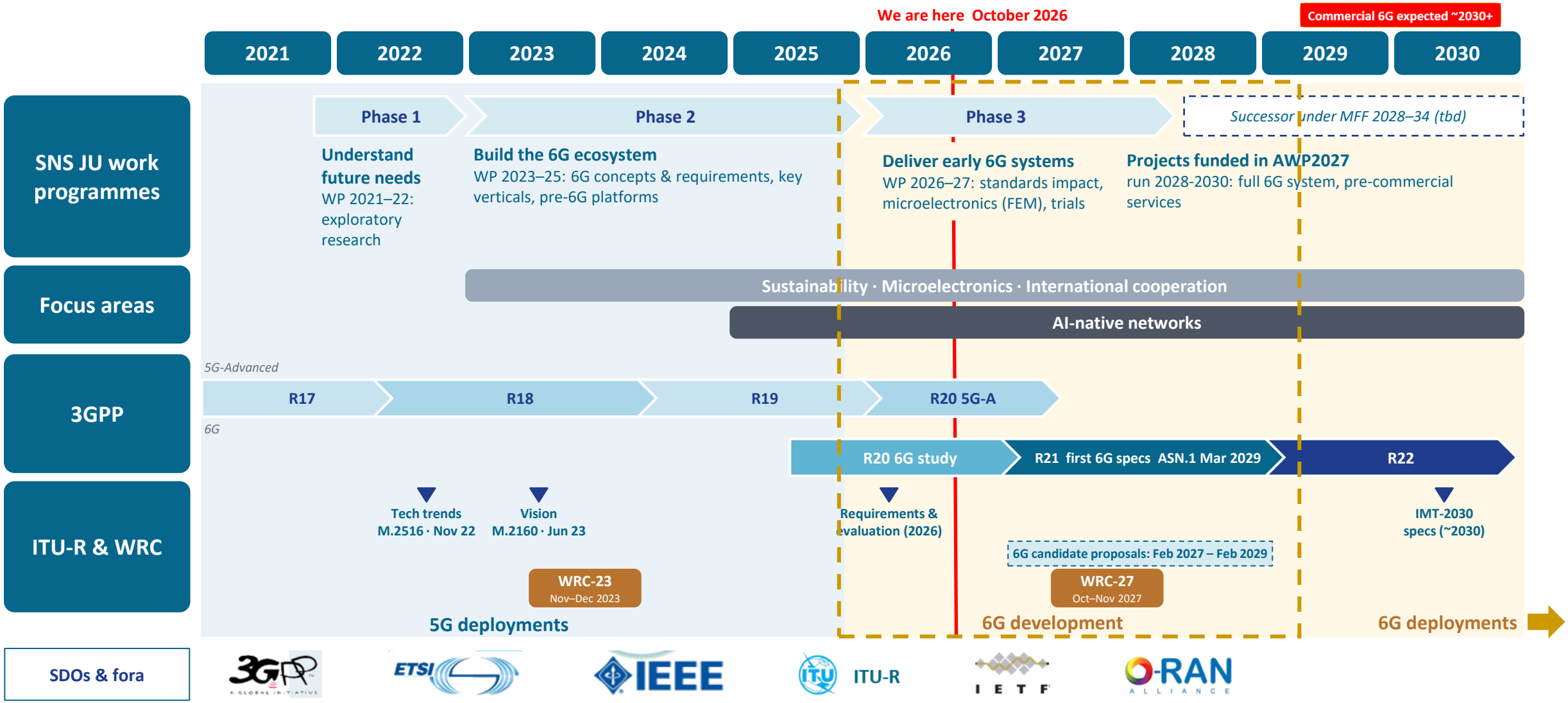
COLLABORATES

International Cooperation

United States	South Korea	Japan	India	Taiwan
Call 1	Call 3 & 8	Call 3 & 8	CSA, Calls 6	Call 8

Our work is aligned with global **standards timeline**

Next 2-3 years will be decisive. **6G normative work (Rel-21) will be finalized by Dec 2028**



SNS JU portfolio will reach >**120 projects with 8 calls** implemented

Building the full 6G value chain, from chips and satellites to AI and vertical services

AWP 2027 under consultation

Project waves **start dates**

	Call 1 Started Jan '23	Call 2 Started Jan '24	Call 3 Started Jan '25	Call 4/5 Started in Jul/Sept '26	Call 6/7 To be started in Q1 '27	Call 8 To be started in Jan '28
Stream A 5G Evolution systems	Components, systems & networks	**7** projects validate **complete system** view				
Stream B Research for radical technology advancement towards 6G definition	System Architecture; Wireless & Signal; Infrastructure & Devices; Security; Microelectronics; Sustainability; International Collab	**19** projects research **Novel technologies** expected to be adopted in commercial networks in a **mid /long-term horizon**	**24** projects working on Innovative solutions towards real life networks over a **long-term horizon.** Also targets **International Cooperation** + **CSA Sustainability**	**12** projects targeting a higher TRL range, compared to previous calls, aiming to produce **more mature results** and impact on standardization . Includes lighthouse project on **Sustainability** and targets **International Cooperation**	**15** projects on **Forward looking topics** (advance architectures and IoT), MIMO, AI/ML, Spectrum sharing, Open RAN, **NTN- TN** unification/integration, Optical networks and **Photonics, Security and Resilience**	**1** project on **AI network Datasets** **1** project on **Microelectronics** + **CSA India** + **CSA Devices**	**Up to 9** projects on **wireless, optical, security and International Cooperation.**
Stream C Experimental Infras/Platforms	Platforms; Enablers/ Proof Concept	**3** projects validate **6G technical enablers**	**1** Europe-wide **experimental infrastructure(s)** to support SNS program	**1** project on integration of **microelectronics** components	**1** project on **Telco cloud** and service provision enablers	**1** project on **Experimental Infrastructures**	**2** projects on **Microelectronics and Quantum**
Stream D Large Scale Trials With Verticals	Applications & services; Business ecosystems	**4** projects on specific verticals with **high economic and societal importance**	**2** projects focusing on i) **Automotive** ii) **Health, Smart Cities, Farming and Education**	**2** projects on advanced **5G/6G technologies in/for verticals**, with special focus on sustainability	**4** projects on (1) Industry/Manufacturing, (2)Media (3)Transportation/Logistics, (4) Emergency Services and (5) Health	**No projects**	**6** projects on (1) Telco AI Platform, (2) Media, (3) Smart Industry, (4) ISAC, (5) Quantum security and (6) NTN
	240 MM €	132 MM €	129 MM €	116 MM €	36 MM €	~222-24 MM €

CLOSED

OPEN SOON

Calls 1-6: €637 M awarded to 1,621 beneficiaries in 104 projects

SNS JU **technology domains**

Each project/beneficiary assigned to **1 primary domain**

Top 10 R&I technology domains (Stream A/B €446 M, 70% of funding)

#	Main Technology domain	€M	Share	Proj.	Industry	Most relevant beneficiaries (grant, €M)	Lead countries
1	**Architecture, orchestration & compute continuum**	105.1	16.5%	15	62%	Ericsson 7.4 / Nokia 4.5 / Telefonica 4.0 / Orange 3.0	ES, DE, EL
2	**Security, privacy & trust**	77.1	12.1%	14	61%	Telefónica 4.8 / Ericsson 3.2 / Thales 2.8 /CNIT 1.9	ES, EL, IT
3	**AI-native networks**	50.2	7.9%	12	52%	Nokia 2.1 / ISI-ATHENA 2.1 /EURECOM 2.0 / Ericsson 1.9	IT, FR, DE
4	**Sustainability & energy-neutral IoT**	49.5	7.8%	9	56%	Ericsson 2.5 / Univ. Oulu 2.2 / KU Leuven 2.0 / Siemens 1.5	DE, FR, ES
5	**Wireless, MIMO & Open RAN**	35.4	5.6%	6	47%	Ericsson 1.4 / imec 1.4 / Nokia 1.3 / Aalborg Univ. 1.2	DE, SE, EL
6	**Optical & x-haul transport**	32.2	5.1%	7	55%	CTTC 2.4 / UPC 1.9 / AIT Austria 1.6 / Bifrost Comms 1.4	ES, EL, IT
7	**Non-terrestrial & 3D networks**	31.5	4.9%	5	63%	DLR 3.2 / Thales 3.2 / CTTC 1.3 / Univ. Luxembourg 1.2	FR, DE, IT
8	**THz & reconfigurable surfaces**	22.7	3.6%	4	31%	Fraunhofer 2.6 / TU Delft 1.2 / TU Braunschweig 1.2/ Chalmers 1.1	DE, EL, NL
9	**Integrated sensing & communication**	22.5	3.5%	5	48%	NEC 1.4 / Intel 1.1 / imec 1.1 / Orange 1.0	DE, FR, BE
10	**Microelectronics**	19.6	3.1%	3	40%	CEA 2.1 / Sivers Wireless 1.2 / Nokia 1.2 / III-V Lab 1.2	FR, DE, SE

■ Hardware domains.

Beyond R&I: validation and support

Stream D
Vertical trials & pilots €128.3M (12 projects)
- CERTH, Instituto de Telecomunicações, ICCS-NTUA, SETU;
- €13.7M through open-calls

Stream C
Experimental infrastructures €46.6M (5 projects)
- Univ. Oulu, ISI/ATHENA, Univ. Málaga, i2CAT

Coordination & support €16M (7 projects)
- Eurescom, Nokia, 6G-IA
- Sustainability, India, 6G Devices

What it means
- Vendors active in system domains: Ericsson and Nokia each rank top-3; Telefónica leads security
- Hardware domains get €65M (10%), led by research bodies (Fraunhofer, CEA, imec)
- Non-EU groups rank high in some domains: NEC leads sensing, Intel 2nd, Interdigital.

France is a structural pillar of SNS JU

€57M awarded, top 5 beneficiary country and present in 58% of projects

France's weight in SNS JU programme

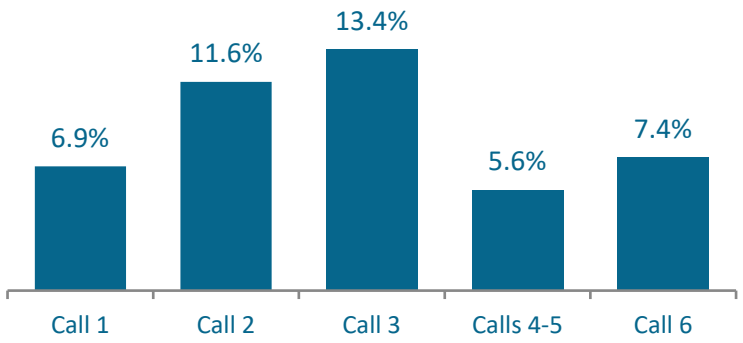
€57.0M
8.9% of €637M awarded

#5
country by grants and by participations (152)

60 / 104
projects with ≥1 French partner

5
SNS JU projects coordinated by French organisations (1)

French share of awarded grant, by call



Top French beneficiaries (group level)

#	Beneficiary	€M	Partic.
1	Thales group	8.4	23
2	CEA	6.7	8
3	EURECOM	6.2	13
4	Orange	4.9	12
5	Nokia Networks France	3.1	11
6	Airbus Defence & Space	3.0	7

French-coordinated projects

Project	Coordinator	Call	Focus
6G-DISAC	CEA	2	Distributed ISAC
6G-GOALS	CEA	2	Semantic comms
6G-ARROW	CEA	3	EU–Korea
6G-MIRAI	Ericsson France	3	EU–Japan
X-TREME 6G	STMicroelectronics	3	Microelectronics Lighthouse
FP2-MORANE 2	UIC Paris	Rail	FRMCS

(1) FP2-MORANE 2 is managed by EU Rail JU in synergy with SNS JU

French-led outcomes (SNS JU Journal 2026)

Sensing & ISAC: 6G-DISAC (CEA-Leti)
53 papers, 34 contributions to 3GPP / ETSI ISAC and 9 patent applications; RIS-assisted smart-parking trial

Sovereign 6G chips: X-TREME 6G (STMicroelectronics)
Microelectronics Lighthouse: pre-industrial SiGe HBT (500 GHz fmax), InP HBT prototypes (600 GHz), 200–300 GHz amplifiers

AI-native RAN in 3GPP : 6G-MIRAI (Ericsson France) and 6GARROW (CEA)
AI-based CSI prediction presented to the 3GPP Rel-20 6G study item; joint EU–Japan and EU–Korea validation

Semantic networking : 6G-GOALS (CEA-Leti)
Semantic O-RAN architecture with a Semantic RIC; logistics field trial with 20 robots at TRL 5

Space–ground integration: 6G-NTN2 Nexus
- TN-NTN proof-of-concept by Thales, Airbus DS, Eutelsat, Orange
- NTN group shaping IMT-2030 satellite standards and IRIS²

Governance footprint

- France currently chairs the SNS JU **States Representatives Group (SRG)**
- 4 of 16 **Stakeholders Group** members (appointed July 2026) are French-based:

Orange | **Capgemini** | **Airbus DS** | **ETSI**

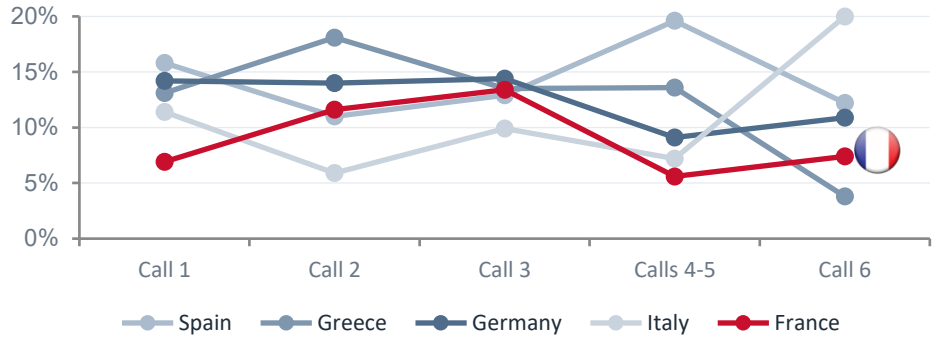
SNS JU Calls 1–6 (2022–2026)

€ 637 Million awarded, 104 projects, 1621 beneficiaries from 34 countries

Country ranking by grant awarded (top 10)

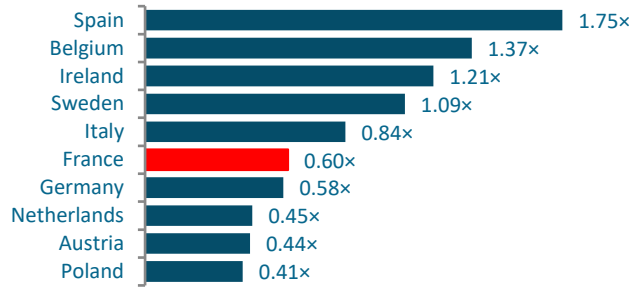
#	Country	€M	Share	Benef.	Unique	Projects (% of 104)	Coord.	SME %
1	Spain	94.3	14.8%	271	71	81 (78%)	15	15%
2	Greece	89.1	14.0%	203	65	74 (71%)	26	33%
3	Germany	83.9	13.2%	175	68	81 (78%)	15	13%
4	Italy	60.6	9.5%	174	59	72 (69%)	9	25%
	France	**57.0**	**8.9%**	**152**	**60**	**60 (58%)**	**5**	**26%**
6	Finland	31.2	4.9%	64	12	38 (37%)	5	20%
7	Belgium	27.9	4.4%	59	16	46 (44%)	4	32%
8	Portugal	23.9	3.7%	54	20	29 (28%)	4	30%
9	Ireland	23.2	3.6%	43	17	32 (31%)	5	35%
10	Sweden	20.9	3.3%	42	14	28 (27%)	2	12%

Share of grant by call (Top 5)



Grant share vs GDP share (1.0 = parity)

Top 10 EU economies

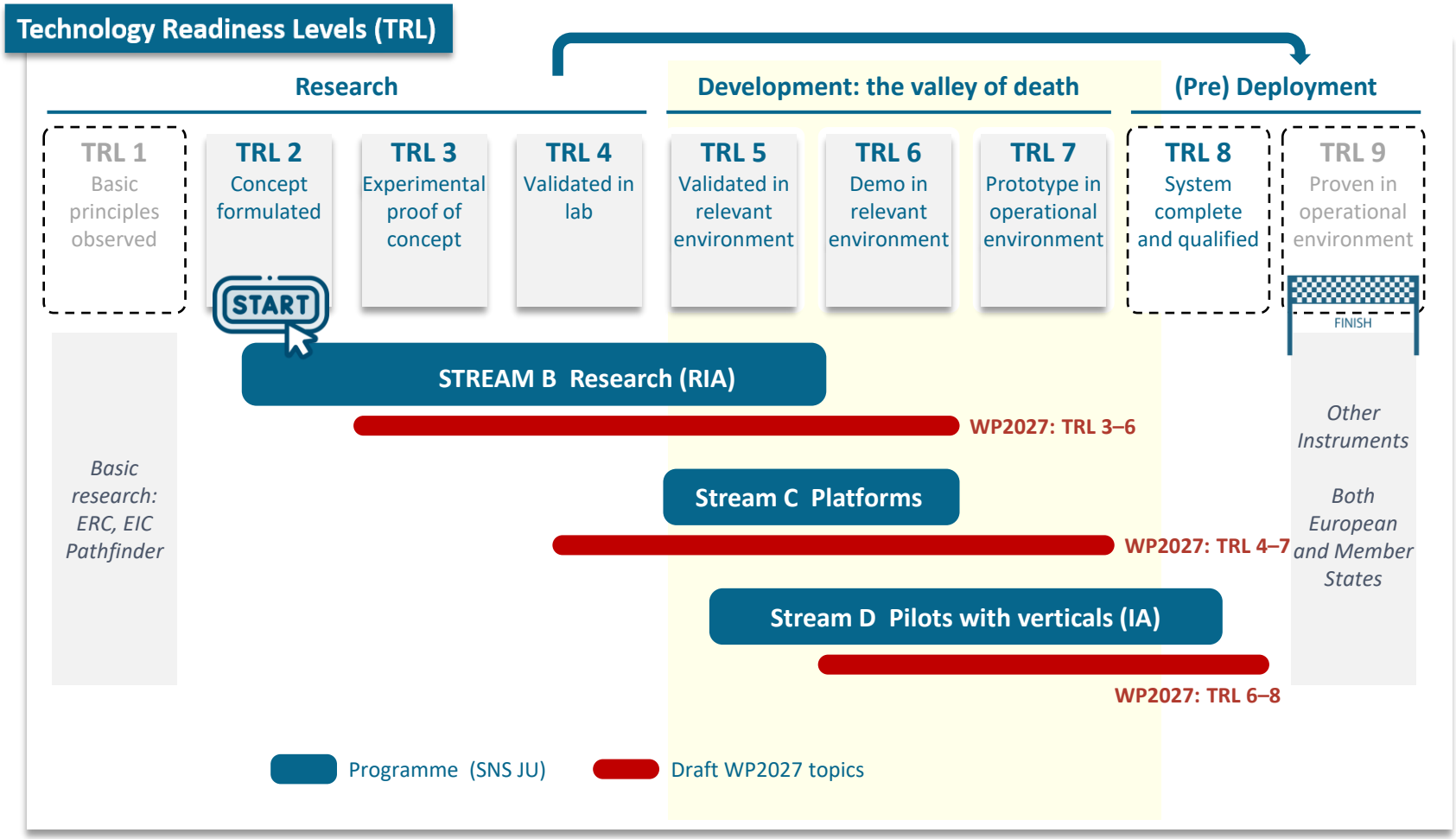


Over-performers outside top 10

Cyprus	12.8×
Greece	11.2×
Finland	3.5×
Luxembourg	2.6×
Portugal	2.4×

Our goal is to progress projects **from lab to market**

How close is a European technology project to real-world use?



Using TRL as SNS JU's steering variable

Sets the instrument
RIA (100% funding) for Stream B; IA (70% for companies) for C and D, so industry co-invests more as maturity rises

The valley of death
TRL 5–7 is where progress slows down; Stream C platforms and Stream D vertical pilots are designed to carry them across

Stops at TRL 7-8
TRL 8–9 needs deployment decisions and money (operators, CEF Digital, InvestEU, IPCEI, national plans); We must plan the complementary impact of other instruments to ensure FP10 impact

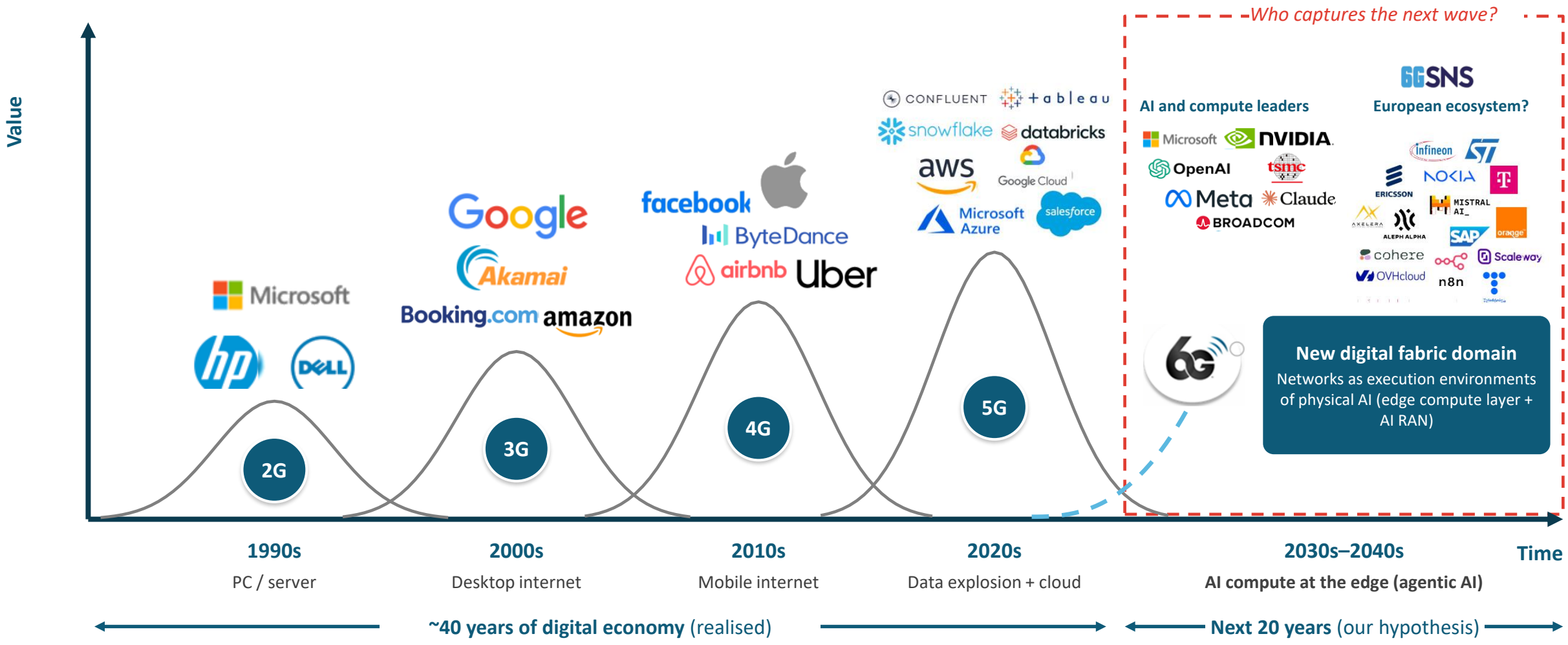
WP2027 is moving towards higher TRLs
Stream B topics up to TRL 6, Stream C FEM at TRL 6 - 7, Stream D Quantum-Safe up to TRL 8

TRL is an opportunity to steer, not just to label

Fund valley of death crossing specific activities, and plan for TRL 9 hand-off to other deployment instruments before the SNS JU ends

Each network generation is connected to a digital wave

6G makes the network itself the **execution environment for Ubiquitous AI**



Why 6G matters? A network that senses, computes and acts

3 new capabilities that will open opportunities for network operators & vertical industries

These capabilities are being architected now, the window to act is only 2-3 years

Ubiquitous connectivity (NTN)

One fabric across **terrestrial, Wi-Fi and satellite**, with performance that vertical applications request through **open APIs**.

MONETISATION

Sell guaranteed performance, not gigabytes: slices and Quality-on-Demand APIs priced by service level**.**

Network as a sensor (ISAC)

Radio signals detect **motion, position and environment**: the network becomes a real-time spatial sensor, not just a data pipe.

MONETISATION

Sensing-as-a-service: location, presence and safety data for factories, ports and cities.

AI at the network-edge

Inference runs inside the network-edge, close to users due to latency requirements. In SNS trials, edge cut latency 4–5x versus cloud.

MONETISATION

Edge AI with service guarantees: real-time inference and network-native apps sold to verticals with SLAs.



Value goes to whoever orchestrates connectivity, sensing and AI into services that industry verticals buy

What makes it possible

Open, modular architecture: AI-native, API-exposed, Agentic AI

Resilience & trust: security and sovereignty by design

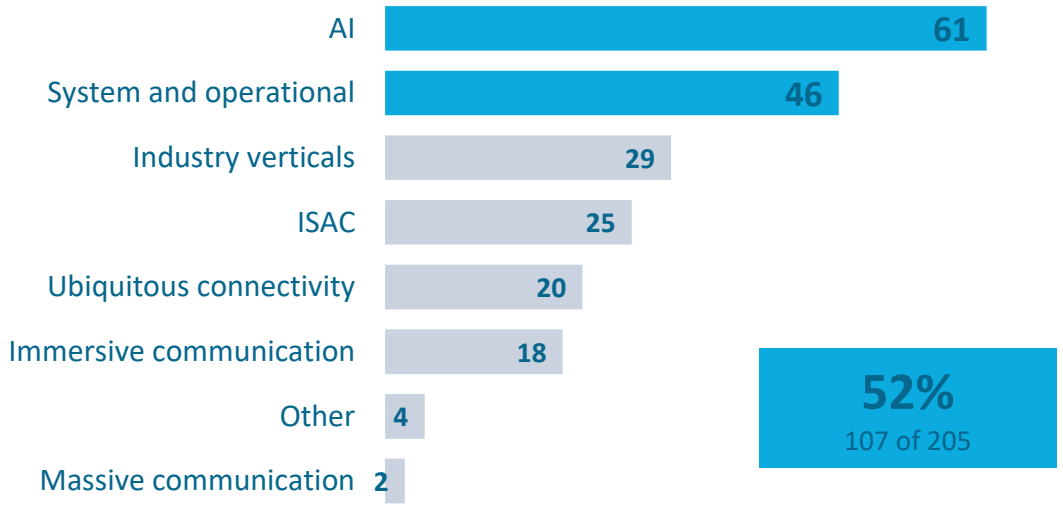
Sustainability: energy efficiency as a design constraint

Rel.20 study item: **6G use cases and service requirements**

Analysis of 3GPP **TR 22.870**: **205 use cases** across **8 domains**

Use cases by domain (205 in total)

Approved Q1 2026



Use cases will become Rel-21 requirements
agent communication, digital twins, resilience, ISAC, NTN

Anchor for Rel-21 normative work
What the distribution tells us

1. **AI and system aspects dominate (107 of 205)**
   6G is being framed globally as an **AI-native, secure and resilient** system rather than primarily as a faster/feature rich consumer radio

2. **Sensing and coverage as new 6G features (45)**
   ISAC (UAV supervision, PPDR, pedestrian safety) and ubiquitous connectivity (NTN/LEO, precise positioning)

3. **Massive IoT has faded (2), and verticals are mostly robots and air mobility (29)**
   5G and RedCap are seen as sufficient for Iot; attention moves from things to agents and physical AI

4. **Counts reflect contributor effort, not future market value**
   Proposals come from vendors and operators; **demand evidence is still missing**.
   Use cases feed the Rel-21 Stage-1 requirements (TS 22.270)

AWP 2027: **final SNS JU call** before FP-10

17 topics with Stream D taking the largest share

AWP 2027 under consultation

Stream B 9 projects — 91 M€

Revolutionary and evolutionary R&I

- **Flagship: beyond 6G** — **TRL 4–5** RIA bridge to FP10 — **20**
- **Long-term R&I (3 × 5 M€)** — **TRL 3–4** RIA low-TRL options* — **15**
- **Wireless communications** — **TRL 4–6** RIA — **12**
- **Optical connectivity for massive AI** — **TRL 6** RIA — **12**
- **Security and resilience by design** — **TRL 6** RIA — **12**
- **E2E AI-native networks** — **TRL 6** IA — **13**
- **EU–Taiwan AI-RAN** — **TRL 6** RIA — **7**

Stream C 2 projects — 30 M€

Strategic capabilities

- **FEM for 6G (phase 3)** — **TRL 6–7** IA synergy Chips JU — **15**
- **Quantum connectivity** — **TRL 4–5** RIA EuroQCI — **15**

Stream D 6 projects — 95 M€

Large-scale pilots (IAs)

- **Telco AI Platform** — **TRL 7** sovereign edge AI — **20**
- **Network-native media** — **TRL 7** immersive services — **15**
- **Smart Industry** — **TRL 7** Industry 5.0 — **15**
- **ISAC for public policies** — **TRL 7** drones, health — **15**
- **Quantum-safe security** — **TRL up to 8** PQC and QKD — **15**
- **Non-terrestrial networks** — **TRL 6-7** in-orbit & cross-region — **15**

CSAs 2 projects — 6 M€

Coordination and support

- **Operational CSA** — Programme support — **5**
- **IMT-2030 evaluation** — ITU-R, via 6G-IA — **1**

Cross-cutting: standardisation and open-source contributions expected for all topics.

Stream D: requires vertical engagement, monetisation evidence, sovereignty (CAMARA APIs), sustainability and resilience KPIs/KVIs

(*) Electromagnetic Continuum innovations. / Neuromorphic Comms. / Quantum Internet

AWP 2027: Streams B and C

Research and strategic capabilities that FP10 transition will build on

AWP 2027 under consultation

STREAM	TOPIC	M€	WHAT IT FUNDS	STRATEGIC GOAL
Stream B 91 M€	**Flagship: beyond 6G** TRL 4–5 RIA	20	Blueprint for a converged communication–sensing–computing platform: AI, quantum, chips, NTN	**Bridge to FP10 with one European reference architecture for Draghi-report technologies**
	Long-term R&I (3 × 5) TRL 3–4 RIA	15	Electromagnetic Continuum innovations. / Neuromorphic Comms. / Quantum Internet	**Keep a pipeline of breakthrough options beyond day-1 6G**
	Wireless communications TRL 4–6 RIA	12	AI-native PHY/MAC, XL-MIMO, FR3 sharing, uplink capacity, sensing in the RAN	**Turn SNS radio results into Rel-21/22 influence and AI-ready uplink**
	Optical for massive AI TRL 6 RIA	12	Data-centre interconnect, multi-band and hollow-core fibre, edge transport, fibre sensing	**Make European optical networks the backbone of distributed, greener AI**
	Security and resilience TRL 6 RIA	12	Survivable architectures, AI-enabled security ops, subsea and optical protection, zero trust	**Protect critical connectivity end to end under NIS2, CRA and the 5G Toolbox**
	E2E AI-native networks TRL 6 IA ·	13	Agentic network management, verifiable intent, open telecom models, Physical AI	**Lead AI-native operations with open European network models**
	EU–Taiwan AI-RAN TRL 6 RIA	7	AI-RAN hardware co-design, device–edge inference, ISAC inference, multi-vendor SMO	**Pair EU networks with Taiwan AI hardware in a shared AI-RAN ecosystem**
Stream C 30 M€	**FEM for 6G, phase 3** TRL 6–7 IA Chips JU synergy	15	Integrated FR3 front-end module, over-the-air tests, SBFD, 10 cm ISAC, pilot lines	**Build a European 6G RF supply chain and diversify components**
	Quantum connectivity TRL 4–5 RIA	15	Metro-scale QKD, entanglement distribution, key-management integration, satellite links	**Turn EuroQCI testbeds into network-integrated quantum security**

AWP 2027: Stream D

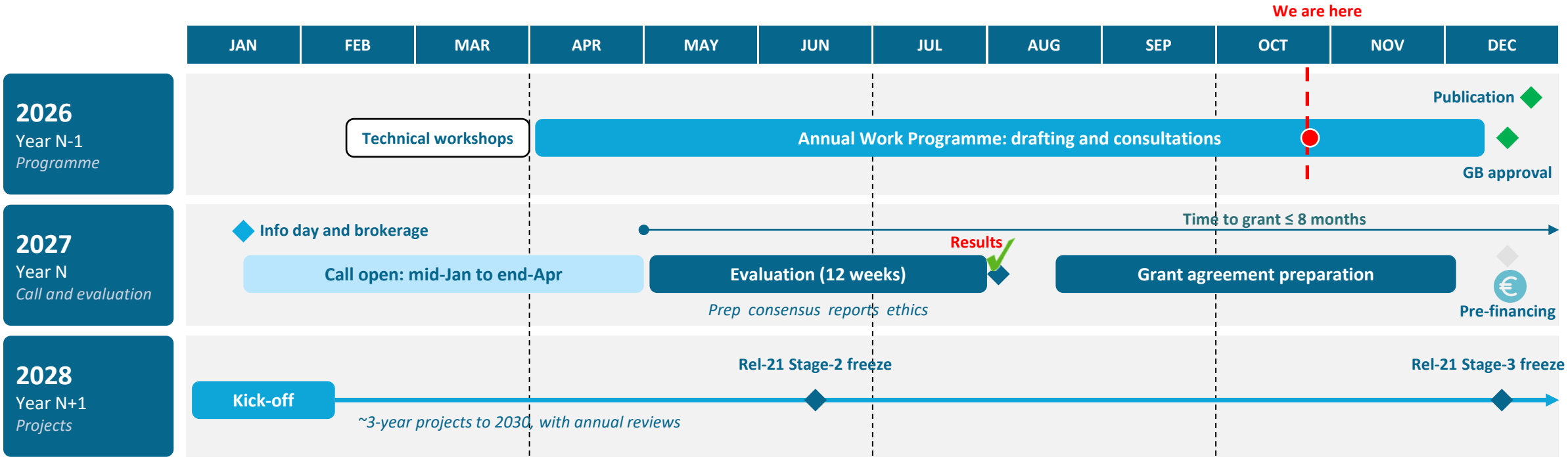
Pilots must turn 6G features into monetisable, sovereign services

AWP 2027 under consultation

STREAM	TOPIC	M€	WHAT IT FUNDS	STRATEGIC GOAL
Stream D 95 M€	**Telco AI Platform** TRL 7 IA	20	Vendor-agnostic edge AI on EURO-3C and Sylva, telemetry data layer, multi-operator pilots	**Create a sovereign shared telco AI edge and avoid hyperscaler lock-in**
	Network-native media TRL 7 IA	15	Real-time immersive and holographic services, positioning, network exposure APIs	**Prove monetisable premium 6G services with European XR players**
	Smart Industry TRL 7 IA	15	Deterministic networking, uplink-centric radio, industrial ISAC, AI control loops	**Make 6G a deployment-ready, replicable upgrade for Industry 5.0**
	ISAC for public policies TRL 7 IA	15	UAV detection and tracking, health monitoring, sensing service framework	**Create public-buyer demand for sensing and inform licence rules**
	Quantum-safe security TRL up to 8 IA	15	PQC migration, crypto inventory and agility, hybrid PQC–QKD in vertical pilots	**Make critical sectors quantum-safe before the threat materialises**
	Non-terrestrial networks † TRL 6-7 IA	15	In-orbit end-to-end TN/NTN, direct-to-device and broadband, multi-tenancy, business models	**Keep European satcom leadership on 3GPP NTN beyond IRIS²**
CSAs 6 M€	**Operational CSA** CSA	5	Programme coordination, KPI and KVI database, EuCNC 2029–30, infrastructure roadmap	**Secure continuity and measurable impact into FP10**
	IMT-2030 evaluation CSA	1	Independent European evaluation of IMT-2030 radio interface proposals at ITU-R	**Give Europe a formal voice in global 6G approval**

AWP2027 timelines

Adopted in Dec 2026, the call runs Jan–Apr 2027 and projects start in Jan 2028



Annual Work Programme
Consensus on priorities

Consortia
≥3 countries,
>20% SMEs (tie-break),
other rules

Independent evaluation
3 external experts plus panel

Final list approval
Governing Board decision

~3-year projects
Annual reviews

If you want to know more….

European Commission | EU Funding & Tenders Portal

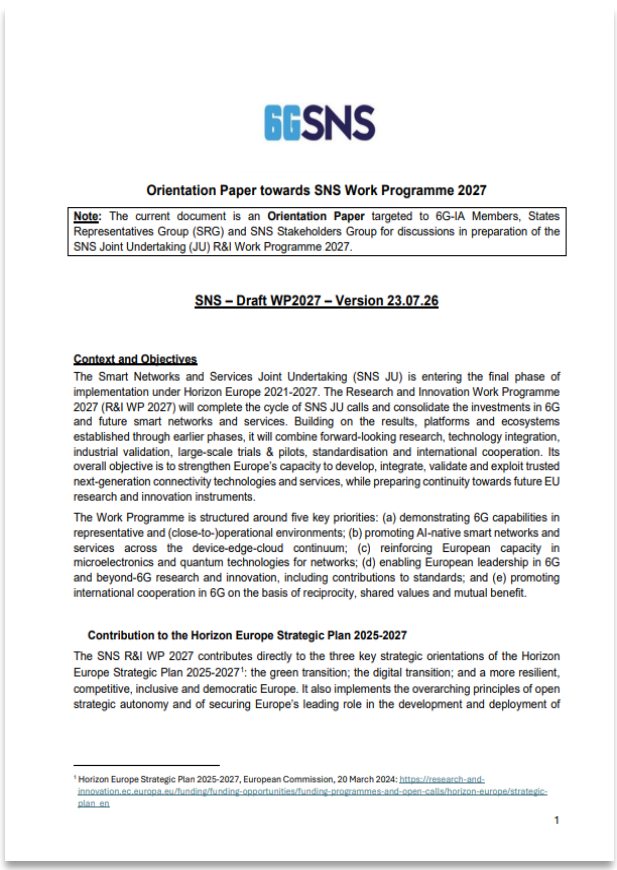
June 2026



October 2026



December 2026



6GSNS

Orientation Paper towards SNS Work Programme 2027

Note: The current document is an **Orientation Paper** targeted to 6G-IA Members, States Representatives Group (SRG) and SNS Stakeholders Group for discussions in preparation of the SNS Joint Undertaking (JU) R&I Work Programme 2027.

SNS – Draft WP2027 – Version 23.07.26

Context and Objectives

The Smart Networks and Services Joint Undertaking (SNS JU) is entering the final phase of implementation under Horizon Europe 2021-2027. The Research and Innovation Work Programme 2027 (R&I WP 2027) will complete the cycle of SNS JU calls and consolidate the investments in 6G and future smart networks and services. Building on the results, platforms and ecosystems established through earlier phases, it will combine forward-looking research, technology integration, industrial validation, large-scale trials & pilots, standardisation and international cooperation. Its overall objective is to strengthen Europe's capacity to develop, integrate, validate and exploit trusted next-generation connectivity technologies and services, while preparing continuity towards future EU research and innovation instruments.

The Work Programme is structured around five key priorities: (a) demonstrating 6G capabilities in representative and (close-to-)operational environments; (b) promoting AI-native smart networks and services across the device-edge-cloud continuum; (c) reinforcing European capacity in microelectronics and quantum technologies for networks; (d) enabling European leadership in 6G and beyond-6G research and innovation, including contributions to standards; and (e) promoting international cooperation in 6G on the basis of reciprocity, shared values and mutual benefit.

Contribution to the Horizon Europe Strategic Plan 2025-2027

The SNS R&I WP 2027 contributes directly to the three key strategic orientations of the Horizon Europe Strategic Plan 2025-2027[1]: the green transition; the digital transition; and a more resilient, competitive, inclusive and democratic Europe. It also implements the overarching principles of open strategic autonomy and of securing Europe's leading role in the development and deployment of

[1] Horizon Europe Strategic Plan 2025-2027, European Commission, 20 March 2024: https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/strategic-plan_en

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Contact us at: smart-networks.europa.eu