

SMART NETWORKS AND SERVICES JOINT UNDERTAKING (SNS JU)



2024

WORK PROGRAMME

In accordance with the Council Regulation (EU) No 2021/2085 and with Article 33.4(e) of the Financial Rules of the Smart Networks and Services Joint Undertaking.

The Work Programme is made publicly available after its adoption by the Governing Board.

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1. LIST OF ACRONYMS, DEFINITIONS AND ABBREVIATIONS

6G IA 6G Industrial Association
AAR Annual Activity Report
AWP Annual Work Plan
CA Commitment Appropriations
CAS Common Audit Service
CSA Coordination and Support Action
CSC Common Support Centre
EC European Commission
ECA European Court of Auditors
EDPS European Data Protection Supervisor
FP7 European Framework Programme 7 (2007-2013)
FWC Framework Contract
GB Governing Board
HE Horizon Europe
HR Human Resources
IA Innovation Action
IAS Internal Audit Service
ICF Internal Control Framework
ICS Internal Control Standards
IKAA In Kind Additional Activities
IKOP In Kind Operational Activities
KPI Key Performance Indicator
KVI Key Value Indicator
NCPs National Contact Points
MEP Member of the European Parliament
PA Payment Appropriation
PPP Public-Private Partnership

RIA Research and Innovation Action

SC Scientific Committee

SRIA Strategic Innovation and Research Agenda

SLA Service Level Agreement

SNS JU Smart Networks and Services Joint Undertaking

SO Strategic Orientation

SRG States Representatives Group

SMEs Small and medium-sized enterprises

TA Temporary Agent

TRL Technology Readiness Level

TTG Time To Grant

TTI Time To Inform

TTP Time To Pay

2. INTRODUCTION

2.1. Mission statement of Smart Networks and Services Partnership

The Smart Networks and Services Joint Undertaking (hereinafter “SNS JU”), established by the Council Regulation (EU) 2021/2085 (hereinafter “Regulation”), aims to foster European technological capacities as regards smart networks and services value chains. In this context, the aim is to enable European players to develop the R&I capacities for 6G technologies as a basis for future digital services in the period to 2030. The initiative also aims to advance the development of lead markets for 5G infrastructure and services in Europe. Both sets of activities (for 5G infrastructure deployment and 6G R&I) will foster the alignment of future smart networks and services with EU policy and societal needs, including competitiveness, robust supply chains, energy efficiency, privacy, ethics and cybersecurity.

Background and link with the Strategic Research and Innovation Agenda

The 5G PPP White Paper describing a ‘European Vision for the 6G Network Ecosystem’¹ highlights that ‘6G is expected to play a key role in the evolution of the society towards the 2030’s, as the convergence between the digital, physical and personal worlds will increasingly become a reality’. The White Paper recommends public and private R&I investment to focus on key 6G technologies, ‘such as programmability, integrated sensing and communication, trustworthy infrastructure, scalability and affordability, as well as AI/ML, microelectronics (at least in design), photonics, batteries (e.g., for mobile devices), software, and other technologies that may help to reduce the energy footprint’.

According to Article 16 of the Council Regulation² establishing the SNS Joint Undertaking, the Governing Board (GB) adopts the Strategic Research and Innovation Agenda (SRIA) at the beginning of the initiative and amends it throughout the duration of Horizon Europe, where necessary. The SRIA shall identify the partnership’s targeted impact, foreseen portfolio of activities, measurable expected outcomes, resources, deliverables, and milestones within a defined timeframe. It shall also identify the other European partnerships with which the SNS JU shall establish a formal and regular collaboration and the possibilities for synergies between the SNS JU’s actions and national or regional initiatives and policies based on information received by the participating states or the States’ Representatives Group (SRG) as well as synergies with other Union programmes.

The SRIA is produced by the NetWorldEurope European Technology Platform (ETP), representing more than 1000 entities. The SRIA includes contributions from the 6G industry association (6GIA), the Alliance for Internet of Things Innovation (AIoTI) and the Networked European Software and Services Initiative (NESSI) and Satellite Communications (SATCOM) community. Further to the SRIA 2020³ adopted by the SNS GB on 15 December 2021⁴, the revised SRIA 2022 has undergone a public consultation in November 2022. Other external organisations provided inputs at different stages of the revision of the SRIA.

The SRIA 2022⁵ provides a summary of the key areas that the European R&D Community believes relevant for the future of communications technology to meet the objectives of the SNS JU. This analysis has been

¹ <https://5g-ppp.eu/wp-content/uploads/2021/06/WhitePaper-6G-Europe.pdf>

² <https://eur-lex.europa.eu/eli/reg/2021/2085>

³ <https://bscw.5g-ppp.eu/pub/bscw.cgi/d367342/Networld2020%20SRIA%202020%20Final%20Version%202.2%20.pdf>

⁴ Decision of the GB of the SNS JU No 12/2021.

⁵ URL: Available from 15 December 2022 at: <https://www.networldeurope.eu/sria-and-whitepapers/>

anchored in the challenges identified by the United Nations Sustainable Development Goals, and in the current policies inside the European Union, notably the Path to the Digital Decade and European Green Deal. It has identified research and innovation directions for the communications technologies and systems, in order to realise these high-level societal objectives. These are implemented into the SNS JU R&I Work Programme 2023-2024.

In addition, the Path to the Digital Decade⁶ recognises that a sustainable digital infrastructure for connectivity is ‘*an essential enabler for taking advantage of the benefits of digitisation, for further technological developments and for Europe’s digital leadership*’. It therefore aims to achieve all populated areas covered by 5G by 2030. As part of its objectives, the SNS JU is expected to help lead markets for 5G infrastructure and services to develop in Europe by coordinating 5G deployment with Connecting Europe Facility 2 (CEF Digital). Pursuant to the Regulation that established the SNS JU, its role includes (i) a strategic coordination mechanism for CEF Digital; (ii) accelerating the development and widespread deployment of 5G and (iii) promoting the coordination and strategic support of 5G deployment for Connected and Automated Mobility along cross-border corridors. In this context, the SNS JU shall coordinate stakeholder activities in relation to CEF Digital, assessing the need for reviewing the Strategic Deployment Agenda (SDA) for 5G and facilitating the establishment of project pipelines.

2.2. Foreword - Message from the Executive Director

I am honoured to share with you the annual work program for the year 2024, highlighting the significant achievements that have marked 2023 in the realm of European innovation. As the Executive Director of the SNS JU, it is my privilege to provide you with insights into the transformative initiatives shaping the future.

A New Horizon in European Innovation: Europe's Commitment to 6G

The year 2023 has ushered in a promising era in European innovation. Our commitment to fostering cutting-edge technology is more resolute than ever, as we set our sights on the future of connectivity and technological advancement.

Europe's commitment to 6G technology is unequivocal. Our Smart Networks and Services Joint Undertaking (SNS JU) is at the forefront of this journey, as demonstrated by the investment of approximately €131 million in a portfolio of 27 research, innovation, and trial projects during the year. This commitment underscores Europe's dedication to leading the global charge in developing 6G ecosystems and shaping the digital landscape.

The relevance of 6G technology to Europe cannot be overstated. Our strategy extends beyond traditional research boundaries, embracing a broader end to end value chain approach that encompasses connectivity, components, and devices. From edge clouds to IoT devices and enabling technologies, Europe is well-positioned to harness these innovations. Leveraging our strengths in domains such as automotive,

⁶ Proposal for a Decision of the European Parliament and of the Council establishing the 2030 Policy Programme “Path to the Digital Decade”, COM(2021) 574 final.

healthcare, Industry 4.0, and energy, we are poised to excel in an hyperconnected future where technology is ubiquitous.

By nurturing 6G technologies, Europe strives to consolidate its leadership in existing domains and pioneer capabilities in emerging areas. This will ensure our competitiveness in a swiftly evolving technological landscape, bolstering our region's potential for sustainable growth and global leadership.

Throughout 2023, we have witnessed remarkable progress in our 6G projects. Challenges, such as launching the first wave of SNS projects, selecting the second wave based on WP 2023-2024, and initiating international collaborations, have been surmounted. A fully functional and autonomous SNS JU office has been established under the guidance of a new Executive Director.

Looking Forward to 2024

In the coming year, 2024, we eagerly anticipate new challenges and opportunities. The primary focus will be on launching the third wave of projects, with special attention given to new lighthouse projects in microelectronics and sustainability. These projects are poised to redefine the landscape of innovation, not only in Europe but worldwide.

In 2024, we will also focus on new priorities. Business and societal aspects, regulatory and ethical issues, cybersecurity and trustworthiness will take centre stage. These issues are integral to the responsible development and deployment of 6G technologies, and we are committed to addressing them comprehensively.

As we move into this exciting phase, our mission is clear: to strengthen collaboration with key industry verticals. The transformative impact of 6G technologies extends far beyond the realm of technology alone. It encompasses industries as diverse as transportation, healthcare, and manufacturing. It is through cross-sector partnerships that we can harness the full potential of this technology and drive meaningful, sustainable change.

In conclusion, Europe's commitment to 6G technologies is a testimony of our vision, innovation, and resilience. It is signalling Europe's readiness to shape the future of technology and connectivity in a way that is aligned with our values.

We remain dedicated to driving progress and fostering innovation. Together, we shall ensure that Europe continues to stand at the vanguard of the 6G revolution.

3. WORK PROGRAMME 2024

3.1. Executive summary 2024

The present SNS JU Work Programme 2024 ('WP 2024') provides an overview of the main activities and related resource needs of the SNS JU during the year 2024. This includes information about the planned 2024 calls for R&I proposals as outlined in annex 2. It has to be noted that the R&I activities include some brief high-level perspectives on Work Programme 2025, however, these orientations are indicative and will be subject to further elaboration during 2024.

Operations

The SNS R&I WP2024 addresses the technological and business realisation underpinning the 6G vision⁷, targeting massive digitisation of societal and business processes through intelligent connectivity across the human, physical and digital world.

The focus of 6G R&I in the WP2024 is to complement R&I on enabling technologies / technical enablers and Proof of Concepts (PoCs) with more system-oriented R&I and dedicated prototyping and experimentation, whilst leaving room for long-term R&I on disruptive concepts (e.g. academics driven).

This third Work Programme of the SNS JU continues the second phase implementation of the SNS roadmap. Compared to the 2 previous Calls, it includes:

- a reinforced focus on key technological topics targeting a higher TRL range, compared to the 2022 and 2023 calls;
- activities designed to further support the 6G standardisation phase (target 2025 with first batch of 6G Study Items);
- a reinforced emphasis on sustainability, societal challenges and economic aspects;
- a set of activities on end-to-end system integration of SNS AI/ML solutions
- a set of activities on experimenting & validating microelectronics and photonics solutions for 6G, in the wake of the elaboration of the Corenect Roadmap , and extending/reinforcing the cooperation with the Chips JU and the European Partnerships for Photonics ;
- A synergy Call with EU-RAIL JU with a contribution of up to EUR 1 000 000 from the SNS JU: HORIZON-ER-JU-2024-FA2-SNS: EU-RAIL – SNS SYNERGY: Digital & Automated testing and operational validation of the next EU rail communication system. The selection criteria and the call conditions can be found in the EU-Rail Work Programme “Europe’s Rail Work Programme 2023-2024”
- a set of focused international cooperation activities, targeting Japan and South Korea;
- complementary and extended opportunities to test 6G technologies through Proof of Concepts and trials with verticals;
- further extension of the stakeholder’s base, notably towards the microelectronics, photonics, AI and vertical user industries.
- coordination and support activities (CSAs) to facilitate the activities of the European SNS JU community and the related Work Programmes (building on Call 1 and Call 2 activities), and to further support national and international collaboration for 6G.

⁷ <https://5g-ppp.eu/wp-content/uploads/2021/06/WhitePaper-6G-Europe.pdf>

The SNS JU will also provide support services for projects implemented under the first and second calls and notably on: i) implementation of the collaboration clause of the MGA through coordination of joint project work; ii) support to the implementation of Financial Support to Third Parties (FSTP).

At R&I level, the target is to launch **one single call in January 2024** supported by all needed documents, procedures and configurations of the IT systems.

The estimated EU **expenditure for the 2024 call is EUR 129M**. The budget is subject to its adoption by the budgetary authority and may be updated accordingly.

Annex 2 details the call 2024 part (2nd Call of SNS Phase 2).

Other 2024 activities include:

- R&I calls implementation, including evaluation, Grant Agreements, projects reviews, amendments and payments, experts' management, portfolio analysis, KPI tracking, audit support, etc.;
- Various supporting activities related to communication, administration, finance;
- Preparation of the Work Programme 2025 and related SRIA update;
- Coordination of stakeholder activities in relation to the CEF Digital Programme in particular reviewing the Strategic Deployment Agenda (SDA) for 5G for Connected and Automated Mobility and facilitating the establishment of project pipelines;
- Contribute to the Work Programme of CEF Digital as well as coordinating the piloting and deployment for pan-European 5G corridors for connected and automated mobility under CEF Digital;
- Pursue the definition on KPIs/KVIs related to 6G and related standards;
- Support the 2024 edition of the EUCNC & 6G Summit conference;
- Coordinating information sessions on the 2024 SNS R&I work programme as well as specific rules for participation;
- Support to audits and audit processes;
- Support the other department: administration & finance;
- Implement the standard operating procedure (SOP) on Access to documents, organise the training of the staff on access to documents issues and create the internal control processes and methods;
- Reporting, input to Horizon Europe evaluation and monitoring, preparation of progress monitoring reports (including for 2023);
- Work with the EC's central services when necessary to address horizontal legal, financial and administrative issues in a manner coordinated among JUs;
- Ensuring the smooth launch and operations of an autonomous JU office environment in 2024 including recruitment to full staffing of the JU office and needed SLA's for steady operations of the JU;
- Initiate and coordinate the various SNS Working Groups, in alignment to the Governance model of the SNS JU, and ensure their effective contribution to 6G R&I and 5G deployment.

Further develop strong cooperation and information sharing with Member States with regular support to SRG meetings.

Communication

In 2024, the SNS JU will be engaging in designing and deploying a clever and carefully planned communication strategy, raising its profile and visibility online as well as its presence, at key moments where the future of smart networks and services is discussed and shaped (e.g. possible presence at MWC 2024, workshop organisation).

In 2024, the SNS JU aims at stepping up its communication efforts, continuing growing the online presence (fast growing community), coordinating resources between existing CSAs for a maximum impact, and broadening the communities to which its messages are addressed. Specific attention will be paid to microelectronics and sustainability, the two Lighthouses of the Annual Work Plan and its 2024 Research and Innovation dimensions.

Administration and Finance and Human Resources

SNS JU achieved its financial autonomy in October 2023 and since then the JU is managing its own budget. Year 2024 will be the first year of several financial tasks, mainly the elaboration of the annual accounts of 2023 subject to an audit by external auditors, the creation of the Annual Activity Report and the budgetary and financial management reports. This year we will manage our first REPAs (call 1) and related reviews by experts.

In 2024 the team of Administration and Finance will be complete. A new Finance Officer will join in January 2024 and the Operational team is reinforced with four new Project Officers.

The JU will be complete and fully operational in 2024, meaning budget consumption higher than in 2023, especially with regards administrative budget.

3.2. Operations

3.2.1 Objectives, indicators and risks

The below table for 2023 indicates the actual achievements (current figures), while for the coming years (2024-2027) it represents target figures.

The tables below are updated

KPI Name	Unit of measurement	2022	Target 2023	Target 2025	Target 2027	Ambition >2027	Risk and action plan (if relevant)	Comments
Resources (input), processes and activities								
R1. SME innovation & participation	% of SMEs participation	~18%	20%	20%	20%	20%	For the SNS R&I WP 2023-2024 a similar approach has been followed as in 2022. Although the SNS R&I WP provides explicit hints for the participation of SMEs in various Streams, dedicated webinars for SMEs (e.g., through NetworldEurope's SME WG, or open Information days) will be used to mobilize European SMEs.	Current analysis from the first call indicates that SMEs from selected projects will receive the 18% of the funding budget without taking into consideration that 7 projects will operate cascade funding. In terms of actual participation in Phase 1, selected proposals have 84 SMEs which means 33% out of all the stakeholders (considering 253 stakeholders where affiliated entities are not counted). In case of counting affiliated entities then the number of participants is 288 which means that 29% are SMEs.
R2. Rapid diffusion	#of end-user workshops & webinars [cumulative]	0	25	60	90	125		Based on the evaluation process selection and contractual agreements expected by the end of 2022. The projects are expected to start in 2023

R3. High risk research funding	% of total funding	~68%	50%	50%	30%	N/A	The risk for not meeting this objective in 2023 is minimum as low TRL activities are planned for B projects in the call of 2023 that constitute ~70% of the overall funding.	
R4. Standardization contributions	Contributions to SDOs [cumulative]	0	50	350	750	1000		Based on the evaluation process selection and contractual agreements expected by the end of 2022. The projects are expected to start in 2023.
R5. Share on family patents	% of patent families	0	15%	15%	15%	15%		Based on the evaluation process selection and contractual agreements expected by the end of 2022. The projects are expected to start in 2023.
	Patent grant rate							
		0	60%	60%	60%	60%		
R6. Scientific excellence	# of publications [cumulative]	0	100	400	700	1000		Based on the evaluation process selection and contractual agreements expected by the end of 2022. The projects are expected to start in 2023.
R7. Reach an appropriate balance between research, innovation, and deployment	% RIA	RIA 78% IA 20% CSA 2%	78% RIA	N/A	N/A	N/A	The risk for not meeting this objective in 2023 is minimum based on the structure of the SNS R&I WP 2023-2024 and the mobilization of interested stakeholders as monitored during the first Call.	The SNS R&I WP has been designed in a way to focus on research activities during the first phase of the SNS while working in parallel in large scale trials. This % will be reevaluated during the following phases to maximize the impact of
	% IA		20% IA					
	% CSA		2% CSA					

								the SNS results at a global level.
R.8 Accelerate the development of energy efficient networks	# of related projects investigating to a significant extent energy efficiency topics: >=3	0	>=3	N/A	N/A	N/A	Based on the SNS R&I WP 2023 and 2024, energy efficiency has again a prominent place in multiple streams. Still to ensure that proposals will keep energy efficiency in the core activities may require dedicated sessions during Information Days. Moreover, in 2024 a lighthouse project is being planned to aggregate the efforts from Phase1 and Phase 2 projects so as to achieve a higher impact	The gap analysis of Phase 1 selected projects has identified around 10 projects aiming to work on energy efficient networks.
R.9 Ensure research on secure future digital services	# of related projects:	0	>=3	N/A	N/A	N/A	Based on the first SNS R&I WP, topics related to the security toolbox and privacy support have a prominent place in multiple streams. Still to ensure that proposals will keep security and privacy in the core activities may require dedicated sessions during Information Days.	The gap analysis of Phase 1 selected projects has identified around 12 projects aiming to work in security.
R.10 Collaboration and synergies with other Partnerships	# collaborations	0	2	5	6	6	6G-IA has proactively engaged in discussions with other Partnerships on SNS related topics. This activity will be further strengthened via the	In 2022, a strong collaboration with KDT and Photonics 21 has been established. These ties will be further strengthened during the following years.

							SNS office and 6G-IA and through the SNS CSA projects.	Also, during 2022 links to national initiatives such as Germany and Finland have been established.
Outcomes (SO)								
O.1 Development of energy efficient networks	White papers	GeSI report on Energy consumption by 2030	1	2	3	>3		Based on the evaluation process selection and contractual agreements expected by the end of 2022. The projects are expected to start in 2023.
	[cumulative]							
O.2 Technological solutions consensus building	White papers	0	1	2	3	N/A	Working towards this direction, activities are planned for 2022 (e.g. public consultation for 6G-IA's vision white paper on 6G technologies) and 2023. The target is to have a first consensus by the end of SNS' first phase (2023).	Based on the evaluation process selection and contractual agreements expected by the end of 2022. The projects are expected to start in 2023.
	[cumulative]							
O.3 Advanced 6G solutions for verticals	#of different vertical types engaged [cumulative]	0	3	6	10	10	In the second phase of the Partnership, the key engagement of verticals will happen again in Stream D where it is expected that 4 large-scale trials will be implemented. Even if the same vertical sectors are selected in Stream D, vertical industries are expected to be engaged in other SNS R&I WP Stream projects that will demonstrate the results of B5G and 6G solutions.	The gap analysis of Phase 1 selected projects has identified around 10 verticals areas that will be addressed by the flagship project, Stream C projects and Stream D projects. Of course, not all verticals will be covered at the same level, but the first step to create related ecosystems will be initiated.

								Note that for 2023 and 2024 special attention is being given to core areas that are covered but at smaller extent in 2022 selected projects (e.g. automotive and transportation, e-health, etc.).
O.4 Foster emergence of new actors in the 6G supply chain	KPI7: # of related projects or cross-projects WGs dealing with the investigation and potential adoption of open ecosystem principles in B5G and 6G networks	0	>=2	N/A	N/A	N/A	Based on the second SNS R&I WP, topics related to disaggregated architectures have a prominent place in multiple streams. Still to ensure that proposals will keep this topic in the core activities may require dedicated sessions during Information Days	The gap analysis of Phase 1 selected projects has identified at least 4 projects working on open principles
Impacts (GO)								
I.1 A competitive data economy	% Market share for the communication network	40%	N/A	N/A	N/A	N/A		Based on the evaluation process selection and contractual agreements expected by the end of 2022. The projects are expected to start in 2023.
I.2 Reach Programme level consensus on 6G KPIs	white papers	Networl dEurope SRIA	1	2	3	N/A	Working towards this direction, activities are planned for 2022 and 2023 to compile results from 5G PPP projects as well as supporting organizations (e.g. NetworkdEurope) and 6G-IA WGs.	This is an ongoing process in 2022 where a first list of 6G KPIs will be uploaded in the context of 6G Start. The target is to have a first set of widely accepted 6G KPIs by the end of SNS' first Phase (2023).
	[cumulative]							

I.3 Uptake of digital solutions within verticals	Number of large-scale trials							Based on the evaluation process selection and contractual agreements expected by the end of 2022. The projects are expected to start in 2023.
	[cumulative]	0	3	6	10	>10		
I.4 Energy efficiency of telecommunication networks	% increase of energy efficiency of cellular communications	Legacy cellular systems (4G)	N/A	N/A	N/A	N/A		In 2023-2024, the key engagement of verticals will be in Stream D where it is expected that 4 large-scale trials will be implemented.

Table 1: Target SNS JU KPIs

Other risks

Risk	Action Plan	Comments
<p>Two risks have to be considered for 2023 and 2024</p> <p>1) Mobilisation of the stakeholders and understanding of the JU model and call conditions;</p> <p>2) slow start and delays in launching calls.</p>	<p>Risk 1 is mitigated through planned information events and public presentations of the programme. In 2022, several informal events already took place to raise stakeholders' awareness and to increase their preparedness. This has been amplified through Member States informal meetings, in view of relaying information and awareness at national level.</p> <p>Risk 2 is taken care of by a structured dialogue between Commission Services, States Representative groups and private stakeholders in view of making all call documentation available in time for an early start in 2023 and 2024.</p>	

3.2.2. Scientific priorities, challenges and expected impacts

The scope of the SNS R&I WP2023-24 is based on the NetworkEurope Strategic Research and Innovation Agenda (SRIA), the SNS JU SRIA adopted on 15/12/2021 (SNS JU GB Decision 12/2021⁸), the analysis of the coverage gaps resulting from the results and implementation of the first call, and on the identification of specific policy priorities, notably sustainability, micro-electronics and international cooperation.

In that context, the 2024 call covers multiple 6G objectives, notably:

Objective 1 – Full industry digitization and support of vertical industries

- To provide and validate (in trials and pilots) the enablers and solutions for full digitization of the European vertical industries to improve their business operations.

Objective 2 – Societal and political aspects

To foster the development and adoption of technologies and solutions that will help to address societal challenges that can directly or indirectly contribute to

- Achieve EU Green Deal's targets and relevant subset of United Nations SDGs' goals.
- Enable Europe to reach digital autonomy and technology sovereignty.
- Ensure that digitization of our society will be done in a secure way to retain Europe's leading position in trust and privacy.
- Create high-skill jobs and social inclusive technologies.

Objective 3 – Business aspects – Europe's share on the global market

- To reinforce European leadership in the smart networks domain, to seize opportunities to stimulate EU ICT capabilities in domains where the EU industry is less prominent, and mobilize

⁸ https://smart-networks.europa.eu/wp-content/uploads/2022/10/122021_sns_gb_decision_sria_including_annexdocx_89dnouztkolqi0m6dij7feh9da_82079_compressed-1.pdf

cross-disciplinary private sector forces to build solutions that will improve the operation of European vertical industries.

Objective 4 – B5G Systems design and support of emerging applications

- To research, develop and validate the next generation of smart networks and support emerging services, while enabling networks to efficiently support any service to be provisioned under all relevant environments.

The proposed R&I WP2024 includes the following three complementary streams:

- **Stream B:** it covers **research for revolutionary and evolutionary technology advancements**, in preparation for 6G and revolutionary and evolutionary advancements including IoT, devices and software. This Stream targets low to medium TRL in WP2024, although slightly higher TRL in WP 2024 compared to WP 2023, with the objective of delivering innovative solutions towards real-life sustainable networks in a long-term period, notably through PoCs.
- **Stream C:** it focuses on **SNS Enablers and Proof of Concepts (PoCs)** as considered in different use and problem contexts from different verticals, used to further develop and consolidate experimental infrastructure(s), in support of the various phases of the SNS Partnership. Stream C developments in WP 2024 will mainly focus on the integration of microelectronics and photonics, developed by related partnerships, in 6G experimental infrastructures.
- **Stream D:** it targets **large-scale SNS Trials and Pilots with Verticals**, including the required infrastructure. The aim is to explore and demonstrate technologies and advanced applications and services for the vertical domains. During the second SNS phase, Stream D projects are expected to mostly rely on SNS Phase 1 technologies and especially the infrastructures to be developed from Stream C projects. The goal is to gradually incorporate innovative 6G functionalities. From the societal point of view, stream D will highlight sustainability evaluations across verticals, validating exploitation of 6G across different vertical sectors.

Additional goals of the 2024 WP are detailed in the Annex R&I Work Programme.

3.2.3. Calls for Proposals

3.2.3.1. Calls

In Annex II, the R&I SNS WP2024 details **the call for 2024 that will open in January 2024 and will close in April 2024** with selected proposals to be contracted by the end of 2024. It covers the following topics:

Streams / Topics	Call 2024 Topic Budget (in M€)
HORIZON-JU-SNS-2024-STREAM-B (RIA)	
01-01: System Architecture	16.0
01-02: Wireless Communication Technologies and Signal Processing	16.0
01-03: Communication Infrastructure Technologies and Devices	16.0
01-04: Reliable Services and Smart Security	16.0
01-05: International Collaboration – EU-JP	3.0
01-06: International Collaboration – EU-KOR	3.0
01-07: Sustainability Lighthouse	13.0
01-08: Reliable AI for Reliable Communications Systems and Services	6.0
HORIZON-JU-SNS-2024-STREAM-C (RIA)	
01-01: SNS Microelectronics Lighthouse	10.0
HORIZON-JU-SNS-2024-STREAM-D (IA, with FSTP)	
01-01: SNS Large Scale Trials and Pilots (LST&Ps) with Verticals (IA)	25.0
HORIZON-JU-SNS-2024-STREAM-CSA (CSA)	
01-01: SNS Operations and Output optimisation	4.0
HORIZON-ER-JU-2024-FA2-SNS	
EU-RAIL – SNS SYNERGY: Digital & Automated testing and operational validation of the next EU rail communication system	1.0 ⁹
Total (M€)	129

⁹ Contribution of up to EUR 1 000 000 from the SNS JU to EU-Rail JU. The modalities of this transfer will be detailed in an arrangement between both organisations.

3.2.3.2. Measures for Newcomers

The SBA indicates the need for measures to attract newcomers, in particularly SMEs, higher education institutions and research organisations. Horizon Europe also promotes the engagement of a broad range of entities, including newcomers, as part of its underlying openness principle.

Call 1 (based on SNS R&I WP 2021-2022) and Call 2 (based on SNS R&I WP 2023) therefore made a careful balance between opening topics to JU members other than the Union and newcomers, through the Horizon Europe Third Parties Financing (FSTP) mechanism (usually referred as cascade funding, or open calls inside HE actions) and ensuring long-term commitment of beneficiaries through industrial association membership. A first batch of Open Calls has been implemented in 2023 and will be further extended in 2024 with relevant activities from Call 1 projects as well as through the selected Stream D projects from Call 2.

In addition, several actions are planned to publicise the SNS JU activities, the R&I WP and the call launched in 2024 to potential newcomers. It includes, web briefings, webinars, a dedicated proposers' Info Day and a range of presentations and materials available through the website of the EC, the SNS JU and the 6G IA. Once projects start, information sessions are organised for coordinators to learn about financial and reporting issues, amendments and other administrative aspects relevant for their work.

3.2.3.3. Conditions and management of the calls

The General Annexes to Horizon Europe for the Work Programme 2023-2024¹⁰ generally applies with a few exceptions that are specific to the SNS JU. These exceptions are detailed in Appendix 1 to the R&I Work Programme of Annex 2.

Openness: In line with Horizon Europe principles, all above R&I topics for 2023 are fully open (with IKOP generation incentives) with the exception of HORIZON-JU-SNS-2024-STREAM-B-01-07, HORIZON-JU-SNS-2024-STREAM-B-01-08 and HORIZON-JU-SNS-2024-STREAM-C-01-01 (up to half of the budget fully open) and HORIZON-JU-SNS-2024-STREAM-D-01-01 (up to 30% of the budget fully open). These exceptions are in line with Recital 21 and Article 5.2.(a) of the Council regulation (EU) 2021/2085 establishing the Joint Undertakings under Horizon Europe. Proposals that do not fulfil the above conditions, including the provision of a mandatory table of compliance, at the time of the proposal submission, will be considered ineligible and, therefore, will not be evaluated.

Security: Pursuant to the SBA, participation in Union funding programs in relevant technology domains is conditional on compliance with security requirements. Article 170 of the Single Basic Act (SBA) establishing the SNS JU, suggest that network elements deployed for large-scale experimentation or piloting may have to follow security scrutiny assessments, inspired by the EU toolbox for 5G security. Furthermore, the Commission recently adopted its strategy to enhance European Economic Strategy¹¹, referring to a broader set of risks and, in particular, risks related to technology security and technology leakage. Therefore, proposals are expected to demonstrate EU added value, with special attention to the role of suppliers, and in particular of the high-risk suppliers mentioned in the Commission Communication C(2023) 4049. In addition, proposals are expected to demonstrate that the economic security risks (e.g. technology leakage and supply chain risks) have been identified and addressed and that the management

¹⁰ Available from the tender portal in December 2022

¹¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023JC0020>

of project results, technologies and equipment in the proposed project comply with relevant security requirements.

IKOP: In Kind Contribution to Operational Activities (IKOP) is an important tool to stimulate private investments in addition to public investments for achieving the SNS JU's objectives. IKOP can only be generated by private members of the 6G-Infrastructure Association (6G-IA). For this Work Program, the estimated value of In-Kind Contribution to Operational Activities (IKOP) by the members other than the Union or their constituent entities shall be a minimum of EUR 8 million. A minimum program level IKOP contribution of 6% is targeted and proposals are expected to significantly contribute to this target, which is reflected in the impact section of the evaluation procedure.

SNS synergy with EU-Rail: A complementary topic "HORIZON-ER-JU-2024-FA2-SNS: EU-RAIL – SNS SYNERGY: Digital & Automated testing and operational validation of the next EU rail communication system" will be implemented through a synergy call between EU-Rail JU and SNS JU, with a contribution of up to EUR 1 000 000 from the SNS JU. The selection criteria and the call conditions can be found in the EU-Rail Work Programme "Europe's Rail Work Programme 2023-2024". The submission of proposals will be done through the related EU-Rail Call.

SMEs: Target for SME participation is at 20% at programme level, also reflected in the impact section of the evaluation procedure.

Collaboration: Participants of selected projects will be requested to cooperate in the SNS Programme for topics of common interests by signing the collaboration agreement referred in the specific provisions of the Model Grant Agreement (MGA).

Procedure: Specific rules apply related to the procedure to rank proposals with equal scores.

3.2.4. Follow-up activities linked to past calls: monitoring, evaluation and impact assessment

Projects for the first call of the SNS JU R&I Work Program 2021-2022 (total budget of EUR 248 million) started at the beginning of 2023. The second Call (SNS R&I Work Program 2023) is implemented with a total budget of EUR 132 million. All projects are expected to start at the beginning of 2024.

While the SNS JU will pursue its planned R&I activities, further findings, pursuant to a gap analysis and the current policy context, highlighted the need to strengthen links (established or intended) with Partnerships, national initiatives and international partnerships (in particular with USA, Japan and South Korea), focus on end-to-end sustainability and reliable AI for 6G, further enhance collaboration with the micro-electronics community (chips JU) in the context of the European Chips Act¹² and establish synergy with the EU-Rail JU by introducing a complementary topic. These activities will be either implemented by the 2024 Work Program or prepared in 2024 for further implementation in 2025.

¹² COM(2022) 45 final

3.2.5. Cooperation, synergies and cross-cutting themes and activities

The SNS JU will exchange best practices with other JUs. It will organize workshops on scientific topics of common interest and assess the opportunity of coordinated calls/synergy actions.

Further to the European Chips Act¹³, the Memorandum of Understanding between AENEAS and 6G-IA¹⁴, findings of the COREnect study¹⁵, the SNS JU has established close links with the Chips JU, including through the alignment on topics of mutual interest, in the context of microelectronic components for 6G. 3 projects have been selected from Call 2 STREAM-B-01-05: Microelectronics-based Solutions for 6G, bringing together both communities and focusing on THz communication enabling technologies. In R&I WP2024, the SNS stream “SNS-2024-STREAM-C-01-01: SNS Microelectronics Lighthouse” aims to provide test/experimental platforms where solutions from the micro-electronics domain developed either in the context of Phase 1 SNS WP, or Horizon Europe Cluster 4, and solutions developed under the Chips JU, will be validated in terms of performance and applicability for 6G networks.

The SNS JU will also create synergies with the EU-Rail JU by developing a complementary topic “HORIZON-ER-JU-2024-FA2-SNS: EU-RAIL – SNS SYNERGY: Digital & Automated testing and operational validation of the next EU rail communication system”, focusing on the development, validation and testing of the next telecommunication system for railways “Future Rail Mobile Communications System” (FRMCS). A significant participation of the communication/networking R&I stakeholders is expected, both from the supply and demand sides, with a strong and demonstrated track record to bring results to standardization bodies. This synergy call will be implemented through Europe’s Rail Work Program 2023-2024 with a contribution of up to EUR 1 000 000 from the SNS JU.

The Memorandum of Understanding (MoU) between the 5G Automotive Association (5GAA) and 6G-IA demonstrates their mutual interest in fostering the use of future connectivity in key vertical sectors, such as connected and automated mobility. Cooperation will be strengthened through the continuation of the SNS strategic Working Group “5G for Connected and Automated Mobility - Deployment Stream” and the 6G-IA Working Group “5G/6G for Connected and Automated Mobility - R&I Stream”.

The **EU-US Trade and Technology Council** was established as a forum to coordinate approaches to address key trade and technology issues, and to deepen transatlantic cooperation based on shared values. Its Working Group 4 on ICT security and competitiveness¹⁶ facilitates cooperation on approaches to securing ICTS supply chains and risk information sharing programs. As regards R&I cooperation for beyond 5G and 6G, the TTC aims to a common vision and roadmap outlining some of the key challenges and needs of future generations of communication technologies, including 6G. The 6G-IA and the Next G Alliance (USA) have also signed a MoU to exchange information regarding their work programs in areas of mutual interest in the field of 6G communication systems and networks and are currently preparing the industry roadmap in the context of the TTC. The MoU also covers collaboration on joint activities, including workshops, seminars, webinars and trials on 6G-related topics.

¹³ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-chips-act_en

¹⁴ <https://aeneas-office.org/2022/06/07/aeneas-and-6g-ia-join-forces-to-build-synergies-for-european-leadership-in-next-generation-telecommunications/>

¹⁵ <https://digital-strategy.ec.europa.eu/en/news/european-think-tank-corenect-launches-roadmap-towards-leadership-chips-6g>

¹⁶ [Working Group 4 - ICT security and competitiveness | Futurium \(europa.eu\)](#)

The Japan-EU Digital Partnership¹⁷ advances cooperation on digital issues to foster economic growth and a human-centric digital transformation based on common values¹⁸. To further promote concrete cooperation in the area of B5G / 6G, the 6G-IA has signed an MoU with the Beyond 5G Promotion Consortium (B5PC) of Japan. Republic of South Korea and the EU have also recently concluded a Digital Partnership. In 2024, the Work Program will implement joint R&I cooperation with Japan and Republic of South Korea.

The SNS JU will explore horizontal topics of interest through its different sets of Working Groups (WGs). During 2023, three (3) “SNS Project-related Working Groups” and two (2) “SNS Strategic Working Groups” have been launched, in addition to nine (9) “6G_IA Industry-driven Working Groups”. The SNS JU may adjust the future structure of Working Groups following the recommendation from the JU Governing Board. Access to WGs and their rules of functioning are defined in the relevant Terms of Reference of each WG.

In addition, collaboration with Photonics21¹⁹ and with the European Cyber Security Organization²⁰ is also pursued further.

The SNS JU will also assess to what extent the additional tasks laid out in the Regulation are being addressed and will in particular, strengthen strategic collaboration with 5G deployment activities and promote synergies among relevant Union-funded trials, pilots and deployment activities in the area of smart networks and services (e.g. CEF2 Digital program, Recovery and Resilience Funds, InvestEU, etc.).

The SNS JU will also continue to pursue potential synergies with national 6G initiatives and policies, in particular through the SNS ICE CSA, notably through the organization of workshops and interactions with implemented actions at MS level, in view of defining common follow up actions at EU level.

3.3. Support to Operations

3.3.1. Communication, dissemination and exploitation

The SNS JU communication activities will support the priorities identified in the annual work plan and agreed by the SNS JU Governing Board. A strategic communication will ensure that all stakeholders will be duly informed, in an accurate, clear and accessible way about the activities and results of the SNS JU.

Communication objectives will be to raise awareness on research and innovation activities on B5G and 6G networks and services, increase knowledge of the SNS JU, and promote participation in the SNS JU activities by engaging with prioritised stakeholder groups. They will also include activities aimed at accelerating the development and widespread deployment of 5G.

Communication activities will focus on the programme achievements that have a strong impact, on the scientific advancements and their market uptake potential, which translate into concrete benefits for European industries, authorities, and citizens. A specific focus is put on building bridges between the 5G (deployment) community and the 6G (Research and Innovation) one, as well as on demonstrating societal added value of 6G, engaging different communities and perspectives. Focus on sustainability for future 6G networks and services will also be a main driver for communication activities.

¹⁷ [最終版-jp-eu-digital-partnership-clean-final-docx.pdf \(europa.eu\)](#)

¹⁸ [Japan-EU Digital Partnership - Factsheet | Shaping Europe's digital future \(europa.eu\)](#)

¹⁹ [Photonics21 – A Key Enabling Technology for Europe](#)

²⁰ [ECSC - European Cyber Security Organisation \(ecs-org.eu\)](#)

In order to do so the SNS JU will:

- Highlight the programme's relevance, impact and contribution to related EU policy areas;
- Showcase the programme achievements' progress and benefits;
- Leverage project communication and promote projects' success stories to build on the results obtained and to demonstrate the impact of their outcomes;
- Communicate the benefits of the technology with real-life use cases and projects' results;
- Mobilise strongly committed applicants to continue to ensure excellence in our call for proposals/grants;
- Increase communication synergies with other programmes and instruments, in particular those of CEF Digital for 5G deployment;
- Highlight technology potential and market readiness;
- Increase public awareness of the SNS JU beyond the programme stakeholders, reaching out to new audiences.

Target audiences:

- Policy-makers: EU institutions (European Commission, European Parliament, Council of the EU, Committee of the Regions), individual Member States (relevant representatives of governments and permanent representations), municipalities and regional authorities;
- SNS stakeholders and their governance structure: 6G IA, European Commission, Member States, technical experts;
- SNS JU current and potential new beneficiaries;
- Financial actors (e.g. investors);
- General public.

Outreach activities:

- The SNS JU has significantly improved its brand recognition, notably by drafting and implementing SNS projects communication guidelines. The SNS JU will continue working on leveraging on its brand, building on an increased projects portfolio recognition, as well as on promoting its core activities, such as the 2024 Call for proposals. The vision of the current initiative and of the Joint Undertaking itself will be communicated via campaigns that will concentrate on its concrete added value for a more digitalised and greener society. The JU will develop SNS success stories and adapt them to different audiences and channels, while maintaining close contacts with ongoing projects to gather and promote their latest news and results.
- In addition, the SNS JU will work in collaboration with the communication unit of the European Commission's Directorate-General for Research and Innovation, responsible for services such as the Horizon Magazine, Futuris and the webpage for EU research success stories.

Communication channels:

- The SNS JU will develop content for the following channels with the aim of providing all interested stakeholders with access to relevant and specific information on the work of SNS and its projects:
- Website;
- Newsletter;
- Social media (LinkedIn, Twitter);
- Videos (Youtube);
- Events;
- Media

- Direct mailings;
- Publications.

The SNS JU will amplify its communication outreach thanks to publicity from its stakeholders and communities, the Governing Board members, the SNS Coordination and Support Actions, States Representatives Group, National Contact Points, stakeholders' group, SME organisations, other JUs.

Key events in 2024:

- Info Day(s) and brokerage event;
- Mobile World Congress 2024;
- EuCNC + 6G Summit 2024;
- 5G Techritory 2024;
- 6G Global Summit and 5G Conference (Forum Europe).

Alongside the research and innovation dimensions of the SNS JU Work Programme, in 2024 the SNS JU will focus on engaging different communities beyond the technological, research and innovation one. Accrued focus on societal impact of 6H technologies and on the sustainability dimensions of 6G will be the main drivers of this approach.

The Coordination and Support Action "6G for Society" (SNS Societal Challenge) will help addressing broader societal implications of 6G to ensure that technological advancements align with societal needs and benefits. It will provide insights on how to address the tensions between ubiquitous, always more performant future networks systems while ensuring that societal values and sustainability are properly embedded into future technologies.

3.3.2. Procurement and contracts

The SNS JU will implement its administrative budget by launching specific SNS JU procurement procedures, by participating in JU joint procurement procedures, and by taking part to European Framework Work Contracts..

The **Service Level agreement (SLA)** on the **Back Office Arrangement (BOA)** on Procurements signed by the Horizon Europe JUs (including SNS JU) in December 2022 is intended to establish a centralised procurement system to manage joint administrative procurements for the benefit of all signatory JUs

This SLA is led by the Clean Aviation Joint Undertaking (CAJU) and aims at creating synergies by launching a unique procurement procedure covering common JU needs , therefore maximizing open tenders for award of inter-JUs FWCs and middle value negotiated procedures with focus on the critical joint administrative procurement.

This centralised management of common procurement needs will allow SNS JU to reduce its administration workload considerably while eventually benefitting from advantages derived from a higher demand of services.

In 2024, several procurements will be launched related to notably to IT services, audit of annual accounts and events, HR m support services, as agreed via a JU joint Public Procurement Planning (PPP).

Apart from the JU BOA, the SNS JU has also signed several Service Level Agreements²¹ with different Directorates-General of the European Commission, like DIGIT (Informatics), PMO (Paymaster Office) or HR (Human Resources). Those agreements provide with services required for the smooth functioning of SNS JU in several fields. In 2024, as SNS JU will operate under a system of full financial autonomy, some services will be needed anymore from the the European Commission, like the payment of salaries, that will be operated the SNS JU programme Office. Sme services will be provided by the EC Commission services porvided payment of fees, like the use certain IT tool like ABAC²²/SAP or e-procurement/PPMT²³.

SNS JU also intends to purchase services and goods through specific Framework Contracts (FWC) negotiated by the EU Commission services with external contractors for specific services/goods that are required on a regular basis, and in which SNS JU is considered as a potential contracting authority.

3.3.3. Other support operations

Information Technology

The priorities for IT are to ensure a stable and secure IT system, provide IT support to staff in the use of IT applications and equipment and to cooperate with the Commission to ensure synergy and efficient use of resources.

Main activities include:

- Follow-up and monitor implementation of the contract with IT supplier, notably service delivery plan; ensure maintenance and upgrades are done as necessary;
- Monitor stability of the IT system;
- Participate in coordination meetings with the Commission and other JUs and take action follow-up on the adjustments needed to allow and ensure smooth functioning of Horizon Europe IT tools;
- Ensure adjustment of IT tools to the SNS needs (expansion, upgrade, etc.).

In 2024, the focus will be put on the following:

- Achieving IT autonomy within the first half of 2024 including (but not limited to):
- Fully operational digital workspace for the SNS JU staff.
- Migration to all mission critical corporate European Commission systems.
- Collaboration with the other JUs towards the finalization of the IT Back Office Arrangement (BOA)
- Join new framework contracts of the European Commission concerning the procurement of ICT related product and services.

Logistics

²¹ Service Level Agreements are agreements that the Union institutions may conclude with each other or that may be agreed upon between departments of Union institutions, Union bodies, European offices, bodies or persons entrusted with implementation of specific actions in the CFSP pursuant to Title V of the TEU and the Office of the Secretary-General of the Board of Governors of the European schools.

²² Common Accrual Based Accounting System created by the EC services and compulsory for all EU institutions and bodies.

²³ 'E-procurement' is a the exclusive use of electronic means when organising a procurement procedure. PPMT is the ePreparation tool, part of the corporate eProcurement program, also mandatory for all procurement procedures..

In addition, logistical support will be provided in the context of General Administration. It encompasses the management of supply and maintenance of equipment, namely stationery, goods and services for administration and includes monitoring of services provided in particular through the OIB, the translation centre and the publication office.

Based on the new ways of working that was accelerated by the COVID-19 situation, the organisation of the workplace will take into account less presence in the office, increased hybrid modes of working as well as health and safety requirements.

Data protection

The SNS JU applies Regulation (EU) 2018/1725 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies²⁴.

The role of the Data Protection Officer (DPO) is exercised by the Legal Officer. The DPO together with all staff members involved in data processing activities, ensures an effective application of the data protection legal framework in all the areas and functions of the organisation.

Access to documents

The SNS JU will address requests for access to SNS JU documents according to Regulation (EC) No 1049/2001, in a spirit of openness and transparency in order to bring its activities and outputs closer to the public in line with the policy developed by the Programme Office. The SNS JU will implement the standard operating procedure (SOP) on Access to documents and the training of the staff on access to documents issues.

Feedback to policy

The SNS JU will contribute to the activities of a number of services in the European Commission. Contributions will vary in content and format. They will all share the common goals of providing fact-based information on the state-of-the-art of 5G/6G technologies, feeding EU initiatives and policies, especially in the telecommunication sector, and boosting competitiveness and growth.

In practical terms, the SNS JU will take part in a number of technical groups and/or events organised by the Commission and other international bodies, and it will actively participate in meetings. It includes also feedback from projects and studies to the Commission in contribution to relevant connectivity files and topics (e.g. cybersecurity, sustainability, privacy, public health, etc.).

In 2024, the SNS JU Programme Office will ensure a close collaboration with policy makers in the European Commission, specifically (but not exclusively) within the framework for feedback to policy in Horizon Europe, prepared and piloted by the Common Implementation Centre to support evidence-informed policy design and evaluation.

²⁴ OJ L 295, 21.11.2018, p. 39–98. Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC

Pursuant to the Regulation, the SNS JU will also contribute to consultations in the context of Union regulatory processes and pursue activities to further develop the ecosystem including through cooperation with verticals.

3.3.4. Human Resources

3.3.4.1. HR Management

The SNS JU aims to achieve its goals through effective recruitment procedures, proper allocation and administration of resources and by developing, motivating and retaining valuable/high qualified staff while maintaining a motivating and efficient working environment.

The Executive Director will ensure that all HR functions are managed well and that all staff work in a safe, respectful and rewarding environment.

In 2024, the appraisals of the staff members who joined the SNS JU in 2023 are foreseen.

3.3.4.2. Staff Establishment Plan

The Staff establishment plan gives an overview and forecast of annual staff positions for the year 2024.

From a general point of view, the SNS Staff shall consist of temporary staff (TA) and contract staff (CA). Their contracts will be governed by the Staff Regulations of officials and conditions of employment of other servants of the European Union (CEOS).

The staff policy followed by the SNS JU consists of:

- a set of implementing rules giving effect to the Staff Regulations of officials and conditions of employment of other servants of the European Union, adopted by the Governing Board with prior agreement of the Commission,
- a set of internal rules organising the day-to-day administration of the Office and responsibilities and tasks entrusted to staff.

By January 2024, the team of SNS JU will expectedly be fully staffed according to the planned Staff Establishment Plan agreed for the entire duration of the Horizon Europe Programme. Three Project Officers will join by end 2023 and another Finance Officer will start in January 2024. The total staff by then will be of 17 employees .

PLANNED POST

2024	
Establishment plan posts: TA-AD	7
Establishment plan posts: TA-AST	0
Total establishment plan posts	7
Contract Agents	10
Total Staff	17

CATEGORIES AND GRADES	2024
AD 16	
AD 15	
AD 14	1
AD 13	
AD 12	1
AD 11	
AD 10	
AD 9	
AD 8	
AD 7	5
AD 6	
AD 5	
Total AD	7
Total AST/SC	0
TOTAL	7

CONTRACT AGENTS	2024
Function Group IV	7

Function Group III	2
Function Group II	1
Function Group I	
Total Staff	10

DESCRIPTION OF THE POSITIONS

Executive Director (TA-AD14)

The Executive Director is the Chief Executive responsible for the day-to-day management of the SNS Joint Undertaking providing leadership at the strategic and operational level ensuring the achievement of the Joint Undertaking's objectives. The Executive Director is its legal representative, and he/she shall perform his/her tasks with independence and shall be accountable to the Governing Board.

Head of Programmes (TA-AD12)

The Head of Programmes has responsibility for the scientific and technical work of the Programme Office, for programming, coordinating and communicating the activities of the JU. In particular, he/she has a key coordination role to establish the draft R&I Work Programmes, to oversee the Working Groups of the JU, and to steer the Strategic Research and Innovation Agenda and the Strategic Deployment Agendas in close cooperation with relevant stakeholders. He/she also oversees the operational tasks leading to proposal selection.

Deputy Head of Programmes (TA-AD7)

The Deputy Head of Office will oversee to the preparation and implementation of the scientific, technical and administrative activities of the annual work programme of the JU and, consequently, for the entire life cycle of a portfolio of projects that cover research, innovation and demonstration activities of technologies under the scope of the JU. In particular, he/she has a key role in the preparation of the draft R&I Work Programmes, the establishment of the Working Groups of the JU, and the coordination of the Strategic Research and Innovation Agenda and the Strategic Deployment Agendas in close cooperation with the Head of Programmes, other programmes officers and relevant stakeholders.

Team Leader Administration and Finance (TA-AD7)

The Team Leader of Finance and Administration has responsibility on a wide range of fields such as Human Resources, Budget and Finance, Legal Affairs, Governance, Internal Control and Audits, Information Technology, and building and infrastructure. He/she is in charge of co-ordinating all these areas and to manage a team of five officers, one Legal Officer, two Finance Officers, one Finance Assistant and one Administrative Assistant.

Program Officers (TA-AD7)

The Program Officers will contribute to the preparation and implementation of the scientific, technical and administrative activities of the annual work programme of the JU and, consequently, for the entire life cycle of a portfolio of projects that cover research, innovation and demonstration activities of technologies under the scope of the JU. They will also be responsible for monitoring of the key performance indicators (KPIs) and associated targets in their projects portfolio, while maximizing the impact of the JU overall program implementation through dissemination of projects results and

achievements, including feedback to policy. They also contribute to Working Groups of the JU, and to the steering of the Strategic Research and Innovation Agenda and the Strategic Deployment Agendas in close cooperation with relevant stakeholders. They also develop the draft communications strategy of the JU and the related communications activity plan and oversees all communication activities of the JU.

Project Officers (CA-FGIV)

The Project Officer will be responsible for the management of research grants as well as to the planning, management and implementation of SNS call launch, evaluation and reporting. In addition, the Project Officer / Call Coordinator will also coordinate the overall planning and management of project interim reviews. He/she will also contribute to the preparation and implementation of the scientific, technical, and administrative activities of the multi-annual and annual work programs of the JU and, consequently, for the entire life cycle of a portfolio of projects that cover research, innovation, demonstration and deployment activities concerning technologies under the scope of the JU. The Project Officer / Call Coordinator will also be responsible for the coordination of the overall planning, management and monitoring of SNS calls for proposals and evaluations.

Financial Officers (CA-FGIV)

The Financial Officer work under the direct supervision of the Team Leader Administration and Finance and are responsible for the proper functioning of the budgeting and financial aspects of the JU, including the financial management of individual projects, the compilation of the overall budgets, their implementation, forecast and overall execution of sound financial management.

Legal Officer (CA-FGIV)

The Legal Officer provides the JU with all relevant legal advice and support for the smooth operation of the activities of the JU, monitors the implementation of contractual obligations of the JU, drafts the legal documents of the JU. He/She is also the JU's Data Protection Officer. He/She ensures the legality of the procedures in place, provides recommendations to improve the efficiency, effectiveness of the JU and is the liaison with auditing bodies.

Financial Assistant (CA-FGIII)

The Financial Assistant supports the financial management of individual projects, verifies the financial and administrative compliance of the grants and contracts, performs the administrative quality checks on files for signature, monitors the operational and administrative expenditures, and provides budget planning and reporting for operational and administrative expenditures. The Financial Assistant reports to the Finance and Administration Team Leader.

Administrative Assistant (CA – FGIII)

The Administrative Assistant manages the daily administrative and Human Resources duties of the joint undertaking. Among others, he/she is in charge of managing the relations with the staff members and assists them in all matters related to HR. He/she is in charge of managing the data in the tools related to payrolls, missions and similar, and of implementing the documentation policy of the joint undertaking. All that in liaison with DG HR of the Commission.

Administrative Support Assistant (CA-FGII)

The Administrative Support Assistant provides support to the Executive Director in her daily activities, by managing her agenda, scheduling meetings, organizing staff events, liaising with the two units and

executing a wide range of administrative tasks. She also provides support to the two units with the management of internal and external documents, the procurement of office material and the overall functioning of office.

3.4. Governance activities

3.4.1.1. 3.4.1. Governing Board

SNS JU's Governing Board has overall responsibility for the strategic orientation and the operations of the SNS JU and shall supervise the implementation of its activities in accordance with Article 17 of the Council Regulation (EU) 2021/2085.

The GB is composed of two representatives of the European Commission on behalf of the EU, and five representatives of 6GIA.

The indicative key decisions of the GB in the year 2024 are listed below:

Key SNS JU GB decisions in 2024	Timeline (Quarter)
Approval of the evaluation outcome for 3 rd Call	Q1
Assessment of the Annual Activity Report 2022	Q2
Adoption of the AWP 2025	Q4

3.4.1.2. 3.4.2. Executive Director

The **Executive Director of SNS JU is Mrs Erzsébet FITORI** as from 1 October 2023, appointed to perform the tasks defined in Article 19 of the Council Regulation (EU) No 2021/2085.

The Executive Director presented the following priorities for 2024 englobed in four areas:

1. Governance:

- Consolidate the role of the SRG and the Stakeholders Group under the SNS JU mandate.

2. Program implementation

- SNS JU grant agreements preparation and kick-off of the SNS projects from 2nd SNS JU call.
- Promotion of the SNS JU 3rd call and its evaluation.
- Coordinate the AWP 2025 preparation according to the established SNS JU programming procedure.

3. Communication and stakeholders' management

- Establish the SNS JU Communication strategy in line with its mission.

4. Administration and finance

- Follow the implementation of the back-office arrangements.
- Finalize the office set-up in line with the new ways of working and conclude the procedure for the building in collaboration with the other JUs.

3.4.1.3. 3.4.3. States' Representatives Group

The States' Representatives Group (SRG) is one of the advisory bodies of SNS JU. In line with Article 20 of the of the Council Regulation (EU) 2021/2085, the SRG provides recommendations and the opinion of EU's Member States and associated countries on the operations of SNS JU, including the progress of the programme implementation, the SRIA, the draft annual work programmes, the annual activity report, as well as other measures taken to address specific objectives of the initiative.

During 2024, at least two SRG meetings are planned. Additional meetings could take place, if needed, to address major issues. In all the meetings, the SRG members will be invited to report information about national and regional activities and initiatives linked to SNS JU with a view to ensure complementarities and identify areas of cooperation with the SNS JU

3.5. Strategy and plans for organisational management and internal control systems.

The Internal Control Framework (ICF), approved by SNS JU GB Decision 12-2023 on 24 May 2023, provides reasonable assurance to the GB regarding the achievement of SNS JU's objectives. In line with the requirements expressed in the SNS JU Financial Rules and in the EU Financial Regulation, it shall:

- Ensure that operational activities are effective and efficient. The SNS JU meets its objectives defined in the AWP using the adequate human and financial resources.
- Ensure that legal and regulatory requirements are met. The SNS JU operates in full accordance with all legal and regulatory requirements.
- Ensure that reporting is reliable. The SNS JU management produces regular, reliable and easily accessible management information on financial management, use of resources and progress on the achievement of operational objectives.
- Ensure that assets and information are safeguarded. The SNS JU managers take the measures necessary to ensure the completeness and preserve the integrity of the data on which management decisions are taken and reports are issued.

All the SNS JU management processes and functions concur to these four objectives granting the largest possible preventive, detective and corrective controls in line with the available resources. In 2024 the SNS JU will run its operations by improving the quality level of programme implementation while anticipating the potential corrective actions. The main activities that will be performed include the following:

- Carry out periodic review of risks at least yearly in the context of preparing the annual work programme;
- Coordinate visits of the European Court of Auditors and of the external auditor of SNS JU accounts;
- Liaise with the auditors of the Internal Audit Service;
- Ensure a smooth implementation of the possible findings of ex post audit controls and optimise the SNS JU's specific audit efforts based on the analysis of those first ex-post audits and of the specificities of SNS JU beneficiaries

A first ICF Action Plan was adopted by the SNS JU Executive Director by Decision 12-2023 of 05/10/2023 to implement the 17 SNS JU internal control principles, to ensure such effective and efficient internal control system, by facilitating the response to different types of risks and by providing reasonable assurance regarding the proper execution of the whole operational system.

A. Financial procedures

The financial procedure for projects under Horizon Europe depends on the Horizon Europe IT tools developed by the European Commission. These IT tools encompass the full cycle of the process, including workflows, check-lists, etc.

The Financial rules of the SNS JU have been adopted by the Governing Board Decision 01_2021 of 15 December 2021.

In 2024, the CBE JU will continue to consolidate and improve its financial procedures in both the administrative and grant management areas, in line with its Manual of Financial Procedures as well as the general EU financial regulatory framework and IT tools used for financial transactions performed by the SNS JU.

On the grants side the majority of transactions will to be dealt with via the corporate tools COMPASS/SYGMA, with certain grants-related transactions being performed directly in the EC accounting system ABAC, or completed in ABAC following initiation in other tools (e.g. COMPASS/SYGMA or EMI).

Staff (existing as well as newly-recruited where relevant) will continue to be trained adequately to ensure maximum competence in the use of the IT tools as well as the various different transactions which can arise (e.g. grant amendments, the Mutual Insurance Mecanism, recoveries).

On the administrative side, the business procedures should ensure high-quality processing, optimal budgetary implementation and accurate accounts. There will be continued monitoring of these procedures to evaluate their efficiency and fine-tune or update them where necessary.

The administration and finance team and the programme team will continue to coordinate with corporate services in order to ensure coherent understanding and implementation of the financial rules. This will also ensure the speedy and efficient verification and validation of all transactions.

B. Ex-ante and ex-post control

There is a full set of processes and procedures that will be implemented in 2024 to provide reasonable assurance that the principles of sound financial management have been applied to each transaction.

The ex-ante control of financial transactions will be executed according to the Manual on financial workflows of the joint undertaking, meaning that every transactions will be subject to an initiation and a verification by the operational and financial officers before the authorization of the transaction. The ex-post control will be executed by the relevant actor in accordance with the financial rules of the joint undertaking.

In particular ex ante controls on operational expenditure will be implemented by the SNS JU in line with the adopted Horizon Europe ex ante control strategy. To implement ex ante controls, desk reviews will be performed by the SNS JU Program Office; on top of this reviews periodic reports will be carried out by

external experts and ad-hoc technical reviews can also be launched when deemed necessary. The SNS JU will continue to update and develop internal procedures defining the ex-ante controls to be performed and taking into account risk-based and cost-effectiveness considerations.

In 2024, the SNS JU will cooperate with the Fraud and Irregularities in Research (FAIR) Committee of the R&I family²⁵ as well as with the Common Audit Service (CAS), in line with the working arrangements for OLAF cases.

Relevant Program Office staff will receive training on fraud detection and prevention; the possibility to deepen the knowledge in this field will continue to be promoted through the learning and development framework of the SNS JU. For what concerns the prevention of possible double funding, the SNS JU will collaborate with EC services and the Research Executive Agency to detect at an early stage possible overlapping during the grant agreement preparation, subsequent to the adoption of the ranking list by the Governing Board. Any possible overlapping at the level of topic definition is monitored by EC services responsible for the preparation of relevant work programs.

The current developments for the electronic management of calls and selected projects shall be complemented in cooperation with the Common Implementation Centre (CIC) of the Commission, in charge of the applications.

Ex post controls of operational expenditure will be implemented in line with the Horizon Europe Control Strategy²⁶. The main objective of the Audit Strategy is to provide the individual Authorizing Officers with the necessary elements of assurance in a timely manner, thus allowing them to report on the budget expenditure for which they are responsible. Ex-post controls on operational expenditure contribute in particular to:

- assessing the legality and regularity of expenditure on a multi-annual basis;
- providing an indication of the effectiveness of the related ex-ante controls
- providing the basis for corrective and recovery mechanisms, if necessary.

The Common Audit Service (CAS) of the European Commission is the part of the CIC serving all Horizon Europe stakeholders in the implementation of the audit strategy. Its mission is to deliver a corporate approach for the audit cycle: audit selection, planning, application of rules, relations with beneficiaries and management information on the audit process. The SNS JU is effectively integrated in this control chain: it will participate in 2024 in the audit process definition and in the monitoring of its implementation in continuous collaboration with CAS and its clients. The main objectives of the cooperation are to align operations and exploit synergies on the common audit effort. The efficiency gains should reduce the audit costs and the administrative burden on auditees, always in line with the specific objectives for ex-post controls explained above.

²⁵ The Fraud and Irregularities in Research Committee (FAIR) is the main network and forum of the Research and Innovation Family in the area of irregularities and fraud matters.

²⁶ In September 2023, the Horizon Europe (HE) Executive Committee adopted the final version of the Control Strategy for Horizon Europe, with Ref. Ares(2023)6179687 adopted on 12/09/2023, following the written consultation with Ref. Ares(2023) Ares(2023)4508864 of 29 June 2023, preceded by a discussion topic at the Executive Committee's meeting of 13 June 2023.

In 2024, the SNS JU will implement the results of the ex post audits on its beneficiaries and will provide adequate reporting through the budget discharge process

The HE Control Strategy is characterized by a risk-based approach²⁷ and details how the HE control system will maintain a balance between economy, effectiveness and efficiency in the achievement of the HE program goals. The main building blocks of the internal control²⁸ system for HE expenditure are²⁹:

- procedures for selecting the best projects and translating them into legal instruments;
- project and contract management throughout the lifetime of every project;
- ex-ante controls;
- ex-post financial and non-financial audits on a sample of claims; and
- scientific/technical evaluation of action results.

Under H2020, one of the key, direct indicators used by the Joint Undertakings (JUs) for assessing the compliance and regularity of operational budget implementation was the JU-specific representative error rate. Under the HE program, the JUs can no longer request JU-specific representative audits and the portion of the JUs' budgets covered through audits of the Common Representative Sample are not sufficiently representative to draw conclusions on the entire JU expenditure³⁰.

As the JUs need to establish their own individual assurance, followed by a separate discharge procedure, SNS JU participated in the elaboration of a new approach for assurance which goes beyond the calculation of a representative error rate, is needed. This reflexion is presented in a document on the JUs' common implementation approach to the Horizon Europe Control Strategy, aiming at harmonizing the blocks of assurance on which the JUs will rely for their HE assurance needs. In particular, the document provides the different JUs with a common framework for building a JU-specific control strategy for HE expenditure, bearing in mind the specificities of their own population, resources and management priorities³¹.

C. Audits

The audit environment is an accountability pillar within the SNS JU's internal control Framework since it provides reasonable assurance about the state of effectiveness of risk management and control processes and serves as a building block for the annual Declaration of Assurance of the Executive Director.

Audits will be organised both on an internal and external basis.

²⁷ According to Art. 36 of the Financial Regulation, the "frequency and intensity of the controls should be determined by taking into account the results of prior controls as well as risk-based and cost-effectiveness considerations" .

²⁸ The internal control system is supported by the Financial Regulation of 18 July 2018, which identifies the responsibility of the Authorising Officers for the control of the budget implementation at programme level (Cf. Article 36 of the Financial Regulation)

²⁹ These elements are re-iterated in the HE-Multi Annual Audit Plan (currently being approved; refs. to be inserted).

³⁰ Inclusion in the Common Representative Sample is governed by a "probability-to-proportion" principle of the Monetary Unit Sampling used by CAS, i.e. the bigger the size of the Research & Innovation budget, the greater the probability to be selected. It should be noted that an individual JU budget may represent only 1-2% of the overall HE budget, with all JUs collectively representing 12% of the HE expenditure. As a consequence, the presence of the JU population in the Common Representative Sample might be too limited.

³¹ The present document only elaborates on the implementation of the control framework for the **Horizon Europe** programme at the level of JUs. JUs that manage different additional European (research) programmes will articulate the differences, similarities and interrelationships between these different programmes in their individual JU control strategy. The present document does not affect the eGrants Vademecum of EU Funding Programmes³¹ and must be seen as complementary to the Vademecum.

The first audits will be operated probably be in 2024, as the joint undertaking will have reached its financial autonomy. The internal audit capability will be developed during 2024 in accordance with the provisions of the Financial Rules. The inter-JU initiative on internal audit will be further developed during the following year and will meet the requirements of the DG Research and the European Court of Auditors.

External audits are systematically operated by the European Court of Auditors (ECA), reporting to the European Parliament and the Council, responsible for the discharge procedure. ECA carries out an exhaustive examination of the annual accounts and drafts a report with the main results which is made public. The ECAs may also execute audits of the financial transactions to evaluate the financial management of the budget and to share relevant information and preventive recommendations to the joint undertaking

The SNS JU defines annually the needs and methods for the ex-post audits of grant agreements, in close cooperation with the Common Implementation Centre (CIC) of the European Commission, in view of a coordinated approach of audits of beneficiaries. A common Multi-annual audit plan for all EU services involved in the programme Horizon Europe will be implemented by the CIC from 2024, including the SNS JU.

As regards fraud, The Common R&I Family³² Anti-Fraud Strategy, updated following the launch of Horizon Europe and as established in the Methodology and guidance for services' anti-fraud strategies³³, will also be applied to SNS JU. This updated strategy, based on the lessons learnt from the previous R&I Framework Programmes, focuses on protecting Horizon Europe from fraud by assessing, preventing, detecting and minimising, when necessary, potential risks also associated with its novelties. Horizon Europe, with a budget of €95.5 billion, continues promoting simplification based on implementation experiences of Horizon 2020, while including novelties related to digital transformation of administrative processes, to the evaluation process, transparency in its implementation and an extended use of simplified forms of funding, among others.

In 2024, the SNS JU will ensure the coordination and support to the audits carried out by the Internal Audit Service (IAS), and the Court of Auditors (ECA) and by the external auditor of the SNS JU accounts. The SNS JU will also continue to follow up and confirm the implementation of the relevant recommendations.

4. BUDGET 2024

In accordance with the provisions of the Regulation, the contributors for its budget are:

- The *European Union (including the EFTA)*, covering administrative and operational costs,
- The *Private Member of the Joint Undertaking*, which shall make or arrange for their constituent entities and affiliated entities to make financial contributions to the JU's administrative costs.

The Union budget will constitute a ceiling for the actual Union contribution, in accordance with Article 10 of that Council Regulation.

Budget Revenue

³² The R&I family is composed by an important number of Commission Directorates-General, Executive Agencies and Joint Undertakings that implement the R&I Framework Programmes (Horizon Europe and its predecessors).

³³ <https://myintracomm.ec.europa.eu/serv/en/fraud-prevention/ToolBox/Documents/AFS%20methodology%20-%20final%20June%202021.docx.pdf>

Budget line: 01 02 02 43: Cluster Digital, Industry and Space — Smart Networks and Services joint undertaking

Human Resources Overview

The table below presents the number of posts in the establishment plan.

Human Resources	2023		2024
	Authorised Budget	Actually filled as of 31/12/2023	Draft Budget Request
Administrators (AD)	7	7	7
Assistants (AST)			
Assistants/Secretaries (AST/SC)			
ESTABLISHMENT PLAN POSTS	7	7	7
Contract Agents (CA)	10	10	10
Seconded National Experts (SNE)			
TOTAL STAFF	17	17	17

Financial Resources Overview

Revenues Overview

REVENUES	2023		2024
	Revenues estimated by the agency		Budget Forecast
EU contribution	131.204.255		127.335.018
Other Revenue	4.400.255		5.274.681
TOTAL REVENUES	135.604.510		132.609.699

Expenditure Overview

Expenditure	2023		2024	
	Commitment appropriations	Payment appropriations	Commitment appropriations	Payment appropriations
Title 1 - Staff expenditure	2.199.247	2.199.247	2.187.272	2.187.272
Title 2 - Infrastructure and operating expenditure	843.014	843.014	830.264	830.264
Title 3 - Operational expenditure	132.562.249	134.598.074	129.592.162	129.816.195
TOTAL EXPENDITURE	135.604.510	137.640.335	132.609.699	132.833.731

The total budget of SNS JU for 2024 is estimated at EUR 132.609.699.

The administrative budget will amount to EUR 3.017.536³⁴ in 2024, meaning 2,3% of the total budget for the year. The European Union, the EFTA and the industry association (6G IA) will contribute to the administrative expenditure. The operational budget will be of EUR 129.592.162 in 2024, meaning 97,7% of the total budget, that will be mainly used to fund the call for proposal number 3 and will be contributed by the European Union and the EFTA.

The contribution of the EFTA is included in the EU contributions amounts reported above and applies on administrative and operational budgets. It is calculated as a percentage of the EU contribution which, for 2024, is 3.54%.

These amounts are subject to the approval by the Governing Board, and may be subject to modifications. Once approved, the final budget will be published in the web of SNS JU.

Human Resources

Establishment plan posts (Temporary Agents)

Function group and grade	2023				2024	
	Authorised Budget		Actually filled as of 31/12/2023		Request of the Agency	
	Permanent posts	Temporary posts	Permanent posts	Temporary posts	Permanent posts	Temporary posts
AD 14		1				1
AD 12		1				1
AD 7		5				5
AD TOTAL		7				7
AST TOTAL		0				0
AST/SC TOTAL		0				0
TOTAL		7				7
GRAND TOTAL	7				7	

External personnel (Contractual Agents)

Contract agents	Authorised 2023	Recruited as of 23/10/2023	Budget 2024
Function Group IV	5	3	7
Function Group III	4	2	2
Function Group II	1	1	1

Contract agents	Authorised 2023	Recruited as of 23/10/2023	Budget 2024
Function Group I	0	0	0
TOTAL	10	6	10

Financial Resources

Revenues

REVENUES COMMITMENT APPROPRIATIONS	REVENUES COMMITMENT APPROPRIATIONS	
	Executed Budget 2023	Budget 2024
1 EU CONTRIBUTION	131.204.256	127.335.018
- Of which Administrative (Title 1 and Title 2)	2.365.448	2.173.571
- Of which Operational (Title 3)	128.838.808	125.161.447
2 THIRD COUNTRIES CONTRIBUTION (incl. EEA/EFTA and candidate countries)	3.791.802	4.507.660
- Of which EEA/EFTA (excl. Switzerland)	3.791.802	4.507.660
- Of which candidate countries	0	0
3 OTHER CONTRIBUTIONS	608.452	767.021
TOTAL	135.604.510	132.609.699
REVENUES PAYMENT APPROPRIATIONS	REVENUES PAYMENT APPROPRIATIONS	
	Executed Budget 2023	Budget 2024
1 EU CONTRIBUTION	133.182.898	127.551.391
- Of which (fresh C1) Administrative (Title 1 and Title 2)	2.365.448	2.173.571
- Of which frontloading (Title 1 and Title 2)	0	0
- Of which Operational (Title 3)	130.817.450	125.377.820
2 THIRD PARTIES CONTRIBUTION	3.848.985	4.515.319
- Of which EEA/EFTA (excl. Switzerland)	3.848.985	4.515.319
- Of which third countries	0	0
3 IN CASH THIRD PARTY CONTRIBUTIONS	608.452	767.021
- Of which Administrative (Title 1 and Title 2)	608.452	767.021
- Of which Operational (Title 3)	0	0
TOTAL	137.640.335	132.833.731

Expenditures

EXPENDITURE	COMMITMENT APPROPRIATIONS	
	Executed Budget 2023	Budget 2024
Title 1 - Staff expenditure	2.199.247	2.187.272
Salaries & allowances	1.999.315	1.968.272
- Of which establishment plan posts	1.119.617	1.151.708
- Of which external personnel	879.699	816.564
Expenditure relating to Staff recruitment (1)	199.932	30.000
Mission expenses		30.000
Socio-medical infrastructure		25.000
Training		10.000
External Services		25.000
Receptions, events and representation		5.000
Social welfare		74.000
Other Staff related expenditure		20.000
Title 2 - Infrastructure and operating expenditure	843.014	830.264
Rental of buildings and associated costs	350.000	150.000
Information, communication technology and data processing	298.097	250.000
Movable property and associated costs	4.810	50.000
Current administrative expenditure	80.211	169.264
Postage / Telecommunications	14.430	15.000
Meeting expenses	37.747	16.000
Running costs in connection with operational activities		60.000
Information and publishing		0
Studies		0
Other infrastructure and operating expenditure	57.719	120.000
Title 3 - Operational expenditure	132.562.249	129.592.162
Grants		128.879.662
Experts		712.500
Other costs		0
TOTAL	135.604.510	132.609.699

EXPENDITURE	PAYMENT APPROPRIATIONS	
	Executed Budget 2023	Budget 2024
Title 1 - Staff expenditure	2.199.247	2.187.272
Salaries & allowances	1.999.315	1.968.272
- Of which establishment plan posts	1.119.617	1.151.708
- Of which external personnel	879.699	816.564
Expenditure relating to Staff recruitment	199.932	30.000
Mission expenses		30.000
Socio-medical infrastructure		25.000
Training		10.000
External Services		25.000
Receptions, events and representation		5.000
Social welfare		74.000
Other Staff related expenditure		20.000
Title 2 - Infrastructure and operating expenditure	843.014	830.264
Rental of buildings and associated costs	350.000	150.000
Information, communication technology and data processing	298.097	250.000
Movable property and associated costs	4.810	50.000
Current administrative expenditure	80.211	169.264
Postage / Telecommunications	14.430	15.000
Meeting expenses	37.747	16.000
Running costs in connection with operational activities		60.000
Information and publishing		0
Studies		0
Other infrastructure and operating expenditure	57.719	120.000
Title 3 - Operational expenditure	134.598.074	129.816.195
Grants		129.103.694,83
Experts		712.500,00
Other costs		0
TOTAL	137.640.335	132.833.731

Other information

Building

The SNS JU office is located at the White Atrium building in 1160 Brussels. The office space will be rented by joining an usufruct contract together with other joint undertakings located in the same building from 1st November 2023. In 2024 the space will be adapted and equipped according to the characteristics of the building, the needs of the staff and nature of the activities of the joint undertaking.

5. ANNEXES

5.1. Annex I- 6GIA In-Kind Contributions to Additional Activities (IKAA) Plan

As stated in Article 164 of the Founding Regulation 2021/2085 establishing the SNS JU, For the purpose of Article 11(1), point (b), additional activities may include:

- a. spin-off research and development activities;
- b. contributions to standardisation;
- c. contributions to consultations in the context of Union regulatory processes;
- d. activities financed by loans of the EIB and not funded under a grant by the Union;
- e. contributions to activities of 6GIA and any other group or association of stakeholders in the area of the SNS JU, not funded under a grant by the Union;
- f. activities to develop the ecosystem including building cooperation with verticals;
- g. dissemination activities of results globally to achieve consensus on supported technologies as preparation of future standards;
- h. trials, demos, pilots, go to market and early deployment of technologies;
- i. international cooperation not funded under a grant by the Union;
- j. activities related to the preparation of, and participation in, research and innovation projects funded by private or public bodies other than the Union.

According to the Founding regulation such additional activities could be preformed in the frame of the entire SNS JU strategic programme or may be linked to specific SNS JU Projects. The ones described below are linked to the programme; The exact nature and amount of the additional activities planned at project level (if any) will be known only when the SNS Governing Board will approve the results of the 3rd call (selection of projects)

ESTIMATED AMOUNT OF IKAA FOR YEAR 2024					
Additional Activities category ³⁵	Description of the Additional Activities ³⁶	Country of establishment of the contributor	Link to JU objectives / KPIs ³⁷	Link to JU project/ topic (if relevant)	Certified annual value ³⁸
1. Support to additional R&I					
	Activities related to the preparation of, and participation in, research and innovation projects funded by private or public bodies other than the Union.	BE, ES, FI, DE, FR, SE, NO, IT	c) Advanced 6G Solutions for verticals	Stream B, C, D projects	1,000,000.00

³⁵ Please provide the reference to the specific provision in the scope of additional activities for the joint undertaking;

³⁶ Please provide more information on the envisaged Additional Activities

³⁷ to be selected from the SRIA

³⁸ Costs incurred by contributors in implementing additional activities less any contribution to those costs from the Union and from the participating states of that joint undertaking

ESTIMATED AMOUNT OF IKAA FOR YEAR 2024					
Additional Activities category ³⁵	Description of the Additional Activities ³⁶	Country of establishment of the contributor	Link to JU objectives / KPIs ³⁷	Link to JU project/ topic (if relevant)	Certified annual value ³⁸
	Spin off research and development activities (all research activities aligned with the goals of the SNS partnership, namely research into the evolution of 5G systems and research into 6G systems which is not funded by the SNS partnership).	BE, ES, FI, DE, FR, SE, NO, IT	a) High Risk Research Funding e) Energy Efficient Telecommunication Networks	Stream B, C, D projects	53,000,000.00
2. Scale up of technologies					
	Investment in start-ups and new products in the advanced networks and services domains.	BE, ES, FI, DE, FR, SE, NO, IT	d) Uptake of digital solutions within verticals	Stream B, C, D projects	500,000.00
3. Demonstrators					
	Trials, demos, pilots and Proof of Concepts (PoCs), go to market, early deployment of technologies; (not funded by SNS projects like customer trials).	BE, ES, FI, DE, FR, SE, NO, IT	a) Advanced 6G Solutions for verticals b) Uptake of digital solutions within verticals	Stream B, C, D projects	1,000,000.00
4. Creating new business opportunities					
	Activities related to patent Filing not funded under a grant by the Union (the costs associated with all Patent filing activities aligned with the goals of the SNS partnership, namely IPR in the area of 5G and 6G. This includes both the costs associated with IPR preparation as well as submission costs).	BE, ES, FI, DE, FR, SE, NO, IT	a) Share on Family patents	Stream B, C, D projects	1,000,000.00
5. Training & skills development					
	None				
6. Contribution to the development of new standards, regulations and policies					
	Contributions to standardization (all standardization activities aligned with the goals of the SNS partnership, namely standardization of 5G and 6G in SDOs like 3GPP, O-RAN Alliance, ITU etc. which is not funded by	BE, ES, FI, DE, FR, SE, NO, IT	a) Standardization contributions	Stream B, C, D projects	22,000,000.00

ESTIMATED AMOUNT OF IKAA FOR YEAR 2024					
Additional Activities category ³⁵	Description of the Additional Activities ³⁶	Country of establishment of the contributor	Link to JU objectives / KPIs ³⁷	Link to JU project/ topic (if relevant)	Certified annual value ³⁸
	the SNS partnership. This includes both the costs associated with participation in standardization as well as any necessary technical preparatory work such as research or simulation).				
7. Supporting ecosystem development					
	Activities to develop the ecosystem including building cooperation with verticals; (e.g., creation of specific interest groups, International cooperation not funded under a grant by the Union).	BE, ES, FI, DE, FR, SE, NO, IT	d) Uptake of digital solutions within verticals	Stream B, C, D projects	500,000.00
8. Communication, dissemination, awareness raising, citizen engagement					
	Dissemination activities of results globally to achieve consensus on supported technologies as preparation of future standards; (publications, workshops, conferences).	BE, ES, FI, DE, FR, SE, NO, IT	b) Reach Programme level consensus on 6G KPIs	Stream B, C, D projects	500,000.00
	SNS related education and events to promote future ICT technologies.	BE, ES, FI, DE, FR, SE, NO, IT			50,000
9. Others					
	Contributions to activities of the 6G Smart Networks and Services Industry Association (6G-IA) and any other group or association of stakeholders in the area of the Smart Networks and Services Joint Undertaking, not funded under a grant by the Union; (e.g., working groups, white papers).	BE, ES, FI, DE, FR, SE, NO, IT	b) Collaboration and synergies with other Partnerships	Stream B, C, D projects	1,000,000.00
TOTAL ALL PLANNED IKAA					80,550,000.00

IKAA BREAKDOWN PER COUNTRY	
Country	Estimated value
Belgium, Germany, Spain, Finland, France	80,550,000.00

The SNS JU IKAA Plan classification key is below:

1. Support to additional R&I:
 - Spin off research and development activities (all research activities aligned with the goals of the SNS partnership, namely research into the evolution of 5G systems and research into 6G systems which is not funded by the SNS partnership).
 - Activities financed by loans of the European Investment Bank and not funded under a grant by the Union; (e.g. establishment of new R&D centers, loans for R&D activities).
 - Activities related to the preparation of, and participation in, research and innovation projects funded by private or public bodies other than the Union.
 - Provision of experts (e.g., to assess economic / societal impact of SNS technologies).
 - Acquisition of R&D lab equipment and infrastructures funded by own resources.
2. Scale up of technologies:
 - Investment in start-ups and new products in the advanced networks and services domains.
 - Investment in new infrastructures in conjunction with CEF2 proposals and projects.
 - Orchestration and support of projects in related peer programs such as the EUREKA Clusters, and specifically the CELTIC-NEXT cluster where there is a lot of future networks and applications investments.
3. Demonstrators:
 - Trials, demos, pilots and Proof of Concepts (PoCs), go to market, early deployment of technologies; (not funded by SNS projects like customer trials).
4. Creating new business opportunities:
 - Activities related to patent Filing not funded under a grant by the Union (the costs associated with all Patent filing activities aligned with the goals of the SNS partnership, namely IPR in the area of 5G and 6G. This includes both the costs associated with IPR preparation as well as submission costs).
5. Training and skills development:

- R&D training programs (e.g., PhD programs) not being funded by the EC in the advanced networks and services domain.
6. Contribution to the development of new standard, regulations, and policies:
- Contributions to standardization (all standardization activities aligned with the goals of the SNS partnership, namely standardization of 5G and 6G in SDOs like 3GPP, O-RAN Alliance, ITU etc. which is not funded by the SNS partnership. This includes both the costs associated with participation in standardization as well as any necessary technical preparatory work such as research or simulation).
 - Contributions to regulatory processes; (all regulatory activities – e.g. ITU-R; CEPT, national processes, contributions to preparation of WRC – aligned with the goals of the SNS partnership, namely related to 5G and 6G which are not funded by the SNS partnership).
7. Supporting ecosystems development:
- Activities to develop the ecosystem including building cooperation with verticals; (e.g., creation of specific interest groups, International cooperation not funded under a grant by the Union).
8. Communication, dissemination, awareness raising, citizen engagement:
- Dissemination activities of results globally to achieve consensus on supported technologies as preparation of future standards; (publications, workshops, conferences).
 - SNS related education and events to promote future ICT technologies.
9. Others:
- Investment in environmental and Green deal evolutions.
 - Contributions to activities of the 6G Smart Networks and Services Industry Association (6G-IA) and any other group or association of stakeholders in the area of the Smart Networks and Services Joint Undertaking, not funded under a grant by the Union; (e.g., working groups, white papers).

5.2. Annex II – Research and Innovation Work Programme 2024:

See the corresponding detailed document on the 3rd SNS JU call for proposals attached.

5.3. Annex III- SNS JU Organigramme:

