Grant Agreement No.: 101139070 (SNS JU) **DOI number:** 10.5281/zenodo.14592217

6G4SOCIETY

D2.3 PUBLIC POSITIONS ON 6G TECHNOLOGY

Revision: v.1.0

Work package	WP2
Task	Task 2.3
Due date	31/12/2025
Submission date	15/01/2026
Deliverable lead	Digital for Planet
Version	1.0
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Abstract	This deliverable summarises public perceptions, expectations and concerns related to 6G based on citizen engagement activities. It highlights strong priorities around privacy, fairness, environmental sustainability and the social value of future connectivity. The insights aim to guide responsible development and communication of 6G as a trusted, inclusive and human-centred technology.
Keywords	public perception, public concerns, privacy, environmental sustainability, digital inclusion, recommendations

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

Document Revision History

Version	Date	Description of change	List of contributor(s)
V0.1	06/03/2024	1st version of the template for comments	Matilde Voltolini (D4P)
V0.2	10/11/2025	1st version of content	Flavia Maragno (D4P)
V0.3	15/12/2025	Reviewers edits	Georgia Pantelide (eBOS), Tetiana Vasylieva (CyberEthics), Anna Aseeva (D4P)
V1.0	15/01/2026	Final edits	Flavia Maragno (D4P)

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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). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.Note: This deliverable has only been submitted and is waiting for final approval from the European Commission.

Project co-funded by the European Commission in the Horizon Europe Programme		
Nature of the deliverable:	**R**	
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PU	*Public, fully open, e.g. web (Deliverables flagged as public will be automatically published in CORDIS project's page)*	✓
SEN	*Sensitive, limited under the conditions of the Grant Agreement*	
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* R: Document, report (excluding the periodic and final reports)

DEM: Demonstrator, pilot, prototype, plan designs

DEC: Websites, patents filing, press & media actions, videos, etc.

DATA: Data sets, microdata, etc.

DMP: Data management plan

ETHICS: Deliverables related to ethics issues.

SECURITY: Deliverables related to security issues

OTHER: Software, technical diagram, algorithms, models, etc.

EXECUTIVE SUMMARY

This deliverable presents insights into how citizens perceive the future of 6G, based on public input collected through engagement activities and the 6G4Society citizen survey. The results show that awareness of 6G is still emerging, yet people already hold clear expectations about how next-generation networks should be developed, communicated, and governed. Rather than focusing only on performance or technological advancement, public priorities centre on privacy protection, fairness in access, environmental sustainability, and tangible benefits for everyday life.

When reflecting on the legacy of 5G communication, people value traditional press and mainstream media as their most trusted information sources, with social media and peer networks also playing a significant role. Expert channels, government sources and technical reports are trusted far less, which suggests that future communication strategies must be more transparent, accessible and grounded in real-world examples. The public does not reject innovation, but they expect it to be developed in dialogue with society, not announced only once decisions are already made.

Across all demographics, citizens want 6G to be human-centric, ethically governed and mindful of privacy risks associated with data-intensive systems. Environmental sustainability also features strongly, with many emphasising energy efficiency, reduced e-waste and thoughtful infrastructure deployment. People see value in future connectivity primarily where it improves daily life, such as work efficiency, information access, public services and digital safety.

Age-based analysis reveals clear generational differences. Younger groups are more driven by equity, inclusion and sustainability, while older groups prioritise reliability, practicality and digital support in day-to-day life. Despite these differences, there is wide alignment on a core principle: future networks must serve society as a whole.

These findings underline the need for early, ongoing engagement with the public throughout 6G development. Trust cannot be retrofitted later, and social acceptance depends on governance frameworks that protect rights, ensure fairness and balance innovation with responsibility. The deliverable concludes with implications for stakeholders and guidance for policy and technology teams aiming to build a 6G ecosystem that is trusted, inclusive and aligned with shared societal values.

Beyond its immediate findings, this deliverable is intended to serve as a practical knowledge base for future projects and the wider 6G and SNS-JU community. The insights into public perceptions, expectations and concerns around 6G provide valuable guidance for understanding how technological development is viewed by society and how its direction can be better aligned with real-world needs, values and priorities.

By capturing citizen perspectives at this early stage of the 6G journey, the deliverable enables future initiatives to anticipate societal challenges, design more inclusive and trusted technologies, and shape research and policy agendas that respond directly to public expectations. In this way, the work contributes to a shared learning resource that strengthens responsible innovation and supports long-term societal engagement in the evolution of Europe's digital infrastructure.

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TABLE OF CONTENTS

LIST OF FIGURES

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1 INTRODUCTION

The development of sixth-generation (6G) communication networks is still in its early research phase, yet discussions around expectations, societal impacts, and public trust have already begun. As technological innovation accelerates, understanding public perceptions becomes increasingly important, not only to anticipate potential concerns but also to guide responsible and human-centric design choices from the outset.

This deliverable presents insights gathered through the **6G4Society** public engagement activities, with a primary focus on findings from the **citizen survey**, complemented by inputs from workshops, dialogues, and online engagement initiatives. By capturing perspectives from a wide range of individuals across different countries, demographics, and levels of digital literacy, this work contributes to a more complete picture of how citizens perceive emerging network technologies and what they expect from future connectivity systems.

Objectives of the Deliverable

The main objectives of this deliverable are to:

- Provide an overview of public perceptions related to 6G, including levels of awareness, perceived opportunities, concerns, and expectations.
- Identify patterns, themes, and emerging narratives informed by citizen input.
- Illustrate the value of early-stage public engagement in shaping responsible technology roadmaps.
- Offer guidance for policymakers, industry stakeholders, and researchers seeking to align 6G development with societal priorities and concerns.

Relevance of Public Input for 6G Development: Why is it relevant?

Public perception plays a critical role in the acceptance, deployment, and long-term success of any new communication technology. Experiences with the introduction of 5G, including misinformation, opposition in some communities, and confusion about its purpose, demonstrate that social acceptance cannot be assumed once deployment begins. Instead, trust must be built progressively and deliberately. European policymakers have emphasised that 6G must avoid repeating '5G mistakes.' These also included failures in public acceptance driven by neglected concerns about health, privacy, and sustainability. How can we ensure that economic competitiveness and societal legitimacy are treated as two sides of the same coin in 6G governance, and in further European Technological Sovereignty "virtuous cycle"? For 6G, this means that public engagement is not an accessory to the technical process, but a core requirement in ensuring that future networks are understood, welcomed, and used confidently.

Listening to people early helps identify expectations and concerns before they become points of friction. Engaging communities in the exploratory stages of research allows decision-makers to design communication strategies that reflect real questions rather than assumed ones. It also helps anticipate areas where misinformation could develop, particularly on topics such as health, privacy and environmental impact, and enables clearer and more proactive responses. Early dialogue offers an opportunity to surface blind spots and social risks that developers or policymakers may overlook, especially regarding unintended consequences for vulnerable groups.

Public input also supports the long-term legitimacy of policy and technical roadmaps. When people see that their experiences and values are taken into consideration, acceptance of new infrastructure increases and resistance is less likely to form. This is particularly relevant for 6G because many of its benefits and risks will be distributed unevenly across age, geography and socio-economic groups. Continuous engagement helps ensure that the technology evolves in ways consistent with priorities such as sustainability, privacy, fairness and equitable access. By grounding decision-making in public input rather than in purely technological ambition, the transition to 6G becomes more balanced, socially anchored and more resilient over time.

6G4Society supports the development of a **sustainable, socially accepted, and value-based 6G**, aligned with EU democratic values, societal needs, and long-term sustainability. This deliverable therefore contributes to the broader ambition of shaping 6G as a **trusted, responsible, and inclusive** technology ecosystem.

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2 METHODOLOGY

This section outlines the data sources, sampling characteristics, and analytical approach used to understand public perceptions of 6G. The methodology is designed to ensure transparency, reproducibility, and clarity regarding the strengths and limitations of the findings.

Overview of Data Sources

The insights presented in this deliverable draw primarily from the **6G4Society Citizen Survey**, complemented by qualitative input from other engagement activities:

- **Citizen Survey**: The core dataset, gathering structured responses on awareness, expectations, concerns, and perceived opportunities related to 6G.
- **Public Workshops**: Facilitated group sessions exploring themes such as trust, digital rights, sustainability, and societal implications of next-generation networks.
- **Public Dialogues**: Conversations with citizen groups, community representatives, and multi-stakeholder panels providing deeper qualitative insights.
- **Online Engagement**: Interactions through social media, digital polls, comments, and open calls that captured spontaneous public sentiment.

These combined sources provide both quantitative evidence and qualitative nuance.

For a detailed overview of the activities carried out for Public Engagement, please refer to D2.1 Public Engagement Strategy and Plan.

Sample Size, Demographics & Geographic Coverage

- Total number of survey respondents: 1900. Used for the purpose of this analysis: 1358.
- Distribution across countries or regions: The public activities and Citizen Survey have been focused on the European region. The Survey reached most European countries with the highest number of answers coming from Ireland, UK, Italy, Spain, Romania, France and Germany.
- Age groups and gender balance: The in-person public outreach activities primarily engaged young adults and adults, with participation concentrated in the 18–24 and 25–35 age groups. These formats tended to attract participants who were already active in public discussions, education settings, or community events, and therefore provided valuable qualitative insights into the perspectives of populations that are often early adopters of digital technologies.

  The citizen survey enabled a broader and more balanced age distribution. Responses were more evenly spread across age groups, with particularly strong participation from the 35–44, 45–54 and 55–64 age brackets. This wider reach helped capture perspectives from mid-career and pre-retirement populations, who often prioritise reliability, security, employment stability and practical impacts on daily life. Taken together, the combination of in-person engagement and survey responses provides a complementary dataset that strengthens the analysis across age demographics, reducing age-related bias and supporting a more comprehensive understanding of public perceptions of 6G.

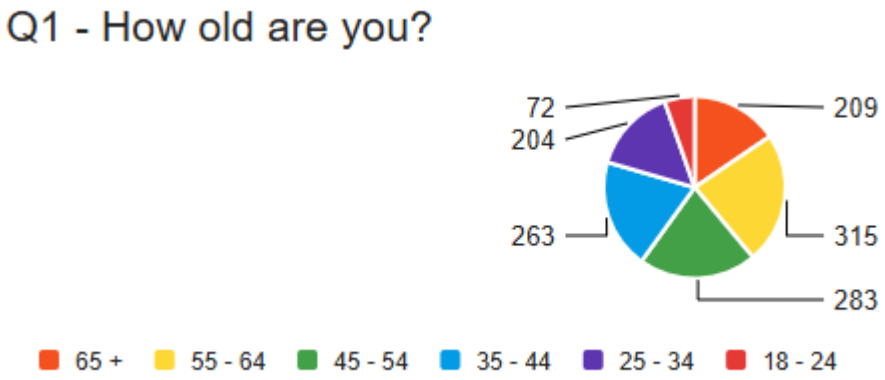

FIGURE 1: DEMOGRAPHIC DISTRIBUTION

Regarding gender distribution, participation in the in-person activities was balanced, with a slight majority of female attendees. The citizen survey also reached a balanced audience, with a slight majority of male respondents.

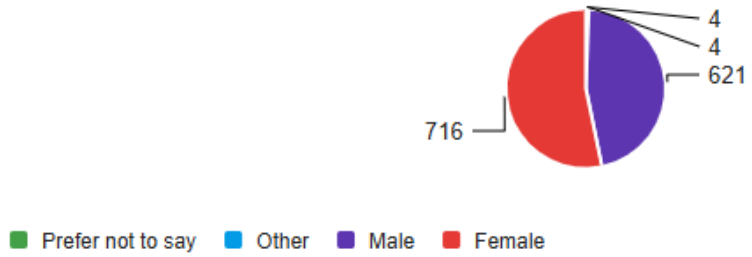

FIGURE 2: GENDER DISTRIBUTION

- Residential context: The survey data shows that the majority of participants reside in urban areas, making this the most represented residential context in the sample. Suburban areas form the second largest group, followed by respondents living in small towns. Rural areas are less represented, though they still account for a meaningful share of responses. Overall, the distribution indicates a stronger representation of urban and suburban perspectives, which is relevant when interpreting expectations around connectivity, infrastructure deployment and everyday use of digital services, while still incorporating views from smaller towns and rural settings.

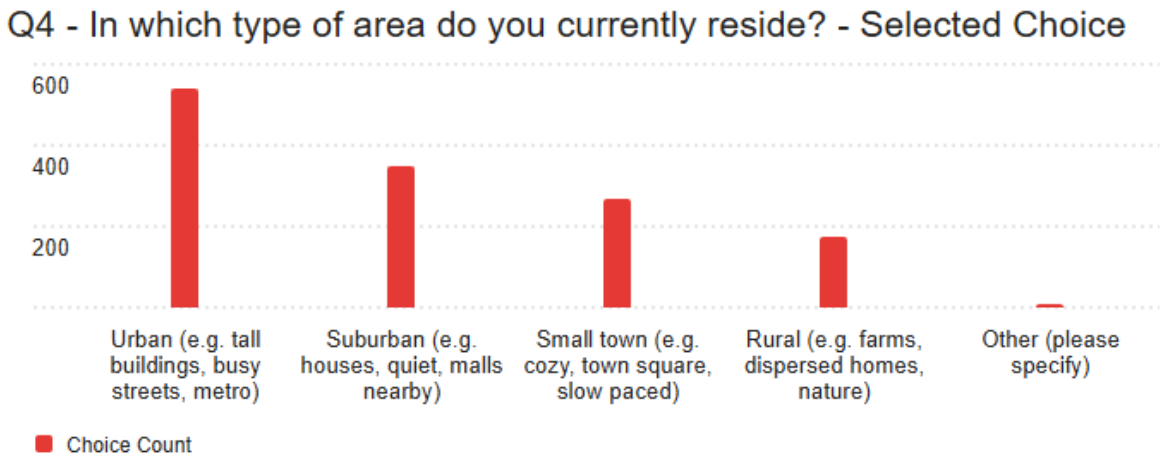

FIGURE 3: AREA OF RESIDENCY DISTRIBUTION

- Language accessibility: The in-person activities were conducted in English, Italian and Dutch, based on where they took place. The Citizen Survey was translated in 9 languages.

Limitations of the Data

To maintain transparency, this deliverable acknowledges several methodological considerations:

- **Survey distribution bias**: Online formats may exclude certain groups.
- **Geographical imbalance**, as some countries are overrepresented.
- **Temporal limitations**: Perceptions may shift as public discourse evolves or as 6G research progresses.
- **6G is still abstract** to many participants, which may limit the granularity of responses.

Analysis Approach

The analysis involved:

- **Quantitative analysis** of closed-ended survey questions, including descriptive statistics and trend identification.
- **Qualitative thematic coding** of open-ended responses to identify recurring narratives related to trust, benefits, concerns, and values.
- **Comparative reading** across engagement formats (survey, workshops, dialogues) to identify converging or diverging insights.
- **Light-touch comparison with 5G narratives**, based on either existing literature or available perception data, to determine whether citizen expectations for 6G mark continuity or a shift in public discourse.

This mixed-method approach ensures a balanced interpretation of the data.

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3 PUBLIC PERCEPTIONS OF 6G TECHNOLOGY

As 6G remains in early research stages, public attitudes are still forming, shaped largely by experiences with previous network generations and expectations for the future. The input collected through our public engagement and citizen survey reveals a landscape defined by both curiosity and caution. Many people associate 6G with the promise of improved connectivity, smarter services and new capabilities for everyday life. At the same time, the legacy of 5G communication, misinformation, and social debate continues to influence how emerging technologies are perceived. Understanding this context is essential if future development is to reflect societal needs and foster trust rather than resistance.

Across the dataset, several themes emerge consistently. Citizens look to trusted media sources and personal networks for information, are most familiar with visible and widely discussed digital applications, and express clear expectations on privacy, fairness, environmental sustainability and responsible governance. Concerns about energy use, surveillance and potential inequalities coexist with optimism around better healthcare, information access and quality of life. The following subsections explore these perceptions in detail, outlining where expectations are aligned, where uncertainties persist and how public priorities can guide a more inclusive and future-ready 6G ecosystem.

PUBLIC NARRATIVES AROUND 5G

Before examining how citizens perceive 6G, it is essential to understand the communication landscape surrounding 5G, as it represents the narrative baseline from which public expectations and concerns now evolve. The rollout of 5G was accompanied by ambitious promises, such as faster speeds, ultra-low latency, massive device connectivity, and transformative applications across sectors from healthcare to manufacturing. These messages, largely driven by governments, telecom providers, and industry actors, framed 5G as “revolutionary,” “life-changing,” and a catalyst for economic and social progress. However, this top-down narrative was not universally accepted. Public understanding often lagged behind the technical messaging, and communication efforts struggled to reach or resonate with communities that had questions about the rationale, implications, and governance of the new infrastructure.

At the same time, 5G became a focal point for significant controversy. While misinformation, especially during the COVID-19 pandemic, exacerbated fears, many concerns expressed by citizens had deeper historical roots and pre-dated 5G. Issues such as potential health effects from EMF exposure, environmental impact, energy consumption, privacy risks, and the visual footprint of antennas contributed to protests, regulatory challenges, and, in some cases, vandalism of infrastructure across Europe. These tensions highlighted gaps in trust, transparency, and local involvement in decision-making. The 5G experience revealed the limitations of a predominantly industry-driven communication approach and underscored the need for more inclusive, responsive, and participatory models of technology governance. For a more detailed analysis of the 5G narrative and its implications, please refer to Deliverable 2.1. Public engagement strategy and plan.

● Trusted sources for 6G information

The data collected throughout the project shows that people continue to rely mostly on traditional news media when seeking information about connectivity technologies. News websites and newspapers appear clearly at the top of the ranking, well ahead of all other sources, which suggests that mainstream journalism still plays a central role in shaping how

the public understands developments such as 5G and, eventually, 6G. Social media and personal networks, such as friends and colleagues, follow closely behind. This combination is important because it reveals that while citizens look for credibility and authority in established news outlets, they also depend heavily on the immediacy, accessibility and social validation that come from digital platforms and peer conversations.

What is particularly striking is how low institutional and expert sources rank. Government websites, educational institutions, technical journals and industry reports all appear much further down the list. This indicates a clear trust gap between formal, authoritative channels and the channels people actually turn to when forming opinions. For 6G communication, this is a critical insight. It suggests that even the most accurate or technically rigorous information will not reach the public effectively if it is shared only through official or specialist sources. Instead, meaningful engagement will require working through the platforms and intermediaries that people already trust, strengthening media partnerships, improving clarity and accessibility in public-facing communication, and ensuring that trustworthy explanations circulate in the spaces where people naturally discuss and interpret new technologies.

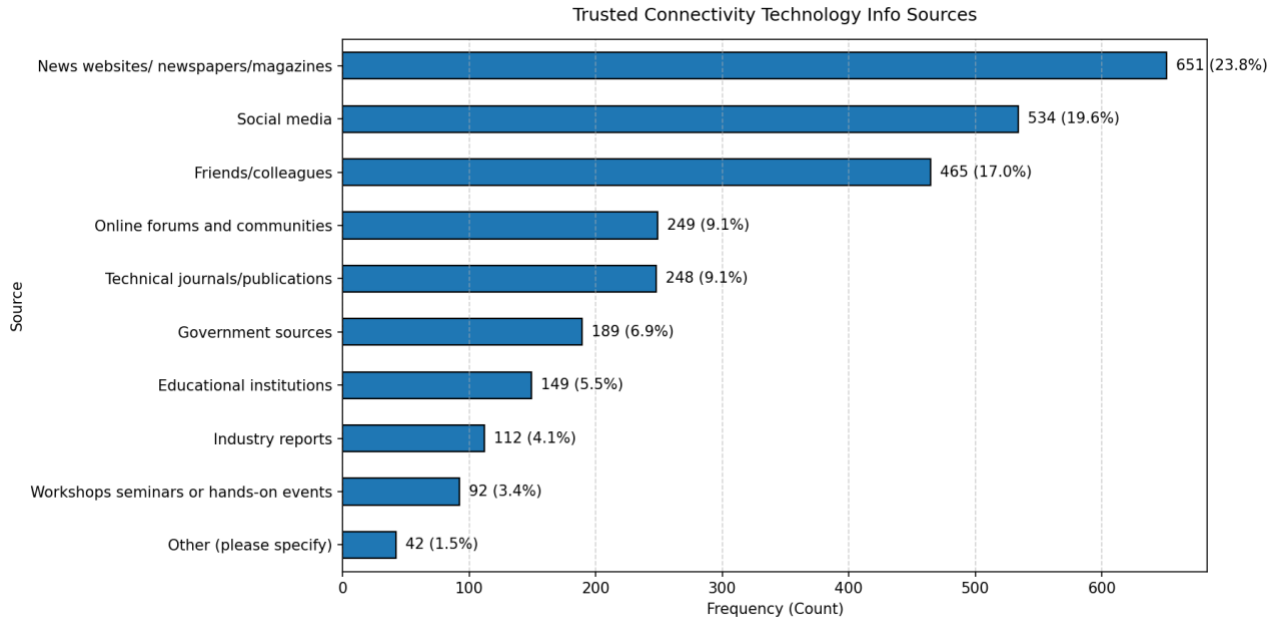

FIGURE 4: TRUSTED CONNECTIVITY INFORMATION SOURCES

FAMILIARITY WITH CURRENT AND EMERGING APPLICATIONS

When asked which advanced digital applications they are most familiar with, respondents overwhelmingly selected artificial intelligence and machine learning. This category sits clearly at the top of the responses, reflecting the strong presence of AI in public debate and its integration into everyday services such as recommendation systems, digital assistants and productivity tools. Virtual and augmented reality follow in second place, suggesting that immersive technologies have also become widely recognised, even if not yet widely adopted. Their visibility through gaming, entertainment and workplace training likely contributes to this familiarity.

Beyond these highly visible technologies, respondents show moderate familiarity with applications such as self-driving cars, robotic or remote surgery and smart-traffic management. These innovations are often featured in news stories and technological forecasts, which may explain why people have a general sense of what they involve, even if they remain distant from

everyday experience. Precision agriculture, which is more sector specific and less represented in mainstream media, generates the lowest familiarity. Interestingly, a sizeable group selected “none of the above”, highlighting that for many citizens, the landscape of advanced digital applications still feels abstract or disconnected from their daily lives. This gap indicates an important opportunity for clearer communication: as 6G develops, linking its capabilities to practical and relatable examples will be essential to help the public understand where they may encounter real benefits.

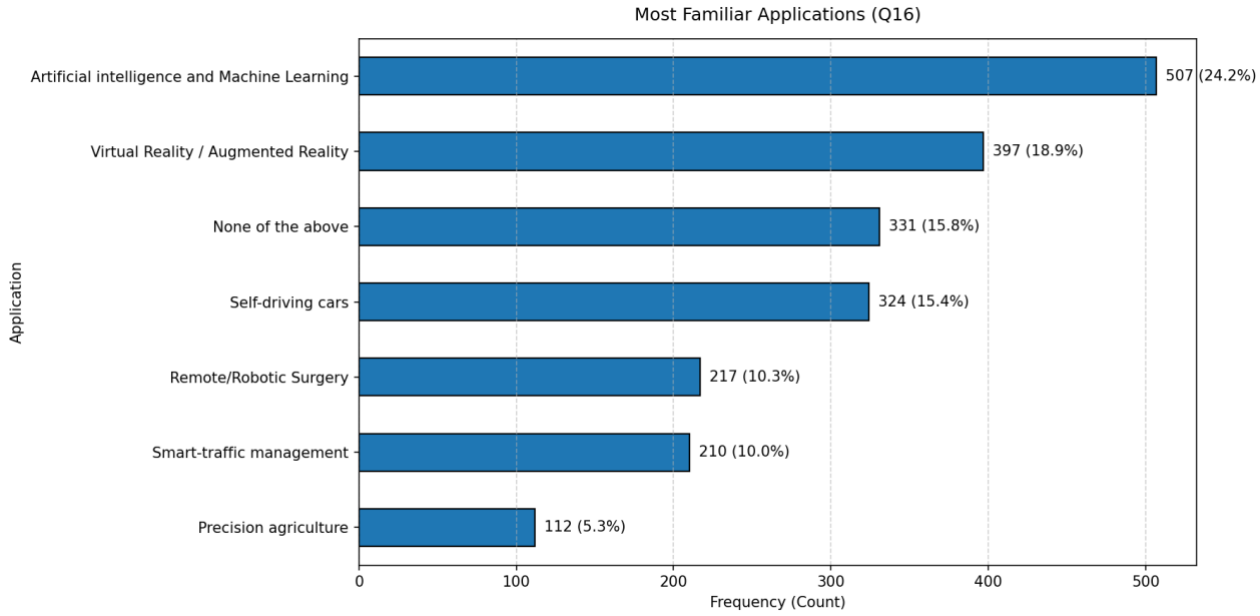

FIGURE 5: MOST FAMILIAR APPLICATIONS

PERCEIVED CONCERNS AND OPPORTUNITIES

• Call for Privacy, Ethics and Governance

Privacy appears as a central concern for many respondents, with a substantial share identifying it as one of their top priorities for future connectivity, with **64% ranking it as its top priority**. It is also worth noting that 801 people ranked Cybersecurity Threats as number 2 rather than number 1, suggesting it is often seen as closely linked to privacy rather than distinct from it.While people acknowledge that faster and more intelligent networks could bring clear advantages, many are unsure about how their data will be used and what forms of oversight will be in place. Several respondents describe 6G as "*promising technology, easily misused, needs a lot of effective ethical ruling,"* reflecting a view that innovation and responsibility must advance together. **It is important to note that this perspective does not reject technological progress but highlights the importance of ensuring that personal data protection, transparency and individual rights are considered from the outset.**

Field	1	2	3	4	5	6	7	8
Privacy and Surveillance Risks (Data collection, personal security)	855	192	97	53	28	13	6	2
Cybersecurity Threats (Hacking, national security risks)	169	801	124	66	52	28	5	1
Health and Safety Concerns (Scientific uncertainty, EMF exposure)	71	94	779	142	85	48	25	2
Social Impact (Job displacement, digital divide, isolation)	29	55	102	803	152	75	30	0
Environmental Impact (E-waste, energy use , biodiversity effects.)	46	48	57	76	801	162	56	0
Geopolitical Concerns (Power struggles, international regulations)	18	17	32	38	69	851	219	2
Financial Costs (Infrastructure investment, personal costs)	53	39	55	68	59	67	897	8
Other (please specify)	5	0	0	0	0	2	8	1,231

FIGURE 6: RANKING OF PERCEIVED CONCERNS

The comments also show a growing expectation for stronger ethical and governance frameworks to accompany new network capabilities. People express a desire for clarity about who benefits from technological progress and how potential risks are managed. For some, the concern is global in scope, as reflected in the statement that "*dangers to society exist but are not necessarily due to technology but on how it is used. We need safeguards of ethics and human rights in all regions of the world. We also need anti-trust laws.*" Others focus on rights linked to the digital environment of the coming decade, noting that "6G must address the societal issues that will be major in 2030: the right to connect and disconnect, the right to access reliable and true information and the means to verify it, privacy."

Many respondents associate trust with the quality of governance rather than the technology itself. Several highlight that their confidence depends on careful implementation and clear rules, as captured in the view that "*positive outlook, depends on how well technologies and applications are implemented, together with regulations that control and support the proper use and development of services."* Others worry that the pace of regulation is not keeping up with innovation and comment that "*hopeful but I believe that we are legislating slower than technology requires us to."*

Throughout the responses, there is a consistent idea that technology is only as beneficial as the choices surrounding its use. This is reflected in the remarks that *"emerging technologies with great potential if used in human-centric and democratic ways*" and "*they are tools; what is important is how we use them.*" Together, these concerns and expectations point to a strong public interest in ethical governance, meaningful accountability and trustworthy communication as fundamental elements of 6G development.

• Environmental Sustainability

Environmental sustainability emerges as a prominent theme across the public input collected through our engagement activities. A considerable share of participants highlighted environmental protection, resource efficiency and climate considerations as central expectations for the development of 6G. This reflects a growing awareness that future connectivity must align with planetary boundaries and broader ecological goals. Many participants expressed concern that the next generation of networks could increase energy use, accelerate e-waste production or reinforce a pattern of technological expansion without clear societal need. As one participant remarked, "*material and energy overconsumption for the sake of watching high-def(definition) videos anywhere. I do not see it as a positive development for our societies*." Others pointed to a "*race for technology without conscience,*" suggesting discomfort with innovation that is perceived as misaligned with environmental priorities.

Concerns also extended to the broader ecosystem supporting digital technologies, including data centres, AI-driven systems and the supply chains required to maintain them. Several participants noted that "anything related to AI, especially on such a scale has a huge environmental impact," drawing attention to the material footprint of servers, cooling systems and the extraction of critical minerals. References to the "*risk of exceeding planetary limits"* and to debates being "*out of sync with the environmental emergency"* illustrate a perception that digital development is not always connected to long-term ecological responsibility. At the same time, participants acknowledged that technology can support sustainability objectives if deployed thoughtfully.

The input also reveals a desire for governance frameworks that ensure environmental risks are properly addressed. Comments such as "*attention to the frenzied race for 'more' and the negative impacts"* and "*useful but has risks that will need to be analyzed*" reflect calls for a measured, evidence-based approach to development. Others pointed to the need for policy alignment, noting that progress could be "*mostly positive but policies and legislations have to keep up on safety as well as academia and research must be funded on their impact on health and the environment.*" **A recurring message is that technology is seen as a tool whose impact depends on how it is used and governed**. Overall, environmental sustainability is both perceived as a concern and an opportunity: citizens recognise the potential of 6G to support greener systems, while asking for careful consideration of its footprint and alignment with societal and ecological priorities.

• Opportunities in Daily Life

When asked which aspects of their daily lives they would most like future connectivity technologies such as 6G to improve, public input points to a set of priorities that are highly practical, human-centred and rooted in everyday digital experience. Rather than abstract visions or speculative use cases, people express a clear desire for technologies that make them feel safer, better informed, better connected, and more supported in work and public life.

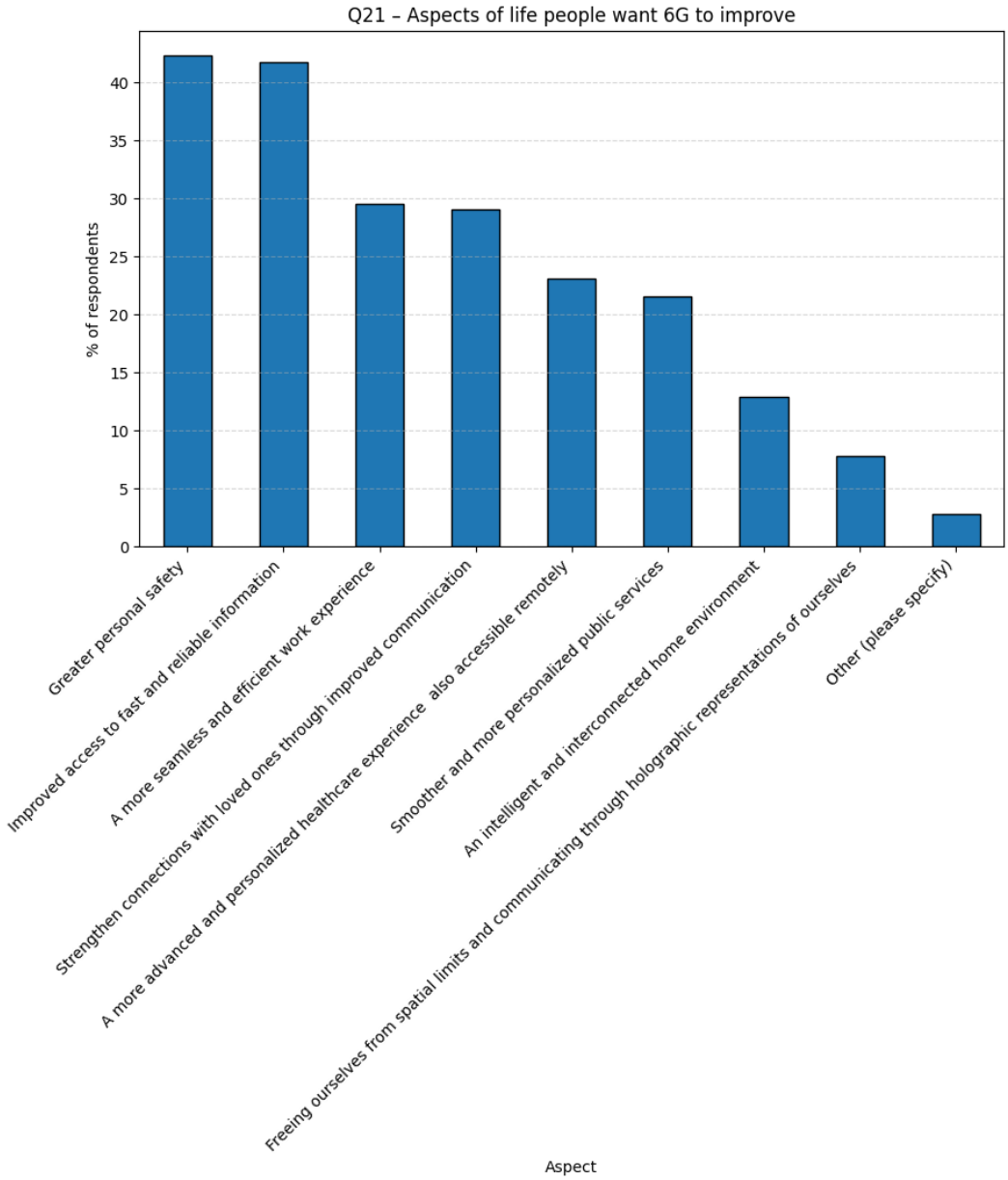

FIGURE 7: RANKING OF ASPECTS OF LIFE TO BE IMPROVED WITH 6G

Personal safety emerges at the top of the list, with **more than 40 percent** of citizens selecting it as a priority. While safety is often understood in terms of emergency response and secure infrastructure, many comments indicate that people link safety to privacy, data protection and digital security. In other words, feeling safe means being able to communicate, navigate and engage online without fear of surveillance, misuse of personal data, or exposure to cyber risks. For 6G development, this suggests that technical reliability alone will not be enough to deliver a sense of safety. Privacy-by-design, robust encryption, and user agency over data will be defining factors in whether people experience next-generation networks as safe environments.

A similarly high proportion of respondents highlight **improved access to fast and reliable information**, also above **40 percent.** This reflects expectations for better quality connectivity in everyday life, but also the need for information flow that is trustworthy and verifiable. In a context where misinformation spreads rapidly across digital platforms, faster networks alone

do not guarantee better outcomes. A 6G future that delivers benefits in this area will need to pair speed and capacity with safeguards that help users navigate information securely and with confidence.

Just under one third of the public express a desire for **more seamless and efficient work experiences,** indicating that connectivity is increasingly seen as an enabler of productivity, collaboration and economic participation. A further similar shared value is **stronger connections with loved ones,** which reinforces the idea that 6G will be socially relevant if it enhances human relationships rather than merely accelerating automation. Technologies supporting remote presence, high-quality communication and better accessibility are therefore perceived as meaningful opportunities, especially in cross-border families, hybrid workplaces and care contexts.

Together, these priorities paint a clear picture. The opportunities that matter most to people are not futuristic abstractions, but improvements with direct, tangible relevance to everyday life.

- ### Age-based Variations in Expectations and Concerns

The public input results reveal clear **generational patterns** in how people think about 6G, what they expect from future networks, and which aspects of technological development they prioritise. While all age groups express interest in improved connectivity, their motivations and concerns differ in important ways. **Younger respondents** tend to approach 6G through a **broader social lens**, connecting technological progress with issues such as sustainability, fairness, and digital rights. **Middle-aged groups** focus more on **economic stability**, job security, and the performance of public services. Older adults emphasise reliability, safety, and practical improvements that support daily life.

Younger adults consistently associate 6G with climate action, sustainability and long-term ecological protection, while middle-aged respondents tend to highlight biodiversity and ecosystem preservation. Respondents aged 65 and over select environmental issues less frequently and instead prioritise stable networks and services that help them manage day-to-day tasks. This confirms a generational divide between users motivated by environmental and social values and those who focus more on concrete functionality.

Expectations for faster and more reliable connectivity are shared across all age groups, although the emphasis differs. Older respondents place particular value on dependable service and trustworthy performance, while those aged 25 to 44 show stronger expectations regarding speed and seamless mobility. In contrast to these performance concerns, many younger respondents associate 6G with broader societal goals, including fair and inclusive access to digital services. Their comments often link future networks with solidarity, equal opportunities and the reduction of digital divides.

For older adults, expectations for 6G are closely tied to practical real-life improvements. They are generally less concerned with immersive or entertainment-focused applications and more interested in technologies that simplify how they interact with services and information. By comparison, respondents aged 18 to 24 place stronger emphasis on maintaining connections with loved ones, improving information access and supporting social participation.

Middle-aged respondents show the strongest concern about the impact of automation and digital transformation on employment. Job security, fair labour practices and economic stability are recurring themes, especially among those aged 35 to 54. While younger respondents tend to connect 6G with social and environmental progress, middle-aged groups link it more directly with economic consequences and workplace change.

Defence and militarisation rank low across all age groups, including older respondents. Even in a period of geopolitical tension, people are more concerned with environmental resilience, social inclusion and daily digital needs. This suggests that public expectations for 6G remain grounded in socio-economic and ecological priorities rather than national security narratives.I**t is important to interpret this finding in relation to the geographical context of the survey. The respondent pool is predominantly European, where defence considerations are generally less central to public debates on digital infrastructure than in regions experiencing active conflict or acute security instability.** In a different setting, such as areas affected by armed conflict, perceptions and priorities might naturally place a much stronger emphasis on security, defence and geopolitical risk.

Overall, these findings highlight how perceptions of 6G vary across generations. Younger adults focus on sustainability, equity and digital rights, middle-aged respondents emphasise economic and practical concerns, and older adults seek reliability and clear benefits to everyday life. Understanding these differences can support more targeted communication and policy design as 6G research and development advances.

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4 INSIGHTS FOR STAKEHOLDERS

Public input gathered through citizen engagement activities shows a hierarchy of expectations for how future connectivity and digital innovation should be governed. While views are diverse, four issues consistently rank highest, indicating where people believe political decision-making and industry strategy should focus as 6G evolves. These priorities blend economic pragmatism with social and environmental awareness, reflecting a desire for progress that is both future-oriented and grounded in public benefit rather than technological ambition alone.

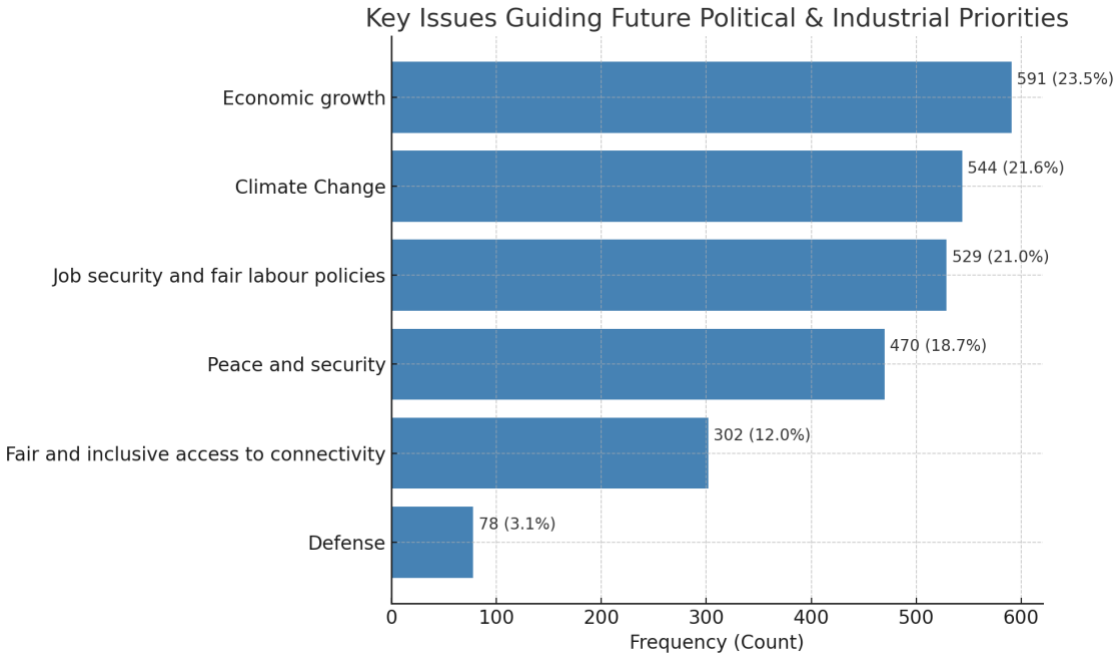

FIGURE 8: RANKING OF KEY ISSUES DRIVING POLITICAL AND INDUSTRIAL POLICIES

Economic growth stands as the most frequently selected priority, chosen by 23.5 percent of participants. Many citizens see digital infrastructure as a driver of competitiveness, productivity and innovation, particularly in a context of labour transformation and automation. The emphasis on economic development suggests that 6G is viewed not only as a technical upgrade but as an enabler of long-term prosperity, industrial resilience and new market opportunities. However, this perspective often comes with expectations for fairness, job stability and balanced growth that benefits more than just the technology sector.

Close behind is **climate change**, selected by 21.6 percent. This reflects a strong desire for future connectivity systems to support climate goals rather than compete with them. People want emerging networks to reduce energy consumption, minimise waste and contribute to more sustainable digital practices overall. The ranking suggests that technological progress will be judged not only by speed or capability, but by whether it aligns with a low-carbon future and avoids repeating patterns of resource overuse as seen in previous generations.

The third highest priority, chosen by 21 percent, is **job security and fair labour policies.** This underscores public awareness that automation and AI-powered systems may reshape employment landscapes. Many citizens support digital innovation, but also want clear

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strategies to protect workers, retrain affected groups and avoid widening inequalities between sectors or skill levels. The public expectation is not to halt technological progress, but to prepare for it with policies that ensure a just transition.

Peace and security appears next with 18.7 percent, ranking high but notably below economic, environmental and labour concerns. People value stability and safety in digital infrastructure, yet the relatively lower prioritisation suggests that everyday socio-economic realities weigh more heavily than geopolitical narratives. It is important to acknowledge that the dataset reflects primarily European input, where defence is not at the forefront of public expectation. In other regions with ongoing conflict, instability or occupation, defence relevance might look very different.

The following section presents **key lessons learned for policy makers and technology providers**, derived from insights gathered through public engagement activities. These lessons reflect how citizens prioritise economic, social, environmental, and governance considerations in relation to future connectivity and 6G development. They are intended to highlight areas of attention informed by public expectations, rather than to serve as exhaustive recommendations. For a more in-depth set of recommendations based on the overall project results, please refer to **D1.2** ***Towards a Socially Accepted and Sustainable 6G – Policy Brief*** and **D1.3** ***Towards a Socially Accepted and Sustainable 6G – Operation Brief***.

FOR POLICY MAKERS

Throughout this document we have seen that citizens emphasised the importance of privacy, fairness, environmental sustainability and real improvements to daily life. EU citizens thus, signalled to European policy makers a need for governance frameworks that embed public values into technology development early, rather than retrofitting safeguards later. Policy makers therefore have a strategic opportunity: to shape 6G as a trusted public infrastructure grounded in democratic legitimacy, rather than a purely technical upgrade.

Based on the work and data collected throughout the Public Engagement work, in collaboration with the analysis conducted by T1.4, below is a set of actionable points for Policy makers.

1. Adopt a values-driven approach to 6G governance and research investment.

Public attitudes demonstrate that technological acceptance grows when people recognise their values reflected in design, deployment and communication. Policy frameworks should therefore integrate societal values as early decision-making criteria. This involves embedding requirements for privacy-by-design, equitable access, energy-responsible network deployment and anticipating social impacts from the outset rather than after infrastructure is built. Such an approach would guide research funding, spectrum policy and infrastructure planning in ways aligned with public expectations for responsibility and fairness.

2. Build regulatory frameworks around privacy as a non negotiable baseline

Citizens expect strong guarantees on data protection and surveillance safeguards. A governance structure grounded in privacy by design would strengthen trust and reduce resistance during deployment. Regulators can do this by clarifying legal limits on telecom data analytics, providing guidance for profiling and automated decision processes, and defining which types of inferences from network data should be restricted. Policy should align with the risk based approach in the EU AI Act and ensure that 6G systems handling personal information are subject to proportional accountability and oversight.

3. Address environmental sustainability as a formal design requirement

With climate change ranking as the second most selected policy priority at 21.6 percent, environmental risks should not remain a secondary topic. Policy frameworks should incentivise energy efficiency targets for networks and data centres, support low footprint infrastructure deployment, and require lifecycle reporting on e waste. Regulatory alignment can be strengthened through a reference programme that demonstrates how environmental sustainability can be integrated into business decisions at each stage of the telecom value chain. This includes spectrum use, hardware design, deployment standards and end of life recovery.

4. Treat fairness and digital equity as core development criteria

Twelve percent of participants prioritise fair and inclusive access to connectivity, and comments repeatedly point to fear of widening digital divides. Policymakers should define inclusion indicators for 6G access, device affordability and coverage distribution. A harmonised EU framework for digital skills should also be introduced to support adoption, particularly for seniors who emphasise reliability and practical utility. Public consultation mechanisms should ensure that communities with limited resources receive technical assistance and genuine participation in infrastructure decisions.

5. Establish early public engagement and community inclusion mechanisms

Public input shows that trust cannot be built retroactively and that acceptance improves when people are included before deployment decisions are final. Given that citizens place high importance on privacy, fairness and environmental sustainability, structured early engagement can help identify social risks, address blind spots and align development with public expectations. Policymakers should require early consultation processes for 6G planning, with clear procedures for information sharing, impact feedback and integration of community concerns into planning outcomes.

5. Support multidisciplinary research capacity for social and ethical evaluation

Public concerns extend beyond performance to implications such as labour displacement, personal autonomy and environmental limits. Policymakers should ensure that research programmes integrate social science competences where societal effects are central. Reference research streams could address immersive media, communication behaviour, gaming as a value shaping environment, and the merging of physical and virtual worlds. This would mitigate blind spots in early technical development and reduce future regulatory friction.

FOR TECHNOLOGY PROVIDERS

Public expectations for 6G indicate interest in improved connectivity, faster services and enhanced everyday functions, but only if these advances protect privacy, reduce energy consumption and are implemented responsibly. Over forty percent of participants ranked personal safety and information access as key improvements they expect from future networks. Much of what citizens describe as safety relates directly to privacy and data security. The industry therefore operates in a context where technical performance alone will not secure trust. Adoption will depend on whether product development aligns with societal expectations recorded during engagement.

Based on the work and data collected throughout the Public Engagement work, below is a set of actionable points for Industry and Technology Providers.

1. Adopt privacy by design as a baseline for network architecture

Citizens do not ask for less innovation, but they expect clear guarantees that personal information will remain protected. Providers should incorporate privacy features at protocol level, minimise unnecessary data flows, and provide user facing controls that allow transparency over data use. Documentation should explain which data is collected and for what purpose. This would reduce uncertainty reported during public consultation and strengthen the sense of safety associated with network usage.

2. Demonstrate leadership in environmental responsibility

Environmental concerns appear repeatedly across qualitative and quantitative input. Providers should monitor energy consumption during network design, evaluate material footprints and apply circular resource strategies to hardware. Demonstration projects could show reduction targets on data centre load or tower energy consumption to support regulatory alignment. This would position 6G development within climate objectives cited in 21.6 percent of policy priority selections.

3. Prioritise reliability, accessibility and practical utility in early deployments

Older citizens place the highest value on reliability and ease of use, while younger groups emphasise fairness and sustainability. Industry roadmaps should therefore balance high performance innovation with service continuity and robustness. Device interoperability, stable connectivity in rural zones and simple user interfaces would reduce friction for adoption and respond to expectations across age groups.

4. Communicate in accessible, relatable, and non-technical terms.

Traditional news media are reported as the most trusted source, followed by social platforms and conversations with peers. Technical reports and institutional channels rank lower. Providers should communicate through channels that already hold public trust and focus on practical benefits rather than abstract capability statements. Industry should invest in clear communication that focuses on real use-cases, tangible daily benefits, and transparent discussion of risks, trade-offs and uncertainties.

5. Collaborate in multi stakeholder processes to align networks with shared values

Industry should not treat social acceptance as a marketing challenge. Instead, collaboration with civil society, academic researchers and policymakers can identify value risks early, reduce perception gaps and improve governance alignment. Participation in reference programmes on sustainability and ethical design would support long term deployment stability and reduce future regulatory intervention.

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5 CONCLUSIONS

This deliverable highlights the central role of public input in shaping the future development of 6G. While 6G remains at an early stage, the findings demonstrate that public expectations are already clearly articulated, particularly when it comes to values, governance and societal impact. Citizens do not primarily evaluate future connectivity through technical performance alone. Instead, they assess it according to its implications for privacy, environmental sustainability, fairness, employment and everyday life.

Experiences with the rollout of 5G continue to influence how emerging technologies are perceived. Public input reflects lingering confusion and scepticism linked to how previous technologies were communicated and deployed, reinforcing the importance of transparency and early dialogue. The data shows that people rely more on media, social platforms and personal networks than on institutional or expert sources when forming opinions. This underscores a persistent trust gap that must be addressed if 6G is to be understood and accepted by the wider public. Communication strategies therefore need to be grounded in clear, accessible explanations and must openly address both benefits and risks.

Listening to public input is not only a matter of democratic inclusion but also a practical necessity. Engagement activities reveal concerns that may otherwise remain underrepresented in technical planning, such as fears around data misuse, energy consumption, digital exclusion or unintended social impacts. By involving citizens early, stakeholders can identify these blind spots, adapt development pathways and avoid resistance emerging at later stages. Early engagement also supports social acceptance, as people are more likely to trust technologies they understand and feel have been developed with their interests in mind.

Across the data, several consistent themes emerge. There is strong alignment around the need for privacy protection, responsible data governance and safeguards against excessive surveillance. Environmental sustainability is a key expectation, with many questioning whether future connectivity will reduce or intensify resource use and emissions. Participants also express a clear desire for fair and inclusive access, alongside concerns about labour impacts and the pace of automation. At the same time, the public recognises the potential of 6G to support economic development, improve services and enhance quality of life, provided that these benefits are distributed equitably.

Differences across age groups highlight the importance of tailoring both policy and communication approaches. While younger people often emphasise sustainability, equity and ethical governance, older groups tend to focus on reliability, safety and practical utility. Despite these variations, expectations converge around a shared principle: 6G should be developed as a responsible and human-centric system that prioritises public benefit over technological ambition alone.

The recommendations outlined in this deliverable translate these insights into concrete actions for policy makers and technology providers. They emphasise the need for values-driven governance, early public engagement, privacy-first design, environmental accountability and fair access. Taken together, the findings suggest that a successful transition to 6G will depend less on technical breakthroughs than on the ability to align innovation with societal values. Treating public input as a continuous resource rather than a one-time consultation is essential to ensure that 6G develops as a trusted and sustainable infrastructure for the long term.

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