

Grant Agreement No.: 101192000

Coordination and support action

Call Identifier: HORIZON-JU-SNS-2024-STREAM-CSA-01



SNS CO-OP – SNS Collaborative Operations and Output Optimisation

D3.1: Year 1 Report on Programme Governance and operation

Version: v1.0

Deliverable type	R (Document, report)
Dissemination level	PU (Public)
Due date	31/12/2025/
Submission date	17/12/2025
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Work package, Task	WP3, T3.1, T3.2, T3.3, T3.4
Keywords	SB, TB, Working Groups, White Papers, 6G, Collaboration Agreement

Abstract

This document summarises the operational progress, principal activities, and strategic results achieved in the SNS-JU Programme Governance throughout January to December 2025. It details effective programme governance through coordinated support to the Steering Board (SB), Technology Board (TB), and the SNS/6G-IA/NetworldEurope Working Groups (WGs). Key achievements include strengthened cross-project alignment, enhanced reporting procedures, streamlined governance processes, and sustained support to the revised SNS JU Collaboration Agreement. Overall, the deliverable provides a consolidated view of governance performance and collaboration outcomes across the initiative

Document revision history

Version	Date	Description of change	List of contributor(s)
v0.1	24/10/25	ToC ready and editors' assignments	Javier Garcia
v0.2	15/11/25	First draft with content	Javier Garcia, Uwe Herzog, David Kennedy, Kostas Trichias
v0.3	30/11/25	Second draft. Full content ready for review	Javier Garcia, Uwe Herzog, David Kennedy, Kostas Trichias
v0.4	09/12/25	Full reviewed version	Colin Willcock, Per H. Lehne, Kostas Trichias
v0.5	17/12/25	Final editorial check	Ellen Tallas
v1.0	17/12/25	Final check and submission	Uwe Herzog

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Acknowledgment

This report was elaborated by the SNS CO-OP CSA funded by the European Commission Horizon Europe programme under Grant Agreement No 101192000. The European Commission has no responsibility for the content of this document.

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Executive Summary

This deliverable constitutes the Year 1 governance report, presenting the results of SNS CO-OP's mandate to provide secretariat and organizational support to the SNS JU collaborative bodies, namely the Steering Board (SB), Technology Board (TB), and the SNS/6G-IA and NetworldEurope Working Groups (WGs). The SNS CO-OP project ensured strategic and technical coherence across 79 active projects at the beginning of 2025, later stabilizing at 69 after the completion of several Call 1 projects.

During 2025, SNS CO-OP fully assumed operational responsibilities from SNS OPS and implemented an enhanced governance model. Support included organizing 6 SB meetings, coordinating monthly (virtual) and bi-annual (in person) TB meetings, and maintaining communication tools, documentation repositories, and process templates. The onboarding of 16 Call 3 projects represented a significant operational challenge, as nearly 200 participants joined the governance structures. SNS CO-OP also ensured the continuation of the SNS JU Collaboration Agreement (SNS JU CoA), overseeing signature processes, compliance checks, and updates triggered by changes in European Commission (EC) interpretations.

Regarding the SNS-JU and 6G-IA Working Groups (WGs), SNS CO-OP completed the transition of monitoring, facilitated the creation of the new Sustainability WG, introduced a streamlined quarterly reporting methodology, managed Terms of Reference (ToR) updates, and supported extensive cross-project publications, including 15 White Papers and consolidated engagement at EuCNC'25. SNS CO-OP contributed to consultations, dissemination activities, and the broader alignment of WG activities with SB, TB, and 6G-IA priorities.

Overall, Year 1 demonstrates that a stable, scalable governance framework is now in place, providing a coherent operational backbone for the SNS ecosystem and ensuring that programme-level outputs, coordination efficiency, and cross-project collaboration remain strong.

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Abbreviations

Abbreviation	Definition
3CN	3C Network – Connected, Collaborative Computing
3GPP	Third Generation Partnership Project
6GF	6G Forum
6G-IA	6G Industry Association
AI	Artificial Intelligence
AIOTI	Alliance for IoT and Edge Computing Innovation
AR	Augmented Reality
ATIS	Alliance for Telecommunications Industry Solutions
B5PC	Beyond 5G Promotion Consortium
B6GA	Bharat 6G Alliance
CCSA	China Communications Standards Association
CHIPS-JU	Chips Joint Understanding
CSA	Coordination and Support Action
CSO	Civil Society Organization
DG-CNECT	Directorate-General for Communications Networks, Content and Technology
EC	European Commission
ECCC	European Cybersecurity Competence Centre
ECS	Edge Computing System
ECSO	European Cyber Security Organisation
ESA	European Space Agency
ETP	European Technology Platform
ETSI	European Telecommunication Standards Institute
FSTP	Financial Support to Third Party
HE	Horizon Europe
HPC	High Performance Computing
ICT	Information and Communication Technology
IMT-2030	International Mobile Telecommunications - 2030
IPCEI	Important Projects of Common European Interest
ISAC	Integrated Sensing and Communications
ITU-R	International Telecommunication Union – Radiocommunication Sector
KPI	Key Performance Indicator
KSO	Key Strategic Orientation
KVI	Key Value Indicator
MIMO	Multiple Input – Multiple Output
ML	Machine Learning

MNO	Mobile Network Operator
MR	Mixed Reality
NESSI	Networked European Software and Services Initiative
NGA	Next G Alliance
NGMN	Next Generation Mobile Networks Alliance
NGO	Non-Governmental Organization
NTN	Non-Terrestrial Network
NWE	NetworldEurope
PSCE	Public Safety Communications Europe
RAN	Radio Access Network
RIS	Reconfigurable Intelligent Surface
RT	Real Time
SB	Steering Board
SME	Small or Medium sized Enterprise
SNO	Satellite Network Operator
SNS JU	Smart Network and Services Joint Undertaking
SoC	System on a Chip
SRIA	Strategic Research and Innovation Agenda
TB	Technology Board
TF	Task Force
TN	Terrestrial Network
TRL	Technology Readiness Level
TSDSI	Telecommunications Standards Development Society
UAV	Unmanned Aerial Vehicle
VR	Virtual Reality
VSC WG	Vision and Societal Challenges Working Group

1 Programme governance overview

The governance structure of the SNS-JU programme is organised around three core bodies (namely SNS Initiative Bodies), the SNS-I Steering Board (SNS-I SB), the Technology Board (TB), and the SNS/6G-IA Working Groups (WGs). These bodies ensure strategic coherence, technical alignment, and cross-project collaboration across all running SNS JU projects.

The present document describes the secretariat functions that enable their effective operation, ensuring coordinated execution, coherent communication, and structured decision-making across all running SNS JU projects. Its mandate includes ensuring efficient cross-project collaboration, monitoring openness and transparency in SNS JU processes, and facilitating the availability and consolidation of programme results across phases.

The SNS-JU Collaboration Agreement (SNS JU CoA) serves as the common legal framework for cooperation. It supports the organization and management of the WGs while promoting structured information exchange both within the initiative and with the broader community.

The following sections contain a high-level description of both the role and the function that each of these bodies performs within the SNS-JU programme, as well as the dependency relationships between them.

1.1 Governance structure and roles

SNS-Initiative Steering Board (SNS-I SB)

The SNS-I SB is responsible for providing governance, strategic orientation, and organisational direction to all active SNS projects. It is composed of the main representatives of each project, typically the project coordinators (PCs). The SNS-I SB is chaired by Mikael Fallgren (Ericsson) with Tasos Gavras (EURES) serving as co-chair. The SNS-I SB facilitates meetings organisation, provision of supporting documentation, communication flows, and follow-up actions.

SNS Technology Board (TB)

The TB oversees the technical aspects, progress, and outcomes of all running SNS projects. Its members are the Technical Managers (TMs) designated by each project. The TB is chaired by Kostas Trichias (6G-IA), while recently Haesik Kim (VTT) was elected at the position of the TB vice-chair. The TB enables systematic coordination, alignment of work plans, and structured review of technical outputs.

SNS / 6G-IA Working Groups (WGs)

The WGs constitute the main cross-project collaboration mechanism within the SNS-JU programme. They bring together representatives from all running SNS-JU projects to exchange knowledge, align on strategic topics, and develop common outputs, typically in the form of white papers or consolidated recommendations. SNS CO-OP supports the organisation, continuity, and harmonisation of WG activities, ensuring effective collaboration, avoidance of duplication, and consistent communication with the broader SNS and 6G-IA community.

NetworldEurope Working Groups (WGs)

These are WGs established under the mandate of NetworldEurope². Although they do not have a formal or programmatic dependency on the SNS-JU, SNS CO-OP provides support to these groups in the form of organisational facilitation, meeting coordination, operational guidance and alignment with broader SNS-JU objectives.

More information and details about the WGs can be found in Section 5 of the present deliverable.

At the time of submitting this deliverable, the following WGs remain active and fully operational:

² <https://www.networleurope.eu/>

Table 1: SNS-JU Working Groups

WG Title	Chair/Co-Chair
6G Architecture	Oemer Bulakci – Nokia Xi Li – NEC Lab
Reliable Software Network	David Artuñedo Guillen – Telefónica Dimitris Tsolkas – Fugus
Test, measurement and KPIs validation	Michael Dieudonné – Keysight Ioannis Patseouras – WINGS
Hardware Technologies	Alexios Birbas – University of Patras Luis Manuel Pessoa – INESC TEC
Sustainability	Christoph Schmelz – Nokia Stefan Wendt – Orange Mir Ghoraishi – Gigasys Solutions

Table 2: 6G-IA Working Groups

WG Title	Chair/Co-Chair
Vision	Patrik Rugeland – Ericsson Håkon Lønsethagen – Telenor
Trials	Carles Antón-Haro – CTTC Paul Harris – VIAVI
Pre-Standardization	Riccardo Trivisonno – Huawei Veronica Vuotto – Trust-IT
5G/6G for Connected and Automated Mobility	Pouria Sayyad Khodashenas – i2CAT Kostas Katsaros – ICCS
Spectrum	Maite Aparicio – Telefónica
Security	Antonio Skarmeta – Umurcia Dhouha Ayed – Thales
WiTaR	Bahare Masood – Nokia Marie-Helene Hamon – Orange

Table 3: NetworldEurope Working Groups

WG Title	Chair/Co-Chair
Expert Advisory Group	Jyrki Huusko – VTT Artur Hecker – Huawei
Enabling Technologies for Future Vertical Ecosystem Transformation	Maziar Nekovee – University of Sussex Xulei An – Huawei
SatCom	Alessandro Guidotti – UNIBO Joan A. Ruiz-de-Azua – i2CAT
SME	Jessica Carneiro – Australo Nicola Ciulli – Nextworks

1.2 Secretariat functions and coordination highlights

The main secretariat functions carried out during this period were the following:

- **Managed the transition from SNS OPS to SNS CO-OP** for supporting all SNS Initiative bodies. The three-month overlap between January and March 2025 enabled a smooth handover, including understanding ongoing activities, reviewing key outputs, and identifying essential roles. Established operational practices from SNS OPS were maintained and updated, such as WG infrastructure support, regular SNS-I SB/TB meetings, systematic agenda and minutes preparation, and review of published white papers.

- **Clarified scope and cross-body synergies of the SNS Initiative bodies.** During the transition, an assessment was carried out to identify leadership structures and the degree of implementation of each WG. Meetings were organised with several WG leaders to understand their ongoing work, identify synergies, and avoid overlaps across WGs. A notable example includes the coordinated efforts between the TMV WG and the Spectrum WG, resulting in the successful submission and presentation of multiple contributions to ITU-R WP5D on the minimum requirements for IMT-2030.
- **Supported the operational management of WGs**, overseeing the launch and closure of groups (e.g., the establishment of the SNS-JU Sustainability WG and the discontinuation of the 6G-IA Open SNS WG), as well as coordinating leadership transitions and the renewal of chairs for the SB, TB and all SNS and 6G-IA WGs. Additionally, full support for the BSCW logistical infrastructure has been renewed for all SNS and 6G-IA WGs.
- **Orchestrated a unified reporting model to best identify cross-WG activities and found a systematic way to present WGs results in every SB meeting**, with shared approaches for all, with unified highlights. A common quarterly reporting template was also provided to WG leaders (SNS JU, 6G-AI, NetworkEurope), improving the visibility and comparability of results and enabling consistent analysis of outputs and impact.
- **Facilitated the onboarding of Call 3 projects**, including efficient management of the signature of the SNS Collaboration Agreement (SNS CoA³) and the welcome webinars⁴ for call 3 projects to give an overview of their activities and ambitions. At peak activity, SNS CO-OP managed interactions with a total of 79 active projects.

³ <https://smart-networks.europa.eu/collaboration-agreement/>

⁴ <https://smart-networks.europa.eu/event/sns-ju-call-3-projects-introduction-webinars/>

2 SNS-Initiative Steering Board (SNS-I SB)

As defined in the SNS-JU Collaboration Agreement (SNS JU CoA)⁵, the 6G SNS Initiative comprises - besides the selected projects under the SNS-JU umbrella - various bodies, one of which is the SNS-Initiative Steering Board (SNS-I SB). The SNS-I SB (hereinafter, SB) has been established in 2023 as required by the SNS-JU Collaboration Agreement (SNS JU CoA). The role of the SB is to provide guidance in the SNS Initiative, including the cooperation between SNS projects and joint events to promote results of the SNS, concepts and systems, recommend on collaboration and synchronisation of activities, including but not limited to on management of outcomes, common approaches towards standardisation SME involvement, links with regulatory and policy activities, and commonly shared dissemination and awareness raising activities. The SB is also responsible for steering SNS Initiative level activities, and for reaching agreements on the overall Initiative planning between ongoing projects and progress monitoring and for making recommendations that are taken on board by the SNS Actions

2.1 Coordination activities, follow-up and main highlights

The SNS CO-OP CSA provides the secretarial functions for the SB. This involves organising the SB meetings - in case of physical meetings also to find and book a suitable meeting room, determining the agenda with the Chairman and producing the minutes of the meetings and the record of the decisions taken.

In addition, the SB is supported by an email exploder list that is used for communications with all SB members, a BSCW document repository where minutes, slides and other relevant documents are stored, and online-meeting conferencing facilities to host conferences as required.

As mentioned above, the setup of the SB had already been completed in 2023 and the support of the SB activities and its meetings in 2023 and 2024 has been provided by the predecessor CSA SNS OPS. SNS CO-OP has taken over the responsibility for the SB support from January 2025. In the current period, i.e. from January – December 2025, the focus had been on supporting the established SB, to organise its meetings and to manage its further growth in terms of projects represented in the SB.

As of January 2025, the SB had 63 members which were the Coordinators for Call 1 and Call 2 projects. In the first quarter of 2025 16 projects from SNS Call 3 were joining the SB, increasing the number of projects in the SB to 79. This further growth made the support to the SB even more challenging, and significant efforts were needed to manage that growth and to support this large body. In the second half of 2025 the first projects of SNS Call 1 were finishing their activities which step by step again decreased the size of the SB, resulting in 69 projects in the SB in December 2025.

In this period, i.e. from January to December 2025, six meetings of the SB have been organised by SNS CO-OP, of which three were physical Face to Face (f2f) meetings and three were by web-conference. The practice regarding meeting frequency agreed in the SB, i.e. to have three f2f meetings per year, with a virtual meeting in between f2f meetings has thus been correctly implemented. For 2026 the same meeting schedule will again be implemented and the hosts and locations for the three f2f meetings have already been fixed (Porto, Thessaloniki, Madrid).

Having three meetings in f2f format is considered important as the virtual meetings taking place in-between the f2f meetings do not enable the same level of cooperation, effectiveness, discussion, exchange and creativity that can be witnessed in f2f meetings organised so far for this SB. F2f meetings are scheduled for a full day and are used for more detailed discussions on strategy, joint horizontal activities, technical topics, review of Working Groups (WGs) activities, joint presence at dissemination events, future plans, but also to address issues and questions from projects. Teleconferences in turn are used for short status and progress updates and are limited to max. 2 hours. The number of active projects and representatives caused challenges for f2f organisation, but finding a venue has always been successful so far. Given that the number of projects joining from future Calls will be lower than in the past, it is expected that the size of the SB will not reach the peak size observed in 2025, and therefore also finding

⁵ <https://smart-networks.europa.eu/collaboration-agreement/>

a meeting venue should become less difficult in the future.

Projects accede to the SB (and the other inter-project collaborative activities as e.g. the TB, WGs etc.) as soon as they have fully signed up to the SNS Collaboration Agreement. As mentioned above, 16 new projects from SNS Call 3 have joined the SB in 2025. In preparation for that, SNS CO-OP contacted the official coordinators as indicated in the project proposal and requested several pieces of information, most notably the names and contact details of the project representatives in the SB, TB and Comms Taskforce (TF). At this opportunity, projects are also provided with some pieces of important information to explain the schedule and procedure for joining the collaborative activities in SNS. With the collected information, the preparations for granting the projects access to the SNS document repository (BSCW) are initiated, and the adding of representatives to the various mailing lists in SNS is prepared. BSCW access is granted, and representatives are added to the mailing lists as soon as a project has fully signed up to the SNS Collaboration Agreement.

In order to support the on-boarding to the joint activities, SNS CO-OP has supported the organisation of a webinar on 13 February 2025⁶ (for which the predecessor CSA SNS OPS still had the main organisational responsibility), in which an introduction to SNS JU and its SB, TB and WG activities was given to the new projects from Call 3.

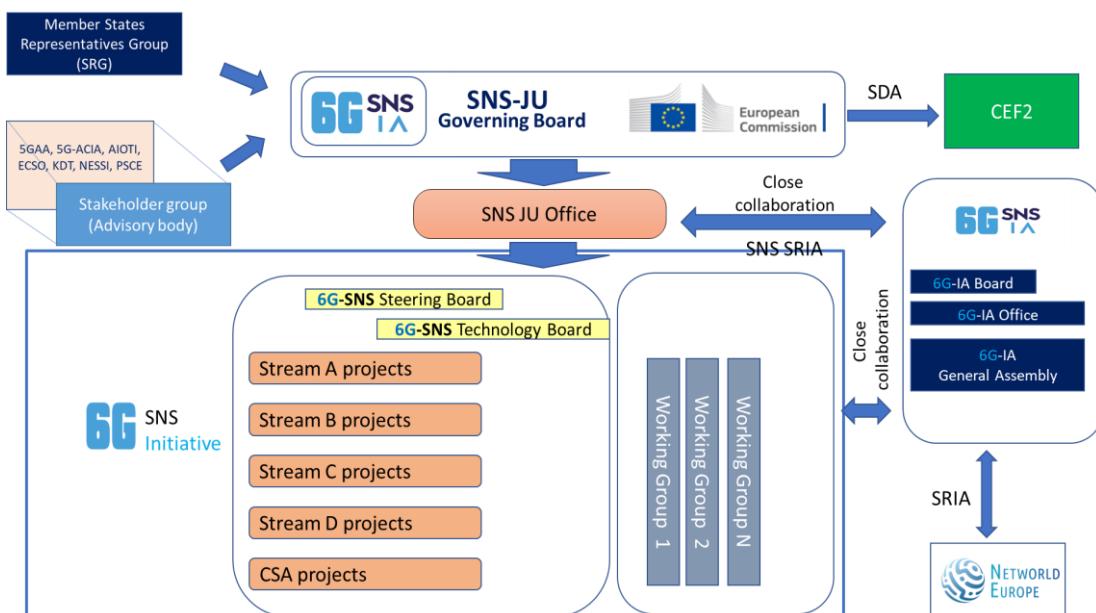


Figure 1: Slide presented at the Call 3 projects “on-boarding” webinar on 13/02/2025

As the term of the SB Chair / Vice-Chair is always for one year, an election has been organised in October 2025, starting with a Call for candidates that was sent to all SB members, i.e. all projects that were running in SNS JU at that time and which had joined the SB. The election process resulted in the confirmation of Mikael Fallgren (Ericsson) as SB Chair and Tasos Gavras (Eurescom) as Vice-Chair, based on the responses received. Both were the only candidates for these positions, and both were already in these positions in the past year and were thus simply continuing in their roles. Looking at this minimal number of candidates that volunteered, it appears that there is not a huge interest among project coordinators to take these roles, and the Support Action provides a significant contribution to the organisation of the inter-project activities in SNS also in this respect.

The Working Groups which activities are reviewed in the SB meetings includes the SNS-JU WGs (five WGs at the time of writing this document – Architecture WG, TMV WG, Software Networks WG, Hardware Technologies WG and Sustainability WG – for details see the SNS web⁷), but also the Open

⁶ <https://smart-networks.europa.eu/event/sns-ju-call-3-projects-introduction-webinars/>

⁷ <https://smart-networks.europa.eu/sns-ju-working-groups/>

Calls Task Force and the 6G-IA Industry WGs⁸. When the setup of the new WG is suggested, the proposal for that is discussed and approved (or rejected) by the SB too. In 2025 one new WG – on Sustainability – has been created. The new WG prepared the ToR and sent to the SB for approval. The ToR for the Sustainability WG have been approved by the SB on 30/04/2025.

Whitepapers are the typical form of output of the WG activities, but also of the TB. On completion, it is sent to the SB which reviews and approves it before publication. In 2025, 10 Whitepapers were produced by the TB and SNS/6G-IA WGs and were approved by the SB, e.g. from the Architecture WG on 6G Key Concepts, Challenges, and Building Blocks, or from the TMV WG on 6G KVI. Details on this reporting are presented in section 5 of this deliverable.

SNS CO-OP carries out a regular documentation of Working Group activities and status, based on input received from the WG leaders. These reports are used by the 6G-IA board and the WGs in SNS JU, including the SB. Details on this reporting are presented in section 5 of this deliverable.

2.2 List of SB meetings

2.2.1 SB meeting #1 – 19/02/2025 – Kista

The first SB meeting in 2025 was a f2f meeting which was hosted by Ericsson in Kista, Sweden. Mikael Prytz, Research Director for RA networks at Ericsson, welcomed the participants and presented an overview of the Ericsson Research organisation and also some views on the status and expected evolution and challenges for future mobile networks.

After the checking of participants, approval of the agenda and review of action items from the last meeting, the SNS Office representative presented some news from the SNS Office. He reported that Call 3 projects have been kicked off in January 2025 and gave some information on upcoming SNS project reviews. Projects were reminded to enter the information in the portal in the context of reviews, most importantly the Continuous Reporting tool data. Some information on the 2025 SNS Call was given. While the 2025 SNS Work programme had been published, the Call had not been published in F&T portal nor opened yet. Call conditions were still under discussion, and a final date for opening the Call had not been agreed yet.

Some updates were also given by 6G-IA as the representative of the private side in SNS. Several 6G-IA Whitepapers had been published recently, and the re-election of the Chair and Vice-Chair of the six 6G-IA WGs was ongoing. 6G-IA had received a liaison statement from ITU-R about the minimum requirements for IMT-2030 and decided to contribute, drafting the document had been under the Spectrum WG.

A detailed report was given about the activities of the TB, including work on the Reference figure 2025, the AI/ML Whitepaper, EuCNC'25 participation coordination, progress of the work of the Sustainability TF, etc. For more details on TB activities the reader is referred to the corresponding chapter in this Deliverable.

An overview of projects' participation to the SB meetings / telcos was presented by the SB Chair. There were a few projects who had missed several meetings. These projects were specifically asked to ensure they attend future SB meetings.

SNS CO-OP presented an overview of the status of upload of Deliverables of Call 1 and 2 projects to the SNS Document Repository (BSCW). Quite many projects had not yet even uploaded the list of Deliverables, and many Deliverables that according to the list had already been due were not yet uploaded. The projects concerned were reminded to upload the missing Deliverables.

⁸ <https://6g-ia.eu/6g-ia-working-groups/>



Figure 2: SB meeting session at the Kista meeting

The status of the Collaboration Agreement signature process was presented. All Call 1 and 2 projects had signed the updated SNS Collaboration Agreement, and from Call 3 all but 5 projects had signed up and had been invited to join the inter-project activities in SNS.

Finally, under the “Project-related” agenda item, the requirement to setup an Ethics Board following the Ethics review for some of the SNS proposals was discussed, and some hints were given to projects for how to make provisions for such potential events.

Under the “Events” agenda item, EuCNC’25 and the planning of a workshop with the SRG collocated with EuCNC was discussed.

A longer session followed where SNS and 6G-IA WGs – 7 in total - gave an overview of the status, achievements and plans. Under the TMV WG, there was some discussion about KVI, e.g. who defines the KVI, how is this activity linked to the Vision WG SG, etc. The TMV WG Chair informed that the TMV WG collects the definitions from projects but is not itself defining them. The topic might be forwarded into an ITU-R activity to adopt a KVI definition in standards. For more details on WG activities the reader is referred to the corresponding chapter in this Deliverable.

Finally in this meeting, the Open Calls Task Force (OCTF) reported about recent Open Calls activities in several projects. A proposal for Redress Handling and the Handling of financial matter related to the Open Calls was presented, and some Generic Lessons learned. The Open Calls TF was asked to prepare a summary of the results of Open Call subprojects (what has been done and what has been achieved).

2.2.2 SB meeting #2 – 04/04/2025 – Online

The next meeting was organised as a 2-hour web conference. Given the shorter amount of time available for these web-conferences the focus was on giving brief updates, sharing news and discussing the necessary coordination and joint actions.

The Task Force on Open Calls informed that the proposal on how to deal with Redress Cases has been prepared and is now for review with the SB. A template for technical and financial reporting of OC activities is currently being prepared.

For the Public Sides updates, some information was given on project reviews that were organised in the past two months. For the SNS R&I WP2025, internal discussions have been finalised, and the WP was currently being amended. The SNS session at MWC has been a big success and the projects that contributed were thanked for their presence, activities and demonstrations. The next main priority was EuCNC’25.

Regarding Private side updates, it was informed that new Chairs and Vicechairs of the 6G-IA WGs for the period 2025-26 have been appointed.

In the TB status update projects were reminded for several inputs, including to the reference figure (). For the Trials & Pilots brochure 19 submissions were received. It was also informed that the work on identifying the SNS projects Key achievements would now be started.

In the WG status report slot, two main pieces of information were presented besides some news from WGs: First, that there was now a uniform template for whitepapers to be prepared in SNS-I WGs, and secondly some ideas and motivations for setting up a WG on the sustainability topic were presented. The draft ToR of the WG were already ready for SB members' review.

2.2.3 SB meeting #3 – 14/05/2025 – Athens

This meeting was organised as a f2f meeting and was hosted by OTE in Athens, Greece. After the usual welcome, checking of participants, approval of the agenda and review of action items from the last meeting, the SNS Office representative informed that the SNS JU Call for proposals 2025 has been published; Call opening date is 22 May 2025 for Streams B, C. The Call for Stream D was planned to be opened in June. The projects from this Call were planned to start around May/June 2026. In addition, a number of pieces of information on project reviews coming up in September / October 2025 were presented. Some initial information of the SNS Annual Activity Report 2024 that was planned to be published in June 2025 was presented. SNS JU will have a booth at EuCNC 2025 which was currently being prepared by the SNS JU and SNS CO-OP Comm teams.

On the Private side updates, it was informed that 6G-IA will sign a MoU with XGMF (Japan) during a Workshop in Tokyo on 27 May 2025.

Regarding the TB status review and planning, the good attendance level at TB meetings was commented. A pre-final draft of the Reference Figure was presented (includes now Call 1+2+3 projects). The activity to collect Key achievements (KAs) from projects has been started. All projects from Call 1 and 2 have been asked to report up to 3 KAs in an online form by 30 May. The best KAs will be selected by an evaluation committee to form a Top-10. Regarding the Trials & Pilots brochure, 8 T&Ps have been selected to be included in the brochure that will be released at EuCNC'25. It was finally informed that the TB has initiated preparation of 4 vertical-oriented whitepaper in the areas of I4.0/Manufacturing, Media & Entertainment, PPDR, and eHealth.



Figure 3: Participants at the SB meeting in Athens

The Project-related items agenda items were used to inform about the status of SB attendance and Deliverable uploads. It was also discussed what the obligations and opportunities were for finished SNS projects to continue their participation in the SNS SB, TB and SNS WGs. For the SB and TB, it was agreed that the SB/TB members of closed projects may stay on the SB/TB mailing list and can attend the meetings as an observer but may request to leave the mailing list at any time. Closed project

representatives can stay on the WG mailing lists and may continue to contribute to the WG activities (primarily with results from their closed project).

Regarding events there was some discussion around the upcoming EuCNC'25 for which it was already clear that there would be a strong presence from SNS projects.

In the Working Group news session, some highlights from the Q1 2025 WG reports were presented, e.g. involvement in EuCNC, overview of whitepapers, and synergies between WGs that were identified. From the TMV WG an overview of the progress on Test data reusability was presented. The Meta data definition had been approved in the WG on 13 May 2025, and also the SB was asked to approve that definition in this meeting. All SNS projects should align their data sets accordingly. The Metadata Registry System (MRS) will be based on SLICES MRS, and the MRS system will be hosted by 6G-SANDBOX during the project runtime. SNS projects can upload data sets there from June 2025.

The Open Calls (OC) TF informed on the progress of activities. The technical and financial reporting template had been created, and current activities are now included with summaries of OC subproject activities, and a report presenting OC projects statistics.

The SB meeting was concluded as usual with presenting the plans for future SB meetings and the AoB.

2.2.4 SB meeting #4 – 09/07/2025 – Online

This online meeting was taking place at the start of the holiday season but nevertheless received a good participation level. Under “Public side updates” the meeting was used to present further details on the planned project reviews in September / October 2025. Projects were asked to include an agenda item in the review meetings in which the project participation in the SNS collaborative activities (SB, TB, WGs, joint activities, etc.) should be presented. In addition, an agenda item “Lessons learnt and recommendations” should also be included.

Under Private side updates some details on a webinar that has been organised between 6G-IA and 5G-ACIA on 19/05/2025 were given. A follow-up webinar is planned for Oct/Nov. 2025, for which there was an open call for SNS projects that work on ISAC/JCAS to participate and present their related work in the webinar.

The TB briefly touched upon current work items and actions, including the updated reference figure that now included also the Call 3 projects, the published Sustainability TF whitepaper and 1st edition of the Trials and Pilots brochure, Key Achievements, Vertical Engagement Tracker input collection, etc.

Under Project-related items various topics were discussed, including Projects extension and more details on the conditions for Amendments in SNS. For the Metadata Repository System (MRS) the login details had been sent to the Call 1 Coordinators already.

In the WG status update slot six WGs presented some news for their activities, including e.g. the release of Whitepapers and their participation at events.

MWC'26 and Techritory 2025 were announced as upcoming events where SNS aims at having good visibility. Some initial discussions have started, and projects interested to join the activities were asked to inform.

Under AoB, one cost issue related to publishing in IEEE was brought forward by one of the projects, as the repository licence fee to be paid was not an eligible cost in Horizon Europe. It was concluded that this needed further investigation.

2.2.5 SB meeting #5 – 15/10/2025 – Madrid

This meeting was organised as a f2f meeting and was hosted by TID in Madrid, Spain. After the usual welcome, checking of participants and approval of the agenda, the action items from the previous SB meeting were reviewed. One of the action items – about the IEEE repository licence fee – triggered a longer discussion about what the implications of the fee and its ineligibility as a cost in Horizon Europe would have on SNS projects, and if anything could be done to resolve this conflict. In conclusion it was agreed that SNS CO-OP should coordinate drafting a letter, explaining the issue, that should be sent to the corresponding unit in the EC.

SNS CO-OP presented the status of the SB Chair / Vice-Chair election 2025. As the current term of the

SB Chair and Vice ended in October, the election process had been started. Following the Call for candidatures, the following applications were received:

- For the SB Chair:
 - Mikael Fallgren, Ericsson.
- For the SB Vice-Chair:
 - Anastasius Gavras, Eurescom.

Given that there is only one candidate per position, elections were not needed. The SB members in this meeting approved the candidates with a unanimous vote.

Under “Public side updates”, the SNS Office representative informed that SNS Call 4 / 5 had closed in September and 175 proposals had been received. Some information was given on past and upcoming project reviews, about current status of SNS project extension requests, and some information on the Innovation Radar that all projects need to contribute to. It was also informed that all Call 1 and 2 projects would be asked to prepare 2-3 pages about the policy feedback of the project, i.e. how the project could impact policy makers or regulators.

The “Private Side” informed that the membership in 6G-IA keeps increasing – it now has 430 members. The reports of two 6G-IA Strategic Consultation Workshops on Photonics and NTN that were organised earlier in 2025 have been published and can be downloaded from 6G-IA web.

In the TB part, the results of the SNS Key Achievements (KAs) collection were announced. 192 KAs (structured in 5 categories) have been reported from 63 projects. All submitted KAs have been reviewed, every KA by 3 reviewers, followed by several further rounds of discussion. A Top-10 KAs have been identified in this review process and were presented to the SB.



Figure 4: SB meeting session at the Madrid meeting

The “Project-related items” session was again used to review the project attendance at SB meetings which SNS CO-OP has been monitoring, reporting and kept reminding projects - with support from the Project Officers – which has resulted in higher awareness among project coordinators of this obligation and in good attendance levels at the SB meetings. SNS CO-OP has also continued to monitor that the projects upload their Deliverables to the SNS BSCW. There was a good improvement since the last time this was reviewed, but quite a few Deliverables were still missing. The Excel sheet with the details was uploaded to the BSCW folder of this SB meeting folder for everyone to check. The concerned projects were asked to upload the missing Deliverables.

Under “Events”, and as the Techtritory Riga event was coming up in the following week, some information on the event was presented. SNS CO-OP had planned to be organising several sessions and panels to which also SNS projects participate. On MWC’26 it was informed that there will again be no common SNS projects exhibition space. Instead, project demos should again be done through project

partner stands. Planning towards EuCNC'26, it was agreed that the coordination of session and workshop proposals from SNS projects will again be done with support from SNS CO-OP in the TB.

The “Working Group status review and planning” started with a discussion about whether some coordination would be beneficial in order to align activities of the WGs and to ensure consistency. SNS CO-OP will support this and agreed to take the discussion further from there. Ten of the WGs presented a status report of their activities or had sent some slides to be presented. The TMV WG informed again on the Metadata Repository System (MRS) which was up and running and several projects had already uploaded their (meta) data. It was proposed to create an SNS JU DataOps tool which would extend MRS to include the actual data (in addition to the current meta data) which was agreed by the SB. The Hardware Technologies WG informed that it will issue a microelectronics questionnaire, targeting organisations mainly at Chips JU projects and pilot lines. Finally, to mention, the Sustainability WG had kicked off its activities on 1 October 2025. A kickoff meeting was organised where interested projects presented their links to sustainability.

Concluding this SB meeting, the SB agreed to organise the 2026 f2f SB meetings in Porto, Thessaloniki and Madrid.

2.2.6 SB meeting #6 – 01/12/2025 – Online

The last SB meeting in 2025 was organised as an online meeting and was mainly about presenting the progress and status of actions since the previous f2f meeting in Madrid.

A report has been given about the findings of the subgroup that has further investigated on the IEEE repository licence fee, following the respective discussion in the previous SB meeting. This group was chaired and the report was given by SNS CO-OP. The SB decided to move forward with preparing a letter to DG RTD in which the issues that SNS projects are faced with regarding this IEEE fee are brought to their attention.

The Public side updates informed about the status of SNS Call 4 / 5 evaluations and the progress and plans for the Work programme 2026. The Private Side informed of the availability of the concluding reports of several workshops that 6G-IA has organised, as well as of several whitepapers that have been released.

In the Technology Board status review the status of progress of several TB activities was presented, including the Whitepapers that were under preparation, the coordination of EuCNC Workshop proposals, the Trials & Pilots brochure v2.0, etc.

Projects were reminded about the planned schedule for the SNS projects annual questionnaire.

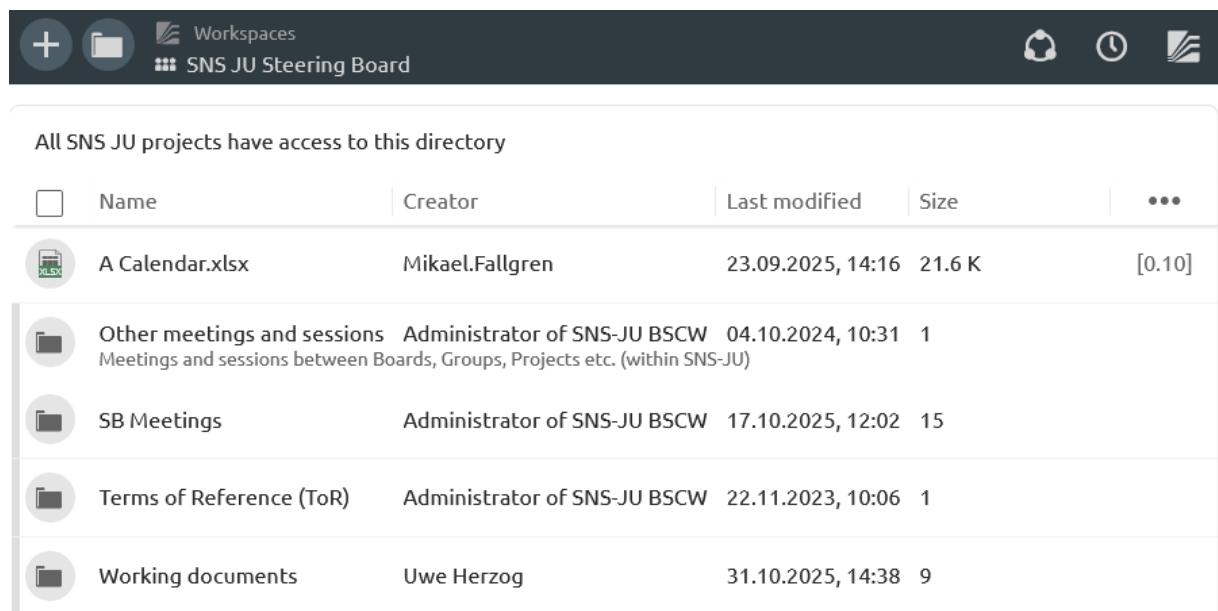
Eight of the Working Groups presented recent news and plans, e.g. the 5G for CAM WG about an upcoming public webinar which will provide an overview of the status of CAM in Europe, the Software networks WG about their nearly completed AI/ML for smart networks and services Whitepaper, or the TMV WG which informed about the progress of data sets being added by projects in the Metadata Repository System.

The Task Force on Open Calls informed that a draft version of the Open Calls results report had been published. So far 259 Open Call projects have been funded in SNS.

Finally, a brief slot discussed events and reminded of the plans for future SB meetings.

2.3 SB Documentation Repository

All the agendas, minutes, presented slides and other supporting documents of the SB meetings are stored in the SNS JU BSCW document repository where they can be accessed by all beneficiaries of the SNS-Initiative. Reference documents and slides used in the meetings, when available, are also there. Figure 5 shows a snapshot from the SNS JU SB BSCW space.



All SNS JU projects have access to this directory

<input type="checkbox"/>	Name	Creator	Last modified	Size	...
	A Calendar.xlsx	Mikael.Fallgren	23.09.2025, 14:16	21.6 K	[0.10]
	Other meetings and sessions	Administrator of SNS-JU BSCW	04.10.2024, 10:31	1	Meetings and sessions between Boards, Groups, Projects etc. (within SNS-JU)
	SB Meetings	Administrator of SNS-JU BSCW	17.10.2025, 12:02	15	
	Terms of Reference (ToR)	Administrator of SNS-JU BSCW	22.11.2023, 10:06	1	
	Working documents	Uwe Herzog	31.10.2025, 14:38	9	

Figure 5: Screenshot of the SNS JU BSCW – SB space

3 SNS Technology Board (SNS TB)

The SNS JU Technology Board (TB) is the collaborative body of the Technical Managers (TMs) of all active SNS JU projects. The TB has been operational since October 2023 and in the past its activities have been reported under the SNS OPS CSA project, the predecessor of SNS CO-OP (for more details see deliverables D3.1 [1] and D3.2 [2] of SNS OPS). As the SNS CO-OP project took over the support of the SNS JU collaborative activities, this section reports on the TB activities from January 2025 onwards. The section provides an overview of the meetings held, activities performed and currently ongoing and some key TB highlights from 2025.

3.1 Coordination activities, follow-up and main highlights

3.1.1 TB Operation & Coordination

The SNS JU TB is directly supported by the SNS CO-OP project on a day-to-day basis. Besides providing and maintaining all the necessary tools and methods for the efficient collaboration of the TMs (mailing lists, online repository, templates, telco bridges, etc.), the TB is chaired by SNS CO-OP's Kostas Trichias (6G-IA) and vice chaired by Haesik Kim (VTT)⁹, operationally assisted by James Clarke (SETU). Both these roles require the devotion of significant amount of time and resources to effectively run the TB, organize the online and face-to-face (F2F) meetings, document and circulate the meeting minutes and follow up on the agreed action points. Thanks to the meticulous approach followed by the SNS CO-OP members, the TB has run very efficiently, being able to deliver on all its targets and additionally supporting additional requests originating from the SNS JU office.

The TB meets virtually on a monthly basis, based on an agenda circulated by the chairman (SNS CO-OP) at least one week before the meetings. The agenda items are agreed with the technical managers beforehand, while during the meetings decisions are taken based on consensus and Action Points (APs) are commonly agreed as well. The meeting minutes, containing a detailed attendance sheet and concise information on the discussed topics, decisions/agreements, agreed action points as well as open topics, are circulated a few days after the meeting and the project representatives are given 10 days to react / provide feedback to the minutes. After this period the meeting minutes are agreed and frozen. All the TB meeting minutes can be found on the online BSCW repository, under the respective meeting folder¹⁰.

The TB has agreed to also hold face-to-face meetings twice a year. These F2F meetings are full day meetings, and all projects are required to send representatives, to enable interactive discussions on the open activities of the TB. A full list of both the online and F2F TB meeting for 2025 is provided in section 3.2.1.

In 2025, the following TB F2F meetings took place:

- 20th February 2025, Kista, Sweden
- 16th October 2025, Madrid, Spain

The TB also facilitates other related SNS JU actions, driven by different bodies (e.g., SNS JU Steering Board, the operational CSA project (OPS or CO-OP), the SNS JU office, etc.), by informing the project representatives and pushing for their input where necessary. Such assistance has significantly helped with the on-time completion of important SNS JU actions, such as participation in key events (EuCNC, MWC, Techritory, etc.), the population of important SNS JU documents such as the SNS JU Journal 2025¹¹ as well as the population of critical SNS JU tools, such as the SNS JU trackers¹² (Vertical, Standards and KPIs Radars).

⁹ The term of Kostas Trichias as TB chair was renewed in October 2025 for one more year. Haesik Kim from VTT (not an SNS CO-OP member) was elected to the position of TB vice-chair for one year.

¹⁰ <https://bscw.sns-ju.eu/sec/bscw.cgi/476812>

¹¹ <https://smart-networks.europa.eu/sns-journal-2025/>

¹² <https://sns-trackers.sns-ju.eu/>

3.1.2 TB Activities & Highlights for 2025

The TB has reached its current peak in terms of participating projects within 2025 with the co-existence of Call 1, Call 2 and Call 3 projects amounting to a total of 79 active projects (until April 2025 when the first Call 1 projects started ending). The active engagement of the SNS JU projects under the leadership and support of SNS CO-OP, has allowed for the accomplishment of multiple TB objectives and the delivery of some high-value items, tools and documents that are currently being used for the promotion of the SNS JU success, the dissemination of the lessons learned and the maximization of the impact of the performed work. The output of the TB is widely used in the following manner:

- Population of the SNS JU website¹³ with critical information on the projects' vision, work & outcomes as well as the categorization of their work.
- Scientific publications (mostly in the form of White papers) available via the SNS JU website¹⁴, sharing significant cumulative insights from the projects' work on specific technological topics and positioning European R&I efforts and outcomes on the global landscape
- Population of the SNS JU interactive tools & trackers¹⁵ (Verticals, Standards and KPI Radars) allowing for the interaction of the general public with the work and accomplishment of the projects and quantification of their work.
- Material for the promotion, dissemination and maximization of impact of the work performed from the SNS JU projects, through the creation of material used by the SNS JU office, the 6G-IA office, the CSA projects and multiple other stakeholders in the SNS JU ecosystem.
- Synchronization and alignment among SNS JU projects as well as with external global stakeholders based on the analysis and categorization of work performed by the TB (common sessions, workshops, webinars on targeted topics).
- Organization, launch, and publication of Key Achievements from SNS Call 1 and Call 2 projects, culminating in the global dissemination of the key achievements as well as the selection of a Top¹⁶ list of outstanding achievements.

The TB is also cooperating and aligning with the SB and the SNS JU and 6G-IA Working Groups (WGs), facilitating activities led by these bodies, to ensure wide dissemination along the SNS community and to avoid duplication of effort. So, the TB's footprint is much larger than its pure activities being performed within the body itself. The rest of this section provides an overview of the key activities and highlights of the TB's work for 2025¹⁷.

AI/ML TF & White Paper

Artificial Intelligence & Machine Learning (AI/ML) is by far the most addressed technological topic¹⁸ among the SNS JU projects, working on it from a multitude of angles and perspectives. Upon this realization, a dedicated TF was formed under the TB (in 2024) to aggregate information from all relevant projects and to produce communal SNS JU insights regarding the key aspects of AI/ML mechanisms and their use for the advancement and further development of 6G Networks. In total 33 SNS JU projects actively participated and contributed to this TF, generating a targeted AI/ML questionnaire and providing their respective inputs. A core team of volunteers and editors was formed that led the analysis of the received questionnaires and the respective work in creating a thorough white paper providing key insights, lessons learned and recommendations, which was the final deliverable of this TF.

¹³ A prime example is the Reference Figure (RF) created by the TB: <https://smart-networks.europa.eu/interactive-map-of-sns-projects/>

¹⁴ SNS JU Publications: <https://smart-networks.europa.eu/sns-publications/>

¹⁵ <https://sns-trackers.sns-ju.eu>

¹⁶ <https://smart-networks.europa.eu/sns-ju-projects-key-achievements-2025/>

¹⁷ More details can be acquired by the TB presentations and meeting minutes available to the SNS JU community via the BSCW online repository: <https://bscw.sns-ju.eu/sec/bscw.cgi/13575>

¹⁸ As evidenced by the SNS JU Annual Questionnaire and the SNS JU Reference Figure.

On January 2025, the TF published its white paper entitled “*AI/ML as a Key Enabler of 6G Networks: Methodology, Approach and AI-Mechanisms in SNS-JU*”[3]. The white paper represents the volume of work to present common learnings from the study of 199 AI/ML mechanisms submitted by the 33 participating projects and addressing aspects such as the global AI/ML landscape and the position of SNS JU within it, the targets, use cases and networks segments addressed by the SNS JU AI/ML mechanisms, the analysis of the training models and datasets used and additional aspects such as privacy and security, explainability, monitoring and more. This white paper also received substantial support from the CSA CO-OP project, to produce high-quality infographics, harmonized visual messaging and engaging cover page and figures (Figure 6: AI/ML White paper delivered on January 2025 by the TB), to assist with its further promotion to relevant communities.

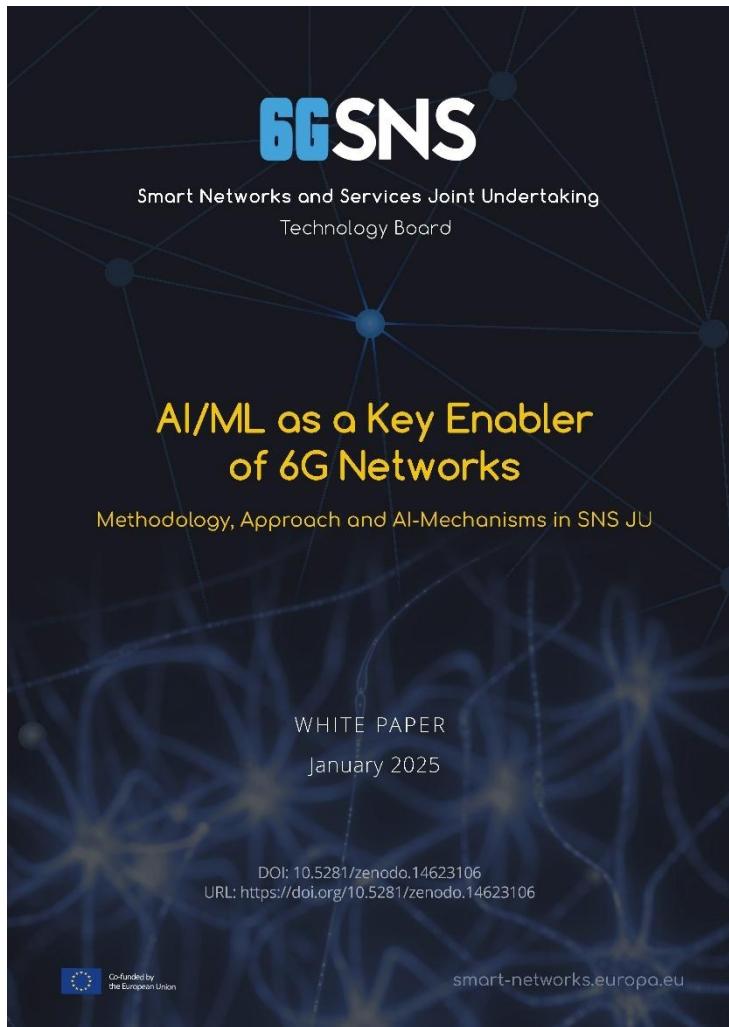


Figure 6: AI/ML White paper delivered on January 2025 by the TB

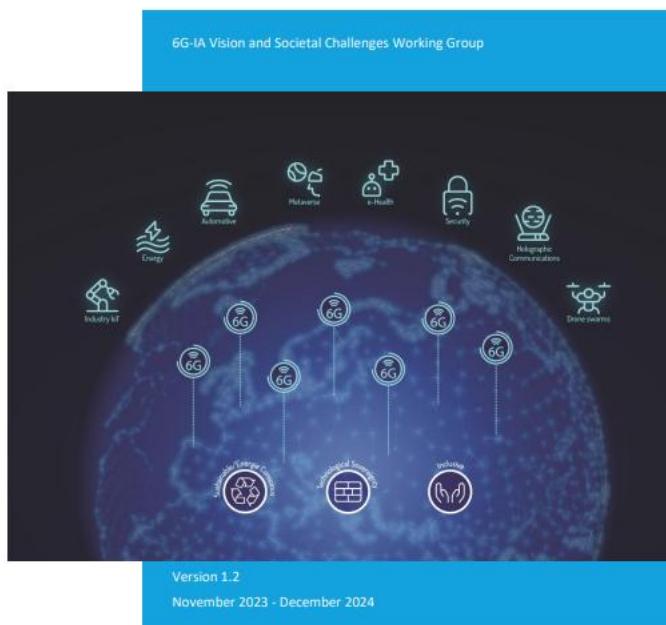
The work initiated by the AI/ML TF operating under the TB laid the groundwork for a coordinated approach towards the analysis of AI/ML mechanisms for 6G networks and the sharing of critical information among the projects. With the publication of the white paper and the wrap-up of the TF activities under the TB, the AI/ML related activities were handed over to the Software Networks WG of the SNS-JU, to further continue the work with more targeted actions.

Sustainability TF & White Paper

Detecting early on the wide interest of the majority of the SNS JU projects in Sustainability aspects, a *Sustainability Task Force (TF)* was created under the TB, to aggregate and analyse information from all projects engaging in sustainability activities regarding their approach, methodology, mechanisms and targeted outcomes, and to provide insights regarding the overall approach taken by the SNS JU (as a means of comparing with other similar initiatives around the world).

The work of the Sustainability TF took more than a year and resulted in the publication of a highly covered white paper in June 2025 [3], with input from 27 SNS JU projects, shedding light on all investigated aspects within the SNS JU including sustainability targets, methodologies, trade-offs, implementation considerations and the foreseen way forward. The paper further comments on the lessons learned from the SNS JU projects so far, the identified research gaps to fuel relative R&I efforts in the near future as well as targeted recommendations to relevant stakeholders for the further adoption of sustainability solutions. This white paper is considered a significant milestone for the SNS as it is the first publication to provide communal lessons learned and insights from the SNS JU community in order to further boost relevant research efforts and provide the necessary directions to engaged stakeholders.

The work of the TF further highlighted the interest of the SNS JU community on sustainability aspects and the important transversal role that it plays in all research initiatives and projects. As a result, the TB recommended the evolutions of the Sustainability TF to a formal SNS JU Sustainability Working Group (WG) operating under the mandate of the SNS JU Steering Board, to further evolve this work. The Sustainability WG was approved by the SB within 2025 and will continue the work on Sustainability within the SNS JU community, using the outcomes of the TF as the necessary groundwork and its starting point.



WHITE PAPER

SUSTAINABILITY OF 6G: WAYS TO REDUCE ENERGY CONSUMPTION

DOI: 10.5281/zenodo.13986789
URL: <https://doi.org/10.5281/zenodo.13986789>



Figure 7: Sustainability White paper delivered on January 2025 by the TB

SNS JU Reference Figure

The SNS JU Reference Figure (RF) has been established since the beginning of the TB as one of its key outputs, which is widely used by the entire SNS JU community to provide a high-level overview of the SNS JU projects and the key areas that each of them is working on. The RF depicts the categorization of SNS JU projects according to their Call, Stream and addressed Technological & Network Domains.

The online interactive version of the RF, available via the SNS JU website¹⁹, allows for dynamic viewing of the different technological and networking domains, making it easy to identify projects working on a specific topic or network aspect and to further follow up with each of the projects based on the embedded links. The current version of the RF is comprised of 15 different key technological domains and 6 network domains, as agreed by the representatives of the projects to the TB.

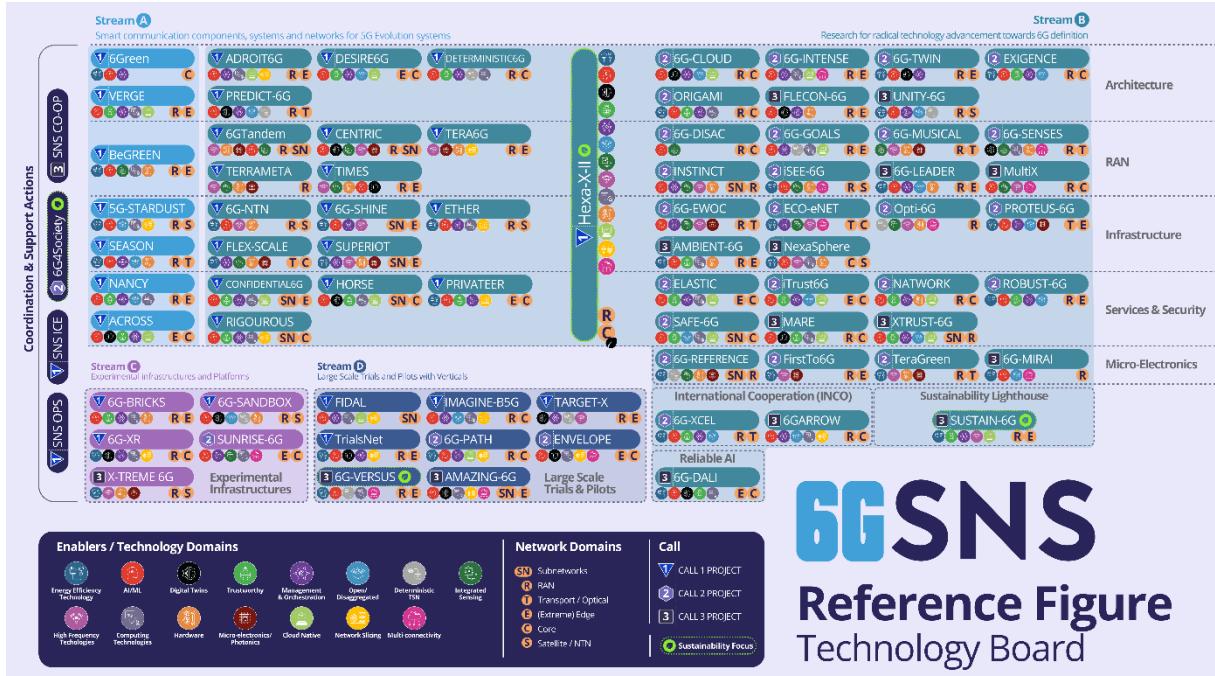


Figure 8: SNS JU Reference Figure 2025

After the onboarding of the Call 3 projects that started in 2025, the TB organized and performed the exercise for the necessary update of the RF, in order to include the Call 3 projects in the RF. The Call 3 project representatives were asked to provide their input according to the work performed by their projects and the SNS CO-OP partners updated the visuals as well as the website components of the RF to include all projects according to their input. The 2025 version of the SNS JU RF contains all projects from Calls 1, 2 and 3 and is depicted in Figure 8: SNS JU Reference Figure 2025

The Reference Figure will be further updated in 2026 to include the Call 4 and Call 5 projects as well, after the onboarding of the respective representatives in the TB has been successfully completed.

Trials & Pilots Brochure

Building on the legacy of 5G PPP and its work on publishing annual Brochures of the most successful Trials & Pilots from R&I projects every year²⁰, the SNS JU TB initiated a similar process in 2025, to gather information, review and publish the most successful Trials & Pilots (T&P) of the SNS JU. The SNS JU T&P's process was spearheaded by SNS CO-OP's Didier Bourse (Nokia), who was also leading the same exercise in 5G PPP, capitalizing on his experience and expertise on the matter. A T&Ps evaluation committee was set up, comprised of experts from SNS CO-OP, the SNS JU office and the 6G-IA to assist with the modernization and update of the process (transition into the 6G era) and to evaluate the project submissions.

The SNS JU T&Ps Brochure addresses advanced / mature trials and pilots performed by SNS JU projects in realistic environments. It aims to raise awareness and promote the work in the field of projects that have achieved a relatively high Technology Readiness Level (TRL), i.e., above 5-6, and that were able to showcase some of the key advantages of B5G/6G technologies in realistic environments. Consequently, only mature projects working on higher TRL level solutions are eligible to participate in this exercise (lower TRL solutions and/or lab tests and Proof of Concepts (PoC) are not eligible). Since

¹⁹ <https://smart-networks.europa.eu/interactive-map-of-sns-projects/>

²⁰ <https://5g-ppp.eu/5g-ppp-trials-and-pilots-summary-brochure-2024/>

the T&Ps Brochure will be an annual publication from the TB, all projects will have the opportunity to participate in later editions, as they further develop and evolve their solutions and experimentation.

The 1st edition of the SNS JU Trials & Pilots Brochure was published in June 2025²¹ (in time for EuCNC 2025, where it was presented) comprising the best 8 T&Ps from the active SNS JU projects. Participation in this first edition of the SNS JU T&Ps brochure was relatively modest (19 submissions in total) which is attributed to the early phase of the SNS JU projects at the beginning of 2025. At that stage, all Call 2 projects had barely completed 1 year of operations, which makes it hard to have set-up, executed and collected the results from mature pilots, so the only real candidates were Call 1 projects. However, as call 1 contained multiple low TRL projects (Stream A & B), it made sense that there were not that many completed mature T&Ps at that stage. As the SNS JU progresses and more projects mature, it is expected that the T&Ps exercise will receive a lot more and higher quality input in the coming years (more mature T&Ps executed by SNS JU projects).

The SNS CO-OP team, heavily supported the publication of this brochure. Besides taking on the largest load in terms of work effort (most of the evaluation team members originate from SNS CO-OP) to set-up, collect, process and provide the content for the brochure, the team also provided significant visualization and graphics support, ensuring that the final product is of very high quality and highly engaging, as depicted in Figure 9: SNS JU Trials & Pilots Brochure – 1st Edition (2025).



Figure 9: SNS JU Trials & Pilots Brochure – 1st Edition (2025)

SNS Key Achievements

The SNS JU Key Achievements process is an adaptation of the 5G PPP respective exercise, however with a significant overhaul, as several aspects of the process including the collection of information, the templates, the categorization, the selection criteria as well as the nomination of a top 10 have been completely renewed and updated. The SNS JU Key Achievements has been established as one of the key activities expected by the TB from the SNS JU office, as it enables the publication of key results from the ongoing projects and assists in the dissemination and celebration of key achievements around the globe.

²¹ https://smart-networks.europa.eu/wp-content/uploads/2025/06/sns_tps_brochure_may25_final.pdf

The process to define the templates and categorization of KAs started in the TB in April 2025, guided by a KAs evaluation committee comprised of experts from the SNS JU community (SB/TB chairs and former chairs, WG leaders, etc.), CSA experts and representatives from the SNS JU office as well as from DG CONNECT. Through a few iterations and a feedback loop among all interested parties, an acceptable process by all was established and the collection of input from the projects began. It was agreed that only projects from Call 1 and Call 2 were eligible to participate in this first edition of the SNS JU KAs, as Call 3 projects only had a few months of 'life' when this process started and hence did not have the opportunity to achieve meaningful results at this stage. Call 3 projects will be eligible to participate in the SNS JU KAs for 2026 onwards.

In total **188 KAs** were submitted for the first edition of the SNS JU Key Achievements in 2025. All projects had the right to submit up to 3 key achievements (except the flagship Hexa-X-II who was allowed to submit more). Each KA could be categorized under 5 categories, based on the type of solution. Figure 10: SNS JU Key Achievements 2025 – Distribution of KAs by category depicts the distribution of the submitted KAs for 2025, indicating a strong focus of Call 1 and Call 2 projects to targeted technological solutions and experimentations platforms and tools. The five categories were:

- Category 1: Significant Technology development.
- Category 2: Experimentation (Infrastructure / Tool Creation, Performance Evaluation).
- Category 3: Vertical Solution & Trials (incl. Business solutions, Potential Market Impact).
- Category 4: Impactful standards contribution.
- Category 5: Sustainability solution.

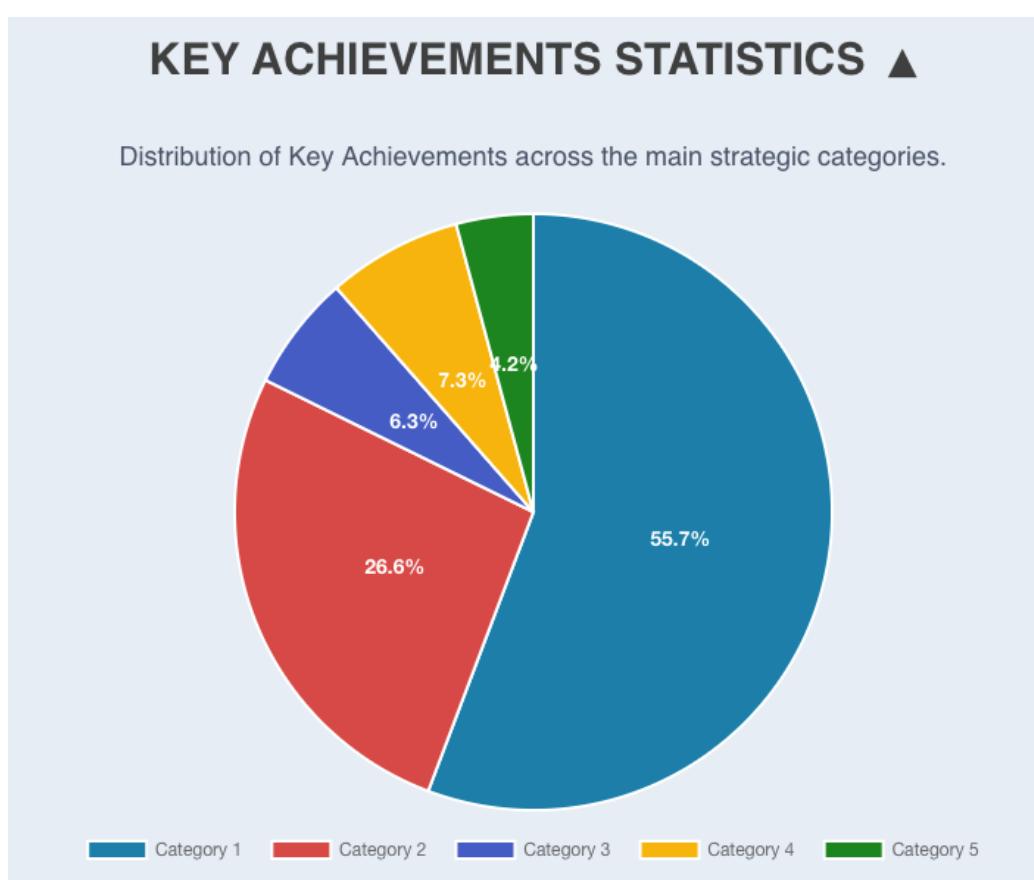


Figure 10: SNS JU Key Achievements 2025 – Distribution of KAs by category

All submitted KAs were reviewed by the evaluation committee, which was tasked with selecting the 10 best key achievements for 2025, which would be further promoted and disseminated as key results of the SNS JU via a dedicated publication and webpage under the SNS JU website. The evaluation criteria were agreed beforehand and included aspects such as the clarity of description, the technological

innovation, the maturity of the solutions, the clarity of added value of B5G/6G, the impact of the KA in its respective sector and the innovation and/or market prospects. Each KA was reviewed by at least 3 reviewers, while the TB chairman reviewed all 188 KAs. The review scores were later normalized to account for reviewer bias and to deliver impartial results, clarifying the top candidates. Based on the normalized scores the review committee selected the top 25 KAs and proceeded to hold several evaluation meetings to discuss them one-by-one, exchange argumentation and finally arrive at the final TOP-10, as depicted in Figure 11. The TOP-10 was announced to the SNS JU community during the SB and TB F2F meetings held on October 15th and 16th in Madrid, Spain, while targeted promotion material was created by the SNS CO-OP and an extensive promotional campaign for the TOP-10 KAs was launched in November 2025.

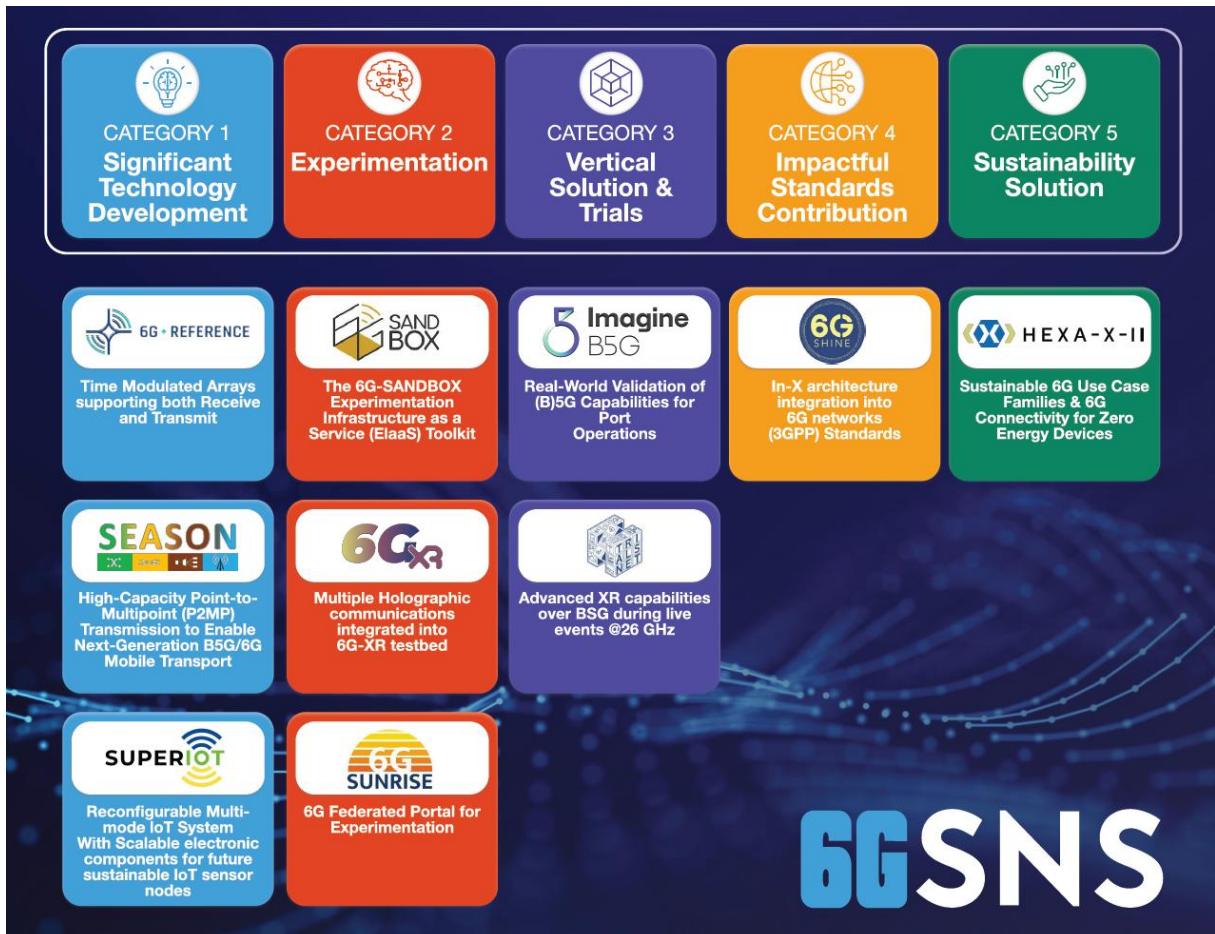


Figure 11: SNS JU Key Achievements – 2025 TOP-10

As this was the first time that this completely renewed KAs process was implemented, there was a lot of learning, that have been taken into account to further improve the process for its next iterations. The evaluation committee produced a detailed document of insights and lessons learned, including recommendations for improvements such as, the creation of a more strict template with clear guidelines and drop-down lists and including examples, to assist the projects in providing the right kind of input with the correct level of detail, the improved categorization of evaluation criteria to assist with a more straightforward scoring scheme and the inclusion of non-technical descriptions of the KAs to cover readers of non-technical background (to be utilized for the promotion of the KAs). These findings were shared with the TB community during the Madrid F2F meeting in October 2025, where the project representatives were also able to provide their feedback and suggestions for further improvements in the next iterations of this exercise.

Additional TB activities

Besides the above-described activities which constitute the highlights of the TB operation for 2025, the TB has engaged in multiple additional activities to further enhance the project outcomes, facilitate synergies among projects that will further maximize the impact of their results and to promote the results

of the SNS JU community to the world. The most important of these activities can be summarized as follows:

- **Vertical White Papers:** Based on the project responses on the annual SNS JU questionnaire and the VET, four vertical sectors were identified as the most prominent ones with a strong commitment of resources from SNS JU projects to develop targeted B5G/6G enabled solutions for these sectors. The TB identified four candidates among the project representatives to act as the main editors for each one of these papers and organized sub-groups with the participation of the interested projects, to generate four vertical papers, describing the approach, developed solutions and early results for these four vertical sectors. These papers will play a pivotal role in the dissemination of the SNS JU's work towards the proper vertical stakeholders which will hopefully lead to a greater adoption of European 6G-enabled vertical solutions from vertical industries. All four papers are currently in the production phase and are expected to be published by the end of 2025 or beginning of 2026. The four vertical sectors addressed by these white papers are:
 - Media & Entertainment
 - I4.0 / Manufacturing
 - PPDR
 - E-Health
- **SNS JU Cooperative Events:** The TB has played a critical role in strengthening the collaboration among projects working on similar topics and assisting in the organization of collaborative events to attract attention to the specific technologies being developed within the SNS JU. During 2025, the TB took a leading role in aligning the project submissions for Workshops and sessions at EuCNC 2025, minimizing cross-border competitions and creating stronger proposals with the participation of all interested projects. As a result, 18 different collaborative WS proposals were submitted by SNS JU projects out of which 15 were accepted, constituting a very high percentage of acceptance for the SNS JU community. Other similar attempts were made for smaller events while a multitude of cross-project online webinars were also organized within 2025, supported by the TB and the SNS CO-OP CSA (see the SNS JU Events webpage²² for more details).
- **SNS JU Trackers:** The SNS JU Trackers suite²³, comprised of the Vertical Engagement Tracker (VET), the Standards Tracker and the KPIs Radar is one of the most powerful features of the SNS JU website, providing the capability to filter and categorize the relevant output of projects and obtain critical information based on their work and outcomes. These tools have become the go-to source for anyone wishing to obtain information on the addressed verticals and respective trials taking place within SNS JU, getting the overview of the SNS JU standards contributions and the related SDOs as well as the main technical and programmatic KPIs for the entire programme. However, the tools are only as good as the data that are used to populate them. Even though the creation, maintenance and population of these tools fall directly under the SNS CO-OP CSA, the wide reach and high attendance of the TB are used to issue the requests for data for these tools at regular intervals, ensuring that they remain up to date. Such actions have been consistently turned into TB action points addressed to all projects in 2025, facilitating the acquisition of the necessary data. Similar requests will be supported by the TB in the forthcoming years, ensuring the flow of information towards these important SNS JU tools.

²² <https://smart-networks.europa.eu/event/list/?eventDisplay=past>

²³ <https://sns-trackers.sns-ju.eu>



Figure 12: SNS JU Trackers

- **Maximization of SNS JU projects standards impact:** Due to the high importance of standardization for the European ecosystem and the need to improve the flow from R&I solutions towards standards impact and market potential, TB has undertaken several relevant actions within 2025, to assist the SNS JU projects in navigating the complex world of pre-standardization bodies and Standards Development Organizations (SDOs). Inherited from SNS ICE, the TB organized relevant webinars, providing an overview of the procedures followed by the many (pre)standardization organizations as well as overviews of the ongoing items discussed. Moreover, a dedicated session has taken place in the last TB F2F meeting in Madrid Spain (October 2025), where a deep-dive into the four main (pre)standardization bodies, namely 3GPP, ETSI, IEEE and IETF, took place, inviting experts from each of them to explain how to navigate each of them and tips for an improved impact. An interactive discussion followed with all the project representatives, expressing their views and challenges that they face. The TB has taken the action point to further build on this discussion and to propose a way forward that will enable projects to better navigate the SDO world and to increase their respective impact.
- **SNS JU repository for AI datasets & models:** The TB has also undertaken in 2025 to resolve a long-standing pain-point of collaborative research in Europe, namely the lack of a common project repository for AI datasets and models. Perhaps the biggest challenge faced currently by AI researchers is the lack of high-quality data to train and develop the AI algorithms. This becomes an even larger issue when the data needs to originate from a specific field of technology (in the case of SNS JU that field is B5G/6G network-related data). As such, the TB has initiated a discussion with the TMV WG, to evolve their Meta-Data Registry System (MRS) to support AI training data, with the assistance of other AI-focused projects and the mechanisms they developed. Furthermore, the need to further evolve this tool to also support the sharing of AI models, that will allow cross-validation of results among projects, was also discussed. This will be one of the key items addressed by the TB in the coming months.

3.1.3 TB planning for 2026

Most of the above work items and highlights mentioned are annual activities for the TB, which means that they will be repeated within 2026 as well (updated processes based on the learning of 2025). The activities of the TB can be separated in main/annual activities and linked or ad-hoc activities (originating from suggestions of TB members and/or requests from the SNS JU office). While the ad-hoc activities cannot be a-priori predicted, the main/annual activities of the TB are well established and a tentative schedule has already been devised. During the Madrid F2F TB meeting in October 2025, the TB chairman presented the tentative schedule for the main upcoming TB activities for the next year. Figure 13 presents the expected (approximate) timeline of the upcoming TB activities for the rest of 2025 and 2026:



Figure 13: SNS JU Technology Board – Activities timeline 2026

Besides the above-mentioned main activities that have already been mentioned the TB is also expected to continue supporting and promoted linked activities (originating from the SNS JU office or the CSA project) that are critical for the success of the SNS JU programme. Such linked activities can be considered the update on the SNS JU trackers with updated data from ongoing and new projects, the provision of input to the SNS JU annual journal 2026 as well as relevant SNS JU WG activities or cross-border collaborations for common events and webinars. These activities are mostly ad-hoc in nature and cannot be a-priori scheduled. However, the TB chairman (as a member of the SNS CO-OP CSA) remains in constant communication with the other instruments of the SNS JU and will ensure the timely flow of information to and from the TB representatives as needed throughout the year.

3.2 List of TB meetings

The TB meets on a regular (monthly) basis, in order to synchronize across all its activities, discuss the open action points and agree on the next steps. The monthly meetings are held virtually, while the TB has also agreed to 2 face-to-face (F2F) meetings per year. The F2F meetings are shaped like interactive Workshops, taking advantage of the physical presence of the project representatives, and engaging them in discussion delivering actionable outcomes and a concrete way forward

3.2.1 List of TB meetings

There have been twelve (12) TB meetings held in 2025: two (2) were held as F2F meetings and ten (10) were held virtually. Table 4 provides the full list of TB meetings in 2025 and their respective dates.

Table 4: List of TB Meetings (2025)

#	Meeting Date	Meeting Format	Meeting location (if not virtual)
1	14/01/2025	Virtual	
2	20/02/2025	Face to Face	Kista, Sweden
3	11/03/2025	Virtual	

4	08/04/2025	Virtual	
5	12/05/2025	Virtual	
6	10/06/2025	Virtual	
7	01/07/2025	Virtual	
8	26/08/2025	Virtual	
9	23/09/2025	Virtual	
10	16/10/2025	Face to Face	Madrid, Spain
11	18/11/2025	Virtual	
12	16/12/2025	Virtual	

The TB has already agreed to hold 2 more F2F meetings in 2026 and the locations and hosting organizations have already been agreed. The following F2F TB meeting will be organized in 2026:

- May 2026 – Thessaloniki, Greece
- October 2026 – Madrid, Spain

3.2.2 TB meeting statistics & project onboarding

The TB activities concern all the active SNS JU projects, whether compulsory (mandated by their Grant Agreement) or voluntary (activities agreed by the TB with the goal of maximizing the visibility and impact of SNS JU solutions), hence all projects are expected to keep up to date with the TB meetings, agreements and action points. To that end, the monthly TB telcos serve as “status & alignment checkpoints” among the projects and offer significant opportunities for cross-project information and collaboration. To that end, all active projects are expected to be represented in the TB meetings, whether virtual or physical, by the TMs or deputy TMs. Figure 14: SNS JU Project Attendance @TB Telcos below depicts the attendance of project representatives at the TB telcos (virtual meetings) for 2025. In almost every telco a few projects are excused due to collision of the TB meeting timing with important project functions / activities that cannot be missed (e.g., project plenary meetings, project reviews, etc.). It can be observed that project presence has been steadily increasing from the beginning of the year until the summer. The relative drop observed after summer is attributed to the fact that several Call 1 projects have ended in the summer of 2025 (and more end as we approach the end of the year), which means that the absolute number of active SNS JU projects is diminishing. In relative terms the project attendance in TB telcos throughout the year is estimated between 67% and 84% of active projects.

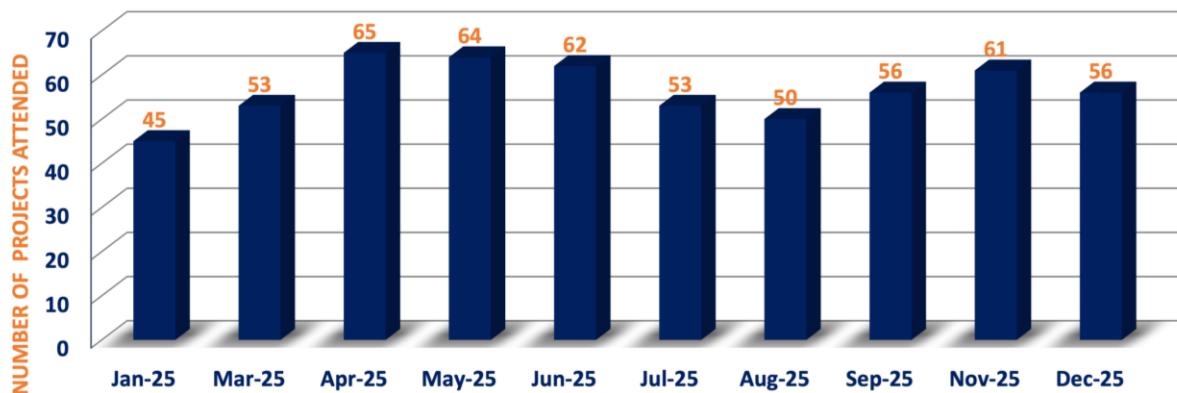


Figure 14: SNS JU Project Attendance @TB Telcos

Attendance in the TBs F2F meetings is perhaps even more crucial, as these are full day working sessions, with interactive discussions where the projects' representatives engage directly with each other and the long-term strategy and goals of the TB are decided. The attendance statistics for the TB F2F meetings

of 2025 (February 2025 at Kista, SE and October 2025 at Madrid, ES) are very good as the project participation reached 92% of active projects.

2025 can be considered a transition period for the TB as it is the first year where several Call 1 projects are ending, and the TB is assisting with the offboarding (e.g., by stressing to the projects that they need to respond to the annual Questionnaires and other ongoing activities before closing), while 16 new projects from Call 3 were also onboarded.

The TB in collaboration with the SB has prepared extensive and detailed onboarding material to help newcomers to join the activities and follow the processes of the SNS JU community. The material is available for all project representatives on the BSCW online repository²⁴. As described above for the SB, a dedicated webinar was organized by the SNS CO-OP project to welcome the new representatives of Call 3 projects in February 2025 and to present to them the onboarding material and answer their questions. This process has ensured the smooth integration of Call 3 representatives into the TB (and SB and WG) activities and their immediate active participation to the SNS JU community.

3.3 TB Documentation Repository

All the supporting documents needed for the operation of the TB, such as agendas, minutes, slide-decks, etc., are stored in a dedicated TB folder²⁵ in the SNS JU online repository (BSCW) where they can be accessed by all beneficiaries of the SNS-Initiative.

Besides the supporting documents for regular meetings, the TB has also delivered several important documents, representing the outcomes of key TB activities within 2025. These documents are summarized below:

1. White Paper on **AI/ML as a Key Enabler of 6G Networks: Methodology, Approach, and AI Mechanisms in SNS JU** [3]. Published in January 2025, this white paper aims to introduce the work taking place within the SNS JU projects of particular relevance to AI/ML. An overview of the projects is provided while details and statistics about the AI/ML based solutions developed within the SNS JU are also presented including the goal of the AI mechanisms, the learning type & method, the network segment they are implemented on, characteristics of the AI models used and information about the training data sets and the output of the mechanisms. This paper was undertaken to assist in the understanding of the work performed within the SNS JU on the very important topic of AI, promote the AI solutions developed in Europe and foster synergies with other global AI and 6G experts.
2. White paper on **Sustainability in SNS JU Projects: Targets, Methodologies, Trade-offs and Implementation Considerations Towards 6G Systems** [4]. Published by the Sustainability Task Force (TF) in June 2025. This white paper (WP) presents a comprehensive analysis of how 27 projects funded by the SNS JU address sustainability in their work on next-generation (6G) communication technologies. The analysis draws on detailed questionnaire responses and follow-up interviews, spanning four core themes: (i) sustainability targets, (ii) methodologies, (iii) trade-offs, and (iv) implementation considerations.
3. **Trials and Pilots Brochure** No.1. Published in June 2025 73[5], this first SNS Trials and Pilots (T&Ps) Brochure includes 8 selected T&Ps from SNS JU funded projects. Each contributing project prepared a two-page flyer, presenting an overview of its T&P, including network architecture, deployment details, key results obtained and innovative features enabled by 5G, 5G Advanced and emerging 6G technologies. These flyers emphasise the benefits and value brought by 5G Advanced and 6G networks, technologies and enablers, that previous generations of mobile networks cannot provide (i.e., their 5G, 5G Advanced and 6G empowerment). Importantly, the featured T&Ps illustrate strong social relevance, economic potential, or the validation of groundbreaking services and applications, demonstrating how 5G, 5G-Advanced and 6G are driving innovation and impact.

²⁴ <https://bscw.sns-ju.eu/sec/bscw.cgi/313419>

²⁵ <https://bscw.sns-ju.eu/sec/bscw.cgi/13575>

4. **Vertical Sectors White papers.** Based on the wide infiltration of vertical stakeholders in the SNS JU projects and the intense activities performed by multiple projects on validation of vertical-specific solutions, the TB decided within 2025 to work on the publication of white papers focusing on four main vertical sectors, attracting most of the interest from SNS JU projects. These white papers will aggregate information on the approach, solutions, technologies, use cases and more per vertical sector and will highlight the contribution of SNS JU projects to these sectors, as well as the added value of B5G/6G solutions. The following vertical white papers have been initiated within 2025 and are currently under development by dedicated sub-groups comprised of TB members. All the papers are expected to be published by the end of 2025 or early 2026 and will be available via the SNS JU website's Publications page²⁶.
 - a. **Towards 6G-enabled Industrial Manufacturing: Use Cases, KPIs, Technologies.** Target Publication date: January 2026. This white paper will compile ongoing work in SNS JU projects addressing how trends in I4.0 and I5.0, in which there is the evolution towards the Industrial Metaverse, all of them adding requirements towards future connectivity. I5.0 creates additional potentials for 6G, such as integrating humans in automation, e.g., for human-machine collaboration and these topics will be elaborated in this white paper.
 - b. **6G for Media & Entertainment: Challenges, Opportunities and future Outlook**²⁷. This white paper was developed by 22 SNS projects that have use cases and technologies for specific applications in the Media and Entertainment (M&E) sector. 46 use cases developed by 22 SNS JU projects are addressing different aspects of the M&E sector. This huge R&I activity has brought a lot of results that could bring added value to the M&E sector stakeholders. The paper addresses several aspects such as technical, user experience, sustainability, regulation, ethics, and more, which brings a comprehensive overview of what SNS JU call 1, 2 and 3 projects have studied and the results that can be exploited by the M&E sector.
 - c. **Public Protection and Disaster Relief (PPDR).** Target Publication Date: January 2026. This white paper will compile lessons learned from SNS projects working on topics related to PPDR. The overall aim/message of the white paper is to describe current activities related to PPDR by SNS-JU projects for PPDR stakeholders, and to identify strength and areas for further exploration in PPDR in order to influence policy directions, industry investments, and importantly, research and innovation directions in this topic.
 - d. **Towards 6G Enabled eHealth.** Target Publication Date: December 2025. This white paper will cluster information provided by SNS projects working in areas related to eHealth. The white paper will focus on highlighting eHealth use cases addressed within SNS JU and the relevant technical requirements, dependencies, and sustainability considerations for each use case. The paper will also touch upon initial implementation results, challenges and the expected impact of B5G/6G solutions for the eHealth sector.
5. **Key Achievements 2025 TOP-10 Brochure.** The TB conducted an extensive exercise throughout 2025 in collecting information from the SNS projects on their Key Achievements (KAs) and evaluation of the KAs by a dedicated evaluation committee in order to select the **TOP-10 KAs** across five categories to be published in a brochure. The brochure is currently in the development phase (expected to be delivered by early 2026). The process involved the collection, evaluation and classification of **188 KAs from 63 projects** highlighting the key project outcomes for 2025. Lessons learned have been compiled with the evaluation committee and discussed with TB members at the F2F meeting in Madrid in October 2025. The lessons learned from this first instance of the KAs exercise along with the feedback received by the project representatives will be used to further streamline and improve the process for 2026 (the KAs process is an annual activity of the TB). Once ready, the KAs TOP-10 Brochure will be

²⁶ <https://smart-networks.europa.eu/sns-publications/>

²⁷ <https://smart-networks.europa.eu/wp-content/uploads/2025/12/white-paper-6g-for-me-v1.0.pdf>

available via the SNS JU website.

6. **Overview document for TB onboarding of new projects²⁸**. This Overview document provides important information on the operation and processes of the SNS JU Steering Board (SB), Technology Board (TB), and Working Groups (WGs) and constitutes a critical long-standing document of the TB. The overview document is structured in the following sections in order to enable new project representatives to understand the way of working of the TB: SNS JU, Projects, SB, TB, WGs, TFs, BSCW Links, Calendar. The document is updated as needed and according to feedback and presented each year to the new projects (and their representatives) as part of their onboarding process.

²⁸ <https://bscw.sns-ju.eu/sec/bscw.cgi/313419>

4 SNS JU Collaboration Agreement (SNS JU CoA 2024)

During 2025, the SNS JU Collaboration Agreement was revised (SNS JU CoA 2025) and sent to all projects for signatures by all participants in the SNS JU Projects. This revision was necessary because the European Commission had re-interpreted some key definitions which had an impact on the construction of the SNS JU CoA 2024. Specifically, they adopted a new definition of “linked” projects which means it was no longer appropriate to use Articles 3 & 7 as the basis of the obligation on project participants to be party to a programme level collaboration agreement.

Another reason for this change was that the original structure of those articles always required an amendment of all running SNS projects to add a list of new SNS JU projects each time more SNS projects were launched within the JU. This would have triggered hundreds of project amendments per year just to keep the administration of “linked” projects correct.

The alternative adopted was to place the SNS JU CoA 2024 participation requirement in Annex 5 of the SNS JU grant agreements. To facilitate this, a formal reference list of the SNS projects is created and will be maintained on the SNS website and this can be used as the list of the SNS family of projects that must accede to same CoA.

4.1 SNS CO-OP Taking over the SNS JU CoA 2024

The updated SNS JU CoA 2024 was made available to be shared with the projects from Q2 2024 and the SNS OPS project disseminated to all projects and tracked the return of signatures. By the end of 2024 all Call 1 project participants and all Call2 project participants had acceded to the updated CoA.

In January 2025, 16 new projects from Call 3 of the SNS JU started and these projects were actually already approached in the preparation phase to consider the status of their participants in the updated SNS JU CoA 2024.

The 16 Call 3 projects comprised almost 200 participations, noting that a single organisation may account for multiple participations when involved in more than one project. Nearly half of these participations came from organisations new to the SNS JU. The SNS JU CoA 2024 requires one signature per organisation, which is valid for all of that organisation’s participations across projects. By January 2025, 72% of the organisations participating in Call 3 had acceded to the CoA, representing 81% of total participations. Signature collection was still ongoing at that time. Of the 16 call 3 projects, 7 projects had already collected their full set of signatures as of January 2025.

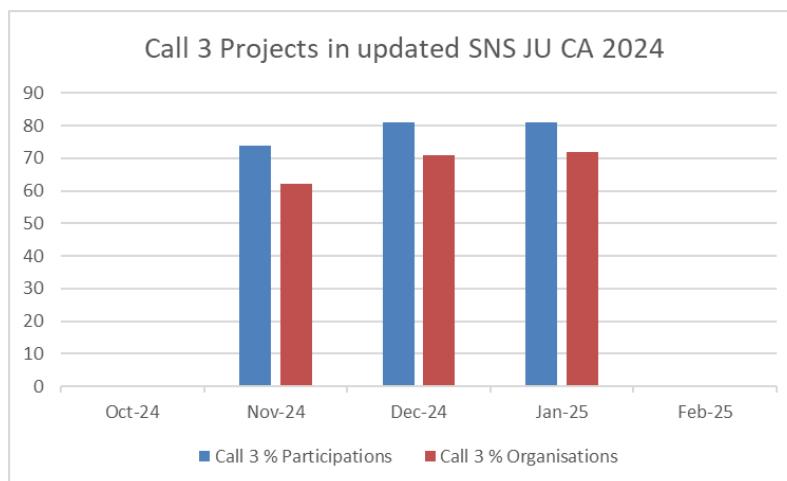


Figure 15: Rate of accession of Call 3 projects to the SNS JU CoA until January 2025

4.2 SNS CO-OP work on implementing the SNS JU CoA 2024

The support work SNS CO-OP offered to all the projects in 2025 focused on providing clarifications on the CoA process, responding to questions on legal understandings, having meetings with individual

organisations where explanations of the agreement were requested, and checking each signed form for correctness and completeness.

It also involved checking PIC numbers, PIC numbers of affiliates and any other variations that arose in the signature process. SNS CO-OP must also update the database with any changes implemented through project amendments where new parties may be added, or existing parties may be removed.

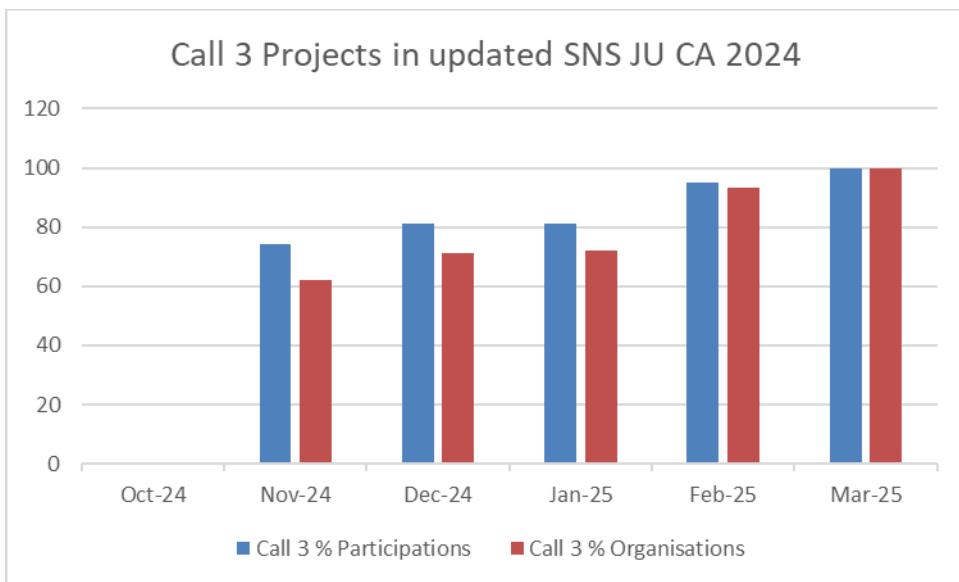


Figure 16: Rate of accession of Call 3 projects to the SNS JU CoA after January 2025

4.3 Scale of the Community for the updated SNS JU CoA 2024

As of January 2025, the number of projects in the SNS JU was 79 which made the common meetings, such as SB and TB, very large and therefore quite challenging. The role of the updated SNS JU CoA 2024 is to provide a stable and supported interworking environment where the projects can interwork with mutual trust and respect.

SNS CO-OP has overseen the integration of the last Call 3 participants and made sure all participants are parties to the Collaboration Agreement. In total this set of projects represents 460 unique organisations who all acceded to the updated SNS JU CoA 2024.

A list of these organisations has been included in Appendix A of this document.

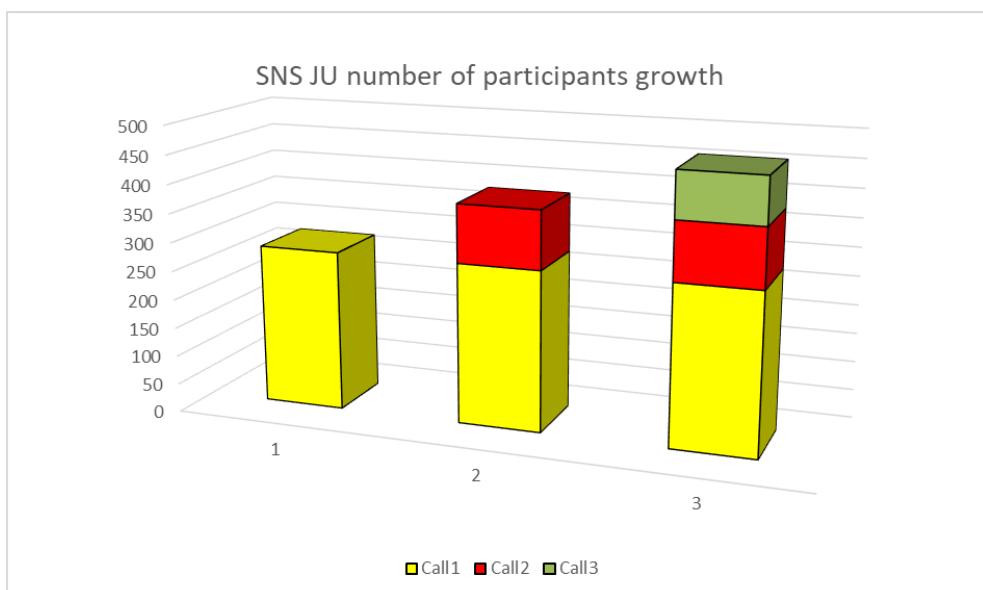


Figure 17: SNS JU number of participants growth

4.4 Future of the SNS JU Collaboration Agreement

Calls 4 and 5 of the SNS JU were closed in September 25 and will add another round of projects to this community starting from Q2 of 2026. SNS CO-OP will manage the CoA process for these new projects, building on the experience of previous work. In the same timeframe it is expected some of the Call 1 projects will complete their work and their results will need to be archived and kept available to the SNS JU community.

5 Working Groups Coordination

This section documents the activities of SNS CO-OP in supporting the various Working Groups (WGs) of the SNS JU, 6G-IA and NetworldEurope. During this reporting period (M1–M12), the transition in the management of these activities from the SNS OPS project has been successfully completed, while maintaining all the electronic infrastructure provided by SNS OPS.

In this section, in addition to documenting the activities of the SNS CO-OP project in supporting the WGs of the SNS JU, 6G-IA and NetworldEurope, the scope and the main activities and achievements of each WG during the first twelve months of activity are also presented. However, it is important to clarify that the scope of the activity within SNS CO-OP is limited to monitoring and supporting the different WGs and does not extend to responsibility for the activities or the content of the outputs produced by the WGs.

5.1 Introduction to Working Groups (WGs)

Working Groups (WGs) are collaborative expert communities established under the SNS JU, 6G-IA and NetworldEurope to bring together industry, academia and other stakeholders to advance strategic, technical and cross-cutting topics essential for 6G development

The WGs have the following ambitions:

- To rally and engage the community around key strategic themes for 6G and the Smart Networks and Services Joint Undertaking (SNS JU) ecosystem, including active participation in major European and international events (e.g., EUCNC).
- To enable community discussions and capture the resulting outcomes through white papers, position papers or other types of publications.
- To collaborate with the community in shaping and refining roadmaps for critical 6G technologies, architectures and services.
- To work alongside the community to define requirements for experimental platforms, testbeds and facilities supporting large-scale 6G trials.
- To address and integrate horizontal and cross-cutting challenges highlighted by international 6G initiatives (including the 6G-IA, NetworldEurope and SNS JU projects), such as sustainability, security, interoperability, open interfaces, ecosystem engagement and spectrum-related considerations.
- To advance 6G standardisation and pre-standardisation topics in a coordinated fashion within the SNS JU and in alignment with global standard-setting bodies.

Under the SNS JU, there are three categories of WGs, including the NetworldEurope WGs:

- **SNS JU Working Groups (WGs)** are proposed by SNS JU projects when a specific need is identified, and participation is open to all SNS JU projects:
 - The current SNS JU WGs are: 6G Architecture, Reliable Software Network, Test, Measurement and KPIs Validation (TMV), Hardware Technologies (HW) and Sustainability²⁹.
- **6G-IA Working Groups (WGs)** are open to member organizations of the 6G-IA and may also include organizations from SNS JU projects on an ad-hoc or invitation basis.
 - The current 6G-IA-initiated WGs are: Vision, Trials, Pre-Standardization, 5G/6G for Connected and Automated Mobility (5G/6G CAM), Spectrum, Security and Women in Telecommunications and Research (WiTaR).
 - It should be noted that, at the time of submitting this deliverable, the Open SNS WG is

²⁹ The Sustainability WG is a new group proposed by the SNS JU projects, with no equivalent under SNS OPS framework. SNS CO-OP has supported its establishment and will continue to provide support as its activities progress

suspended and therefore is not listed among the active WGs. Unless there is renewed interest from the 6G-IA community, the WG will remain suspended indefinitely.

- Although not formally a WG, SNS OPS also provided infrastructure support to the Verticals Engagement Task Force of the 6G-IA in a similar manner to its support for WGs. The operational assistance required to carry out the task force's activities is also delivered by SNS CO-OP (e.g., maintenance of the Verticals Tracker).
- **NetworldEurope WGs** are expert groups created to address specific strategic or technical topics within the European communications landscape. They may be established either upon request from a set of interested member organizations, or directly by decision of the NetworldEurope Steering Board itself. The previous good relations continue between 6G-IA/SNS JU and NetworldEurope, and SNS CO-OP offers support to NetworldEurope WGs.
 - The current NetworldEurope WGs are Expert Advisory Group, SatCom, SME and Enabling Technologies for Future Vertical Ecosystem Transformation.

5.2 Support provided to the Working Groups

A broad set of general support services has been made available to all WGs, with assistance provided wherever needed. Additional targeted actions were also necessary to facilitate the transition from the SNS OPS project to the SNS CO-OP.

- Document management and repository services: During the reporting period, every SNS-JU WG had a dedicated space in the OnlyOffice infrastructure to accommodate their management and repository needs. This action was applied to SNS, 6G-IA and NetworldEurope WGs.
- Communications and conference facilities: Webex was used to supply the communication and conferencing capabilities required by the WGs, including hosting regular WG meetings, facilitating large-scale webinars, and providing reliable channels for remote collaboration across WGs participants.
- Support for elections and voting processes: Throughout this period, SNS CO-OP assisted in the chair elections for the Sustainability WG and provided facilitation for the relaunch of the Spectrum and the 5G/6G for Connected and Automated Mobility WGs, for instance. Support was also given for routine leadership changes such as:
 - Renewal of the same chairs and co-chairs for the 6G Architecture, Reliable Software Network, TMV and Women in Telecommunications and Research (WiTaR) WGs.
 - Appointment of new chairs and co-chairs for Hardware Technologies, Sustainability and 5G/6G for Connected and Automated Mobility WGs.
 - Appointment of new chairs (only) for Vision and Spectrum WGs.
 - Appointment of new co-chairs for Trials, Pre-Standardization and Security WGs.
- Collection and coordination of periodic activity updates from the WGs (2025-Qx WG reporting file), enabling strategic monitoring by the 6G-IA, the SNS JU Steering Board, the SNS JU Technology Board, and NetworldEurope. Although a solid reporting mechanism was inherited from the SNS OPS project, SNS CO-OP prepared a revised reporting procedure and negotiated it for consultation among WG chairs and co-chairs. As a result:
 - The reporting frequency has now become quarterly (every three months), instead of annual, i.e., only at the end of the calendar year.
 - The reporting structure has also been updated, ensuring that all WGs present their results in a consistent and comparable manner. All WGs now provide information on their activities completed during the quarter and those planned for the next one, following a common structure consisting of: *WG Activities*, *WG Management*, and *WG Dissemination and Outreach*.
- Revision and maintenance of WG Terms of Reference (ToRs): SNS CO-OP is responsible for

ensuring that the appropriate governing bodies periodically review each WG's ToR. During this reporting cycle, updates at WG ToRs were required for Reliable Software Network, Hardware Technologies, Sustainability and the Spectrum WGs.

- Onboarding of new projects into the WGs: SNS CO-OP facilitated the integration of SNS JU projects into the various WGs by promoting the groups, coordinating communication with project teams, and providing straightforward mechanisms for expressing interest and joining (e.g., organization of welcome webinar for new call 3 projects³⁰)
- Organising/hosting Consultations and publication service: SNS CO-OP supported the organisation and delivery of consultations, including the preparation of the consultation material, coordinating invitations, managing the logistics of virtual and in-person sessions, and facilitating structured discussions to gather feedback and insights. These consultations played an important role in ensuring transparency, inclusiveness and alignment between WG activities and the broader needs of the SNS ecosystem.

During the first three months of this activity (M1–M3), the work overlapped with the final months of SNS OPS. Throughout this period and given that the teams involved in this activity were different, the SNS CO-OP team maintained direct communication with SNS OPS to safeguard the objectives of both projects and avoid any overlap. This interaction was essential for learning, improving the process, and strengthening the monitoring of WG activities.

The following sections provide a comprehensive overview that includes not only the key outcomes and results achieved by each WG, but also a detailed account of the activities undertaken by each of them.

As previously outlined, the role of the SNS CO-OP project is to support the WGs in executing their activities efficiently, productively, and with measurable impact. The project does not directly influence the strategic direction, technical content, or outputs of the WGs, except for facilitating the presentation and dissemination of those outputs.

5.3 WGs highlights

This section outlines the key highlights and achievements from the SNS-JU and 6G-IA WGs, reflecting collaborative efforts, milestones and synergies that have been realized, further advancing the goals of the SNS initiative. Notable activities include the strong participation in EUCNC 2025, the development and publication of White Papers, and the introduction of a new, more efficient design for the Working Groups' collection report. These efforts underscore the momentum behind the SNS-JU's mission to drive innovation, research excellence, and international collaboration in the development of 6G technologies.

Key figures regarding WG output are summarized as follows:

- 15 White Papers published or ongoing across the SNS/6G-IA WGs (Table 5).
 - 9 published, 4 finalizing, 2 ongoing.
 - Publications span architecture, KPIs/KVIs, sustainability, security, business models, trials, and service management.
- 13 types of engagements at EUCNC'25 (Table 6):
 - 6 organized sessions (Special, Convened, or Workshop)

³⁰ <https://smart-networks.europa.eu/event/sns-ju-call-3-projects-introduction-webinars/>

Table 5: White Papers (WP) Summary (Published and Ongoing)

WG	WP Title	Status	DOI
Arch	<i>Towards 6G Architecture: Key Concepts, Challenges and Building Blocks</i> ³¹	Published	DOI: 10.5281/zenodo.15001377
SNWG	<i>Network and Service Management Advancements</i> ³²	Published	DOI: 10.5281/zenodo.15011613
SNWG	<i>The AI/ML landscape for smart networks and services</i>	Published	DOI: pending
TMV	<i>6G KPIs – Definitions and Target Values</i> ³³	Published	DOI: 10.5281/zenodo.15011631
TMV	<i>6G KVI – SNS Projects Initial Survey Results 2025</i> ³⁴	Published	DOI: 10.5281/zenodo.15220945
TMV	<i>6G KPIs – Definitions and Target Values (updated version)</i>	Ongoing	--
Vision	<i>Emerging 5G and beyond Ecosystem Business Models</i>	Published	DOI: 10.5281/zenodo.14230482
Vision	<i>Sustainable 6G: Ways to reduce energy consumption</i>	Published	DOI: 10.5281/zenodo.13986789
Vision	<i>White Paper on KVI (unofficial title)</i>	Ongoing	--
Vision	<i>White paper on 6G Services (unofficial title)</i>	Ongoing	--
Trials	<i>Evolution of use cases and verticals towards 6G</i>	Finalizing	--
Trials	<i>Smart Connectivity testing and experimental facilities</i> ³⁵	Published	--
Trials	<i>Lessons learnt from SNS Trials and Pilots</i>	Ongoing	--
Security	<i>Innovative Approaches for 6G Security</i> ³⁶	Published	DOI: 10.5281/zenodo.14619618
Security	<i>6G Security and Trust: Insights from European SNS Projects</i> ³⁷	Published	DOI: pending
5G/6G CAM	<i>No title</i>	Ongoing	--

Table 6: SNS/6G-IA WGs EUCNC'25 participation

WG	Type of engagement	Programme participation	Title
Arch	Organization	Special Session	<i>6G Architecture Blueprint and Key Innovations: A European Perspective</i>
Arch	Participation	Workshop	<i>The 6G series workshop by Hexa-X-II</i>

³¹ <https://smart-networks.europa.eu/wp-content/uploads/2025/11/archwg-whitepaper-v1.3.1-final.pdf>³² https://smart-networks.europa.eu/wp-content/uploads/2025/03/softnet-whitepaper2024-v1.0_final.pdf³³ https://smart-networks.europa.eu/wp-content/uploads/2025/03/white-paper-kpis_7_3_2025_with-disclaimer.pdf³⁴ https://smart-networks.europa.eu/wp-content/uploads/2025/05/sns-ju-white-paper-6g-kvis-survey-2025_final-1.pdf³⁵ <https://aioti.eu/wp-content/uploads/SCoDIHNet-experimental-platforms-Final.pdf>³⁶ https://6g-ia.eu/wp-content/uploads/2025/01/wg_sec_position_paper-23.pdf³⁷ https://6g-ia.eu/wp-content/uploads/2025/12/6g-ia_white-paper-sept25_v6.pdf

SNWG	Organization	Special Session	<i>Software-based evolution towards the 6G era in telecommunications</i>
TMV	Organization	Workshop	<i>6G experimentation methodologies, pitfalls and best practices</i>
TMV	Participation	Workshop	<i>The 6G series workshop by Hexa-X-II</i>
TMV	Participation	Special Session	<i>Value Approach of 6G: The Role of Key Value Indicators in Design and Societal Impact</i>
HW	Organization	Workshop	<i>Hardware Components Evolution Towards 6G</i>
Vision	Organization	Convened Session	<i>A collaborative approach to 6G – the role of European National Initiatives and SNS JU</i>
Trials	Participation	Special Session	<i>Enabling Interoperability in Healthcare through European Health Data Slices (EHDSL), Post-Quantum Cryptography (PQC), and Advanced Mobile Technologies for 6G Networks</i>
Trials	Participation	Workshop	<i>SNS Trials & Pilots (T&Ps) Introduction and Cartography</i>
Security	Organization	Convened Session	<i>Uncovered 6G Security: gap and needs for the evolution beyond 5G security and towards 6G Networks</i>
Security	Organization	Workshop	<i>6G Trustworthiness: Requirements, Challenges, and Considerations</i>
WiTaR	Organization	Convened Session	<i>WiTaR: Women in Telecommunications and Research</i>

5.4 SNS WGs detailed reporting

This section provides an overview of the key activities and outputs of the SNS JU WGs during the reporting period.

SNS JU WGs are proposed by SNS JU projects when a need or clear benefit for collaboration on specific cross-cutting topics is identified. The creation and dissolution of these WGs is subject to approval by the SNS JU Steering Board, to which the WGs also report. Membership in the SNS JU Project WGs is open to SNS JU projects, only. During the reporting period, one new WG focused on Sustainability aspects was newly created and formally established.

The SNS JU Project WGs active during this reporting period were:

- 6G Architecture
- Reliable Software Network.
- Test, Measurement and KPIs Validation (TMV).
- Hardware Technologies (HW).
- Sustainability.

5.4.1 6G Architecture WG

Chair: Ömer Bulakci (Nokia)

Vice-Chair: Xi Li (NEC)

Purpose and scope

The goal of this WG is to serve as a common platform to facilitate the discussions among the SNS JU projects developing 6G architectural concepts and components as well as validating them, and to attain

a consolidated European view on the overall 6G architecture design. The WG disseminates the results primarily via white papers and international conferences/workshops as well as bilateral/multilateral workshops with global stakeholders. The results can also be disseminated via potential high-ranking publications (journal or conference papers) or open access books (based on the contributions of WG members and SNS JU projects), whenever deemed appropriate by the WG.

Objectives

The main objectives of the WG are to:

- Objective 1: Collect, analyse and consolidate information from relevant projects (SNS, other global projects and initiatives) on architecture research solutions and results.
- Objective 2: Liaise back the discussion findings to relevant SNS projects.
- Objective 3: Facilitate consensus building on the 6G architecture, roadmap and migrations strategy.
- Objective 4: Collaborate with other WGs on relevant subjects, e.g., Pre-Standardization and Reliable Software Network.

Key activities and achievements in the reporting period:

The 6G Architecture WG has made steady progress in project onboarding, technical coordination, and dissemination of architectural insights across the SNS JU ecosystem. Significant effort has been dedicated to producing the WG's flagship white paper and reinforcing the WG's visibility through high-impact events and international collaborations.

Key highlights of the WG include:

- Completion and official publication of the 6G Architecture White Paper, “*Towards 6G Architecture: Key Concepts, Challenges and Building Blocks [6]*” marking a major milestone for the WG and providing the architectural vision for SNS JU and the European 6G ecosystem.
- Full onboarding of Call 2 projects and successful on-going onboarding of Call 3 projects, ensuring continuity of contributions and broad engagement across the SNS project portfolio. Newly onboarded projects were incorporated into the WG's workflows and invited to share their architectural innovations.
- Successful organisation and participation in high-profile international events, significantly increasing visibility of the WG and its outputs.
- Strengthening global outreach, including active discussions for a joint workshop with XGMF and engagement with sector-specific stakeholders (e.g., railway industry).
- Consistent knowledge exchange through biweekly meetings, project presentations and TechTalks, promoting alignment on architectural principles and innovations.

In terms of dissemination and outreach, the WG has disseminated its work and architectural developments at a number of major event contributions, including:

- **6G IA General Assembly (2025, online)**: Delivery of the architectural landscape presentation.
- **EUCNC & 6G Summit 2025 (Poznan)**:
 - Organized Special Session 2, “*6G Architecture Blueprint and Key Innovations: A European Perspective*”³⁸ presenting key insights from the white paper and engaging experts from verticals, vendors, operators, academia, and pre-standardisation bodies.
 - Participated in Workshop 2, “*The 6G series workshop by Hexa-X-II*”³⁹, where the key highlights on the 6G Architecture vision (including the overall 6G system blueprint and essential architectural components and trends) were presented.

³⁸ <https://www.eucnc.eu/programme/special-sessions/special-session-2/>

³⁹ <https://www.eucnc.eu/programme/workshops/workshop-2/>

- **Berlin 6G Conference 2025 (Berlin)**⁴⁰: Delivery of an invited talk presenting the white paper highlights and the WG's vision for 6G architecture.
- **PIMRC 2025 (Istanbul)**: Successful organisation of the panel “*Architectural Landscape towards 6G: Standardization Trends, New Enablers, and New Challenges*,”⁴¹ widely disseminated on social media.
- **Joint EIM-6G-IA Workshop (2025)**: The WG contributed to discussions on the evolution from GSM-R to FRMCS and future 6G integration, presenting key architectural considerations to stakeholders from the railway sector.

Operationally, the WG has not undergone any changes, and its evolution remains stable and consistent.

Plans for 2026

The WG aims at the following activities as part of the 2026 goals:

- Objective 1: Full onboarding of the Call 3 projects such that their innovations and architectural concepts can be utilised for providing updates on the established architectural foundation. Initiate the onboarding of Call 4 and Call 5 projects.
- Objective 2: Organization of International Workshop titled “*6GArch: The 5th Workshop on 6G Architecture* (11th edition combined with 5GArch)” at ICC 2026 (Glasgow).
- Objective 3: Organization of a virtual workshop with XGMF beginning of February 2026, which will focus on 6G architecture and enablers.
- Objective 4: Organization of a special session/convened session and/or a panel at EuCNC 2026.
- Objective 5: Start of the preparation for the next version of the 6G architecture white paper factoring in SNS JU Call 2 and Call 3 projects' results with a publication target in 2027.

5.4.2 Reliable Software Networks WG

Chair: David Artuñedo (Telefónica)

Vice-Chair: Dimitris Tsolkas (Fogus Innovations & Services P.C)

Purpose and scope

This Working Group (WG) group focuses on analyzing how 6G networks will be designed as software enabled platforms. It aims to address the unification and applicability of key research topics related to Software Networking, encompassing cloud native design, network abstraction, “as code” design, APIs, AI/ML, Development, Security and Operations (DevSecOps) etc. These topics aim to cover all types of compute and connect, infrastructures, platforms or components; for any network system (mobile, IoT, etc.), and service (management, orchestration, experimentation, etc.). Main task of the group is to analyze the recent trends and the key technological challenges that transform the network to a modular and open model.

The Reliable Software Networks WG (SNWG) disseminates the results via white papers and international conferences/workshops as well as bilateral/multilateral workshops with global stakeholders.

Objectives

The main objectives of the WG are to:

- Objective 1: Collect, analyse and consolidate research findings from relevant projects (SNS, other global projects and national initiatives) on software solutions, components, interfaces, layers, trends or results.

⁴⁰ <https://www.6g-plattform.de/berlin-6g-conference/>

⁴¹ <https://pimrc2025.ieee-pimrc.org/program/panels#p8>

- Objective 2: Foster agreements, facilitate the consensus-building process on a roadmap that will enable massive adoption of software solutions for 6G by the telco industry.
- Objective 3: Collaborate with other SNS-JU and 6G-IA WGs on relevant subjects, e.g., Architecture, pre-standardization and/or security WGs.

Key activities and achievements in the reporting period:

The Reliable Software Network WG made significant progress in onboarding new projects, driving thematic technical discussions, developing a major white paper on AI/ML, and strengthening its collaboration with ETSI SDGs. The WG maintained a stable operational rhythm and expanded its role as a coordination forum for software-based innovation across the SNS JU programme.

Key highlights of the WG include:

- Publication of the White Paper, “*Network and Service Management Advancements [7]*”, establishing a foundational reference for key frameworks and interfaces towards Open, Intelligent and Reliable 6G networks.
- Lead the preparation and finalization of the AI/ML white paper, “*The AI/ML landscape for smart networks and services*⁴²”, targeting fundamental aspect of AI/ML in networks, and including a taxonomy, an overview of related standardisation efforts, and key research directions.
- Successful onboarding of a significant number of SNS JU projects, significantly expanding WG participation and cross-collaboration. E.g. Silvia Almagia, Director at ETSI Software and Standards, has been invited as external observer to the WG’s calls.
- Execution of multiple thematic mini workshops addressing different topics:
 - Impact of network openness (5G, and in general) to vertical industries.
 - Security and trust management in Software ecosystem.
 - Software tools and interfaces to integrate AI solutions in network operations and to enable Digital twins.
- Strong international dissemination, highlighted by the EuCNC & 6G Summit 2025 Special Session and reinforced engagement with ETSI events.

In terms of dissemination and outreach, the WG can highlight:

- **EUCNC & 6G Summit 2025 (Poznan): Co-Organized Special Session 15**, “*Software-based evolution towards the 6G era in telecommunications*”⁴³, together with ETSI SDGs. This session explored how software and open-source approaches are transforming telecommunications as we move toward the 6G era. It examined the shift from 5G’s service-based and cloud-native architectures to emerging open-source innovations across networks, APIs, RAN splits, orchestration and slicing.
- **SNS4SNS 2026 event**: Active support to the organization of the upcoming SNS4SNS 2026⁴⁴ event.

Operationally, the WG renewed its chair and co-chairs in the first quarter of 2025. However, by the time of submitting this deliverable, it became necessary to call new elections (to be held in January 2026) to appoint a new chair following the departure of David Artuñedo from this role.

Plans for 2026

In the coming year, the focus will be on advancing key initiatives and enhancing collaboration within the AI/ML and 6G domains. The following activities are planned:

- White Paper preparation on AI/ML frameworks: A key activity will be the preparation of a comprehensive White Paper focused on the AI/ML frameworks developed within SNS-JU projects. This will include a detailed exploration of current Part B of the White Paper “*The*

⁴² At the time of submission of this deliverable, the white paper is under review by the SB, with its official publication expected in early January 2026.

⁴³ <https://www.eucnc.eu/programme/special-sessions/special-session-15/>

⁴⁴ <https://www.etsi.org/events/2501-etsi-sns4sns-event-2>

AI/ML landscape for smart networks and services”, which specifically addresses the AI/ML landscape for SNS.

- Workshop/Special Session proposal submission: The SNWG will submit a proposal for a workshop or special session at the EUCNC & 6G Summit 2026 in Malaga. This event provides a unique opportunity to showcase our work in AI/ML and 6G, to disseminate the white papers and to engage with key stakeholders, researchers, and industry leaders. The session will aim to foster discussion on the latest trends and advancements in these areas.
- Ongoing thematic mini-workshops: The SNWG will continue organizing and executing thematic mini-workshops during the SNWG calls. These workshops will facilitate deeper collaboration and knowledge exchange among participants, focusing on specific topics of interest within the scope of the SNS-JU and the broader 6G research community.

These efforts will contribute to the broader objectives of advancing AI/ML capabilities and fostering strong ties within the European 6G ecosystem.

5.4.3 Test, Measurement and KPIs Validation (TMV) WG

Chair & Test Data Reusability sub-WG: Michael Dieudonne (Keysight)

Vice Chair and KVI sub-WG: Ioannis Patsouras (WINGS ICT)

KPI sub-WG Chair: Ioanna Mesogiti (COSMOTE Mobile Telecommunications S.A.)

Purpose and scope

This Working Group (WG) group focuses on promoting commonalities across projects that have strong interest in Testing & Monitoring (T&M) methodologies needed to provide support to the 6G Trial use cases. Such efforts include the development of test and measurement methods, test cases, procedures as well as the KPI/KVI formalization and validation to the greatest possible extent, to ensure a unique European vision on how the entire lifecycle of the 6G network, ranging from R&D to actual deployed environments, can be supported.

Objectives

The main objectives of the WG are to:

- Objective 1: KPI definition, KPI sources, collection procedures and analysis.
- Objective 2: Testing frameworks (requirements, environment, scenarios, expectations, limitation) and tools.
- Objective 3: Testing methodologies and procedures.
- Objective 4: KPI/KVI validation methodologies.
- Objective 5: Testing lifecycle (i.e., testing execution, monitoring, evaluation and reporting).
- Objective 6: Analysis of SNS Trials results and generation of insights.
- Objective 7: Common information models for 6G Test and Measurement (6G T&M).
- Objective 8: Data reusability in SNS (standards for experimental data storage and labelling for EU projects to ensure data reuse, standards for experiment, methodology, data and result description).
- Objective 9: Electromagnetic fields (EMF) related topics (KPIs, methodologies, analysis and evaluation).

Key activities and achievements in the reporting period:

The WG focused on defining, harmonizing, and validating 6G Key Performance Indicators (KPIs) and Key Value Indicators (KVI), as well as on establishing best practices for experimentation, measurement, and data reusability across SNS JU projects. The WG also actively contributed to dissemination, workshops, and white paper publications, fostering alignment between projects and supporting ITU-R IMT2030 contributions.

Key highlights of the WG include:

- Publication of the White Papers, “6G KPIs - Definitions and Target Values [8]”, “6G KVI - SNS projects initial survey results 2025 [9]” and “TMV data quality” (for internal SNS

consumption, only).

- Development and creation of an updated version of the White Paper on “6G KPIs - Definitions and Target Values [8]” to include data from active projects that were not part of the first version.
- Standardization and Harmonization of KPIs and KVIs (with definitions aligned across multiple SNS JU projects and including collaboration on 6G KPIs and target values with Spectrum WG on contributions for ITU-R IMT2030).
- Finalization and Publication of the Meta Registry System (MRS) to centralize and provide structured access to metadata from all active SNS JU projects, supporting reproducibility and alignment of results. Upon submission of this deliverable, a 21 number of projects have provided their metadata to the MRS.
- Groundwork laid for a common dataset curation tool, in collaboration with 6G-DALI⁴⁵ project.
- Publication, maintenance and release of the KPIs radar⁴⁶.

In terms of dissemination and outreach, the WG highlighted major presence in the EUCNC & 6G Summit 2025:

- **EUCNC & 6G Summit 2025 (Poznan):**

- Organized Workshop 16, “6G experimentation methodologies, pitfalls and best practices”⁴⁷, where best practices and lessons from multiple SNS JU projects were shared to improve the design, execution, and reproducibility of 6G experiments, covering aspects such as KPI/KVI assessment, multi-modal data synchronization, network state control, and energy measurements.
- Participated in Special Session 17, “Value Approach of 6G: The Role of Key Value Indicators in Design and Societal Impact”⁴⁸. The session explored methodologies for defining and applying KVIIs in 6G projects, linking technology development to societal value and long-term impact assessment.
- Participated in Workshop 2, “The 6G series workshop by Hexa-X-II”⁴⁹, where the TMV WG presented work on consolidating 6G KPIs, providing definitions, target values, and context to align development with IMT 2030 capabilities.

Operationally, the WG has not undergone any changes, and its evolution remains stable and consistent.

Plans for 2026

Looking ahead to 2026, the focus will be on:

- Continuing the KPI and KVI work, further refining definitions, methodologies, and alignment across projects.
- Advancing, updating, and cross-validating KPI definitions, incorporating inputs from an expanded set of SNS JU Call 2 and Call 3 projects. Reporting on KPI measurement results derived from testing and demonstration activities, including final results from Call 1 projects (with some continuing into Q1 2026) and the initial testing activities of Call 2 projects.
- Extracting insights and shaping a harmonized view of KPI definitions and target values across the SNS JU framework, ensuring consistency and alignment among participating projects.
- Advancing and updating the KVI estimation methodology, integrating contributions from additional SNS JU Call 2 and Call 3 projects and reporting on KVI estimation outcomes

⁴⁵ <https://6gdali.eu/>

⁴⁶ <https://verticals-tracker.sns-ju.eu/kpi-radars>

⁴⁷ <https://www.eucnc.eu/programme/workshops/workshop-16/>

⁴⁸ <https://www.eucnc.eu/programme/special-sessions/special-session-17/>

⁴⁹ <https://www.eucnc.eu/programme/workshops/workshop-2/>

following the completion of Call 1 projects (with some work extending into Q1 2026).

- Improving the MRS user experience and searchability, ensuring easier access to metrics-related resources.
- Progressing the data reusability activities, with the goal of delivering the first prototype by the end of 2026.

5.4.4 **Hardware technologies (HW) WG**

Chair: Alexios Birbas (University of Patras)

Vice-Chair: Luis Manuel Pessoa (INESC TEC)

Purpose and scope

The Hardware Technologies WG (HT-WG) encompasses all interested projects that target research and innovation in the areas of systems, components, materials and chipsets, which are fundamental for the development of 6G networks. Among the goals is to set up joined actions, common events, and issuing position statements, such as white papers. Such activities are considered part of the SNS Initiative scope.

Objectives

The main objectives of the WG are to:

- Objective 1: Collect, analyze and consolidate research findings from relevant projects (SNS, other global projects and national initiatives) on 6G hardware solutions, components, trends and results.
- Objective 2: Foster agreements and facilitate the consensus-building process on a roadmap that will enable massive adoption of hardware solutions for 6G by the telco industry.
- Objective 3: Collaborate with other SNS and 6G/IA WGs on relevant subjects, e.g., Architecture, pre-standardization and/or trials WGs.

Key activities and achievements in the reporting period:

During 2025, the Hardware Technologies WG has established its governance, defined strategic priorities, initiated community engagement, and laid the foundation for advancing European microelectronics capabilities for 6G networks. The WG focused on onboarding projects, defining its technological mission, engaging with cross-domain initiatives and assessing community needs.

Key highlights of the WG include:

- Formal creation of the Hardware Technologies WG, with periodic calls successfully conducted.
- Successful onboarding of a total of 32 projects from Call 1, 2 and 3 SNS JU projects, establishing mechanisms for capturing member interests and needs.
- Foundational insight collection activities are ongoing, using a questionnaire⁵⁰ designed to map community capabilities, identify gaps, and inform future WG strategy and EU-level microelectronics initiatives.
- First international dissemination, highlighted by the EuCNC & 6G Summit 2025 Workshop.

In terms of dissemination and outreach, the WG can highlight:

- **EUCNC & 6G Summit 2025 (Poznan):** Organized Workshop 9, "Hardware Components Evolution Towards 6G"⁵¹ where the WG addressed the technological challenges and innovations needed for 6G hardware, including RF/mmWave/THz components, advanced circuit design, heterogeneous packaging, and non-CMOS computing.

⁵⁰

<https://docs.google.com/forms/d/e/1FAIpQLSeVKvHZPC5j4dVxm88GgmKEyNRmqlXarYOOt6MfnVFQqFZSPQ/viewform>

⁵¹ <https://www.eucnc.eu/programme/workshops/workshop-9/>

Operationally, the WG was officially established in Q1-2025, with the first assembly held in February 2025. The WG is in full speed now, and its evolution remains stable and consistent.

Plans for 2026

In 2026, the HT-WG will focus on consolidating the insights gathered through the microelectronics needs questionnaire and translating them into actionable priorities for the European 6G hardware ecosystem. Key activities will include the formulation of recommendations to support EU-level initiatives (e.g. Chips JU, pilot lines), coordination of contributions to policy briefs, and continued community mapping across SNS projects. The group will also organize the second edition of the workshop *“Hardware Components Evolution Towards 6G”* at EuCNC & 6G Summit 2026 in Malaga, reinforcing its role in shaping the 6G hardware R&I agenda.

Cross-WG collaboration, engagement with new projects from upcoming SNS calls, and enhanced dissemination will be pursued through the preparation of a White Paper, tentatively titled *“Towards a 6G-Ready Hardware Ecosystem: Strategic Priorities for Microelectronics and Photonics in Europe”*. This document will provide a broad R&I and policy alignment perspective, addressing key technology trends, integration and co-design challenges, and ecosystem coordination opportunities. Special emphasis will be given to the convergence of microelectronics and photonics, with focus on co-integration strategies, packaging, and system-level enablers required to meet the performance, energy, and scalability demands of future 6G systems.

5.4.5 Sustainability WG

Chair: Christoph Schmelz (Nokia)

Vice-Chair: Stefan Wendt (Orange), Mir Ghoraishi (Gigasys Solutions)

Purpose and scope

This Working Group aims at providing a centralised and coordinated forum for SNS JU projects to present and discuss their work on all three areas of sustainability (environmental, societal, and economic). The WG aspires to comprise the single central collaborative body of the SNS JU working on sustainability, unifying approaches and knowledge towards ensuring higher coherence among the various technical enablers researched, prototyped, evaluated and demonstrated.

Objectives

The main objectives of the WG are to:

- Objective 1: Build on the insights from the Sustainability Task Force and further develop the envisaged sustainability framework, to facilitate the definition, evaluation and validation of relevant sustainability goals, values, indicators and – where applicable – metrics.
- Objective 2: Establish a shared definition of sustainability within the 6G ecosystem.
- Objective 3: Align the use of sustainability-related terminology across projects.
- Objective 4: Support coordination of technical work related to sustainability among SNS JU projects and leverage exchange of insights among SNS JU stakeholders.
- Objective 5: Support other WGs on sustainability-related work and create effective synergies (architecture, security, pre-STD, etc.)
- Objective 6: Align with the work of the 6G-IA sub-WG on Societal Needs and Value Creation (SNVC) in defining Key Values and Key Value Indicators.
- Objective 7: Develop and implement an impact creation strategy.

Key activities and achievements in the reporting period:

During 2025, the Sustainability WG was formally established and focused on defining its structure, work plan, and initial technical priorities, setting the stage for coordinated activity across SNS JU projects.

Key highlights of the WG include:

- Formal creation of the Sustainability WG, with official kick off on 1 October 2025.
- Initiation of terminology alignment across SNS JU projects to ensure consistency in definitions

and approaches.

- Preparation of a summary paper capturing insights from the EuCNC 2025 Workshop 18 on sustainability “*Technology Enablers for Sustainable 6G Design*”⁵².

Given its recent establishment, this WG has not yet been able to carry out dissemination and outreach activities.

Operationally, the WG was already well-established in 2025, and its evolution remains stable and consistent.

Plans for 2026

Based on the work plan, the WG plans to stepwise kick-off various activities in the course of 2026:

- Establish a common terminology on sustainability across the SNS-JU (and possibly beyond) by leveraging terms that are established e.g. in dedicated standards (such as ITU, ISO). The activity shall thereby be aligned with other SNS-JU and 6G-IA work groups (e.g., TMV, Vision WG – SNVC). The respective means for this activity (webinars, lectures, workshops etc.) are to be agreed.
- Alignment of sustainability assessment and evaluation processes and methodologies across the SNS-JU, through a close collaboration with the TMV WG. The goal of this activity is to establish a framework for running and future projects towards being able to assess the sustainability effects (direct and indirect) of their technology development.
- Launching an improvement of the interworking on sustainability between ICT and vertical sectors, with the goal to improve the mutual understanding of sustainability needs and requirements, and technology needs and capabilities.
- Continue the communication and dissemination efforts on sustainability regarding conferences (EuCNC etc.) and online events, with the Sustainability WG acting as hub and organiser for SNS-JU (projects).

5.5 6G-IA WGs detailed reporting

This section provides an overview of the key activities and outputs of the 6G-IA WGs during the reporting period.

6G-IA WGs are open to the Members of the 6G-IA Association and potentially to members of some running SNS JU projects by invitation. The Open SNS WG is effectively suspended and therefore is not listed among the active WGs.

The WGs active during this reporting period were:

- Vision
- Trials
- Pre-standardization
- 5G/6G for Connected and Automated Mobility (5G for CAM)
- Spectrum
- Security
- WiTaR

5.5.1 Vision WG

Chair:

Patrik Rugeland (Ericsson) – from March 2025

⁵² <https://www.eucnc.eu/programme/workshops/workshop-18/>

Artur Hecker (Huawei) – until March 2025
Vice-Chair: Håkon Lønsethagen (TELENOR)
SNSV SG Co-leaders: Patrik Rugeland (Ericsson), Carlos J. Bernardos (Univ. Carlos III), Artur Hecker (Huawei)
BVME SG leader: Hanne-Stine Hallingby (TELENOR)
SNVC SG Co-leaders: Marja Matimikko-Blue (Univ. Oulu), Stefan Wunderer (Nokia)
MSI SG leader: Carles Antón-Haro (CTTC)

Purpose and scope

The purpose of this WG is to develop a vision of future Smart Networks and Services (SNS) and Next Generation Internet under the scientific, technical, socio-economic and societal points of view. Whenever judged appropriate, this will be done in alignment with other organizations, e.g., NetworkEurope, through direct exchanges between the community representatives and, e.g., in the form of consensus, common white papers or through the development and updates of an agreed Strategic Research and Innovation Agenda (SRIA). The goal is to develop an industrial view on the complex interplay of required technological, economic and societal developments (e.g., in form of whitepapers, slide sets, etc.) and support it by suggesting possible research roadmaps considering both European and Member State activities in the respective sectors and branches. To achieve this, it is required to interact with the other 6G-IA WGs, task forces and expert communities, the 6G-IA Governing Board (GB), SNS JU and potentially external expert communities on the overarching vision and societal challenges topics.

Objectives

The main objectives of the WG are to:

- Objective 1: Develop a vision for Smart Networks and Services beyond 2030, covering both advanced research and societal challenges, including environmental, economic and social sustainability. This includes harmonization of visions stemming from different stakeholders from the SNS community, vertical industries, expert groups, and related associations and partnerships.
- Objective 2: Stimulate the liaison with member state initiatives on 5G, 6G and on Smart Networks and Services.
- Objective 3: Enable visions and validations of current and upcoming technology candidates (6G, advanced connectivity and beyond connectivity, AI, Edge Compute, etc.), along with, whenever applicable, their value propositions, corresponding business models and evolved or expected ecosystems. This includes considerations on opportunities and implications as enabled by the so-called connected, collaborative, compute networks (3CN) concept.
- Objective 4: Stimulate discussion on value-driven research and value-related considerations for 6G, and channel a needs and value-based European view on 6G technologies for the 2030 timeframe, considering global challenges.

Key activities and achievements in the reporting period:

During 2025, the Vision WG focused on leadership transition, development of key white papers, project onboarding, and alignment of Key Value Indicators (KVI) with emerging 6G services. Despite Q1 being primarily dedicated to leadership election and reactivation, the WG established structured activities and outreach initiatives that laid the groundwork for coordinated work across SNS JU projects and external stakeholders.

Key highlights of the WG include:

- Smooth leadership transition and reactivation of the WG and sub-WGs, ensuring continuity of activities for all. Update of the ToR.
- Successful initiation for the development of a new methodological framework on KVI. Establishment of structured KVI questionnaire to process and collect experiences from SNS JU projects about their key values and KVI work.
- Publication of the White Papers, “*Sustainability of 6G: Ways to reduce energy consumption [10]*” and “*Emerging 5G and beyond ecosystem business models [11]*”.

- Lead the preparation and design of well-defined content structures of two white papers on KVIs (under the SNVC SG) and on 6G Services (under the BVME SG).

In terms of dissemination and outreach, the WG can highlight:

- **EUCNC & 6G Summit 2025 (Poznan):** Organized Convened Session 2, "A collaborative approach to 6G – unifying the European R&I ecosystem"⁵³, where representatives from various National Initiatives provided key recommendations for collaboration among EU researchers and on the progress of 6G efforts across EU countries.
- **XG Mobile Promotion Forum (XGMF) 2025 (Tokyo):** Development of a joint workshop where discussions of potential for collaborations (e.g. related to business potential of 6G, and spectrum) took place.
- **Bharat 6G 2025 (online):** Development of a joint workshop where discussions of potential collaborations (e.g., related to architecture, spectrum and use cases).

Operationally, the leadership transition occurred smoothly with the new chair taking over the WG chair on April 1, 2025.

Plans for 2026

Looking ahead, the WG plans to stepwise kick-off various activities in the course of 2026:

- The VSC SG is planning a white paper outlining the vision for 6G beyond the first releases, i.e., beyond 2035 with input from the entire WG.
- BVME SG also plans to work with a white paper on a framework for B5G services. This will be a guide to better design B5G services from a business perspective as technologies change, converge, become virtualized and programmable - in an "Anything as a Service" ecosystem. It will also build understanding of price models and levels for B5G services (and services in general) and thus, increases ability to identify and validate future B5G revenue streams.
- SNVC plans to work on the white paper about experiences of using and further developing the key value indicator (KVI) framework from SNVC in the SNS JU projects. This is to share experiences of key values related research in SNS-JU projects and provide guidelines for the development of more advanced interdisciplinary approaches for key values research in 6G.
- The MSI SG will follow-up on the 6G-IA workshops and Position Papers from 2025, e.g., related to Microelectronics, Photonics, NTN, Security, Wireless, and Cloud/Service Provision, using e.g., questionnaires to map out which countries are prioritizing which technologies aiming to develop an EU-wide technology focus map.

5.5.2 Trials WG

Chair: Carles Antón-Haro (CTTC)

Vice-Chair: Paul Harris (VIAVI Solutions)

Purpose and scope

The Trials WG was launched in September 2016 after the publication of the 5G Manifesto of the industry in Europe and in the context of the 5G Action Plan of the EU Commission. According to the 5G Manifesto, industry in Europe was expected to develop a European trial roadmap on technology trials and Pan-European trials with vertical sector use-cases. Consequently, the 5G Infrastructure Association (now the 6G Infrastructure Association) decided to launch this WG to provide a neutral place for such discussions to take place. Due to the broad nature of the objectives of this WG, its activities are organized in several Streams. Streams are created and removed, according to the activities that are required by the overall WG, but they are quite stable (usually six or more months of operations). Each Stream is chaired by a Champion who steers and coordinates its activities, convenes telcos and meetings, produces the contributions of his/her Stream to the yearly workplan and periodic activity reports, and acts as the editor of the documents produced. The Trials WG organizes regular plenary online meetings on a quarterly basis. The Trials WG also organizes face-to-face meetings when needed. The Streams also organize meetings as required. The Trials WG Leadership Team is meeting online on monthly basis.

⁵³ <https://www.eucnc.eu/programme/special-sessions/convened-session-2/>

Objectives

The main objectives of the WG are to:

- Objective 1: To develop a 5G Advanced and 6G European Trial Roadmap and leverage on the knowledge gained for upcoming trial roadmaps for beyond 5G/6G systems to be addressed in the context of Smart Networks and Services (SNS) partnership in Horizon Europe.
- Objective 2: To facilitate the involvement of verticals in the Trials roadmap.
- Objective 3: To discuss and define business principles underpinning the economic viability of trials.
- Objective 4: To consider and coordinate the activity on trials and verticals with other relevant initiatives at international level.
- Objective 5: To investigate and propose how to link trials to upcoming calls for project proposals to be addressed in SNS JU.
- Objective 6: To increase the visibility of the trials and pilots carried out by 6G SNS Initiative, with emphasis, but not only, in Stream C and D projects.
- Objective 7: To keep track and disseminate to the broadest possible audience the work on verticals done by SNS JU- and other EU-funded projects.
- Objective 8: To support the development of European strategic research and innovation agenda and liaise preparation of SNS Work Programmes in relation to trials and experimentations.
- Objective 9: To facilitate transfer of the developed and experimented solutions to the market using the Digital Innovation Hub (Digital Europe Programme (DEP)).

Key activities and achievements in the reporting period:

During 2025, the Trials WG focused on strengthening project coordination, updating catalogues for replicability and experimental facilities, drafting white papers, and facilitating knowledge exchange across SNS JU projects and external stakeholders. In line with its Work Plan, the WG successfully launched structured activities and outputs to enhance visibility and impact of Trials and Pilots across Europe and beyond.

Key highlights of the WG include:

- Successful establishment of WG governance and leadership, enabling structured activity planning and consistent output tracking.
- Finalization and publication of SNS Trials & Pilots Brochure no. 1⁵⁴.
- Publication of the White Papers, “Smart Connectivity testing and experimental facilities [12]” (white paper in collaboration with AIOTI).
- Continuous improvement of replicability catalogues and experimental facilities databases, providing a comprehensive reference for SNS JU projects and external stakeholders, including:
 - SCoDIHNet platform catalogue⁵⁵ (Experimental facilities, Replicability catalogue, Technology providers catalogue, etc).
 - Verticals Engagement Tracker (VET)⁵⁶.
- Strengthening global outreach, including the development of webinars and participation in public talks, such as:
 - Development of successful joint webinar of the 6G-IA and EIM (Railway Association)

⁵⁴ https://smart-networks.europa.eu/wp-content/uploads/2025/06/sns_tps_brochure_may25_final.pdf

⁵⁵ <https://aioti.eu/scodihnet/>

⁵⁶ <https://sns-trackers.sns-ju.eu/vertical-engagement-tracker>

with participation of 6G IA and EIM representatives, and Project officers (30.09.25).

- Public talk on Strategies and Recommendations for Global Consensus and R&D Cooperation towards 6G', 5G Forum, Sevilla (Spain), May 12-16 May 12-16 2025. C. Antón-Haro. (invited speech).

In terms of dissemination and outreach, the WG can highlight:

- **EUCNC & 6G Summit 2025 (Poznan):**
 - Participated in Workshop 4, “*SNS Trials & Pilots (T&Ps) Introduction and Cartography*”⁵⁷, where the “SNS Trials & Pilots Brochure no. 1” was presented.
 - Contributed to an invited talk to Special Session 3, “*Towards a European Health Data Slice (EHDSL) – Resilience, Security, Interoperability and Use Cases*”⁵⁸.
- **Techritory 2025 (Riga):** Co-organized the Co-Creation Event 7 “*Integrated Sensing and Communications in SNS Trials and Pilots: pathway to monetization of 6G networks*”⁵⁹, with participation of 3 SNS JU projects: Multi-X 6G, ISEE 6G and HEXA-X-II and speakers from ETSI ISG ISAC and GSMA.

Operationally, the WG has not undergone any changes, and its evolution remains stable and consistent.

Plans for 2026

No major changes in the scope of the Working Group’s activities are expected for 2026. In principle, the current activity streams—together with their respective stream champions—will continue as planned. A workshop on *Trials and Pilots* is foreseen for EUCNC’26, complemented by the organisation of a co-creation event at the Techritory Forum. In addition, the WG aims to deliver the second release of the *SNS Trials and Pilots* brochure. Particular attention will also be given to the outcomes of the vertical workshops to be held in February–March in Brussels, as these will support the definition of the SNS R&I Work Programme for 2027.

Beyond these overarching activities, the following items are planned for 2026:

- White Papers: The University of Málaga has initiated the preparation of a new white paper on *Lessons Learned from SNS Trials and Pilots*, developed within the Trials WG. The Table of Contents is already defined, and the editorial team is complete. The expected release is planned for Q3 2026.
- Continuous Platform Updates: Regular updates will be carried out on the SCoDIHNet catalogues (covering experimental facilities, replicability resources, technology providers, and more) within the DIHIWARE platform hosted by Eurescom.
- Vertical Engagement Tracker: Continuous updates of the Vertical Engagement Tracker will remain an ongoing activity throughout the year.
- Potential Joint Workshop with Japan’s XGMF: Discussions are ongoing between the Architecture WG and XGMF on the organization of a joint workshop, with involvement from the Trials WG. The tentative timeline is Q4 2025. With the 6GIA–XGMF MoU now concluded, planning is progressing. In parallel, a potential joint workshop with NGA is also under consideration.
- SNS Trials & Pilots Brochure No. 2: Actions related to the preparation and publication of the second *Targeted SNS Trials & Pilots Brochure* will be launched, serving as a key input to MWC 2026.

⁵⁷ <https://www.eucnc.eu/programme/workshops/workshop-4/>

⁵⁸ <https://www.eucnc.eu/programme/special-sessions/special-session-3/>

⁵⁹ <https://www.techritory.com/integrated-sensing-and-communications-in-sns-trials-and-pilots-pathway-to-monetization-of-6g-networks/>

5.5.3 Pre-standardization WG

Chair: Riccardo Trivisonno (Huawei)

Vice-Chair:

Veronica Vuotto (TRUST-IT) – from March 2025

Claudio de Majo (TRUST-IT) – until March 2025

Purpose and scope

The main purpose of the Pre-Standardization WG is to identify and engage with key standardization and regulatory bodies, define a coherent roadmap for 6G standardization topics, and influence global pre-standardization and R&D agendas and help position Europe at the forefront of 6G development.

Objectives

The main objectives of the WG are to:

- Objective 1: To identify standardization and regulatory bodies to align with e.g. ETSI, 3GPP, IEEE and other relevant standards bodies, ITU-R (incl. WPs) and WRC (including e.g. ECC PT1).
- Objective 2: To develop a roadmap of relevant standardization and regulatory topics for 6G: Evaluate existing roadmaps at the international level; Propose own roadmap for 6G being aligned at the international level.
- Objective 3: To influence pre-standardization on 6G and related R&D: Potentially propose where topics should be standardized; Influence timing on R&D work programs (e.g. EC WPs).

Key activities and achievements in the reporting period:

During 2025, the Pre-Standardization WG focused on strengthening coordination between SNS JU projects and standardization bodies (3GPP, ETSI, ITU-T), promoting cross-project impact visibility, and setting the foundation for new coordination groups addressing emerging topics such as ISAC, KVIIs, and architecture impact. The WG ensured continuity in debriefing activities, supported external engagements, and co-organized targeted dissemination events to reinforce the EU projects' positioning in international fora.

Key highlights of the WG include:

- Consolidation the WG structure and leadership, ensuring a smooth transition with the new vice-chair and the continuity of activities.
- Maintain active dissemination of main SDOs roadmaps (3GPP, ETSI, ITU-T) through systematic debriefs and publication of outputs. To highlight:
 - Regular 3GPP Plenary meetings debrief, by H. Van der Veen, 6G-IA expert member.
 - 3GPP SA2 Rel20 SI “*Study on Architecture for 6G System*” status updates, by M. Sama, 3GPP SA2 SI Rapporteur.
 - ETSI ISAC ISG: Status updates by A. Mourad, Chair of ISG and WI#1 GR presentation, by C. Ciochina, WI# Rapporteur.
 - ETSI THZ ISG: Status Updates, by T. Kuerner, Chair of ISG.
 - ETSI ENI ISG: Status Updates, by R. Forbes, Chair of ISG.
 - ITU-T FG AINN, Status Updates, by B. Bilgin, Chair of FG.
- Laid the foundation for thematic coordination groups (ISAC, KVIIs, Architecture, INSTAR), strengthening the WG's strategic role.
- Foster dissemination footprint, co-organizing high-impact sessions like the Techtritory 2025 workshop and reinforcing external visibility of EU 6G research outcomes.

In terms of dissemination and outreach, the WG can highlight:

- **Techtritory 2025 (Riga):** Together with the WiTaR WG, co-organized the Co-Creation Event 3: “WiTaR in Focus: Advancing Research and pre-standardisation synergies in emerging

*technologies*⁶⁰, where the importance of addressing gender imbalances as well as inclusive standardization was highlighted to ensure that the technology development and science in making reflects the diversity of Europe's society.

Regarding the WG's operation and management, it is worth noting the change of vice-chair that took place in March 2025, which had no impact on the WG's execution.

Plans for 2026

The Pre-Standardisation WG 2026 plan will remain fully aligned with the WG's purpose and objectives, which will stay unchanged, and will build in continuity with the work of previous years. In light of the expected 2026 activities of major SDOs on 6G systems, the WG will further strengthen its role in fostering synergies among SNS JU projects and facilitate effective contributions to relevant SDOs, ensuring that EC-funded research results are translated into standards.

5.5.4 5G/6G for Connected and Automated Mobility (5G/6G for CAM) WG

Chair:

Pouria Sayyad Khodashenas (i2CAT) – from March 2025
Jesus Alonso-Zarate – until March 2025

Vice-Chair:

- Konstantinos V. Katsaros (ICCS) – from March 2025
- Markus Dillinger - Huawei, – until March 2025
- Edwin Fischer – Deutsche – until March 2025

Purpose and scope

This Working Group (WG) group focuses on 5G and beyond for Connected and Automated Mobility (CAM). It aims at becoming a meeting point and knowledge base for all activities related to CAM from a connectivity perspective, with particular focus on 5G and beyond technologies. Among others, its participants represent those partners active in R&I SNS-JU projects funded by the European Commission where there is a particular focus or interest in CAM use cases and deployment. This group constitutes a fundamental element between the 6G-IA and the CCAM community

Objectives

The main objectives of the WG are to:

- Objective 1: Become a knowledge base for the SNS JU community with a particular interest in CAM.
- Objective 2: Represent the 6G-IA in the CAM domain and build bridges with related stakeholders and initiatives.
- Objective 3: Contribute to the definition of Strategic Research Innovation Agendas and Work Programmes to ensure a proper inclusion of 5G and beyond for CAM related topics.

Key activities and achievements in the reporting period:

During 2025, the 5G/6G for CAM WG focused on reactivation, structured project collaboration, technical coordination, and preparation of a webinar and a WG white paper. Despite a slow start in Q1 due to leadership transition, the WG established foundations for organized knowledge exchange, cross-project collaboration, and engagement with external stakeholders.

Key highlights of the WG include:

- Smooth WG reactivation and leadership transition, enabling a shift from inactivity to structure planning and collaboration.

⁶⁰

<https://www.techritory.com/witar-in-focus-advancing-research-and-pre-standardisation-synergies-in-emerging-technologies/>

- Launch of a unified project presentation framework and systematic project mapping to foster structured knowledge exchange.
- Lead the preparation of Shaping the Evolution of CAM Towards Next Generation Networks Webinar, aiming to provide a comprehensive overview of the status of the CAM ecosystem in Europe and beyond, across multiple axes i.e., research, CEF projects, standards, policy/regulation, and related initiatives (5GAA, CCAM Partnership, OEMs). Also, to support the development of a white paper and recommendations for FP10 topics within SNS JU and Cluster 5.
- Lead the preparation of a white paper, as the next step of the webinar and the WG activities, to be presented at EUCNC & 6G Summit 2026 in Malaga. Significant progress has been done in 2025, including ToC completion, task allocation, and initial content development.
- Alignment of WG activities with 3GPP SA1 use cases and KVI methodology, ensuring both research relevance and near-market impact.
- Foundational insight collection activities are ongoing, including external engagement with industry, CCAM PPP, and pre-standardization bodies, laying the groundwork for workshops, publications, and cross-project collaboration.

Given its recent establishment, this WG has not yet been able to carry out dissemination and outreach activities. Initial efforts have been focused on defining objectives, scope, and internal coordination, while also identifying key events for engaging with external audiences. In this context, the WG is currently planning participation and outreach activities to support the promotion/dissemination of SNS JU project results in the broader automotive sector, including presence in key CAM events, such as the ITS EU Congress 2026⁶¹.

Operationally, the leadership transition occurred smoothly with the new chair and vice-chair taking over the WG chair on April 1, 2025.

Plans for 2026

- Events, Conferences, and Public Talks: In 2026, the WG plans to continue its active participation in key conferences and community-building events. This includes progress toward the EuCNC 2026 publication and the organisation of the associated workshop. In addition, preparations will advance for a Special Interest Session at ITS EU Congress 2026.
- External Stakeholder Engagement and Liaison: Efforts will be intensified to reinforce engagement with major industry and standards stakeholders, including 5GAA, the CCAM Partnership, and other relevant groups. These activities are intended to ensure smooth information exchange, greater alignment on priorities, and broader visibility of SNS outcomes.
- Pre-standardization Alignment: The WG plans to strengthen coordination with the Pre-Standardization WG and the CCAM PPP to promote consistent positioning across 3GPP MRPs. This includes aligning technical inputs, harmonizing viewpoints across working structures, and supporting a coherent representation of SNS activities in the pre-standardization landscape.

5.5.5 Spectrum WG

Chair:

Maite Aparicio (Telefónica) – from March 2025
 Werner Mohr (6G-IA) – until March 2025

Purpose and scope

The group focuses on the regulatory and mainly technical aspects that relate to frequency spectrum for beyond 5G and 6G systems or in general on IMT systems in ITU-R terms. Its key purpose is to investigate the impact by and on research and innovation activities vice versa in relation to actual developments in ITU-R on IMT-2030 and for the future identification of additional IMT frequency spectrum as well as the feasibility of envisaged services and applications. For this purpose, the Working

⁶¹ <https://2026.itseuropeancongress.com/its-istanbul>

Group (WG) captures the European Industry and Academia priorities and trends in relation to spectrum. It also aims at providing support and consultancy to 6G-IA on spectrum-related issues. Moreover, it will facilitate dialogues with EU-funded research projects to create synergies on common interests in spectrum related issues and coordinate and promote research results within 6G-IA, by pursuing the convergence of results on spectrum topics from the different projects. The Working Group may also support European positions on spectrum matters for IMT-2030 based on technical expertise

Objectives

The main objectives of the WG are to:

- Objective 1: Provide expert views to the 6G-IA Board and contribute to the outcomes of 6G-IA, the 6G Initiative and the SNS JU in the spectrum area.
- Objective 2: Establish and promote a comprehensive and coordinated view of 6G-IA members on spectrum related issues as well as research and results from the different EU funded projects and Working Groups with respect to spectrum topics.
- Objective 3: Promote the view of 6G-IA in spectrum related issues.

Key activities and achievements in the reporting period:

The Spectrum WG focused on developing contributions to ITU-R WP5D for IMT-2030 minimum requirements, coordinating project inputs, and establishing a structured roadmap for future spectrum-related activities. The WG ensured active engagement of its members, maintained regular meetings, and strengthened its technical outputs in alignment with SNS JU objectives.

Key highlights of the WG include:

- Smooth leadership transition with continuity of WG activities.
- Successful submission and presentation of multiple contributions to ITU-R WP5D on IMT-2030 minimum requirements, positioning the WG as a key contributor to international spectrum discussions. The first submission focused on items without target values, followed by a second contribution including refined input from WG members. A third contribution was prepared to consolidate collective WG feedback and facilitate international discussions.
- Establishment of a clear roadmap and process for spectrum-related contributions and project coordination within the SNS JU ecosystem.
- Representation and attendance of the Spectrum WG chair (on behalf of 6G-IA) at the “*6G-IA and Bharat 6G Alliance Joint Workshop 2025*” (July 4th, 2025)
- Representation and attendance of the Spectrum WG chair (on behalf of 6G-IA) at the “*Joint EC-CEPT workshop on WRC-27*” (November 13th, 2025).

Given its recent establishment, this WG has not yet been able to carry out dissemination and outreach activities. Indeed, initial efforts since the appointment of the new chair have been focused on defining objectives, scope, and internal coordination before engaging with external audiences.

Operationally, the leadership transition occurred smoothly with Maite Aparicio (Telefónica) taking over the WG chair on April 1, 2025.

Plans for 2026

- New submission on IMT-2030 minimum requirements. The submission will provide new targets for some IMT-2030 capabilities.
- Analysis of the potential use of new frequency bands to IMT-2030.
- Strengthening collaboration through the SNS projects to investigate the impact by and on research and innovation activities vice versa in relation to the IMT frequency spectrum as well as the feasibility of envisaged services and applications.

5.5.6 Security WG

Chair:

Antonio Skarmeta (Umurcia) – from March 2025
 Pascal Bisson (Thales) – until March 2025

Vice-Chair:

Dhouda Ayed (Thales) – from March 2025
 Antonio Skarmeta (Umurcia) – until March 2025

Purpose and scope

Activities of the 6G IA Security WG are mainly focusing on production of Whitepapers and organization of Workshops around topics nominated by the WG. Other activities of the 6G IA Security WG include cooperation with other WGs or institutions and provision of inputs on relevant matters. The WG also reports on results and discusses ideas and approaches with the 6G Community at large and beyond, further nurturing and developing necessary connection with relevant stakeholders (e.g. liaison with Cyber Security PPP in the context of MoU signed between 5G/6G IA & ECSO)

Objectives

The main objectives of the WG are to:

- Objective 1: Deliver Whitepapers on the field of Security.
- Objective 2: Organize dedicated Workshops at events (e.g. EuCNC, ARES, FNWF Conference).
- Objective 3: Share interesting results from project or members and engage with the community at large.
- Objective 4: Liaise outside of 6G IA with interested/interesting Agency (e.g. ENISA), organizations (e.g. ECSO), ETPs (NetworlEurope).
- Objective 5: Cope with additional demands of concerns (e.g. contribute to Networld Europe through SRIA as an example).
- Objective 6: Create synergies with other 6G-AI WGs of interest.

Key activities and achievements in the reporting period:

The Security WG advanced its mission to consolidate security-related knowledge, coordinate project contributions, and disseminate key insights across the 6G-IA ecosystem. The WG focused on SNS projects onboarding, white papers development, KVI integration, and active engagement with external stakeholders.

Key highlights of the WG include:

- Completion and official publication of the Security white papers:
 - “*Innovative Approaches for 6G Security [13]*” marking a major milestone for the WG and providing cutting-edge research and innovative solutions in the realm of 6G security. The white paper also emphasizes the importance of trustworthiness, privacy, and resilience in future network architectures.
 - “*6G Security and Trust: Insights from European SNS Projects [14]*”. This white paper synthesizes the collective work of key European Smart Networks and Services Joint Undertaking (SNS JU) projects (including HORSE, RIGOUROUS, ELASTIC, ROBUST-6G, iTrust6G, 6GCLOUD, NATWORK, and SUNSET-6G) showcasing a critical evolution toward proactive, adaptable, and sustainable security architectures.
- Full onboarding of Call 2 projects and successful on-going onboarding of Call 3 projects, ensuring broad contributions and engagement across the SNS project portfolio.
- Successful organization and participation in high-profile international events, reinforcing the WG’s visibility and influence.
- Establishment of structured KVI tracks and integration of security considerations across project activities.
- Strengthen external collaboration, particularly with ECSO, to explore roadmap alignment and potential collaboration on 5G/6G security SRIA.
- Successful organisation of presentations from external Stakeholders, such as:

- Roberto Casella (ECSO): Presentation around ECSO's work on Security for 5G/6G.
- Hekma Chaari (ESCS-FAU Erlangen, Germany): Introduction about the 6G Security Initiative in Germany.

In terms of dissemination and outreach, the WG has disseminated its work and security developments at a number of major event contributions, including:

- **EUCNC & 6G Summit 2025 (Poznan):**
 - Organized Workshop 6, “*6G Trustworthiness: Requirements, Challenges, and Considerations*”⁶². With the participation of 9 SNS projects (namely, ROBUST6G, NATWORK, PRIVATEER, SAFE-6G, iTrust6G, MARE, VERGE, CONFIDENTIAL6G, and RIGOROUS) plus the 6G Platform Germany, the workshop aimed at presenting a holistic framework to orchestrate and assess security in 6G, the methodologies to set the trustworthiness targets, and the current state of the art
 - Organized Convened Session 3, “*Uncovered 6G Security: gap and needs for the evolution beyond 5G security and towards 6G Networks*”⁶³, where awareness of the panorama of solutions in 6G security as well as the identification of new trends, needs and the evolution of the actual architecture were discussed and presented.
- **IEEE Future Network World Forum 2025 (Bangalore):** Provided support for the organization of “*Symposium on security in future networks*”⁶⁴, featuring presentations from multiple SNS projects.

Regarding the WG's operation and management, it is worth noting the change of chairs that took place in March 2025, which had no impact on the WG's execution.

Plans for 2026

Within 2026 the main tasks to be accomplished are:

- Continue the presentation and discussion with new projects to identify main enablers and research directions.
- Organize workshop in the context of EuCNC2026.
- Follow up of external collaboration with meeting with other stakeholders like ECSO and ENISA.
- Conclude with the KVI for security analysis and possible position paper.
- Launch new edition of the white paper with new contributions from call 2 and call 3 projects.
- Continue onboarding partners from projects.

5.5.7 WiTar WG

Chair: Bahare Masood Khorsandi (Nokia)

Vice-Chair: Marie-Helene Hamon (Orange)

Purpose and scope

This Working Group (WG) group focuses on promoting gender equality, inclusion, and empowerment in the 6G Research & Innovation (R&I) community. The road to close gender equality is still a very long one. This clearly captures the European industry and academia's needs for a major change in relation to their policies that should be implemented in direction of closing the gender gap

Objectives

The main objectives of the WG are to:

- Objective 1: Digital Presence: Enhance WiTaR's digital presence by improving the visibility, usability, and consistency of our digital platforms e.g., new website and LinkedIn group. This

⁶² <https://www.eucnc.eu/programme/workshops/workshop-6/>

⁶³ <https://www.eucnc.eu/programme/special-sessions/convened-session-3/>

⁶⁴ <https://fnwf2025.ieee.org/symposium-security-future-networks>

objective focuses on delivering clear and engaging content, strengthening WiTaR recognition, and ensuring that digital channels effectively support outreach, communication.

- **Objective 2:** Member Expansion: Drive sustainable member growth by broadening outreach. This objective aims to strengthen the WiTaR's influence, diversify perspectives within the community, and build a resilient membership base for the future. The ultimate goal is to have an official representative from each project present and actively contributing in WiTaR WG.
- **Objective 3:** Highlight the main issues of the community: Identify, articulate, and elevate the key challenges and priorities facing our community. This objective focuses on gathering insights from members, fostering open dialogue, and presenting a clear and unified voice that raises awareness, and supports positive change.
- **Objective 4:** Set up events and workshops: Organize dissemination events and series of workshops with goal of spread the awareness and educate on particular topics.

Key activities and achievements in the reporting period:

The WiTaR WG strengthened its visibility and engagement within the SNS community, positioning itself as a key platform for promoting diversity, gender balance, and inclusion across telecommunications and research domains. The WG also focused on outreach, communication, and the creation of opportunities for dialogue and collaboration among female professionals in the sector.

Key highlights of the WG include:

- **Publication of the WiTaR 2024 Activity Report**⁶⁵, summarizing key achievements and initiatives throughout the year.
- **Strong international dissemination**, highlighted by the EuCNC & 6G Summit 2025 Convened Session, ICTON and Techtritory events.
- **Relaunch and development of the WiTaR Lunch Salon series.** WiTaR Lunch Salon is a monthly platform to foster dialogue and engagement on gender diversity and inclusion. This program invites volunteers from across projects to share their insights, experiences, and best practices on topics ranging from workplace challenges and success stories to strategies for creating inclusive environments. Two sessions took place in this period:
 - “*Pillars of success – How women make Tech teams successful!*”⁶⁶ held on March 4th (2025), featuring Ashkay Jain (Nokia).
 - “*A Practical Introduction to Data Protection Compliance*”⁶⁷ held on May 21st (2025), featuring Pooja Mohnani (Eurescom).
- **Strengthening global communication outreach** through social media channels, including:
 - “*Meet the Members*” campaign on LinkedIn, designed to introduce WG participants and promote visibility of individual contributions.
 - “*International Women’s Day*” campaign on March 8th on LinkedIn to spotlight women’s contributions in telecom and research.
 - “*International Women in Engineering Day*” campaign on June 23rd on LinkedIn, highlighting contributions from women across the sector.
 - “*Monday Facts*” campaign on LinkedIn to provide weekly insights on diversity, inclusion, and achievements of women in the telecom and research sectors.

In terms of dissemination and outreach, the WG has disseminated its work at a number of major event contributions, including:

⁶⁵ 6g-ia.eu/wp-content/uploads/2025/01/witar-yearly-report-2024.pdf

⁶⁶ <https://www.youtube.com/watch?v=XsSYJtCEcls&feature=youtu.be>

⁶⁷ https://www.youtube.com/watch?v=NN_4nSRr6fY&feature=youtu.be

- **EUCNC & 6G Summit 2025 (Poznan):** Organized Convened Session 1, “WiTaR: Women in Telecommunications and Research”⁶⁸, where up-dates, actions and plans regarding further raising awareness of gender inclusivity were discussed.
- **ICTON 2025 (Barcelona):** Co-developed a collaborative workshop⁶⁹ with WeInTel (Women In Telecommunication and optical networks). The session consisted on a two-hour session where recommendations to promote gender inclusivity included mentorship programs were revealed, recognizing women’s achievements as well as supporting working mothers.
- **Techtritory 2025 (Riga):** Together with the Pre-Standardization WG, WiTaR co-organized the Co-Creation Event 3, “WiTaR in Focus: Advancing Research and pre-standardisation synergies in emerging technologies”⁷⁰, where the importance of addressing gender imbalances as well as inclusive standardization was highlighted. Goal is to ensure that technology development and science in making reflects the diversity of Europe’s society.

Operationally, the WG has not undergone any changes, and its evolution remains stable and consistent.

Plans for 2026

Within 2026 the main tasks to be accomplished are:

- Continuing expanding the group, integrating members from new projects and getting minimal representations from the different on-going SNS projects.
- Continuing the dissemination, with a new convene session to be organized in EUCNC 2026, and other events and conferences.
- Publish a WiTaR 2025 Activity Report.
- Pursuing the development of WiTaR Lunch Salon with new sessions to foster dialogue on topics related to gender diversity and inclusion
- Develop new activities to deepen topics related to gender diversity and inclusion, such as analysis of biases in specifications of use cases, and explore the possibilities to publish the outcomes of such analysis in a White paper.
- Continue strengthening the communication outreach through social media channels.

5.6 NetworkEurope WGs detailed reporting

NetworkEurope is the European Technology Platform (ETP) for communication networks and services. Enabling the interaction between users, communication networks and services fulfils society’s requirements for interconnection. As such, NetworkEurope gathers almost 1,000 players across the whole sector value chain: industry leaders, innovative SMEs, and leading academic institutions.

There are four WG linked to the ETP, namely:

- Enabling Technologies for Future Vertical Ecosystem Transformation, which explores the potential cooperation with any kinds of stakeholders, from any research, technology or industrial sector, from any geographical region
- Expert Advisory Group, which advises NetworkEurope from a scientific perspective and advocates for the interests of the research community
- SatCom, which focuses on satellite communication systems
- SME, which represents the interests of SMEs in the sector.

⁶⁸ <https://www.eucnc.eu/programme/special-sessions/convened-session-1/>

⁶⁹ <https://6g-ia.eu/wp-content/uploads/2025/08/weintel2025.pdf>

⁷⁰ <https://www.techtritory.com/witar-in-focus-advancing-research-and-pre-standardisation-synergies-in-emerging-technologies/>

5.6.1 Enabling Technologies for Future Vertical Ecosystem Transformation

Chair: Maziar Nekovee (University of Sussex)

Vice-Chair: Xueli An (Huawei)

Purpose and scope

The Enabling Technologies for Future Vertical Ecosystem Transformation WG serves as a forum for NetworldEurope to engage with stakeholders from vertical sectors. Its focus is on long-term roadmaps, future requirements, and research and technology aspects rather than prototypes or products. The WG also aims to extend discussions and engagement globally, with an emphasis on technologies that enable disruptive business transformations.

Objectives

The main objectives of the WG are to:

- Objective 1: Exchange/sharing of long-term roadmaps from the vertical domains versus communication domain with the view also to evolution beyond-5G and 6G.
- Objective 2: Elicitation/exchange of user/func requirements
- Objective 3: Compatibility/integration and transformation of architectures
- Objective 4: Blueprints for common reference points and interfaces
- Objective 5: Contributions for consideration of restructuring of business models in the telco and vertical ecosystem.
- Objective 6: Future challenges and markets in the vertical sectors and relationships with communication domain stakeholders

Key activities and achievements in the reporting period:

During 2025, the Enabling Technologies for Future Vertical Ecosystem Transformation WG focused on defining service-based architectures, network exposure, and APIs for vertical industries, while fostering knowledge exchange and visibility through high-profile events and workshops. The WG established the foundation for the development of a dedicated white paper and continued engagement with key stakeholders in the SNS JU ecosystem.

Key highlights of the WG include:

- Agreement and initial planning for a flagship WG white paper on "*Unlocking 5G Advanced and 6G for Verticals Through Service Based Architecture, Network Exposure and Network APIs*".
- Successful organization and support of high-profile sessions at EUCNC 2025 and FCN 2025, ensuring visibility of WG expertise among industry, research, and standardization stakeholders.
- Maintain WG operational stability and continuity, enabling coordinated planning for future activities and white paper development.
- Strengthening external engagement with SNS JU projects, 6G-IA, and ETSI ISGs, ensuring alignment on vertical network architecture trends and requirements.

In terms of dissemination and outreach, the WG can highlight:

- **EUCNC & 6G Summit 2025 (Poznan):** Organized Special Session 9, “Unlocking 5G-Advanced and 6G for Verticals Through Service Based Architecture, Network Exposure and Network APIs”⁷¹, featuring keynotes and invited talks from SNS JU projects and representatives from 6G-IA and ETSI ENI ISG.
- **FCN 2025 (Belgrade):** Provided support for the Special Panel “6G, AI-Native Design and Beyond”⁷², highlighting WG expertise in vertical network architectures.

⁷¹ <https://www.eucnc.eu/programme/special-sessions/special-session-9/>

⁷² <https://www.networdeurope.eu/networdeurope-wg-enabling-technologies-endorses-special-panel-on-6g-ai-native-design-at-future-communication-networks-19-august-2025/>

Operationally, the WG has not undergone any changes, and its evolution remains stable and consistent.

Plans for 2026

In 2026, the WG will advance its flagship white paper on *Unlocking 5G-Advanced and 6G for Verticals Through Service Based Architecture, Network Exposure and Network APIs* and reinforce its role as a strategic forum for long-term interaction between vertical sectors and the communication domain. The WG will continue exchanging long-term roadmaps and future requirements with vertical stakeholders, further explore architecture compatibility, integration, and common reference points, and contribute to discussions on future business model transformations across the telco–vertical ecosystem.

In parallel, the WG will maintain strong alignment with SNS JU projects, 6G-IA, and relevant ETSI ISGs, and support dissemination and visibility through targeted participation in major European and international events.

5.6.2 Expert Advisory Group

Chair:

Jyrki Huusko (VTT) – from March 2025
Ari Pouttu (University of Oulu) – until March 2025

Vice-Chair: Artur Hecker (Huawei)

Purpose and scope

This WG group mainly represents R&D centres and the academic domain. The WG, comprising around 250 experts from academia, industry, and SMEs across all areas of communication network technologies, is primarily responsible for developing the NetworldEurope Strategic Research and Innovation Agenda (SRIA).

Objectives

The main objectives of the WG are to:

- Objective 1: To consult and advise NetworldEurope from the scientific perspective.
- Objective 2: To advocate for the interests of the research community

Key activities and achievements in the reporting period:

Throughout the reporting period, the Expert Advisory Group (EAG) advanced both its strategic planning activities and its contribution to the evolution of Europe's long-term research agenda for future communication networks, systems, and services. The group focused on strengthening long-term research perspectives, finalising key SRIA-related outputs, organising high-impact events, and preparing the groundwork for upcoming activities that will shape the next EU Framework Programme.

Key highlights of the WG include:

- Smooth leadership transition with continuity of WG activities.
- Completion and publication of the SRIA Technical Annex⁷³, providing detailed insights into future research priorities and technological evolution pathways for European communication networks.
- Initiation of long-term research scoping, with analysis of disruptive, multidisciplinary scientific areas relevant for the evolution of future telecom systems.
- Progressive restructuring of the SRIA white paper content following the finalization of the Technical Annex, ensuring consistency and alignment across all SRIA components.
- Early launch of preparatory work for the next SRIA cycle, including preliminary topic identification and planning for broad stakeholder engagement, in view of the next EU Framework Programme.
- Planning of the VFCS 2025 contributions, including early speaker identification and topic analysis.

⁷³ <https://www.networldeurope.eu/wp-content/uploads/2025/05/ta-sria-2024-final-published-pdf.pdf?x22825>

In terms of dissemination and outreach, the WG can highlight:

- **EUCNC & 6G Summit 2025 (Poznan):** Organized Convened Session 5, “Networld Europe Strategic Research and Innovation Agenda”⁷⁴, presenting the main findings and key challenges identified in the SRIA work.
- **Co-located MWC event (Barcelona):** Organized workshop on “Autonomous Network for Future – AI, Vertical Oriented New Business Services”⁷⁵, addressing AI, automation and future network service models.
- **Joint NetworldEurope-CCSA Online Workshop on Non-Terrestrial Networks⁷⁶ (19 September 2025):** The EAG supported the organisation and programme definition of this bilateral event focusing on R&D&I, business perspectives and global standardisation actions on NTN.

Regarding the WG’s operation and management, it is worth noting the change of chairs that took place in March 2025, which had no impact on the WG’s execution.

Plans for 2026

The primary focus will be on the renewal and publication of the SRIA technical Annex, with the new version placing greater emphasis on the FP10 era, ensuring that efforts are fully aligned with the forward-looking scope of the upcoming SRIA.

The main SRIA drafting and writing phase is planned for Q1 through Q2/Q3 of 2026. To enable a smooth process, the SRIA 2026 structure and editorial teams should be finalized by the beginning of the year.

5.6.3 SatCom

Chair:

Alessandro Guidotti (UNIBO) – from March 2025

Tomaso de Cola (DLR) – until March 2025

Vice-Chair: Joan A. Ruiz-de-Azua (i2CAT, UPC)

Purpose and scope

The mission of the Working Group is to foster the development of Non-Terrestrial Networks (NTN), consisting of Satellite Communications and airborne systems, and define their strategic positioning in the 2025-2035 timeframe in support of global service continuity, ubiquity, resiliency, and multi-service solutions.

Objectives

The main objectives of the WG are to:

- Objective 1: To define Vision and priorities for NTN related Research and Innovation topics, including fostering Fixed/Mobile NTN convergence within 6G networks.
- Objective 2: To analyse the EC policies and communications related to NTN R&D and develop and convey the sector position towards the EU stakeholders.
- Objective 3: To interface with European (such as SNS-JU DG groups and ESA) and national organizations and other ETPs for space/air-bone NTN-related matters.
- Objective 4: To foster the link and research collaborations within Research and standards (support related policy).
- Objective 5: To interface with the New-ETP Steering Board for harmonization and coordination.
- Objective 6: To define the positioning of NTN within future smart networks, where innovations

⁷⁴ <https://www.eucnc.eu/programme/special-sessions/convened-session-4/>

⁷⁵ <https://www.networldeurope.eu/early-notice-workshop-autonomous-network-for-future-ai-vertical-oriented-new-business-services-barcelona-5-march-2025/>

⁷⁶ <https://www.networldeurope.eu/workshop-non-terrestrial-networks-19-september-2025-0900-1230-cest/>

are required to develop techniques/technologies to ensure also sustainable ICT.

Key activities and achievements in the reporting period:

During the reporting period, the newly revitalised NTN WG made substantial progress in restructuring its internal organisation, restarting technical work, and reinforcing the visibility of NTN contributions within the wider SNS JU and European 6G community. The WG focused on consolidating its membership, defining the future technical direction, strengthening its leadership role in global NTN discourse and engaging with standardisation bodies.

Key highlights of the WG include:

- Successful restart and restructuring of the WG, including the appointment of a new Chair and Vice-Chair, the definition of Task Forces, and a rebranding from SatCom WG to the broader NTN WG, officially approved by the Steering Board. This marks a strategic shift to fully encompass the NTN ecosystem (satellites, HAPS, aerial platforms, IoT NTN, etc.).
- Completion of the NTN Chapter of the SRIA, providing key NTN-specific insights and ensuring that non-terrestrial perspectives are fully embedded in the strategic vision for 6G research and innovation.
- Significant expansion of the WG community, with 23 new members joining during Q2, further strengthening the WG's multidisciplinary expertise and increasing its capacity for coordinated contributions.
- Definition of a new position paper on “*NTN in 6G and Beyond*”, including definition of the Table of Contents, allocation of responsibilities, and coordination of an editorial team. This paper will serve as the WG's flagship technical output for 2026 and beyond. The planned release of the Position Paper is Q1 2026.
- Strong engagement in international conferences, reinforcing the WG's leadership in NTN research and innovation. This includes major contributions to EUCNC & 6G Summit, IEEE MetroAeroSpace, and PIMRC 2025.
- Deepening collaboration with external stakeholders and standardisation bodies, including discussions on contributions to 3GPP, ITU and IEEE, as well as internal coordination with Task Force leaders on regulation, standardisation, and technical priorities.
- Preparation of thematic seminars and dedicated technical sessions aimed at enhancing knowledge-sharing both within and beyond the WG, including upcoming briefings on the latest 3GPP NTN developments.

In terms of dissemination and outreach, the WG maintained strong visibility through high-profile engagements:

- **EUCNC & 6G Summit 2025 (Poznan):**
 - Participated in Convened Session 4, “*Networld Europe Strategic Research and Innovation Agenda*”⁷⁷, where the NTN Chapter of the SRIA was presented by the former WG Chair.
 - Broad participation of WG members across tutorials, workshops, and paper sessions, showcasing leadership in NTN research.
- **IEEE MetroAeroSpace 2025 (Naples):** Organisation and contribution to the Special Track “*Concepts and Technologies for Next-generation Integrated Terrestrial–Non-Terrestrial Networks*”⁷⁸, reinforcing the WG's visibility in the aerospace engineering community.
- **PIMRC 2025 (Istanbul):** Successful organisation and management of the workshop “*6G-NTN: architectures and technologies*”⁷⁹, a flagship dissemination activity demonstrating the WG's capacity to convene top-tier international experts.

⁷⁷ <https://www.eucnc.eu/programme/special-sessions/convened-session-4/>

⁷⁸ <https://www.metroaerospace.org/mas2025/special-track-1>

⁷⁹ <https://pimrc2024.ieee-pimrc.org/program-test#S1571029269>

- **ASMS/SPSC Conference (Sitges):** Co-organization of the conference in collaboration with key SatCom WG partners. Active participation in the conference through the presentation of scientific papers, reinforcing the group's thought leadership in the field.
- **IEEE AESS Glue Technologies for Space Systems Summer School on “Frontier Technologies for Space 2.0 Communications Ph.D. Summer School” (Italian Space Agency, Rome):** lecture on “6G NTN: The future of global connectivity” given in presence at the Italian Space Agency (ASI) in Rome in September 2025.
- **5th NTN Workshop: Towards a unified TN-NTN system (Berlin):** invited speech on “Challenges and Innovations for future 6G NTN” in the 5th NTN Workshop organized by FUSECO Fokus in Berlin (September 2025).
- **Fifth Visions for Future Communications Summit (Lisbon):** two presentations given on “Non-Terrestrial Networks evolution in 6G and beyond: Spectrum & Technologies” and “Non-Terrestrial Networks evolution in 6G and beyond: Network & Services” at the event organized by 6G-IA, SNS CO-OP, EC, and IEEE to present the views of NTN in 6G and beyond.
- **IAF International Astronautical Congress (IAC) 2025 (Melbourne):** two presentations given related to network management and operations in NTN that shared the perspective of NTN WG.
- **SNS NON-TERRESTRIAL NETWORKS (NTN) IN 6G Workshop Report (Online):** Presentation of the NTN WG perspective and needs in NTN regarding the following SNS programme (2026).

Operationally, the WG has undergone significant evolution, transitioning from SatCom-focused structure to a dynamic, strategically aligned NTN WG. The restructuring, rebranding and new task forces have provided a refreshed foundation for technical coordination and long-term impact.

Plans for 2026

In 2026, the effort of the NTN WG will be primarily directed to the preparation of the Strategic Research and Innovation Agenda (SRIA) for any part related to Non-Terrestrial Networks and their integration with the Terrestrial component. The definition of the type of content and section responsibilities is on-going and, thus, no further information is available at this stage. In parallel to this endeavour, the NTN WG will draft a Position Paper with the objective of indicating the way forward for NTN in terms of technologies and related roadmap, architectures, services, and regulation/standardisation. The planned timeline for the Position Paper will be adapted to that for the SRIA, which still has to be agreed, since this activity shall be prioritised.

In addition to this, the WG will continue the activities via periodic meetings and ad-hoc calls on specific technical topics, which might also be translated into (semi-)public webinars. From a dissemination perspective, in line with the past years, the various WG members will participate to different conferences, tutorials, and publications dedicated to the NTN research areas. These might include EuCNC 2026, the Mobile World Congress 2026, and other relevant events (such as GLOBECOM, ICC, PIMRC, and WCNC to name a few).

Finally, at the beginning of 2026, an update of the website will be proposed and published so as to reflect the modifications in the structure, naming, and objective of the WG described above also online

5.6.4 SME WG

Chair: Jessica Carneiro (Australo)

Vice-Chair: Nicola Ciulli (Nextworks)

Purpose and scope

The NetworldEurope SME Working Group (SME WG) serves as both the collective voice and the networking hub for SMEs within the NetworldEurope community. Its purpose is to promote the capabilities, expertise, and visibility of SMEs in the telecommunications sector, and to strengthen their participation in collaborative research, innovation projects, and industrial cooperation. The WG aims to facilitate connections between SMEs and larger industry players, research organisations, and key European initiatives by providing information, visibility tools, and interaction opportunities.

Objectives

The main objectives of the WG are to:

- Objective 1: Enhancing SME visibility and positioning by promoting their strengths and expertise towards larger companies, research organisations, and European initiatives.
- Objective 2: Strengthening SME engagement in collaborative projects and support SMEs in accessing and participating in EU-funded research and innovation activities by sharing relevant opportunities, organising thematic webinars, and encouraging cooperation within the SME community.
- Objective 3: Facilitating continuous networking and information exchange. Organising regular meetings and interactions, relay relevant events and project information, and act as a liaison with steering boards and associations (including the 6G-IA) to ensure SMEs remain informed, connected, and represented.
- Objective 4: Serving as the “reference” point for SMEs in the SNS JU Programme, advocating for their interests, and developing awareness across the overall SNS Members/Community

Key activities and achievements in the reporting period:

The SME WG focused on strengthening SME visibility within the SNS ecosystem, monitoring and supporting SME engagement in the different calls, advancing its strategic publications, and supporting SME engagement in upcoming programme cycles.

Key highlights of the WG include:

- Publication and promotion of the “European SME Expertise in 5G and Beyond 2024”⁸⁰ brochure, featuring over 80 SME profiles and 20 success stories. As of October 2025, the brochure had been downloaded 223 times, making it the most downloaded document in all the NetworkEurope website.
- Preparation of the 2025 edition of the “European SME Expertise in 5G and Beyond”, brochure.
- Organization of the roundtable (online) “SMEs R&I strategies and entrepreneurship”⁸¹ in March 2025. The gathered WG members - Prof. Harris Skianis (EightBells) and Haya Al Kassir (Four Dots Infinity) - drove the discussion on several topics: how EU-funded projects help advancing SMEs R&I roadmaps; strategies to participate in EU-funded projects with limited resources, lessons learnt and more.
- Monitoring and analysing the SME participation in the SNS JU calls.
- Preparation of the SME WG position paper 2026, with a focus on the next multiannual financial framework (MFF) and the role of SMEs in it.
- Preparation and launch of the SME WG 2025 questionnaire, which objective is obtaining information about the SMEs' situation in the telecommunications sector, particularly regarding the SNS ecosystem, as well as their feedback on the functioning of the WG. It also helps to update the data of the SME WG members. Moreover, this edition includes a block with questions aimed at gaining a broader perspective of the different aspects tackled in the position paper.
- Significant push and growth of the WG social media channels to increase the efficiency in the communication of relevant opportunities such as open calls, webinars and workshops, or events.

In terms of dissemination and outreach, the WG can highlight:

- **Valencia 5G Days (March 2025) (Valencia)**: Participated in the invited talk “*Invited talk: The role of SMEs in the 6G-IA and HE ecosystem*”⁸² to present the role of SMEs in the SNS JU and how they are helping to shape 6G.

⁸⁰ <https://smart-networks.europa.eu/european-sme-expertise-in-5g-and-beyond-2024-brochure-now-available/>

⁸¹ <https://www.youtube.com/watch?v=Ua5-eM4ZzK8>

⁸² <https://v5g.es/v5g-days-2025/#programa>

- **EUCNC & 6G Summit 2025 (Poznan):** Organized the Convened Session 5 “*SMEs on the spotlight: driving innovation in next generation of communication networks*”⁸³, where an overview of the role of SMEs in the SNS/6G landscape (highlighting their contribution to European research in the topic and their success stories) was presented. During EuCNC, a video featuring various SME testimonials was recorded and was made available in YouTube⁸⁴. More information about the convened session can be found in SNS CO-OP D2.1. Stakeholder Identification & Involvement Strategy and D6.1 Period 1 Report on Events.

Operationally, in March 2025, the WG renewed Jessica Carneiro (AUSTRALO) and Nicola Ciulli (Nextworks) as Chair and Vice-Chair respectively, for the 2025-2027 period.

Plans for 2026

Plans for 2026 include onboarding and presentations from ENVELOPE (open call) and ScoDIHnet, together with a discussion on the new SRIA. The project will finalise the next edition of the European SME Expertise in 5G and Beyond brochure and resume drafting the position paper with a focus on FP10. The release date will be February 2026, and a promotion campaign is being planned to accompany the launch of the brochure to ensure its widespread reach. The position paper is expected to be finalised by January 2026.

A dedicated SME-focused standardisation session is planned for Q1 2026, in collaboration with WP2 T2.1, and a proposal will be prepared for a convened session at EuCNC 2026. Likewise, the WG envisions to organise a new “SMEs R&I strategies and entrepreneurship” roundtable.

The possibility to organise thematic discussions, including but not limited to technical topics, is being examined.

⁸³ <https://www.eucnc.eu/programme/special-sessions/convened-session-5/>

⁸⁴ <https://www.youtube.com/watch?v=GvZiHOYF9rQ>

6 Conclusions

During its first year, SNS CO-OP successfully ensured continuity and efficiency in the governance of the SNS JU programme. All SB and TB governance mechanisms operated seamlessly, despite the increased size and complexity brought by Call 3 onboarding. The project strengthened collaborative structures, improved reporting processes, and facilitated the production and dissemination of joint outputs across the ecosystem. Significant achievements include maintaining the Collaboration Agreement process, enhancing WG reporting mechanisms and ToRs, and supporting high-impact community deliverables such as White Papers, the Trials & Pilots Brochure, and the Key Achievements process. The transition from SNS OPS was completed without operational disruption, demonstrating a robust and scalable coordination model.

Looking ahead, SNS CO-OP will continue supporting the SB, TB, and WGs with improved workflows and harmonised communication channels. Priorities for 2026 include:

- Managing the onboarding of future Call 4 and Call 5 projects and ensuring CoA compliance.
- Strengthening WG monitoring with the new quarterly reporting structure and supporting new publications, consultations, and roadmap updates.
- Streamlining the Key Achievements process based on lessons learned from 2025 and supporting the publication of the 2026 TOP-10 brochure.
- Enhancing coordination around upcoming events (EUCNC 2026, major dissemination actions) and supporting strategic alignment activities such as updates to SRIA and cross-WG collaborations.

These actions will reinforce transparency, coordination efficiency, and community alignment across the entire SNS JU programme as it enters the final phase of implementation.

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Appendix A List of organisations that acceded to the SNS JU Collaboration Agreement

The SNS JU Collaboration Agreement was concluded between 476 parties by the end of 2025

Participant Legal Name	Participant PIC
6G SMART NETWORKS AND SERVICES INDUSTRY ASSOCIATION	935632513
5G COMMUNICATIONS FOR FUTURE INDUSTRY VERTICALS SL	896973745
A1 BULGARIA EAD	953608941
AALBORG UNIVERSITET	999904034
AALTO KORKEAKOULUSAATIO SR	991256096
ABSTRACT MACHINES,	882199481
ACCELLERAN	942650075
ACP ADVANCED CIRCUIT PURSUIT AG	906093879
ACROMOVE EUROPE SP PC	876659229
ACST GMBH	990879833
ADDITESS ADVANCED INTEGRATED TECHNOLOGY SOLUTIONS & SERVICES LTD	954502214
ADRESTIA EREVNTIKI IDIOTIKI KEFALAIOUXIKI ETAIREIA	893378925
ADVA OPTICAL NETWORKING SE	999811787
ADVANCED WIRELESS SOLUTIONS AND SERVICES (AW2S)	895626609
aeroLiFi GmbH	889213551
AETNA GROUP SPA	919579595
AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS	999991722
AGRICLOUD S.R.L.	882209569
AIRBUS DEFENCE AND SPACE SAS	999809265
AIRBUS DS SLC	920862323
AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH	999584128
ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA	999993953
ALTICE LABS SA	999911503
AMIRES THE BUSINESS INNOVATION MANAGEMENT INSTITUTE ZU	897837918
ANTERAL SL	957946490
APA-ADMINISTRACAO DO PORTO DE AVEIRO SA	897197330
APPART AE NEW TECHNOLOGIES COMPUTER AND TELECOMMUNICATIONS	941424286
APPLE TECHNOLOGY ENGINEERING BV & CO KG	886995549
ARCELIK A.S.	998821708
ARCHI PROSTASIAS DEDOMENON PROSOPIKOU CHARAKTIRA	914847935
ARGO IMIAGOGOI ANONYMI ETAIREIA*ARGO SEMICONDUCTORS SOCIETE ANONYME	884233765
ARGOTEC SOLUCIONES INNOVADORAS EN TELECOMUNICACIONES SL	880306914
ARGUS SPACE AG	882087446
ARISTOTELIO PANEPISTIMIO THESSALONIKIS	999895692
ARM LIMITED	999813824
ATHENS INTERNATIONAL AIRPORT S.A.	999484994
ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS - RESEARCH CENTER	999896856
ATHINA-EREVNITIKO KENTRO KAINOTOMIAS STIS TECHNOLOGIES TIS PLIROFORIAS, TON EPIKOINONION KAI TIS GNOSIS	999562788
ATOS IT SOLUTIONS AND SERVICES IBERIA SL	952979120
AURORA POWERTRAINS OY	891881536

AVANTI HYLAS 2 CYPRUS LIMITED	956158392
AXON LOGIC IDIOTIKI KEFALAIOUXIKI ETAIREIA	894850318
B&R INDUSTRIAL AUTOMATION GMBH	970686470
BARCELONA SUPERCOMPUTING CENTER CENTRO NACIONAL DE SUPERCOMPUTACION	999655520
BARKHAUSEN INSTITUT GGMBH	897336040
B-COM	948011362
BEAMAGINE S.L	911685153
BELLANTENNA S.R.L.	878023534
BI2S-BUSINESS AND IOT INTEGRATED SOLUTIONS LTD	905804819
BIFROST COMMUNICATIONS APS	886375525
BI-REX- BIG DATA INNOVATION RESEARCH EXCELLENCE	903031783
BOREAL TECHNOLOGY AND INVESTMENTS SL	890932682
BRAINSTORM MULTIMEDIA SL	999441732
BRITISH TELECOMMUNICATIONS PLC	999908593
BRUNEL UNIVERSITY LONDON	999749610
BUBBLERAN	883591431
CAFA TECH OU	907711936
CAPGEMINI ESPANA SL	971124425
CAPGEMINI PORTUGAL SA	920077981
CENTRALESUPELEC	933906883
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS	999997930
CENTRE TECNOLOGIC DE TELECOMUNICACIONES DE CATALUNYA	999638739
CENTRO DE ESTUDOS SOCIAIS	998333895
CERAGON NETWORKS S.R.L	887101570
CHALMERS TEKNISKA HOGSKOLA AB	999980373
CHARITE - UNIVERSITAETS MEDIZIN BERLIN	999992692
CLOUDSIGMA AG	969018264
COGNITIVE INNOVATIONS PRIVATE COMPANY	915396955
COLLINS AEROSPACE IRELAND, LIMITED	971136162
COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	999992401
COMMSIGNIA Korlatolt Felelossegú Tarsasag	951878461
COMUNE DI TORINO	986538792
CONSERVATOIRE NATIONAL DES ARTS ET METIERS	999645529
CONSIGLIO NAZIONALE DELLE RICERCHE	999979500
CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE TELECOMUNICAZIONI	999649603
CONSORZIO PER LA RICERCA NELL' AUTOMATICA E NELLE TELECOMUNICAZIONI C.R.A.T.	999655229
Construction Robotics GmbH	889313655
CORIANT R&D GMBH	953414165
CROSSMEDIA EUROPE	884545717
CUMUCORE OY	923625077
CYBERETHICS LAB SRLS	915041547
CYBERSOCIAL LAB SRL IMPRESA SOCIALE	884047428
CYENS CENTRE OF EXCELLENCE	906763761
CYENTIFIC AS	883934423
DANMARKS TEKNISKE UNIVERSITET	999990655
DETECON INTERNATIONAL GMBH	996293888
DEUTSCHE TELEKOM AG	999936335

DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV	999981731
DIGITAL CATAPULT	947642277
DIGITAL FOR PLANET-D4P	897171237
DIINEKES S.I. MONOPROSOPI IDIOTIKI KEFALAIOUCHIKI ETAIREIA	884438338
DIMOS ATHINAION EPICHEIRISI MICHANOGRAFISIS	991350089
DIMOSIA EPICHEIRISI ILEKTRISMOU ANONYMI ETAIREIA	999938954
DIREK LTD	905165492
DRAxis ENVIRONMENTAL SA	996151686
EBOS TECHNOLOGIES LIMITED	997848022
ECOLE NATIONALE SUPERIEURE DE L'ELECTRONIQUE ET DE SES APPLICATIONS	999583643
EFACEC ENGENHARIA E SISTEMAS SA	971832428
EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH	999979015
EIGHT BELLS LTD	917066131
EKTACOM	951474359
ELECTRICITE DE FRANCE	999926829
E-LIGHTHOUSE NETWORK SOLUTIONS SL	908505008
ELLAS SAT ANONYMH ETAIREIA YPIRESIES DORYFORIKON SYSTIMATON KAI EPIKOINONION	953343161
ELLINIKI OMADA DIASOSIS ATTIKIS	923230578
ELLINIKO VRAVEIO EPICHEIRIMATIKOTITAS	896936788
EMC INFORMATION SYSTEMS INTERNATIONAL UNLIMITED COMPANY	959978349
EMNIFY GMBH	882121493
ENTRA ENERGY	903648315
EOTVOS LORAND TUDOMANYEGYETEM	999896468
ERICSSON AB	999910921
ERICSSON ARASTIRMA GELISTIRME VE BILISIM HIZMETLERİ ANONIM SIRKETI	950341108
ERICSSON ESPANA SA	999941088
ERICSSON FRANCE	895532034
ERICSSON GMBH	999944386
Ericsson Limited	882060577
ERICSSON MAGYARORSZAG KOMMUNIKACIOS RENDSZEREK KFT	999944289
ERICSSON TELECOMUNICAZIONI SPA	996447342
ETABLISSEMENT D'ENSEIGNEMENT SUPERIEUR CONSULAIRE GRENOBLE ECOLE DE MANAGEMENT	915102366
ETHNICON METSOVION POLYTECHNION	999978142
ETHNIKO KAI KAPODISTRIAKO PANEPISTIMIO ATHINON	999643007
ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	998802502
EURECOM GIE	999606147
EURESCOM-EUROPEAN INSTITUTE FOR RESEARCH AND STRATEGIC STUDIES IN TELECOMMUNICATIONS GMBH	999912279
EUROPEAN DYNAMICS LUXEMBOURG SA	947337891
EUROPEAN ROAD TRANSPORT TELEMATICS IMPLEMENTATION COORDINATION ORGANISATION - INTELLIGENT TRANSPORT SYSTEMS & SERVICES EUROPE	999785112
F6S NETWORK IRELAND LIMITED	900885658
FOGUS INNOVATIONS & SERVICES P.C.	917691296
FONDAZIONE ISTITUTO ITALIANO DI TECNOLOGIA	999596447
FONDAZIONE LINKS - LEADING INNOVATION & KNOWLEDGE FOR SOCIETY	916573856
FORSVARETS FORSKNINGINSTITUTT	999789574

FOUR DOT INFINITY INFORMATION AND TELECOMMUNICATIONS SOLUTIONS PRIVATE COMPANY	891912576
FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV	999984059
FUNDACIO PRIVADA I2CAT, INTERNET I INNOVACIO DIGITAL A CATALUNYA	999583061
FUNDACION CENTRO ANDALUZ DE INVESTIGACIONES DEL AGUA	947977218
FUNDACION CENTRO DE TECNOLOGIAS DE INTERACCION VISUAL Y COMUNICACIONES VICOMTECH	955552336
FUNDACION CENTRO TECNOLOXICO DE TELECOMUNICACIONES DE GALICIA	996369936
FUNDACION DE LA COMUNIDAD VALENCIANA PARA LA INVESTIGACION, PROMOCION Y ESTUDIOS COMERCIALES DE VALENCIAPORT	998709188
FUNDACION IMDEA NETWORKS	999651058
FUNDACION IMDEA SOFTWARE	998520426
FUNDACION TECNALIA RESEARCH & INNOVATION	999604110
FUNDATIA ORANGE	885831258
FUNDINGBOX ACCELERATOR SP ZOO	951227688
FUNDINGBOX COMMUNITIES SL	911373783
GESTAMP SERVICIOS SA	924115703
GIGASYS SOLUTIONS LTD	900272618
GIGASYS SOLUTIONS SL	881119580
GIOUMPITEK MELETI SCHEDIASMOS YLOPOIISI KAI POLISI ERGON PLIROFORIKIS ETAIREIA PERIORISMENIS EFTHYNIS	985034419
GOHM ELEKTRONIK VE BILISIM SANAYI TICARET LIMITED SIRKETI	914716791
GREENCITYZEN	915150769
GREENERWAVE	903463821
GROUND TRANSPORTATION SYSTEMS ITALIA SRL	885746674
HAUTE ECOLE SPECIALISEE DE SUISSE OCCIDENTALE	999479659
HEWLETT PACKARD ITALIANA SRL	999909951
HEWLETT-PACKARD FRANCE	882048355
HIDRALIA GESTION INTEGRAL DE AGUAS DE ANDALUCIA SA	893067458
HIRO MICRODATACENTERS B.V.	904044463
HISPASAT SA	999784530
HOLO-INDUSTRIE 4.0 SOFTWARE GMBH	905786486
HUAWEI TECHNOLOGIES DUESSELDORF GMBH	996543275
HUBER + SUHNER AG	899292045
HUBER+SUHNER POLATIS LIMITED	985958053
IBM IRELAND LIMITED	944973128
ICTFICIAL OY	894353969
IDIADA AUTOMOTIVE TECHNOLOGY SA	999788313
IDRYMA TECHNOLOGIAS KAI EREVNAS	999995893
IHP GMBH - INNOVATIONS FOR HIGH PERFORMANCE	
MICROELECTRONICS/LEIBNIZ-INSTITUT FUER INNOVATIVE MIKROELEKTRONIK	999606438
III-V LAB	999971546
ILMATIETEEN LAITOS	999591306
IMMERSION	998062974
IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE	999993468
IMST GMBH	999796849
INCIRT GMBH	883592595
INCITES CONSULTING SA	894228257

INDEPENDENT POWER TRANSMISSION OPERATOR SA	953977056
INESC TEC - INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES, TECNOLOGIA E CIENCIA	999513706
INFILI TECHNOLOGIES SOCIETE ANONYME	932053019
INFINEON TECHNOLOGIES AG	999978918
INFINEON TECHNOLOGIES AUSTRIA AG	999705087
INFINERA UNIPESSOAL LDA	943750734
INFOLYSIS P.C.	915352141
INLECOM COMMERCIAL PATHWAYS COMPANYLIMITED BY GUARANTEE	893373008
INNOCUBE I.K.E.	891624486
INOV INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES INOVACAO	999620503
INQBIT INNOVATIONS SRL	895370529
INSTITUT JOZEF STEFAN	999971837
INSTITUT NATIONAL DE RECHERCHE EN INFORMATIQUE ET AUTOMATIQUE	999547074
INSTITUT POLYTECHNIQUE DE BORDEAUX	991798035
INSTITUTE OF ACCELERATING SYSTEMS AND APPLICATIONS	999593634
INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS	999654356
INSTITUTO DE TELECOMUNICACOES	999580248
INSTITUTO PEDRO NUNES ASSOCIACAO PARA A INOVACAO E DESENVOLVIMENTO EM CIENCIA E TECNOLOGIA	999578502
INSTITUTO POLITECNICO DO PORTO	991473861
INTEL DEUTSCHLAND GMBH	967538432
INTERDIGITAL EUROPE LTD	950635891
INTERNET INSTITUTE, COMMUNICATIONS SOLUTIONS AND CONSULTING LTD	946634059
INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM	999981149
INTRACOM SA TELECOM SOLUTIONS	999969994
IQUADRAT INFORMATICA SL	996237822
ISFM INTELLIGENT SYSTEMS FOR MOBILITY	895942538
ISRD SP Z O.O.	889804087
ITALTEL SPA	886601147
IUVO SRL	929242056
JOHN DEERE GMBH & CO. KG*JD	951777872
JSIO LDA	877943218
K3Y	905140563
KARLSRUHER INSTITUT FUER TECHNOLOGIE	990797674
KARLSTADS UNIVERSITET	999874837
KATHOLIEKE UNIVERSITEIT LEUVEN	999991334
KEYSIGHT TECHNOLOGIES BELGIUM	939097256
KEYSIGHT TECHNOLOGIES DENMARK APS	939084937
KEYSIGHT TECHNOLOGIES FINLAND OY	955188295
KEYSIGHT TECHNOLOGIES SPAIN SL	919967692
KING'S COLLEGE LONDON	999981052
KINGSTON UNIVERSITY HIGHER EDUCATION CORPORATION	999864652
KONINKLIJKE KPN NV	951644691
KUNGLIGA TEKNISKA HOEGSKOLAN	999990946
L.M. ERICSSON LIMITED	999946326
LENOVO DEUTSCHLAND GMBH	917812643
LIGENTEC SA	916439026
LIGHTBEE SL	934490144

LINKOPINGS UNIVERSITET	999852236
LIONIX INTERNATIONAL BV	918272908
LULEA TEKNISKA UNIVERSITET	999876874
LUNDS UNIVERSITET	999901318
LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY	934320200
MAGISTER SOLUTIONS OY	954912233
Magna Electronics Sweden AB	906872013
MARPOSS MONITORING SOLUTIONS GMBH	953485945
MARPOSS SOCIETA PER AZIONI	899722046
MARTEL GMBH	999695387
MARTEL INNOVATE BV	889777703
Massive Beams GmbH	879907662
MATSUKO S.R.O	929824832
MBRYONICS LIMITED	914787892
MCS DATALABS	940750039
MDCREATE SRL	879089564
MELLANOX TECHNOLOGIES LTD - MLNX	990560024
Menhir Photonics AG	899730485
METAMIND INNOVATIONS IKE	889264185
MITSUBISHI ELECTRIC EUROPE BV	930203423
MONTIMAGE EURL	999716242
MPICOSYS - EMBEDDED PICO SYSTEMS SPZOO	985206400
MTU AUSTRALO ALPHA LAB	889769167
NATIONAL CENTER FOR SCIENTIFIC RESEARCH "DEMOKRITOS"	999978239
NATIONAL INSTRUMENTS DRESDEN GMBH	974894427
NEARBY COMPUTING SL	904712502
NEC LABORATORIES EUROPE GMBH	910561893
NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO	999988909
NET AI TECH LTD	888921193
NETCOMPANY-INTRASOFT SA	999702371
NETWORK RAIL INFRASTRUCTURE LIMITED	999540963
NEUTROON TECHNOLOGIES SL	891810241
NEXTWORKS	996613600
NH APPART HOLDING LTD	882512209
NOKIA DENMARK AS	996116087
NOKIA NETWORKS FRANCE	950760051
NOKIA SOLUTIONS AND NETWORKS GMBH &CO KG	999940603
NOKIA SOLUTIONS AND NETWORKS HELLAS SINGLE MEMBER SA	958872452
NOKIA SOLUTIONS AND NETWORKS ITALIA SPA	900775078
NOKIA SOLUTIONS AND NETWORKS KFT	996375562
NOKIA SOLUTIONS AND NETWORKS OY	999925471
NOKIA SPAIN SA	999806064
NOKIA UK LIMITED	999805579
NOVA ID FCT - ASSOCIACAO PARA A INOVACAO E DESENVOLVIMENTO DA FCT	937405091
NOVA TELECOMMUNICATIONS SINGLE MEMBER SA	985390312
NUBIS IDIOTIKI KEFALAIOUCHIKI ETAIRIA	895483825
NVIDIA DENMARK APS	915433621

NVIDIA GmbH	919708508
NXP SEMICONDUCTORS AUSTRIA GMBH & CO KG	891427091
NXP SEMICONDUCTORS GERMANY GMBH	996753474
OCULAVIS GMBH	916491988
ODIN SOLUTIONS SOCIEDAD LIMITADA	934796858
OHB SYSTEM AG	989360037
OLEDCOMM SAS	916612074
One Reality	887031730
ONE SOURCE CONSULTORIA INFORMATICA LDA	968818347
OPENNEBULA SYSTEMS SL	969580476
OPSYS SENSING TECHNOLOGIES LTD	888933027
OPTARE SOLUTIONS SL	955546225
OQ TECHNOLOGY Sarl	898396638
ORAMAVR SA	893482230
ORANGE POLSKA SPOLKA AKCYJNA	999951079
ORANGE ROMANIA SA	954892445
ORANGE SA	999908981
ORGANISMOS LIMENOS THESSALONIKIS ANONYMI ETAIRIA	998798040
ORGANISMOS TILEPIKIONONION TIS ELLADOS OTE AE	999792581
OSLO UNIVERSITETSSYKEHUS HF	991104000
OULUN YLIOPISTO	999844670
OY L M ERICSSON AB	999942931
PANEPISTIMIO DYTIKIS ATTIKIS	905978255
PANEPISTIMIO DYTIKIS MAKEDONIAS	986185518
PANEPISTIMIO PATRON	999894528
PANEPISTIMIO THESSALIAS	986152150
PARALLEL WIRELESS ISRAEL LTD	885314539
PDM E FC PROJECTO DESENVOLVIMENTO MANUTENCAO FORMACAO E CONSULTADORIA LDA	999742335
PHIX BV	907680217
PICADVANCED, SA	934950215
P-NET ANADYOMENA DIKTYA NEAS GENIAS & EFARMOGES IDIOTIKI KEFALAIOUCHIKI ETAIREIA	887635749
POLARITON TECHNOLOGIES AG	901228262
POLITECHNIKA POZNANSKA	999659691
POLITECHNIKA WARSZAWSKA	999884052
POLITECNICO DI BARI	999431159
POLITECNICO DI MILANO	999879881
POLITECNICO DI TORINO	999977754
POLYTECHNEIO KRITIS EL	924773848
PRIVREDNO DRUSTVO ZENTRIX LAB DRUSTVO SA OGRANICENOM ODGOVORNOSCU PANCEVO	898982906
PROMOZIONE PER L'INNOVAZIONE FRA INDUSTRIA E UNIVERSITA ASSOCIAZIONE	972458175
PROSEGUR GLOBAL SIS ROW SL	884994439
PROXIMUS LUXEMBOURG SA	951654973
PUBLIC SAFETY COMMUNICATION EUROPE FORUM AISBL	984488212
QAMCOM RESEARCH AND TECHNOLOGY AB	957254007
QUALCOMM CDMA TECHNOLOGIES GMBH	996457430

QUALCOMM France (formaly QUALCOMM COMMUNICATIONS SARL PIC 887059860)	883340492
QUALTEK SRL	996477412
QUICKSAND	942722340
R2M SOLUTION	916226693
RADCHAT AB	887764662
RAYTRIX GMBH	942467521
REAL WIRELESS LIMITED	935339282
REALWORLD EASTERN EUROPE SRL	887499755
REDZINC SERVICES LIMITED	961330335
RF MICROTECH SRL	970744282
RHEA SYSTEM – 987472029 – STARION ITALIA SPA (912789692)	912789692
RHEA SYSTEM LUXEMBOURG SA	892309403
RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN	999983962
Rimedo SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA	889374086
ROBERT BOSCH GMBH	999908787
ROMARS SRL START-UP COSTITUITA A NORMA DELL'ART 4 COMMA 10BIS DEL DECRETO LEGGE 24 GENNAIO 2015, N.3	890333416
RUNEL NGMT LTD	934564543
SAFRAN PASSENGER INNOVATIONS GERMANY GMBH	997492129
SAMSUNG ELECTRONICS (UK) LIMITED	999765712
SAS IDATE	887114665
SATELIO IOT SERVICES, SL	899480904
SATWAYS-OLOKLIROMENES LYSEIS ASFALEIAS KAI AMYNAS-IDIOTIKI EPICHEIRISI PAROCHIS YPIRESION ASFALEIAS (IEPYA)-ETAIREIA PERIORISMENIS EFTHYNIS	987804060
SCIPROM SARL	999748834
SCUOLA SUPERIORE DI STUDI UNIVERSITARI E DI PERFEZIONAMENTO S ANNA	999884731
SEQUANS COMMUNICATIONS SA	999687821
SERVICIUL DE TELECOMUNICATII SPECIALE	936947348
SES TECHCOM SA	999584419
SIDROCO HOLDINGS LIMITED	912316332
SIEMENS AKTIENGESELLSCHAFT	999987260
SIEMENS AKTIENGESELLSCHAFT OESTERREICH	999953601
SIEMENS INDUSTRY SOFTWARE NETHERLANDS BV	891270824
SIEMENS INDUSTRY SOFTWARE OY	888040530
SILICON AUSTRIA LABS GMBH	901837907
SIMTEL TEAM SA	882137595
SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN	908901350
SISTIMATA TILEPIKINONION ANTONIS GEORGIOU MONOPROSOPI ETERIA PERIORISMENIS EFTHINIS	906354518
SIVERS WIRELESS AB	968616102
SMART RAIL CONNECTIVITY-CAMPUS (SRCC) EV	878052828
SMILE	904841221
SOFTWARE COMPANY EOOD	969020301
SOFTWARE IMAGINATION & VISION SRL	897024185
SOFTWARE RADIO SYSTEMS LIMITED	937177723
SONY EUROPE BV	899858913
SORBONNE UNIVERSITE	909875521
SOUTH EAST TECHNOLOGICAL UNIVERSITY	886107126

SPACE HELLAS ANONYMI ETAIREIA SYSTIMATA KAI YPIRESIES	
TILEPIKIONIONPLIROFORIKIS ASFALEIAS - IDIOTIKI EPICHEIRISI PAROCHIS	
YPERISION ASFA	999778322
SPARK WORKS LIMITED	891674344
SPHYNX TECHNOLOGY SOLUTIONS AG	881338703
SPHYNX TECHNOLOGY SOLUTIONS AG	916839248
STELLANTIS EUROPE SPA	997740643
STICHTING IMEC NEDERLAND	999577144
STMICROELECTRONICS CROLLES 2 SAS	999750580
STMICROELECTRONICS FRANCE	999909175
SUITE5 DATA INTELLIGENCE SOLUTIONS LIMITED	910462080
Summit TEC Group LTD	896772664
SYNTHARA AG	899425517
TAGES	900534227
TALLINNA TEHNIAÜLIKOO	999842536
TECHNIKON FORSCHUNGS- UND PLANUNGSGESELLSCHAFT MBH	999761735
TECHNISCHE UNIVERSITAET BRAUNSCHWEIG	999861257
TECHNISCHE UNIVERSITAET CHEMNITZ	999877844
TECHNISCHE UNIVERSITAET DRESDEN	999897729
TECHNISCHE UNIVERSITAET GRAZ	999977948
TECHNISCHE UNIVERSITAT BERLIN	999986678
TECHNISCHE UNIVERSITAT KAISERSLAUTERN	999885895
TECHNISCHE UNIVERSITEIT DELFT	999977366
TECHNISCHE UNIVERSITEIT EINDHOVEN	999977269
TECHNISCHE UNIVERSITEIT WIEN	999979888
TEKNOLOGIAN TUTKIMUSKESKUS VTT OY	932760440
TELECOM ITALIA SPA	999908496
TELEFONICA INVESTIGACION Y DESARROLLO SA (previously 999910824)	917790915
TELEFONICA SA	997255837
TELEKOM SLOVENIJE DD	957062432
TELENOR ASA	999910630
Telit Cinterion Deutschland GmbH	954516279
TEORESI S.P.A.	887959341
TERRAVIEW GMBH	891974171
THALES ALENIA SPACE FRANCE SAS	999908205
THALES ALENIA SPACE UK LTD	936556147
THALES DIS FRANCE SAS	890652158
THALES SIX GTS FRANCE SAS	999971934
THE HEBREW UNIVERSITY OF JERUSALEM	999975038
THE NOTTINGHAM TRENT UNIVERSITY	999824494
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THE QUEEN'S UNIVERSITY OF BELFAST	999992013
THE UNIVERSITY OF BIRMINGHAM	999907526
THE UNIVERSITY OF HERTFORDSHIRE HIGHER EDUCATION CORPORATION	999911115
TOSHIBA EUROPE LIMITED	999958548
TRUST-IT SRL	906664821
TURKCELL TEKNOLOJİ ARASTIRMA VE GELISTIRME ANONIM SIRKETI	935067391

TZOYNIPER DIKYA ELLAS ANONYMI ETAIRIA	887359396
UBITECH LIMITED	926362126
UBIWHERE LDA	991811906
UCLAN CYPRUS LIMITED	951954315
ULTRAVIOLET CONSULT DOO	889724062
UNIVERSIDAD CARLOS III DE MADRID	999899572
UNIVERSIDAD COMPLUTENSE DE MADRID	999874546
UNIVERSIDAD DE CANTABRIA	999880075
UNIVERSIDAD DE GRANADA	999882015
UNIVERSIDAD DE MALAGA	999898311
UNIVERSIDAD DE MURCIA	999844282
UNIVERSIDAD MIGUEL HERNANDEZ DE ELCHE	999851363
UNIVERSIDAD POLITECNICA DE MADRID	999974844
UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II	999976590
UNIVERSITA DEGLI STUDI DI PADOVA	999995602
UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA	999987745
UNIVERSITAET BERN	999976493
UNIVERSITAET DUISBURG-ESSEN	999843312
UNIVERSITAT POLITECNICA DE CATALUNYA	999976202
UNIVERSITAT POLITECNICA DE VALENCIA	999864846
UNIVERSITAT ZURICH	999976396
UNIVERSITATEA TEHNICA GHEORGHE ASACHI DIN IASI	999853303
UNIVERSITE DE BORDEAUX	949735440
UNIVERSITE DE VERSAILLES SAINT-QUENTIN-EN-YVELINES.	999837104
UNIVERSITE DIJON BOURGOGNE	999839820
UNIVERSITE DU LUXEMBOURG	999878620
UNIVERSITEIT TWENTE	999900833
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UNIVERSITETET I OSLO	999975814
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UNIVERSITY OF BRADFORD	999899766
UNIVERSITY OF BRISTOL	999974262
UNIVERSITY OF CYPRUS	999835843
UNIVERSITY OF ESSEX	999856989
UNIVERSITY OF PELOPONNESE	999548238
UNIVERSITY OF PIRAEUS RESEARCH CENTER	999586941
UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION	999847871
UNIVERSITY OF STUTTGART	999974747
UNIVERSITY OF SURREY	999985223
UNIVERSITY OF THE WEST OF SCOTLAND	999589657
VALSTS AKCIJU SABIEDRIBA ELEKTRONISKIE SAKARI	898187700
VIAVI SOLUTIONS FRANCE SAS	900446636
VIAVI SOLUTIONS IRELAND LIMITED	882145937
VIRTUAL OPEN SYSTEMS	968966466
VIVID COMPONENTS GERMANY UG	887005249
Vodafone Group Services GmbH	991001956
VPIPHOTONICS GMBH	950983248

WASEDA UNIVERSITY	999585486
WAVECOM SOLUCOES RADIO SA	998142708
WEST AQUILA SRL	993174077
WINGS ICT SOLUTIONS INFORMATION & COMMUNICATION TECHNOLOGIES IKE	952269953
XLAB RAZVOJ PROGRAMSKE OPREME IN SVETOVANJE DOO	999773375
YEDITEPE UNIVERSITY VAKIF	997837255
YERBA BUENA VR EUROPE SL	910768600
ZORTENET IDIOTIKI KEFALAIOUXIKI ETAIREIA	897526936
ZURCHER HOCHSCHULE FUR ANGEWANDTE WISSENSCHAFTEN	998291506

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