6G AI-Native Integrated RAN-Core Networks

Deliverable D6.1

Dissemination, standardisation and communication plans, and project website

This work has been supported by the 6GARROW project which 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 101192194 and from the Institute for Information & Communications Technology Promotion (IITP) grant funded by the Korea government (MSIT) (No. RS-2024-00435652).

Date of delivery:	31/03/2025	Version:	0.3
Project reference:	101192194	Call:	HORIZON-JU-SNS-2024-STREAM-B-01-06
Start date of project:	01/01/2025	Duration:	36 months

Document properties:

Document Number:	D6.1
Document Title:	Dissemination, standardisation and communication plans, and project website
Editor(s):	Sallamaari Syrjä (OULU), Matti Latva-aho (OULU) Dileepa Marasinghe (OULU), Nicolas Cassiau (CEA), Markus Mueck (INTEL), Alexis Dowhuszko (AALTO)
Authors:	Sallamaari Syrjä (OULU), Matti Latva-aho (OULU) Dileepa Marasinghe (OULU), Nicolas Cassiau (CEA), Markus Mueck (INTEL), Riku Jäntti (AALTO), Alexis Dowhuszko (AALTO), Davide Montagno Bozzone (HPE), Seong-Lyun Kim (YONSEI), Thomas Haustein (FhG), Emilio Calvanese Strinati (CEA), Zoran Utkovski (FhG), Quentin Lampin (ORANGE), Pierre Dal Zotto (GEM), Jaehoon Chung (LGE)
Contractual Date of Delivery:	31/03/2025
Dissemination level:	PU
Status:	Final
Version:	0.1
File Name:	6GARROW D6.1_v0.3

Revision History

Revision	Date	Issued by	Description
0.1	30.01.2025	6GARROW WP6 - OULU	Initial draft and table of contents
0.2	07.03.2025	6GARROW WP6 - OULU	Version for internal review
0.3	20.03.2025	6GARROW WP6 - OULU	Final version for review

Abstract

The 6GARROW deliverable D6.1 defines the dissemination, standardization, and communication strategy for the project. It establishes a structured framework to maximize the project's visibility, impact, and engagement with key stakeholders, including industry, academia policymakers, and standardization bodies.

The document outlines targeted communication channels, content strategies, and dissemination activities, ensuring alignment with global 6G research and regulatory developments. The deliverable also addresses project's EU-Korea collaboration, including joint research, Proof-of-Concept demonstrations, and standardization contributions.

This document serves as a reference point to ensure alignment with 6GARROW's objectives, and as a guide to help the project team both communicate and report its work and impact throughout the project.

Keywords

6GARROW, Communication, Strategy, Media, Dissemination, Demonstrations, Proof-of-Concepts, Key Exploitable Results, Standardisation, Regulation, Objectives, Impact, Collaboration, European Union, Korea, Horizon Europe, SNS JU

Executive Summary

The 6GARROW Communications Plan is a document that outlines how the project will promote its research, achievements, and key results while fostering collaboration and engagement with its target audience. The plan serves as a guide to support the project's objectives, ensuring a clear framework for dissemination, standardisation, and communication activities.

The document provides practical information about target audiences, communication channels and platforms, and strategies for utilizing them.

The plan includes:

- A brief introduction to project communication in general and to the plan itself.
- Communication and dissemination plans, including communication goals, platforms and methods, content strategy and creation workflow, dissemination activities, and information about Proof-of-Concepts and Demonstrations.
- Information on Key Exploitable Results, from implementation plans to expected outputs.
- A description of the project’s standardization and regulation activities, as well as applicable standardization bodies.
- Planned activities for EU-KR cooperation, including participation in international events.

This document ensures that 6GARROW’s communication, dissemination, and standardisation efforts are targeted, consistent, and effectively support the project’s goals.

Table of Contents

List of Tables

List of Figures

Acronyms and abbreviations

Term	Description
3GPP	3rd Generation Partnership Project
5G-ALLSTAR	5G AgiLe and fLexible integration of SaTellite And cellulaR
5G-CHAMPION	5G Communication with a Heterogeneous, Agile Mobile network in the Pyeongchang wInter Olympic competitioN
6G-IA	6G Smart Networks and Services Industry Association
6GARROW	6G AI-Native Integrated RAN-Core Networks
AI	Artificial Intelligence
AI-RAN	Artificial Intelligence Radio Access Network
AIFS	AI Frontiers Summit
APCC	Asia-Pacific Conference on Communications
ARIB	Association of Radio Industries and Businesses
ATIS	Alliance for Telecommunications Industry Solutions

CC	Core Network
CCSA	China Communications Standards Association
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CN	Core Network
CoNEXT	International Conference on emerging Networking EXperiments and Technologies
CU	Central Unit
D	Deliverable
DU	Distributed Unit
ER	Expected Result
ETSI	European Telecommunications Standards Institute
EU	European Union
EUCAP	European Conference on Antennas and Propagation
EUCNC	European Conference on Networks and Communications
EUMW	European Microwave Week
EUSIPCO	European Signal Processing Conference
EW	European Wireless Conference
ETRI	Electronics and Telecommunications Research Institute
FhG	Fraunhofer-Gesellschaft
GEM	Grenoble Ecole de Management
GLOBECOM	Institute of Electrical and Electronics Engineers Global Communications Conference
HPE	Hewlett Packard Enterprise
IA	International Association
ICASSP	Institute of Electrical and Electronics Engineers International Conference on Acoustics, Speech and Signal Processing
ICC	Institute of Electrical and Electronics Engineers International Conference on Communications
ICIC	International Conference on Information & Communications
ICT	Information and Communications Technology
ICTC	International Conference on Information and Communication Convergence
IEEE	Institute of Electrical and Electronics Engineers
INFOCOM	Institute of Electrical and Electronics Engineers International Conference on Computer Communications
INFORMS APS	Institute for Operations Research and the Management Sciences Applied Probability Society Conference
INIT	Initial

ISWCS	International Symposium on Wireless Communication Systems
KICS	Korean Institute of Communications and Information Sciences
KPI	Key Performance Indicator
KR	Republic of Korea
KU	Korea University
M	Month
ML	Machine Learning
Near-RT RIC	Near-Real-Time Radio Access Network Intelligent Controller
NETCONF	Network Configuration Protocol
NEF	Network Exposure Function
Non-RT RIC	Non-Real-Time Radio Access Network Intelligent Controller
O-RAN	Open Radio Access Network
PhD	Doctor of Philosophy
PIMRC	Institute of Electrical and Electronics Engineers International Symposium on Personal, Indoor and Mobile Radio Communications
PoC	Proof of Concept
PriMO-5G	Virtual Presence in Moving Objects through 5G
PU	Public
R	Report
R&I	Research and Innovation
RAN	Radio Access Network
RIC	Radio Access Network Intelligent Controller
ROK	Republic of Korea
SIGCOMM	Special Interest Group on Data Communication
SBA	Service Based Architecture
SBI	Service Based Interface
SNS JU	Smart Networks and Services Joint Undertaking
SPAWC	Institute of Electrical and Electronics Engineers International Workshop on Signal Processing Advances in Wireless Communications
TOC	Table of Contents
TSDSI	Telecommunications Standards Development Society, India
TTC	Telecommunication Technology Committee
TTA	Telecommunication Technology Association of Korea
vRAN	Virtualized Radio Access Network
VTC	Institute of Electrical and Electronics Engineers Vehicular Technology Conference

WCNC	Institute of Electrical and Electronics Engineers Wireless Communications and Networking Conference
WP	Work Package
xApps	SAP AG Composite Application

1 Introduction

Strong communication and dissemination efforts are essential for any project's success. Understanding this, the 6GARROW project has created a comprehensive communication plan to effectively share its progress, results, and impact with relevant audiences. The project will publish a total of 26 deliverables (see [6GARW25-D11]), four of which addressing topics on communication, dissemination, and standardisation in **Table 1**. This document outlines these deliverables, their purpose, and their timeline, illustrating how they align with the project's broader objectives. The project's scheduled deliverables are listed below.

Table 1: List of 6GARROW Deliverables addressing topics on communication, dissemination, and standardisation.

Number WP	**Deliverable name. (Lead participant) and description**	**Type– Dissemination level Delivery date (in months)**	**Internal Deadlines (dates updated dynamically)**
D6.1 WP6	**Dissemination, standardisation and communication plans, and project website** (OULU): Plan for the dissemination, standardisation and communication activities; project website.	R – PU M3	INIT TOC – 16/01/2025 TOC – 06/02/2025 REVIEW – 05/03/2025 FINAL TC – 20/03/2025
D6.2 WP6	**Dissemination, Standardisation and Exploitation activity report Y1** (OULU): First year status and update plans for dissemination, standardisation and exploitation.	R – PU M12	INIT TOC – 01/10/2025 TOC – 03/11/2025 REVIEW – 01/12/2025 FINAL TC – 24/12/2025
D6.3 WP6	**Dissemination, Standardisation and Exploitation activity report Y2** (INTEL): Second year status and update plans for dissemination, standardisation and exploitation.	R – PU M24	INIT TOC – 01/10/2026 TOC – 02/11/2026 REVIEW – 01/12/2026 FINAL TC – 24/12/2026
D6.4 WP6	**Business Model Development and Market Exploitation:** Strategy and value proposition to provide business models; report detailing the component of the business model based on the Badenfuller & Mangematin typology.	OTHER – PU December '27	FINAL TC – 24/12/2027
D6.5 WP6	**Dissemination, Standardisation and Exploitation activity report Y3** (CEA): Final status for dissemination, standardisation and exploitation.	R – PU M36	INIT TOC – 01/10/2027 TOC – 01/11/2027 REVIEW – 01/12/2027 FINAL TC – 24/12/2027

R→ Report, OTHER→ Other format, PU → Public, INIT TOC → Initial table of contents, TOC → Finalized table of contents, REVIEW → Start of review process, FINAL TC → Final version to TC

2 Communication and dissemination plans

6GARROW communication and dissemination plans are outlined in this section. The document outlines the strategies and tactics designed to effectively engage with the project's target audiences, and to highlight its research, achievements, and impact. The plan provides a simple framework for communication and dissemination efforts to support the project's goals.

The plan covers the essential aspects, such as identifying key audiences, selecting the best suited communication channels and platforms, and crafting compelling content to both inform and foster engagement. It also provides a general strategy for the essential communication activities and defines the roles and responsibilities of project team members in executing said strategy.

The plan is followed by annual activity reports, which will refine the communication, dissemination and standardisation efforts the project progresses. Each one of them will serve as a valuable guide for the project team in communicating its work and impact.

Communication, dissemination, exploitation, and standardisation are shared responsibilities across the 6GARROW consortium. All project partners are committed to promoting the project's developments through their own networks, including websites, news articles, blog posts, and press releases. Additionally, social media platforms such as LinkedIn, X, and YouTube play a crucial role in reaching broader audiences.

Other 6GARROW partner-specific communication practices include newsletters for internal and external audiences, internal events and fairs, publications in academic or technical journals, and company-internal social media.

By leveraging these diverse communication efforts, 6GARROW ensures that its research, findings, and innovations reach the right audiences while fostering engagement and collaboration across different sectors.

2.1 Communication goals

6GARROW communication aims to actively promote collaboration between the European Union and the Republic of Korea both online through our website and social media platforms, as well as different scientific events.

To ensure broad dissemination of research and innovation (R&I) results, project findings will be submitted to key technical and non-technical bodies and fora, contributing to the wider 6G community. Open science publication will be promoted.

Additionally, novel technological advancements will be highlighted through keynotes, conference talks, and workshops. Project's upcoming activities also include presentations and Proof-of-Concept demonstrations in various conferences and industrial or commercial exhibitions.

Beyond participating in external events, 6GARROW will organize its own events and special sessions, including the final project workshop. A key highlight will be a public presentation and discussion on 6G and AI in France, featuring a distinguished speaker from the consortium. These events will serve as platforms for knowledge exchange, stakeholder engagement, and industry collaboration.

6GARROW's communication efforts are designed to reach a diverse set of stakeholders, each with distinct interests and priorities. These target groups, categorized as A-F, include:

A. Telecom operators and Vendors

B. Service providers over telecommunication networks

C. General Public

D. Research and academic community

E. Standards bodies, Policy Makers, Governments and Regulatory Agencies

F. 6G-IA and related European fora

These target groups are either involved in the project or have an interest in its research and findings. To maximize engagement, 6GARROW's communication approach will be carefully tailored to address the specific needs, interests, and expectations of each audience segment. By providing regular updates, insights, and opportunities for collaboration, the project aims to build a strong network of support and drive impact within the global 6G ecosystem.

Table 2: 6GARROW communication goals

Communication mean	Quantified goal	Minimum per year
Posts on social media	>30	10
Press releases	>6	2
Organization of technical workshops, special sessions, tutorials etc.	>3	1

2.2 Content strategy

6GARROW will enhance the effectiveness and reach of its communication activities through a coordinated and strategic approach, emphasizing joint efforts across the consortium. This includes collaborative contributions to top-tier conferences and journals, participation in keynote speeches, expert groups, industry fora, and standardization meetings. To further amplify these efforts, project insights and key messages will also be disseminated through press releases and various communication channels.

From the outset, a comprehensive dissemination package will be developed, providing project partners with a consistent and professional set of communication materials, including the project logo, website, newsletter, and Microsoft Office templates, which will be used by all partners throughout the project duration.

The 6GARROW consortium will tap into its extensive network of national and international communities to expand the project's visibility and outreach. By leveraging these existing connections, partnerships, and industry affiliations, the project can effectively promote its vision, objectives, and research outcomes to a broader and more diverse audience.

This collaborative approach is key to enhancing the impact and effectiveness of the project's communication efforts.

2.2.1 Content creation and approval

A well-structured content creation and approval process is essential for ensuring that all communication materials are of high quality, accurate, and aligned with the project's objectives. This section outlines the workflow for creating and approving content across 6GARROW's key communication channels, including the project website, social media, newsletters, and press releases. It also includes guidelines for ensuring that all content is reviewed and approved by the appropriate project members to ensure consistency and accuracy.

The content creation process follows the best practices of the research projects, and it's described below.

Ideas

All consortium partners are allowed and encouraged to suggest and provide content for the 6GARROW communication channels. A submission form will be provided in SharePoint for the most common communication needs, but of course, reaching out to project Communication manager Sallamaari Syrjä (University of Oulu) via email is allowed for more specific needs.

Collaboration

Once a communication need is identified, the project team collaborates to develop the necessary content. For straightforward cases, when the Communication Manager receives the submission form with all the relevant information, the communication item, such as a Sosial Media post, is then drafted and sent to the Project Manager for approval.

For more complex items, the process involves the Project Coordinator, Work Package Leader, and Communication Manager. At this stage, the team may decide that the content is not suitable for publication, in which case the process ends. Otherwise, the process continues with an internal review with the partners.

Approval

Approval of each communication item is done by the Project Coordinator Emilio Calvanese Strinati (CEA-Leti) or Deputy Coordinator Nicolas Cassiau (CEA-Leti). Project coordinator will coordinate with the Korean partners when needed. If the item is approved, the communication takes place on the selected channels, case by case. There are several communication items that are part of the plan, as detailed below.

2.2.2 Website

The 6GARROW website is the primary platform for sharing project's concepts, results, and achievements with our audience. Therefore, it is the main communication and promotion tool for the project. The website will be maintained and updated regularly throughout the project's duration, ensuring both pleasing user experience, and visibility on search engines. [GSC24].

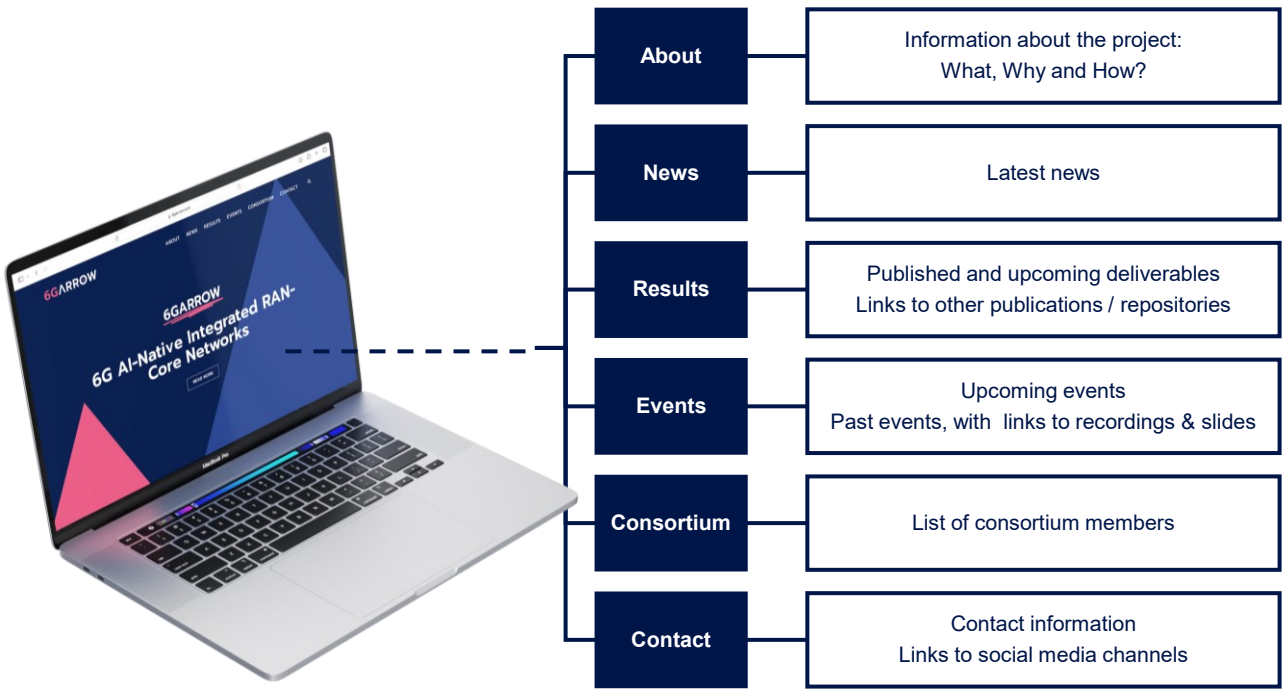

Figure 1 6GARROW website

2.2.3 Social Media

Social media is a powerful tool for both communication and engagement with our audience. This chapter outlines the project's social media strategy, including the different platforms and channels that will be utilised; LinkedIn, X and YouTube. The 6GARROW project aims to have >30 posts on social media by the end of the project, the minimum being 10 per year. However, this is the bare minimum, and greater numbers will be pursued.

Activity in social media should be a collaborative effort for the whole project. Therefore, a form to suggest posts for social media will be created and made easily available on SharePoint. Communications manager Sallamaari Syrjä (University of Oulu) will draft the posts and send them to the Project Coordinator Emilio Calvanese Strinati (CEA-Leti) and Deputy Coordinator Nicolas Cassiau (CEA-Leti) for approval. Project coordinator will coordinate with the Korean partners when needed.

To successfully showcase our hard work, all partners of the 6GARROW project will also leverage their own connections to various national and international communities to promote the project's concept and objectives. Each partner will actively share information on their own social media channels and encourage the people in their respective networks to follow us on our own social media channels.

By utilizing these existing networks, the project can reach a wider audience and increase public awareness of its goals and capabilities. This collaborative approach is expected to enhance the impact and effectiveness of the project's communication efforts. Reposting from SNS JU and consortium accounts is also advised, when the topic is relevant to 6GARROW.

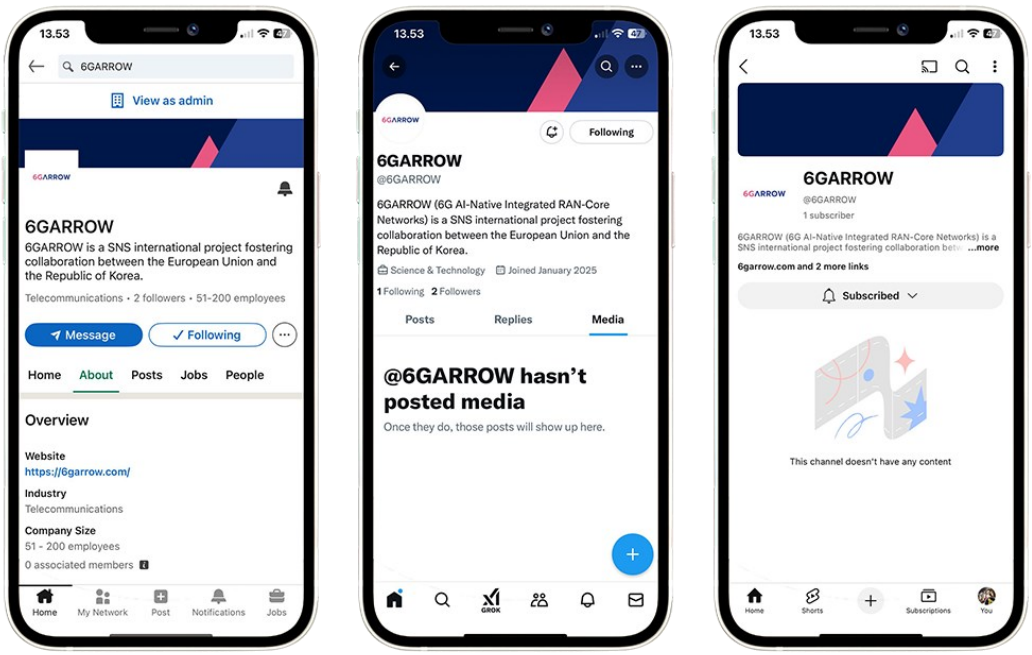

Figure 2 6GARROW's social media profiles.

2.2.3.1 LinkedIn

Regular updates, news, and achievements will be shared on LinkedIn and X. The aim is not only to inform, but to engage our followers, and drive traffic to our website. Given LinkedIn's focus on professional discussions and its support for longer-form content, it is expected to be our most influential platform and attract the highest number of followers.

The LinkedIn content for the 6GARROW project should be focused on providing professional and informative updates about the project's research and impact. This could include posts about the project's milestones, key research findings and innovations, collaborations and upcoming events.

To effectively reach and engage the project's audience on LinkedIn, the content should be carefully planned and tailored to the platform. Posts should always include:

Visuals: Eye-catching images, videos, and graphics to gain attention and illustrate project's work.

Calls to action: Each post should encourage interaction, whether by inviting followers to comment, visit the website, or follow the project for updates.

The 6GARROW project aims to have >30 Social Media posts by the end of the project, the minimum being 10 per year. LinkedIn recommends daily posts for pages. [LIMS22]. This is significantly more than our personal goal, and we should not think of our goal as a limit. That being said, our priority is to focus on quality over quantity. High-value content that resonates with the audience is far more effective than frequent, low-impact posts. It is also mentioned in LinkedIns best practices guide, that companies that post weekly see a 2x lift in engagement with their content. [LMS15].

All consortium members are encouraged to follow the project's LinkedIn account and engage with reactions, reposts and replies. All partners are encouraged to tag the project @6GARROW when posting content related to the project.

On our own account, SNS JU will be mentioned by adding @Smart Networks and Services Joint Undertaking (SNS JU) to each post.

By following these guidelines, 6GARROW will establish a strong and engaged LinkedIn presence, fostering meaningful discussions and increasing visibility within the 6G research and industry community.

2.2.3.2 X

In addition to LinkedIn, we will also be active on X. Given the 280-character limit, posts should be bold, concise, and attention-grabbing, focusing on creating intrigue rather than trying to say it all in the limited space we have. Striking visuals and compelling calls to actions are strongly recommended.

Consortium partners are asked to tag the project @6GARROW when discussing project-related matters online. In addition, using a couple of relevant hashtags helps to increase the content's visibility and makes it easier for users to find and engage with the project. X recommends limiting hashtags to 1-2 per post for maximum organic efficiency. [XB24]

2.2.3.3 YouTube

The project's YouTube channel will be used to share both promotional videos of the project and recordings of the events we will host or participate in.

2.2.4 Media

The 6GARROW project will create and disseminate promotional materials such as posters, press releases, and informational brochures to increase public awareness of the project's goals and purpose. These materials will be tailored for a diverse audience and distributed widely through various channels.

2.2.4.1 Press releases

Press releases aim to increase public awareness of the project's goals and purpose. Our goal is to release > 6 press releases throughout the project, minimum being 2 per year.

Press releases will be approved before publishing by the Project Coordinator Emilio Calvanese Strinati (CEA-Leti) and Deputy Coordinator Nicolas Cassiau (CEA-Leti).

2.2.4.2 Promotional materials

Throughout the project, 6GARROW will create and disseminate promotional materials such as posters and brochures to increase public awareness of the project's goals, purpose and capabilities. These materials will be tailored for a diverse audience and distributed widely.

In addition to the traditional print materials the project will produce a video showcasing the potential of its proposed network scenarios to a wider audience. This visual medium is expected to be an engaging and accessible way to communicate complex concepts to a diverse audience.

The cost of producing promotional materials will be agreed case by case.

2.2.5 Events

By actively participating in exhibitions, conferences and industry events, the project can increase its visibility, establish credibility, and build valuable relationships with industry leaders and experts.

2.2.5.1 Participation

The 6GARROW project will utilize popular conferences and exhibitions as platforms to disseminate its progress and achievements throughout the project's duration. Conferences such as EUCNC, ICC, Globecom, and PIMRC, as well as exhibitions like the Mobile World Congress, provide excellent opportunities for the project partners to communicate their work to a wider audience.

2.2.5.2 Organization

The 6GARROW project will host international workshops and engage in both local and global events, providing opportunities for interaction with key industry players. This collaborative approach aims to facilitate discussions and knowledge exchange between the project partners and representatives from various vertical industries, fostering valuable relationships and advancing the project's goals and objectives.

2.2.5.3 Event recordings

When possible, we should record the events we organize, make them available on our YouTube channel, and finally embed them on our website.

We can also create playlists and embed event recordings of the events we participate in, if such videos are made freely available on YouTube.

2.3 Dissemination activities

6GARROW is committed to sharing its project knowledge and achievements on a global scale by targeting leading conferences, journals, and events. The dissemination strategy will target the following communities with different dissemination methods to maximize the impact of the project during and beyond the project lifetime.

2.3.1 Targeted communities

2.3.1.1 Research, academic and educational communities

Publication in international peer-reviewed technical fora is essential to reach the research, academic, and educational communities who can benefit from the project findings to advance research in AI-native 6G communications. Conference publications provide an opportunity for immediate knowledge exchange, networking, and collaboration, enabling researchers to present their work, receive real-time feedback, and engage with industry leaders and peers. This helps to establish the project’s presence within the research community and fosters the development of new ideas and partnerships. Journals, on the other hand, offer a platform for in-depth, rigorous presentations of

research, ensuring long-term visibility and academic credibility. By publishing in these highly respected fora, the project ensures its findings are widely disseminated, reaching a broad audience who are crucial for advancing the field of AI-native 6G communications.

The utilization of project results will extend beyond the duration of the project itself, fuelling follow-up research collaborations, PhD dissertations, and industrial research projects, both nationally and internationally. The insights and innovations generated by the project will serve as a foundation for future studies, facilitating the development of new techniques, models, and methodologies.

An internal list of dissemination opportunities, including relevant deadlines, will be maintained to help project participants easily identify suitable forums for sharing their work. This list will be regularly updated and will cover key conferences, workshops, journals, and other relevant events aligned with the project's objectives, ensuring timely submissions and maximizing outreach.

2.3.1.2 Industrial Community

The project will include presentations at symposia and the organization of webinars to disseminate key results and engage with relevant audiences. Regular updates will be provided on the project website, along with press releases highlighting important milestones and achievements. Contributions will also be made to relevant standards bodies to ensure the integration of project results into future standards specifications. After the project's completion, outcomes will be shared with industrial consortium partners, and the PoC and testbeds will remain available to showcase the project's impact. Additionally, continued contributions to standards bodies will help anchor the project's results in future standards specifications.

One of the recently formed industrial alliances, the AI-RAN Alliance [AIRAN], brings together industry leaders and academia to enhance RAN performance with AI, optimize asset utilization, and unlock new revenue streams. Its vision aligns closely with the 6GARROW project’s goals, and many project partners, including the University of Oulu, HPE, ETRI, Yonsei University and Korea University, are active members. Therefore, the project aims to promote relevant results within AI-RAN Alliance activities, reaching a wider audience, subject to discussion and approval by the project participants.

2.3.1.3 Governmental (policy making), Social, Environmental and Regulation Authorities and Communities

The project will engage governmental authorities, regulatory bodies, and local communities to address policy and regulatory aspects, ensuring alignment and cooperation throughout its implementation. It will highlight socio-economic impacts and implement measures to ensure environmental compatibility. An Advisory Board, including representatives from public administration, will be established to provide proper guidance and oversight. After the project's lifetime, continuity in policy actions and regulations will be ensured by aligning them with industrial partners' objectives, while long-term follow-up of policy actions will be facilitated through collaboration with industrial partners.

2.3.1.4 Investment Community

The project aims to present at webinars to exchange novel ideas with the investment community, fostering knowledge sharing and collaboration. It will explore opportunities for interaction with the start-up, business angel, and investment communities through dedicated events designed to build connections and promote engagement. After the project's completion, interactions with the investment and start-up community are expected to be most effective during the second year, with efforts focused on maintaining outreach and leveraging established networks.

2.3.2 Dissemination plan

The partners intend to disseminate their work through multiple channels, including international conferences, workshops, and peer-reviewed journals, covering areas such as signal processing, information theory, wireless networks, communications theory, AI/ML, and Radio Interface design. They will also contribute to the standardization process by providing inputs to Standards Development Organizations like 3GPP and ETSI and actively participating in relevant sessions to advocate for their interests and alliances such as AI-RAN alliance. Additionally, the partners plan to collaborate on joint publications in leading global conferences and prestigious journals, addressing topics such as core networking, beyond-5G network architectures, network function virtualization, and AI-driven network management and orchestration. Some partners will explore gamified approaches and focus on organization sciences, management information systems, and strategy in their research. Furthermore, particular attention will be given to the enablers necessary for the evolution of AI-native 6G network architectures to support semantic communication services.

Table 3. Quantified dissemination goals for 6GARROW.

Dissemination mean	Quantified goal
Publications	>50
Organization of technical workshops, special sessions, tutorials etc.	>3
Industrial exhibitions and demonstrations	2
Conference to the general public	1

2.3.2.1 Open access publishing

Project deliverables and links to publications will be made available on the project website. In line with Horizon Europe's open-access publishing requirements, the public deliverables and publications will remain accessible on the website for a minimum of three years following the project's completion as mentioned before.

The scientific publications will be publicly available through the 6GARROW Zenodo [ZENODO] repository.

Link to Zenodo repository: https://zenodo.org/communities/6garrow/records

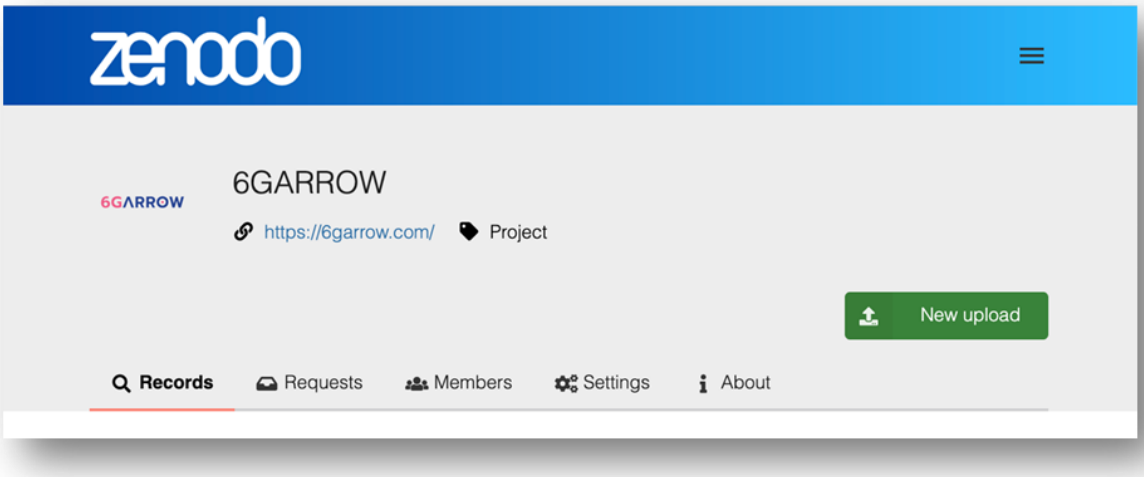

Figure 3. 6GARROW Zenodo community page

A guideline for adding publications into the Zenodo community will be created and shared with the project participants. Periodic checkup in work package meetings will be carried out to ensure the scientific publications are available in the Zenodo community.

2.3.2.2 Target conferences and workshops

Throughout the project's duration, the 6GARROW consortium will actively disseminate its research findings by presenting articles and papers at prominent international and national conferences and workshops. The focus will be on high-profile events in communication and networking domains, ensuring maximum visibility and impact. Key targeted conferences include, but are not limited to:

- IEEE International Conference on Communications, ICC
- IEEE Global Communications Conference, GLOBECOM
- European Conference on Networks and Communications (EuCNC) & 6GSUMMIT, European Wireless Conference (EW), European Signal Processing Conference (EUSIPCO), EUCAP, EUMW
- APS INFOCOM, SIGCOMM, CoNEXT, ICASSP, VTC, WCNC, ISWCS, SPAWC and PIMRC
- ETSI events such as ETSI Workshops.
- Events organized by The Korean Institute of Communications and Information Sciences (KICS), like: ICT Convergence Korea, AI Frontiers Summit (AIFS), International Conference on Information and Communication Convergence (ICTC), Asia-Pacific Conference on Communications (APCC), International Conference on Information & Communications (ICIC).

2.3.2.3 Target journals and magazines

In addition to the conferences mentioned in the previous section, the 6GARROW consortium will primarily target high-impact journals and magazines to disseminate its research findings. The focus will be on reputable, high-impact factor journals and magazines, including, but not limited to:

- **IEEE Transactions Series:** Communications, Wireless Communications, Broadcasting, and related fields.
- **IEEE Letters:** Including Communications Letters and Wireless Communications Letters.
- **IEEE Magazines:** IEEE Communications Magazine, IEEE Network, IEEE Wireless Communications Magazine, and IEEE Internet of Things Magazine.

These targeted publications will ensure broad visibility within the scientific community with lasting impact from the 6GARROW project findings.

2.3.2.4 Organization of workshops, special sessions, participation in invited talks and related events at key conferences.

The 6GARROW consortium is dedicated to sharing its vision and achievements by participating in high-profile conferences and hosting at least one workshop and exhibition annually throughout the project's duration. These events will be organized in collaboration with other Horizon Europe projects, fostering a dynamic environment for:

- Showcasing Project Outcomes: Presenting results through live demonstrations and interactive exhibits.
- Knowledge Exchange: Collaborating with peer projects to share insights, best practices, and innovations.
- Industry Engagement: Connecting with key industrial stakeholders to promote discussion, gather feedback, and explore potential partnerships.

This proactive dissemination strategy aims to maximize the project's visibility, encourage cross-sector collaboration, and strengthen the impact of 6GARROW within the research and industrial communities. As part of the first year's dissemination strategy, a proposal has been submitted for a workshop at IEEE Globecom 2025.

An EU-ROK workshop will be held in Europe between M19 and M22, featuring presentations on the 6GARROW vision, initial dissemination efforts, and global standardization strategies. The event will include interactive sessions with European and Korean stakeholders, industry representatives, scientists, and government officials, contributing to the refinement of the initial exploitation model, planning, and industrial acceptance. It will also foster the adoption of 6GARROW results within the EU-ROK research community. Towards the end of the project (between M34 and M36), a final training workshop will take place in ROK, bringing together representatives from the EU Commission, Korean government, industry, and relevant institutions. This workshop will showcase and discuss technical and experimentation results, provide critical insights, and strengthen ongoing EU-ROK cooperation.

The delivery of invited (educational) talks at universities, research institutes, and public academic and educational events will play a key role in disseminating the project's findings and promoting its vision. These talks will provide opportunities to engage with students, researchers, and educators, fostering knowledge transfer and encouraging further exploration of the project's topics. By sharing insights on AI-native 6G communications and other related areas, the project will contribute to advancing education and research, inspire new academic pursuits, and stimulate interest in innovative solutions within the communications field. A workshop presenting Orange's vision on semantic communications will be held for Grenoble École de Management (GEM) students and the Information Systems for Society (ISS) research team in Fall 2025.

2.3.2.5 Webinars

The 6GARROW consortium intends to organize or participate in webinars to disseminate project results to a broad audience, including industrial and research communities. Invitations will be sent to relevant contacts of consortium partners and promoted via the project's website and newsletter. Additionally, details about webinar content and schedules will be shared through the project portal and affiliated social media channels. The first webinar is planned for after the project's first year, with subsequent webinars scheduled throughout the project's duration.

2.3.2.6 Skills and educational training

The project prioritizes providing industry experts and researchers with new skills through educational training. This will be accomplished through invited talks in academic circles, research institutes, and workshops, as well as special sessions and webinars on relevant topics. Additionally, pedagogical case studies will be created to help learners grasp the theory and practical application of entrepreneurship and management in emerging technologies.

2.4 Demonstrations and Proof-of-Concepts

Emphasizing demonstrations and proof of concept (PoC) is a vital component of the 6GARROW dissemination plan. These elements serve as tangible evidence of the project's innovations and their practical applications, making them powerful tools for engaging stakeholders and showcasing the project's potential.

2.4.1 Objectives of Demonstrations and PoCs

Showcase Innovation: Visually demonstrate the capabilities and benefits of 6GARROW technologies.

Validate Concepts: Provide evidence of the feasibility and effectiveness of the project's innovations.

Engage Stakeholders: Capture the interest of industry partners, policymakers, and the academic community through interactive experiences.

Facilitate Understanding: Help stakeholders understand complex technologies through real-world applications.

Exchange of best practice: Share lesson learned in European and Korean prototyping, lab trials and proof of concept on 6GARROW technologies.

2.4.2 Target Audiences for Demonstrations and PoCs

Industry Partners: Showcase potential applications and benefits to attract investment and collaboration.

Policymakers and Regulators: Demonstrate the practical implications and readiness of 6GARROW technologies for policy considerations.

Academic Community: Provide insights into cutting-edge research and potential areas for further study.

General Public: Engage and educate the public about the future of telecommunications.

2.4.3 Types of demonstrations

2.4.3.1 Live demonstrations

The objectives of such demonstrations are to provide an immersive experience for attendees and to facilitate real-time interaction and feedback. Nevertheless, some technical issues may arise, and the reach of these demonstrations is limited to physical venue.

As the 6GARROW project progresses, the specific demonstrations that will be showcased in public events remain undetermined at the time of issuing this deliverable. The decision on which demonstrations to present will be made later, based on factors such as project milestones, stakeholder interest, and logistical considerations. This flexibility allows the project team to adapt to evolving circumstances and ensure that the most impactful and relevant demonstrations are highlighted to the public.

2.4.3.2 Recorded demonstrations

The objective of such demonstrations is to reach a broader audience who cannot attend live events, to provide a permanent resource for stakeholders to revisit and to allow for detailed explanations and annotations.

6GARROW will engage in high-quality production (professional filming and editing to ensure clarity and engagement) and ad-hoc distribution channels (utilize platforms like YouTube, the project's website, and social media to distribute videos widely).

2.4.4 Evaluation

The evaluation phase is crucial for refining the effectiveness of both live and recorded demonstrations. By establishing clear metrics and key performance indicators (KPIs), the project team can systematically assess engagement levels, such as attendance at live events and viewership of recorded videos. This data-driven approach allows for a comprehensive impact assessment, evaluating how these demonstrations influence stakeholder perceptions and interest in the 6GARROW project.

2.4.5 Planned testbeds and experimentation platforms

AI/ML functionalities are commonly limited to individual signal processing modules that are used locally to solve specific needs or added on top of the networking stack. These implemented models are usually standalone and lack an online end-to-end optimization process. To advance beyond the current state of the art, 6GARROW will showcase key architectural innovations and validate novel AI/ML solutions for improved device performance and optimized RAN and Core. Additionally, the planned PoC will demonstrate advanced orchestration of network functions like fronthaul/backhaul management, authentication, and user management. These platforms will also enable an open interface for customer-driven application development, implementation, integration, and testing of testbeds for functional demonstrations. Four demonstrations have been planned as part of the project, specifically:

- **Demonstration 1:** "Semantic-aware device-edge co-inference."
- **Demonstration 2:** "6G cross-domain network intelligence framework."
- **Demonstration 3:** "Physical layer AI/ML techniques."
- **Demonstration 4:** "AI/ML based CSI and CQI compression."

As the 6GARROW project reaches its conclusion, the collaboration between European and Korean partners will culminate in the form of a *"joint intercontinental demonstration"* of the project's results. This collaborative effort will be based on a PoC demonstrator, which will showcase the successful integration and implementation of the innovative 6G and AI technologies developed throughout the project. The PoC demonstrator will be the result of the joint efforts, knowledge, and expertise contributed by European and Korean partners, reflecting the successful collaboration and synergy achieved throughout the project. For further information about the details of this joint testbed system, please refer to **Section 4.1**.

3 Standardisation and regulation

6GARROW has strong ambitions with respect to standardization and regulation. In the context of Artificial Intelligence, often combined with Cybersecurity, two main pillars will be addressed:

- **The "industrial angle of standardization":** Standards Developing Organizations (SDOs) are working towards Deliverables, such as Technical Specifications, with the objective to have global adoption, usage and thus interoperability. 6GARROW has the ambition to monitor and influence related activities in the field of AI native 6G networks.
- **The "policy angle of standardization":** The European Standardisation Organisations (ESOs), specifically ETSI, CEN and CENELEC, are task by the European Union to support the

implementation of policy priorities. Current targets include the EU Artificial Intelligence Act (EU AI Act), the Cyber Resilience Act (CRA) and other. 6GARROW has the ambition to be closely involved in the process and to identify solutions which facilitate compliance to related market access requirements applicable to the European Union Single Market. Here, we have a close interaction of regulation and standardization activities.

3.1 Standardisation activities

Key Standards Developing Organisation are summarized below as identified by 6GARROW. A key emphasis is laid on European Standardisation Organisations (ESOs) and Partnership Projects with strong involvement of ESOs, especially 3GPP.

3.1.1 European Telecommunications Standards Institute (ETSI)

The European Telecommunications Standards Institute (ETSI) produces globally applicable standards for Information and Communications Technology (ICT). These standards also include fixed, mobile, radio, converged, broadcast, and internet technologies. ETSI's purpose is to produce and maintain the technical standards required by its members [EC+24]. The ETSI will deliver Group Reports to be considered by 3GPP and other relevant industry bodies in their 6G standardization activities. It will contribute to the development of 6G as a pervasive general-purpose communication system connecting humans and machines across a wide range of use cases. This initiative aligns with the evolving needs of future wireless networks, which are expected to support - amongst others - new interactive immersive experiences and overcome the challenges of connectivity in High Demand Density areas. It will also provide more efficient and reliable media delivery (live and on-demand) over mobile networks at scale [ETSI+25].

Furthermore, ETSI is closely collaborating with CEN-CENELEC on the implementation of the European Artificial Intelligence Act and is expected to be tasked by the European Commission with the development of deliverables in support of the Cyber Resilience Act (CRA). Both are of key interest to 6GARROW.

6GARROW members are deeply involved in all levels of ETSI, including Technical Committees (TCs) and Industry Specification Groups (ISGs) as well as the ETSI Board, the ETSI Operational Coordination Group (OCG) on Artificial Intelligence which is coordinating related activities across the Institute and is contributing to a regular dialogue between the European Commission and European Standardisation Organisations (ESOs) in the field of Artificial Intelligence.

3.1.2 The European Committee for Standardization (CEN)

The European Committee for Standardization (CEN) brings together the national standardization bodies of 34 European countries. It provides a platform for the development of European standards and other technical documents on various types of products, materials, services, and processes. These include air and space, chemicals, construction, consumer products, defence and security, energy, the environment, food and feed, health and safety, healthcare, ICT, machinery, materials, pressure equipment, services, smart living, transport and packaging [EC+24]. Although the standardization of communication technologies, like 6G, is mainly the responsibility of the European Telecommunications Standards Institute (ETSI), CEN supports it indirectly by developing standards in related areas. For example, CEN published Guide 6, which provides guidelines for standard developers to meet the needs of older people and people with disabilities, promoting inclusivity in products and services [CEN+14].

3.1.3 European Committee for Electrotechnical Standardization (CENELEC)

The European Committee for Electrotechnical Standardization (CENELEC) is an association of the National Electrotechnical Committees of 34 European countries and is responsible for

standardization in the electro-technical field. Voluntary standards prepared by CENELEC help facilitate trade between countries, access new markets, cut compliance costs, and support the development of the Single European Market [EC+24]. Like CEN, CENELEC also contributes indirectly by developing standards related to areas such as electrical safety and network infrastructure reliability of electrical and electronic components used in communication networks, including advanced ones like 6G. Additionally, through CEN-CENELEC Guide 25, the organization promotes cooperation with European organizations and other stakeholders, helping to define regulations that support the safe and interoperable development of emerging technologies. [CENELEC+25].

CEN and CENELEC have recently received European Commission Standardisation Requests related to Artificial Intelligence, Cybersecurity, Privacy and other. CEN-CENELEC Joint Technical Committee 21 (JTC 21) is a dedicated body focused on standardization in the field of Artificial Intelligence (AI). JTC21 is of relevance to 6GARROW because it is working on the implementation of the European Artificial Intelligence Act by developing supporting (Harmonised) Standards. CEN-CENELEC Joint Technical Committee 13 (JTC 13) is the CEN and CENELEC horizontal technical committee that addresses 'Cybersecurity and data protection'. CEN-CENELEC JTC13 WG9 is of specific interest to 6GARROW, since it is the key focal point in CEN-CENELEC for the implementation of the Cyber Resilience Act (CRA) in collaboration with ETSI.

6GARROW members are either directly involved in CEN and/or CENELEC or the respective Joint Technical Committees or have a relationship through ETSI and the established agreements between ETSI and CEN-CENELEC.

3.1.4 The 3rd Generation Partnership Project (3GPP)

The 3rd Generation Partnership Project unites seven telecommunications standard development organizations, ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC, known as Organizational Partners, providing their members with a stable environment to produce the Reports and Specifications that define the 3GPP system [3GPP]. While 6G standardization is mainly led by ETSI, CEN supports related areas such as artificial intelligence and cybersecurity, helping to create the necessary framework for future 6G networks in Europe.

The 3GPP Organizational Partners may invite a Market Representation Partner to take part in 3GPP, in order to offer market advice to 3GPP and to bring into 3GPP a consensus view of market requirements (e.g., services, features and functionality) falling within the 3GPP scope. There are several Market Representation Partners, some of which, such as 6G Smart Network and Services Industry Association (6G-IA) and one6G are focused on 6G.

3GPP plans to develop specifications for 6G starting with a Study on 6G Scenarios and Requirements in Release 19 and a Study on 6G Use Cases and Service Requirements in Release 20 all due for completion in 2026.

Currently, 3GPP is working on Release 18, which focuses on 5G-Advanced, and is preparing for Release 19, which will further enhance these systems. As the work for 6G progresses, 3GPP is already planning the development of specifications well in advance, ensuring a smooth transition to the next generation. The growing interest in 5G has led to an expansion of 3GPP to meet the demands of various sectors and services. As the need for 6G use cases is considered, 3GPP is expected to continue to expand its efforts.

6GARROW partners are broadly involved in 3GPP, including the Technical Specification Groups (TSGs) RAN (Radio Access Network), SA (Service & System Aspects) and CT (Core Network & Terminals). Also, 6GARROW members are contributing to the highest decision-making body of 3GPP, i.e. 3GPP PCG (Project Coordination Group) as delegation member of the respective 3GPP Organizational Partners.

3.1.5 The Internet Engineering Task Force (IETF)

As a standards organization for the Internet, the Internet Engineering Task Force (IETF) develops technical standards that constitute the Internet protocol suite (TCP/IP). The IETF participation is built on volunteers. Usually, the work is funded by employers or other sponsors.

Since 1993, it has operated under the auspices of the Internet Society, a non-profit organization with local chapters around the world.

6GARROW partners are involved in IETF and specifically consider recent IETF activities on protocols which may be used to deploy Artificial Intelligence based Services to Users.

3.2 Regulation activities

As discussed above, 6GARROW will engage into regulation related activities especially through the planned contributions to Standards Developing Organizations (SDOs). European Standards Organisations (ESOs) are or will be tasked to develop deliverables supporting the implementation of European Policy priorities, especially including the European AI Act, the European Cyber Resilience Act (CRA) and others. 6GARROW will monitor and influence the corresponding discussions. The gathered information will be used to develop solutions which support compliance to the future requirements for accessing the European Union Single Market.

Delegates from the 6GARROW partners attended the recently held 3GPP 6G Workshop in Incheon, Korea from 11th-12th March, 2025 which served as the starting point of discussions in 6G standardization in 3GPP. The official summary of the workshop [3GPP+25] highlights several key aspects relevant to 6GARROW's work scope, particularly in AI-native design, network automation, and efficiency enhancements to be considered in the 6G roadmap.

It is assessed that "AI and automation" is included as one of the core 6G motivations. The core purpose is implementing AI-native networks for automation, optimization, and improved efficiency in network management and resource allocation. AI-driven power management and AI-driven automation and optimization are also mentioned under the "Energy Efficiency and Sustainability" motivation aspect and the 6G goal for "Efficiency."

As part of the "6G System Design Consideration," the aspects listed include "AI-Native Design," which integrates AI and ML frameworks natively into the network for intelligent automation, optimization, and improved efficiency. Additionally, a "Service-Aware" approach is emphasized, enabling a service-aware intelligent network powered by AI-native, programmable, and service-aware 6G RAN.

For "Radio Access Network for 6G design consideration," AI/ML is included as one of the core features with the following way forward. An extensible AI/ML framework is built on 5G-Advanced as appropriate, with native support for AI/ML lifecycle management, such as configuration, performance monitoring, deactivation, and seamless transition to conventional algorithms. The framework also explores new use cases relevant for AI.

Regarding "Core Network for 6G design consideration," the core network for 6G is to be designed to cover new 6G requirements regarding AI, connectivity, security, privacy, and resilience. There is also a possible reuse of the 5G Service Based Architecture (SBA)/ Service Based Interface (SBI) framework while investigating enhancements to the 5G SBA/SBI architecture.

These initial discussions on the 3GPP standardization efforts for 6G align strongly with the goals of the 6GARROW project. The emphasis on AI-native design, automation, and network intelligence provides a solid foundation for 6GARROW to contribute to and leverage the evolving 6G landscape. The 6G Standardization timeline from [3GPP+25] shown in Figure 4, for Release 20 is well aligned with the 6GARROW project timeline, which provides the opportunity for contributing the project results and outcomes to the standardization. By focusing on AI-driven RAN and Core Network enhancements, 6GARROW is well-positioned to contribute to the standardization of 6G technologies.

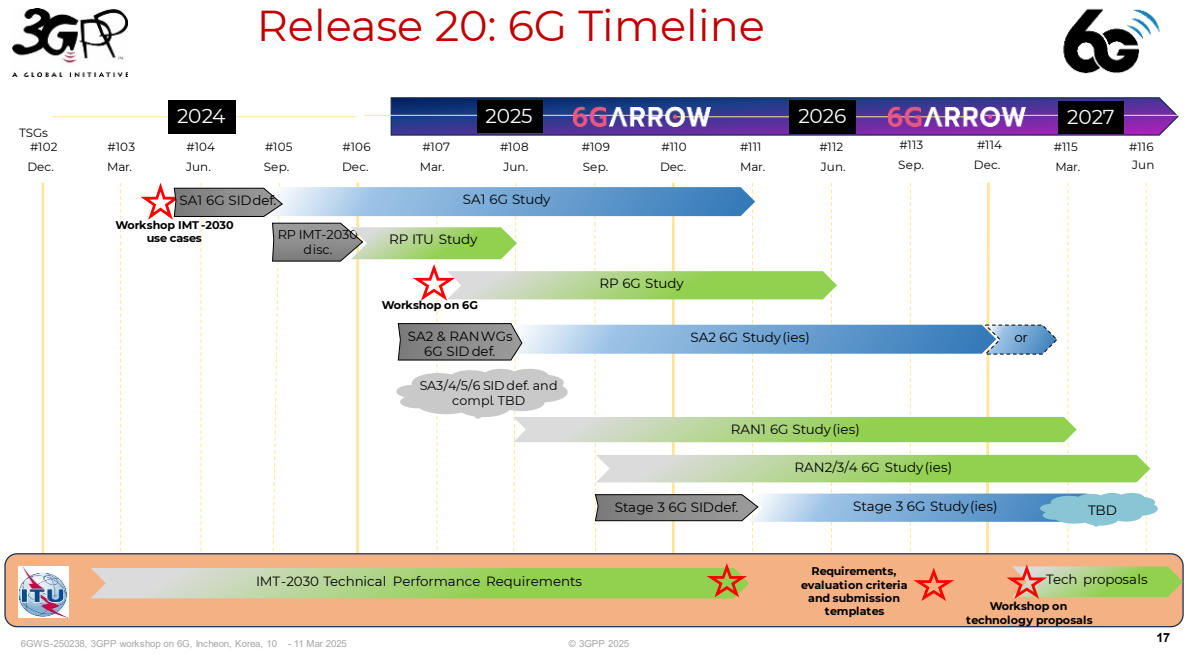

Figure 4. 3GPP 6G Standardization for Release 20 and 6GARROW project timelines

4 International cooperation

The 6GARROW project is committed to fostering strong international collaboration to accelerate advancements in 6G AI-native networks. By leveraging cross-continental partnerships, the project ensures a global perspective on next-generation wireless technologies, integrating expertise from both the EU and ROK. This collaboration is built upon the success of previous EU-ROK research initiatives and extends their impact through joint research, technology validation, and standardization efforts. A key focus of the project is to enhance interoperability, scalability, and AI-driven optimization in future wireless networks through coordinated activities, including joint Proof-of-Concept (PoC) demonstrations, data-sharing frameworks, and participation in high-profile international events. The following subsections outline the specific EU-ROK cooperation initiatives and the project's role in global knowledge dissemination through key industry and academic events.

4.1 EU-KR cooperation

The 6GARROW project builds on the long-standing EU-ROK collaboration in next-generation wireless technologies which was initiated through:

- **The 5G-CHAMPION project** [5GCHAMP] (collaboration between ETRI and CEA among others), that successfully demonstrated 5G technology during the 2018 Winter Olympics in PyeongChang. Part of the demonstration entailed outfitting the buses that carry spectators between the different sites with 5G technology, along with screens showing very-high-quality 3D videos. Passengers also enjoyed very-high-speed connectivity, since the buses act as relays between the 5G network and a WiFi signal retransmitted inside the buses.
- **PriMO-5G project** [PRIMO5G] (AALTO, YONSEI and KU): it showcased an end-to-end 5G system that provided immersive video services for moving objects, such as drones.
- **The 5G-ALLSTAR project** [5GALLST] (ETRI, CEA, FhG and GEM) that demonstrated the seamless integration of 5G terrestrial and satellite systems.

The 6GARROW project expands this collaboration by integrating AI-native architectures into 6G research. The project establishes a structured framework for EU-ROK cooperation, combining European expertise in AI-driven network management with ROK's strengths in AI-powered mobile systems and terminal-side innovations. This strategic collaboration enables the development of future-proof solutions for intelligent, adaptive, and highly efficient 6G networks.

The 6GARROW project follows an innovative four-phase methodology, see figure below, designed to address problems identification and the demonstration of solutions while fostering international cooperation between EU and ROK in phase 4.

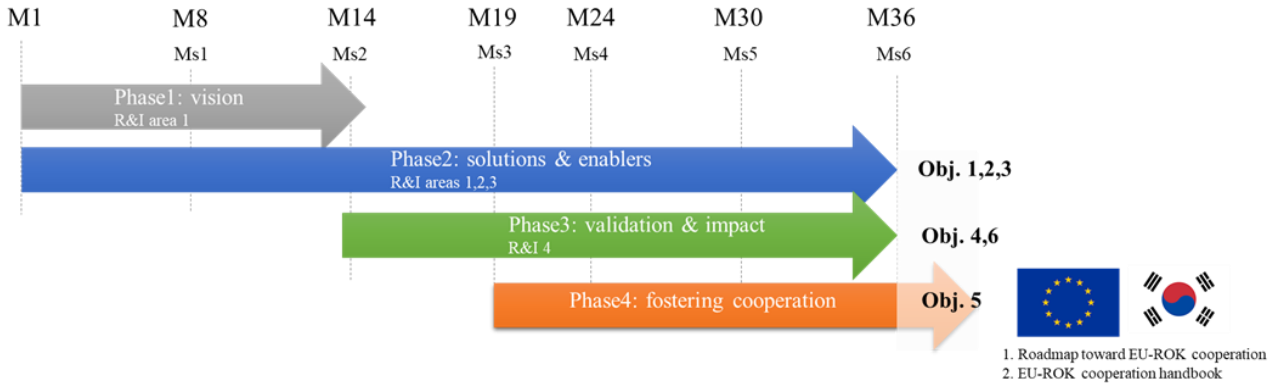

Figure 5. 6GARROW's four-phase methodology.

This fourth phase, which runs concurrently with technical phases 2 and 3, focuses on joint dissemination, collaborative PoC initiatives, the exchange of methodologies and results, and organizing workshops. This phase will lead to the completion of 6GARROW objective 5, described in the table below.

Table 4. 6GARROW objective 5

Objective 5	**Fostering collaboration between EU and ROK**
Expected Results (ER)	**ER5.1:** Exchange of best practice and lesson learned in European and Korean prototyping, lab trials and proof of concept (PoC). **ER5.2:** Joint development of solutions, techniques and components, architecture, interfaces and specific technological solutions that may have a direct impact on future business. **ER5.3:** Establishment of mutual understanding and trust among European and Korean academics, industry, telecom operators to promote future collaborations in 6G and future networks markets. **ER5.4:** Joint EU-ROK publications in international journals and conferences. **ER5.5:** Publication in social media and dedicated website. **ER5.6:** Press releases. **ER5.7:** EU-ROK co-organization of workshops and schools. **ER5.8:** Joint demonstration of the 6GARROW key concepts.
Measurable results	EU-ROK PoC demonstration. 2 EU-ROK workshops, joint dissemination (Journal and conference papers)

Means of verification	D5.3, D5.4, D6.1, D6.2, D6.3
Related WPs	WP1-6

The 6GARROW project recognizes that high-quality, large-scale datasets are essential for developing and validating AI-native 6G technologies. To this end, the project facilitates joint EU-ROK data collection and sharing to support network intelligence, performance optimization, and standardization efforts.

The 6GARROW project emphasizes capacity-building and knowledge transfer through workshops, training sessions, and researcher exchanges between the EU and ROK. The planned activities will foster long-term academic and industrial cooperation by providing a platform for sharing research outcomes, experimental findings, and best practices in 6G and AI technologies. These workshops will engage key stakeholders from academia, industry, and regulatory bodies, ensuring alignment with both scientific advancements and standardization efforts. Additionally, the project will facilitate researcher exchanges and secondments, allowing early-career and senior researchers to gain cross-institutional experience, strengthening the collaborative network between EU and ROK institutions.

To sustain collaboration beyond the project's duration, 6GARROW will develop a structured roadmap outlining the long-term vision for EU-ROK cooperation in 6G and AI-native research. This roadmap will identify key research priorities, funding opportunities, and regulatory considerations to guide future joint initiatives. Furthermore, it will support ongoing engagement with standardization bodies and joint participation in international research programs, ensuring that EU-ROK cooperation remains a driving force in shaping next-generation wireless technologies. The roadmap will serve as a strategic blueprint for fostering deeper scientific, industrial, and policy-driven collaborations between Europe and Korea.

A cornerstone of this collaboration is the Joint EU-ROK PoC demonstration which will showcase the successful integration and implementation of the 6G and AI technologies developed throughout the project, reflecting the joint efforts, knowledge, and expertise contributed by both EU and ROK partners. This demonstration will not only validate the 6GARROW project's outcomes but also pave the way for future EU-ROK collaborations in the field of 6G and AI technologies

4.1.1 Intercontinental PoC between EU and ROK partners: Joint testbed system and experimental evaluation of the key AI/ML concepts

This joint PoC between Europe and Korea aims at demonstrating procedures and AI-empowered protocols that will improve efficiencies of the wireless communications through mobility management, wireless resource management, automated maintenance, and self-optimization of the mobile network parameters. The planned PoC utilizes the 5G test-networks available at Yonsei University campus in ROK and Aalto University Campus in Finland. Two different kinds of Core Networks (CN), one provided by HPE, and one already available at Aalto and Yonsei provided by Cumucore [CUMUCOR], will be utilized. This will enable the testing of mobility management in large scale including roaming. The Network Controller will orchestrate the functions of the Central Unit (CU) and may integrate capabilities of the RIC and NETCONF controller to manage the fronthaul and backhaul, alongside overseeing authentication, network slicing, and user management; concurrently, it will provide an open interface to enable customers to develop their own applications through Network Exposure Function (NEF). The PoC system will use virtualized RAN (vRAN) at Yonsei campus and more traditional RAN architecture with RAN Intelligent Controller (RIC) at Aalto campus.

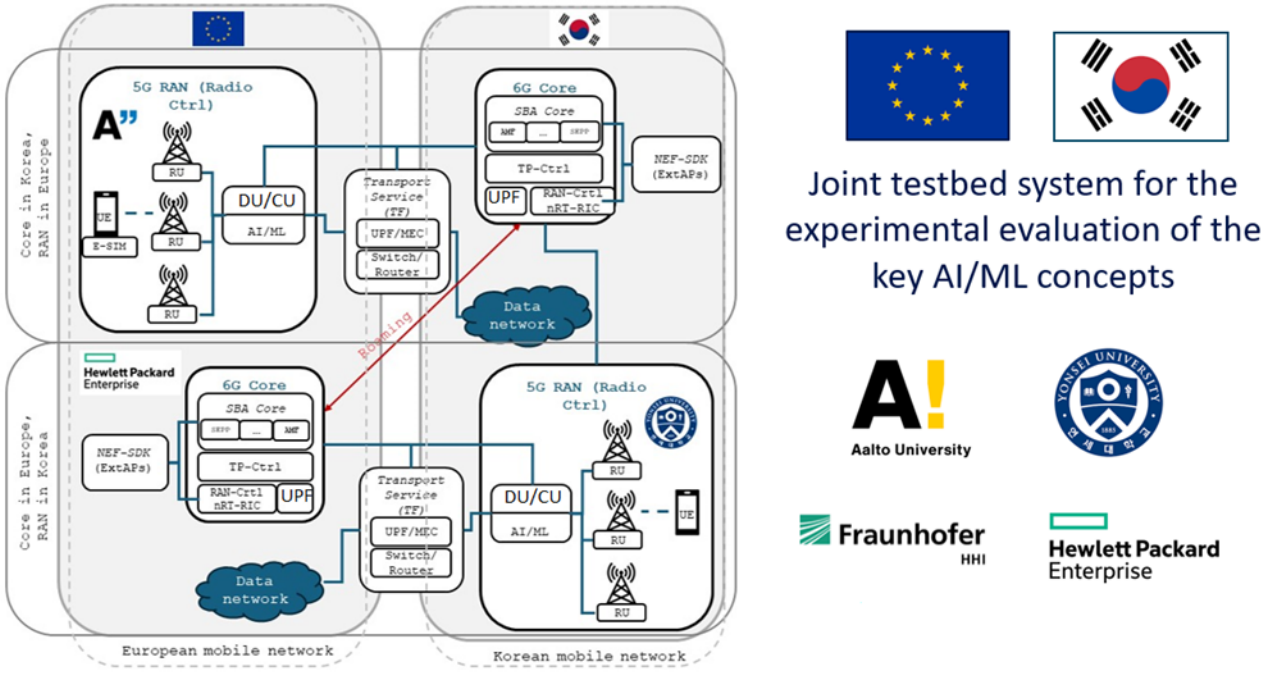

Figure 6. Implementation of the Europe-Korea intercontinental demonstration.

The Network Controller will incorporate AI to optimize network operations. It will also oversee the CU and potentially integrate functions of the RIC and NETCONF controller. This will enable us to proficiently manage the complexities of fronthaul and backhaul, while also handling critical functions such as authentication, network slicing, and user management, ensuring a highly efficient global network management. The PoC system will also integrate aspects of the semantic-aware device-edge co-inference architecture, showcasing the potential of 6G to provide overhead-aware, low-latency, energy-efficient solutions for edge intelligence applications. The planned network architecture in the initial phase of the 6GARROW project is illustrated in **Figure** 6**6**. The networks in Europe and Korea are being designed to be cross coupled, such that the CN is in Europe and the RAN in Korea, or vice versa. This setup will demonstrate a multi-vendor environment as well as RAN sharing. Also, it will showcase the possibility of cloudifying the implementation of functions in the RAN and CN parts of the next generation mobile network.

4.1.2 Status of the Planned Proof of Concept

The RANs that are currently implemented at the premises of Aalto and YONSEI, respectively, have been built using proprietary equipment with interfaces coming from vendors that hinder the potential for innovation. Following the Open RAN (O-RAN) paradigm, a RIC will be added for the control of the functions carried out at both the Distributed Unit (DU) and the CU of the O-RAN architecture. This way, the O-RAN RIC will act as a central point for coordinating, controlling, and optimizing RAN functions, offering the chance to develop AI and ML algorithms to carry out these tasks.

The Non-Real-Time RIC (Non-RT RIC), which operates on a scale of seconds to minutes, will use AI/ML algorithms to analyze historical data and recommend decisions that will create a positive impact on the long-term performance of the 6G mobile network. This will be done by communicating the guidance and policies defined by the non-RT RIC to the Near-Real-Time RIC (Near-RT RIC), which will be responsible for decision-making on a much shorter time scale (from milliseconds to seconds) to perform radio resource management, load balancing, and real-time optimization functions. Both types of RIC work together to enable the intelligent adaptation of the RAN and will provide a platform for third-party developers to create applications, known as xApps (for Near-RT RIC) and rApps (for Non-RT RIC), which will be integrated into the RAN to enhance its capabilities. This will improve the performance of the mobile network through AI-driven analytics and optimization.

4.2 Participation to international events

The 6GARROW project places strong emphasis on participation in international events representing the project and help disseminate the results and engaging with the global scientific and industrial community through participation in leading international conferences and workshops. This ensures that project innovations reach a broad audience and contribute to ongoing advancements in 6G and AI-native wireless technologies. The dissemination strategy described in Section 2.3 provides the targeted international events such as conferences and workshops.

5 Conclusion

This deliverable outlines the strategy for communication, dissemination, standardization, and international activities including the EU-ROK collaboration within the 6GARROW project. These efforts play a crucial role in achieving the project's objectives and maximizing its impact. The plan includes key initiatives such as establishing a strong and visually appealing project brand by maintaining an engaging website and social media presence, and leveraging newsletters, press releases, organization of workshops, keynotes etc. The project results are disseminated as deliverables and scientific papers, while contributing to pre-standards and standards. By utilizing these channels effectively, 6GARROW aims to expand its reach, highlight its progress and accomplishments, and encourage stakeholder engagement. The outlined plan will be continuously updated and refined to remain aligned with the project's goals and ensure lasting impact.

References

[3GPP] 3rd Generation Partnership Project (3GPP), “3GPP”, Accessed on 18/02/2025 [Online.] Available: https://www.3gpp.org/

[3GPP+25] 3rd Generation Partnership Project (3GPP), “Chair’s summary of the 3GPP workshop on 6G”, Accessed on 18/03/2025 [Online.] Available: https://www.3gpp.org/ftp/workshop/2025-03-10_3GPP_6G_WS/Docs/6GWS-250243.zip

[5GALLST] 5G-allstar Project, Accessed on 07/03/2025 [Online] Available: https://5g-allstar.eu/

[5GCHAMP] 5G Champion Project, Accessed on 07/03/2025 [Online] Available: https://www.5g-champion.eu/

[6GARW25-D11] 6GARROW Deliverable 1.1 “Quality Plan,” March 2025. Available: https://6garrow.com/results/

[AIRAN] AI-RAN Alliance, Accessed on 07/03/2025, Available: ttps://ai-ran.org/

[CEN+14] CEN-CENELEC, “CEN-CENELEC GUIDE 6 – Guide for addressing accessibility in standards,” Accessed on 18/02/2025 [Online.] Available: https://www.cencenelec.eu/media/Guides/CEN-CLC/cenclcguide6.pdf

[CENELEC+14] CEN-CENELECT, “CEN-CENELEC Guide 25 – The concept of Cooperation with European Organizations and other stakeholders”, Accessed on 18/02/2025 [Online.] Available: https://www.cencenelec.eu/media/Guides/CEN-CLC/cenclcguide25.pdf

[CUMUCOR] Cumucore, Accessed on 07/03/2025 [Online] Available: https://cumucore.com/

[EC+24] European Commission, “Key players in European Standardisation,” Accessed on 18/02/2025 [Online.] Available: https://single-market-economy.ec.europa.eu/single-market/european-standards/key-players-european-standardisation_en

[ETSI+25] ETSI, ETSI Launches New Group on Multiple Access Techniques for 6G Networks, Accessed on 18/02/2025 [Online.] Available: https://www.etsi.org/newsroom/press-releases/2484-etsi-launches-new-group-on-multiple-access-techniques-for-6g-networks#:~:text=The%20new%20ETSI%20Group%20will,wide%20range%20of%20use%20cases.

[GSC24] Google Search Central, “Search Engine Optimization (SEO) Starter Guide”, Accessed on 06/03/2025 [Online.] Available: https://developers.google.com/search/docs/fundamentals/seo-starter-guide

[LMS22] LinkedIn Marketing Solutions, “The ultimate Guide to LinkedIn Page posting, Accessed on 06/03/2025 [Online.] Available: https://business.linkedin.com/content/dam/me/business/en-us/amp/marketing-solutions/images/stories/best-practices/pdfs/lms-linkedin-page-posting-best-practices-one-pager.pdf

[LMS15] LinkedIn Marketing Solutions, “LinkedIn Pages Best Practices,” Accessed on 06/03/2025 [Online.] Available: https://business.linkedin.com/marketing-solutions/linkedin-pages/best-practices

[PRIMO5G] Primo-5G Project, Accessed on 07/03/2025 [Online] Available: https://primo-5g.eu/

[XB24] X Business, “Organic best practices”, Accessed on 06/03/2025 [Online.] Available: https://business.x.com/en/basics/organic-best-practices2025

[ZENODO] Zenodo, Accessed on 07/03/2025 [Online] Available: https://about.zenodo.org/