ANNEX I TO DECISION No XX/2024 OF THE GOVERNING BOARD OF SMART NETWORKS AND SERVICES JOINT UNDERTAKING

SMART NETWORKS AND SERVICES (SNS) JOINT UNDERTAKING (JU)

2025

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 Industry Association
- AAR Annual Activity Report
- AWP Annual Work Plan
- CA Commitment Appropriations
- CAS Common Audit Service
- CoA Collaboration Agreement (Between 6GIA and SNS JU beneficiaries)
- CSA Coordination and Support Action
- CSC Common Support Centre
- EC European Commission
- ECA European Court of Auditors
- EDPS European Data Protection Supervisor
- FPx European Framework Programme x
- FWC Framework Contract
- GB Governing Board (Governing body of SNS JU)
- 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
- R&I WP Research and Innovation Work Programme (Annex 2 of the WP)
- RIA Research and Innovation Action
- SBA Single Basic Act (Council Regulation 2021/2085 establishing the HE joint undertakings)
- SC Scientific Committee
- SRIA Strategic Innovation and Research Agenda
- SLA Service Level Agreement
- SMEs Small and medium-sized enterprises
- SNS JU Smart Networks and Services Joint Undertaking
- SO Strategic Orientation
- SRG States' Representatives Group (Advisory body of SNS JU)
- SWG Strategic Working Group
- TA Temporary Agent
- TRL Technology Readiness Level
- TTG Time To Grant
- TTI Time To Inform
- TTP Time To Pay
- WG Working Group
- WP Work Programme (annual)

2. INTRODUCTION

2.1. Mission statement of Smart Networks and Services Partnership

The Smart Networks and Services Joint Undertaking (SNS JU), established by Council Regulation (EU) 2021/2085, is committed to strengthening Europe's leadership in next-generation digital technologies.

Our mission is to harness and expand European research and innovation capacities to develop advanced networks and services that will drive the digital transformation towards 2030 and beyond. By prioritizing breakthroughs in connectivity, sustainability, and intelligent systems, we aim to position Europe as a global leader in digital networks and services.

The SNS program will enable transformative applications across multiple sectors, fostering inclusive growth, seamless communication, and a secure, resilient digital ecosystem that empowers societies and economies in the coming decades. Our efforts will advance not only the development of 6G technologies but also the deployment of 5G infrastructure, supporting lead markets in Europe. These activities are closely aligned with EU policy priorities, assuring resilient supply chains, promoting sustainability, ethics, and cybersecurity and ensuring Europe's technological sovereignty and global competitiveness.

2.2. Background and link with the Strategic Research and Innovation Agenda

The 5G PPP White Paper describing a **'European Vision for the 6G Network Ecosystem'** highlighted 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 recommended 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 Regulation establishing the SNS Joint Undertaking, the Governing Board (GB) adopts the **Strategic Research and Innovation Agenda (SRIA)** at the beginning of the program 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 technical content is produced by the NetWorld Europe, a European Technology Platform (ETP), representing more than 1000 entities. The SRIA includes contributions from multiple parties, including stakeholders such as 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 2020 adopted by the SNS GB on 15 December 2021, the revised SRIA 2024 is planned to undergo a public consultation in November 2024. Other external organisations provided inputs at different stages of the revision of the SRIA. The SRIA 2024 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, including discussing some components also relevant to other EU initiatives. This analysis has been 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, the European Green Deal and the recent reports on European Competitiveness. It has identified research and innovation directions for the communications technologies and systems, to realize these high-level societal objectives. These are implemented into the SNS JU Research &Innovation Work Programme 2025 (R&I WP, Annex 2 of the present document).

The scope of the SNS R&I WP 2025-26 is based on the NetworldEurope Strategic Research and Innovation Agenda (SRIA), which has been developed in parallel with the technical work developed inside the SRIA, including initiatives to collect stakeholders' views. The analysis of the coverage gaps resulting from the results and implementation of the previous calls, and on the identification of specific policy priorities, notably sustainability, micro-electronics, and cloud.

More recently, the **European Commission's white paper** ***'How to master Europe's digital infrastructure needs?'*** laid out a transformative vision for the future of Europe's digital ecosystem. It underscored the critical importance of building a connected, collaborative computing network where the telco-cloud serves as the cornerstone of this infrastructure continuum. In this vision, traditional centralised cloud infrastructures are seamlessly interlinked with supercomputers, and further enhanced by distributed edge nodes that extend computational power closer to the end users, supporting real-time applications and services. This integrated approach is designed to harness the power of telecommunications infrastructure, enabling low-latency, high-bandwidth connections crucial for the emerging demands of 6G networks and next-generation digital services.
This telco-cloud continuum supports Europe's strategic priorities by ensuring data sovereignty, promoting sustainability through energy-efficient computing solutions, and fostering digital resilience in a highly interconnected, secure environment. By interweaving cloud, edge, and telecom infrastructures, Europe can achieve digital autonomy while addressing the complex needs of future applications, such as immersive communication, AI-driven services, and industrial automation, laying the foundation for a digital decade that spans beyond 2030.

In addition, the **Path to the Digital Decade** 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 will 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.

All these priorities will be integrated and implemented into the SNS JU R&I WP 2025.

2.3. Strategy for the implementation of the programme

Key elements of the strategy

To place Europe at the forefront of the next generation digital and secure infrastructures, and to develop competitive and innovative connectivity services requires an end-to-end approach from policy and regulation to research, standardisation, and deployments, and to build further on a strong public-private cooperation.

The R&I WP 2025 for the SNS JU is structured around **4 strategic pillars that connect 10 key initiatives aimed** at ensuring that Europe maintains a leading role in 6G research and innovation.

These strategic pillars are designed to position Europe as a global leader by fostering technological advancement, competitiveness, and alignment with international standards and societal priorities.

By addressing these critical areas, the R&I WP 2025 seeks to enhance Europe's leadership in 6G, enabling future digital services and supporting the continent's economic and societal goals in an increasingly interconnected world.

Pillar 1: Technological Innovation and Infrastructure Development

This area focuses on the cutting-edge technologies and infrastructure needed to drive the 6G transition. Initiatives:

i. **Evolutionary path from 5G to 6G** (Stream A): Leveraging existing 5G deployments to ensure a cost-effective and efficient path toward 6G.

ii. **Advanced 6G technologies and applications** (Stream B): The focus is on novel technologies that are expected to be adopted in commercial networks in a mid and/or long-term period. Research topics considered include, inter alia, novel 6G system architectures, advanced wireless and optical communication technologies, advances in Non-Terrestrial Networks, secure development of ultra-reliable, and low-latency communications (URLLC) applications.

iii. **Telco Cloud and 3C Network** (Stream C): Establishing Europe's leadership in cloud-enabled services and collaborative computing infrastructures. The project in this stream aims at developing EU-wide trials that can incorporate promising technical 6G enablers for validation. Key aspects for the project will be reusability and ability to evolve. Accessibility and openness with well-defined and clearly documented technological and business interfaces are also considered key assets of the infrastructures to be developed.

Pillar 2: Sustainability

This area aligns with global and European sustainability goals, ensuring that 6G technologies contribute to environmental and societal well-being. SNS JU will promote the development of energy efficient computing architectures and breakthrough solutions to minimise the use of natural resources. Sustainable technologies for cloud and data centres are a necessity for Europe and a potential source of competitive advantage.

Initiatives:

i. **Sustainable 6G:** Addressing environmental impacts and contributing to SDGs, especially in terms of energy efficiency.
ii. **6G for Sustainability**: Leveraging 6G to support sustainability in other sectors, focusing on climate action and responsible digital services.

Pillar 3: Security, Resilience, and Sovereignty

This area ensures that Europe's 6G networks are secure, resilient, and aligned with the need for technological sovereignty and cybersecurity.

Initiatives

i. **Cybersecurity:** Ensuring robust, secure infrastructures that protect data and services.
ii. **Resilience and sovereignty**: Building competitive supply chains and digital sovereignty through secure 6G platforms that maintain European control over critical technologies.
iii. **Standardization and KPIs/KVIs**: Supporting global standardization efforts and developing KPIs/KVIs that reflect Europe's strategic interests. The SNS programme offers opportunities to European stakeholders in industry, research and academia to achieve a leading position in the standardization process, securing a leading position for Europe in the global ICT market, over the coming 8-10 years. The window of opportunity to decide on tech choices is closing as we are about to enter the 6G standardisation phase.

Pillar 4: Competitiveness and International Collaboration

This area focuses on fostering European competitiveness in the global 6G race through strategic alliances and international cooperation.

Initiatives:

i. **Vertical integration and business use cases** (Stream D): Promoting partnerships with vertical sectors to drive innovations such as AI/ML, cybersecurity, cloud/edge and advanced IoT solutions and ensure the commercial success of 6G technologies. The aim is to explore and demonstrate 6G technologies, advanced applications and services in vertical sectors such as energy, automotive, manufacturing, eHealth, and media. Additionally, these large-scale trials aim to become the catalyst for the creation of viable business ecosystems.
ii. **Global cooperation and strategic alliances**: Building partnerships with national and international players, particularly under EU-US frameworks like the Trade and Technology Council (TTC).

Our strategy extends beyond traditional connectivity research boundaries, embracing a broader end to end value chain approach that encompasses connectivity, components, services and business models. the complexity of 6G is that it will have to converge with other adjacent technologies that have not been part

of the traditional telecom domain from artificial intelligence to microelectronics and from quantum communication to non-terrestrial networks. From edge clouds to IoT and enabling technologies, Europe is ready to join the race of innovation.

Challenges and Opportunities in Implementing the AWP 2025 for 6G Smart Networks and Services

As we approach 2025, the WP2025 for the SNS JU presents both significant challenges and exciting opportunities in shaping the future of 6G technologies. The year ahead will be pivotal in establishing Europe's global leadership in 6G ecosystems and influencing the evolving digital landscape, driving innovation, sustainability, and competitiveness across industries.

Opportunities

The primary opportunity lies in Europe's potential to lead the global charge in the development of 6G ecosystems, particularly as we prepare to launch the third wave of projects under the SNS JU in January 2025.Our previous waves were focus on:

- **Lighthouse projects in key areas such as microelectronics and sustainability**, which are expected to set the foundation for future technological breakthroughs, not only for Europe but also for global markets.
- **Strengthening international collaboration**, particularly with strategic partners like US, Japan and South Korea, to drive innovation, share knowledge, and create opportunities for co-development in 6G research and deployment. This global collaboration will ensure Europe stays at the forefront of 6G technology and influences its direction.

The R&I WP 2025 brings forward new opportunities that will be crucial to capture value in a 6G future, with a special focus on:

- **Non-terrestrial networks (NTN),** advancing seamless global connectivity through satellite and space-based communication systems.
- **Photonics,** playing a vital role in next-generation communication infrastructure and enabling ultra-fast, high-capacity data transmission.
- **Telco-edge Cloud**, enabling distributed computing closer to the user and powering real-time, data-driven applications across sectors.

These technological advancements provide opportunities for Europe to spearhead innovation in fields critical to 6G, creating a more connected, efficient, and sustainable digital ecosystem.

Challenges

While the opportunities are vast, the challenges are equally substantial. Enhancing Europe's positioning in the global 6G race will require continuous mobilization and alignment of the EU ecosystem, including academia, industry, and policymakers both at European and national levels. To achieve the ambitious goals set for 2025, the SNS JU will need to navigate several key hurdles:

- **Delivering Scientific Excellence**: Ensuring that Europe continues to excel in cutting-edge research and development across emerging 6G technologies, including AI-driven automation, quantum

computing, and network intelligence, is paramount. Maintaining leadership in scientific output and transforming these advancements into deployable solutions will be essential for success.

- **Guaranteeing Cybersecurity and Economic Security**: As 6G networks become central to critical infrastructure, ensuring robust cybersecurity and safeguarding economic security becomes a top priority. Integrating secure-by-design principles in 6G networks and protecting sensitive data from emerging threats will be critical to achieving trust in 6G systems.
- **Integrating with Verticals and Mobilizing the EU Ecosystem**: The ability to seamlessly integrate 6G technologies with key industry verticals such as automotive, healthcare, and manufacturing, remains a central challenge. Each vertical has specific demands and operational environments, requiring tailored solutions that address their unique needs while fostering collaboration across sectors.
- **Contributing to the Sustainability Transition**: 6G presents an opportunity to significantly reduce the energy consumption of networks and communications infrastructure. However, achieving the green transition will require advancements in energy-efficient network design, new materials for sustainable hardware, and intelligent resource allocation strategies.
- **Enabling Innovative Business Models and Disruptive Applications**: One of the critical opportunities for 6G lies in fostering innovative business models and supporting disruptive high-value applications that transcend traditional telecom services. Developing flexible regulatory frameworks, encouraging cross-industry innovation, and driving adoption across diverse markets will be key to unlocking the economic potential of 6G.
- **Influencing the Global 6G Vision and Standardization**: A strategic challenge for Europe will be to actively influence the global 6G vision and lead in the standardization process. By participating in international standardization bodies and shaping the technical and ethical foundations of 6G, Europe can ensure that its priorities—such as privacy, sustainability, and inclusivity—are reflected in global frameworks.

Type of instruments and timeline

The SNS R&I WP 2025 marks a significant step forward in the second phase of the SNS Roadmap, building on the current portfolio of 79 research, innovation, and trial projects. This phase aims to further enhance the development of enabling technologies and applications that are critical for 6G, addressing societal and sustainability drivers while ensuring full supply chain integration and ecosystem engagement. A key focus is on validating business perspectives early on and preparing standards to support long-term deployment of 6G technologies.

To maximize the impact of public investments, collaboration and synergy creation are fundamental components of the program. These are achieved through:

- **Collaboration activities via SNS Working Groups (SNS WGs):** These groups provide a platform for strategic alignment and resource optimization, particularly in terms of cooperation amongst SNS projects and with other partnerships and industry vertical stakeholders. The goal is to generate positive multiplier effects that benefit the broader European digital economy.
- **Synergies with other EU Initiatives and Partnerships**: Engagement with existing European programs, such as Chips JU and Rail JU, and partnerships in relevant domains, ensure that R&I

efforts are aligned with EU policy objectives. This approach enhances the coherence of funding strategies and accelerates the development of critical 6G technologies across sectors like microelectronics, AI, photonics, and cloud computing.

Additionally, two key Strategic **Working Groups** have been established to provide strategic guidance:

- **Standardization SWG**: This group will focus on aligning SNS outcomes with international standardization efforts, ensuring that Europe maintains a leadership role in shaping 6G standards globally. Early engagement in standards development will be critical to influence the future trajectory of 6G deployment.
- **Telco Cloud Continuum SWG**: With the growing importance of cloud and edge technologies, this group will focus on the development of a Telco Cloud continuum. This involves the seamless integration of telecommunications networks with cloud infrastructures, enabling real-time data processing, enhanced service delivery, and the deployment of 6G-enabled services at scale.

The timeliness of these instruments is crucial, as early-stage coordination and standardization activities will pave the way for smooth market adoption and operational success of 6G technologies. By fostering collaboration across public and private sectors and leveraging synergies, the SNS R&I WP 2025 is positioned to deliver high-impact outcomes that align with Europe's strategic goals in the digital economy.

Overview of Key Stakeholders of SNS JU

The SNS JU brings together a diverse ecosystem of stakeholders that play a critical role in shaping the future of 6G networks and services. These stakeholders, representing both public and private sectors, contribute to the overall strategic direction, funding, and implementation of projects that drive Europe's leadership in 6G innovation and digital infrastructure. The collaboration between industry, member states, vertical sectors, and international partners ensures a comprehensive approach to the development of next-generation technologies.

1. Industry Stakeholders

Industry stakeholders are at the forefront of the SNS JU, providing strategic guidance and investment to support the development of 6G technologies. The private members of the SNS JU's GB, represented by the 6G-IA (the voice of the European private sector for smart networks and services with 365 members), have a strong leadership role in defining work programs and ensuring that industry needs are well-represented. These private sector members are committed to matching EU funding through co-investment in projects and additional activities, reinforcing the importance of public-private collaboration in driving innovation.

2. Member States and National Initiatives

Member States, through the SRG, play a crucial role in aligning national priorities with the broader objectives of the SNS JU. This collaboration helps ensure that national initiatives complement EU-wide efforts, fostering synergies between different funding mechanisms. The SRG also facilitates partnerships with national governments, ensuring that research outcomes reflect the needs of individual countries while contributing to Europe's collective 6G vision. This alignment is essential for maximizing the impact of the SNS JU and securing Europe's leadership in global 6G developments.

3. International Collaboration and Synergies

International cooperation is a fundamental success factor for the SNS JU, which promotes a European approach to 6G while facilitating global partnerships. The program fosters collaboration with regions that have initiated bold 6G initiatives, ensuring that Europe remains competitive on the world stage. Through partnerships with international organizations and initiatives like the EU-US Trade and Technology Council (TTC) and NextG Alliance, the SNS JU strengthens Europe's role in shaping global 6G standards and supply chains.

4. European Partnerships and Associations

The SNS JU leverages synergies with other European partnerships, associations, and platforms to ensure a coordinated approach to 6G research and innovation. The following organizations have been invited to join the SNS JU stakeholders' group, ensuring that a broad range of sectors are integrated into the program:

- NetWorld Europe
- Alliance for Internet of Things Innovation (AIOTI)
- European Cyber Security Organisation (ECSO)
- Networked European Software and Services Initiative (NESSI)
- Public Safety Communication Europe (PSCE)
- 5G Automotive Association (5GAA)
- 5G Alliance for Connected Industries and Automation (5GACIA)
- European Telecommunications Standards Institute (ETSI)
- AENEAS (microelectronics industry association)
- ETNO
- GSMA

These organizations represent a wide array of expertise in telecommunications, microelectronics, cybersecurity, and vertical applications. Through close collaboration, the SNS JU ensures that all relevant technological domains are aligned, driving a unified approach toward the development of 6G.

5. Vertical Industry Stakeholders

A key priority of the SNS JU is to foster deep collaboration with vertical industries across sectors. The development of enabling technologies and applications that impact societal, and sustainability goals requires full supply chain integration—from microelectronics to digital services. A strategic goal of the SNS program is to empower these vertical domains beyond the current capabilities of 5G, supporting the integration of innovations such as cloud/IT technologies, IoT connectivity, and ultra-reliable communications. This broad value chain approach ensures that 6G technologies are aligned with the needs of sectors such as automotive, healthcare, manufacturing, and public safety.

6. Collaboration with Other Key Partnerships and Programs

To ensure maximum impact, the SNS JU actively collaborates with other European partnerships and initiatives in areas like microelectronics, photonics, edge cloud and connected mobility. Specific synergies are pursued with:

- Photonics 21 for advanced optical and quantum technologies.

- Rail JU for FRMCS evolution and Gigabit train infrastructure.
- European Alliance for Industrial Data, Edge and Cloud
- 5G for Connected, Cooperative and Automated Mobility (CCAM) for smart mobility solutions. This collaboration with the CEF Digital Program supports the holistic integration of 6G technologies into Europe's broader digital and industrial ecosystems.

7. Supply Chain Integration

The program recognizes the importance of a comprehensive approach to supply chain integration, ensuring that 6G innovation encompasses the full spectrum from microelectronics to digital services. The SNS JU aims to bring together industry stakeholders across the value chain, from component manufacturers to service providers, enabling the development of interoperable platforms and solutions that benefit a wide range of vertical markets.

In 2025, the SNS JU program will be fully 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 2025

2.1. Executive summary

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

Operations

The SNS R&I WP2025 addresses the technological and business realisation underpinning the 6G vision[1], targeting massive digitalisation of societal and business processes through intelligent connectivity across the human, physical and digital world.

The focus of 6G R&I in the WP2025 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 considering long-term R&I on disruptive concepts.

This **fourth WP of the SNS JU** continues the second phase implementation of the SNS roadmap. Compared to the 3 previous Calls, it includes:

- a reinforced focus on key technological topics targeting medium to higher TRL ranges, compared to the 2022 and 2023 calls, further enhancing the 2024 Call objectives;
- strands on 6G disruptive technologies targeting long-term R&I starting at low TRL (starting at TRL 1-3 and not above) with projects expected to prepare the forthcoming definition of technologies and concepts for advanced 6G in advanced Architectures, IoT and device technologies;
- activities designed to further support the 6G standardisation phase (target 2025 with first batch of 6G Study Items);
- a reinforced emphasis on trust, security and communication privacy-enhancing technologies, sustainability, societal challenges and economic aspects;
- a set of activities on Microelectronics for connectivity and more specifically on “Front End Module” (FEM) that combines digital, RF, and packaging technologies to reach a reconfigurable, multi frequency, versatile front end for 6G end-to-end system and extending/reinforcing the cooperation with the Chips JU
- a dedicated strand on further R&I work on multiple aspects of photonic technology reinforcing the synergy with the European Partnerships for Photonics
- a dedicated strand on terrestrial (TN) and non-terrestrial networks (NTN) unification/integration, focusing on unification of technologies, protocols and architectures in complement to what ESA/Space Agencies are supporting, also considering the demanding requirements of the most innovative use cases of NTN;
- a set of activities on experimenting & validating 6G solutions and use cases targeting the development of an evolvable 6G telco cloud and service provision experimental infrastructure for the duration of

the SNS programme, offering opportunities to include and extend additional platforms developed in other related national initiatives, Cluster 4 projects (e.g., under the "Advanced computing and big data" domain), IPCEI-CIS, or previous SNS projects.

- International cooperation activities, under Stream B and where relevant, targeting US and considering the policy developments between EU and US on 6G under the EU-US Trade and Technology Council (TTC);
- complementary and extended opportunities to test 6G technologies through Proof of Concepts and trials with verticals, targeting the validation of SNS KVIs and KPIs in the context of very advanced digital use cases with a focus on specific vertical sectors (i.e., Industry/Manufacturing, Media, Transportation/Logistics, Emergency and Safety Services and Health);
- further extension of the stakeholder's base, notably towards the cloud, IoT, microelectronics, photonics and key vertical user industries.

The SNS JU will also provide support services for projects implemented under the first, second and third 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 applying to the first and second Call).

At R&I level, the target is to launch **one or more calls in 2025, the first one in January 2025** supported by all needed documents, procedures and configurations of the IT systems.

The estimated EU **expenditure for the 2025 call is EUR 128M**. The budget is subject to its adoption by the budgetary authority and may be updated accordingly.

Annex 2 details the call 2025 part (4th Call of SNS JU, under SNS Phase 2).

Other 2025 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 WP 2026 and related SNS JU SRIA update (planned in 2025);
- 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 WP 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 2025 edition of the EUCNC & 6G Summit conference;
- Coordinating information sessions on the 2025 SNS R&I WP as well as specific rules for participation;
- Support administration & finance on JU internal control processes and methods (e.g risk assessment, Access to documents etc.)

- Reporting, input to Horizon Europe evaluation and monitoring, preparation of Annual Activity Report (for 2024);
- Work with the EC's central services when necessary to provide policy feedback and address horizontal legal, financial and administrative issues in a manner coordinated among JUs;
- Ensuring the smooth operations of an autonomous JU office environment in 2025 including IT autonomy and recruitment to full staffing of the JU office and needed SLA's for steady operations of the JU;
- Initiate and coordinate the various SNS programmatic structures (Steering Board, Technology Board, 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 2025, the SNS JU will be engaging in designing and deploying a carefully planned communication strategy, which will be outlined in the comprehensive **Communication Plan 2025** (to be adopted by the SNS JU GB), with the target to further raise 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. presence at MWC 2025, EuCNC and 5G Techritory Events etc.).

In 2025, 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 highlight programme achievements with strong impact, scientific advancements, and their market uptake potential as well as on key programme priorities such as security, societal and sustainability aspects. Moreover, SNS JU will place increased emphasis on engaging different communities beyond the technological, research, and innovation sectors.

Administration and Finance

The SNS JU will be fully staffed in 2025 achieving the staffing figures foreseen in the Legal Financial Statement which corresponds to 17 staff. The Human Resources policy has been developed in 2024 (e.g. selection and recruitment policy) and will be further completed in 2025 (e.g. mobility, gender, inclusiveness). The policies are aligned to other JUs through the BOA set-up.

In 2025 the SNS JU will further consolidate its working methodology in terms of finance and accounting refining workflows, if needed, after the 14 months of the SNS JU financial autonomy. This will be done in the framework of both the operational (grants management) and the administrative budget. In terms of procurement, SNS JU will further strengthen its participation in the Inter-JUs BOA procurement reducing further its administration workload while eventually benefitting from advantages derived from a higher demand of services.

The SNS JU will implement its digital transition in 2025 through its IT autonomy which is planned to be achieved in the first quarter of the year. The conclusion of the SLA BOA IT will also further enhance synergies in this area.

The SNS JU is based in the white atrium Building in Brussels where seven other JUs are located. In 2025 a new usufruct contract will enter into force. The SNS JU office space will also be refurbished.

3.2. Operations

3.2.1 Objectives, indicators and risks

The below table indicates the actual achievements (2023 figures) under the Comments section, while it also represents target figures for the whole duration of the SNS programme.

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 2025 a similar approach has been followed as in 2024. 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.	On aggregated figures from Call 1 and Call 2, SMEs represent 26,5 % of beneficiaries and 24 % of EU funding received. This figure does not include EU funding received by SMEs through Financial Support to Third Parties (FSTP) which, in most cases, favours the SME participation.
R2. Rapid diffusion	**#of end-user workshops & webinars [cumulative]**	**0**	**25**	**60**	**90**	**125**		The SNS projects started in 2023 (call 1) have reported the organization of 100 events and workshops. This figure clearly outscores the target of 25 workshops for the year. Additionally, projects have reported participation to 314 industry events.
R3. High risk research funding	**% of total funding**	**~68%**	**>=50%**	**>=50%**	**>=50%**	**>=40%**	The risk for not meeting this objective in 2025 is minimum as low to medium TRL activities are planned for B projects in the call of 2025 that constitute ~70% of the overall funding.	Low TRL activities are considered as High risk. They represented 70 % of total funding of Call 1 projects.
R4. Standardization contributions	**Contributions to SDOs [cumulative]**	**0**	**50**	**350**	**750**	**1000**		308 contributions to standards were made by Call 1 projects within 2023.
R5. Share on family patents	**% of patent families**	**0**	**15%**	**15%**	**15%**	**15%**		SNS Projects from the first call have submitted 32 patents.
	Patent grant rate							
		0	**60%**	**60%**	**60%**	**60%**		

R6. Scientific excellence	**# of publications [cumulative]**	**0**	**100**	**400**	**700**	**1000**		In 2023, SNS projects produced and disseminated quality knowledge in 129 peer reviewed articles and journals, 230 conference papers, 14 white papers. These figures are above the target of 100 publications.
R7. Reach an appropriate balance between research, innovation, and deployment	**% RIA** **% IA** **%CSA**	RIA 78% IA 20% CSA 2%	RIA 78% IA 20% CSA 2%	RIA 78% IA 22%	RIA 70% IA 30%	RIA 60% IA 40%	The risk for not meeting the right balance in 2025 is minimum based on the structure of the SNS R&I WP 2025 and the mobilization of interested stakeholders as monitored during the previous Calls.	SNS R&I WP is designed to focus mostly on research activities during initial phases and rebalancing towards large-scale trials in the final ones. In 2023, 86% of funding was allocated to RIA and 10% to IA. In 2025 81% of funding will be allocated to RIA and 19% to IA. This % will be revaluated during the following phases to maximize the impact of 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**	**>=10**	**>=20**	>=30	Based on the SNS R&I WP 2025, sustainability aspects including 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 explicit focus and guidance to applicants during Information Days. Moreover, the sustainability lighthouse project will start beginning 2025 and will aggregate the efforts from Phase1 and Phase 2 projects to achieve a higher impact.	In 2023, 13 projects were working specifically on energy efficient RAN while almost all of them were working on different aspects of energy consumption of networks.
R.9 Ensure research on secure future digital services	**# of related projects:**	**0**	**>=3**	>=10	>=15	>=20	Based on the SNS R&I WP 2025, topics related to security and privacy support have a prominent place in multiple streams. We need to ensure that this	In 2023, 12 Call 1 projects working on security aspects have been launched.

							message is also conveyed during Information Days.	
R.10 Collaboration and synergies with other Partnerships	**# collaborations**	**0**	**2**	**5**	**6**	**6**	6G-IA has engaged in discussions and MoUs with other Partnerships on SNS related topics. This activity will be further strengthened via the SNS JU and 6G-IA and through the SNS CSA projects.	In 2023, SNS JU has established a strong collaboration with Chips JU, Rail JU and Photonics 21, which will be further strengthened during the following years. Links to national initiatives, have also been strengthened through the States Representative Group.
Outcomes (SO)								
O.1 Development of energy efficient networks	**White papers** **[cumulative]**	**GeSI report on Energy consumption by 2030**	**1**	**2**	**3**	**>3**		This KPI cannot be evaluated yet as the relevant projects (see KPI R#8) have started in 2023 and there is no tangible outcome yet. Following the launch of SNS collaborative activities (SNS Steering Board & Technology Board) a dedicated task force on sustainability has been setup to investigate among other things the development of energy efficient networks in the context of SNS programme. Results by the sustainability task force (in the form of a joint SNS project white paper) are expected by beginning 2025.
O.2 Technological solutions consensus building	**White papers** **[cumulative]**	**0**	**1**	**2**	**3**	**>3**	Working towards this direction, activities are planned for 2025 (e.g. white papers on 6G Architecture, Software Network, AI/ML and sustainability). The target is also to have a first consensus on KPIs/KVIs definition and validation methodology in 2025.	In 2023, SNS JU policy working group, with the assistance of the 6G-IA association developed a joint industry position paper between EU and US. It included the technological roadmap for cooperation in the context of the Trade and Technology Council

								(TTC). Additionally, key partners from Hexa-X-II and 6G-IA submitted a contribution in the IMT-2030 activities analysing the Key Value Indicators (KVIs) that will be needed to measure sustainability goals. It is also worth mentioning that in in 2023 the compilation and streamlining of use cases among SNS projects started and were submitted as European contribution to 3GPPP in May 2024.
O.3 Advanced 6G solutions for verticals	**#of different vertical types engaged [cumulative]**	**0**	**3**	**6**	**10**	**10**	In WP2025, the key engagement of verticals will happen again in Stream D where it is expected that 4 trials and pilots (on different priorities) with verticals will be selected, with tangible results for environmental, societal and economic aspects by the end of the project. Vertical industries are expected to be engaged in other SNS R&I WP Stream projects that will demonstrate the results of 6G solutions.	The gap analysis of Phase 1 selected projects has identified around 15 vertical areas that are ingbe addressed by Call 1 projects. Note that in Call 2 (projects started beg. 2024) special attention was given to core areas that were covered at smaller extent in Call 1 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**	**0**	**>=2**	>=10	>=15	**>=20**	Based on the SNS R&I WP 2025, topics related to disaggregated architectures have a prominent place in multiple streams, and especially under Stream C - 6G Telco Cloud and Service Provision Enablers.	The analysis of Call 1 selected projects by SNS-OPS in 2023 has identified 29 open-source contributions, out of which 23 were accepted by relevant communities.

	B5G and 6G networks							
Impacts (GO)								
I.1 A competitive data economy	**% Market share for the communication network**	**40%**	**40%**	**40%**	**40%**	**40%**		Based on market data (2023) NOKIA has 15,3% share of the global market and Ericsson has 12,5% market share.
I.2 Reach Programme level consensus on 6G KPIs	**white papers** **[cumulative]**	**NetworldEurope SRIA**	**1**	**2**	**3**	**N/A**	Working towards this direction, activities are planned for 2025 to compile results from Call 1 and Call 2 projects, TMV WG, Sustainability TF (KVIs) as well as supporting organizations (e.g. NetworldEurope) and 6G-IA WGs.	In 2023, the SNS community has already started building upon the results of the 5G PPP. the Test, Measurement and KPIs Validation Working Group (TMV WG) has re-launched its activities within 2023 following the Call 1 projects start and transition of Working Groups under SNS initiative. The TMV WG provides the right forum for KPI & KVI (societal key value indicators) formalization and validation to the greatest possible extent, to ensure a unique European vision on 6G networks. Furthermore, Hexa-X-II project is responsible for the definition of KPIs and KVIS for the main 6G use cases, while the SNS-OPS project has already started monitoring and analysing all SNS project KPIs & KVIs in 2023 through a dedicated questionnaire, which will be addressed to all SNS projects on an annual basis.
I.3 Uptake of digital solutions within verticals	**Number of large-scale trials**	**0**	**3**	**6**	**10**	**>10**	In WP2025 Stream D targets 4 projects, which are expected to prioritize use cases for a limited number of verticals	In 2023, 4 Call 1 Stream D projects started their engagement with

	[cumulative]						(1 or maximum 2 verticals) to ensure that they engage key vertical stakeholders and provide solutions of high monetization prospects, e.g. according to the European vision and orientations, as presented in the 3GPP SA1 Workshop that took place in May 2024.	verticals to develop large-scale trials.
I.4 Energy efficiency of telecommunication networks	**% increase of energy efficiency of cellular communications**	**50%**	**50%**	**50%**	**50%**	**50%**		This KPI cannot be evaluated yet, as the relevant projects (see KPI R#8) have started in 2023 and there is no tangible outcome yet. Following the launch of SNS collaborative activities (SNS Steering Board & Technology Board) a dedicated Sustainability Task force has been setup to investigate among other things the development of energy efficient networks in the context of SNS programme. Results by the sustainability task force (in the form of a joint SNS project white paper) are expected by beginning 2025.

Table 1: Target SNS JU KPIs

Other risks

Risk	Action Plan
Two risks have to be considered for 2025: 1) Mobilisation of the right stakeholders (especially in the cloud/edge and microelectronics domains) as well as the key verticals in the identified priority areas and understanding of the JU requirements (e.g. strong impact on standardisation), operation model (programmatic objectives and call conditions; 2) operational-related delays in launching calls and in evaluation/GAP workflows due to the implementation modalities additional SNS conditions and specificities (e.g. eligibility conditions)	Risk 1 can be mitigated through planned information events and public presentations of the programme, targeted workshops with key stakeholders and collaboration/synergy activities. In 2023 and 2024, several events already took place to raise stakeholders' awareness and to increase their preparedness, such as the 6 6G-IA workshops on Microelectronics, Photonics, NTN, Security, Wireless and Cloud/Service Provision, with the purpose to identify future strategic directions for the SNS JU for the years 2025 to 2027. All relevant efforts can be amplified through SRG meetings and initiatives, in view of relaying information and awareness at national level. Risk 2 is taken care of by a structured and efficient dialogue between SNS JU, Commission Services & States Representative group, applying detailed guidelines and strict milestones.

3.2.2 Scientific priorities, challenges and expected impacts

The scope of the SNS R&I WP2025 is based on the NetworldEurope Strategic Research and Innovation Agenda (SRIA), the SNS JU SRIA[1] adopted in 2023, the analysis of the coverage gaps resulting from the results and implementation of the previous SNS calls, and on the identification of specific policy priorities, notably security & technological sovereignty, sustainability, satellite communications policy, micro-electronics, international cooperation and Connected Collaborative Computing Networks "3C Network". In that context, the 2025 call covers multiple 6G objectives, notably:

Objective 1 – Full industry digitalisation and support of vertical industries

- To provide and validate (in trials and pilots) the enablers and solutions for full digitalisation of the European vertical industries to improve their business operations.
- To further test/validate early Standards and Systems and provide further input to future standardization phases and releases
- The validation of KPIs and their technical low implementation cost, considering the ITU KPIs detailed definition expected in 2026 as well as progressing on KVIs qualification/quantification.

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

[1] sns-ju-sria-2021-2027-second-edition-2023.pdf (europa.eu)

- 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 digitalisation 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 cross-disciplinary private sector forces to build solutions that will improve the operation of European vertical industries.
- To "support research initiatives in the cloudification or virtualisation of communication platforms, customer-facing edge cloud solutions, and 6G development" as recommended in the Draghi report[2]
- To take reinforced actions on the Telco Cloud in view of securing a better European position in the cloud and edge cloud domain.
- To further work towards a unified consensus framework promoting a European approach towards 6G that takes into consideration national specificities (e.g. current infrastructures, economic power, societal needs), facilitating international cooperation.

Objective 4 – B5G and 6G 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 WP2025 proposes to continue working on its previous 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 both low-medium TRLs leveraging WP 2024 with the objective of delivering innovative solutions towards real-life networks in a short to medium-term period and also low TRL targeting forthcoming 6G / disruptive technologies in a long-term period. The Stream contains the Strands dedicated to wireless communication and signal processing, communication infrastructure technologies and devices, and reliable services and smart security. A dedicated Strand on the design, development and testing of a Front-End Module (FEM) is also included.
- **Stream C:** it focuses on SNS Enablers and Proof of Concepts (PoCs) used to further develop and consolidate experimental infrastructure(s), in support of the various phases of the SNS JU. Stream C developments in WP 2025 has a particular focus on 6G Telco Cloud and service platform, using Open-Source technologies and addressing longer term parts of the 3C Networks orientations.
- **Stream D:** it targets 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

[2] EU competitiveness: Looking ahead - European Commission (europa.eu)

vertical domains. SNS R&I WP 2025 Stream D projects are expected to mostly rely on SNS Phase 1, and early Phase 2 (Call 2023 and Call 2024) technologies and especially the infrastructures being developed from Stream C projects. The Stream D projects are also expected to use results from other HE calls (e.g., Cluster 4) or results on 6G from national initiatives. The goal is to further incorporate innovative 6G functionalities.

An extensive description of the R&I WP 2025 is detailed in the Annex 2 of this document.

3.2.3. Calls for Proposals

3.2.3.1. Calls

The R&I SNS WP2025 (annex 2 of the present document) details **one or more calls for 2025, with a call planned to open in January 2025 and will close in April 2025** with selected proposals to be contracted by the end of 2025. It covers the following topics:

Streams / Topics	Call 2025 Topic Budget (in M€)
HORIZON-JU-SNS-2025-STREAM-B (RIA)	
01-01: Advanced Architectures Systems and Technologies	15.0
01-02: Advanced IoT and Device Technologies	9.0
02: Wireless Communication Technologies and Signal Processing	21.0
03-01: 6G NTN-TN Unification/Integration	8.0
03-02: Higher Speed Optical Access Networks and future end-to-end Packet Optical Network Architecture in 6G	8.0
04-01: Smart Security / Security Services	8.0
04-02: Reliable Services Operation	8.0
05: Microelectronic – Front-End Module (FEM)	12.0
HORIZON-JU-SNS-2025-STREAM-C (RIA)	
01: 6G Telco Cloud and Service Provision enablers	15.0
HORIZON-JU-SNS-2025-STREAM-D (IA)	
01: SNS Trials and Pilots (T&Ps) with Verticals	24.0
Total (M€)	**128**

3.2.3.3. Conditions and management of the calls

The General Annexes to Horizon Europe for the WP 2023-2025[3] generally apply with a few exceptions that are specific to the SNS JU. These exceptions are detailed in Appendix 1 to the R&I WP of Annex 2.

Openness: In line with Horizon Europe principles, all above R&I topics for 2025 are fully open (with IKOP generation incentives) with the exception of HORIZON-JU-SNS-2025-STREAM-B-05, HORIZON-JU-SNS-2025-STREAM-C-01 (up to half of the budget fully open) and HORIZON-JU-SNS-2025-STREAM-D-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 (also called "Single Basic Act" or "SBA"). 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.

IKOP: In Kind Contribution to Operational Activities (IKOP) are 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.

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 to in the specific provisions of the Model Grant Agreement (MGA).

Procedure: Specific rules apply related to the procedure to rank proposals with equal scores. Furthermore, in Streams SNS-2025-STREAM-B-01-01, SNS-2025-STREAM-B-01-02 and HORIZON-JU-SNS-2025-STREAM-D-01, to ensure a balanced portfolio within those clusters of activities on above streams, grants will be awarded to proposals not only in order of ranking but at least also to one project that is the highest ranked within each of the identified aspects/priorities, provided that the proposals attain all thresholds (and subject to available budget).

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

35 Projects from 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. 28 Projects from the second call of the SNS JU R&I Work Program 2023 (total budget of around EUR 132 million) started beginning 2024 (27 projects started in January 2024,

[3] https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/horizon-europe-work-programmes_en

while project ELASTIC started in March 2024). The third Call (SNS R&I Work Program 2024) is implemented with a total budget of EUR 128 million. All 16 projects from the last SNS Call are expected to start at the beginning of 2025.

During the previous years of implementation of SNS JU projects, a set of actions have been taken in collaboration with SNS OPS CSA to ensure the establishment of synergies among our portfolio of projects:

- Adoption of a commonly acceptable **Collaboration Agreement (CoA)**
- Functioning of the **SNS-Initiative Steering Board (SB) in the frame of the CoA**
- Functioning of the **SNS-Initiative Technology Board (TB) in the frame of the CoA**
- Functioning of several **project WGS (Architecture; Reliable Software Network; Test, Measurement and KPIs Validation; Hardware technologies)**

All 16 Call 3 projects will be invited to sign the CoA within 2 months after the project start date, so that they are fully onboarded into the above programmatic activities, where 63 projects are already very active with well-planned anticipated results within 2025 (e.g. white papers on sustainability, AI/ML & 6G Architecture; Policy papers; SNS Open Call Report, joint communication and demonstration activities etc.).

While the SNS JU will pursue all 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 targeted verticals (Industry/Manufacturing, Media, Transportation/Logistics, Emergency and Safety Services and Health) and Partnerships (e.g. on Photonics), national initiatives and international partnerships (following already established collaboration with USA, Japan and South Korea), focus on telco cloud/edge and 3C networks, Non-Terrestrial networks and space components, trust & security, end-to-end sustainability and further enhance collaboration with the micro-electronics community (chips JU) in the context of the European Chips Act. SNS JU will also try to continue or establish new synergies with other Horizon Europe partnerships such as the EU-Rail JU, the EuroHPC JU and the European Cybersecurity Competence Centre. These activities will be either implemented by the 2025 Work Program or prepared in 2025 for further implementation in 2026.

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

The SNS JU will continue to 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 Act[4], the Memorandum of Understanding between AENEAS and 6G-IA[5], findings of the COREnect study[6], 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 launched from Call 2 STREAM-B-01-05: Microelectronics-based Solutions for 6G, bringing together both communities and focusing on THz communication enabling technologies. Furthermore, one lighthouse project resulted from the SNS stream "SNS-2024-STREAM-C-01-01: SNS Microelectronics Lighthouse"

[4] https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-chips-act_en
[5] https://aeneas-office.org/2022/06/07/aeneas-and-6g-ia-join-forces-to-build-synergies-for-european-leadership-in-next-generation-telecommunications/
[6] https://digital-strategy.ec.europa.eu/en/news/european-think-tank-corenect-launches-roadmap-towards-leadership-chips-6g

aiming 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. This lighthouse project will start in January 2025. The HORIZON-JU-SNS-2025-STREAM-B-05 Strand in Wp 2025 targets one project on Front-End Module (FEM), complementing the SNS Call 2023 Microelectronic projects and the SNS Call 2024 Microelectronic Lighthouse project. The FEM Strand has been designed to potentially span over the next Work Programmes to achieve critical mass and ideally to be mirrored by complementary activities under the Chips JU.

In line with the European Commission White Paper on ***"How to master Europe's digital infrastructure needs?"***, it is necessary to continue developing a synergetic ecosystem between relevant actors in the cloud/computing continuum. In this context, the Policy WG on 3C Networks will focus on the development of a European strategy for the Telco Cloud continuum. Moreover, the R&I WP 2025 Stream C (dedicated to the development of EU-wide experimentation platforms incorporating 6G telco cloud and service provision enablers) will consider the forthcoming activities and Call under Horizon Europe Cluster 4 - Connected Collaborative Computing Networks (3C networks) and other ongoing European activities (e.g. IPCEI-CIS, the Cloud-Edge-IoT HE projects etc.) to bring communities together, ensure complementarity and avoid potential overlaps. The objective in 2025 is also to further identify synergies among European funding instruments to maximize the impact of their activities, shorten the delivery of well-studied and tested solutions towards standardisation activities.

The Memorandum of Understanding (MoU) between the 5G Automotive Association (5GAA) and 6G-IA will be further leveraged in 2025, demonstrating 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 (SWG) ***"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 competitiveness[7] 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. In this context, EU-US cooperation may be materialized under R&I WP 2025 Stream B, if applicants consider this as relevant. More specifically, in these Streams and for projects which encourage the inclusion of US subsidiaries, it is expected to establish cooperation and provide wide visibility of the related undertaken R&I, notably how the work relates to the related US developments under the Next G Alliance and the related US R&I funding programmes, how

[7] https://futurium.ec.europa.eu/en/EU-US-TTC/wg4

it represents EU-US collaboration opportunities and how it paves the way towards complementary advanced research and supply chains for 6G.

The Japan-EU Digital Partnership[8] advances cooperation on digital issues to foster economic growth and a human-centric digital transformation based on common values[9]. 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, joint R&I cooperation with Japan and Republic of South Korea has led to the selection of 2 projects, focusing on AI-driven systems that bring reliability and flexibility to next-generation radio access networks. These projects will start in 2025 and are expected to work in close collaboration with the relevant funded projects that have been selected by the JP and ROK side.
The SNS JU will continue to explore horizontal topics of interest through its different sets of Working Groups (WGs). During 2025, four (4) "SNS Project-related Working Groups" (SNS JU WGs) and two (2) "SNS Strategic Working Groups" (SWGs) will be active, 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 GB. Access to WGs and their rules of functioning are defined in the relevant Terms of Reference of each WG.

In addition, collaboration with Photonics21[10] and with the European Cyber Security Organization[11] is also pursued further through dedicated streams (Strand 03-02: Higher Speed Optical Access Networks and future end-to-end Packet Optical Network Architecture in 6G; 2 strands under STREAM-B-04: Reliable Services and Smart Security) as well as through close collaboration during drafting of the updated SNS JU Strategic Research and Innovation Agenda (SRIA) 2025.

The HORIZON-JU-SNS-2025-STREAM-B-03-01: 6G NTN-TN Unification/Integration strand teams up with Pillar III of the White Paper, which outlines the need to ensure that European digital infrastructures are secure and resilient, as well as the complementary role of terrestrial and satellite connectivity solutions, for uninterrupted availability of connectivity services under all circumstances. SNS JU will continue building bridges between the space and terrestrial communities in the view of "TN-NTN" unification/integration; to this end SNS JU will create synergies i) to facilitate access to European space assets, notably from the European Space Agency (further to the ongoing testing work under the signed MoU with Call 1 6G-SANDBOX project), and ii) with other European programmes.

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, through the SNS ICE CSA and the follow-up CSA (SNS CO-OP), notably through the organization of

[8] https://www.consilium.europa.eu/media/56091/%E6%9C%80%E7%B5%82%E7%89%88-jp-eu-digital-partnership-clean-final-docx.pdf
[9] https://digital-strategy.ec.europa.eu/en/library/japan-eu-digital-partnership-factsheet
[10] https://www.photonics21.org/
[11] https://ecs-org.eu/

workshops and interactions with implemented actions at MS level, in view of defining common follow up actions at EU level.

3.3.1.1. Support to Operations

3.3.1. Communication, dissemination and exploitation

Our vision at the SNS JU is to lead Europe into the future by shaping the design, development, and deployment of 6G, with a vision to converge adjacent technologies and components, from microelectronics to the computing continuum, building on 6G AI-native networks and capabilities like sensing, positioning and integration of terrestrial and non-terrestrial networks. We envision a world where ubiquitous, intelligent, and sustainable networks and services transform industries, enhance societal well-being, and strengthen Europe's technological sovereignty.

Communication is key in bringing this message within and beyond the R&I community. In a moment where we strive to balance Europe's competitiveness with technological sovereignty, as predicted in the Draghi Report, while we want to build a 6G that benefits society, there is an urgent need to communicate to a broader audience of stakeholders.

The SNS JU communication activities for 2025 will continue to support the priorities identified in the **Annual Work Plan 2025** and agreed by the **SNS JU GB** and will align with the strategic objectives outlined in the SNS JU **Communication Policy and the Communication Plan for 2025 (to be adopted by the SNS JU GB).**

Expectations from stakeholders are high, with a **growing demand for faster, more transparent, and clear communication** on Europe's advancements in the field of next-generation networks and services. Strategic communication will ensure all stakeholders are duly informed, in an accurate, clear and accessible way about the activities and results of the SNS JU.

Communication objectives will focus on raising awareness of research and innovation activities on future smart networks and services, increasing knowledge of the SNS JU, and promoting participation in SNS JU activities by engaging with prioritized stakeholder groups. Activities will also aim to accelerate the development and widespread deployment of 6G and adjacent technologies.

Communication objectives will be to:

- Continue promoting the SNS JU brand, identity and activities
- Build credibility and trust in SNS JU as a leading European strategic entity
- Encourage stakeholder engagement and investment
- Foster community building within the R&I ecosystem
- Increase the visibility and impact of SNS JU and its projects
- Ensure effective coordination with other JUs and relevant initiatives
- Provide timely and accurate information about SNS JU activities, calls, and opportunities
- Offer educational resources and support to stakeholders, beneficiaries and the general public

Our communication strategy will balance delivering technical content with addressing broader, more accessible topics related to 6G technology and the future of connectivity. This approach will position the SNS JU not only as expert in a specialized sector but also as a comprehensive dissemination channel that serves as a reference point even for non-experts. Ultimately, the success of 6G will depend also on public acceptance and technology uptake.

Communication activities will highlight programme achievements with strong impact, scientific advancements, and their market uptake potential, translating into concrete benefits for European industries, research and academia, and the citizens. A specific focus will be placed on [reference to be added to the White Paper and 3C network implementation], as well as demonstrating the societal added value of 6G, engaging different communities and perspectives. Sustainability for future smart networks and services will continue to be a main driver for communication activities.

In 2025, the SNS JU will implement key actions around:

1. **Thought Leadership and Expert Panels**: Organize and participate in high-profile expert panels, workshops, and events on 6G, future smart networks and services related technologies.
2. **Alignment with Communication Priorities from the SNS JU Members and increased Collaboration with Other JUs,** with the common objective to demonstrate impact of the public-private models of European Partnerships and Joint Undertakings
3. **Broader Audience Engagement**: Actively involving experts and non-expert public in discussions about future smart networks and services and related technologies.
4. **Enhanced Visibility for SNS JU**: Continually highlighting the SNS JU's role and objectives as well as achievements of the SNS program and projects, with support of the dedicated communication players.

Target audiences

- **Policy-makers:** EU institutions, individual Member States, 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**: with a focus on engaging diverse communities beyond the technological and research sectors.

Communication channels

The SNS JU will develop content targeting the different following channels:

- The SNS JU Website
- Social media (LinkedIn, Twitter)
- Events
- Publications
- Newsletter
- Media
- Direct mailings

The SNS JU will amplify its communication outreach through publicity from its stakeholders and communities, GB members, SNS Coordination and Support Actions, States' Representatives Group, National Contact Points, stakeholder groups, SME organizations, and other JUs.

Key events in 2025 (dates to be confirmed):

- Info Day(s) and brokerage event for the 2025 call
- 5th IEEE International Symposium on Joint Communications & Sensing (JC&S)
- Mobile World Congress 2025
- IEEE WCNC (Wireless Communications and Networking Conference)
- European Parliament event with other Joint Undertakings
- EU Agencies Network events
- EuCNC + 6G Summit 2025
- 5G Techritory 2025
- ETSI 6G Standardisation event
- 6G Global Summits and other relevant 6G Conferences

In 2025, the SNS JU will place increased emphasis on engaging different communities beyond the technological, research, and innovation sectors. The societal impact of 6G technologies and the sustainability dimensions of 6G will be the main drivers of this approach.

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 of the European Commission and other European Institutions.

The SNS JU is part of the Service Level Back Office Arrangement (BOA) for Procurements since December 2022. This SLA is intended 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 common procurement procedures covering common JU needs. This centralised management of common procurement needs allows SNS JU to reduce its administration workload while eventually benefitting from advantages derived from a higher demand of services.

In the framework of the above SLA, several common procurements have already been identified via the Joint Public Procurement Planning for launching in 2025, namely: audit of annual accounts, communication and events, online data protection services, architect services for building refurbishment, facility management services, insurance services, data protection legal support and support to DPOs tasks, CEI remunerated experts for specialised legal advice, support services for implementation of the BOA HR, first aid training, organisation of away days and team building, staff satisfaction/engagement, IT services.

Apart from the JUs BOA above, the SNS JU has also signed several Service Level Agreements with different Directorates-General of the European Commission for the provisions of specific services by the Central

Services. In 2025 the main operating SLA with European Commission DGs will concern: specific IT services (SLA DIGIT); specific HR services (SLA DG HR); specific payroll services (PMO); specific financial/accounting applications – ABAC/SUMMA - (SLA DG BUDG); specific logistics services (OIB); specific document management services Hermes ARES NOMCOM (SLA SECGEN).

SNS JU also intends to purchase services and goods through specific Framework Contracts (FWC) negotiated by the EU Commission services or other EU Institutions 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

Efficiencies and synergies – Back Office Arrangements

The priority for 2025 in terms of synergies and efficiencies for the operations of the JU is to further reinforce and refine its participation in the JU Back Office Arrangements, namely, Accounting, Procurement, Human Resources and Information and Technology.

In 2025, the Joint Undertaking will prepare the accounts 2024 in the frame of the BOA Accounting led by EU-Rail. The joint undertaking will reinforce its collaboration with the Accounting Officer and the Accounting Assistant in the preparation of the accounts 2024 and in all the tasks related to accounting, ABAC and data quality. This includes onboarding SUMMA Business Partners as of January 2025 and to follow up closely the steps to onboard SUMMA in the coming years.

One Back Office Arrangement on facility management/logistics will be set-up in 2025 under the lead of CHIPS Joint Undertaking.

An overview of the main Back Office Arrangements' plan for 2025 in the areas above are provided in the relevant section of the 2025 Work-programme.

3.3.1.2. IT Operations

The priorities for 2025 of the IT System of SNS JU are to consolidate the stability and the reliability of the system, to 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.
Outcomes

1. The first key outcome in terms of digital transformation foreseen for SNS JU for 2025 is the achievement of its IT autonomy. By the first quarter 2025, it is foreseen for SNS JU to fully onboard to the common JUs IT environment.
2. During the first three months of 2025 it is also foreseen the migration into the new IT environment of key corporate systems like ARES and the full operationalisation activation of corporate enabling tools like the EULOGIN.
3. Fully operational SNS JU Digital Workplace.
4. Fully stable IT system – including for corporate operational applications which are key for SNS JU like COMPASS-SYGMA.

IT Back Office Arrangement

The BOA ICT covers services addressing needs for ICT services of the parties including planning, execution and coordination of the implementation of those services. The SLA for the BOA ICT has been signed in December 2024 and its implementation will take place as of 2025 in the following working arrangements/service areas:

1. Inter-JU IT Governance
2. Management of shared ICT infrastructure
3. Management of ICT tools, services and contracts
4. Workplace services provision
5. Security and compliance management
6. ICT activities specific per JU

3.3.1.3. Logistics

The SNS JU is based in the White Atrium Building in Brussels where seven other JUs are located. In 2025 a new usufruct contract will enter into force. Further to an architectural study carried out end 2024 beginning 2025 the SNS JU office space will be refurbished and furnished in order to provide a collaborative working space ensuring efficiency and responding to EU safety and security requirements.

3.3.1.4. Feedback to Policy

European partnerships are a key element of the policy approach of Horizon Europe.

The SRIA of SNS JU has been designed to deliver on Union priorities targeted by Horizon Europe and ensure a clear impact for the Union and its people, which can be achieved more effectively in partnership rather than by the Union alone.

The political guidelines for the new European Commission 2024-2027[12] call for strengthening the Union´s sovereignty, security and democracy. Over the next years, the new Commission will boost Europe´s competitiveness and productivity in the digital economy by putting research and innovation, science and technology, at the centre of the European economy, which will accelerate the green and digital transitions. This ambition has also been endorsed by the Draghi Report[13].

In particular, the mission letter[14] to the European Vice-president-designate for Tech Sovereignty, Security and Democracy, Henna Virkkunen, stresses the need to improve access to secure, fast, and reliable connectivity, as part of a broader strategy for connected collaborative computing. Further, the new geopolitical context has placed the EU digital and green transition in the spotlight, requiring, on the one hand, the reduction of strategic dependencies on critical technologies, as well as the speed-up of the digital transformation to strengthen the EU's resilience and, on the other, foster global industrial

[12] https://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en?filename=Political%20Guidelines%202024-2029_EN.pdf
[13] https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en#paragraph_47059
[14] https://commission.europa.eu/document/3b537594-9264-4249-a912-5b102b7b49a3_en

leadership in key technological domains and value chains. Facilitating synergies between relevant EU programmes will also help to achieve Union's technological sovereignty and autonomous connectivity.

The Commission White Paper on ***"How to master Europe's digital infrastructure needs?"***[15] analyses the multiple challenges Europe faces in the rollout of future connectivity networks to meet the needs of the data-driven society and economy. In its Pillar I, the document details a vision for the Connected Collaborative Computing Networks "3C Network" and calls for reinforced actions on the Telco Cloud domain. It envisages a need to establish a synergetic ecosystem between connectivity and computing infrastructures, making sure that today's connectivity providers become tomorrow's providers of collaborative connectivity and computing, which will be capable of orchestrating different computing elements that the new ecosystem may require. Pillar III of the document outlines the need to ensure that such digital infrastructure is secure and resilient, as well as the complementary role of terrestrial and satellite connectivity solutions, for uninterrupted availability of service under all circumstances[16]. Adequate attention should be given to physical security, notably in relation to the backbone infrastructure, as well as to the transmission of data from end to end of the network[17]. Over the next years, on the basis of the responses to the White Paper, the Commission will work on a new legislative proposal, the Digital Networks Act, to help boost secure and resilient high-speed (fixed and mobile) broadband networks to reach the policy objectives and targets set in the Digital Decade[18], notably the gigabit connectivity by 2030.

In 2025, 6G-SNS JU will continue to support technological sovereignty concerning smart networks and services in line with the EU industrial strategy[19] by enabling the digital and green transitions and European players to develop the technology capacities for 6G systems as the basis for future digital services towards 2030.

6G-SNS Feedback to Policy Roadmap

The importance of evidence-based policy, which advocates for policy decisions to be grounded on objective evidence, has been widely recognised as a crucial asset of transparency and public accountability. Scientific knowledge, stemming from multiple different sources, including research programmes and projects, is a key element of objective evidence that can inform policy makers and other stakeholders throughout the entire policy cycle. However, the decoupling of project management activities (carried out by 6G-SNS) from policy making (carried out by DG CNECT) can create potential gaps and hamper an effective and efficient flow of relevant knowledge to develop digital and connectivity policies steaming from 6G-SNS projects. In the view of the ambitious policy objectives of the new Commission described above, as well as the ongoing progress on the 6G standardisation activities, 6G-

[15] COM(2024)81 White Paper – 'How to master Europe's digital infrastructure needs?' (europa.eu)

[16] In this context, the Commission launched in 2023 the EU Infrastructure for Resilience, Interconnectivity and Security by Satellite (IRIS2) which aims to provide higher security, lower latency and increased bandwidth to citizens, businesses and governments. IRIS2 will also contribute to fulfilling the objectives set in Europe's Digital Decade by enabling advanced broadband satellite communication commercial services. Particularly, it will offer services which combine NTN state-of-the-art technologies, such as software defined satellites and 5G open standards, and NTN cutting-edge technology.

[17] COM(2024)81 White Paper – 'How to master Europe's digital infrastructure needs?' (europa.eu)

[18] https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en#the-path-to-the-digital-decade

[19] https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en

SNS will ensure a systematic and meaningful flow of information across policy cycles to avoid that any policy relevant knowledge generated by 6G-SNS projects is lost. A common policy feedback process will be established to i) strengthen the collaboration between the relevant units in DG CNECT and 6G-SNS JU and, ii) facilitate the identification of policy relevant projects. 6G-SNS JU will work on a **Feedback to a Policy Roadmap** that will consist of:

- **Establishing DG CNECT and 6G-SNS joint team(s)**[20] to define annual feedback ***to policy plan*** which will contain a description of thematic policy needs (notably on 6G standards and security, 6G frequency bands and 6G Cloud Computing), which would include concrete policy questions, the type of required policy input, the corresponding activities as well as the adequate process to channel these policy inputs.
- **Providing regular Policy Input**[21] that will be delivered in two main forms: **i) 6G-SNS programme implementation feedback** (report with key figures on quantitative and qualitative structured programme monitoring data) and **ii) 6G-SNS policy feedback,** which would contribute to DG CNECT`s policy implementation and development. This can be provided in different forms: policy brief from projects related to a relevant policy area, an overview of policy relevant information derived from the project deliverables and reports, case studies (successful use cases), lessons learned and best practices, or a list of policy relevant projects related to a relevant policy area.

3.3.1.5. Record management, data protection and access to documents

Record management covers all information, both electronic and physical, necessary to ensure evidence of SNS JU's activities ensuring an appropriate level of accountability, transparency, and retention of SNS JU's legacy. Effective record management helps to meet SNS JU's transparency obligations, in particular by facilitating public access to documents and implementing the principle of accountability of public actions. Effective record management helps to meet SNS JU's transparency obligations, in particular by facilitating public access to documents and implementing the principle of accountability of public actions.

To keep awareness among staff at a high level, SNS JU will continue with procedural guidance and trainings on these matters.

As regards the processing of personal data, SNS JU applies Regulation (EU) 2018/1725 of 23 October 2018[22] ("EUDPR"). SNS JU, in compliance with EUDPR, is liaising with the relevant services of the European Data Protection Supervisor and contributing to the activities of the inter-institutional data protection networks and working groups to raise awareness among the staff and stakeholders. Internally, the SNS JU

[20] The composition of the DG CNECT and 6G-SNS Joint Teams should complement pre-existing and well-functioning bilateral relationships between DG CNECT Directorate E and SNS Joint Undertaking.
[21] Policy Inputs can stem from quantitative sources (statistics and indicators) or qualitative (information coming from reports and deliverables).
[22] 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; OJ L 295, 21.11.2018, p. 39–98.

data protection will continue to develop new data protection policies covering horizontal services and encompassing such areas as internal control, procurement, IT, HR, and governance.

SNS JU, as a controller, maintains a record of processing activities under its responsibility in a central register ("GDPR central" tool) and makes this register publicly accessible. In addition, SNS JU takes appropriate measures to provide transparent information, communication and modalities for the exercise of the rights of the data subject[23].

Based on the results of a SNS JU Data Protection gap assessment carried out in 2024, SNS JU will continue to ensure compliance with the Regulation (EU) 2018/1725 through the implementation of a Data Protection Action Plan 2024-2025 in close synergies with the other JUs and support of an external service provider. The Data protection Action Plan 2024-2025 will focus on the following priorities:

- the review of the Procedure for Data Subject Requests;
- the review of the Data Protection Privacy Statements;
- the review of the Personal Data Breach Rules;
- the update of the data register and review of the records of processing activities;
- the review of the JU's Information Security Policy.

Regarding access to documents, SNS JU will address any requests for access to documents according to Regulation No 1049/2001, in a spirit of openness and transparency, in order to bring its activities and outputs closer to the public by giving the opportunity to the public to monitor its work.

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 terms of the concrete actions to be carried out in Human Resources Management for 2025:

- Selection and recruitment will be carried out, if and as required, according to the procedures in force and considering the BOA alignment and harmonization of the JUs selection and recruitments procedures. A specific IT tool for the written tests has also been acquired and will be used for selections in 2025.
- Both the appraisal and the reclassification processes will be carried out in 2025 in line with the applicable procedures as per relevant GB Decisions.
- For the mobility and the gender and geographical balance the SNS JU will adapt its activities to the common Guidelines due to be approved by the relevant Working Group within the EU Agency Network.

[23] More information is available on SNS JU website:
https://smart-networks.europa.eu/data-protection-declaration/

3.3.4.2. Strategy for achieving efficiency gains and synergies in HR

The strategy of the SNS JU for achieving efficiency gains and synergies in the Human Resources Management fits in the strategy set at the level of the Back Office Arrangements.
According to Council Regulation (EU) 2021/2085, Joint Undertakings shall achieve synergies via the establishment of back-office arrangements (BOA) operating in some identified areas. Article 13 identifies Human Resources Support among the areas where common BOA can be set up. In that respect, CBE JU expressed its willingness to be the lead JU for the BOA HR with IHI JU as back-up JU.
The BOA HR will implement actions in three main areas of HR Support: recruitment, HR legal framework and HR digitalisation. Its objective is to maximise synergies among the JU's, harmonise procedures by valorising best practices, ensure coherent HR support services, achieve efficiencies and economies of scale, increase the negotiation power of JU's operating under the SBA towards contractors and service providers.

The Joint Undertakings established under Council Regulation (EU) 2021/2085 will contribute to BOA HR Support together with EuroHPC and SESARJU that will participate on specific initiatives in line with their internal priorities and according to their own specificities.

Scope of the BOA HR support

In line with the proposal of an enhanced coordination of the Network of JUs' HR officers, the conclusion of a Service Level Agreement (SLA) among the JU's has been deemed necessary since a clear commitment to the execution of the BOA HR Annual Work Plans must be made by the JU's under the coordination of the Lead JU.
The actual implementation of the BOA HR which started in 2024 and will continue in 2025 focuses on three predefined areas of HR support:

Recruitment

- ***Alignment and harmonisation of the JUs' recruitment processes***: the JU's will finalize the work started in 2024 on the best practices by establishing a common selection process based on the existing relevant legal framework. This common selection process will then be applied across all JU's when launching a selection procedure. This project will include for example the creation of common templates, scoring guides, platforms and tools that will provide a consolidated ground for individual and common selection procedures and recruitments.
- ***Organisation of joint selection procedures***: in order to increase efficiency gains the JU's will organise as much as possible joint selection procedures for common profiles with same grades. This practice is already in place and will continue in 2025.
- ***Establishment and sharing of reserve lists/ job profiles library***: the JUs will continue to share their reserve lists to shorten their recruitment processes and time-to-recruit and will start to work on the harmonisation of job profiles.

HR legal framework

The JU's share a common legal framework in the HR domain, therefore, additional synergies can be achieved by enhancing the existing collaboration in this area. The focus in 2025 will be on:

- ***Inter-JU network of Confidential Counsellors (CCs):*** currently the JU's share a common network of confidential counsellors and regularly organise joint calls for expression of interest to expand the network. Training, information campaigns and joint actions are also organised to promote the JU's staff well-being and raise awareness on psychological and sexual harassment and to prevent interpersonal conflicts. A new inter-JU call for expression of interest will be launched to replace the Confidential Counsellors who will depart due to the end of their mandates. New training sessions will be provided both to the Confidential Counsellors but also to staff members on this matter. In the context of the HR BOA, the JU's will also promote the visibility of mediation services by organizing an information campaign for all JU staff.

- ***Collaboration with the EU agencies network (EUAN) and the European Commission***: the JU's will continue to attend EUAN meetings including possible ad-hoc participation of the HR Officers to different working groups. The JU's will continue to liaise with DGHR /PMO about common HR matters and seek advice for specific topics.

- ***Inter JU's HR Officers network:*** the JU's HR Officers will continue to meet bi-weekly to share best practices and provide support to the newly established JU's. To this purpose, a common collaborative platform was be created (Teams) to facilitate the interactions between HR Officers, the exchange of information and documents.

HR digitalisation

In 2025, the JUs will continue to move towards a digitalisation of HR processes and will work on the harmonization of their IT systems in the HR area.
The inter-JU HR Officers will continue to share good practices in the use of their IT systems and will continue to actively take part in the HR Transformation programme led by the European Commission, notably by contributing to the projects of the second wave (2024-2025).

The JU's will implement the actions defined in the 2025 BOA HR Annual Work Plan and more specifically the following projects:

- Alignment and harmonization of practice for selection and recruitment procedures;
- Develop an inter JU Competency Framework;
- Identify the common recruitments for 2025 and shared reserve lists;
- Continuation of the 2024 actions.

3.3.4.3. Staff Establishment Plan

The Staff establishment plan gives an overview and forecast of annual staff positions for the year 2023.

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.

Temporary Agents (Function group and grade)	2024				2025	
	Authorised budget		Actually filled as of 31/12		Authorised budget	
	Permanent posts	Temporary posts	Permanent posts	Temporary posts	Permanent posts	Temporary posts
AD 16						
AD 15						
AD 14		1		1		1
AD 13						
AD 12		1		1		1
AD 11						
AD 10						
AD 9						
AD 8						5
AD 7		5		5		
AD 6						
AD 5						
TOTAL AD		7		7		7
AST 11						
AST10						
AST 9						
AST 8						
AST 7						
AST 6						
AST 5						
AST 4						
AST 3						
AST 2						
AST 1						
TOTAL AST						
AST/SC 6						
AST/SC 5						
AST/SC 4						
AST/SC 3						
AST/SC 2						

AST/SC 1			
TOTAL AST/SC			
TOTAL AD+AST+ AST/SC	7	7	7
GRAND TOTAL	**7**	**7**	**7**

Contract Agents	FTE corresponding to the authorised **budget 2024**	Executed FTE as of 31/12/2024	Headcount as of 31/12/**2024**	FTE corresponding **to the authorised budget 2025**
Function Group IV	7	7	7	7
Function Group III	2	2	2	2
Function Group III	1	1	1	1
Function Group I				
TOTAL	10	10	10	10

Seconded National Experts	FTE corresponding to the authorised budget **2024**	Executed FTE as of 31/12**/2024**	Headcount as of 31/12**/2024**	FTE corresponding to the authorised budget **2025**
TOTAL	0	0	0	0

3.3.1.6. Governance activities

3.3.1.6.1. Governing Board

The GB is the decision-making body of the SNS JU. It has the overall responsibility for the strategic orientation, coherence with the relevant Union objectives and policies and operations of the JU and supervises the implementation of its activities.

The GB of the SNS JU is composed of two representatives of the European Commission on behalf of the Union and five representatives of 6GIA. It shall hold ordinary meetings at least twice a year, whereas extraordinary meetings may be convened at the request of the Chairperson, the Executive Director, the Commission or 6GIA. The meetings of the GB are convened by the Chairperson. The agenda of the meetings and the decisions taken are made publicly available on the website of the SNS JU. The Chairperson and the Vice Chairperson of the SRG are invited as observers to the GB meetings.

In 2025, it is foreseen that the GB of the SNS JU holds three meetings. The GB key activities for 2025 are listed below:

Key activities	Estimated Timetable (In Quarter-Q)
First discussion on the SNS JU AAR 2024 and SNS JU AWP 2026	Q1
Approval of the evaluation outcome for SNS JU Call 4	Q2
Assessment of the AAR 2024 and Adoption of the AWP 2026	Q4

3.3.1.6.2. Executive Director

The Executive Director is the chief executive responsible for the day-to-day management of SNS JU. The Executive Director is the legal representative of the SNS JU and is accountable to the Governing Board. He is supported in his activities by the staff of SNS JU (SNS JU Office).
On 24th May 2023, the GB appointed Erzsébet FITORI as the SNS JU Executive Director as from 01 October 2023 and for a period of four years, until 01st October 2027 (initial mandate). By the end of this initial mandate, and after an assessment of her performance as well as of the future tasks and challenges of SNS JU, her mandate could be extended for a period of not more than three years.

3.3.1.6.3. States' Representatives Group (SRG)

The SRG is one of the advisory bodies of SNS JU. The SRG provides recommendations and the opinion of EU's Member States and associated countries on the SNS JU, including: the progress of the programme implementation, the draft annual work programmes, the annual activity report, as well as other measures taken to address specific objectives of the initiative. The secretariat of the SRG is provided by the SNS JU Office and the Executive Director, members of the SNS JU Office, 6GIA representatives or Commission representatives may be invited as observers.

The SRG reports to the GB on a range of matters, and in particular by means of an annual report describing the status of relevant national or regional research and innovation programmes and initiatives and identifying potential areas of cooperation.

In 2025, at least two SRG meetings are planned in Q2 and Q4. Additional meetings could take place, if needed. In all the meetings, the SRG members will be invited to report information about national and regional activities and initiatives linked to SNS JU objectives with a view to prepare the SRG annual report and to ensure complementarities and identify areas of cooperation with the SNS JU activities.

3.3.1.6.4. Stakeholders' Group

The stakeholders' group brings together relevant public and private stakeholders, including organised groups active in the field of the SNS JU, international interest groups from Member States, associated countries or other countries.

The stakeholders' group is regularly informed on the activities of the SNS JU and, if relevant, is invited to provide comments on the joint undertaking's planned initiatives. It can also be consulted on specific questions, contribute to the update the Strategic Research and Innovation Agenda and will be involved in the preparation of the upcoming EuCNC &GS (European Conference on Networks and Communications & 6G Summit).

3.3.1.7. Strategy and plans for the organisational management and internal control systems

3.3.1.7.1. Internal Control framework

The Internal Control Framework (ICF), approved in 2023 (SNS JU GB decision 12/2023), 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 2025 the SNS JU will continue to run its operations by improving the quality level of programme implementation while integrating the corrective actions that were identified in the past.
The main activities that will be performed include the following:

- Report on compliance and effectiveness of internal control in the annual activity report;
- 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;

• Follow up on the implementation of action plans on audit recommendations and on observations of the discharge authority;
• Ensure a smooth implementation of the findings of the ex-post audit strategy and optimise
the JU's specific audit efforts based on the analysis of the ex-post audits and of the specificities of SNS JU beneficiaries

3.3.1.7.2. Financial Procedures

SNS JU shall fully comply with the requirements of Regulation (EU, Euratom) 2018/1046 (the Financial Regulation).

In compliance with its article 71, SNS JU respects the principle of sound financial management. SNS JU also complies with the provisions of the Model Financial Regulation applicable to the Joint Undertaking (Financial Rules adopted in 2021; SNS JU GB decision 02/2021).

The financial procedures and the workflows in place follow the financial rules, the general control framework applicable in the Commission and the H2020 & Horizon Europe rules and guidance.

Monitoring arrangements, including through the Union representation in the Governing Board, as well as reporting arrangements, will ensure that SNS JU can meet the accountability requirements both to the College and to the Budgetary Authority.

Regarding ICT tools applied to support its financial procedures, since 2021, most transactions are 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 ECS). The SNS JU Staff will continue to be trained adequately to ensure maximum competence in the use of the IT tools as well as the various transactions which can arise (e.g. grant amendments, the Mutual Insurance Mechanism, 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 to ensure coherent understanding and implementation of the financial rules.

3.3.1.7.3. Ex ante and Ex post Controls

Standard ex-ante control measures are in place for Horizon Europe programmes. In 2025, the administration & finance Team and the Programmes Team of SNS JU will continue to work closely together in their day-to-day activities of initiation, verification and payments of invoices and cost claims, creation

of commitments, recovery orders, validation of financial and technical reports and following-up on other financial and administrative aspects of the projects. Ex-ante controls will follow a risk-based monitoring approach, which will contribute to further reducing the risk of failing projects and/or loss of funding in the final stage of the SNS programme.

These activities will be conducted in a timely manner that will be monitored through the defined set of key indicators, in particular, the time to pay, the budget implementation and work programme execution. The Ex-post audit process represents a significant element of the Internal Control System of the SNS JU. The main objectives of the audits are:

- To ensure the legality and regularity of the validation of cost claims performed by the SNS JU's management;
- To provide an adequate indication on the effectiveness of the related ex-ante controls;
- To provide the basis for corrective and recovery activities, if necessary

In 2025, the SNS JU will continue to cooperate with the Fraud and Irregularities in Research (FAIR) Committee of the R&I family as well as with the Common Audit Service (CAS). For OLAF cases Relevant Programme Officers staff has received training on fraud detection and prevention; the possibility to deepen the knowledge in this field will continue to be promoted within the learning and development framework of the SNS JU.

In 2025, ex post controls of operational expenditure will continue to be implemented in line with the Horizon Europe audit strategies. The Common Implementation Centre (CIC) of the European Commission developed these audit strategies in cooperation with all its clients (i.e. Services of the European Commission, Executive Agencies and Joint Undertakings). The Common Audit Service of the Common Implementation Centre of the Research & Innovation department of the European Commission carries out all audits for the SNS JU (internally or outsourced to external firms) for Horizon Europe.
Together, ex-ante and ex-post controls will provide the Authorising Officers with the necessary elements of assurance on the research and innovation budget under their responsibility. To that purpose, SNS JU will implement the control strategy for the Horizon Europe programme (including ex-ante and ex-post controls and anti-fraud) in 2025.
Specific attention will be paid to:

- raising beneficiaries' awareness of the financial and administrative aspects of the Horizon Europe rules and how to avoid errors in cost reporting;
- validation of financial and technical reports;
- ex-ante controls for interim and final payments;
- following up recovery orders where needed

3.3.1.7.4. Audits

SNS JU audit arrangements are set up in accordance with Article 28 and 58 of the SNS JU Financial Rules. The audits provide reasonable assurance about the state of effectiveness of risk management, control and governance processes and serve as a building block for the Executive Director's (Authorising Officer's) annual Declaration of Assurance.

Internal audits are carried out by the Internal Audit Service of the European Commission (IAS) in liaison with Internal Control and Audit Manager. In 2025, based on the SNS JU Strategic Internal Audit Plan (SIAP) 2025-2027 adopted by the IAS in 2024 based on a risk assessment.

The following table lists the prospective IAS audit topics that the IAS intends to perform for the two audit engagements over the next audit cycle:

	Prospective IAS audit topics (2025-2027)
Audits	1. Limited review of the SNS JU's Internal Control Framework (ICF) 2. Audit on grant management
Follow-up	• Continuous desk review of the recommendations reported as implemented • On-the-spot follow up as required

Depending on the results of the annual risk assessment update and considering the main risks identified by the IAS, the 2025-2027 strategic internal audit plan may be adapted at that time by either planning additional audit engagements or by replacing one of the prospective audits. Considering the risks outlined above, the IAS has identified the following as a potential reserve audit topic "Human Resources (HR) management and ethics".

As regards external audits, every year, the European Court of Auditors (ECA) provides the European Parliament (EP) and the Council with a statement of assurance of the reliability of the annual accounts of the JU and the legality and regularity of the underlying transactions, based on an audit of the SNS JU accounts. The fieldwork related to the audit of the accounts 2024 is expected to start in January 2025 (final report publication in November 2025).

After the granting of the financial autonomy to SNS JU on 23 October 2023, the ECA presented the working arrangements and first audit of SNS JU for the year 2024. The main topics of the first ECA mission in 2024 cover grant selection procedure, recruitment, revenues, and review of the main control procedures.

The conclusions on the ECA exercises above and the potential remarks and recommendations will be fully considered in 2025, setting relevant implementation plans when required.

Therefore, the main activities for 2025 will focus on:

- providing the necessary information and support for IAS audit work.
- providing the necessary information and support for ECA audits on SNS JU activities and 2024 accounts;
- liaising with the external audit company that will audit the 2024 annual accounts
- Following-up the recommendations of both IAS and ECA, setting relevant implementation plan or corrective measures whenever necessary

4. BUDGET 2025

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

- The European Union (including the EFTA), covering administrative and operational costs,
- The Industry Association (6G-IA), who 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 the Article 10 of the Council Regulation.

Budget overview

The annual budget is established in accordance the article 17 of the Financial Rules of the joint undertaking. The annual budget is composed of the establishment plan, the statement of revenue and the statement of expenditure. The years subject included in the budget statements are 2025 (N) and 2024 (N-1). For coherence in the annual comparison, the year 2023 (N-2) is not included in the budget because the budgetary data is available only as of financial autonomy date (24/10/2023).

Human Resources Overview

The staff establishment plan includes the number of permanent and temporary posts by function group and by grade and is complemented with the number of contract staff and of seconded national experts expressed in full-time equivalents. The establishment plan shall be adopted by the GB in accordance with the constituent act of the SNS JU.

Human Resources	2024		2025
	Authorised Budget	As of 31/12/2024	Authorised Budget
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**

Revenue overview

The statement of revenue is composed of the actual revenue for the financial year 2024 and the estimated revenue for the financial year 2025 of the SNS JU. The key factor of the budget 2025 in relation to that of 2024 is the contribution from United Kingdom. An amount of EUR 4 million is expected to top-up the budget 2025 of the SNS JU. Secondly, in 2025, the unused commitment appropriations of previous years will be partially re-activated, in both administrative and operational budget, increasing by 5% the total

budget for the year. The rate of the EFTA contribution to Horizon Europe for 2025 is 2,75%, lower than that of 2024 (3,54%). It applies on administrative and operational EU contributions. The contribution of the Industry Association to the administrative budget will be formally agreed early 2025.

Expenditure overview

The statement of expenditure is composed of Title 1 for staff expenditure, Title 2 for Infrastructure and operating expenditure and Title 3 for Operational expenditure. Title 1 and Title 2 are the administrative expenditure of the Joint Undertaking. Title 3 corresponds to the operational expenditure. Each title is composed of chapters and articles.

The administrative budget will amount to EUR 3,855,133 in 2025, meaning 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 128,741,125 in 2025, meaning 97% of the total budget, that will be mainly used to fund the call for proposal number 4 and will be contributed by the European Union and the EFTA. An amount of EUR 985.734 unused commitment and payment appropriations of previous years will be re-activated in 2025 in order to respond to the JU needs both under Title 1 and Title 2.

The operational budget of 2025 will be totally used on the grant agreements/projects derived from the call for proposals of 2025. The amount of EUR 5,643,653 unused commitment appropriations of 2022 and 2023 will be re-activated in 2025. It will be used to cover part of the grant agreements/projects (EUR 5,2 million – Title 3) and the experts' evaluators and reviewers. The budget of the expert evaluators may be managed by the REA in accordance with the instructions from the RTD while the experts' reviewers will be contracted and paid directly by the joint undertaking.

The budget reactivation will be made in virtue of the article 6.5 of the Financial Rules of the joint undertaking: ***"Given the needs of the SNS JU, the unused appropriations may be entered in the estimate of revenue and expenditure of up to the following three financial years. These appropriations must be used first."***

The contribution of United Kingdom of EUR 4,000,000 commitment appropriations to the financing of projects under Horizon Europe will be introduced in the budget (Title 3) via an amendment to the budget at a later stage in 2025. No impact expected on the payment appropriations.

In accordance with article 16 of the Financial Rules of the joint undertaking, the annual budget shall be adopted by the GB in accordance with the constituent act of the joint undertaking. The approved budget will be published on the website SNS JU.

STATEMENT OF REVENUE					
Title **Chapter**	**Heading**	**Financial year 2025**			
		Estimate Commitment Appropriations	In %	Estimate Payment Appropriations	In %

EU contribution (excluding EFTA and third countries contribution)[24] [25]		**121.836.972**	**92%**	**121.249.430**	**96%**
of which (fresh C1) Administrative (Title 1&2)		2.034.080		2.034.080	
of which frontloaded commitments (Title 1 and Title 2)					
of which Operational (Title 3)		119.802.892		119.215.350	
Of which related to additional entrusted tasks					
EFTA and third countries contribution		**3.350.517**	**3%**	**3.334.359**	**3%**
of which Administrative EFTA (Title 1&2)		55.937		55.937	
Of which administrative third countries excluding EFTA (Title 1&2)					
of which Operational EFTA (Title 3)		3.294.580		3.278.422	
Of which operational third countries excluding EFTA (Title 3)					
Financial Members other than the Union contribution		**779.382**	**1%**	**779.382**	**1%**
of which Administrative (Title 1&2)		779.382		779.382	
of which Operational (Title 3)					
Financial Contributing partners contribution					
Interest generated					
Other Revenue					
Unused appropriations from previous years		**6.629.387**	**5%**	**985,734**	**1%**
Of which administrative		**985.734**		**985.734**	
Of which operational		5,643,653		-	
TOTAL ESTIMATE REVENUE		**132.596.258**	**100%**	**126.348.906**	**100%**

STATEMENT OF EXPENDITURE					
Title Chapter	**Heading**	**Financial year 2025**			
		Estimate Commitment Appropriations	**% Ratio [Year N/year N-1]**	**Estimate Payment Appropriations**	**% Ratio [Year N/year N-1]**
1-Staff					
Salaries & allowances					

[24] This information has to be obtained by the JUs from the parent DGs when they work on the WP/or its update as JUs do not have an overview of the different fund sources that are included in the EU contribution. Even though the JUs normally have an entry for the "overall Union contribution received" (including EFTA and third countries contribution) under the contribution agreements, a breakdown of the Union contribution per fund source would allow the Commission financial services to crosscheck it with the data already provided (from hearings, WD III and ABAC).

- Of which establishment plan posts		1.183.361	30%	1.183.361	30%
- Of which external personnel		839.132	21%	839.132	21%
Expenditure relating to Staff recruitment		0	0%	0	0%
Mission expenses		50.000	1%	50.000	1%
Socio-medical infrastructure		10.000	0%	10.000	0%
Training		10.000	0%	10.000	0%
External Services		224.000	6%	224.000	6%
Receptions, events and representation		5.000	0%	5.000	0%
Social welfare		70.000	2%	70.000	2%
Other Staff related expenditure		13.000	0%	13.000	0%
2-Infrastructure and operating					
Rental of buildings and associated costs		175.000	4%	175.000	4%
Information, communication technology and data processing		540.000	14%	540.000	14%
Movable property and associated costs		75.000	2%	75.000	2%
Current administrative expenditure		390.000	12%	390.000	12%
Postage / Telecommunications		8.000	0%	8.000	0%
Meeting expenses		10.000	0%	10.000	0%
Running costs in connection with operational activities		100.000	3%	100.000	3%
Information and publishing		0	0%	0	0%
Studies		0	0%	0	0%
Other infrastructure and operating expenditure		152.640	4%	152.640	4%
TOTAL ADMINISTRATIVE (1+2)		**3.855.133**	**100%**	**3.855.133**	**100%**
3-Operational					
TOTAL OPERATIONAL (3)		**128.741.125**	**100%**	**122.493.772**	**100%**
ESTIMATE TOTAL EXPENDITURE		**132.596.258**	**100%**	**126.348.906**	**100%**

5. ANNEXES:

5.1 IKAA Plan

ESTIMATED AMOUNT OF IKAA FOR YEAR 2025					
Additional Activities category[26]	**Description of the Additional Activities[27]**	**Country of establishment of the contributor**	**Link to JU objectives / KPIs[28]**	**Link to JU project/ topic (if relevant)**	**Certified annual value[29]**
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	c) Advanced 6G Solutions for verticals	Stream B, C, D projects	1,000,000.00
	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	a) High Risk Research Funding e) Energy Efficient Telecommunicatio n 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	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	BE	a) Advanced 6G Solutions for verticals	Stream B, C, D projects	1,000,000.00

[26] Please provide the reference to the specific provision in the scope of additional activities for the joint undertaking;
[27] Please provide more information on the envisaged Additional Activities
[28] to be selected from the SRIA
[29] 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.

	technologies; (not funded by SNS projects like customer trials).		b) Uptake of digital solutions within verticals		
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	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 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).	BE	a) Standardization contributions	Stream B, C, D projects	22,000,000.00
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	d) Uptake of digital solutions within verticals	Stream B, C, D projects	400,000.00
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	b) Reach Programme level consensus on 6G KPIs	Stream B, C, D projects	200,000.00

	SNS related education and events to promote future ICT technologies.	BE			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	b) Collaboration and synergies with other Partnerships	Stream B, C, D projects	1,000,000.00
TOTAL ALL PLANNED IKAA					80,150,000.00

IKAA BREAKDOWN PER COUNTRY	
Country	**Estimated value**
Belgium	80,150,000.00

SNS JU IKAA Plan classification key

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).
    - 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.
5. 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).
6. 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).
7. 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.
8. 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 Research and Innovation Work Programme 2025 (R&I WP)

See separate document.

5.3 SNS JU Organisational Chart