Smart Networks and Services International and European Cooperation Ecosystem

D4.2 Intermediate Dissemination, Communication and Exploitation Plan

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Abbreviations List

Abbreviation / Term	Description
3GPP	3rd Generation Partnership Project
5G PPP	5G Public Private Partnership
6G-IA	6G Smart Networks and Services – Industry Association
B2B	Business-to-business
B2C	Business-to-consumer
CC	Creative Commons
CMS	Content Management System
CSA	Coordination and Support Actions
DIHs	Digital Innovation Hubs
EC	European Commission
EMBB	Enhanced Mobile Broadband
ENCQOR	Evolution of Networked Services through a Corridor in Quebec and Ontario for Research and Innovation
ETSI	European Telecommunications Standards Institute
EuCNC	European Conference on Networks and Communications
Hexa-X II	SNS JU Flagship Project - A holistic approach towards the 6G network platform and system.
IA	Innovation Action
ICT	Information and Communication Technology
ICASSP	International Conference on Acoustics, Speech, and Signal Processing
IEEE	Institute of Electrical and Electronics Engineers
ITRI	Industry Technology Research Institute
KERs	Key Exploitable Results
KPI	Key Performance Indicator
mMTC	Massive Machine Type Communication
MoUs	Memorandums of Understanding
SCoDIHNet	Smart Connectivity Digital Innovation Hub Network
SNS JU	Smart Networks and Services Joint Undertaking
R&I	Research and Innovation
RIA	Research and Innovation Action
SDOs	Standard Development Organisations
SMEs	Small and Medium-sized Enterprises
SNS GB	Smart Networks and Services Governing Board
SNS JU	Smart Networks and Services Joint Undertaking
TAICS	Taiwan Association of Information and Communication Standards
TRL	Technology Readiness Level
URLLC	Ultra-Reliable Low Latency Communication
VASES	Electronic Communications Office of Latvia

Executive Summary

Launched in January 2023, the SNS ICE project aims to establish a collaborative environment for European and global stakeholders involved in developing 6G Smart Networks and Services (SNS). It serves as a platform to showcase, leverage, and position the achievements of SNS Joint Undertaking (JU) in major European and global forums. The project actively engages with regions where 6G activities are planned or ongoing, including vertical industries, through established associations to understand their requirements and promote SNS JU solutions, enabling the development of tailored 6G solutions for early adoption.

As a Coordination and Support Action (CSA) project, SNS ICE's practical actions include supporting and representing the SNS JU R&I (Research and Innovation Action) projects in their technological developments. In this context, SNS ICE particularly seeks to cooperate with all SNS JU active projects (currently only Phase 1), divided into four Streams (A, B, C and D).

The document outlines the SNS ICE project's exploitation and sustainability strategy, emphasising the practical application and potential commercialisation of its outputs. It details the project's three main Key Exploitable Results (KERs) - Vertical Engagement Tracker, Interoperability, Replicability and Scalability Initiative, and Strategic Policy Recommendations. In this context, recommendations from the Horizon Results Booster Module C - Exploitation Service are also incorporated, providing a road-map for exploitation and showcasing main results, impact prediction, and risk factors.

Moreover, a methodology and framework for developing Strategic Policy Recommendations was also developed. This outlined a systematic approach for formulating these recommendations, including identifying key issues, engaging stakeholders, and creating actionable strategies. Such a focus ensured that the policy recommendations aligned with the overarching goals of the SNS ICE project and were relevant and insightful.

This document also summarises the SNS ICE project's dynamic outreach activities and strategic involvement in significant events. It describes the project's efforts to amplify its presence, engage with diverse stakeholders, and promote its research and innovations across international platforms, highlighting its role in fostering collaboration and promoting the SNS JU work programme.

Notably, SNS ICE's social media platforms have shown significant engagement, with LinkedIn amassing 241 followers and X (former Twitter) gaining traction despite its character limit challenges. The project's YouTube channel serves as an effective medium for sharing insights and updates, enhancing its reach. The SNS ICE website has also played a crucial role in disseminating information, attracting 294 unique visitors with an average engagement time of 1:27 minutes, indicating a strong interest in the content. The project's newsletters, released quarterly, have been instrumental in keeping the community informed about ongoing activities and achievements, further amplifying the project's visibility.

Finally, as showcased in this document, in terms of event participation, SNS ICE has marked its presence in over 24 significant events in 2023, effectively reaching a wide audience and establishing itself as a key contributor to the SNS JU work programme. This active involvement in various platforms and events demonstrates the project's dedication to promoting research and innovation in the 6G domain, thereby playing a pivotal role in shaping the future of smart networks and services.

1 Introduction

As the SNS ICE project closes its first year, this is a crucial juncture to outline a strategic approach to contemplate its future trajectory, enduring impact, and long-term sustainability. In this sense, it is imperative to ensure the continuity of the assets developed and initiatives launched under SNS ICE, which involves reflecting on how the project will imprint its legacy and sustain its relevance beyond its initial time-frame. In this regard, the principles of exploitation, sustainability, dissemination, and communication are of paramount importance, as they are instrumental in determining the project's prolonged influence and success. Each of these terms, while interconnected, has its unique significance.

Exploitation is centred on the practical utilisation, potential commercialisation, or re-purposing of the project's outputs, aiming to leverage the generated knowledge, tools, or technologies for specific benefits, be they economic or strategic. This sets the stage for exploring avenues of sustainability, which delve into how the project's outcomes can remain valuable over time, ensuring their ongoing relevance and utility after the project's commencement phase [1][2].

These explanations underscore the intricate relationship between exploitation and sustainability. Exploitation seeks immediate and tangible advantages, whereas sustainability focuses on ensuring the longevity of these benefits, thereby establishing a lasting legacy for SNS ICE's contributions. This document outlines the main exploitation and sustainability Plan for SNS ICE through an in-depth analysis of exploitation showcasing the pathways for the practical implementation of the project's findings. This exploration subsequently leads to sustainability considerations, laying the groundwork for a comprehensive sustainability strategy, which will undergo further refinement and completion at the project's conclusion in April 2025. In this way, this document outlines a strategic approach to ensure the continuity of the project's initiatives and the longevity of its developed assets, emphasising the importance of maintaining relevance and creating a lasting legacy beyond the initial time frame.

1.1 Background and context

This document presents the initial framework for the SNS ICE project's sustainability strategy at its 12-month milestone, offering preliminary insights set to evolve throughout the project's duration, culminating in a detailed final sustainability plan in D4.3 "Final Dissemination, Communication and Exploitation Plan", due at M27. The strategy delineated in this deliverable is grounded in a vital distinction between the unique KERs of SNS ICE and those associated with the broader Smart Networks and Services Joint Undertaking (SNS JU) initiative. The latter will be collaboratively developed by the sister CSA SNS OPS in the context of the yearly questionnaire circulated among SNS JU RIAs. Although both sets of KERs are valuable, this document prioritises the unique KERs of SNS ICE, as they are crucial in devising the project's sustainability strategy.

From a methodological standpoint, it is crucial to underscore that the development of this deliverable has been shaped by recommendations from the Horizon Results Booster Module C - Exploitation Service. Demonstrating SNS ICE's alignment with the European Commission's (EC) objectives, the project has successfully secured this complimentary support tool, ensuring that the sustainability strategy outlined herein is robust and adheres to the EC's best practices and guidelines. This consultancy was provided by the designated experts Lorenzo Valeriani and Adelaide Moscatelli between August and October 2023, with a focus on enhancing the project's existing strategy for effective exploitation and long-term sustainability of the anticipated KERs.

The other sections contained in this document ("Policy Briefs" - section 3 and "Updates on Communication and Outreach Activities" - section 4, respectively) emerge instead from a series of prolonged actions carried out throughout the first year of the project's life, including events (workshops, co-creation events, conferences), press releases, a podcast series, various multimedia activities and social media coverage.

1.2 Objectives and structure of the updated plan

This document's main purpose is to outline the SNS ICE's main exploitation and sustainability plan to guarantee the effective implementation and valorisation of its results over the course of time. As such, three main KERs have been selected:

- **KER #1 - Vertical Engagement Tracker**
- **KER #2 - Interoperability, Replicability and Scalability Tools**
- **KER #3 - Strategic Policy Recommendations**

Secondly, it also positions the project within the current European policy scenario in the context of 5G/6G developments in the aftermath of the flagship teleconnectivity policy event, the 5G Techritory Forum, held in Riga on 18-19 November and organised by SNS ICE partner VASES. At 5G Techrirtory Forum, SNS ICE organised three co-creation events:

- SNS ICE National Initiatives: Discussion on Different Approaches to European Collaboration for 6G Research;
- 5G for Sustainability, the Future Role of 6G (co-organised with flagship SNS JU RIA Hexa-X II);
- SNS ICE for Verticals: From Large Scale Trials to Adoption Driving Economic Value in Europe.

This contribution encapsulates some of the project's main goals and provides a litmus test to understand the current challenges faced by the SNS JU initiatives in creating meaningful synergies, facilitating the engagement with vertical sectors and devising cutting-edge applications targeting crucial societal challenges. On a broader level, these events also discussed some of the main issues faced by the scientific community as a whole in the development of 6G, both at the European and global levels. Given their timely release, these documents constitute a blueprint of the SNS JU initiative, as their publication summarises some of the main challenges faced by the SNS JU community, summarising the first year of the initiative and providing a guideline for future actions and developments. Such aims to orient future policy-making in the SNS JU context align with the need to continue refining and elaborating communication strategies and events organisation as outlined in the final sections.

1.3 Structure of the document

This document's structure is designed to offer an exhaustive insight into the exploitation and sustainability strategy of the SNS ICE project, ensuring a coherent progression of information across its sections, zooming in on KER#3 and providing updates on communication and dissemination activities. In order to successfully deliver such content, the document is structured as below:

- **Section 1** outlines the document's objectives linked to the exploitation, communication and dissemination of the project's result long-term sustainability and impact, highlighting the need for strategic planning and the integration of key principles such as exploitation, sustainability, dissemination, and communication.
- **Section 2**, delivers an initial portrayal of the SNS ICE KERs. These are identified as pivotal to the project's exploitation and sustainability strategy. Moreover, it provides a critical analysis of SNS ICE KERs, examining in-depth examination the three chosen KERs (**#1 Vertical Engagement; #2 Interoperability, Replicability and Scalability Tools; #3 Strategic Policy Recommendations**), delineating the unique value proposition of each KER, highlighting the necessity of maintaining their accessibility and relevance for future utilisation. As such, the project's dedication to maximising the accessibility of the KERs and its commitment to achieving a lasting impact is underscored. Finally, a comprehensive sustainability roadmap is outlined, detailing the actions, roles of partners, milestones, and anticipated financial support required to ensure the KERs contribute to the sustainable growth and exploitation of the project's results. This section also considers potential risks and outlines strategies for mitigating these risks during the implementation of the roadmap.

- **Section 3**, presents a comprehensive framework for developing strategic policy recommendations (KER #3), discussing the first inputs and results that led to the drafting of the project's first policy recommendations. This task saw the participation of the whole SNS ICE consortium, which organised three co-creation events at the last 5G Techritory Forum event in Riga, Latvia (18-19 October 2023).
- **Section 4** highlights the SNS ICE's efforts in communication and outreach, detailing the strategies employed to reach a wide audience and the impact of these activities in fostering collaborations and raising awareness about the project's goals and achievements providing an update of the initial results and plans outlined in D4.1 [3].
- **Section 5** focuses on the project's involvement in various events, emphasising its role in disseminating knowledge and fostering international cooperation. It provides an overview of the events organised or participated in by the SNS ICE project, reflecting on the impact these activities have had in promoting the project's objectives and enhancing its visibility in the global 6G community.
- **Section 6** concludes the document by underscoring the main achievements linked to the project's exploitation, communication and dissemination activities, setting the stage for future actions to enhance the project's impact and sustainability in the dynamic SNS JU context.

2   Exploitation Strategy

Exploitation strategies play a pivotal role in the success of European projects, serving as a crucial mechanism to maximise the impact and utility of project outcomes. In the context of SNS ICE, a well-defined exploitation strategy ensures that the significant deliverables and innovations developed throughout the project are recognised and, effectively utilised and integrated into relevant sectors. This goes beyond the immediate scope of the project, extending the benefits and innovations to a broader audience, including industry stakeholders, policymakers, and the academic community. By doing so, the project solidifies its position as a contributor to the SNS JU innovation ecosystem, fostering economic growth and advancing technological capabilities.

In the subsequent pages, the SNS ICE exploitation strategy will be outlined in detail, delving into the methodologies, objectives, and key components that constitute this critical aspect of the project. This will provide a clear understanding of how SNS ICE positions its outcomes for maximum impact, ensuring that the innovations and knowledge generated contribute significantly to the European innovation landscape.

2.1   Overview of SNS ICE Key Exploitable Results

Ensuring the sustainability of project results begins with a foundational step, i.e. identifying and selecting the most important outcomes, the KERs. By strategically allocating resources to these pivotal results, the project can effectively focus on outcomes that offer the greatest potential for long-term utility and impact. KERs are defined as significant project deliverables meticulously chosen and prioritised due to their extensive potential for future exploitation.

In this context, "exploitation" encompasses the capacity to utilise and derive benefits from these results, extending their value across the product, process, or solution value chain. Moreover, KERs are instrumental contributors to policy-making, further research, and educational endeavours. Consistent with this definition, the project has identified a comprehensive list of primary KERs, which are systematically categorised and will be thoroughly discussed in the subsequent sections.

2.2   Selected SNS ICE Key Exploitable Results

Within the T4.3 (Exploitation) activities initiated in M1, three main KERs were selected and emphasised as the cornerstone of SNS ICE's sustainability plan. This strategic decision was taken to facilitate comprehensive and fruitful discussions among partners, delving into each of these critical results. As a result, we have crafted a clear and effective framework informed by the insights garnered from these discussions.

This framework is intentionally designed to be adaptable, acknowledging that while these three KERs are pivotal at this juncture of the project's lifecycle, our analysis is not rigid. As the project evolves, should there be a shift in context or priorities necessitating the inclusion of additional KERs, our approach is flexible enough to accommodate such changes seamlessly. The KERs currently under scrutiny in this phase include the vertical engagement tracker, the interoperability, replicability and scalability tool, and the strategic policy recommendations.

2.2.1   KER #1 - Vertical Engagement Tracker

KER#1 Vertical Engagement Tracker aims to establish a dynamic online platform crafted to house a rich repository of information pertaining to use cases developed by SNS JU R&I projects, creating a strategic hub ensuring that these key stakeholders are at the forefront of this initiative. The Vertical Engagement Tracker is designed with multifaceted objectives in mind. It aims to establish robust links with verticals, leveraging the strength of partnerships with associations to create a network of collaborative opportunities. Furthermore, the platform will

play a crucial role in mapping out vertical associations, creating a comprehensive landscape of the various entities and their interconnections. This mapping exercise is instrumental in identifying key players, understanding their roles, and pinpointing opportunities for collaboration and synergy. The Verticals Engagement Tracker is, therefore, a tool designed to monitor and analyse the engagement levels of verticals, providing valuable insights and data to drive future strategies and initiatives. Complementing this, the information collected in the platform will be pivotal to running gap analyses within the vertical engagement domain, offering in-depth analysis and perspective on the current state of affairs, challenges, and opportunities in the vertical landscape to drive innovation, foster connections, and create a lasting impact in the vertical domain.

2.2.2   KER #2 - Interoperability, Replicability and Scalability Tool

KER#2 revolves around creating and disseminating tools focused on interoperability, replicability[1], and scalability, aiming to facilitate knowledge sharing among SNS JU R&I projects through dedicated events. The primary target audience for this initiative is SMEs engaged in 5G/6G technologies, ensuring that these key players are equipped with the necessary tools and knowledge to navigate the evolving technological landscape. The core of this initiative is developing a replicability and scalability assessment tool. This tool is designed to evaluate and enhance the interoperability of various technical solutions, ensuring that they can be effectively replicated and scaled to meet the demands of different contexts and applications.

The tool will serve as a valuable resource for SMEs, providing them with insights and guidance on how to optimise their technologies for broader application and impact. By focusing on interoperability, replicability, and scalability, KER#2 addresses critical aspects of technological development, ensuring that SMEs have the resources and support they need to succeed. This collaborative effort underscores the commitment of the SNS ICE consortium to fostering innovation, sharing knowledge, and creating tools that empower SMEs to thrive, driving forward the European technological agenda and contributing to the broader goals of innovation and economic growth in the 5G/6G era.

2.2.3   KER #3 - Strategic Policy Recommendations

KER#3, focusing on Strategic Policy Recommendations, is a crucial project component aiming to influence and guide policy measures within the Smart Networks and Services (SNS) context. The primary targets for this initiative are the European Commission and SNS JU R&I projects, ensuring that the policy recommendations directly address the needs and challenges of these key stakeholders.

The main objective of KER#3 is to develop comprehensive policy briefs, providing valuable feedback on European Commission policy measures. These policy briefs will be informed by insights gained during multi-stakeholder workshops, ensuring they are grounded in diverse perspectives and real-world experiences. The policy briefs will serve as a critical tool for policy advocacy, helping to shape the policy landscape in a way that supports the advancement of SNS technologies and initiatives. By focusing on strategic policy recommendations, KER#3 addresses a critical aspect of the SNS ICE project, ensuring that the project's outcomes have a lasting impact on the policy landscape. This initiative demonstrates the collaborative spirit of the SNS ICE project, bringing together a diverse group of partners to contribute to the broader goals of shaping policy measures and advancing the SNS agenda in Europe.

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[1] According to the EC-funded Embassy of Good Science, "Replicability or replication in science refers to being able to repeat findings of another experiment. Successful replication supports the validity of a certain discovery, increases public trust in science and impacts public health." Learn more at: https://embassy.science/wiki/Theme:7e07b7fa-793a-4282-a036-6fefe8480b3a

2.3 Critical Analysis of SNS ICE Selected KERs

2.3.1 Vertical Engagement Tracker

The Vertical Engagement Tracker[2] is an integral part of the SNS ICE project, aiming to address specific challenges in the European 6G landscape. The forthcoming table provides a detailed tracker overview, outlining its intended purpose, potential alternatives, unique characteristics, and a comprehensive description. Additionally, it examines strategic elements such as the target market, initial users, market competition, market entry strategy, timing, and intellectual property considerations, providing insight into the tool's positioning to address challenges in the 6G domain.

The tool was developed to fill knowledge gaps, facilitating communication between SNS JU RIAs and vertical sectors, and support innovation in the evolving 6G landscape. It incorporates open-source components and follows a dynamic development approach to maintain its relevance and utility throughout the duration of the project and beyond.

Table 1. Vertical Engagement Tracker Characterisation Table

KER# 1- Vertical Engagement Tracker	
Problem	R&I projects developing 6G solutions need to identify potential target markets and early adopters for their solutions. They also might lack understanding of how to connect their invention with relevant vertical sectors. Vertical Associations gathering industries interested in 6G solutions constantly need inputs to boost European competitiveness in 6G applications.
Alternative solutions	As 5G is already in the deployment/operational phase, associations and R&I projects have a record of working together through joint initiatives to attempt to fill gaps and understand mutual requirements. A previous version of the Verticals Engagement Tracker, named Verticals Cartography, was developed in 2019 by Trust-IT to attempt to fill this gap for 5G. Without this tool, the alternative would be: • Associations could find relevant resources through time-consuming research on the CORDIS database, browsing through SNS JU R&I projects deliverables and milestones. • SNS JU R&I projects will need to find relevant industrial partners at flagship mobile connectivity events such as EuCNC and 5G Techritory forum or other industrial events.
Unique Selling points (USP)	The Vertical Engagement Tracker has two main unique selling points: • It is a free tool that allows SNS JU R&I projects and vertical associations to access reliable information about each other quickly, providing a mapping of use cases in different i) vertical sectors (e.g. automotive/transportation/logistics energy, smart cities, broadcasting & media industry 4.0, education, PPDR, Tourism & Culture and others); ii) experiment type (demonstration, pilot, proof of concept, prototype, trial); 3) functionality (cloud, eMBB, mMTC, URLLC, etc.) iv) location. • It is less time and cost-consuming than attending dedicated networking events (both online and physically)

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[2] Browse the Tool at https://verticals-tracker.sns-ju.eu

Short description	The Vertical Engagement Tracker is an online platform built on Drupal CSM that connects vertical use cases developed by SNS JU R&I projects and associations. Relevant datasets are collected through a series of online surveys with selected users. After that, the intersection of shared taxonomies allows the filtering out of information about both R&I projects and associations. By clicking on a vertical use case, users are not only redirected to a more detailed tab with relevant information about the project (location, functionality, vertical sector addressed, brief description, just like in the old cartography) but also a carousel pops up, providing a general description of the vertical-related associations working with these vertical sectors, and a link to their webpage. The same happens the other way around, allowing vertical associations to find related use cases developed by R&I projects.
Target market	• SNS JU R&I projects developing use cases in 6G applications can learn about relevant standards in their area of action and create links with associations. • Vertical Association representatives can engage relevant use cases and gain information about innovations in the field. Some examples include 5GAA Automotive, 5G ACIA Smart Manufacturing, ERTICO Transportation, ECSO Cybersecurity, 6G Health Institute, and EBU/5G MAG.
Early adopters	SNS JU R&I projects within the SNS JU initiative (Phase 1) selected projects with higher TRLs, involving relevant associations later.
Market competitors	Any event – both physical and online – connecting SNS JU R&I projects and vertical associations
Go to market use model.	Provision of service, a cost-free and user-friendly platform informing different stakeholder groups and creating potential connections with each other.
Go to market timing.	There is no market release timing because the platform does not serve any commercial purposes. However, the tool was released by the beginning of 2024 in a pilot version that was already usable/accessible to its target users. It will be continuously updated with new use cases from SNS JU R&I, and it will be online for at least six years after the project's completion. However, it might last even longer depending on the financial support received from the European Commission.
IPR background	According to SNS ICE GA, beneficiaries who have received funding under the grant must adequately protect their results — for an appropriate period and with appropriate territorial coverage — if protection is possible and justified, taking into account all relevant considerations, including the prospects for commercial exploitation, the legitimate interests of the other beneficiaries and any other legitimate interests.
IPR foreground	SNS ICE project will share its IP openly, by default, under a Creative Commons (CC) Attribution-No Derivatives 4.0 International license, as far as SNS ICE is not using other parties' IP, which is regulated under different license terms.

Delving deeper into this KER, the subsequent table provides a detailed breakdown of the essential actions, roles of partners, milestones, financial considerations, and the expected impact, all of which are integral to fostering the tracker's sustainability and expansion beyond the project's end. These planned actions aim to guarantee the ongoing enhancement, flexibility, and incorporation of the tracker into upcoming projects and platforms, ultimately amplifying its significance and sway in the 6G domain. This strategic approach ensures that the tracker remains a valuable and influential tool, continually evolving to meet the demands of the future 6G landscape.

Table 2. Vertical Engagement Tracker Planned Sustainability Actions

KER #1 - Vertical Engagement Tracker	
Planned Actions	The tracker will continue to be updated by the Trust-It/COMMpla team as more projects share relevant information.
	Trust-IT will continue to maintain the platform for the next five years.
	6G-IA and EURESCOM will contribute to disseminating the outcome through their channels (6G-IA website and SNS JU website).
	Trust-IT will draft a whitepaper about the Vertical Engagement Tracker analysing the mapped use cases. All the consortium partners will be involved.
Roles	6G-IA will continue to carry out activities within the SNS JU context, and new CSA projects will be launched in the next phases of the SNS JU initiative (Phases 2 and 3). These will continue to support the activities of SNS JU R&I projects, update and improve the replicability tool and the vertical engagement tracker, and craft whitepapers and policy briefs to redefine challenges and priorities.
	Also, the SNS Working Groups, the SNS JU Office and the SNS JU Governing Board will continue to promote these tools.
Milestones	New entries in the vertical cartography will be continuously monitored and occasionally promoted through social media channels. A new questionnaire will be circulated annually among SNS JU R&I projects to receive updates.
Financials	Trust-IT's tech team will punctually ensure platform maintenance, while 6G-IA and EURESCOM staff will promote the platform through their channels. These activities will have marginal costs (about a couple of man-hours per month). However, potential improvements could happen through the sponsorship of the SNS JU initiative, thanks to new flagship CSA projects.
	Such low costs are justified by the fact that the tracker does not aim to develop commercial solutions but to support a community of projects and associations involved in the SNS JU programs, not to generate any revenues. Thus, no further resources are needed to increase the TRL as it cannot be increased further not being a market-oriented product.

2.3.2 Interoperability, Scalability and Replicability Tool

Within the SNS ICE project, the Interoperability, Scalability, and Replicability Tool targets specific challenges within the European 6G framework. The upcoming table offers a comprehensive tool analysis detailing its purpose, potential alternatives, distinctive features, and an in-depth description. It also scrutinises strategic

factors, including the target market, initial user base, competitive landscape, strategies for market entry, timing, and intellectual property rights, shedding light on the tool's strategic role in addressing 6G challenges [4].

The tool is designed to bridge knowledge gaps, enhance communication among SNS JU R&I projects, and foster innovation as the 6G landscape evolves. By integrating open-source elements and employing a flexible development methodology, the tool aims to stay relevant and useful, providing sustained support throughout the project's life cycle and beyond.

Table 3. Interoperability, Scalability and Replicability Tool Characterisation Table

KER #2 - Interoperability, Scalability and Replicability Tool	
Problem	Most research and innovation projects develop use cases to validate technical solutions. Usually, these solutions never go to the market as such, but a number of these use cases and solutions are very relevant and can be implemented in other locations. On the other hand, Digital Innovation Hubs have the objective of facilitating the digitalisation of European SMEs and are looking for solutions that could fit the end users' requirements.
Alternative solutions	Public project deliverables available on CORDIS could be a potential alternative solution, although they might lack some of the precise and specific information in the Interoperability, replicability, and scalability tools developed for SNS ICE.
Unique Selling points (USP)	To instil confidence in end-users, the objective is to create a Replicability and Sustainability Assessment Tool that can accurately assess and qualify the level of replicability of a developed use case. This tool will empower Digital Innovation Hubs (DIHs) to select the most pertinent use case, taking into consideration both the end-user requirements and the replicability level. The focus here is on the solution, the KER, and the unique value propositions it offers to the users or customers. The tool is not just about developing an assessment method; it's about providing reliable information, enabling faster and more efficient comparisons among projects, and ensuring that the values offered align with the problems being addressed. This approach ensures that the tool is not only functional but also adds tangible value to the end-users, facilitating informed decision-making and enhancing the overall user experience.
Short description	A questionnaire has been developed (see Appendix 1) based on the topics identified for each dimension, this questionnaire will be used to define the replicability level of a specific solution. For each question, a number of points is allocated, and the level will be defined according to a minimum number of points. Three levels have been pre-defined (High replicability, Medium replicability and Low replicability). They will be adjusted after running a specific pilot, which will help to identify the relevant thresholds.
	5G PPP and SNS JU have been funded by a number of projects delivering use cases and solutions. These have been collected in a catalogue which provides a description and contact details that we shall complement with the level of replicability using the tool.
	For now, the catalogue is an Excel sheet, although it might be turned into a more interactive online tool in the future.
Target market	SMEs working on 6G More than 90 DIHs are members of the SCoDIHNet. However, the Replicability catalogue could be used by anyone; SCoDIHNet[3] has already established

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[3] Learn more at https://aioti.eu/scodihnet/.

	cooperation with African DIHs to help them use European Technologies instead of others.
Early adopters	DIHs and end users SMEs in the context of the Digital Europe Programme
Market competitors	Large consulting firms could carry out a similar effort but require a much higher financial investment and use a less objective lens.
Go to market use model.	The first version of the Replicability tools is available. It has been validated through a pilot with the ASSIST-IOT[4] project, and they have already provided feedback on the tool, which is quite encouraging. Following a recent survey among the 35 SNS project call 1, 31 claim to deliver replicable solutions. As long as they will deliver, we shall use the Replicability tool to provide a Replicability level and populate the Replicability catalogue. This will be updated with new use cases/solutions developed by the projects, and anyone could pick up one or the other to replicate it. Projects developing 6G solutions will be able to download the catalogue in Excel format and browse information on already created replicable use cases in order to bridge knowledge gaps and avoid reinventing the wheel all the time.
Go to market timing.	Within two years, but it can be extended until 203 for the whole duration of the SNS JU initiative.
IPR background	According to SNS ICE GA, beneficiaries who have received funding under the grant must adequately protect their results — for an appropriate period and with proper territorial coverage — if protection is possible and justified, taking into account all relevant considerations, including the prospects for commercial exploitation, the legitimate interests of the other beneficiaries and any other legitimate interests.
IPR foreground	SNS ICE project will share its IP openly, by default, under a Creative Commons (CC) Attribution-NoDerivatives 4.0 International license, as far as SNS ICE is not using other parties' IP, which is regulated under different license terms.

Exploring further into this KER, the following table offers an extensive analysis of vital components such as necessary actions, partner responsibilities, milestones, financial aspects, and the anticipated impact. Each element is crucial in nurturing the tool's longevity and broadening its reach post-project completion. The actions outlined are meticulously planned to secure the tool's continuous improvement, adaptability, and integration into future initiatives and platforms, elevating its prominence and authority in the 6G sector. This methodical approach is designed to ensure that the tool retains its value and grows in influence, adapting seamlessly to the evolving requirements of the 6G landscape.

Table 4. Interoperability, Scalability and Replicability Tool Planned Sustainability Actions

KER #2 - Interoperability, Scalability and Replicability Tool	
Planned Actions	- Engagement of the SCoDIHNet community - Engagement of the DIH Thematic sub-networks (Photonics, Robotics, Big - Data, Smart Connectivity, AI, Microelectronics, Smart Systems, - Cybersecurity, HPC, Agriculture, Manufacturing) - Engagement of the 6G-IA community - Engagement of the AIOTI community

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[4] Learn more at the project's website https://assist-iot.eu/.

	• Completion of the Replicability catalogue with results of running projects Update the Replicability catalogue with the replicability level using the Replicability assessment tool.
Roles	6G-IA will continue to carry out activities within the SNS JU context, and new CSA projects will be launched in the next phases of the SNS JU initiative (Phases B and C). These will continue to support the activities of SNS JU R&I projects, update and improve the replicability tool and the vertical engagement tracker, and craft whitepapers and policy briefs to redefine challenges and priorities. Also, the SNS Working Groups, the SNS JU Office and the SNS JU Governing Board will continue to promote these tools.
Milestones	New entries in interoperability and replicability tools will be continuously monitored and occasionally promoted through SNS JU and AIOTI mailing lists and social media channels. A new questionnaire will be circulated every year among SNS JU R&I projects in order to receive updates.
Financials	The 6G-IA team will punctually ensure platform maintenance, while 6G-IA and EURESCOM staff will promote the platform through their channels. These activities will have very marginal costs (about a couple of man-hours per month). However, potential improvements could happen through the sponsorship of the SNS JU initiative thanks to new flagship CSAs. Such low costs are justified by the fact that the tracker does not aim to develop commercial solutions but to support a community of projects and associations involved in the SNS JU programs, not to generate any revenues. Thus, no further resources are needed to increase the TRL as it cannot be increased further not being a market-oriented product.

2.3.3 Strategic Policy Recommendations

In the context of the SNS ICE project, the strategic policy recommendations are formulated to contribute to addressing distinct challenges within the European 6G framework to the best of the project's abilities and given the project's multi-layered agenda. The forthcoming table analyses this KER, elucidating its objectives, viable alternatives, unique attributes, and a detailed description. Additionally, it delves into strategic dimensions such as the target reader, adopters, entry strategies, timing, and intellectual property considerations, offering insights into the tool's role in navigating the complexities of the 6G domain.

The tool is crafted to facilitate discussions among various stakeholders in the 6G ecosystem, support policymakers in developing strategic roadmaps, providing researchers and businesses with insights into the 5G/6G policy landscape. Adopting an adaptable development approach, the KER is positioned to maintain its applicability and utility, leveraging SNS ICE's gathered experiences to provide informed recommendations and streamline efforts in the 6G technology sector.

Table 5. Strategic Policy Recommendations Characterisation Table

KER #3 – Strategic Policy Recommendations	
Problem	To effectively deliver 6G innovation in the European Union, the European Commission needs to navigate the complex interplay of political, economic, social, and technological challenges which shape the EU's success in global markets. Challenges include targeting all right stakeholders and understanding researchers' and Telco providers' specific needs.
Alternative solutions	The creation of a focus working group within the EC would be a viable alternative, although it would take much more effort from the EC's side to understand the right actors to involve, identify the main action points, set a common agenda and coordinate efforts. In case the EC wishes to invest more money, a private consulting company could provide a similar consulting service but at much higher costs. Moreover, any commercial actor (e.g. consulting companies, lobbyists) would push for their commercial interests by providing nonobjective directions.
Unique Selling points (USP)	As a CSA project with the ambassador role for the SNS JU initiative, SNS ICE is in a privileged position to serve the European Commission's purpose of strategically positioning itself in the global 6G ecosystem. By working directly with SNS JU R&I projects and other stakeholders, SNS ICE will i) aggregate information on key innovations emerging from EU stakeholders and offer advice for promotional support in a timely manner, providing spot-on information and ii) save up time and effort to the commission by organised targeting stakeholder events as well as monitoring and analysing developments outside of the EU with regard to 6G technology road-mapping and offering relevant recommendations to strengthen the EU position in the global ecosystem.
Short description	Policy brief documents will contain feedback on policy measures and implementation suggestions. These documents will distil knowledge gained through dedicated events and data-collection processes throughout the project's course. (Also making use of the Monitoring & Analysis framework developed by the other CSA SNS-OPS. SNS-ICE has an agreement to use the output of this framework).
Target market	Primarily the European Commission, but also policymakers, national and regional authorities, researchers, and NGOs.
Early adopters	SNS JU EU Commissioners (a newly independent branch of the EU Commission)
Market competitors	Private consulting companies could provide such consulting services at a much higher fee, although they will not enjoy the same privileged position of a CSA project as an insider of the SNS JU initiative, i.e., will not have access to the same information regarding 6G R&I developments in the EU.
Go to market use model.	Concept note consisting of a unique set of recommendations for the European Commission, drawing on first-hand experience with stakeholder groups involved in 6G testing, experimentation and utilisation.
Go to market timing.	Policy briefs will be published at the end of the project's first year (M13, January 2024) and at the end of the project (M27, March 2025).

IPR background	Previous studies carried out as part of CSA project 6Gstart as part of the 5GPPP initiative and the other SNS JU CSA project SNS OPS will serve as a basis for the new policy briefs. However, all this material is available in the projects' public deliverables, and therefore, it might qualify as IPR.
IPR foreground	All contributing partners will be mentioned as editors/authors under the people who represent them.

Delving deeper into this KER, the subsequent table provides a thorough evaluation of critical components, including required actions, responsibilities of partners, milestones, financial considerations, and the expected impact. Each of these elements is vital for enhancing the longevity of the KER and extending its influence beyond the conclusion of the project. The outlined actions are carefully formulated to ensure the KER's ongoing development, versatility, and integration into future policy initiatives, thus increasing their relevance and impact within the 6G sector. This systematic strategy aims to maintain the value of the policy recommendations while also amplifying their influence, offering strategic insights to navigate the changing demands of the 6G landscape.

Table 6. Strategic Policy Recommendations Planned Sustainability Actions

KER #3 - Strategic Policy Recommendations	
Planned Actions	• Policy briefs will be sent to the European Commission for consideration. • Policy briefs will also be promoted through 6G-IA and EURESCOM's web platforms and social media. • Upon approval from the European Commission, physical and virtual events will be held to disseminate the key outcomes/messages. Potential modifications will be implemented by 6G-IA and will involve other consortium partners according to their needs.
Roles	Trust-IT will create a template layout for the policy briefs and adjust them if needed. 6G-IA and EURESCOM will promote the documents through their channels (e.g. news digests, websites, and social media).
Milestones	The impact of the policy briefs will be monitored by 6G-IA through its engagement channels with the European Commission branch involved in the SNS JU activity. Depending on their relevance for the EC, Policy briefs might also be presented at dedicated events such as project-related webinars and workshops. The first policy briefs will also be rediscussed at the next physical events (e.g. EuCNC, 5G Techritory) to be re-elaborated in their newer versions.
Financials	As part of its flagship role within the SNS JU initiative, 6G-IA will punctually monitor the implementation of the planned activities and potential improvements in the quality of the policy recommendations that could result from new financial revenues obtained through new CSA projects. Such low costs are justified by the fact that the tracker does not aim to develop commercial solutions but to support a community of projects and associations involved in the SNS JU programs, not to generate any revenues. Thus, no further resources are needed to increase the TRL as it cannot be increased further not being a market-oriented product.

2.4 Exploitation Roadmap

Upon defining the KERs as previously described and identifying the necessary actions for sustainability, it becomes imperative to construct a comprehensive roadmap. This roadmap should outline the critical steps for implementation and assess the potential risks associated with each action, along with their corresponding mitigation strategies. By doing so, we can proactively address potential challenges, ensuring the successful exploitation of all three KERs. This approach guarantees that any issues are dealt with promptly, safeguarding the functionality and validity of the KERs for future applications. Furthermore, this strategic planning contributes to the robustness of the project, enhancing its resilience and ensuring that the KERs remain valuable assets in the long term. This proactive risk management and planning are crucial for maintaining the integrity of the KERs and ensuring their continued relevance and effectiveness in future endeavours.

Table 7. Exploitation Roadmap

KER	Action Name	Aim	Beginning	End	Risks	Mitigation
ALL KERs	KERs Development	KERs further development and improvement	January 2023	At least March 2028	Partnership Risk factor: Disagreement on further collaboration between solutions providers and consortium members	Shift effort within the consortium according to the partner's expertise, competencies and network
KER #1 - Vertical Engagement Tracker	ICT Maintenance	Ensure that the tracker functions properly	M13 (January 2024)	At least January 2028	Technological Risk Factor: Lack of ICT maintenance for Verticals Engagement Tracker	SNS ICE partner Trust-IT guarantees seamless maintenance of its platforms for up to four years after project completion of the action
	Projects involvement	Guarantee that SNS JU RIAs use the tool	M13 (January 2024)	At least January 2028	Market Risk Factors: Lack of interest from projects to share their data	Most project consortium members have signed memorandums of agreement to avoid these issues, and further intervention from 6G-IA and the European Commission might help further mitigate these risks
	Platform engagement	Guarantee engagement on the platform	M13 (January 2024)	At least January 2028	Market Risk: Lack of engagement on the platform	The platform will be advertised among the SNS JU large community and promoted in dedicated events with live demonstrations.
	Platform compliance	Guarantee the tracker GDPR compliance	M13 (January 2024)	At least January 2028	Regulation Risk: Vertical Engagement Tracker GDPR Compliance	The platform is hosted on Trust-IT servers based in the EU, and GDPRcompliant plugins will be used (HotJar and Matomo)
KER #2 - Interoperability, Replicability and Scalability Initiative	Results	Boost the tool's applicability	M13 (January 2024)	At least January 2028	Market Risk Factors: Worthless results: lack of actual implementation and transferability of	Several projects are testing open-source solutions that are easily replicable.

					mapped use cases or lack of response from projects	
	Projects involvement	Guarantee that SNS JU RIAs use the tool	M13 (January 2024)	At least January 2028	Market Risk Factor: Lack of interest from projects to share their data	Most projects consortium members have signed memorandums of agreement to avoid these issues, and further intervention from 6G-IA and the European Commission might help further mitigate these risks
	Target users	Guarantee that the right users are properly reached	M13 (January 2024)	At least January 2028	Market Risk Factor: Inability to get the right target users	Advertise the tool among the DIH network plus relevant associations such as AIOTI and 6G-IA
KER#3 - Strategic Policy Recommendations	Content quality	Ensure that the policy recommendations are up to date and in line with the EC's expectations.	M13 (January 2024)	At least March 2025	Technological Risk Factor: Request for integrations/revisions of output	The SNS ICE consortium will share expertise and knowledge to assess any revision request from the European Commission
	Dialogue with policymakers	Ensure that the European Commission makes use of the recommendations for its future policy-making efforts.	M13 (January 2024)	At least January 2028	Market Risk Factor: Lack of engagement from the users (Commission)	Maintain a continuous dialogue with the European Commission to set common goals and targets

Each KER implementation action will follow a structured development process as defined below.

- **Refinement Phase**: This preliminary stage focuses on refining each KER's fundamental capabilities, targeting enhanced robustness and reliability by November 2024.
- **Innovation Phase**: Targeting mid-term goals through mid-2025, this phase involves integrating innovative elements into the KERs. It aims to align them more closely with real-world industry demands, thus boosting engagement and practical utility.
- **Sustainability Phase**: Envisioning a long-term trajectory, this phase is dedicated to continual development, focusing on securing sustained funding. Strategies include exploring revenue channels through premium offerings and intensified stakeholder involvement.
- **Risk Management**: Implementing these phases involves navigating various risks, which have been thoroughly identified and correlated with each KER. Given these risks' diverse yet interlinked nature across the three KERs, a cohesive and strategic approach to risk management is imperative.

2.5 Preliminary Conclusions and Future Actions

Building on the previous paragraph's emphasis on risk assessment and mitigation in the exploitation of KERs, it is crucial to recognise that preparing for exploitation is an ongoing endeavour that extends beyond the lifespan of any given project. In this specific instance, the following actions should be considered for the successful exploitation of SNS ICE main KERs and to ensure their long-term sustainability.

- **Sustainability planning**: by the end of SNS ICE, the project KERs will still not possess full maturity in terms of the expected impact. Thus, it is essential to plan and define the activities to run after the end of the project.
- **Dissemination activities**: properly set up and plan the dissemination activities to engage as many users as possible for the ICT platforms and policy recommendations. Utilisation rates must be well-tracked since if the platform is not populated and the policy recommendations are not used, then the impact will not be achieved.
- **Consortium updates**: allocating specific time slots or periods to discuss and finalise the comprehensive implementation roadmap for each KER is vital to ensure thorough readiness. During these discussions, special focus must be placed on scrutinising the actions required and the associated costs, ensuring that every aspect of the implementation is meticulously planned and budgeted. Clear and unequivocal commitments regarding roles and responsibilities must be established, creating a well-defined action plan that leaves no room for ambiguity.
- **Risk monitoring**: devote some time to analysing risks, identifying mitigation actions, and associating them with value to monitor their relevance. Potential barriers and risks for exploitation must be recognised and countered with appropriate measures.
- **Adaptability to Context**: ensure that the project remains adaptable and aligns with the prevailing economic, environmental, societal, and legal landscapes. This flexibility is crucial for the project's relevance and success.
- **Validation of Consistency**: regularly assess and validate the coherence between the chosen market entry strategy, competitive landscape, early adopters, planned exploitation activities, and the anticipated impact of the project. Enhance the detailing of Key Performance Indicators (KPIs) and milestones to meticulously define the roadmap, incorporating all necessary activities to facilitate the utilisation of the selected KERs.
- **Assessment of Value Chain**: emphasise the project's role within the broader value chain, ensuring this perspective is integral to determining the most effective future collaborations, both as a partnership and

as individual entities. This approach ensures strategic alignment and maximises the project's potential for success.

This level of precision and clarity in planning is essential for successfully exploiting SNS ICE's KERs and ensuring their sustained functionality and relevance in future applications. By taking these proactive steps, the project positions itself to navigate potential challenges effectively, safeguarding the long-term value and impact of the KERs.

3 Policy Briefs

3.1 Context and Methodology

In the SNS ICE project, the adopted methodology for crafting policy briefs aims to delve into the experiences and insights brought about by 6G technologies across various industries. These are pivotal in shaping the project's narrative and impact [5] The first documents will be published by March 2024, condensing and summarising the main information and learnings collected by the project throughout its first year of existence. The three main topics tackled by the policy briefs will be 1) the relationship between SNS JU and nationally-sponsored 6G initiatives, 2) 6G and sustainability, and 3) 6G and vertical industries.

In this context, deliverables D2.1 "Identification of European 6G R&I stakeholders and trends" [6] and D3.2 "Initial Trends Analysis in Vertical Sectors" [7], will be the main reference for the construction of policy briefs, chosen for specific reasons:

- **D.2.1 Identification of European 6G R&I stakeholders and trends**: this deliverable focuses on identifying European 6G R&I stakeholders and trends, offering an overview of these stakeholders, their collaboration agreements, and relevant trends in European 6G R&I for SNS JU.
- **D.3.2 - Initial Trends Analysis in Vertical Sectors**: this deliverable provides an initial analysis of trends in various vertical sectors, detailing the digital transformation processes in these sectors and their implications for SNS JU, including technological roadmaps, user needs, and policy measures.

Utilising insights from these deliverables, the policy briefs aim to present actionable recommendations for stakeholders in the 6G sector, covering normative, environmental, and market aspects. The approach to developing these briefs involves analysing and distilling critical data from each deliverable, focusing on challenges, opportunities, and expert insights.

Just as important for these policy briefs will be the targeted co-creation workshops held during the flagship policy event 5G Techritory Forum (18-19 October 2023, Riga), co-organised by SNS ICE's partner, VASES. These events tackled three pivotal topics for the successful deployment of 6G applications, both from a scientific and socio-political standpoint. The three main events were:

- **National Initiatives**: Approaches to European Collaboration for 6G Research: the event focused on fostering cooperation between various European national initiatives dedicated to 6G research. It invited industry, academia, and government participants to discuss enhancing collaboration in 6G development across Europe. The workshop included presentations from various national and European R&I initiatives about potential collaboration opportunities and featured group discussions to identify and agree on collaborative actions. The main goal was to identify effective collaboration methods among European initiatives and address challenges hindering such cooperation.
- **5G for Sustainability**: the event addressed the sustainability challenges associated with the upcoming 6G system. It examined sustainability from environmental, social, and economic viewpoints, aiming to shape a sustainable and user-centric future system design. Supported by the SNS-ICE project within the Horizon Europe Joint Undertaking SNS framework, the event also featured participation from the Hexa-X-II project, a key player in 6G standardisation for the coming years under SNS JU. Experts from GSMA, 6GIA, ESA, and others contributed to the comprehensive discussion of this critical topic, engaging the audience actively through dedicated segments of the program.
- **SNS ICE: 5G for Verticals**: From Large-Scale Trials to Adoption, Driving Economic Value in Europe: the workshop reflected on the journey of mobile technology development, discussing technology readiness and go-to-market timing for commercial viability. This process encompasses research, standardisation, validation trials, and network deployment. This co-creation event showcased the experiences of 5GPPP and SNS JU in developing mobile technologies. Members of 6G-IA shared outcomes from trials validating vertical use cases, while industrial players discussed their experiences in implementing 5G in the real world.

The three events directly engaged with stakeholders who have firsthand experience with 6G technologies. This approach ensured that the collected insights were genuine and reflected real-world applications. In developing policy briefs, this methodology aligns with the project's timeline, drawing from in-depth research and analysis to inform and guide policy recommendations.

This approach allows to draw meaningful connections and craft comprehensive policy-oriented documents. Project deliverables provide a qualitative, experiential perspective on technology deployment, while co-creation events allow for a more interactive approach among stakeholders, collecting different insights. Policy briefs translate all these experiences and project findings into actionable, strategic insights for policymakers and industry stakeholders. Together, they present a unified and comprehensive picture of the project's impact, significantly contributing to the broader discourse on technological advancement in the 6G domain.

3.2   Framework for policy briefs development

After illustrating the methodology, a phase-based strategy has been formulated to develop policy briefs. This approach is aligned with the project's timeline, ensuring the production of the first policy briefs by March 2024 and a second edition by the end of the project.

- **Phase 1 - Integration of Project Deliverables**: at the outset, the policy briefs are grounded in the vast information amassed from the already mentioned project's deliverables D2.1 [6] and D3.2 [7]. These documents, replete with detailed findings and analyses, are set to serve as fundamental resources for formulating policies. Additionally, insights derived from user stories, as featured in various sections of the project's documentation, are to be integrated. This amalgamation ensures that the policy briefs are anchored in theoretical research and resonate with practical applications and real-world experiences.
- **Phase 2 - Development of Policy Briefs**: after the deliverables are finalised between December 2023 and January 2024, the focus will shift towards developing the policy briefs. These briefs address the principal challenges and themes identified in the white paper and other critical deliverables. The development process will rely on the extensive research and analysis previously conducted within the SNS ICE project, thus ensuring that the briefs are insightful and relevant to the ongoing developments in the 6G field.
- **Phase 3 - Feedback Collection from Experts**: after a first draft of the policy briefs is outlined internally by the SNS ICE consortium, domain experts who participated in the 5G Techritory Forum will be asked to contribute, bringing their insights and expertise to the documents to improve the document's overall quality.
- **Phase 4 - Finalization and Integration**: the final version of the policy briefs will incorporate a comprehensive synthesis of the project's overarching findings. These briefs will encapsulate the key challenges, insights, and breakthroughs uncovered throughout the project, integrating feedback and input collected from external stakeholders. Completing these policy briefs marks a significant contribution to the collective body of knowledge and recommendations of the SNS community, offering strategic guidance and insights for policymakers and key stakeholders in the 6G sector.

3.3   Strategy for data collection and future developments

The structured approach outlined here ensures that the resulting policy briefs are underpinned by a thorough understanding of the subject matter and are also practical and applicable in the broader context of evolving 6G technologies. The entire process is designed to yield comprehensive, informative, and actionable results, catering to the needs and expectations of the diverse stakeholders involved in the realm of 6G innovation and implementation.

The ongoing development and refinement of user stories and policy briefs are crucial elements of this methodology. To achieve this, a comprehensive and dynamic strategy will be employed, focusing on the

relevance and impact of these documents. A core feature of this strategy is organising co-creation events engaging domain experts, thus prioritising gathering a wide array of insights. Methods such as interactive workshops, in-depth interviews, and surveys will be utilised. These varied forms of engagement are designed to ensure that the narratives and analyses produced capture a wide spectrum of experiences and viewpoints.

A crucial part of maintaining the currency and foresight of our content is the establishment of strategic partnerships and a consistent presence at policy events such as 5G Techritory Forum. This level of engagement is essential for keeping up with current trends and predicting future developments in technology. Furthermore, incorporating feedback from both users and experts is a key strategy in maintaining relevance and improving the quality of our content. Such a feedback loop is vital to ensure that the information provided effectively informs and guides the intended audience.

3.4   Forthcoming policy briefs

While the deliverables produced during the first project's year established the groundwork for key challenges, upcoming policy briefs will explore specific areas of interest, adapting to the changing technological and policy environments. Topics for the briefs will be selected and prioritised based on their potential impact, urgency, and stakeholder interest, refined through interviews and consultations to ensure a broad range of perspectives.

As the project progresses in creating the first three policy briefs, six potential topics will be identified, each addressing a crucial aspect of the 6G ecosystem. These topics, outlined with abstracts, will serve as the foundation for the policy brief development process. Following the outlined approach, a rigorous selection and refinement process will be conducted, culminating in the creation of four comprehensive policy briefs by M27. These briefs may undergo further modifications, such as merging or reorienting topics, to ensure they effectively address the most pertinent and current issues within the 6G landscape. This allows to remain responsive to the following research and societal needs:

1. **Enhanced European Collaboration**: Fostering stronger cooperation among European national initiatives for 6G research, including industry, academia, and government sectors.
2. **Inter-sectoral Communication**: Establishing effective communication channels between different sectors (industry, academia, government) for streamlined collaboration in 6G development.
3. **Addressing Cooperation Challenges**: Identifying and overcoming challenges that hinder cooperation among European initiatives in 6G technology.
4. **Sustainable 6G Systems**: Developing 6G systems with a focus on sustainability, considering environmental, social, and economic impacts.
5. **User-Centric Design**: Shaping future 6G systems to be user-centric, ensuring they meet societal needs and preferences.
6. **Standardisation and Regulation**: Discuss and contribute to standards for 6G technology, ensuring consistency and compatibility across Europe.
7. **Practical Implementation of 5G and Beyond:** Sharing real-world experiences and outcomes from trials and deployments of 5G technology, paving the way for 6G adoption.
8. **Economic Impact and Value Creation**: Understanding and maximising the economic value driven by 5G and future 6G technologies, especially in terms of market readiness and commercialisation strategies [8][9].

4   Updates on Communication and Outreach Activities

SNS ICE's communication strategy has been defined in deliverable D4.1: Dissemination, Communication and Exploitation Plan [3] and the progress on these activities is presented here. In general, community building and audience engagement have been a continued activity since the inception of the project. Communication and outreach activities represent an essential effort of the project to raise awareness and maximise the visibility of the project results and progress among key stakeholders.

4.1   Audience Trend Analysis and Evolution

CSA Project SNS ICE continues the online communication, dissemination and promotional activities via the project's webpage[5] established on the SNS JU website[6] and its social media channels LinkedIn, Platform X(Twitter) and YouTube, established in M1. These communication channels are established for the promotion of project activities on a regular basis to foster European and international cooperation.

SNS ICE webpage

The web page and social media channels have a dual purpose, with the primary objective to communicate and disseminate to our audience on a regular basis and establish a connection with them for feedback and synergies.
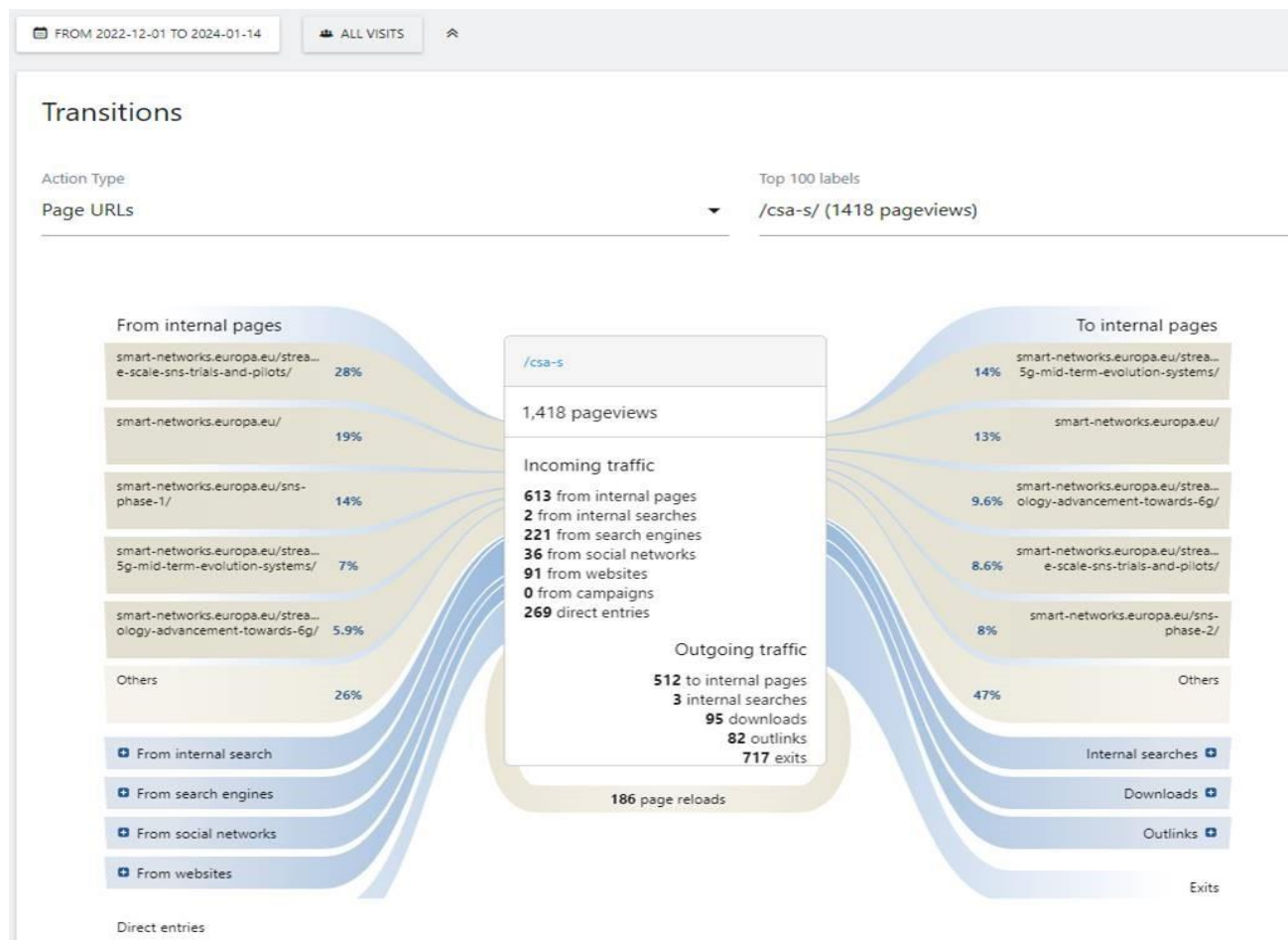

Figure 1. Webpage visitors' analytics

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[5] https://smart-networks.europa.eu/csa-s/#SNS-ICE
[6] https://smart-networks.europa.eu/missions-and-objectives/

Figure 1. Webpage visitors' analytics shows the flows of visitors from the internal links of SNS JU to the two CSAs, SNS ICE and SNS OPS, with an overall of 1,418 page views. There are more than 300 unique visitors to these pages, while others are returning visitors. The pages have more than 30 downloads, including the project's newsletter and deliverables so far, and the average time spent is 1 minute and 27 seconds, which shows that the audience is quite interested in the content and is curious about the project.

The visitors visiting the pages come from Germany (43), Greece (30), Spain (30), Italy (27), France (19), Latvia (16), Switzerland (11), Taiwan (10), the United States (10) and Belgium (9). They are mostly desktop visitors while a few smart phone users also visited the pages.

Figure 2. Webpage downloads analytics below shows the external website links from which these visitors land on the web page and what interests them. There are several file downloads from the project that include newsletter and project deliverables.
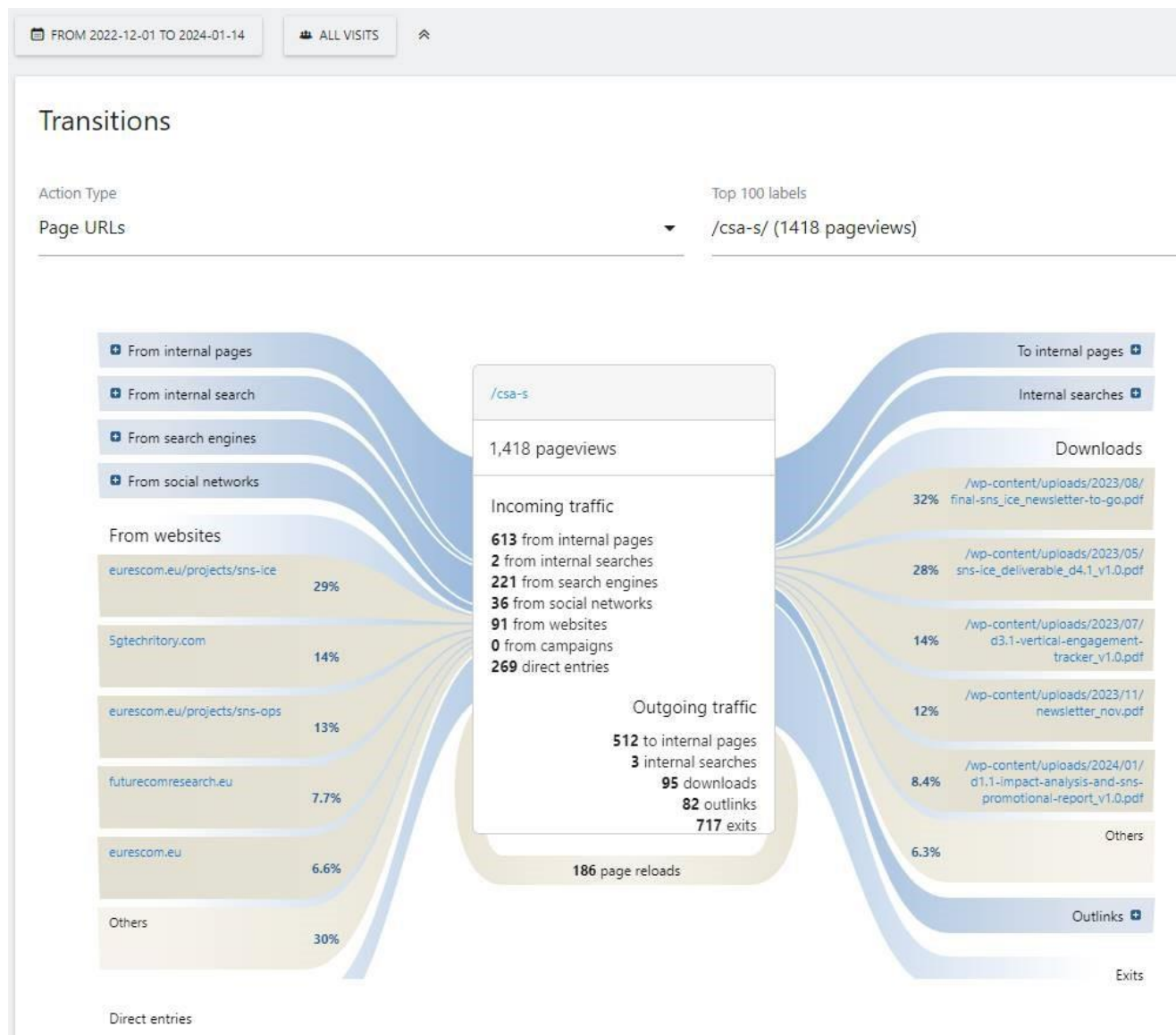

Figure 2. Webpage downloads analytics

Social media Platforms

Different social media bring different audiences to the platform. With the objective of connecting with the target audience instantaneously in a casual way, we use the platform X, while LinkedIn is used more for scientific purposes and to connect in a professional way. YouTube is created for the project with the purpose of explaining the activities of the SNS ICE project through videos. This is important due to information overload and the limited attention span of the audience. The project follows a dynamic scheme via its social media channels and adapts on the basis of audience response and engagement, which are influenced by a variety of factors such as likes, visits, re-posts, etc.

The audience trends and analysis are observed on the social media platforms, namely LinkedIn and X. Together, these social media channels are used to share important activities of the project like participation in the event, presentations, SNS ICE podcast episodes, newsletters, videos, etc., to promote and adapt agreed SNS messages in Europe as well as for global audiences. These also include echoing the SNS JU news.

LinkedIn

LinkedIn allows to reach a professional audience with more elaborate news and/or specific event highlights. It provides the audience with the possibility to share opinions on issues that matter to them. This social network targets more professional and technical audiences and connects the project with specialised ICT profiles that could be potentially interested in collaboration with SNS ICE or other SNS JU projects.

The dedicated B2B SNS ICE LinkedIn page has been extensively used for networking purposes, enabling the promotion of the project activities, especially among the ICT industry and other target audiences. Figure 3. SNS ICE LinkedIn page below shows the current homepage of SNS ICE's LinkedIn group with the posts captured that feature important dissemination items, namely newsletter and podcast from the project and their respective engagement.

SNS ICE LinkedIn page counts 266 followers and more than 65 posts when writing this deliverable. Figure 4. Webpage downloads analytics provides a glimpse of the follower metrics for the first year of the project and how the project gained followers over a period of time. All the followers are organic followers and belong to diverse backgrounds, namely: Education 116 (24.9%), Research 50 (10.8%), Engineering 45 (9.7%), Business Development 44 (9.5%), Community and Social Services 27 (5.8%), Consulting 21 (4.5%), Information Technology 15 (3.2%), Product Management 13 (2.8%), Program and Project Management 10 (2.2%), Operations 9 (1.9%).
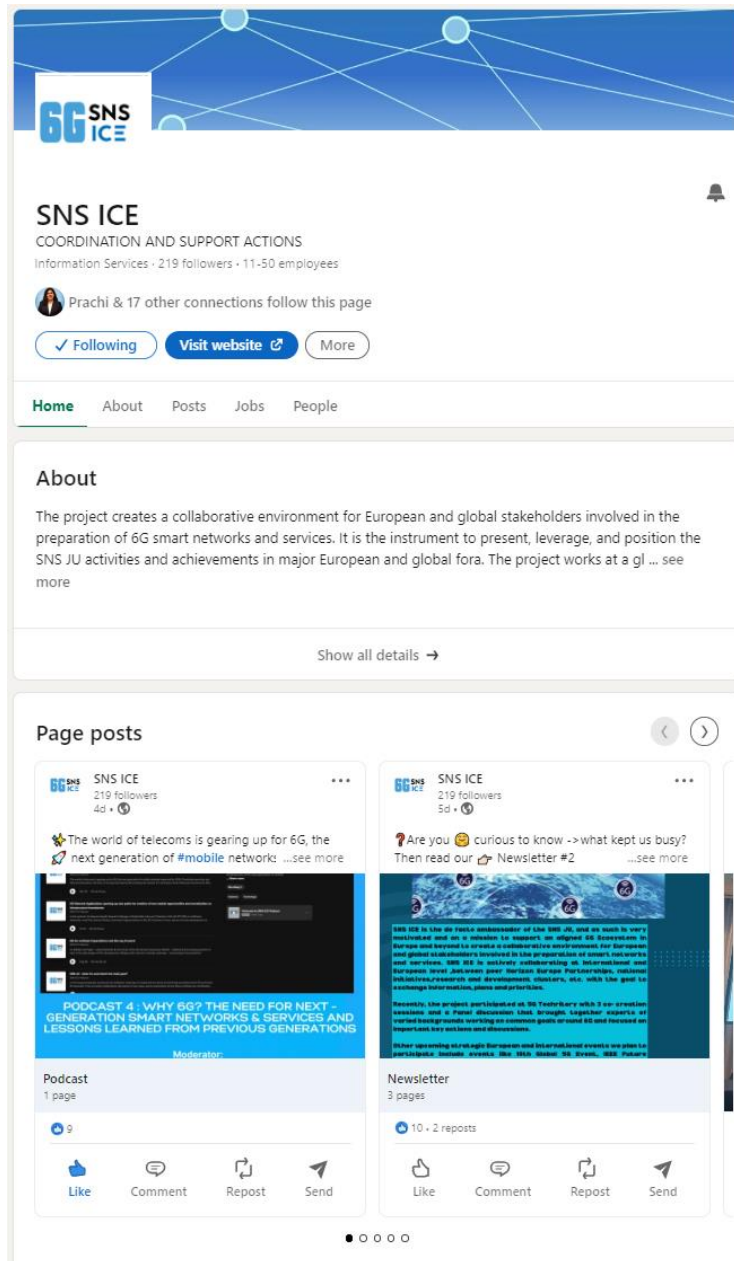
Figure 3. SNS ICE LinkedIn page

The SNS ICE communications strategy is aimed at promoting European/SNS JU achievements on a global level. SNS ICE followers have a broad demographic profile covering the following regions: Brussels Metropolitan Area, Belgium 14 (6.4%) Greater Rome Metropolitan Area, Italy 12 (5.5%) Greater Barcelona Metropolitan Area, Spain 11 (5%), The Randstad, Netherlands, Netherlands 10 (4.6%), London Area, United Kingdom, United Kingdom 10 (4.6%), Athens Metropolitan Area, Greece 9 (4.1%), Greater Turin Metropolitan Area, Italy 8 (3.7%), Greater Pisa Metropolitan Area, Italy 6 (2.7%), Greater Paris Metropolitan Region, France 5 (2.3%), Greater Istanbul, Turkey 4 (1.8%).
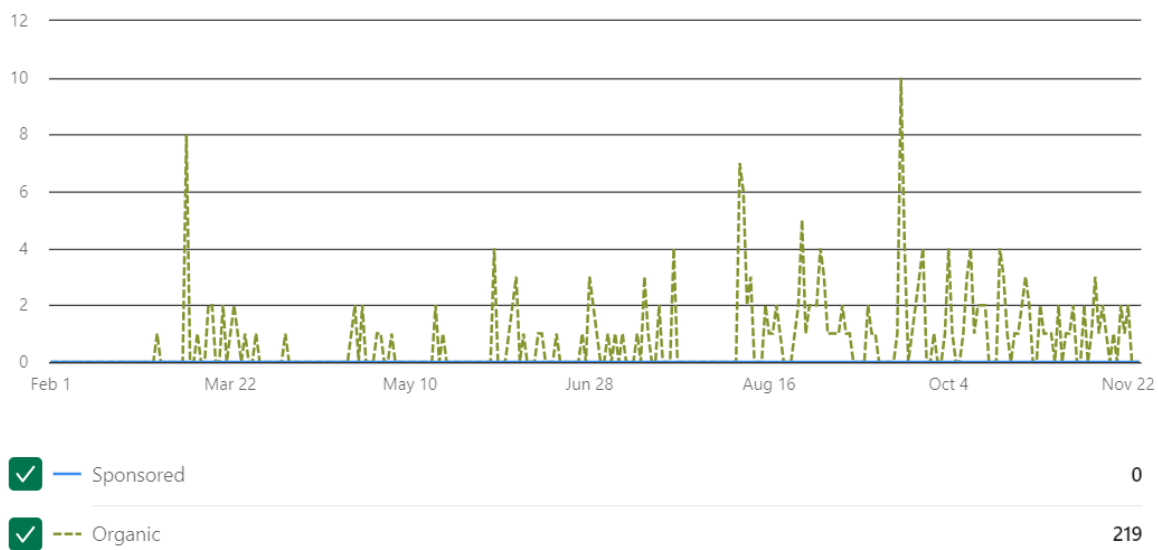
Follower metrics ⊘

Figure 4. Webpage downloads analytics

Figure 5. Engagement rate for the first year of the project below shows the engagement rate of the project since the launch of the LinkedIn page. The project has 544 reactions on various posts with multiple comments and 45 re-posts, which clearly shows that the audience finds the content interesting and valuable and thus likes to share it with their network. It is also important to note and recognise that no external or paid promotion activities have been taken.

Highlights

Data for 2/1/2023 - 11/25/2023

544
Reactions

7
Comments

45
Reposts

Metrics

Engagement rate ▼

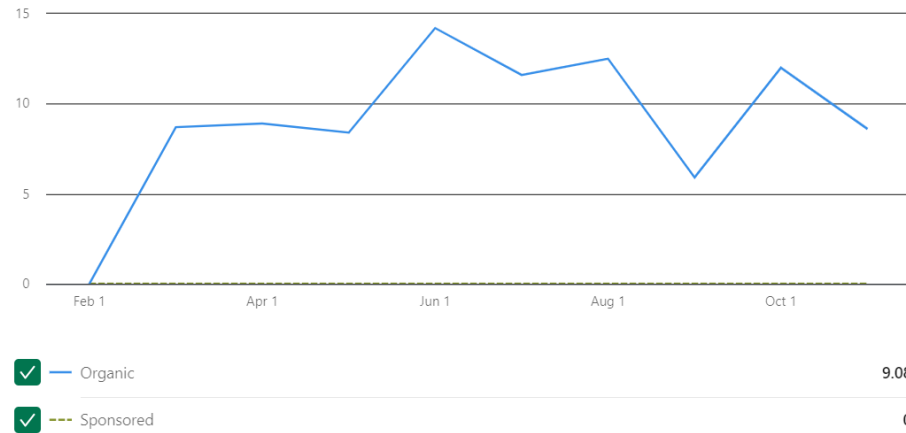|	Organic	9.08
	Sponsored	0

Figure 5. Engagement rate for the first year of the project

Visitor highlights ❓

465
Page views

215
Unique visitors

16
Custom button clicks

💡 Pages that post at least once a week see 5x more followers. **Start a post**   ✕

Visitor metrics ❓

Page views ▼   All pages ▼ | All filters

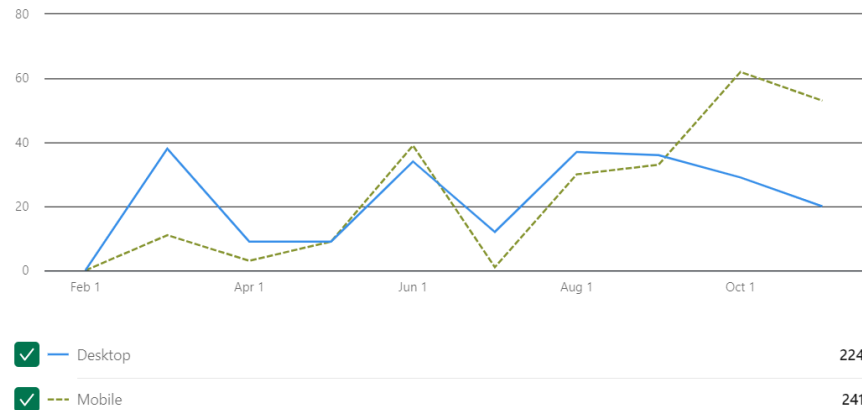|	Desktop	224
	Mobile	241

Figure 6. Visitors Analytics

Figure 6. Visitors Analyticsabove provides the visitor analytics for the SNS ICE LinkedIn page, showing the desktop and mobile users and a significant increase in the click-through rate. There are 14,253 impressions of the posts so far. There have been 465 page views with 215 unique visitors. The custom clicks have been low, but we plan to improve it in the coming months.

Platform X (former Twitter)

The SNS ICE X account[7] is used to amplify communications (both B2B and B2C) to a large community of active stakeholders and propagate news and project developments. The X platform is used in a different fashion by the project in comparison to the LinkedIn platform. Engaging via short messages, tweets are made more frequently about the events and updates that come from those activities. Regular X posts focus on attracting and engaging with target audiences, leading to establishing a trusted SNS ICE network, enlarging the outreach to broad and targeted audiences.

Content is posted regularly to provide followers with relevant information about topics related to the project. Also, information posted by other accounts is re-tweeted and liked to generate interaction with key accounts while also amplifying the scope of the content offered by project SNS ICE. Figure 7. SNS ICE X page below shows the SNS ICE platform X page with 22 followers and 52 following.
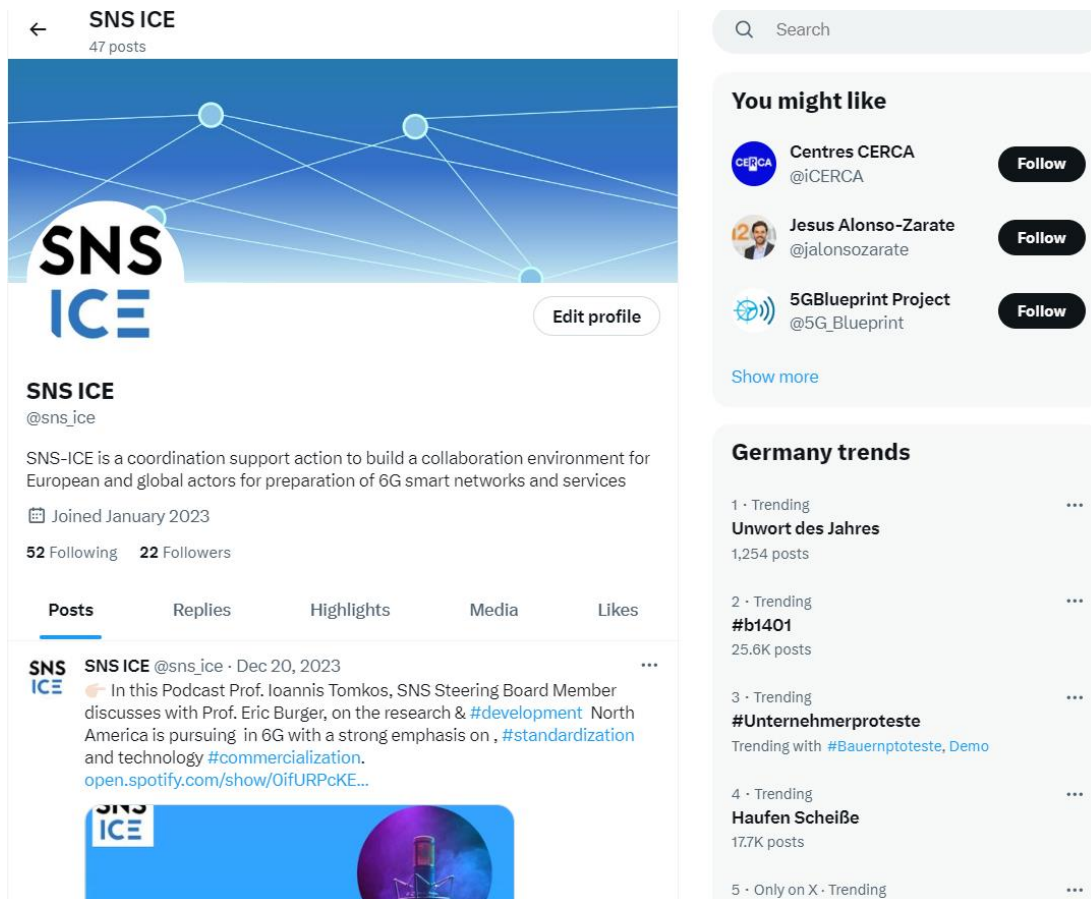

Figure 7. SNS ICE X page

The number of followers is quite low on the platform X due to the fact that audience doesn't follow this platform regularly, especially after the change from Twitter to X, the scientific audience of this platform has been

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[7] https://twitter.com/sns_ice

drastically decreased, which has lowered the overall interest. Stakeholders in the EU and global R&I seem to favour LinkedIn more.

X also has a restriction of a maximum of 140 characters and sometimes shares the message/thoughts with a maximum of 140 characters. to promote becomes difficult. Other reasons that are also responsible for a lower number of followers are the advertisements that pop up on the page and may not be relevant (as algorithms are still in the experimentation phase) and distract the user. Although it appears that the platform providers continue to experiment with new ways to boost user numbers and engagement. Hope this will be improved in time.
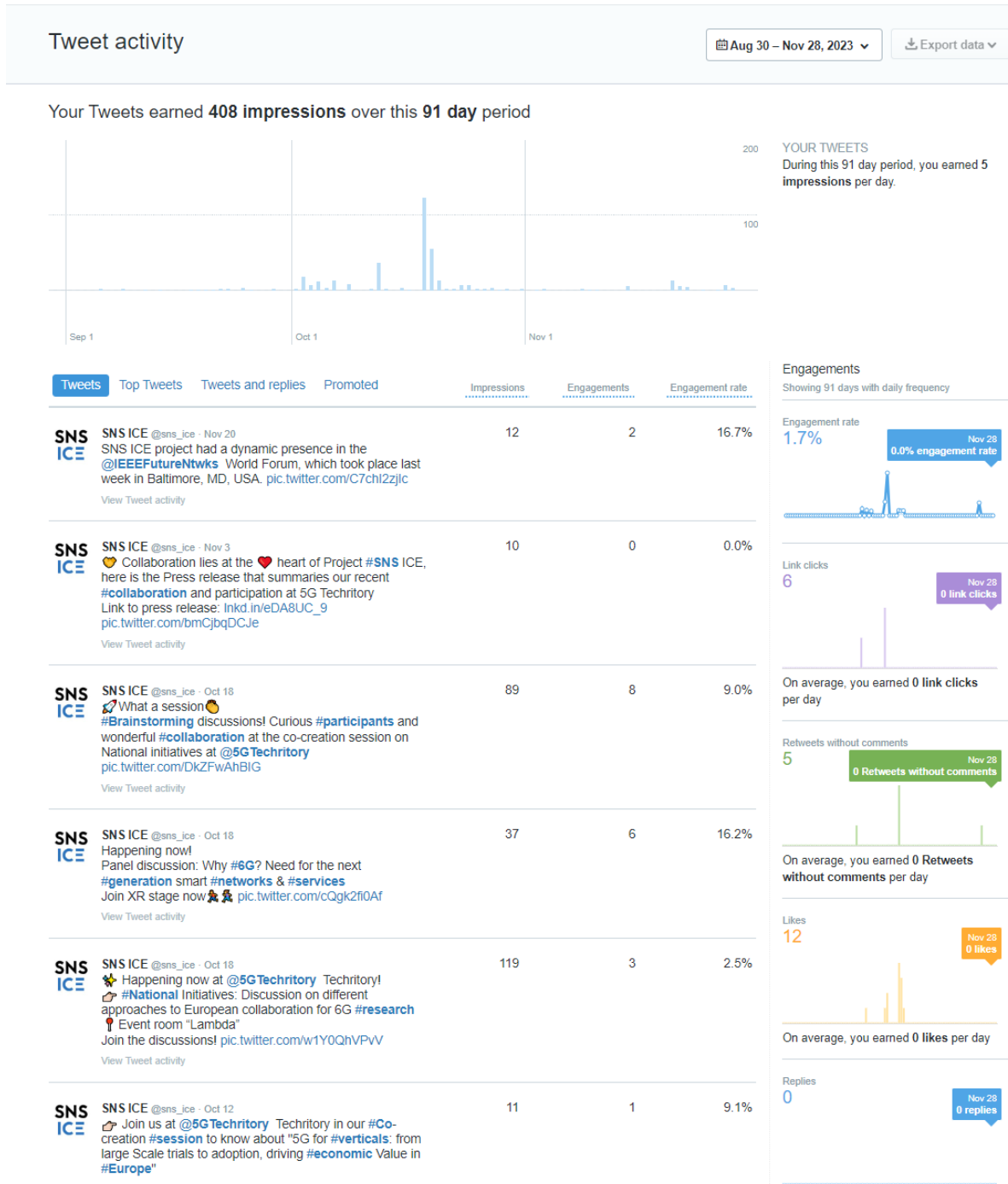

Figure 8. X analytics

Figure 8. X analytics shows the overall follower performance of the project SNS ICE account on X. From the start, a total of 47 tweets have been made by the SNS ICE account. Of these 47 tweets, eight have the best rate of interactions of the last trimester.

You Tube

YouTube is a popular online video-sharing platform that allows users to upload, view, and share videos. This makes it the most favoured platform among all age groups. It is becoming a go-to-place for people with niche interests and who like to learn and explore. The purpose of the project SNS ICE on the YouTube platform is to upload different types of videos, like recordings of webinars produced by the project partners, communicate the progress of the developments, and covering organised events visually. The most recent update is on the takeaways from SNS ICE co-creation events at the 5G Techritory Forum 2023. It also includes video interviews with partners presenting and explaining the project and their contribution. Figure 9 provides the overview of the page and the available videos.
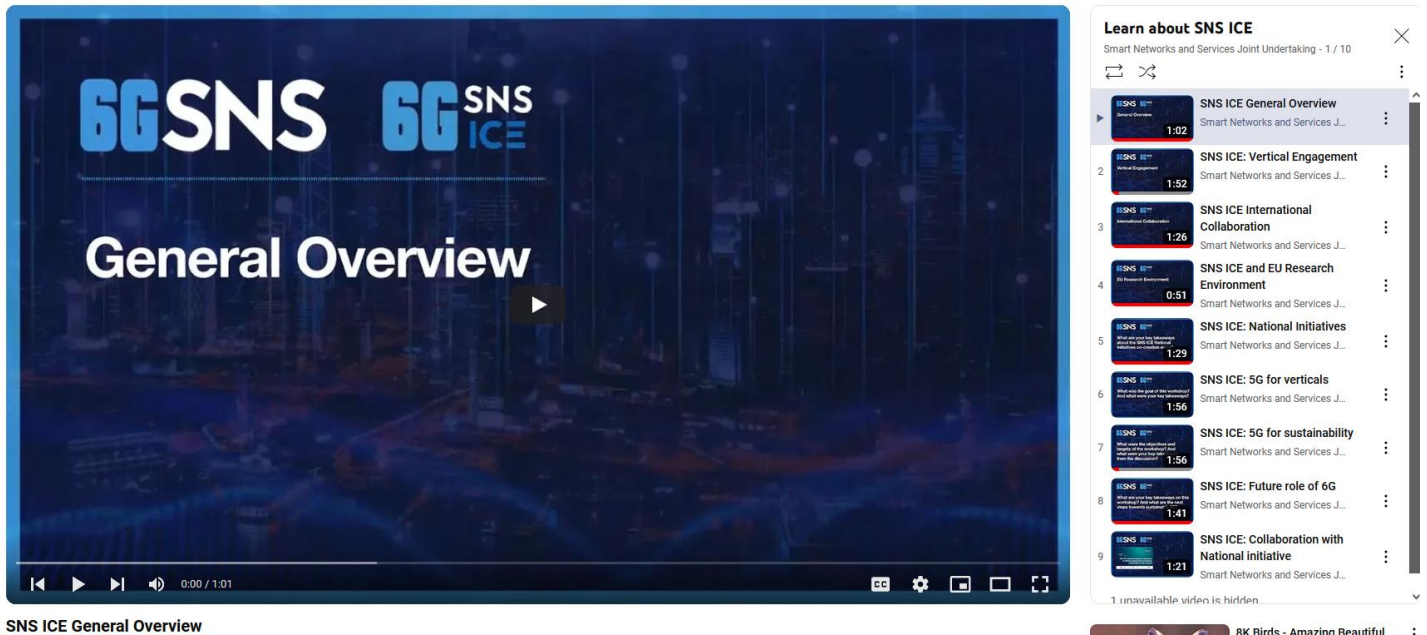

Figure 9. SNS ICE YouTube channel

So far, SNS ICE has 10 videos on the YouTube channel (most of them recently uploaded) and respective views are shown in Figure 10. SNS ICE YouTube performancewhile Figure 11. SNS ICE videos views provides the statistics showcasing a total view count of 266 views.
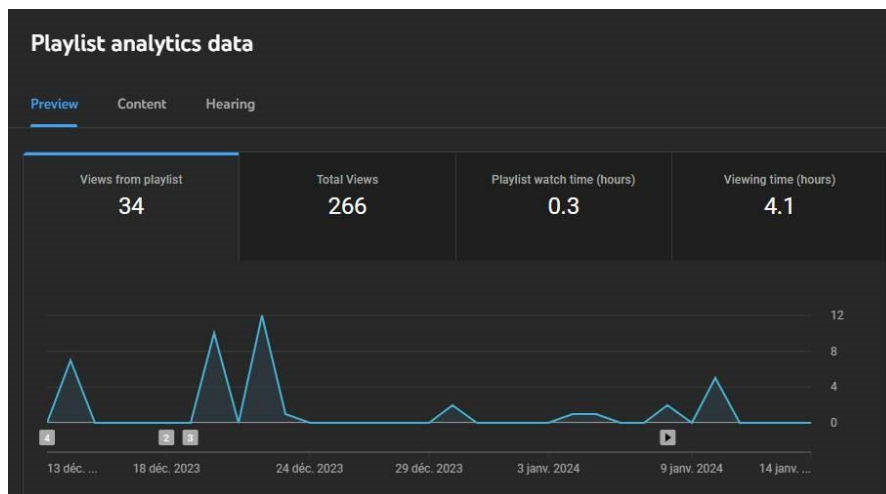
Figure 10. SNS ICE YouTube performance
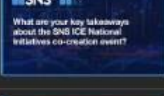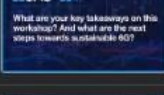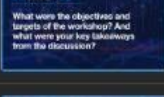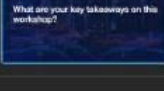
Figure 11. SNS ICE videos views

4.2 Main highlights and Achievements

The SNS ICE project is the ambassador of SNS JU, and has a challenging task to collect, adapt and communicate SNS JU highlights and achievements to a diverse set of audience. The SNS JU is part of the European and global 6G ecosystem that aims to establish a leading position in the development of future smart networks and services. The main objective of SNS ICE is to open and maintain constructive dialogues, monitor and report to the SNS stakeholders (Figure 12. SNS ICE cooperation stakeholders) via MoUs, technological breakthroughs, organise European and global events, promote the SNS RIA (Research & Innovation actions) and IA (Innovation actions) project results, related trends as well as the policies and strategies of the SNS GB (i.e., including public and private sides priorities).

Figure 12. SNS ICE cooperation stakeholders

Below, a few highlights and achievements of the project are mentioned that indicate the progress achieved towards building new partnerships and nurturing the existing ones.

- Under **"EU Initiatives"** 6G-IA signed a Memorandum of Understanding (MoU) with 6G Platform Germany[8] to strengthen the collaboration with national EU initiatives and to jointly address the upcoming challenges of 6G R&D.

- Under **"EU Partnerships"** 6G Smart Networks and Services Industry Association (6G-IA) and HiPEAC (High Performance, Edge and Cloud computing) share synergies on the collaboration activities in Europe for researchers, industry and policy related to computing systems through the common organisation of relevant events

- Under **"Peer Associations"** The 6G Smart Networks and Services Industry Association (6G-IA), and the 5G Media Action Group (5G-MAG) signed a Memorandum of Understanding (MoU) to collaborate on topics of mutual interest in the field of next-generation communication networks, systems and applications. There was a **press release** on the same.[9]

- Under **"Standardisation"** activities SNS JU had a strong presence at the **ETSI research conference this year**[10] where the SNS JU projects presented their standarisation ideas and roadmaps. The project SNS-ICE has collected these roadmaps in order to document the standardisation priorities and interests of the Phase 1 SNS JU projects as a whole. This work helps to foster the early alignment of standardisation efforts of the SNS projects via the Pre-Standardisation Working Group between the SNS JU, the ETSI activities and other SDOs if appropriate.

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[8] For further information see https://www.6g-platform.com/.
[9] For further information see https://idw-online.de/en/news821855.
[10] For further information see https://www.etsi.org/events/2130-etsi-research-conference?jjj=1701419779417

- Under **"International Co operations"**, the project SNS ICE collaborates with the Taiwan Association of Information and Communication Standards (TAICS) on the 6G Vision & competencies of Taiwanese partners in relevant fields of research and technology.[11]

- Overall, the project SNS ICE has established communication links with more than 24 international stakeholders [12]including IMT-2030 (5G) & (6G) Promotion Group – China, 5GForum (South Korea), 5G MF (Japan, 5G Americas, Telebrasil – Projecto "5G Brasil", ENCQOR (Canada), TSDSI (India, Beyond 5G Promotion Consortium – Japan, Next G Alliance – North America, Trade and Technology Council (EU-US, Industry Technology Research Institute (ITRI) – Taiwan.

- Establishment and maintenance of **Vertical Engagement Tracker**, which aims to address specific challenges in the European 6G landscape and has been detailed in section 2.2.1 of this deliverable.

- **Events organisation:** The project partners have organised and participated in strategic and diverse International and European events and Vertical oriented events in the form of Presentations, keynote addresses, workshops, Co-creation sessions, Panel discussions, etc. Details on the events and the overall approach for specific stakeholders can be found in section 5 of this deliverable.

- **Communication and community engagement:** SNS ICE has a comprehensive communication and community engagement plan throughout the project lifecycle, serving the community and providing a platform for collaboration and cross-dissemination. This is explained in D4.1, while the progress is compiled in this deliverable.

4.3 Podcast Series

The SNS ICE podcast comprises a series of digital audio files and provides a convenient and accessible way for people to consume content on the go. Creating this podcast has been crucial for several reasons. First and foremost, it serves as a platform to share valuable insights, knowledge, and discussions about smart network services and international collaboration in the tech industry. By featuring experts and thought leaders, the podcast contributes to the dissemination of key information, helping listeners stay informed about the latest developments in this rapidly evolving field.

Additionally, the podcast fosters a sense of community and connectivity among professionals, researchers, and enthusiasts interested in smart network services. It creates a space for collaboration, idea exchange, and the exploration of innovative solutions to common challenges faced in the industry.

Moreover, as technology continues to shape our global landscape, the SNS ICE podcast series plays a vital role in promoting awareness and understanding of the impact of smart networks on various sectors. By bringing these discussions to a broader audience, the podcast contributes to a more informed and engaged community that can actively participate in and influence the trajectory of smart network services.

In summary, recording the SNS ICE podcast series is important for knowledge sharing, community building, and promoting awareness of the significance of smart network services and international collaboration in our interconnected world.

In the period of 01.01.2023. - On 31.12.2023, the SNS ICE podcast series published the episodes summarised in Table.

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[11] Recent activity on this can be found https://smart-networks.europa.eu/event/taiwans-6g-vision-and-competences/.
[12] For further information see https://smart-networks.europa.eu/european-collaboration-with-international-stakeholders-5g-6g-associations-and-verticals-continues/.

Table 8. Podcast attendees

#	Title	Guests	Publication date
1	SNS JU - what is it?	Colin Willcock, Chairman of the Board, 6G-IA, Peter Stuckmann, Head of Unit, Electronic Communications Policy, Implementation and Enforcement, at European Commission	Published on: Aug 07, 2023
2	6G for verticals, expectations and the way forward	Raffaele de Peppe, 6GIA Board Member & Vice Chair, TIM + recording of EuCNC	Published on: Aug 28, 2023
3	5G Network Applications open up new paths for the creation of new market opportunities and monetisation	Dr. Bessem Sayadi, Research Manager at Nokia Bells Labs and Chairman of the 5G PPP WG on «Software Networks» Prof. Ioannis Tomkos, Technical Program Advisor of the 5G Techritory Forum	Published on: Oct 06, 2023
4	Why 6G? The need for next-generation smart networks & services and lessons learned from previous generations.* *recording of panel discussion via 5G Techritory Forum	Colin Willcock, Chairman of the Board, 6G-IA Raffaele de Peppe, 6GIA Board Member & Vice Chair, TIM Tonko Obuljen, President of the Council, HAKOM Uwe Baeder, Director International Relations ITU/UN, Rohde & Schwarz Erzsebet Fitori, Executive Director, SNS JU	Published on: Nov 22, 2023
5	The Convergence of Smart Cities and the Metaverse in the Era of 6G	Rolf Werner, Head of Europe, Nokia Will Townsend, VP & Principal Analyst/Contributor, MOOR INSIGHTS & STRATEGY/FORBES	Published on: Nov 28, 2023
6	The European Path Towards 6G	Erzsebet Fitori, Executive Director, SNS JU	Published on: Dec 11, 2023
7	The Next-G Alliance, from the eyes of its CTO	Prof. Eric Burger, Next-G Alliance CTO Prof. Ioannis Tomkos, 6G-SNS Steering Board Member	Published on: Dec 20, 2023

The SNS ICE podcast has accumulated an impressive total of 275 all-time downloads, indicating a level of popularity and engagement among listeners. Detailed data on podcast statistics is shown in Figure 13. Data of SNS ICE podcast series. The top-performing episode, titled "5G Network Applications Opening Up New Paths for Creation of New Market Opportunities and Monetization on Infrastructure Investments," suggests a strong interest in content related to the applications and implications of 5G technology. Overall Top 5 episodes from all time published series on SNS ICE podcast with total amount of downloads shown on Figure 14. Top 5 Episodes and Downloads.

In terms of audience distribution, as shown in Figure 15. Top 5 locations of podcast downloads, the top three locations where the podcast is listened to are the United States of America, Belgium, and Latvia. This global reach indicates a diverse and geographically dispersed audience, showcasing the podcast's ability to resonate with listeners across different regions. The international appeal of the content may also suggest that the topics discussed have relevance and interest beyond specific localities, contributing to the podcast's broader appeal and success.

Data on 15.01.2024. at 10:00.
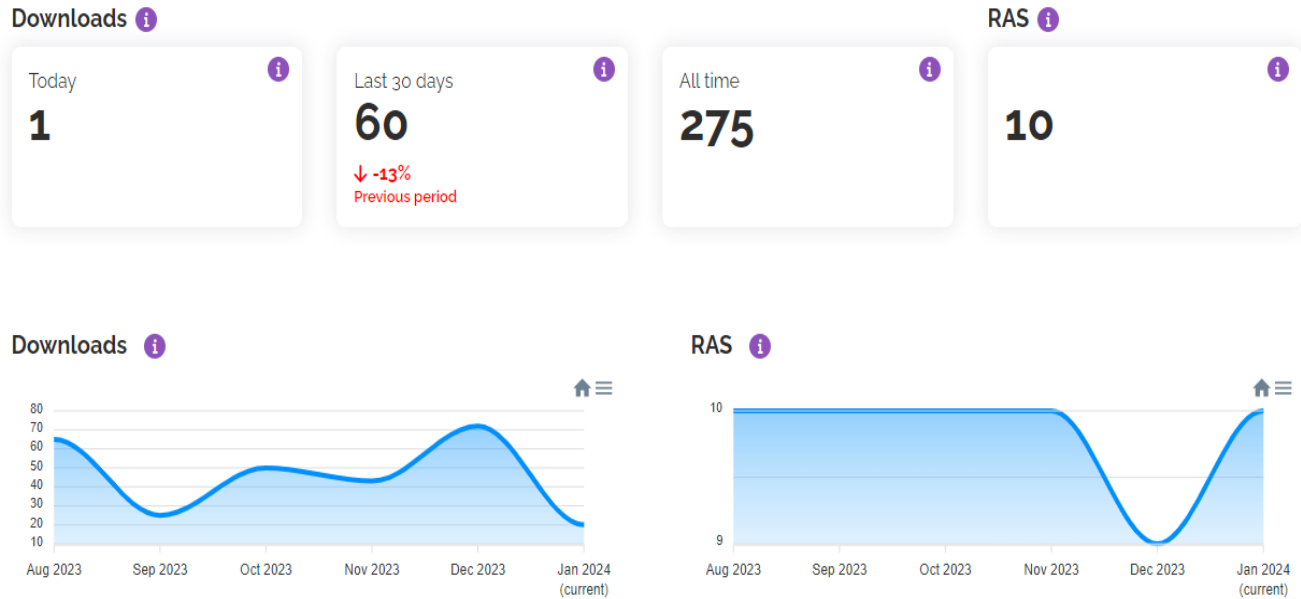
Figure 13. Data of SNS ICE podcast series

Top 5 Episodes and Downloads ℹ   Show deleted episodes ⬤

#	Episode	Release Date	Days Since Release	Dwnlds Day 1	Dwnlds Day 3	Dwnlds Day 7	Dwnlds Day 30	Dwnlds Day 60	Dwnlds Day 90	Dwnlds Total
S01 E03	5G Network Applications opening up new paths for creation of new market opportunities and monetization on infrastructure investments	Oct 06 2023	101	7	11	28	41	47	51	53
S01 E02	6G for verticals: Expectations and the way forward	Aug 28 2023	140	15	21	28	35	40	43	50
S01 E01	SNS JU - what it is and what's the main goal?	Aug 07 2023	161	9	15	18	28	33	37	40
S01	Welcome to SNS ICE Podcast	Aug 02 2023	166	6	7	14	17	22	24	37
S01 E05	The Convergence of Smart Cities and the Metaverse in the Era of 6G	Nov 28 2023	48	12	20	23	30	⌛	⌛	32

Figure 14. Top 5 Episodes and Downloads

Top 5 Locations ⓘ

	Country	City	Downloads
🇺🇸	United States of America	N/A	19
🇱🇻	Latvia	Riga	13
🇧🇪	Belgium	Brussels	12
🇺🇸	United States of America	Boardman	8
🇱🇻	Latvia	N/A	7
🇫🇮	Finland	Helsinki	7
🇵🇹	Portugal	Lisbon	7

Figure 15. Top 5 locations of podcast downloads

4.4   Newsletter

Newsletters in project SNS ICE are a way to disseminate the consortium activities, achievements and relevant developments. This fosters collaborations and secures a continuous connection with European and International stakeholders. In addition, the project also contributes to the newsflash/newsletter organised by the project SNS OPS.

To keep our community updated, the project has published three newsletters. They are available in the project newsletter section on the project`s webpage[13]. The project is expected to publish quarterly newsletters. As the project was ramping up for the first six months, its first newsletter was released in Aug 2023, while the second one was released in November, covering the featured event 5G Techritory Forum. The third newsletter was released in January 2024, covering the main activities for the months of October, November, and December 2023.

The newsletter mainly covers highlights from the project like MoUs signed, participation at strategic events, our latest podcasts, etc. It serves as a window to get a sneak peek into the collaborations and exchanges that the consortium partners make.

SNS ICE newsletter is disseminated primarily via the project's social media platforms and via the 6G- IA platforms. In addition, it is also observed that Consortium partners and followers on social media platforms re-post from their respective channels for a larger audience reach.

Figure 16. Newsletter cover page shows the cover page of the newsletter, which consists of the project logo. Since the project SNS ICE is a Coordinate and Support action from the SNS JU programme, its cover is inspired by the SNS JU design. The following section provides a generic overview of the newsletter and captures the highlights of activities that summarise the newsletter edition. The newsletter also provides information about the participating partners and the project goals.

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[13] Browse them at https://smart-networks.europa.eu/csa-s/#SNS-ICE.

Figure 16. Newsletter cover page

The other sections of the newsletter consist of information about the SNS ICE webpage link, links to social media platforms-> for readers to follow the project and know more about it, be updated about our most recent activities and finally, the information on SNS ICE podcast series (that is covered in section 4.3).

It also includes the contact details of the project coordinator to ensure that we don't miss any opportunity for future collaborations or establishing dialogues.

4.5   KPIs Update and Analysis

Project SNS ICE was incepted with the goal of establishing European and global international cooperation dialogue and mapping, following and creating trends and priorities, and eventually supporting the creation of a global 6G ecosystem. SNS ICE's dissemination and communication activities are tuned towards diverse target

groups, providing information about the purpose and benefits of the SNS programme and its results. This also includes key messages for societal stakeholders and interested citizens.

Table 9 provides the summary of the relevant KPIs:

Table 9. SNS ICE Communication & Dissemination KPIs

KPI	KPI name	Description	Expected Impact	Target Groups	KPI target	KPI actual (to date)
1	**Presentations**	In-person or remote presentations at third-party events (conferences, workshops) as part of the SNS Promotion Programme	Increased awareness and understanding of SNS programme and project activities and results.	USE, RDI, ACA, VER, ASC, STD, PAS, GOV, MED, NGO	Total number of presentations: **30** Total number of people reached: **3,000**	Actual number of presentations: **13** Actual number of people reached: **4,000** approx. Details in Appendix 2 Table X1
2	**Workshops**	In-person or hybrid workshops (co-) organized by SNS ICE as part of the SNS Promotion Programme	Increased awareness and understanding of SNS programme and project activities and results; dialogues with target groups about SNS results adoption	USE, RDI, ACA, VER, ASC, STD, PAS, GOV, MED, NGO	Total number of workshops: 8 Total number of people reached: 800	Actual number of workshops: **9** Actual number of people reached: **760,** approx. Details in Appendix 2 Table X2
3	**Webinars**	Webinars (co-) organised by SNS ICE as part of the SNS Promotion Programme.	Increased awareness and understanding of SNS programme and project activities and results	USE, RDI, ACA, VER, ASC, STD, PAS, GOV, MED, NGO	Total number of webinars: 8 Total number of people reached: 1,600	Actual number of webinars: **2** Actual number of people reached: **230** Details in Appendix 2 Table X3
4	**Info booths**	Info booths at exhibitions and	Increased awareness	USE, RDI, ACA,	Total number of booths: 4	Actual number of booths: **1**

		trade fairs (co-) organised by SNS ICE as part of the SNS Promotion Programme	and understanding of SNS programme and project activities and results; dialogues with target groups about SNS results adoption	VER, ASC, STD, PAS, GOV, MED, NGO, PUB	Total number of people reached: 1,600	Actual number of people reached: **1,300** Details in Appendix 2 Table X4
5	**Brochures and flyers**	Printed and electronic brochures and flyers (co-) produced by SNS ICE for informing target groups about SNS activities and results as part of the SNS Promotion Programme	Increased awareness and understanding of SNS programme and project activities and results	USE, RDI, ACA, VER, ASC, STD, PAS, GOV, MED, NGO, PUB	Total number of brochures and flyers: 12 Total number of people reached: 2,400	Actual number: **7** Actual number of people reached: **2800** Details in Appendix 2 Table X5
6	**Web news items**	News items for the SNS programme website on results and activities, particularly those with an international dimension	Increased knowledge about SNS programme and project activities and results, as well as interest in using SNS results	USE, RDI, ACA, VER, ASC, STD, PAS, GOV, MED, NGO, PUB	Total number of news items: 4 Total number of people reached: 3,000	Actual number of news items: **3** Actual number of people reached:**1052** Details in Appendix 2 Table X6
7	**Press releases**	Press releases on positions and major achievements of the SNS programme, coordinated with the other CSAs	Increased knowledge about SNS programme and project activities and results, as well as interest in using SNS results	USE, RDI, ACA, VER, ASC, STD, PAS, GOV, MED, NGO, PUB	Total number of press releases: 4 Total number of people reached: 800	Actual number of press releases: **2** Actual number of people reached: **12065** Details in Appendix 2 Table X7

| 8 | **Podcast** | Monthly SNS podcast produced by SNS ICE presenting the latest SNS activities, positions and results in interviews and reports | Increased knowledge about SNS programme and project activities and results, as well as interest in using SNS results | USE, RDI, ACA, VER, ASC, STD, PAS, GOV, MED, NGO, PUB | Total number of podcast episodes: 20

Total number of listeners: 2,000 | Actual number of Podcasts: **7**

Actual number of people reached:**275**

Details in section 4.3 |
| 9 | **Videos** | Video recordings of SNS workshops and interviews with key representatives and experts from the SNS programme | Increased knowledge about SNS programme and project activities and results, as well as interest in using SNS results | USE, RDI, ACA, VER, ASC, STD, PAS, GOV, MED, NGO, PUB | Total number of videos: 12

Total number of people reached: 1200 | Actual number of videos:**11**

Actual number of people reached: **335**

Details in Appendix 2 Table X8 |

Acronyms: *USE – Users of SNS results, RDI – RDI community, ACA – Academic researchers, VER – Verticals, ASC – Industry associations, STD – Standardization organisations, PAS – Public authorities, GOV – Government organisations, MED – Media representatives, NGO – Non-governmental organisations, PUB – Interested European citizens*

As this is the first year of the project which included a ramp-up period, the presented figures indicate that the project progress is nicely aligned with the set targets and that the project is projected to successfully meet the expected KPI targets.

5 Dissemination through Events

SNS ICE, as the de facto ambassador of the SNS-JU, tasked with the dissemination and promotion of SNS news and achievements but also with the interaction with other regions of the world, is giving great emphasis on the organisation and participation in key events. SNS ICE partners were active during the first year of the project (2023) and actively engaged in several events targeting European, International and Vertical stakeholders. Section 5.1 provides an overview of all the events that SNS ICE partners organised, participated in or facilitated during 2023, with a high-level explanation of their contribution. Additional details on the respective events and the overall approach for specific stakeholders can be found in deliverable D1.1 for international events [10], D2.1 for EU-stakeholder events [6] and D3.2 for vertical-oriented events [7]. Section 5.2 provides an initial list of targeted events by the SNS ICE for 2024, drawing the roadmap for WP4 activities in this next period.

5.1 Organised Events Overview and Impact

SNS ICE partners have had a dynamic presence in multiple European and International events within 2023, promoting the SNS JU R&I programme and highlighting the European 6G vision while creating synergies on multiple levels (state, international, vertical). SNS ICE has taken over most international events activities from 6G START since its beginning in January 2023, while it is working in close collaboration with SNS OPS to align the organisation and participation in EU-level and vertical events [6].

SNS ICE has taken on a leading role in approximately 24 events in 2023. Table 10. Overview of 2023 events with organization / contribution/participation from SNS ICE partners below provides an overview of all the events that SNS ICE partners contributed to within 2023 (in any format), along with a short description of the exact SNS ICE contribution.

Table 10. Overview of 2023 events with organization / contribution/participation from SNS ICE partners

Event	Date	Location	SNS ICE Contribution & Focus
Joint ATIS Next G ALLIANCE (US) and 6G-IA Workshop	10/01/2023	Online	Organisation of the event. Discuss ongoing activities for EU-US collaboration and explore the next steps.
BCN LATAM SUMMIT	14/03/2023	Online	Recorded presentation on the EU approach to 6G and the SNS JU programme.
HANNOVER MESSE 2023	17/04/2023	Hannover, Germany	Presentation on "Industrial Wireless Arena + 5G Networks & Applications".
Transatlantic 6G Workshop	20/04/2023	Online	Presentation of the SNS JU roadmap and participation in round-table exploring further collaborations between EU-US.
6G Symposium Spring 2023	24/04/2023	Online	Presentation of the EU 6G vision and SNS JU Roadmap
6G World Summit	26/04/2023	Berlin, Germany	Presentation of the EU 6G vision and SNS JU Roadmap
6G-IA & IMT-2030 Workshop - 6G Research & Sustainability Roadmap	08/05/2023	Online	Organisation of the event. Presentation of 6G Research and Sustainability initiatives in EU and CN and discussion on potential collaboration.
5G Forum	11/05/2023	Sevilla, Spain	Presentation of 6G-IA position paper 'Key Strategies for 6G Networks: Joint Undertaking of Smart Networks and Services' Vision.
Big 5G Event	15/05/2023	Austin, Texas, US	Presentation of the EU 6G vision and SNS JU Roadmap. Participation in respective panels.

COST INTERACT event	24/05/2023	Barcelona, Spain	Presentation of 6G-IA position paper 'Key Strategies for 6G Networks: Joint Undertaking of Smart Networks and Services' Vision.
EU-Taiwan Joint 6G SNS Workshop	29/05/2023	Taipei, Taiwan	Co-organisation of session. Presentation of the EU 6G vision and SNS JU Roadmap. Signing of MoU between EU-Taiwan.
EuCNC & 6G Summit	06/06/2023	Gothenburg, Sweden	Co-organisation of SNS JU booth. Organisation of workshop with the SRG. Organisation of Convened Session on SNS-JU R&I priorities & synergies.
IEEE Int'l Conference on Acoustics, Speech and Signal Processing (ICASSP)	10/06/2023	Rhodes, Greece	Invited Speech and participation in a panel on the 'Funding Agencies', with representatives from the US (NSF), UK (UKRI), Israel (MIST), India (DOST), etc.
EVOLVED-5G Accelerator	14/06/2023	Online	Presenting the SNS JU funding opportunities to interested SMEs.
Tokyo 6G Conference (COMNEXT)	28/06/2023	Tokyo, Japan	Presentation of the EU 6G vision and SNS JU Roadmap. Exploration of synergies between EU-JP.
CMCC 6G Conference	29/06/2023	Beijing, China	Keynote speech (recorded) on the EU 6G vision and SNS JU Roadmap.
6G Vision and Competences - Taiwan	06/09/2023	Online	Organisation of the event. Facilitation of synergies between EU and TW stakeholders.
NIST '6G Core Technologies Workshop'	12/09/2023	Online	Co-organization of event. Exploration of synergies between EU-US.
5G Techritory Forum 2023	18/10/2023	Riga, Latvia	Full organisation of event + several sessions (co-creation of events and panels). Organisation and moderation of panel "Why 6G" and organisation and moderation of 3 co-creation events on National Initiatives, Sustainability and 5g for verticals.
European 5G Observatory, 5th Stakeholder Workshop	25/10/2023	Online	Presentation 'A report on 5G trials & pilots in new application domains (and what comes next in SNS – JU)',
10th Global 5G & 6G Global Events	30/10/2023	Seoul, South Korea	Co-organization and participation in panels and sessions. Moderation of session on Future service, technology, and socio-economic trends for 6G
Brooklyn 6G Summit	01/11/2023	Brooklyn, US	Keynote speech (recorded) on the EU 6G vision and SNS JU Roadmap. Exploration of synergies between EU-US.
3rd Workshop TTC (EU-USE)	15/11/2023	Online	Co-organization of the event. Coordination towards the elaboration of the EU-US roadmap
IEEE Globecom	04/12/2023	Kuala Lumpur, Malaysia	Organisation and moderation of Industry Forum on "6G Networks: A European perspective towards a global standard". Participation in other sessions.

It must be noted that in cases where certain important events are missing from the list, such as the *ETSI R&D event 2023 (Sophia-Antipolis, France), MWC 2023 (Barcelona, Spain), 5G PPP to SNS: Passing the torch event at EuCNC 2023, IEEE ICC 2023 in (Rome, Italy), IEEE FNWF 2023 (Baltimore, US)* and more, this is because it was commonly agreed with the other two CSA projects (6G START, SNS OPS) that one of them would take the lead in these events, to avoid duplication of effort. However, SNS ICE partners have also maintained a presence there, supporting the organisational activities when and if needed.

5.2 Future Events

The SNS ICE partners have already performed a preliminary analysis of the key events in 2024 that SNS ICE should have a presence in, as they are considered major, impactful events with the participation of key stakeholders. The level of participation/commitment from the SNS ICE side in these events will depend on the exact focus and interest of SNS R&I projects and opportunities presented for each event and will vary from full-on co-organization of the event or sessions/panels to presentations and facilitation of presence of other SNS projects and representatives. An initial list of the targeted events identified by SNS ICE partners for 2024 is presented in Table, along with the partner responsible for each respective event.

It must be noted that this is simply an initial list, which is expected to be extended with additional events throughout the year as additional invitations/expressions of interest arrive to SNS ICE partners, SNS R&I project targets for specific events solidify, and agenda and focus of certain events become clearer.

Table 11. Initial list of targeted 2024 events by SNS ICE partners

Targeted event	Date (approx)	Location	SNS ICE partner
ETSI AI/ML Conference	Feb-2024	Sophia Antipolis, France	CTTC
Mobile World Congress 2024	Feb-2024	Barcelona, Spain	6G-IA, NSN, Eurescom (Session on SNS JU, potential flyer for SNS projects)
WWRF Huddle 2024	Apr-2024	Berlin, Germany	TIM
IEEE WCNC 2024	Apr-2024	Dubai, UAE	CTTC (Keynote + Panel)
Hannover Messe	Apr-2024	Hannover, Berlin	TIM
IEEE Int'l Conf. Machine Learning for Communication and Networking	May-2024	Stockholm, Sweden	CTTC
3GPP 6G Use Cases definition meeting	May-2024	TBD	6G-IA, TNO
IEEE VTC Spring 2024	TBD	TBD	TIM
EuCNC 2024	Jun-2024	Antwerp, Belgium	6G-IA, All partners
PSCE Congress	Jun-2024	Vienna, Austria	TIM
IEEE ICC 2024	Jun-2024	Denver, CO, US	(TBD)
Space2Connect	Jun-2024	??	TIM
IBC 2024	Sep-2024	Amsterdam, NL	TIM, TNO
30th ITS World Congress	Sep-2024	Dubai, UAE	6G-IA, TIM
5G Techritory Forum 2024	Oct-2024	Riga, Latvia	VASES, 6G-IA, All partners
Global 5G Event	Nov-2024	TBD	6G-IA
IEEE Globecom 2024	Dec-2024	Cape Town, SA	(TBD)

6   Conclusion

During its first year, the SNS ICE project has made significant strides in establishing itself as a key player in developing and promoting the SNS JU work programme for 2023. Fulfilling its ambassador role, the project has created a collaborative environment for European and global stakeholders (including key vertical players as well as national and transnational 6G initiatives), leveraging the achievements of the SNS JU in major forums. SNS ICE has also undertaken a set of practical actions to support and represent the SNS JU community, cooperating with Phase 1 projects to maximise their impact and outreach.

The project's exploitation and sustainability approach outlined in this document ensures the continuity of its initiatives and the longevity of its developed assets, guaranteeing SNS ICE's resilience and prolonged success. To ensure this outcome, the project's exploitation strategy, focusing on the practical application of outputs for immediate benefits and potential commercialisation, has been complemented by a focus on sustainability, ensuring these outputs' long-term value and utility.

The exploitation and sustainability strategy described in section 2 of this document has been reinforced by incorporating Horizon Results Booster Module C - Exploitation Service recommendations. This has led to a thorough description of the project's three main KERs, providing a roadmap for exploitation, showcasing main results, impact prediction, and risk factors. Three selected KERs - 1) Vertical Engagement Tracker; 2) Interoperability, Replicability and Scalability Initiative; 3) Strategic Policy Recommendations - were developed and refined in this document, with a focus on practical application and potential commercialisation. The strategy also includes continuous evaluation and adaptation to ensure the KERs remain relevant and impactful throughout the project lifecycle and beyond. This approach ensures the project's outcomes are effectively utilised, contributing to future uses and initiatives.

In addition, section 3 presented a methodology and framework specifically for KER #3 - Strategic Policy Recommendations, delving into the systematic approach adopted for developing these policy recommendations, encompassing identifying key issues, stakeholder engagement processes, and formulating actionable strategies. It outlines the steps taken to ensure that these policy recommendations are not only relevant and insightful but also aligned with the overarching goals of the SNS ICE project and the next steps that will lead to their publications during the project's second year.

Finally, an in-depth overview of the SNS ICE project's dynamic outreach activities and strategic involvement in a range of significant events was also provided in sections 4 and 5. These described the project's efforts to amplify its presence, engage with diverse stakeholders, and promote its research and innovations across various international platforms.

To sum up, this document has outlined the strategies and activities related to disseminating, communicating, and exploiting the project's results, evaluating the effectiveness of the implemented strategies, and planning future actions to enhance the project's impact and sustainability. As the project moves forward, it will continue to refine and elaborate its communication, dissemination and exploitation strategies and event organisation, ensuring its contributions remain relevant and impactful in the evolving landscape of 6G applications. The comprehensive understanding of the project's exploitation and sustainability strategies, as outlined in this document, paves the way for the project's continued success and lasting impact.

7 References

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Appendix 1 Vertical Engagement Tracker questionnaire

Available at: https://6g-ia.eu/vertical-engagement-tracker/

Project Name (mandatory field, scroll down options)

- BeGREEN : Beyond 5G Artificial Intelligence Assisted Energy Efficient Open Radio Access Network
- 5G-STARDUST: Satellite and Terrestrial Access for Distributed, Ubiquitous, And Smart Telecommunications
- SEASON: SElf-MAnaged Sustainable High-Capacity Optical Networks
- 6Green: Green Technologies For 5/6G Service-Based Architectures
- VERGE: AI-Powered EVolution Towards OpEn and SecuRe EdGe ArchitEctures
- NANCY: An Artificial Intelligent Aided Unified Network for Secure Beyond 5G Long Term Evolution
- ACROSS: Automated Zero-Touch Cross-Layer Provisioning Framework For 5G And Beyond Vertical Services
- DETERMINISTIC6G: DETERMINISTIC E2E COMMUNICATION WITH 6G
- ADROIT6G: Distributed Artificial Intelligence-Driven Open and Programmable Architecture For 6G Networks
- DESIRE6G: Deep Programmability and Secure Distributed Intelligence for Real-Time End-To-End 6G Networks
- PREDICT-6G: PRogrammable AI-Enabled DeterminIstiC NeTworking For 6G
- TERA6G: TERAhertz Integrated Systems Enabling 6G Terabit-Per-Second Ultra-Massive MIMO Wireless Networks
- TERRAMETA: TERahertz ReconfigurAble METAsurfaces For Ultra-High-Rate Wireless Communications
- 6GTandem: A Dual-Frequency Distributed MIMO Approach for Future 6G Applications
- CENTRIC: Towards An AI-Native, User-Centric Air Interface For 6G Networks
- TIMES: THz Industrial Mesh Networks in Smart Sensing and Propagation Environments
- FLEX-SCALE: Flexibly Scalable Energy Efficient Networking
- ETHER: SElf-Evolving Terrestrial/Non-Terrestrial Hybrid NEtwoRks
- 6G-NTN: 6G Non-Terrestrial Networks
- SUPERIOT: Truly Sustainable Printed Electronics-Based IoT Combining Optical and Radio Wireless Technologies
- CONFIDENTIAL6G: Confidential Computing and Privacy-Preserving Technologies For 6G
- RIGOUROUS: SecuRe DesIGn and DeplOyment of TrUsthwoRthy COntinUum Computing 6G Services
- HORSE: Holistic, Omnipresent, Resilient Services for Future 6G Wireless and Computing Ecosystems
- PRIVATEER: Privacy-First Security Enablers For 6G Networks
- Hexa-X II: A Holistic Flagship Towards The 6G Network Platform and System To Inspire Digital Transformation For the World To Act Together In Meeting Needs In Society And Ecosystems With Novel 6G Services
- 6G-SHINE: 6G SHort Range Extreme Communication IN Entities
- 6G-SANDBOX: Supporting Architectural and Technological Network Evolutions Through An Intelligent, SecureD And Twinning EnaBled Open EXperimentation Facility
- 6G-BRICKS: Building Reusable Testbed Infrastructures for Validating Cloud-To-Device BreaKthrough TechnologieS
- 6G-XR: 6G EXperimental Research Infrastructure to Enable Next-Generation XR Services
- TARGET-X: Trial PlAtform FoR 5G EvoluTion – Cross-Industry on Large Scale
- TrialsNet: TRials Supported by Smart Networks Beyond 5G
- FIDAL: Field Trials Beyond 5G

- IMAGINE-B5G: Advanced 5G Open Platform for Large Scale Trials And Pilots Across Europe

SNS JU Phase (mandatory field, scroll down options)

- Phase 1
- Phase 2
- Phase 3

SNS JU Stream (mandatory field, scroll down options)

- Stream A
- Stream B
- Stream C
- Stream D

Use Case Name (mandatory field, open question)

Use Case Contact Name (mandatory field, open question)

Use Case Contact email (mandatory field, open question)

Vertical Sector (mandatory field, scroll down options)

- Smart Agriculture
- Automotive/ Transport/ Logistics
- Media/xR
- Smart Energy
- Education
- Smart Health
- Industry 4.0/ Manufacturing
- Security/ PPDR
- Smart City
- Tourism & Culture
- Other

If "Other" please specify: (optional field, open question)

Type of Experiment (mandatory field, scroll down options)

- Simulation/Emulation
- Demonstration
- Pilot
- Proof of Concept
- Prototype

- Trial

Maturity (mandatory field, scroll down options)

- TRL 1-2 - Technology Concept Formulated
- TRL 3-5 - Technology Development
- TRL 5-6 - Technology Demonstration
- TRL 6-8 - System/subsystem development
- TRL 8-9 - System test, launch and operation

Functionality (mandatory field, scroll down options)

- Cloud-Native Architecture
- Enhanced Mobile Broadband (eMBB)
- Holographic Communications
- Hyper-connectivity
- Intelligent Network Architecture
- Massive Machine-Type Communications (mMTC)
- Multi-Access Edge Computing (MEC)
- Network Slicing
- Quantum Communication and Computing
- Terahertz (THz) Communication
- Ultra-Reliable and Low Latency Communications (URLLC)
- Other

If "Other", please specify (optional field, open question)

Use Case Location (lab Location) (mandatory field, open question)

Use Case Summary (mandatory field, open question)

Photo (optional field, upload bar)

Do you have any interest in offering DIHs the possibility to replicate the use case? (Yes/No)

Technical Solution (i.e. development, integration,…) (optional field, open question)

Legal Aspects (any Specific regulation) (optional field, open question)

Solution Implementation Hardware (optional field, open question)

Linked Products (components/parts) (optional field, open question)

Solution Provider Contact Name (optional field, open question)

Solution Provider Contact email (optional field, open question)

Appendix 2 SNS ICE Communication, Dissemination & Outreach Activities

Table 12. Presentations by SNS ICE consortium Partners

Event name	Date	Location	SNS ICE Contribution	Audience reached
BCN LATAM SUMMIT	14/03/23	Online	Presentation on the EU approach to 6G and the SNS JU programme.	Attracted several hundred online participants in the Latin American region, mainly commercial, but some academics
HANNOVER MESSE 2023	17/04/23	Hannover, Germany	Presentation on "Industrial Wireless Arena + 5G Networks & Applications". Major global industrial trade fair	Direct attendance was around 100 people.
6G Symposium Spring 2023	24/04/23	Online	Presentation of the EU 6G vision and SNS JU Roadmap	Several hundred online participants from both industry and academia
6G World Summit	26/04/23	Berlin, Germany	Presentation of the EU 6G vision and SNS JU Roadmap It brought together global telcos, regulators, industry bodies and distinguished academia to discuss 6G business, policy and technology. It was an opportunity to connect with international 6G thought leaders and hear from telcos on their vision for 6G technology and applications.	Diverse participants in a range of several hundreds
5G Forum	11/05/23	Sevilla, Spain	Presentation of 6G-IA position paper 'Key Strategies for 6G Networks: Joint Undertaking of Smart Networks and Services' Vision.	40 live connections + 10 visualisations on demand" of the recording after the event.
Big 5G Event	15/05/23	Austin, Texas, US	Presentation of the EU 6G vision and SNS JU Roadmap.	Several hundred mainly commercial participants from North America

COST INTERACT event	24/05/23	Barcelona, Spain	Presentation of 6G-IA position paper 'Key Strategies for 6G Networks: Joint Undertaking of Smart Networks and Services' Vision.	Diverse participants in a range of several hundreds
IEEE Int'l Conference on Acoustics, Speech and Signal Processing (ICASSP)	10/06/23	Rhodes, Greece	Invited Speech	Researchers & ICT professionals together were around 3000
EVOLVED-5G Accelerator	14/06/23	Online	Presenting the SNS JU funding opportunities to interested SMEs.	~40 attendees, mainly from SMEs
Tokyo 6G Conference (COMNEXT)	28/06/23	Tokyo, Japan	Presentation of the EU 6G vision and SNS JU Roadmap. Exploration of synergies between EU-JP. International exhibition attracting diverse exhibitors and visitors from all over the world.	250 exhibitors and visitors
CMCC 6G Conference	29/06/23	Beijing, China	Keynote speech (recorded) on the EU 6G vision and SNS JU Roadmap. Chinese event with academic and industrial participation.	Approx few hundred
Brooklyn 6G Summit	01/11/23	Brooklyn, US	The Summit welcomed attendees representing vendors, academia, operators, regulators and experts from multiple industries.	250 physical attendees from around the globe
IEEE Globecom	04/12/2023	Kuala Lumpur, Malaysia	Organisation and moderation of Industry Forum on "6G Networks: A European perspective towards a global standard". Participation in other sessions.	150 participants (50 in presence + 100 remote participants) Participants were researchers, academicians, engineers, and industry players from telecommunication fields all around the globe.

Table 13. Workshops organised and participated by SNS ICE consortium Partners

Event	Date	Location	SNS ICE Contribution	Audience reached
Joint ATIS Next G ALLIANCE (US) and 6G-IA Workshop	10/01/23	Online	Organisation of the event. Discuss ongoing activities for EU-US collaboration and explore next steps	~50 mixed audience (academia, industry, SME)
Transatlantic 6G Workshop	20/04/23	Online	Presentation of the SNS JU roadmap and participation in round-table exploring further collaborations between EU-US.	~40 mixed audience (academia, industry, SME)
6G-IA & IMT-2030 Workshop - 6G Research & Sustainability Roadmap	08/05/23	Online	Organisation of the event. Presentation of 6G Research and Sustainability initiatives in EU and CN and discussion on potential collaboration.	~60 mixed audience (academia, industry, SME)
EU-Taiwan Joint 6G SNS Workshop	29/05/23	Taipei, Taiwan	Co-organisation of session. Presentation of the EU 6G vision and SNS JU Roadmap. The signing of the MoU between EU-Taiwan.	~80 mixed audience (academia, industry, SME)
EuCNC & 6G Summit	06/06/23	Gothenburg, Sweden	Organisation of workshop with the SRG. Organisation of Convened Session on SNS-JU R&I priorities & synergies.	~100 mixed audience (academia, industry, SME)
NIST '6G Core Technologies Workshop'	12/09/23	Online	Co-organisation of event. Exploration of synergies between EU-US.	100
5G Techritory 2023	18/10/23	Riga, Latvia	Organisation and moderation of 3 co-creation sessions Organisation and moderation of panel "Why 6G" and organisation and moderation of 3 co-creation events on National Initiatives, Sustainability and 5g for verticals.	~140 mixed audience (academia, industry, SME)
European 5G Observatory, 5th Stakeholder Workshop	25/10/23	Online	Presentation 'A report on 5G trials & pilots in new application domains (and what comes next in SNS – JU)',	~200 participants
3rd Workshop TTC (EU-USE)	15/11/23	Online	Co-organisation of the event. Coordination towards the elaboration of the EU-US roadmap	~40 mixed audience (academia, industry, SME)

Table 14. Webinars organised and participated by SNS ICE consortium Partners

Webinar Topic	Date	Link	Audience reached
6G Vision & Competences Taiwanese partners	06/09/23	https://smart-networks.europa.eu/event/taiwans-6g-vision-and-competences/	~120
6G-IA Position Paper presentation – Key Strategies for 6G SNS	18/09/23	https://bscw.sns-ju.eu/pub/bscw.cgi/d25056/6G-IA%20Position%20paper-20230918%200800-1.mp4	~110

Table 15. Info booth co-organized by SNS ICE consortium Partners

Event name	Date	Link	Audience reached
EuCNC 2023	03/06/23 - 06/06/23	https://smart-networks.europa.eu/event/taiwans-6g-vision-and-competences/	1,300

Table 16. Brochure/flyer co-designed by SNS ICE consortium Partners

Brochure/flyer	Number	Audience reached
EuCNC 2023	2	1200
5G Techritory	5	1600

In addition, there are infographics and social cards also designed for events and social media platforms.

Table 17. Table X6: News items by SNS ICE consortium Partners

News item	Link	Audience reached
6G-IA And 6G Platform Germany Signed MoU	https://smart-networks.europa.eu/6g-ia-and-6g-platform-germany-signed-mou/	50
Smart Networks and Services International and European Cooperation Ecosystem (SNS-ICE) project organised an open webinar on the 6th of September to explore the 6G Vision & competencies of Taiwanese partners in the context of its International Collaboration activities.	https://smart-networks.europa.eu/presentation-and-video-recording-from-the-taiwan-6g-vision-and-competences-webinar/	979
European collaboration with international stakeholders, 5G/6G associations and verticals continues	https://smart-networks.europa.eu/european-collaboration-with-international-stakeholders-5g-6g-associations-and-verticals-continues/	23

Table 18. Press Releases by the SNS ICE consortium

Press release	Link	Audience reached
Driving Innovation Through Co-Creation: SNS ICE at 5G Techritory	https://idw-online.de/en/news823334	6029
MoU signed between "6G Smart Networks and Services Industry Association" (6G-IA) and "5G Media Action Group (5G-MAG)	https://idw-online.de/en/news821855	6036

Table 19. Videos produced by SNS ICE consortium Partners

Video	Link	Audience reached
Why 6G? Need for the next-gen Smart Networks and lessons learned from previous generations	https://www.youtube.com/watch?v=Kk5aQpXJ0gs	Live: 83 viewers YouTube: 384
SNS ICE General overview	https://www.youtube.com/watch?v=VI7MbkjS77U&list=PLdoUExp7oG-5eGlCp8jqlpjlMBzrc18Hr&index=1	14
SNS ICE International Collaboration	https://www.youtube.com/watch?v=Xtl9KEUgP4A&list=PLdoUExp7oG-5eGlCp8jqlpjlMBzrc18Hr&index=3	25
SNS ICE: Vertical Engagement	https://www.youtube.com/watch?v=9g99cPxYwk8&list=PLdoUExp7oG-5eGlCp8jqlpjlMBzrc18Hr&index=2	17
SNS ICE and EU Research Environment	https://www.youtube.com/watch?v=tyvGaPXTVXk&list=PLdoUExp7oG-5eGlCp8jqlpjlMBzrc18Hr&index=4	9
SNS ICE: 5G for verticals	https://www.youtube.com/watch?v=VTA8Kt9vTgI&list=PLdoUExp7oG-5eGlCp8jqlpjlMBzrc18Hr&index=6	26
SNS ICE: National Initiatives	https://www.youtube.com/watch?v=C2eSC4b1qD0&list=PLdoUExp7oG-5eGlCp8jqlpjlMBzrc18Hr&index=5	22
SNS ICE:5G for sustainability	https://www.youtube.com/watch?v=pFircGFELbY&list=PLdoUExp7oG-5eGlCp8jqlpjlMBzrc18Hr&index=7	37
SNS ICE: Future role of 6G	https://www.youtube.com/watch?v=lctTxenFgpM&list=PLdoUExp7oG-5eGlCp8jqlpjlMBzrc18Hr&index=8	65
SNS ICE: Collaboration with National initiative	https://www.youtube.com/watch?v=8hZXHF8KsI4&list=PLdoUExp7oG-5eGlCp8jqlpjlMBzrc18Hr&index=9	29
SNS ICE: Mobile Operators Perspective	https://www.youtube.com/watch?v=8s42VMqHmtQ	22