Grant Agreement No.: 101139070 (SNS JU)

SNS SURVEY REPORT 2024 - 2025

Revision: v.0.9

Work package	WP 3
Task	T3.3
Report lead	PSCE
Version	0.9
Authors	Melissa Scott (PSCE), Katrina Petersen (PSCE), Margot Bezzi (CSL), Lucas Pereira Carwile (CSL), Hugo d'Eudeville (PSCE)
Keywords	KVI, Acceptance, Project Survey

Co-funded by the European Union

Project funded by
Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Confederation
Federal Department of Economic Affairs
Education and Research EAER
State Secretariat for Education,
Research and Innovation SERI

DISCLAIMER

6G4SOCIETY project has received funding from the Smart Networks and Services Joint Undertaking (SNS JU) under the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101139070. This work has received funding from the Swiss State Secretariat for Education, Research and Innovation (SERI).

Note: This deliverable has only been submitted and is waiting for final approval from the European Commission.

EXECUTIVE SUMMARY

The 6G4Society project conducted two survey rounds in 2024 and 2025 to understand how SNS JU projects are integrating societal considerations into 6G development. With 63 responses across three project calls, these surveys examined how projects approach Key Value Indicators (KVIs) and Social Acceptance, providing essential groundwork for the project's ongoing activities.

Deepening Social Acceptance

The surveys revealed important insights into how projects approach social acceptance. While projects are effectively addressing adoption barriers, there is an opportunity to expand their focus toward broader "acceptability", ensuring technology aligns with societal values like fairness, trust, and institutional legitimacy. When addressing public concerns about issues like electromagnetic fields, projects typically rely on technical explanations and scientific evidence. While this demonstrates strong empirical knowledge, it may benefit from complementary approaches that acknowledge the trust and legitimacy dimensions underlying public concerns. Projects are engaging appropriate stakeholders through established methods like meetings and workshops, though more diverse and rich interaction formats could strengthen dialogue, particularly with end-users, broader stakeholders, and policymakers.

Advancing Key Value Indicators

Most SNS JU projects are actively working with KVIs to align innovation with societal, economic, and environmental goals. As they define indicators, measures and validation approaches, projects are starting to learn to navigate the difference between KVIs and technical Key Performance Indicators. A key insight so far is that KVIs cover a wide variety of values, have a range of different goals, and projects face many challenges in identifying, defining, prioritizing, and defining measures for them. There is also much learning still to be done because almost no projects had started assessing indicators by the time of the survey. Projects are also encountering tensions between technical performance and cost considerations versus values like privacy, security, and inclusivity. These trade-offs point to the need for policy-driven frameworks that can support projects in making balanced decisions when competing priorities arise.

Moving Forward

These lessons are informing 6G4Society's core activities: developing frameworks and practical tools to help projects define and harmonize KVIs; operationalizing a more nuanced Social Acceptance for Technology model through direct collaboration; and engaging with selected projects through interviews and working groups to build deeper understanding and support better integration of societal considerations into 6G innovation.

Co-funded by the European Union

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1 INTRODUCTION

The Coordination and Support Action (CSA) 6G4Society has been mandated since its inception in January 2024 to contribute to shaping the next generation of wireless communication, namely Beyond 5G (B5G) and 6G, by supporting the integration of societal needs beyond just faster connectivity. The vision of the project specifically emphasizes the design and development of innovative solutions that are conceived with the idea of creating a more inclusive, sustainable, and human-centric digital future. 6G4Society focuses on addressing critical societal challenges by supporting the embedding of ethical, social, and environmental considerations into the design and deployment of 6G infrastructure from the outset. The project is doing so by focusing on two main streams of work:

1.1 KEY VALUES AND KEY VALUES INDICATORS (KVI)

This work supports the efforts of the SNS JU in incorporating key values within the development of 6G technologies by exploring how KVIs are being used across 6G innovation projects to generate positive short and long-term impacts on societal, environmental, and economic sustainability.

1.2 SOCIAL ACCEPTANCE (SA) OF 6G TECHNOLOGY

This part of the work focused on better understanding the relationship between the new generation of wireless technology, the public views on technology development, and the consideration of these aspects and relationships across the projects within the Smart Networks and Services Joint Undertakings (SNS JU). In doing so, attention was given not only to how projects interpret acceptance and values in terms of perceptions or concerns, but attention was also given to questions of acceptability. 6G4Society recognizes that social acceptance is not limited to whether people will adopt or resist new technologies, but also involves questions of acceptability, that is, whether technological trajectories, including design choices and purposes, align with societal values such as fairness, trust, inclusivity, and sustainability.

As 6G4Society primarily operates within the system of the SNS JU, the first step was to better understand the existing landscape, dynamics as well as approaches of SNS JU projects in addressing the work on KVIs and Social Acceptance. After a stakeholder mapping exercise, in Q2 of 2024 6G4Society developed a set of questions around four main topics, to gather data across the existing SNS JU projects and better understand the current status quo of the projects with the goal also better support the definition of the key activities of 6G4Society. The four sections addressed within the questionnaire included: potential of 6G; KV and KVIs; Social acceptance of 6G; knowledge of Member States' Initiatives. In addition to informing our understanding of acceptance and KVIs, the materials generated by the surveys are utilized through the SAT and KVI frameworks being developed by the project to assess acceptability and sustainability, particularly where answers address values, trade-offs, and broader social impacts.

Co-funded by the European Union

2 METHODOLOGY

A first questionnaire round was launched in 2024 for Call 1 and Call 2 projects. As the SNS JU welcomed an additional number of projects from Call 3 in 2025, 6G4Society deemed it necessary to gather baseline data from the new projects as well. To this end, a second questionnaire was launched at the beginning of 2025. Leveraging on the first results obtained in 2024 and with a better understanding of the approaches of projects from Call 1 & Call 2, the 2025 survey represented an opportunity to revisit the questions already answered and redefine them to ensure that they provided further insights and more specific questions to the topics as mentioned earlier.

2024 Survey

- **Topics addressed:** Impact of 6G; KV and KVIs; Social acceptance of 6G; Knowledge of Member States Initiatives.
- **Target Group:** Call 1 & Call 2 Projects
- **Responses Received:** 22 projects
- **Period of activity of the Survey:** August - September 2024

2025 Survey

- **Topics addressed:** Impact of 6G; KV and KVIs; Social acceptance of 6G.
- **Target Group:** Call 2 & Call 3 Projects
- **Responses Received:** 41 projects
- **Period of activity of the Survey:** February - March 2025

It is important to note that while the second Survey was mainly targeting Call 2 & Call 3 projects, 6G4Society also did receive answers from Call 1 projects that did not have the opportunity to complete the questionnaire in 2024. All eligible answers received were considered in the Survey analysis.

A decision was made to discard the section on Member States Initiatives in the 2025 questionnaire for two main reasons: i) projects had a limited knowledge of 6G initiatives led at Member States level, ii) at the time when the Survey was launched, it became evident that SNS projects were receiving multiple requests for inputs. Therefore, 6G4Society decided to limit the questionnaire to the three sections that would more directly feed into the project's activities, redefining or revising the questions asked based on needs.

The same communication strategy was put in place for both questionnaires. 6G4Society identified key mailing lists and groups where the surveys could be circulated through. This included:

- The SNS Communication Task Force
- The SNVC Working Group
- The 6G-IA point of contact for communication
- Steering Board and Technical Board mailing list

While the response rate was relatively low for the 2024 survey (22 responses), numbers almost doubled in the 2025 Survey with 41 eligible answers received.

3 THE 2025 SURVEY REVISION

Before its launch, the 2025 Survey underwent a revision that was informed by:

- The latest understanding of the SNS JU landscape by 6G4Society
- The results obtained from the 2024 SNS Survey, assessing how to improve the quality and clarity of responses
- The prioritization needs in the 6G4S activities
- The identified needs of the SNS JU projects

Below are the changes that were proposed in the 2025 Survey, presented by section:

Impact of 6G

Question 5. Regarding the most impacted verticals/sectors projects, they were asked to select the top THREE rather than keeping the question open

Social Acceptance

Question 8. This question looked at projects' understanding of what is meant by acceptance which was not asked in 2024 Survey

Question 9 & 10. These newly introduced questions looked at technologies introduced by projects that might require SA and the stakeholders that were believed as having to accept these new technologies

Question 11. We requested projects to dig deeper in the social and practical implication of the introduced technological changes

Question 15 & 16. Newly added questions looking into how SA is operationalized in the projects' activities and if these are aligned to any existing SA frameworks

Question 19. Newly introduced question on controversies

Question 20. New question concerning proactive measures undertaken by projects to address societal concerns expressed by members of the public during the rollout of 5G.

Key Values Indicators (KVI)

Question 24. The question was rephrased from 2024 to directly ask projects about the values that they are addressing

Question 28. A newly introduced question that looked at the type of trade-offs being considered by the projects

Co-funded by the European Union

4 RESULTS

In this section, we present some key results that have emerged from the two Surveys, comparing where possible the results from 2024 and 2025. The results are reported by topic

4.1 HIGHLIGHTS: IMPACT OF 6G

In 2024, around 70% (17) of the respondents believe that 6G will be somewhat disruptive with 27.3% (6) mentioning its disruptiveness under the business model point of view and 22.7% (5) under the technological point of view (Fig 1). Also, when filtering the result by stream it also appeared that Stream D projects were more likely to select “Not Disruptive at All” or “Disruptive under the business model point of view”. The situation shifted with responses from Call 2 & 3 projects in the 2025 Survey, where the majority of responders (20, 48.8%) believe that most of the disruption will be mainly related to the technological perspective (Fig. 2). This suggests there are different narratives circulating about the impact 6G will have on the market. Suggested future work would involve tracking these narratives in order to understand a) from where they are derived and b) how they are informing the various conceptions of value being engaged by the projects. The aim would be to harmonise the relationship between understood impact, disruption, and value for society.

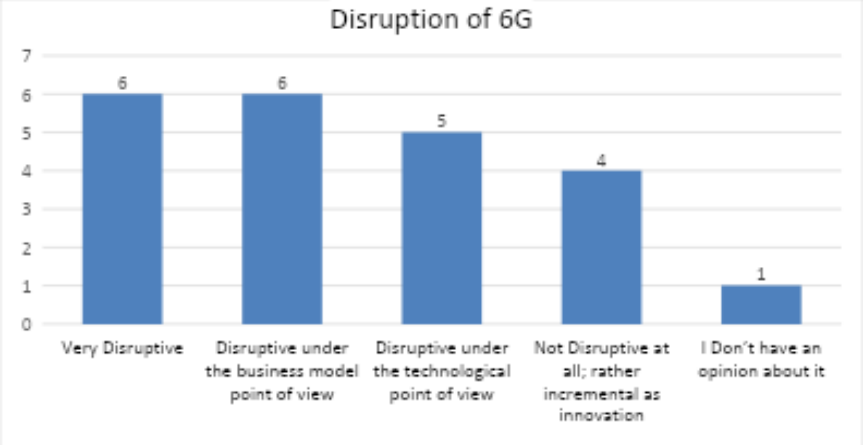

FIGURE 1 2024 SURVEY - IMPACT OF 6G

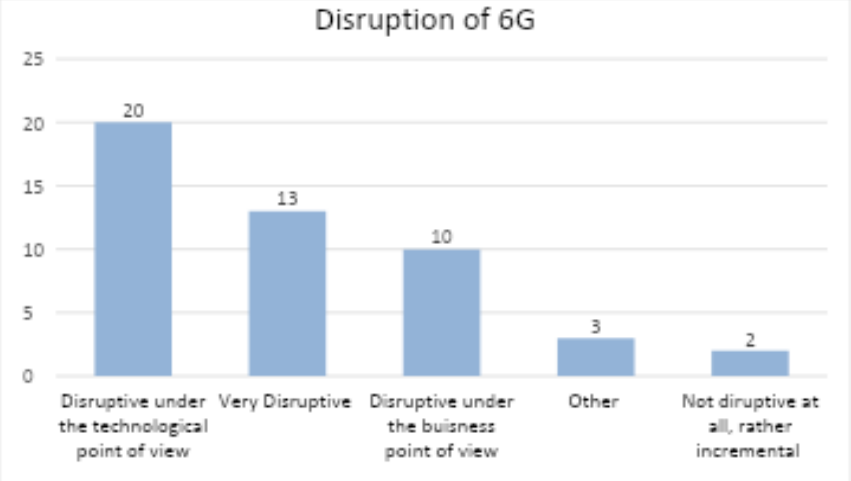

FIGURE 2 2025 SURVEY - IMPACT OF 6G

In terms of **impact on infrastructure**, in 2024 there is a mixed response on this with the majority of responders mentioning no major impacts on infrastructure. Where impacts are mentioned, there is a higher consideration for changes in the rural areas. Some respondents did not answer the question directly but rather highlighted how 6G will bring positive impacts with increased energy efficiency, and create positive environmental impacts, but without further details as to what those environmental impacts are expected to be. In 2025, the number of projects that mentioned foreseeing major changes in the infrastructure has shifted the ratios with ¾ agreeing with the statement that major impacts are foreseen on infrastructure (31). Again, changes mentioned were either positive (21) or neutral (10). Across the surveys, there was a trend in what projects thought were the three most impacted verticals.

In 2024 (Fig 3)

- Top 3 answers: i) Safety and security, ii) Transportation, iii) Entertainment
- Bottom 3 answers: i) Agriculture, ii) Energy, iii) Education

In 2025 (Fig 4)

- Top 3 answers: i) Healthcare, ii) Transportation, iii) Communication
- Bottom 3: i) Agriculture, ii) Education, iii) Energy

Energy Efficiency (EE) is a recurrent topic in SNS JU projects. However, when looking at the answers at both surveys, it seems that EE is not considered as the most impacted vertical. A comparison with the results of the SNS OPS questionnaire released in Q2 2025, highlights that perhaps EE is a **means** to support other verticals, and might not be considered by the projects as a focus vertical per se. It also suggests the end of that means could be something other than improved environment (e.g. increased battery life, decreased cost).

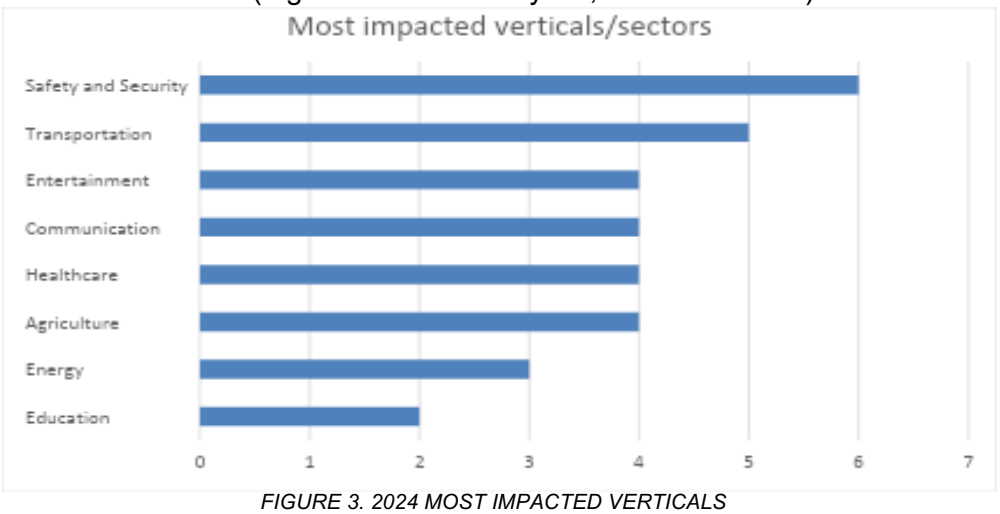

FIGURE 3. 2024 MOST IMPACTED VERTICALS

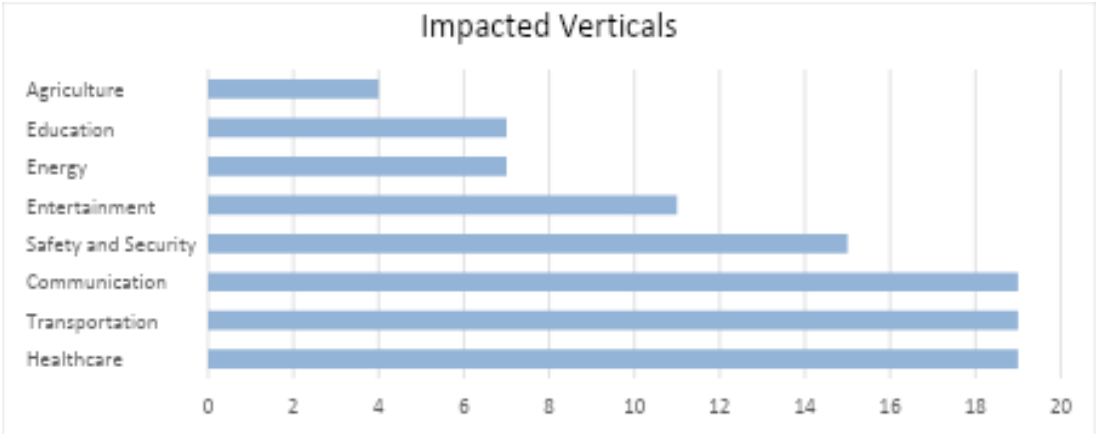

FIGURE 4. 2025 MOST IMPACTED VERTICAL

Finally, regarding **digital divide**, the 2024 question asked for open-ended responses about impacts on digital divide. This resulted in the majority of the projects (60%) identifying rather positive impacts such as lowered digital divide and increased accessibility.

The 2025 Survey was revised to request projects highlight positive and negative impacts as concerns the digital divide issue. In this case as well, the positive impacts seemed to outweigh the number of the negative ones (Table 1). It would be good to assess in the future how many projects are actively addressing these desired impacts, where there might be gaps, and how these relate to different communities' and verticals' understanding of what is needed to bridge the digital divide.

POSITIVE IMPACTS	NEGATIVE IMPACTS
• Facilitating access • More Democratic Networks • (In general) Positive Impacts • < costs and + accessibility (also to vulnerable groups) • Improved access and quality • More accessibility= > coverage • < DD through universal connectivity • Potentially simpler user interface • Enhanced connectivity • Data-driven personalization • Limited impact or decreased DD • Improvement of society's efficiency • Job market opportunities • Institutional efficiency • User-friendly and transparent applications	• Digital literacy • Costs • Accessibility Issues • Affordability • Infrastructure Challenges • Disparity Rural vs Urban • Complexity of technology

TABLE 1. 2025 SURVEY: DIGITAL DIVIDE IMPACTS

4.2 HIGHLIGHTS: SOCIAL ACCEPTANCE

The survey responses shed light on how projects understand acceptance, in terms of adoption, perceptions, and concerns. These descriptive findings and insights will inform the upcoming Deliverable 3.2, dedicated to the Social Acceptance of Technology (SAT) framework. The SAT framework (described in D1.1) will aim to investigate also the acceptability dimension, looking

at how societal values are embedded in 6G development, and will draw directly from answers that touch on values, trade-offs, and broader social impacts.

In 2024, 86% of the respondents did not think that the public would have problems accepting 6G. Amongst the projects that, to some extent, mentioned addressing social acceptance in their activities, projects rated the typology of themes and approaches they are dealing with (Table 2):

Top 3: i) User Experience, ii) User Needs, iii) Accessibility

Bottom 3: i) Adoption propensity or adoption rate, ii) Attitude (towards using), iii) Match with "my values" or social norms

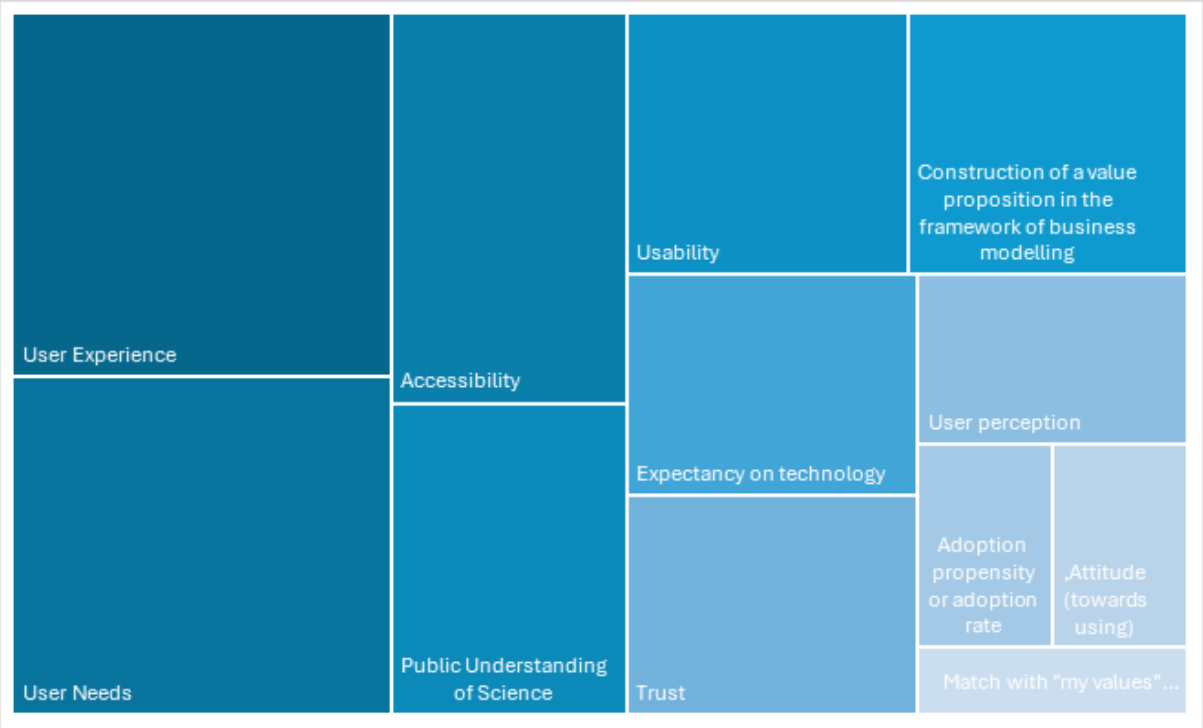

TABLE 2. SURVEY 2024, SNS JU PROJECTS THEMES, ASPECTS, APPROACHES ON SOCIAL ACCEPTANCE

However, it is interesting to observe that while all projects did select one or multiple approaches in the related multiple-choice question, when asked about facilitating users' acceptance by addressing their concerns (Q15), more than 50% of the responders answered that they do not take any actions. Projects that claimed to be proactive, mentioned action that revolved around: Privacy and Security, Trust, Energy Efficiency, Environmental Impact, Health. (Q16). This highlights that "acceptance" is often interpreted narrowly, more as the removal of obstacles to adoption, whereas addressing "acceptability" would require a broader engagement to investigate how such obstacles reflect and are the result of underlying societal values.

This information goes hand in hand with the responses obtained in 2025 relative to the challenges foreseen in addressing Social Acceptance (Q7). In fact, the top three frequently mentioned challenges were:

- Security and Privacy concerns: 19 projects
- Health: 10 projects
- Cost: 9 projects

The cross-analysis of the 2024 and 2025 Survey also highlighted similarities and differences with regards to the **engagement/interaction with stakeholders:**

In 2024, researchers and technology providers resulted being the type of stakeholders that Call 1 & Call 2 projects engaged with or planned to engage with the most, with over 50% (13) mentioning also engagement with final users of the application and almost a 1/3 of the projects that responded (6) referring to interactions with policymakers (Fig. 5). In addition, when asked about the methods used to work with these stakeholders, more than 50% of the projects (13) selected the use of co-design/co-creation and user validation.

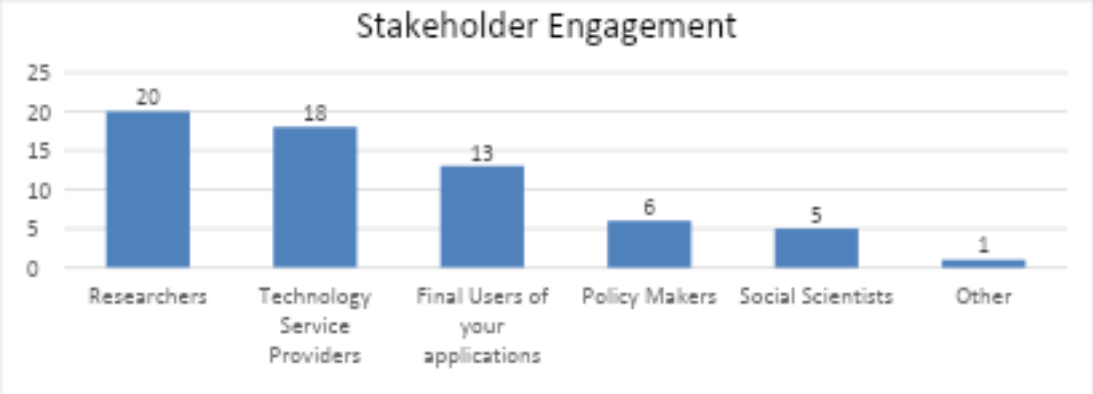

FIGURE 5. SURVEY 2024 STAKEHOLDER ENGAGEMENT

The results seemed consistent with responses from the 2025 Survey (Fig 6), with the exception that the first mentioned type of stakeholder were the Technology Service Provider (40) followed by Researchers (36). In both surveys, a high number of projects also indicated Final Users of Applications and Policymakers in the top four stakeholder types.

With regards to the methods used, projects reported on different methods (Fig. 7) with the most mentioned being: Meeting/Workshops (18), Activities as part of the project (9), Surveys/interviews (7). While engagement activities appear relatively widespread, they tend to emphasize established formats such as workshops or surveys.

According to the current understanding that 6G4Society has of these projects, results from both surveys show the need for a better reflection and shared understanding on the specific actors that is relevant to involve as stakeholders, as well as of the most appropriate engagement modality to use in relation to objective and stage of the project. An appropriate consideration of *acceptance* and of *values* requires the involvement of actors (e.g. users, community members, consumers, public, policymakers) beyond B2B relationships (e.g. service providers). Indeed, in lack of a more varied exploration of social needs and values, if no resistance is raised in business environments (e.g. meetings with service providers), a project might record “acceptance”; this result, however, is not indicative neither of the social acceptance, nor of the acceptability of the solution - where with *acceptability* refers to the extent to which a solution not only complies with legal requirements or norms, but also reflects values and priorities considered priority and just in society (e.g. inclusivity, fairness, trust). In order to guarantee acceptability and social acceptance, the voices of users and communities, not just providers, shall be listened to.

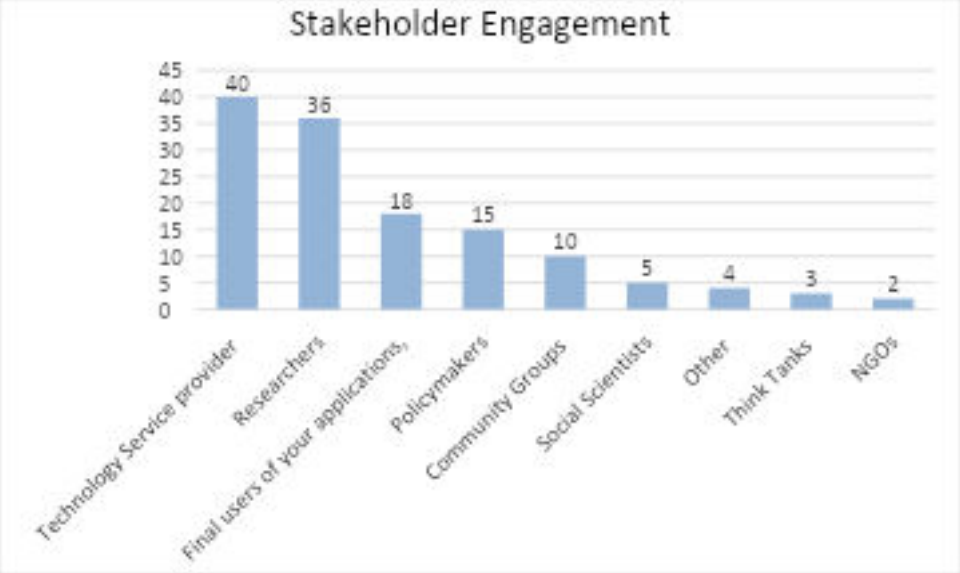

FIGURE 6. SURVEY 2025 STAKEHOLDER ENGAGEMENT

FIGURE 7. SURVEY 2025 STAKEHOLDER ENGAGEMENT METHODS

A final open question was asked to projects in both Surveys to assess how these would respond to a non-technical person raising concerns regarding the linkages between 6G and electromagnetic fields (EMF). In 2024, the largest group of responders tended to promote the idea that the knowledge in physics of technical people should constitute a sufficient argument to pushback any concerns regarding the health impact of 6G. In 2025, 21 projects mentioned that they would refer to evidence/trusted scientific sources, and 16 projects (in line with the 2024 answers) mentioned the application of their personal scientific or technical knowledge.

Such answers indicate significant opportunities and needs for strengthening how projects attribute meaning and address controversial or value-laden public concerns. A notable case is the persistent public anxiety over electromagnetic fields (EMF), which continues to feature prominently in national and local debates surrounding wireless infrastructure. As observed in

both survey rounds, many respondents appear to frame public concern over EMF in terms of misinformation or scientific illiteracy, with answers often relying on technical reassurance or individual knowledge in physics. However, this framing may overlook the broader context.

As emphasized in Deliverable D1.1, **concerns about EMF exposure are not always reducible to knowledge deficits.** The widespread international circulation of the 5G Appeal – signed by hundreds of scientists and acknowledged by public officials, including mayors and local governments across Europe – shows that this topic is also deeply tied to issues of **trust, institutional legitimacy, and conflicting interpretations of scientific evidence**. What was observed in the surveys is that many projects tend to assume that technical expertise (e.g., a background in physics) is sufficient to respond to public concerns. This indicates that **projects often frame disagreements as a matter of ignorance or lack of knowledge,** rather than as legitimate value-laden critiques. In the wider public debate, such framings also risk conflating genuine concerns with fringe conspiracies, such as those linking 5G to COVID-19, without engaging with more grounded critiques.

From an acceptability perspective, these concerns highlight where technological visions may come into tension with societal values such as precaution, accountability, and transparency. The SAT framework developed by 6G4Society urges a different response: to treat such controversies not as anomalies to be corrected, but as signals of where societal values and technological visions may be misaligned. This perspective moves beyond what is known in science communication theory as the 'deficit model', and toward a trust-oriented, value-sensitive vision for 6G development, one that acknowledges, rather than dismisses, societal concerns.

4.3 HIGHLIGHTS: KEY VALUE INDICATORS

In both Surveys, a high number of projects confirmed that they are working on KVIs:

2024: 17 out of 22 projects

2025: 34 out of 41 projects

Regarding the projects' understanding of the role of KVIs, among both the 2024 and 2025 responses, there was a general agreement that KVIs are seen as tools that support the consideration of the societal implication in technology design and development as well as to align innovation with societal, economic, and environmental goals as well as means to ensure that technologies respond to societal needs.

The 2025 Survey asked more specifically about **the objectives of integrating KVI approaches in technology development**. From those responses, projects appear to be using KVIs as a means to attain several goals, with the relationship between values, indicator, and end-goals being handled in different ways across projects (Fig.8). Some of the goals listed by projects for KVIs include fostering trust, measuring real impact, promoting the adoption of use cases or business aspects, promoting social acceptance or other ethical goals, and overall as a means for creating value. In other cases, the objectives are about ensuring accuracy and data rates. In other cases, the objectives of KVIs are intended to meet values like fairness and digital inclusion. In line with what was found in D1.1, the responses from the survey help explain the variations and diversity of KVIs as well as challenges faced by the projects in understanding how to define and implement KVIs in both theoretical and practical terms.

If KVIs are considered to serve this variety of goals, this, in turn, leads to a higher degree of complexity in harmonizing indicators across projects, since each goal could require a different style of indicator. Hence, aligning the objectives of the KVIs across the projects is needed to be able to define a common set of indicators for all projects. 6G4Society has proposed a framework of action towards this. But it also indicates that more purposeful and coordinated guidance is needed to define which values matter and why, particularly from actors with influence over 6G trajectories and desired outcomes, including industry, policy, vertical and community stakeholders.

FIGURE 8. SURVEY 2025, KVI'S INTEGRATION OBJECTIVES

All projects were also asked questions about the challenges encountered with KVIs, including in how they tried to identify KVIS as relevant to their projects and how they aimed to apply KVIs in their work.

Regarding the **identification of KVIs**, in 2024 (Fig. 9) the top 3 challenges mentioned were: i) Defining quantitative measures, ii) Working with qualitative data, iii) Validating KVIs. Similarly, in 2025 (Fig. 10) the top 3 answers mentioned were: i) Defining indicators that can be measured in the project's lifetime, ii) Defining quantitative measures, iii) Validating KVIs. The answers show a consistent pattern of respondents seeing quantification and measurement as key issues related to their successful use of KVIs. Approaches to assessing KVIs that are less similar to quantitative KPIs need to be further developed and projects need support in developing or including such expertise in order to do so.

This pattern was confirmed when projects were more specifically asked to **identify challenges related to their application of KVIs**, where the most recurrent challenges mentioned across the two surveys were:

- Defining KVIs
- Identification of values
- Data collection and validation
- The relationship with KVIs for low TRL projects
- Assessing values that are too early to estimate within the lifespan of a project

Much of what this suggests is that there is a trend to see KVIs as thresholds or targets, similar to KPIs, where societal values are something that can be met, achieved, or cleanly validated through demonstration. This also suggests that projects are still seeking guidance as to how to know what values matter to their projects and how to translate the values into relevant and valid indicators. This stands in contrast to how values are often understood in the social sciences, where they are seen not as fixed or universal truths, but as context-dependent tools for decision-making and evaluation of a societal ideal or goals. While not all social science perspectives align completely, many emphasize that what counts as “good” or “bad” is shaped by cultural, historical, and situational factors, rather than as fixed or universally applicable rules.

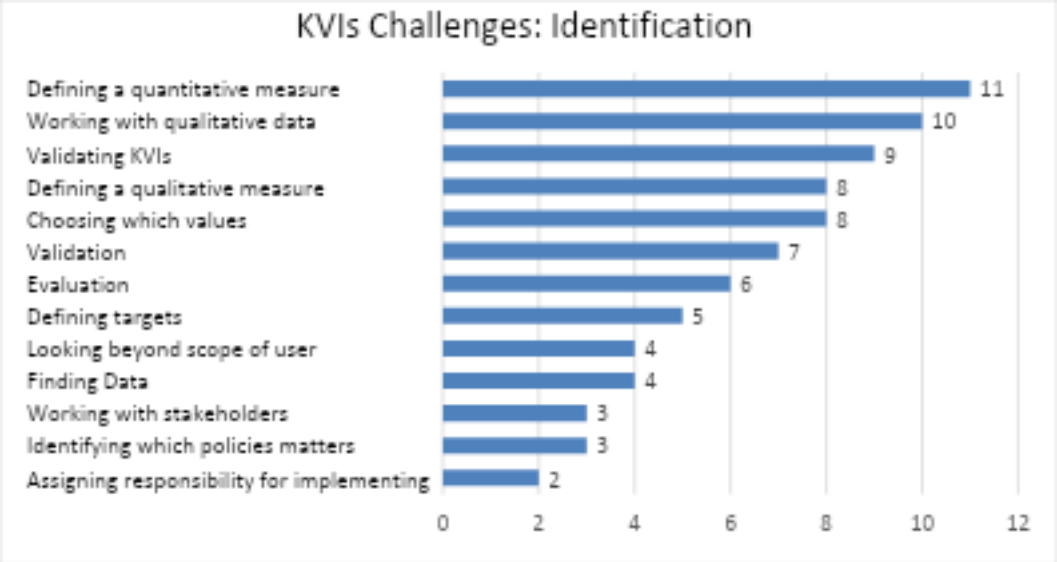

FIGURE 9. 2024 SURVEY, IDENTIFICATION OF KVIS

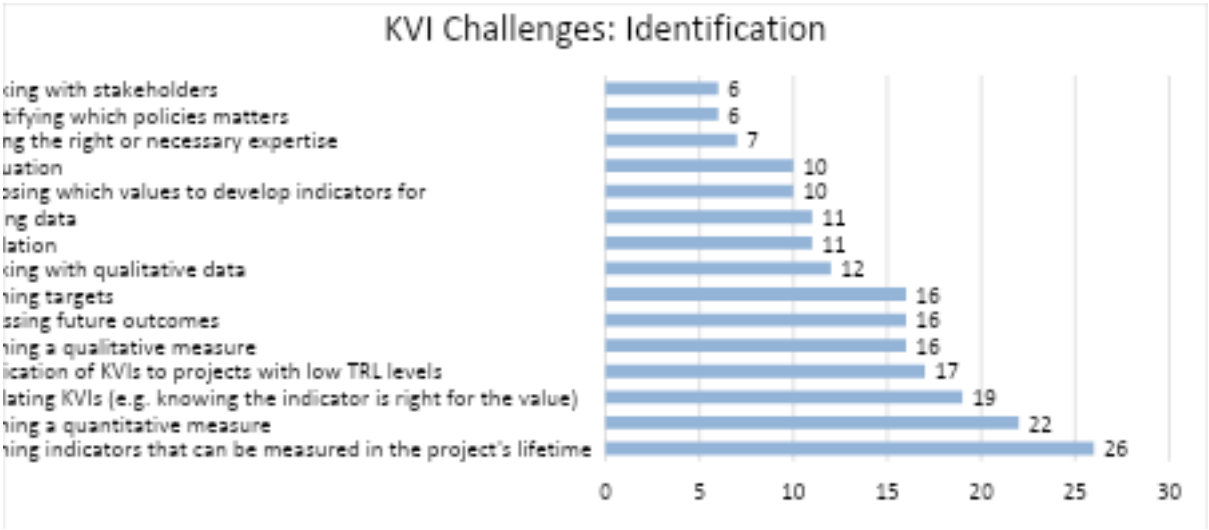

FIGURE 10. 2025 SURVEY, IDENTIFICATION OF KVIS

It is interesting to note is that in the responses to both surveys, working with stakeholders and identifying which policies matter were the challenges least frequently mentioned. Yet, further development of both these areas could help address some of the challenges listed from the previous questions. Policy analysis can provide critical insights into which values matter to impacted communities, while meaningful stakeholder engagement helps validate whether chosen indicators align with stated objectives and real-world implementation needs. This suggests that greater attention to stakeholder engagement and policy alignment during initial project phases could help projects address some of the technical and methodological challenges they currently face.

With the current knowledge that 6G4Society has of SNS JU project activities and dynamics, further questions emerged from these results which warrant future investigation such as: is the policy landscape clear enough for projects to consider what values matter? What do projects mean by stakeholders? What kind of interactions with stakeholders are possible within projects? Are KVIs like KPIs with thresholds and targets or do they more orient research in directions but are not lines to cross? What other kinds of expertise is needed on projects to support addressing these challenges?

To further understand how projects are considering KVIs, in 2025 two additional open-ended questions were added that did not appear in the 2024 Survey:

What values are projects addressing in their KVI approach?

What kind of trade-offs are being considered in your project around KVIs and why?

When looking at **the values more frequently mentioned** by the responders in 2025 (Fig. 11), the top three answers are:

Energy Efficiency (15)

Safety, Security, Privacy (14)

Economic Sustainability (10)

With trust, social sustainability, and digital divide coming tied in fourth place.

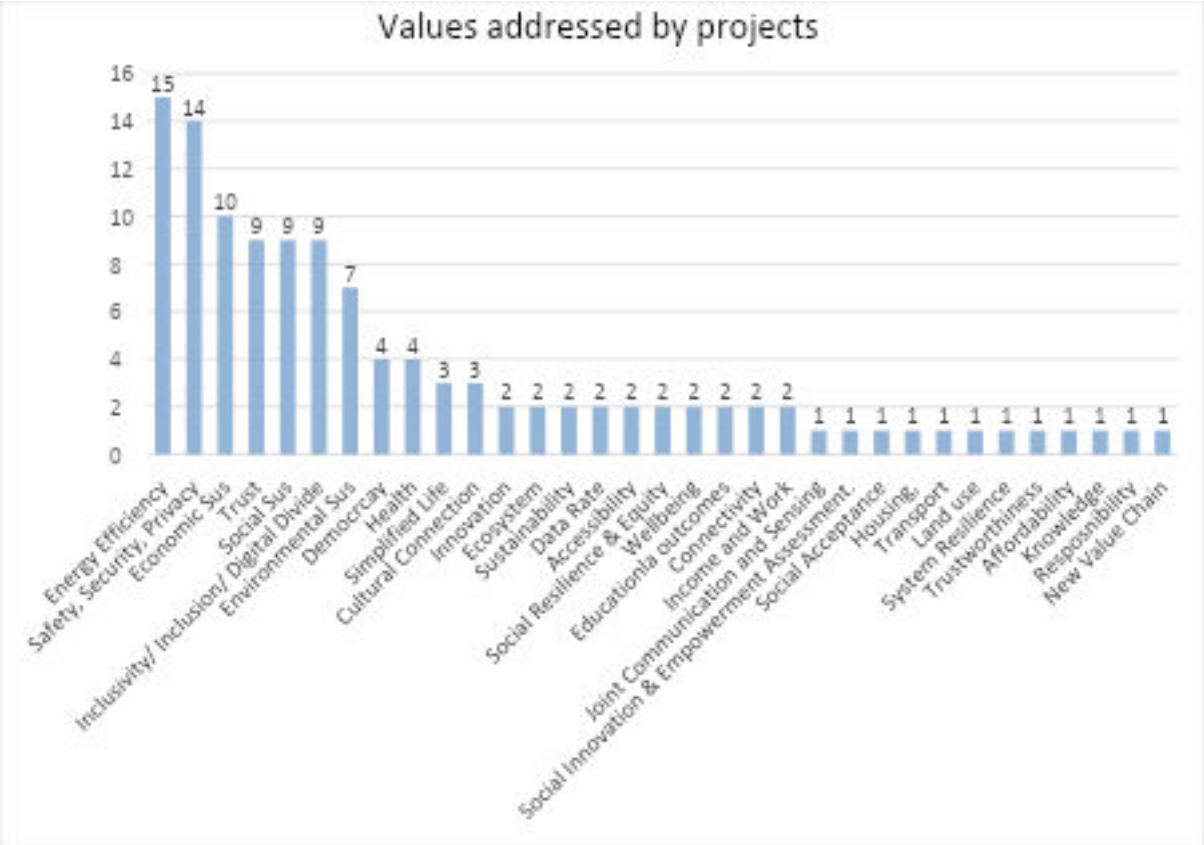

FIGURE 11. 2025 SURVEY. PROJECTS' VALUES

These results validate the information that 6G4Society had been collecting from projects over time regarding the type, granularity, and variety of values that are addressed and discussed within SNS JU projects. The values being addressed by projects span a considerable spectrum, from abstract principles like democracy to specific challenges like the digital divide,

and from broad categories such as economic sustainability to targeted domains that if improved could help make life better for communities, like transport, housing, or system resilience. In other cases, the projects frame their values around the things that projects want to directly make better such as educational outcomes. This diversity reflects the varied contexts and priorities across different initiatives, but it also reveals the need for greater clarity in how values are defined and categorized.

Without more consistent approaches to value classification, projects may struggle to learn from each other's experiences, compare effectiveness across similar contexts, or build upon existing measurement frameworks. It is also not possible to define a set of indicators relevant across 6G or even across a vertical. Developing more harmonized ways of articulating and organizing these values could strengthen the overall value measurement process by helping projects better understand what values are, see how values translate to indicators, clarify how their work connects with that of others, and to identify proven measurement approaches for similar areas of research.

Trade-offs in 6G projects are complex, and each project manages them in different ways, but some clear patterns appear. Performance and related technical features dominate the landscape (e.g. a value vs a performance feature). But the most frequently mentioned features on one side of a trade-off include: Privacy, Cost, Performance features (like latency, accuracy, or AI functions), Security, Energy, and Inclusivity, which suggests these features are the ones driving 6G design and development decisions as well as an important message for communication by the projects. Privacy and Performance are the most frequently traded off elements, and not just with each other. Cost considerations appear widespread, considering they are traded off against nearly every other value mentioned, and are a potential constraint on work towards societal goals. Energy considerations also permeate many 6G decisions and a key sustainability feature considered, but it is also currently understood to be in tension with elements like security and inclusivity. Figure 12 below charts the various trade-off relationships provided. In addition, three trade-offs with unique elements were mentioned but not included in the figure: EMF exposure vs wireless power transfer efficiency, sustainability vs infrastructure scalability, and centralised vs distributed architecture.

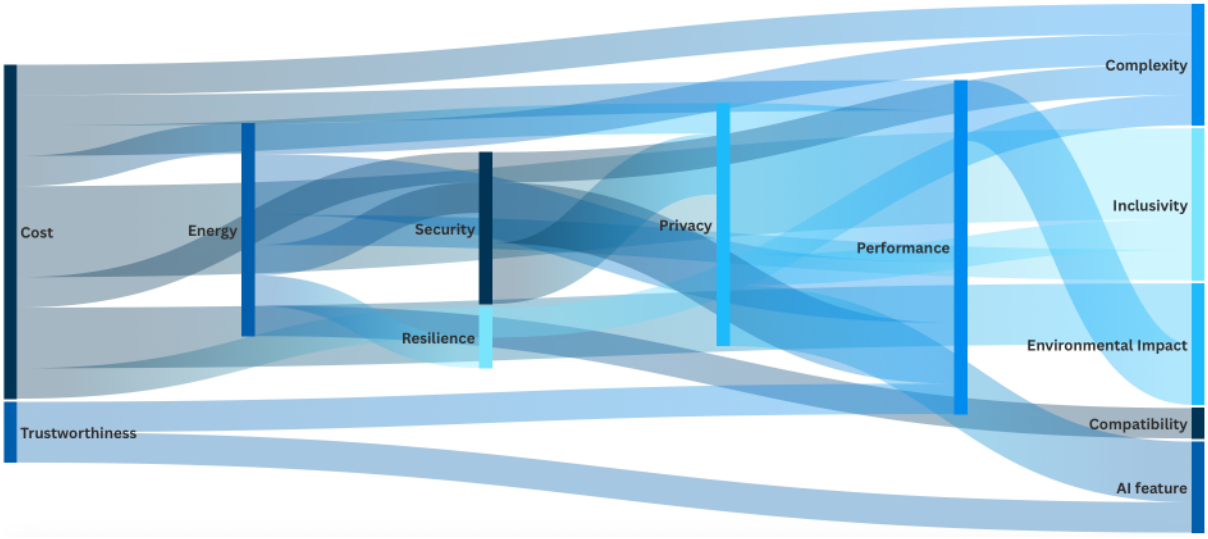

FIGURE 12. 2025 SURVEY. PROJECTS' TRADE-OFFS

However, the diversity and range of tensions presented suggest that a policy- or strategy-driven framework to support decision-making in relation to the values would benefit the projects since otherwise cost and performance often seem to be the foundational drivers. It is worth following up with the projects to understand more how they weighed the trade-offs, what decisions they took towards them in the end, and how they might be able to see - if at all - the relationships as mutually reinforcing rather than one versus the other.

5 SECTION: SURVEY FOLLOW-UP

The responses received from the two Surveys have provided key insights on the status quo of the SNS JU projects regarding the understanding of the topics of KVIs and Social Acceptance, and even further, how projects are addressing perceptions and concerns from the general public regarding the roll out of Beyond 5G and 6G technologies. The data collected with the total of 63 responses received across Call 1, 2 & 3 projects have not only drawn a better picture of the landscape within which 6G4Society is operating, but it also provided the necessary insight to: a) better define the core activities of 6G4Society and b) identify a selected number of projects to be engaged with directly to deepen the knowledge acquired. More specifically:

For the **KVI Work**, 6G4Society has led and organized Workshops on KVI challenges and opportunities as well as how to define and measure values, built exemplar definitions based on existing project work that will support future articulation of KV and KVIs, organized a vertical-specific workshop with Public Protection and Disaster Response stakeholders to understand how values matter from their perspective, and it is currently producing a framework that will be able to better guide and inform SNS JU projects around KVIs and Sustainability. The results are also feeding the ongoing work on 'KVI Thematic Sheets' to further develop some of the value definitions and objectives within to support improved and harmonised indicator derivation. Selected projects have been approached and asked to split across five groups (Trust/trustworthiness, Safety, Build Knowledge & Skills, Inclusivity, Quality of Life) which will work on:

- Clarifying terminologies for values
- Better understanding 6G objectives within the values identified
- Draw a better understanding of the stakeholders they need to engage with and the impact
- Build exemplar KVIs

For the **Social Acceptance work**, the project has led and organized a webinar on controversies, identified and interviewed external experts, initiated a close collaboration with two projects to operationalize the Social Acceptance for Technology (SAT) model and produce material readily accessible and readable for the SNS JU community and beyond. In addition to this work, the 2025 Survey was also leveraged to identify additional projects that could be engaged in one-to-one interviews to understand the current approaches to social acceptance. To date, a total of nine projects have been approached and interviewed with the objective to assess the potential of the adoption and operationalization of SAT within project activities by collecting, through the interviews, evidence from real-world project experiences.

Co-funded by the European Union