Distributed Artificial Intelligence-driven open and programmable architecture for 6G networks

D6.3 Dissemination, communication, standardization, exploitation, IPR, clustering – Final

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Glossary of terms and abbreviations

Abbreviation / Term	Description

GA	Grant Agreement
D&C	Dissemination & Communication
KPIs	Key Performance Indicators
KERs	Key Exploitable Results
SDO	Standards Development Organizations (SDOs)
SMEs	Small And Medium Enterprises
SNSJU	Smart Networks and Services Joint Undertaking
PoCs	Proof of Concepts
WG	Working Groups
ZSM	Zero-touch network and Service Management

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Executive Summary

The present Deliverable D6.3, titled "Dissemination, Communication, Standardisation, Exploitation, IPR, Clustering – Final", is the final version of the already submitted Deliverable D6.2 of the ADROIT6G project. It has been prepared within WP6 "Impact maximization and outreach" and consolidates the results of Tasks 6.1 to 6.4, covering dissemination and communication, exploitation and sustainability, standardisation and clustering, and innovation and IPR management activities.

As the final deliverable of WP6, this document shifts focus from planning and initial presented activities to the consolidation and assessment of implemented activities and achieved outcomes. It provides a comprehensive overview of how the project's outreach, engagement, and impact-oriented efforts have evolved over time, highlighting concrete results, lessons learnt, and the overall contribution of WP6 activities to the objectives of ADROIT6G.

The deliverable reports on the visibility and uptake of project results through the dissemination and communication (D&C) activities conducted during the project lifetime. It summarises the engagement with scientific, industrial, and policy-making communities via publications, events, workshops, and other outreach mechanisms, as well as the role of digital channels and project communication assets in supporting stakeholder engagement and awareness.

In relation to exploitation and sustainability, the document presents the final status of Key Exploitable Results (KERs) and their progression towards uptake and potential deployment. It reflects the exploitation trajectories followed by the consortium partners and provides an updated overview of the pathways through which project outcomes are expected to generate impact beyond the project duration.

With regard to standardisation and clustering, D6.3 summarises the project's active participation in relevant ecosystems. It highlights the contribution of ADROIT6G to ongoing standardisation discussions in the 6G domain and its engagement with related European and international research efforts, ensuring alignment and synergy with complementary activities.

Finally, the deliverable reports on the outcomes of innovation management and IPR-related activities conducted throughout the project. It outlines the generated intellectual property, protection mechanisms applied where relevant, and the overall approach adopted to support knowledge valorisation in line with consortium agreements.

Overall, **D6.3 provides a consolidated view of WP6 outcomes,** marking the completion of the project's impact-oriented activities. It emphasizes achieved results rather than planned actions, demonstrating how dissemination, exploitation, standardisation, and IPR efforts have collectively supported the positioning and long-term impact of ADROIT6G results.

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1 Introduction

The Deliverable D6.3 "Dissemination, communication, standardisation, exploitation, IPR, clustering-Final" addresses Tasks T6.1 "Dissemination, communication, and capacity building", T6.2 "Exploitation and sustainability", and T6.3 "Standardization and clustering activities".

The present deliverable consolidates and evaluates the D&C activities of the ADROIT6G project, throughout the project cycle, with strong emphasis on the activities performed in M19-42. It provides a comprehensive overview of the outcomes of the project based on well-processes and KPIs tracking. It brings together the work carried out across WP6, in the fields of dissemination and communication, exploitation and sustainability, standardisation, and intellectual property rights (IPR) management, offering a coherent perspective on how these dimensions have contributed to the overall objectives and impact of ADROIT6G.

In particular, the document summarises the dissemination and communication efforts implemented throughout the project, including the use of scientific and industry-oriented channels such as conferences, workshops, publications, and other outreach activities. It also reflects on the effectiveness of these actions in ensuring visibility and engagement with relevant stakeholders. Furthermore, the deliverable captures the exploitation dimension of the project, focusing on the final set of Key Exploitable Results (KERs) and the corresponding pathways towards uptake, sustainability, and potential future impact. In addition, it presents the standardisation activities carried out in relevant ecosystems and forums, as well as the IPR management approach adopted to ensure proper identification, protection, and valorisation of project results.

Based on the objectives and work carried out under the relevant tasks, the document starts with an executive summary followed by an Introduction in Chapter 1. Chapter 2 presents WP6 outcomes providing an overview of the WP6 Objectives and their status upon completion of the project, as well as the Impact Maximization which includes the target audiences engaged throughout the project, and the D&C KPIs achieved. In Chapter 3 the dissemination activities performed are detailed, Chapter 4 elaborates on the communication activities and achievements. Chapter 5 describes the Exploitation approach, Chapter 6 refer to the Standardization activities, while Chapter 7 reports on the IPR Management. In briefly:

- Chapter 1: Introduction
- Chapter 2: WP6 Outcomes
- Chapter 3: Dissemination Activities Performed (M19-42)
- Chapter 4: Communication Activities Performed (M19-42)
- Chapter 5: Exploitation
- Chapter 6: Standardization Activities
- Chapter 7: IPR Management
- Chapter 8: Conclusions

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1.1 Target Audience

The intended audience for this deliverable includes scientific peers, industrial partners, consortium members, professional organizations, policymakers, and stakeholders both within and beyond the ADROIT6G project community. It also aims to inform the general public and media who are interested in learning about the ADROIT6G project.

1.2 Mapping ADROIT6G Outputs

This section presents the ADROIT6G 's Grand Agreement (GA) commitments, as extracted from the formal deliverable and task description, in respect to their outputs and work to be performed (Table 1, Table 2).

Table 1. Adherence to ADROIT6G's GA Deliverable

ADROIT6G GA Component Title	ADROIT6G GA Component Outline	Respective Document Chapter(s)	Justification
DELIVERABLE			
D6.3 Dissemination, communication, standardisation, exploitation, IPR, clustering-Final	Plan for the exploitation and dissemination of results including communication activities updated by M42, and reports containing the dissemination, communication, trainings, standardisation, exploitation, and clustering activities with communities/associations. Moreover, the report will contain innovation and IPR management matters.	2-WP6 Outcomes, 3- Dissemination Activities performed (M19-24), 4- Communication Activities performed (M19-24) 5- Exploitation 6-Standardisation Activities 7- IPR Management	The present deliverable details the dissemination and communication plan followed throughout the project, while it reports all the dissemination and communication activities performed by M42. It outlines the exploitation and standardization map, while innovation and IPR management is also being reported.

Table 2. Adherence to ADROIT6G's GA Deliverable & Tasks Descriptions

ADROIT6G GA Component Title	ADROIT6G GA Component Outline	Respective Document Chapter(s)	Justification
TASKS			
Task 6.1 Dissemination, communication,	This task will implement the dissemination and communication of the project goals, software elements and AI models, reports, results,	2-WP6 Outcomes, 3-Dissemination Activities performed (M19-24), 4-	In these Chapters the Dissemination and Communication Execution of the

and capacity building	achievements, and other outputs. The process of communication and dissemination of the results will be executed in a systematized way through the elaboration of a plan according to the article 17 of the Model Grant Agreement of HEU. The dissemination and communication channels and actions as defined in Section 2.2 will serve as a baseline to achieve the impact maximisation goals in this task. As far as dissemination is concerned, all research and academic consortium partners will be involved in the preparation and publication of articles in scientific journals and conferences. The project's intermediate results will also be presented in the form of white papers, presentations and online demos in various conferences and industrial exhibitions. Technical and PoC workshops will be organized by ATH, CYENS, CAFA, SIEMENS, ORO and NXW (see Section 2.2.1), which will be open to academic, research and industrial communities, to present the intermediate and the final project results and achievements, which will be collocated with important conferences. ORO and EURE will undertake the training sessions (online training tutorials and summer schools). CNIT, EURE, OULU, and ORO, will organise training events to PhD schools, as means of knowledge transfer, capacity building, wider outreach, and sustainability. ORO and NOVA will organise the webinars. As far as communication is concerned, this task will ensure the creation and constant update of all web-based communication means, including ADROIT6G website and social media channels (from M01 developed by EBOS). Participants will ensure visibility of the project	Communication Activities performed (M19-24)	previously reported strategy is presented, the Dissemination and Communication Activities performed between M01 and M42, with strong emphasis in M19-42, as well as the status of the KPIs upon the completion of the project.

	activities through several traditional and electronic dissemination materials sent out to a large pool of stakeholders (Table 2.1) on a quarterly basis. (Output: D6.1, D6.2, D6.3)		
Task 6.2 Exploitation and sustainability	This task will conduct a continuous technology and research watch, led by the Exploitation Manager (ORO) supported by all technological partners on the technologies and elements they will conduct their research and development work in ADROIT6G, to identify and verify that ADROIT6G advancements are indeed the most relevant ones having the highest exploitation interest and potential for 6G targeted vertical industries. A technological survey assessment will be undertaken to understand the sectoral needs and opportunities for ADROIT6G, with an initial focus on the vertical industry segments covered by consortium partners, including deep involvement from the MNOs (ORO and NOVA). An analysis will then follow, which will seek to understand how ADROIT6G outcomes compare against existing beyond 5G as well as other 6G architectural technological solutions being developed. This will be used as input to the exploitation plan, to define a market position and unique value propositions for the ADROIT6G solution. Then, the focus will be on analysing the initially identified ADROIT6G key exploitable results and then enhance the exploitation strategy presented in Section 2.2.3 by creating specific business models and plans tailored to the constituent parts of the 6G architecture that consortium partners will either jointly or individually pursue after the end of the project. The task will also support partners in further developing their	5- Exploitation	In this chapter, the exploitation activities are presented, which performed by M42 (completion of the project). It describes how ADROIT6G has matured from planning into a fully developed exploitation portfolio, where validated technologies, integrated PoCs, open-source outputs, and scientific results are now positioned as interoperable building blocks for future 6G systems.

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	individual business plans and goals. To ensure sustainability and accelerate the penetration of ADROIT6G to the industry, free community versions of several ADROIT6G components will be published and promoted, some of them as open source (see Table 2.6). In addition, this task will conduct: an exploitation methodology, a detailed SWOT analysis of the ADROIT6G proposal; an alignment with the market and the competitive landscape; revenue and cost projections for different business models of ADROIT6G addressing specific sectors and customer needs; funding strategies for further R&I; a risk analysis for commercial sustainability for up to 5 years beyond the end of the project, quantifying opportunities as an advantage market opportunity, business aware and sustainable business model plan, etc. All partners of this task will synergize on the set of defined tasks. (Output: D6.2, D6.3)		
Task 6.3 Standardisation and clustering activities	ADROIT6G consortium partners will use standardisation to exploit the impacts of the project key results and to invest the public funding of this project most efficiently. Firstly, it will ensure that the R&D results produced by the project will be aligned with existing and emerging standards from the relevant standardisation bodies (e.g., 3GPP, ETSI, ITU, etc). Secondly, through 5G-PPP pre-standardisation WG and contributing to the next phase of 6G standardisation efforts ADROIT6G will analyse the standardisation gaps with respect to the 6G SNS JU vision, so that such gaps can be adequately addressed. Consortium partners ATH, IQU, ORO, NXW, SIEMENS will join efforts to contribute to the standardisation	6-Standardisation	The Chapter details the Standardization contributions oriented on the ETSI ZSM PoC#19 on “AI-enabled predictive closed loops: network slice automation and performance optimization for collaborative robots”, and the SME WG Standardization activities.

	process by providing experiences, lessons learned, and research results, relevant to the outcomes of the project, as indicatively listed in Table 2.4 in Section 2.2.1. (Output: D6.2, D6.3)		
Task 6.4 Innovation, data management and IPR activities Subtask: Innovation management and IPR activities	Identify and manage innovation from the project, advising the Project Coordinator and consortium partners on the scope and potential of the innovations arising and paying attention to discerning IPR at regular checkpoints. The work also includes identifying, assisting, and overseeing the filing of at least 3 strategic patent filings. All IP produced will be monitored and the potential IPR attached to them (e.g., copyright, patent) will be also verified and cleared for the project's smooth execution. Further activities include: (a) Design the IPR protection strategy to promote the sustainability of project results, building on existing assets, considering aspects defined in Section 2.2.2. (Output: D6.4, D6.5, D6.6, D6.7, D6.8)	7- IPR Management	This Chapter focuses on the ADROIT6G's methodology structure for the IPR management and the IP protection through patents. Summarizes the actions related to IP submissions and the successful grant of one patent out of the four ADROIT6G patent applications.

2 WP6 Outcomes

This chapter outlines the objectives and strategy for Dissemination and Communication (D&C), detailing how the project aimed to effectively share its findings and engage with its audience. It begins by presenting the key objectives of WP6, their status by the completion of the project along with a justification based on the outcomes. Next, the D&C Phases are presented along with the specific actions performed within each phase, ensuring that dissemination efforts were directed towards appropriate channels and towards a meaningful group of stakeholders. Following this, the chapter presents the metrics used to measure the success of these D&C activities. This includes a status report on Key Performance Indicators (KPIs), providing a snapshot of how well the project met its D&C outreach. Additionally, the chapter describes the D&C reporting tools utilized to monitor and evaluate the KPIs, ensuring ongoing assessment throughout the lifespan of the project and collaborative efforts by all the consortium partners.

2.1 Objectives & Status

This chapter presents the objectives defined under Work Package 6 (WP6), focusing on dissemination, communication, and exploitation activities within the project. It provides a structured overview of the intended goals, their implementation status, and the justification of outcomes achieved throughout the project lifecycle. The assessment reflects the extent to which WP6 has contributed to enhancing project visibility, stakeholder engagement, and the uptake of results, while also aligning with the strategic priorities of the Smart Networks and Services Joint Undertaking (SNS JU) and the 6G Smart Networks and Services Industry Association (6G-IA). Table 3. WP6 List of objectives and their status/justification. summarizes each objective alongside its status and a concise justification of progress and achievements.

Table 3. WP6 List of objectives and their status/justification.

Objectives Description	Status	Justification
Provide a clear view of the project goals and its results, including the 6G-IA and SNS JU perspectives	Achieved	The objective has been fully achieved through the consolidation and presentation of the project's key goals, outcomes, and impact-oriented results within the deliverable. A comprehensive overview of ADROIT6G achievements is provided, reflecting alignment with the strategic priorities of both the 6G Smart Networks and Services Industry Association (6G-IA) and the Smart Networks and Services Joint Undertaking (SNS JU). The document captures the evolution from planned objectives to concrete results, highlighting the project's contribution to the broader 6G research and innovation ecosystem.
Create an active community of interested stakeholders and potential users and collect knowledge and requirements considered by the project's activities	Achieved	This objective has been achieved through continuous stakeholder engagement activities conducted throughout the project lifecycle. Relevant communities, including industry, research, and standardisation stakeholders, were actively involved via workshops, events, and direct interactions. Feedback and requirements collected from these engagements were systematically considered within project activities, supporting alignment with user needs and enhancing the relevance of project outcomes.

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Prepare the ground for the exploitation of project's results towards the industry	Achieved	This objective has been achieved through early identification and structuring of Key Exploitable Results (KERs), alongside targeted interactions with industrial stakeholders. The project facilitated the definition of exploitation pathways, potential use cases, and application domains, ensuring that results are positioned for further development, uptake, and potential integration into industrial environments.
Create awareness of the project amongst all stakeholders impacted by the results	Achieved	This objective has been achieved through a structured set of D&C activities aimed at maximising visibility of the project. These include participation in conferences, workshops, publications, and outreach events, as well as the use of digital channels and communication materials. These efforts ensured broad awareness of ADROIT6G objectives and outcomes across relevant stakeholder communities. Also, data/traffic analytics show a strong engagement of stakeholders and interested parties with the project through its channels (social media, website, etc.) recording more than 1000 followers overall & an average of ~3K monthly Impressions.
Establish liaisons with other projects and initiatives for knowledge and innovation transfer	Achieved	This objective has not been fully achieved in terms of establishing formalised and sustained liaisons with external projects and initiatives. However, interactions and joint activities have taken place through participation in ecosystem events and dissemination activities. ADROIT6G co-organised a plethora of activities with other projects such as 6GSUNRISE, 6G-PATH, 6GBRICKS, 6G-INTENSE, FLECON6G and 6G-DALI. These interactions provided opportunities for knowledge sharing, although dedicated official collaboration frameworks (liaisons) were not implemented during the project duration.
Support the dissemination and exploitation of results (including the SNS programme results) by formulating adapted key messages, and prepare adapted D&C material	Achieved	This objective has been achieved through the development of tailored communication materials and key messages adapted to different target audiences. Dissemination outputs were designed to support both technical and non-technical stakeholders, ensuring effective transfer of project results. These materials contributed to improved visibility and facilitated the dissemination and uptake of outcomes within the SNS ecosystem. ADROIT6G also participated in the monthly SNSJU Comms meeting and updated the community on its D&C Activities through its channels. Also, dedicated posts were shared with the audience regarding the annual journal release by SNSJU. Newsflash, newsletters and posts by SNSJU were also distributed through ADROIT6G channels and consortium members to increase SNSJU outreach and maximizing its community impact.
Recognition of the results (including the SNS programme results) among the research communities,	Achieved	This objective has been achieved through active engagement with research communities, standardisation bodies, and relevant stakeholders at European and international level. Project results have been presented in relevant conferences, joint workshops, panel discussion and were also incorporated into ongoing

standardisation bodies, potential users, policy-maker institutions		discussions within the 6G and SNS ecosystem. Specifically, ADROIT6G submitted annual reports to the SNSJU through the "SNSJU Project Status Questionnaires". This has supported increased visibility and recognition of ADROIT6G outcomes across key stakeholder groups.

2.2 Impact Maximization

This chapter outlines the exact approach applied by ADROIT6G to maximise the impact of the project results beyond the consortium, in line with the SNSJU objectives for uptake, exploitation, and long-term sustainability of their projects. Impact maximisation activities focused on ensuring that project outcomes are effectively transferred to relevant stakeholder communities, including industry, academia, standardisation bodies, policy makers, and end users.

2.2.1 Implementation of D&C Phases (M19-42)

A comprehensive array of dedicated D&C activities has significantly contributed to the ADROIT6G project. The primary objective of the ADROIT6G impact maximization strategy was to raise awareness of the project and its outcomes among a broad audience, while also attracting potential users and stakeholders, by employing a certain D&C strategy. This strategy was designed to ensure widespread awareness and adoption of the project's outcomes through 5 phases. Even though phases were initially 4, with the 6-month extension of the project ADROIT6G added one more and final phase (Phase 5), to ensure maximization of its impact. Each phase encompassed a range of activities aimed at both general audiences and specific stakeholders.

Specifically, D&C activities were carried out in five phases, as presented in detail in Table 4, while each phase has its own objectives, target audience and goals, and activities performed using the best-suited channels. Since the present deliverable D6.3 is the final deliverable, a thorough summary within each phase, as executed, is provided1. Initially, between M1-18 of the project, broad communication efforts were focused on reaching a wide public audience, and several target groups. These activities aimed to raise awareness of ADROIT6G and its potential benefits among the public, as reported on D6.2.

During **M13-26** (Second Phase), more targeted D&C initiatives were undertaken to highlight ADROIT6G's advancements and achievements to scientific communities, academia, small and medium enterprises (SMEs), relevant industries, third parties, and end-users. This specialized approach ensured that key stakeholders are informed about the project's progress and outcomes, facilitating potential collaborations, adoption, and utilization of ADROIT6G technologies.

As the project evolved in **M27-33** (Third Phase), the communication strategy adapted to emphasize concrete results and engage stakeholders effectively. Overall, Project Partners ensure visibility of project activities through various traditional and electronic dissemination materials distributed to a wide range of stakeholders on a bi-annually basis.

A short Phase in **M34-36** (Fourth Phase) focused on presenting the first results of ADROIT6G through user-oriented demonstrations targeting potential end-users, ICT developers, and research and academic communities. Dissemination was carried out via the project website, journal publications, industry-focused events, and client demonstrations at major 5G events, ensuring broad visibility and engagement. The phase emphasized demonstrating results to existing stakeholders while attracting new ones across industry, academia, and research sectors.

[1] *D6.2 presented the phases as a plan, while D6.3 is presenting their actual execution summary.*

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The fifth and last phase, which was during the extension period of the project **M37-42**, focused on capturing lessons learnt and presenting the final results of ADROIT6G to potential end-users and the general public. Dissemination activities include special sessions at major congresses, website and social media updates, and a final event featuring use case showcase videos, demos, and online training tutorials. The phase also highlights interviews and online training tutorials presenting each Proof of Concept (PoC) to demonstrate ADROIT6G impact and outcomes.

Table 4. ADROIT6G Dissemination and Communication Phases

Type of Information	Target Audience	Channels	Brief overview of activities performed (high-level)
D&C Phase 1 – M1-M12 ***(Reported in D6.2)***			
Presentation & visual identity of ADROIT6G **Defining the Objectives and expected results of ADROIT6G**	Industry, technological, research and academia Stakeholders identified	Conferences, workshops Brochures, roll-ups, posters Website Social media channels	General visibility (build and publish the website, create the branding material – logos, flyers etc.) Attracting followers on social media, gaining visibility by participating in WGs and events of external parties
D&C Phase 2 – M13-M26			
Increase project awareness **Share initial results within research & development context** **Present ADROIT6G project in forums, conferences** **Design outreach activities**	Potential end-users, Specific technological, research and academic communities, 6G vendors and application developers	Conferences, workshops Publications in journals Special session in major congresses/exhibitions Website Social media channels	Exposing synergies with other SNS projects Providing visibility, engaging with SNSJU activities Presenting ADROIT6G in conferences Journal Publications (>20) Attracting potential collaborators & presenting ADROIT6G in several forums and webinars (including HEXA-II)
D&C Phase 3 – M27-M33			

Presenting elaborated use cases of ADROIT6G **Demonstration of usage and results**	Specific technological research and academic communities	Conferences, workshops Publications in journals Special sessions in major congresses/exhibitions Website Social Media Channels	Showcasing ADROIT6G Demos Use Case Enhancement, preparation of relevant material Updated flyers and brochures Participation in major events, sharing ADROIT6G results.
D&C Phase 4 – M34-M36			
Results of ADROIT6G **User oriented demonstration**	Potential end-users Potential developers in ICT companies Specific technological, research and academic communities.	Website Publications in journals Industry focused events Client demonstrations and demos in major 5G events	Demonstrating results to existing stakeholders Attracting new stakeholders within industry, academia and research communities
D&C Phase 5 – M36-M42			
Gathering Lessons Learnt & **Presenting Final results of ADROIT6G**	Potential end-users General Public	Special sessions in major congresses/exhibitions Website Social Media Channels ADROIT6G Final Event	Use Cases Showcase video Demos & Online Training Tutorials Interviews showcasing each PoC

2.2.2 Target Groups & Channels

The ADROIT6G D&C strategy was committed to mobilizing the appropriate stakeholders and amplifying the effects of D&C&E activities throughout the project. Recognizing the interconnectedness of these varied efforts for maximizing project outcomes, the consortium initially identified specific target audiences, as demonstrated in D6.2. The D&C activities of the ADROIT6G project were designed to engage these diverse audiences effectively. For each of the stakeholder group a different approach of D&C was implemented. For instance**, academia and research communities** were reach though scientific publications, conferences, and specialized workshops which provided in-depth technical insights and fostered collaborative opportunities. **Industry stakeholders, including telecommunications companies and tech innovators**, were targeted through industry conferences, webinars, and partnership meetings, focusing on practical applications and business implications. For the **Public outreach and awareness campaigns** we utilized the social media channels, press releases, and public demonstrations to inform and educate the general public about the benefits and advancements of 6G technology. By tailoring these activities to the specific needs and interests of each audience, ADROIT6G ensured

widespread engagement and impact. Building on this understanding of target audience groups and their anticipated engagement, the consortium established KPIs aiming a unified dissemination and communication strategy, aligning them with the interests of the identified audience segments as detailed in the previously submitted D6.1 & D6.2.

The project has actively engaged multiple target groups, as detailed in Figure 1. These activities have been closely aligned with the project's technical use cases and validation scenarios, ensuring continuous interaction with relevant stakeholders from both supply and demand sides of the emerging 6G ecosystem. This chapter provides an overview of the main target groups reached by ADROIT6G, summarising their role within the project and illustrating how engagement activities have supported dissemination, exploitation, and alignment with European research and innovation objectives.

Figure 1 provides a consolidated overview of the key target groups engaged throughout the ADROIT6G project. It illustrates the project's multi-stakeholder outreach achievement, spanning the full 6G ecosystem from end users and research communities to industrial actors, technology providers, and policy stakeholders.

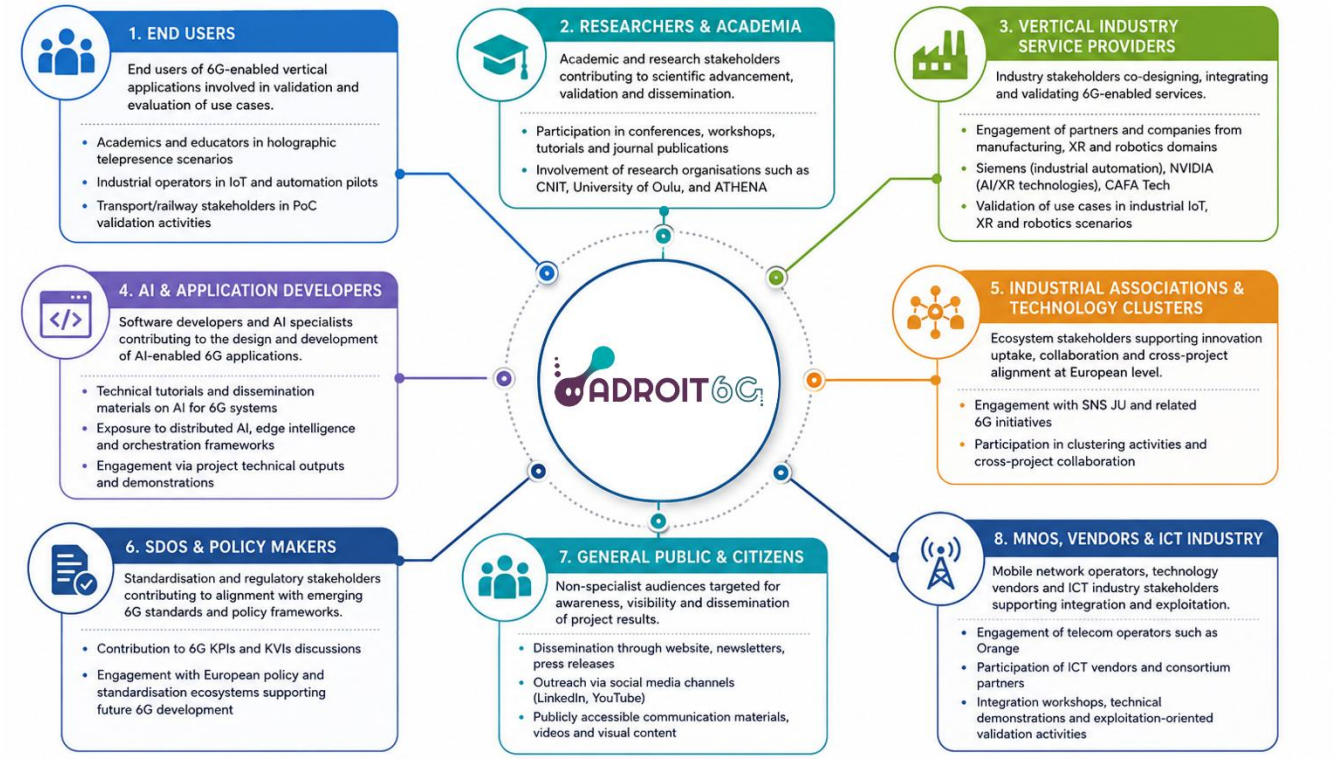

Figure 1. Engaged a diverse 6G-ecosystem throughout the ADROIT6G project duration.

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2.2.3 Dissemination KPIs

This section presents the Key Performance Indicators (KPIs) used to monitor, assess, and demonstrate the effectiveness of ADROIT6G **dissemination** activities throughout the project duration. The defined KPIs provide**d** a structured mechanism to evaluate the reach, quality, and impact of project visibility efforts across multiple channels and stakeholder groups, including digital platforms, scientific dissemination, events, and community engagement activities. **T**hese indicators enable continuous tracking of progress against the dissemination objectives, supporting transparency, accountability, and evidence-based reporting in the context of project exploitation and impact creation. The D&C Manager (eBOS) maintained a repository that was accessible by all project partners and collected constant contributions to dissemination related activities. The overall achieved KPIs for Dissemination are summarized in Table 5.

Table 5. ADROIT6G Dissemination KPIs – Achieved by M42.

Dissemination activity/ KPI	Target Value	Achieved by M42
Technical Publications & white papers		
Scientific papers in peer-reviewed Journals	≥10	26
Scientific Papers in Conferences	≥15	25
White papers	≥5	6
Public Deliverables	15	15
Open-Source Initiatives		
Datasets	≥3	12
Open-source code repository to publish the codes	≥1	1
Workshops, Webinars & Trainings		
Organization of Scientific Workshops	2	4 (+ 11 presentations to other WS)
Average Number of attendees per workshop	>80	50-100
Online Training Tutorials	4	4
Organization of Summer Schools	2	4
Industrials Exhibitions & Trade Fairs		
Participation with Booth	>10	20
Rollup banners	3	13
Brochures to Stakeholders	>1000	>1000
Showcases	≥4	11
Participants	>1000	>1000

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2.2.4 Communication KPIs

This section outlines the KPIs established to monitor and evaluate the effectiveness of ADROIT6G communication activities throughout the project lifecycle. The communication KPIs provide a structured framework to assess the reach, consistency, and impact of the project's communication strategy, ensuring that key messages are effectively shared to both specialist and non-specialist audiences. These indicators supported the continuous measurement of visibility, stakeholder awareness, and engagement across digital channels, events, and outreach activities. The KPI tracking further enables evidence-based assessment of communication performance and ensures that dissemination and communication objectives were met in a coherent and impactful manner. ADROIT6G communication activities and KPIs are summarized in Table 6 .

Table 6. ADROIT6G communication activities and KPIs.

Communication Activity	Target Value	Achieved by M42
Project Website	Online by M01; Unique visitors at M36 > 4K	6500 Page Views 18K Interaction Counts
Social Media	Followers by M36> 1000 Monthly Impressions average>500	1123 Followers 27K Annual Impressions
e-Newsletters - Released or featured	 >6 Total mailing list of contact points >1000	 7 released + 8 featured ~760 (reach > 1000 through social media)
Press-Releases & Online Publishing	≥ 6	9
Promotional Material: Non-technical factsheets Project flyers/leaflets/brochures Hard Copies distributed Rollup Banners and posters	 >3 >3 >2000 >3	 3 5 >2000 4
Multimedia: Promotional videoclips Number of interviews produced Number of views/impressions	 >3 >6 >3000	 4 5 > 9K Views
Public Talks Public events at universities & Open days Events organised by Partners	 >5; visitors per event>100 ≥ 3	 12; 100-200 per event 4

3 Dissemination Activities Performed (M19-M42)

This section outlines the dissemination efforts carried out by the Consortium partners up to M42 (June 2026), with emphasis on the activities performed during the current reporting period, M19 to 42. The ADROIT6G project adopted a comprehensive approach to ensure the effective sharing of project results and to maximize their impact across various stakeholders, as outlined below. KPIs served as compasses to achieve the project outreach and outcomes within the context of valuable and realistic metrics. These quantifiable metrics were the core of our D&C execution, offering a succinct snapshot of performance against predetermined goals.

Key dissemination activities included the publication of research findings in academic journals and the presentation of conference papers to engage with the global research community. Also, it produces technical publications and white papers to detail specific technologies and methodologies, while public deliverables ensure transparency and accessibility of key project outcomes. These efforts collectively aimed to foster broad engagement and knowledge sharing across various stakeholders.

By M42, ADROIT6G not only achieved its Dissemination KPIs but also surpassed them, signalling its commitment throughout the project. ADROIT6G has demonstrated exceptional engagement with the scientific and research community by participating in Conferences, and Workshops, Publishing its results in Conference Proceedings as well as in Peer-Reviewed Journals. Moreover, its participation in Exhibitions with live demos have outpaced projections, maximizing its outreach to several target audience groups.

3.1 Technical Publications & White Papers

The dissemination efforts of the ADROIT6G project on publications have exceeded expectations and defined KPIs, achieving and surpassing its KPIs with **twenty-six (26) journal publications, twenty-five (25) conference papers, and six (6) White Papers** by June 2026, numbering in **total 57 technical publications**. All Journal Publications, Conference Papers, and White Papers released in M19-42, are listed in Table 7, Table 8, and Table 9, respectively. These contributions reflect the project's commitment to advancing 6G research and technology. The journal publications, featured in esteemed academic journals, provide in-depth insights into the project's findings, while the conference papers facilitate knowledge exchange and collaboration within the global research community. These accomplishments underscore the project's significant impact on the scientific and technological landscape of 6G development. below.

3.1.1 Journal Publications

Table 7. ADROIT6G Journal Publications *(M19-42)*

No	Partner	Title of publication	Journal	Month/Year
1	CYENS	DeepRISBeam: Deep Learning-Based RIS Beam Management for Radio Channel Optimization	IEEE Access	06/2024
2	CYENS	AI/ML-aided capacity maximization strategies for URLLC in 5G/6G wireless systems: A survey	Computer Networks	07/2024

3	ISI/ATH	Towards Bridging the FL Performance-Explainability Trade-Off: A Trustworthy 6G RAN Slicing Use-Case	IEEE Transactions on Vehicular Technology	09/2024
4	ISI/ATH	Intelligent QoS-aware Slice Resource Allocation with User Association Parameterization for Beyond 5G O-RAN-based Architecture Using DRL	IEEE Trans. on Vehicular Technology	10/2024
5	CYENS	DSTL: A Dual-Step Transfer Learning-Based Prediction Model for Next-Generation Intelligent Cellular Networks	Intelligent and Converged Networks	03/2025
6	OULU	A Decentralized Matching Theory Framework to Match Data and Algorithms Providers	IEEE Networking Letters	04/2025
7	CYENS	On the Performance Analysis of UE-VBS-Based Wireless Communications: Network Outages, Resource Utilization, and Optimization	IEEE Access	05/2025
8	CNIT	MOSE: A Novel Orchestration Framework for Stateful Microservice Migration at the Edge	IEEE Transactions on Network and Service Management	06/2025
9	SIE	A Survey on Satellite Computing: Connecting the Dots Between Networks and Applications	IEEE Communications Surveys & Tutorials	06/2025
10	CYENS	Enhancing 5G and 6G networks through a dynamic dual-stage machine learning heuristic framework for selecting UEs as UE-VBSs	Ad Hoc Networks	10/2025
11	CYENS	Access Point Selection and Localization for Cluster-Based Realization of a Device-to-Device Cell-Free 6G Communications Network	IET Communications	10/2025

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12	IQU, ISI/ATH	Evaluating QoT-aware hybrid grooming schemes in dynamic C + L-band optical network	Journal of Optical Communications and Networking	11/2025
13	ISI/ATH	Deep State-Space Modeling of Channel Dynamics for CSI Prediction in LEO Non-Terrestrial Networks	IEEE Transactions of Vehicular Technology	01/2026
14	ISI/ATH, IQU	Toward Energy-Efficient AI: Learning Generic Assignment Skills with Unsupervised Reinforcement Learning for Network Slicing in Distributed 6G Networks	IEEE Communications	01/2026
15	OULU	Distributionally Robust Federated Learning with Client Drift Minimization	IEEE Transactions on Machine Learning in Communications and Networking	01/2026
16	CYENS, EBOS, ISI/ATH	A novel two-stage distributed radio resource allocation framework using deep machine learning in 6G cell-free dynamic communication networks	Computer Networks	05/2026

3.1.2 Conference Publications

Table 8. ADROIT6G Conference Publications *(M19-42)*.

No	Partner	Title of publication	Conference/ Journal	Month/ Year
1	OULU	Balancing Energy Efficiency and Distributional Robustness in Over-the-Air Federated Learning	IEEE ICMLCN 2024	08/2024
2	OULU	Fed-Sophia: A Communication-Efficient Second-Order Federated Learning Algorithm	IEEE ICC 2024	08/2024

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3	CYENS	Implementing a Cell-Free 6G Distributed AI Network With the Use of Deep ML Under a Traditional Multi-Cell Mobile Network	IEEE Middle East and North Africa Communications Conference (MENACOMM)	03/2025
4	CYENS	Revolutionizing 6G Networks: Implementing Cell-Free Architecture with Advanced Clustering Through Deep Machine Learning	International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET)	05/2025
5	CYENS	An Accurate Intelligent Plan Library for Belief-Based Desire Prioritization to Intentions in BDIx Agents	International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET)	05/2025
6	CYENS, EBOS, ISI/ATH	Deep Learning-Driven Two-Stage Distributed Radio Resource Allocation in 6G Cell-Free Communication Systems	4th ICPCCT 2025	05/2025
7	CYENS	Recovery RPL Internet of Things Network under the Jamming Attack	DCOSS-IoT 2025	08/2025
8	IQU, ISI/ATH	Quantitative Comparison of Traffic Management Schemes in a Converged Optical-Wireless 6G Network	IEEE ICTON 2025	08/2025
9	CNIT	Traffic-aware DNN Inference Task Offloading in the Mobile Device-Edge Continuum	IEEE INFOCOM 2025 ICCN workshop	09/2025
10	IQU, ISI/ATH	Energy-Efficient Edge-Domain Automation and Service Provision in 6G Networks by Deploying Offline Discovered Assignment Skills	IEEE ICC 2025	09/2025

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11	CYENS	A Two-Stage Generative Framework for URLLC-Constrained Packet Routing in 6G Networks	IEEE ComNet 2026	01/2026
12	IQU, ISI/ATH	KARMA: Knowledge-Aware Resource Management and Autoscaling for Edge Workloads	IEEE GLOBECOM 2025	03/2026
13	CNIT	Orchestrating Composite Applications at the Edge	IEEE NOMS 2026	05/2026

3.1.3 White Papers

Table 9. List of White paper contributions published in M19-42.

No	Partner	Title of publication	Publisher	Month/ Year
1	ORO	European Vision for the 6G Network Ecosystem	6G-IA Vision Working Group	10/2024
2	ORO	Network & Service Management Advancements - Key frameworks and Interfaces towards open, Intelligent and reliable 6G networks	6G SoftNet White Paper	12/2024
3	CYENS	AI/ML as a Key Enabler of 6G Networks - Methodology, Approach and AI-Mehcanisms	SNS JU	01/2025
4	NOVA	6G KPIs - Definitions and Target Values	SNS JU	01/2025
5	NOVA	6G KVIS – SNS PROJECTS INITIAL SURVEY RESULTS 2025	SNS JU	05/2025
6	CYENS	6G for Media & Entertainment: Challenges, Opportunities, and Future Work	SNS JU	11/2025

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3.1.4 Public Deliverables

ADROIT6G has ensured strong transparency and accessibility of its research outcomes through the timely publication of its public deliverables on the project website[2]. The dedicated Public Deliverables section provides open access to all reports that are classified as public, enabling stakeholders from industry, academia, and the wider research community to follow the progress and results of the project in a structured and consistent manner. This approach supports knowledge dissemination, fosters reuse of results, and contributes to the project's broader objectives in standardisation, exploitation, and impact creation.

The 15 published deliverables cover all major technical and cross-cutting work packages of ADROIT6G, including system architecture design, distributed AI frameworks, AI-driven management and orchestration, integration and validation activities, performance evaluation, as well as dissemination, communication, standardisation, exploitation, and IPR management. In particular, key documents such as the requirements and architecture definitions (WP2), distributed AI frameworks (WP3), orchestration and control frameworks (WP4), and integration and testbed validation reports (WP5) are made publicly available, alongside WP6 deliverables addressing dissemination, standardisation, and exploitation activities.

By making these outputs openly accessible, ADROIT6G reinforces its commitment to openness and impact maximisation, allowing external stakeholders to better understand the project's technical progress and results. The public deliverables also serve as an important reference point for standardisation and research communities, supporting alignment with ongoing European initiatives in 5G and 6G development and strengthening the visibility of the project's contributions within the broader SNS ecosystem.

3.2 Open Datasets & Open-source code repository

ADROIT6G promotes openness, reproducibility, and collaboration through the release of selected datasets and open-source repository contributions supporting the project's research and innovation activities. The open dataset strategy is closely aligned with the project's objectives in distributed AI, intelligent networking, and next-generation service orchestration, enabling both internal validation and external exploitation of results by the wider research community. These resources are made available to facilitate experimentation, benchmarking, and further development of machine learning and communication algorithms in 6G-related scenarios. A detailed view of these datasets and data management can be accessed in "D6.6 Data Management Plan – Final" [3].

Also, ADROIT6G joined the OpenOP Research Ecosystem, reinforcing its commitment to open, collaborative, and interoperable approaches to 6G innovation. As part of this ecosystem, the project contributes to advancing research and development in open architectures, testbeds, and standardisation activities aligned with the European Union's 6G vision under the Smart Networks and Services Joint Undertaking (SNS JU). By engaging with OpenOP, ADROIT6G strengthens its role in fostering cooperation across the research community and supporting the evolution of next-generation mobile network architectures through shared knowledge, open frameworks, and joint innovation efforts.

The released datasets and tools cover multiple application domains addressed within the project, including device-to-device (D2D) communications, holographic streaming, and machine learning model optimisation in heterogeneous environments. In particular, they support the validation of AI-driven decision-making mechanisms, the improvement of data transmission strategies for immersive applications, and the efficient selection and deployment of ML models across distributed network infrastructures. Together, these open

[2] Public Deliverables - ADROIT6G

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resources contribute to strengthening the reproducibility of ADROIT6G results and fostering innovation beyond the consortium boundaries.

Table 10 provides detailed description on the open datasets that have been made available within ADROIT6G. The project also maintains an Open-source code repository to manage datasets and publish codes in Github[3].

Table 10. ADROIT6G Open-Source Datasets.

#	Open-Source solution Name / ID	Owner	Area of application / Purpose of solution	Other relevant info
1	VERA	CNIT	Dataset for Scalable Orchestration of Network and Compute Resources for Virtual Edge Services	Related to WP3. https://github.com/corrado113/VERA
2	D2D_RESULTING_TOPOLOGY	CYENS	The area of application is the D2D communication network for evaluating the BDIx agents' decisions. The purpose of the solution is to validate and examine the behavior of the DAIS plan that is associated with the Desire "Achieve the best Transmission Mode in D2D	We use the dataset at WP5.T3. https://github.com/ADROIT6G/CYENS_REPOSITORY
3	MERGE	CNIT	The area of application is the selection of ML model versions that have been trained using differently data sets and different compression factors, namely, pruning factors. The MERGE algorithmic framework thus finds application whenever heterogeneous environments and devices are used for, respectively, the model training and the model execution.	Related to WP3. https://github.com/ADROIT6G/MERGE
4	RenderedStreaming	CYENS	The area of application is in communication and streaming of holographic teaching images. The dataset consists of rendering images taken from the Holographic Teaching PoC 1 application. The purpose of the rendered images is to help partners work on ML models to improve the transmission of the images.	We use the dataset at WP5.T5. https://github.com/ADROIT6G/CYENS_REPOSITORY

[3] https://github.com/orgs/ADROIT6G/dashboard

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5	Azure Kinect Dataset	CYENS	Multi-camera Azure Kinect dataset including RGB and depth voice recording from three Azure Kinect devices for RGB 3D point-cloud generation.	Related to PoC1. https://github.com/ADROIT6G/PoC1DataSet/
6	UL and DL Throughput Dataset	eBOS	Data capturing uplink and downlink throughput metrics for each user equipment (UE). The collected data can include timestamps, UE IDs, throughput rates (in Mbps), and network cell IDs. The usage of this dataset can be to analyse the network's performance and monitor the user's experience.	Related to PoC1. https://github.com/ADROIT6G/eBOSS_Datasets/blob/main/1_throughput_ul_dl.csv
7	Network Resource Consumption Dataset	eBOS	Data tracing the consumption of network resources such as CPU, memory, and bandwidth across various network functions. The collected data can include timestamps, function IDs, resource types, and consumption metrics. This dataset can aid in the resource utilization monitoring and the capacity planning.	Related to PoC1. https://github.com/ADROIT6G/eBOSS_Datasets/blob/main/2_resource_consumption.csv
8	QoS Fulfilment and Session Success Dataset	eBOS	Data measuring the fulfilment of Quality of Service (QoS) parameters and session success rates. The collected data can include timestamps, service IDs, UE IDs, QoS parameters, fulfilment rates, session counts, successful sessions, and success ratios. This dataset can be used to improve user experience and supports the proactive management.	Related to PoC1. https://github.com/ADROIT6G/eBOSS_Datasets/blob/main/3_qos_fulfillment_session.csv
9	Signal Power Dataset	eBOS	Data recording signal power (dBm) for each UE, along with location coordinates and network cell IDs. The collected data can include timestamps, UE IDs, signal powers, latitude, longitude, and cell IDs. This information can be used for coverage analysis, interference management, and the optimization of antenna placement.	Related to PoC1. https://github.com/ADROIT6G/eBOSS_Datasets/blob/main/4_signal_power.csv

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10	Active Users per Service Dataset	eBOS	Data monitoring the number of active users for each service. Collected data can include timestamps, service IDs, and active user counts. This dataset can aid in service usage monitoring and dynamic resource allocation.	Related to PoC1. https://github.com/ADROIT6G/eBOSS_Datasets/blob/main/5_active_users_per_service.csv
11	Resource prediction dataset	ISI/ATH	Timeseries data leveraged for microservice placement, with CPU, RAM, pod placement data collected via k8s telemetry from all k8s clusters and microservices deployed at the Cloud-Edge-Continuum.	Related to PoC1. https://github.com/ADROIT6G/PoC1DataSet/blob/main/ISI ATH-ADROIT6G-TESTBED-DATA.zip
12	Command/video latency, logs, communication metrics	CAFA	The dataset is related to the communication latency and D2D routing performance, produced by CAFA.	Related to PoC3. https://github.com/ADROIT6G/CafaTechDataset

3.3 Workshops, webinars, and online training tutorials

3.3.1 Workshops/ Special Sessions

ADROIT6G has actively contributed to the dissemination of project results through the organisation and co-organisation of targeted workshops and special sessions. These activities have provided dedicated forums for presenting technical advancements, exchanging knowledge with the wider research community, and fostering collaboration with industry and academic stakeholders. In line with the project's KPI, ADROIT6G successfully organised three workshops by M42, thereby fully achieving the planned objective and reinforcing the project's visibility and impact within the 6G research ecosystem. Beyond the organization of Workshops, consortium members also participated and presented ADROIT6G scope and results in relevant Workshops.

3.3.1.1 Workshops Organised (or co-organised) by ADROIT6G

- **IEEE Computer Aided Modeling and Design of Communication Links and Networks (CAMAD 2024)**

The ADROIT6G and CENTRIC projects co-organised a Special Session at IEEE Computer Aided Modeling and Design of Communication Links and Networks (CAMAD 2024), held in Athens 21-23 October 2024. By co-joining the expertise of ADROIT6G and CENTRIC, this Workshop/Special Session offered conference participants a comprehensive understanding of the intricate interplay between the 6G architecture, AI-driven user-centricity, and Distributed Artificial Intelligence-Driven Open & Programmable Architecture for 6G Networks energy efficiency. ADROIT6G deliver a presentation on its innovation and high-level architecture (Figure 2).

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Figure 2. Presentation by ADROIT6G during the CAMAD2024 Special Session.

- **PhD Training Event and Dissemination Workshop**

The ADROIT6G "PhD Training and Dissemination Workshop" took place in Rome in a hybrid format, bringing together more than 50 participants both in-person and online. The event created an exciting space for discussion, learning, and exchange around some of the most pressing topics in communications research today, including 6G, AI-driven networking, and next-generation systems. The workshop program combined expert insights with opportunities for interactive exchange. Participants had the chance to hear keynote lectures from leading researchers: Carla Chiasserini, Giacomo Bernini, Stefano Salsano, and Sergio Barbarossa, who shared their perspectives on the future directions of wireless technologies and network intelligence. Their contributions sparked lively discussion and provided valuable guidance for early-career researchers entering the field.

Alongside the talks, the workshop featured a vibrant poster and demo session, where PhD students and researchers presented their latest work. This session created opportunities for deeper dialogue, allowing attendees to exchange feedback, explore potential collaborations, and gain a closer look at the innovations shaping the 6G research ecosystem.

The day concluded with a strong sense of momentum. Participants left with new knowledge, new connections, and fresh energy for advancing their work. The ADROIT6G consortium is proud to support this vibrant community of researchers, helping to strengthen the bridge between fundamental research and the technologies that will shape the next generation of networks.

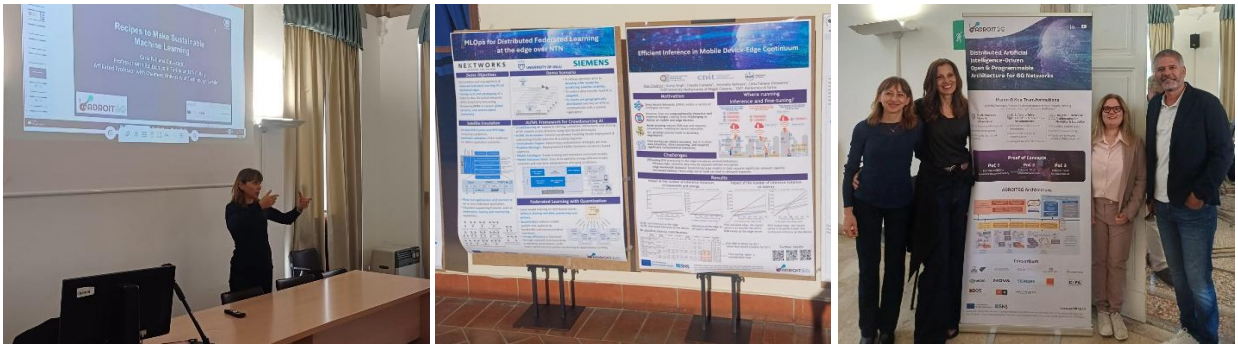

Figure 3. Captures from the ADROIT6G PhD Training Event and Dissemination Workshop.

- **IEEE Conference on Network Function Virtualization & Software-Defined Networking (NFV-SDN 2025)**

The ADROIT6G consortium is actively participating in the NFV-SDN 2025 as the organiser of a dedicated special session titled "Advancing 6G Architecture through Distributed AI and Open Programmability." This session aimed

to showcase the consortium's commitment to designing a next-generation 6G architecture that integrates distributed AI, cloud-native software, and zero-touch automation. The session served as a significant event for the ADROIT6G consortium, since it highlighted the core mission and the innovative approach we are taking towards the future of 6G technologies.

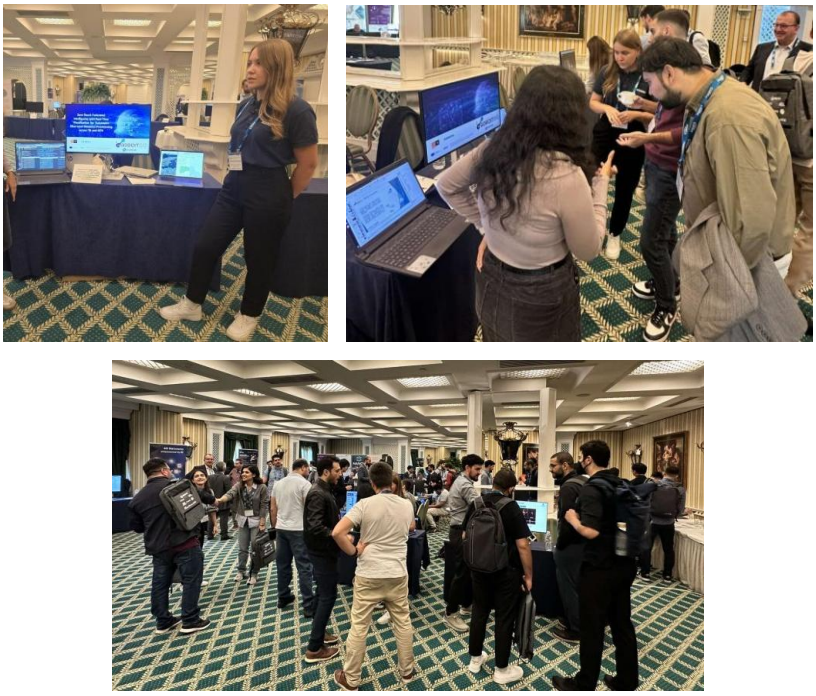

Figure 4. Captures from the NFV-SDN 2025 Special Session.

- **Joint Workshop at the EuCNC & 6G Summit 2026**

ADROIT6G participated in the EuCNC & 6G Summit 2026, held in Málaga, Spain, under the theme “6G Connecting Intelligence.” ADROIT6G contributed with two live Demos, anda jointed session with other SNSJU projects. The joint session was a workshop titled: "Data Platforms for Advanced AI-native Networks: 6G Data Space, DataOps, MLOps, Dataset Generation & Curation" on the 2nd of June 2026, featuring presentations from co-organizer projects: 6G-DALI, SUNRISE-6G, 6G-BRICKS, FLECON-6G, 6G-INTENSE, 6G-PATH, SAFE-6G, and 6G-TWIN.

Figure 5. ADROIT6G participation in EuCNC & 6G Summit 2026.

3.3.1.2 Workshops ADROIT6G participated with presentations

Beyond the project’s defined dissemination KPIs, ADROIT6G has ensured strong visibility within the international research and innovation community through active participation and technical contributions to a broad range of high-impact workshops and scientific events. These activities have provided important opportunities to present

the project's architectural concepts, AI-driven network automation approaches, and use case developments to leading experts in 6G, AI/ML, and networked systems, while also fostering dialogue with complementary research initiatives and standardisation efforts.

ADROIT6G contributions have been presented in several recognised venues covering diverse aspects of next-generation communication systems, including networked sensing, realistic AI deployment in 6G, telco cloud transformation, and intelligent networking architectures. In particular, participation in workshops organised in the context of major conferences such as IEEE ICC, IEEE INFOCOM, and ICML has enabled the project to engage with top-tier research communities and disseminate its results in highly competitive and visible environments. Furthermore, engagement in the Hexa-X-II workshop series and related 6G-focused events has strengthened alignment with ongoing European research initiatives and reinforced the project's positioning within the 6G ecosystem.

The following **eleven (11) workshops** included ADROIT6G presentations and contributions:

- 2nd Workshop on Networked Sensing Systems for a Sustainable Society (NET4us 2023)
- Towards Realistic Usage of AI in 6G Networks workshop
- 6G Series Virtual Workshop Organized by Hexa-X-II
- 3rd IEEE International Conference on Artificial Intelligence for Internet of Things/ Workshop
- Second CND event workshop "Telco cloud transformation with support of AI/ML organized and ADROIT6G architecture"
- IEEE International Conference on Communications (ICC) Workshop on 6G Standardisation and Research Vision
- IEEE INFOCOM Workshop on Intelligent Cloud Computing and Networking
- ADROIT6G at ICML 2024 Workshop on Structured Probabilistic Inference & Generative Modeling.
- HEXA-X-II Feb WS, Session 16: European Perspective on 6G with ADROIT6G (February 2024)
- HEXA-X-II Oct WS, Joint Workshop on architecture & standards: ADROIT6G presentation (October 2024)

Overall, these activities have significantly contributed to increasing the project's international visibility, strengthening its scientific impact, and supporting the dissemination of ADROIT6G results across both academic and industrial communities.

3.3.2 Training Activities

3.3.2.1 Online training tutorials

ADROIT6G has developed and disseminated a set of online training tutorials as part of its capacity-building activities, aiming to support knowledge transfer and facilitate the understanding of the project's key technological concepts. These tutorials are designed to provide accessible and structured guidance on selected technical components of the project, targeting both research and industrial audiences interested in next-generation communication systems, AI-driven network management, and distributed intelligence frameworks.

The project developed **4 tutorials in total**, focusing on translating complex technical developments into practical and reusable learning material, covering areas such as AI/ML-enabled network automation, orchestration of distributed services, and the application of advanced communication technologies within the ADROIT6G use cases. By combining conceptual explanations with demonstrative content, the tutorials support stakeholders in gaining a clearer understanding of the implemented architectures and methodologies, while also enabling potential reuse and extension of the presented approaches. The full titles of the Online Training tutorials are listed below:

1. *AI/ML-Ops in the data-driven 6G networks era (NXW, to be released by July 2026)*
2. Enhanced Reliability and Efficiency of Rail Automation (SIE, June 2026)
   YouTube Link
3. Real-Time Holographic Teaching (CYENS, March 2026)
   YouTube Link
4. Crowdsourcing AI in 6G Networks (CNIT, April 2026)
   YouTube Link

In addition to supporting dissemination objectives, the Online Training Tutorials contributed to the project's impact and exploitation strategy by enhancing accessibility to ADROIT6G results and promoting broader uptake of its innovations beyond the consortium. They are made available through project's YouTube Channel and disseminated through the other digital channels, ensuring long-term visibility and ease of access for interested audiences within the 5G/6G research and innovation ecosystem (Figure 6).

Figure 6. Examples of ADROIT6G Online Training Tutorials as seen on YouTube.

Overall, the online training tutorials represent an important complement to traditional dissemination activities, strengthening ADROIT6G's commitment to education, openness, and effective knowledge transfer within the European research community.

3.3.2.2 Spring/ Summer Schools

ADROIT6G participated in the organization of the Summer/ Spring Schools as means of knowledge transfer, capacity building, wider outreach, and sustainability. Specifically, it organised **4 Spring Schools** and delivered three dedicated sessions related to ADROIT6G and its advancements.

- **2024 Spring School of the University of Iasi**

Our Partner ORO has co-organised with the University of Iasi the 2024 Spring School and participated on the 15th of April 2024 with a presentation. The Spring School, founded in 2018, as an initiative undertaken by the Applied Distributed Systems research group, housed within the Faculty of Computer Science, of the "Alexandru Ioan Cuza" University of Iași in collaboration with the Orange Educational Program. This esteemed event is specifically dedicated to students at the bachelor's, master's, and doctorate levels, as well as academic staff, from technically oriented faculties. It offers a unique opportunity for participants to enhance their understanding and expertise in the realm of Distributed Systems.

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Figure 7. ORO presenting at 2024 Spring School of the University of Iasi.

- **Co-Organisation of the 'EMPOWER-6G & EXACT-6G Schools 1 & 2'**

The ADROIT-6G project, in collaboration with the 6G-BRICKS, 6G-SUNRISE, and 6G-INTENSE consortia, co-organised a series of EMPOWER-6G and EXACT-6G PhD schools held online 10-14 March 2025. These schools addressed a wide spectrum of topics, including the 6G vision and requirements, O-RAN architectures, machine learning for communications, network automation, and emerging applications such as connected and autonomous vehicles.

- **School 1:** Focused on 5G and 6G architectures, enabling technologies, vertical applications, KPIs, and standards
- **School 2:** Covered validation of 6G networks using key analytical, prediction, simulation, and experimental tools

- **2025 Spring School of the University of Iasi**

The program provides students with the opportunity to apply theoretical concepts learned at the faculty, while simultaneously developing technical abilities, teamwork skills, and enhancing their communication proficiency in a professional working environment.

The ADROIT-6G project has been presented by partner ORANGE (ORO) during two different Workshops, titled: "Future Cellular Networks Approach workshop" & "System design, with applications in the field of telecommunications". The WS included demos based on actual ORO TB development, focusing on architecture and AI/ML practical demonstration in ORO Testbed. Introductory course on the principles, case studies, and basic methods of system design, with applications in the field of telecommunications and Future Cellular Networks Approach – 6G Telco Transformation Path through AI/ML, Automation and Novel Use Cases. Participants engaged in interesting discussions exploring various aspects of the workshops and developments presented.

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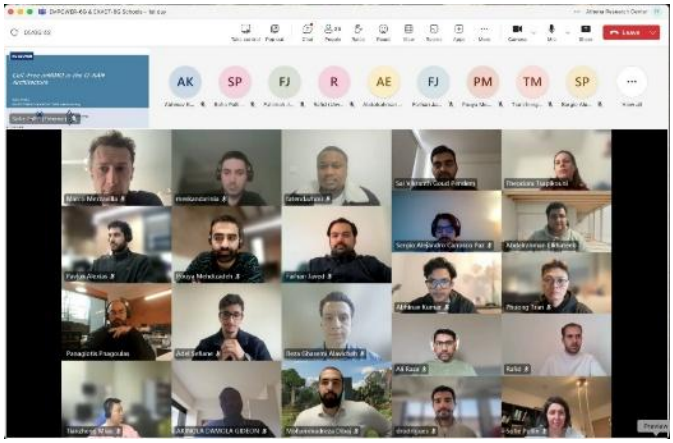

Figure 8. Capture from the Online EMPOWER-6G & EXACT-6G Schools.

Figure 9. ORO delivering ADROIT6G presentation at 2025 Spring School of the University of Iasi.

3.4 Industrials Exhibitions & Showcases

The ADROIT6G project has actively showcased its innovative technologies and research at various industrial exhibitions, trade fairs, and showcases, significantly enhancing its industry presence and impact. These events have provided a platform to demonstrate the project's advancements in 6G technology, leading to increased industry engagement, new collaborations, and heightened interest from potential partners and stakeholders. For instance, participation in reoccuring Events like EuCNC & 6G Summit, Mobile World Congress (MWC), IoT Solutions World Congress and Infocom has allowed the project to present its cutting-edge solutions, resulting in valuable feedback and fostering deeper industry relationships throughout the years. These engagements have not only raised awareness about ADROIT6G but also facilitated the exchange of ideas and best practices, contributing to the broader discourse on the future of 6G networks. Overall, ADROIT6G participated in **twenty (20) Industrial Exhibition**s, and provided overall **eleven (11) live demonstrations**, as listed in Table 11,. Additional information can be accessed through the “Read more” function.

3.4.1 Participation in Exhibitions

Table 11. List of ADROIT6G attendance at Industrial Exhibitions, Trade Fairs and Showcases, with indications of Demos in bold (M19-42).

No	Event Name	Dissemination material	Partner(s)	Date	Additional Info
1	Infocom World 2024	Leaflets/ Rollup/ **Demo**	ISI/ATH	12/11/2024	Read more

2	Integrated Systems Europe (ISE) 2025	Rollup/ Leaflets	ISI/ATH IQU	04-07/02/2025	Read more
3	Mobile World Congress (MWC Barcelona) 2025	Rollup/ **Demo**	ISI/ATH IQU, NXW	03-06/03/2025	Read more
4	EuCNC & 6G Summit on Future Telecommunications 2025	Rollup/ **Demo**/ Presentation	ISI/ATH IQU, eBOS, NXW	03-06/06/2025	Read more
5	HELEXPO/TIF 2025	Rollup/ Leaflets/ **Demo**	ISI/ATH IQU	06-14/09/2025	Read more
6	NFV-SDN 2025	**Demo**	CNIT	10-12/11/2025	Read more
7	ETSI SNS4SN	Leaflet/ **Demos**	IQU ISI/ATH	02-04/02/2026	Read more
8	Integrated Systems Europe (ISE) 2026	Rollup/ Leaflets	ISI/ATH IQU	03-06/02/2026	Read more
9	Mobile World Congress (MWC Barcelona) 2026	Rollup/ **Demo**	ISI/ATH IQU	02-05/03/2026	Read more
10	IEEE INFOCOM Workshop on Intelligent Cloud Computing and Networking	Presentation	CNIT	19/05/2026	Read more
11	EuCNC & 6G Summit 2026	Rollup/ Leaflets/ Joint Workshop/ **Demos**	ISI/ATH ORO, CYENS eBOS, NXW	01-05/06/2026	Read more

A briefing for each Exhibition ADROIT6G participated between M18-42 is provided below:

- **InfoCom World 2024, & 2025**

ADROIT6G participated in InfoCom World 2024 in Athens, where ISI/ATH showcased an advanced Virtual Reality (VR) demonstration over 6G networks (Figure 10). The demo highlighted the seamless integration of immersive VR applications with next-generation connectivity, demonstrating the potential of 6G to support ultra-low latency, high-bandwidth, and reliable communication required for real-time interactive experiences. This use case illustrated how 6G technologies can enable innovative applications across sectors, reinforcing the project's vision of AI-driven, high-performance network infrastructures. The project also participated in InfoCom 2025 in London, UK with an oral presentation on "Traffic-Aware DNN Interface Task Offloading in the Mobile Device-Edge Computing", delivered by CINT.

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Figure 10. ADROIT6G demo at InfoCom 2024 (left), 2025 (right).

- **Integrated Systems Europe (ISE) 2025 & 2026**

ADROIT6G participated in Integrated Systems Europe (ISE) 2025, held from 4–7 February at Fira de Barcelona, where it showcased its latest advancements in 6G technologies and AI-driven network automation. As one of the leading global events for the audiovisual and systems integration industry, ISE 2025 provided a key platform for presenting innovative solutions in next-generation connectivity. ADROIT6G highlighted its work on intelligent, cloud-native, and programmable network architectures, demonstrating how distributed AI and zero-touch automation can support future communication systems and emerging applications across the edge–cloud continuum.

Figure 11. ADROIT6G participation at ISE 2025 & 2026.

The project also participated in ISE 2026, engaging with industry leaders, researchers, and innovators at one of the world's leading events for audiovisual technologies and systems integration. The project contributed to discussions on how emerging 6G network technologies can reshape connected environments, particularly in the context of immersive media and intelligent infrastructures. Through its presence, ADROIT6G highlighted the role of ultra-reliable, low-latency, and AI-driven connectivity in enabling advanced digital experiences, while fostering collaboration and knowledge exchange across the broader innovation ecosystem.

- **Mobile World Congress (MWC Barcelona) 2025**

ADROIT6G has participated in Mobile World Congress (MWC) 2025, the world's premier event for mobile and wireless innovation, on March 3-6, 2025, at Fira Gran Via, Barcelona, where we showcased our latest advancements in 6G technology, AI-driven security, and next-generation connectivity through Demos at IQU Booth (Figure 12).

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Figure 12. Captures at ADROIT6G Booth during MWC 2025.

- **EuCNC & 6G Summit on Future Telecommunications 2025**

ADROIT6G actively participated in the EuCNC & 6G Summit 2025, held from 3–6 June in Poznań, Poland, one of Europe's leading events for future telecommunications. The summit brought together key stakeholders from academia, industry, and policy to present and discuss the latest advancements in 5G evolution and 6G technologies. During the event, ADROIT6G showcased its innovative contributions to next-generation network architectures through booth demonstrations and presentations, highlighting its work on distributed AI-driven, cloud-native, and zero-touch networking solutions. The project also presented its Proof-of-Concept developments, demonstrating how its architecture enables advanced network optimisation and supports emerging 6G use cases, while fostering collaboration within the broader Smart Networks and Services (SNS) ecosystem (Figure 13).

Figure 13. Captures during ADROIT6G participation at EuCNC & 6G Summit 2025

- **HELEXPO/TIF 2025**

ADROIT6G participated in HELEXPO 2025, where it showcased its innovative vision for next-generation 6G networks and distributed AI-driven architectures. At its exhibition booth, the project presented key concepts related to federated and distributed intelligence, focusing on how AI/ML-enabled approaches can support zero-touch management and orchestration across terrestrial and non-terrestrial network environments. The demonstration highlighted solutions for secure, scalable, and adaptive network operations, addressing challenges such as data privacy, dynamic service requirements, and cross-domain coordination. Through its presence at HELEXPO 2025, ADROIT6G contributed to demonstrating how advanced 6G technologies can enable intelligent, autonomous, and highly efficient future communication infrastructures.

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Figure 14. Captures during ADROIT6G participation and live demos at HELEXPO/TIF 2025.

- **ETSI Software and Standards for Smart Networks and Services (SNS4SNS)**

ADROIT6G participated in the ETSI SNS4SNS event, contributing to discussions and demonstrations focused on open-source software ecosystems and next-generation network innovation. The event brought together research initiatives, industry stakeholders, and standardisation bodies to showcase advancements in cloud-edge continuum technologies, AI-driven networking, and 6G system development. Within this context, ADROIT6G presented two demos: "*Towards Railway Automation: SLA-Aware Zero-Touch Federated Intelligence over NTN"* and *"AI-Native Autoscaling and Zero-Touch Orchestration for Future Edge Networks,"* by Swastika Roy and Dimitris Selis, respectively.

Figure 15. ADROIT6G Participation & Demos at ETSI SNS4SNS.

- **Mobile World Congress (MWC Barcelona) 2026**

ADROIT6G participated in MWC 2026 in Barcelona, where the project showcased its latest demonstration, "Zero-Touch Federated Intelligence over NTN towards Railway Automation." Presented at one of the leading global events for connectivity, the demo illustrated how federated intelligence can operate effectively over Non-Terrestrial Networks (NTN) to enable advanced railway automation. The demonstration highlighted the potential of AI-driven, zero-touch network management in supporting reliable, intelligent, and highly connected transport systems, reinforcing ADROIT6G's contribution to next-generation mobility solutions.

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Figure 16. ADROIT6G representatives at Booth during MWC Barcelona 2026

- **EuCNC & 6G Summit 2026**

ADROIT6G participated in the EuCNC & 6G Summit 2026, held in Málaga, Spain, under the theme "6G Connecting Intelligence." The event provided a key venue for presenting and discussing advances in intelligent, AI-native, and cloud-edge integrated 6G systems, bringing together leading stakeholders from across Europe and beyond. Within this context, ADROIT6G contributed with two live Demos, one on Holographic Teaching and one on its ETSI ZSM PoC, as well as with a jointed session with other SNSJU projects, as detailed in the Workshops section of the deliverable.

Figure 17. ADROIT6G participation in EuCNC & 6G Summit 2026.

3.4.2 Technical Demonstrations/ Showcases

ADROIT6G is totalling **fifteen** (**15) demonstrations**, at Industrial Exhibitions, as indicated in Table 11. Additionally, it has also produced **three (3) technical demonstration videos** during live events, serving as complementary and supportive material to the Online Training Tutorials. The objective of these demonstrations is to provide accessible, engaging, and practical insights into the project's Proofs of Concept (PoCs), enabling all interested stakeholders to better understand the implemented innovations. By making these demonstrations available online, ADROIT6G ensures that its results are not only showcased during physical exhibitions but are also accessible in the virtual domain, significantly extending their potential reach and impact.

The first video presents **the AI/ML framework and its associated closed-loop mechanisms for automated service operation**, illustrating how intelligent orchestration and real-time decision-making can enhance network efficiency and adaptability.

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The second and third videos, recorded during the "Innovation to Impact: Deep Tech in Action" Final Event in Athens, focus on two additional PoCs. Specifically, the second video demonstrates S**atellite-enabled Interlocking**, highlighting the integration of satellite communication technologies within advanced network architectures.

The third video showcases the **Holographic Teaching**, emphasizing immersive communication capabilities and their potential applications in next-generation educational and collaborative environments.

Together, these demonstration videos provide a more tangible and application-oriented perspective of the project's innovations, complementing the theoretical and instructional content of the training tutorials. By combining visual demonstrations with explanatory context, they contribute to a more comprehensive dissemination approach, fostering greater understanding, engagement, and uptake among both technical and non-technical audiences.

Figure 18. Technical demonstration videos uploaded on project's YouTube Channel.

4 Communication Activities Performed (M19-42)

Communication efforts regarding ADROIT6G project, and its outcomes involve utilizing available channels and tools by the project's partners to engage various audiences are presented in this chapter. Specifically, this section outlines the actions performed as communication activities to ensure effectiveness and alignment with the project's objectives and scope. Key components include the development and distribution of high-quality promotional materials such as roll-up banners, flyers, and brochures, created by D&C Manager (eBOS). Additionally, the project leverages digital platforms, including a YouTube channel and active LinkedIn accounts, to share updates, insights, and breakthroughs in 6G technology. Regular newsletters and press releases, along with participation in public talks and open days, further ensure that the project's advancements and contributions are widely disseminated and accessible to a broad audience. ADROIT6G Communication KPIs and target values fully achieved by M42, as captured in Chapter 2.2.4.

4.1 Project Website (Google Analytics & Impact)

The ADROIT6G website[4] has served as a central communication and dissemination hub, supporting the visibility and accessibility of project results throughout its lifecycle. Website-related KPIs were defined to monitor performance in terms of reach, user engagement, and content delivery effectiveness. These indicators included metrics such as number of visits and impressions, unique users, geographic distribution of visitors, page views, session duration, and content downloads. The continuous monitoring of these KPIs enabled the D&C Manager as well as the whole consortium to assess audience interest, optimise content strategy, and ensure that key project outputs were effectively communicated to a wide range of stakeholders.

The associated KPI set a target of more than 4,000 unique visitors by M36. Throughout the project lifecycle, which lasted 42 months, the website significantly exceeded its expected outreach performance, achieving a total of:

- 6.5K page views,
- 5.8K user engagements,
- 3.1K session starts,
- 1.5K unique first visitors, and
- 554 Downloads

totalling 18K interaction counts, as presented in Figure 19. These metrics reflect strong visibility and sustained engagement from stakeholders across academia, industry, and the broader 6G research community.

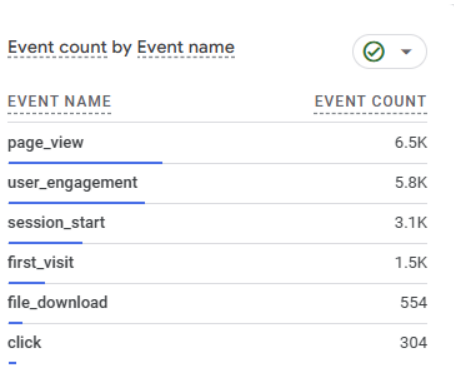

Figure 19. ADROIT6G website event counts M18-42

[4] www.adroit6g.eu

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In addition to reach and traffic metrics, the ADROIT6G website analytics provide valuable insights into user engagement quality and interaction depth. The average time spent per active user was 1 minute and 14 seconds, indicating a consistent level of content consumption across visitors. Furthermore, the platform recorded an average of 1.4 engaged sessions per user, demonstrating recurring interactions and return visits to project content (Figure 20). Peak engagement durations reached between 10 and 15 minutes, also reflecting sustained interest among a subset of users in specific technical outputs, dissemination materials, and/or project-related updates. Overall, these indicators confirm that the website not only achieved broad visibility but also supported meaningful user engagement throughout its operational period.

The observed website performance demonstrates the effectiveness of ADROIT6G's communication strategy in attracting and retaining user interest over time. The level of interaction indicates not only consistent traffic but also active user engagement with project content, including news updates, public deliverables, and dissemination materials. Overall, the website has played a key role in supporting the project's dissemination objectives and in enhancing the accessibility and impact of its results beyond the consortium.

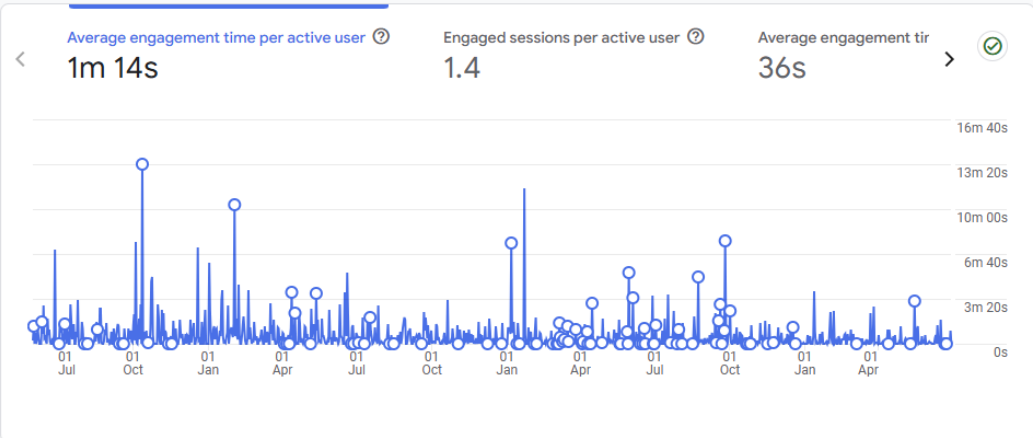

Figure 20. Average engagement time per active user.

4.2 Media Channels

4.2.1 LinkedIn

The ADROIT6G LinkedIn account[5] served and will continue to serve (additional 2 years after completion) as the project's professional hub, providing updates on advancements in 6G technology, research outcomes, and collaborative efforts. Posts were regularly being shared with the audience, ranging between 5 to 10, monthly. As of June 2026, the ADROIT6G LinkedIn account has reached 1123 followers, with 188 new followers gained between M18-42. Since LinkedIn allows only annual data exports, the ADROIT6G LinkedIn analytics are available for the last calendar year of the project which falls into M30-42. Even though the analytics represent the last two months of the projects, are exceeding project's targets and ambitions. As shown in Figure 21, for the past year, ADROIT6G LinkedIn page counted 26809 Impressions, and 854 post reactions, which is an impressive number of stakeholders' engagement with the project. Given the 957 reactions on posts reported in M1-18, it is seen that the project visibility maintained a steady interaction with its audience, as well as provided meaningful content that kept the interest.

[5] LinkedIn: ADROIT6G: Overview | LinkedIn

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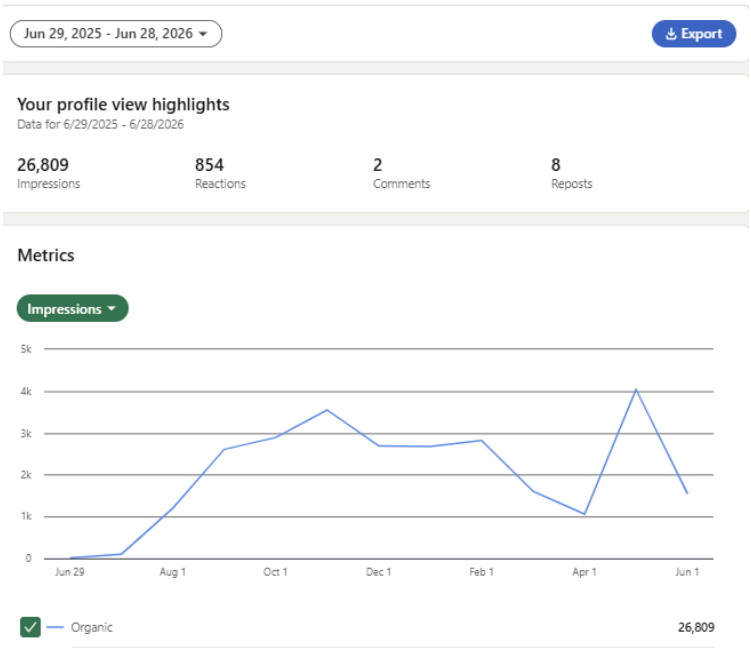

Figure 21. ADROIT6G LinkedIn Content metrics: Impressions, Reactions, Comments, Reposts (M30-42)

4.2.2 YouTube Channel

The ADROIT6G YouTube channel[6] served as platform to share interactive content on project's advancements and cutting-edge research in 6G technology. Specifically, through YouTube ADROIT6G shared a range of content including promotional videos, online training tutorials, project presentations in webinars, and technical demonstrations, tailored to the needs and interests of several audience groups. As per D&C strategy, videos were expected to be release during the 3rd Phase when results became available. Figure 22, shows the YouTube Channel Dashboard details, however extended description on the videos released by M42 is provided in Chapter 4.6, detailing multimedia KPIs related to interviews and project videos.

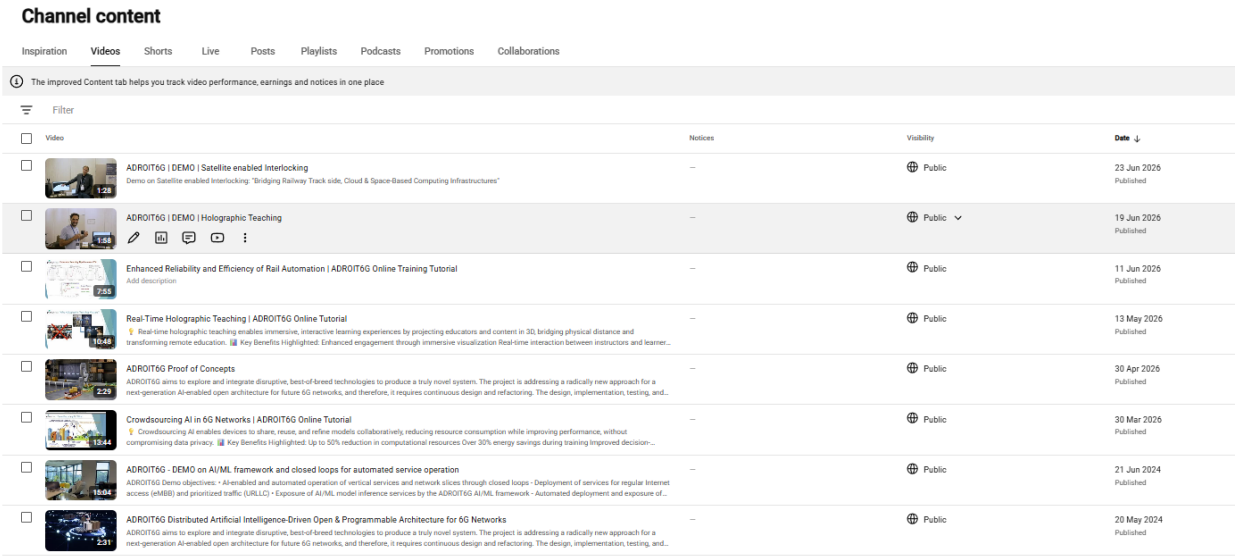

Figure 22. ADROIT6G YouTube Dashboard.

[6] YouTube: ADROIT6G - YouTube

YouTube analytics indicate steady engagement in video views and audience reach, reflecting on-going interest in the project's technical demonstrations, promotional materials, and other project-related recordings. Engagement metrics, including impressions (3.8K), watch time (2.38h) and viewer retention channels (46% external; 20.5% direct; 14.6% Channel pages; 7.5% from browser; and 4.4% from YouTube search), demonstrate that the content was not only accessed but also actively consumed by several audiences (Figure 23). Overall, the YouTube channel contributed effectively to strengthening the project's communication impact and complemented other dissemination channels by providing accessible and engaging multimedia content.

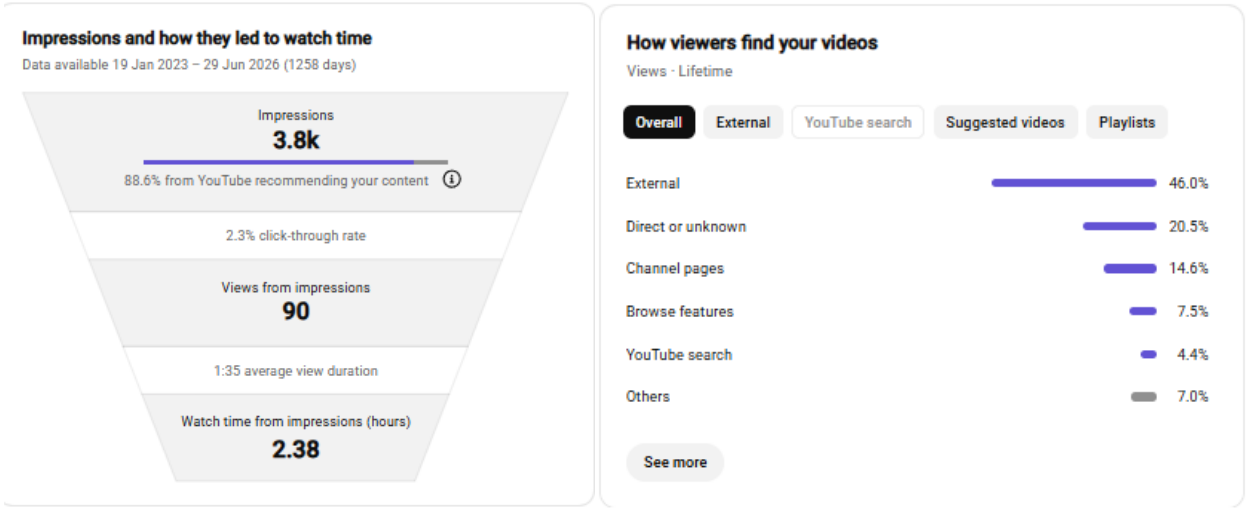

Figure 23. YouTube analytics on impressions, watch time and viewers sources.

The rest of the published videos reach high numbers of engagement,>9k), however the tutorial videos have accumulated close to 100 views across all four YouTube uploads. Although current figures remain modest, a wider impact is anticipated, as the tutorials were only recently released, and further dissemination activities are expected to increase their visibility and uptake, even after the project's closure, which is also part of ADROIT6G sustainability strategy.

4.3 Promotional material

ADROIT6G has created a suite of high-quality promotional materials to effectively communicate the vision and progress of the ADROIT6G project. This includes:

- **4 Roll-up banner designs**, which are prominently displayed at conferences and events to attract and inform attendees about the project's objectives and innovations in 6G technology
- **3 Leaflets**, which provide a concise yet comprehensive overview of the project's key features, technological advancements, and benefits. These leaflets were distributed at events and meetings, serving as quick reference guides for interested stakeholders.
- **2 flyers for dedicated events**: a) ADROIT6G PhD Training Event; b) ETSI ZSM PoC. These flyers were prepared to support the communication of the Events & Demos prior to their execution, as a way to attract more participants and engaged audience.
- **3 Non-Technical Factsheets**, which consisted of PoC Leader Interviews describing in a more direct and simplified way the PoCs.

These promotional materials developed by eBOS, were instrumental in providing stakeholders with a thorough understanding of the project, fostering greater engagement and support. All the promotional material is open-access and can be reached through the project website.

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4.4 Newsletters

The ADROIT6G eNewsletters constituted a key communication tool for providing periodic updates on project progress, achievements, and performed activities. Published regularly through our partner, NOVA, and made publicly available via the project website, as shown in Figure 24, the newsletters served as a structured channel to disseminate technical advancements, dissemination highlights, and collaboration outcomes to a broad audience. Editions were released bi-annually, each summarising key research developments, participation in events, and contributions to the wider 6G ecosystem. ADROIT6G released **seven (7) newsletters**, and are the following:

- June & December 2023,
- June & December 2024,
- June & December 2025,
- June 2026.

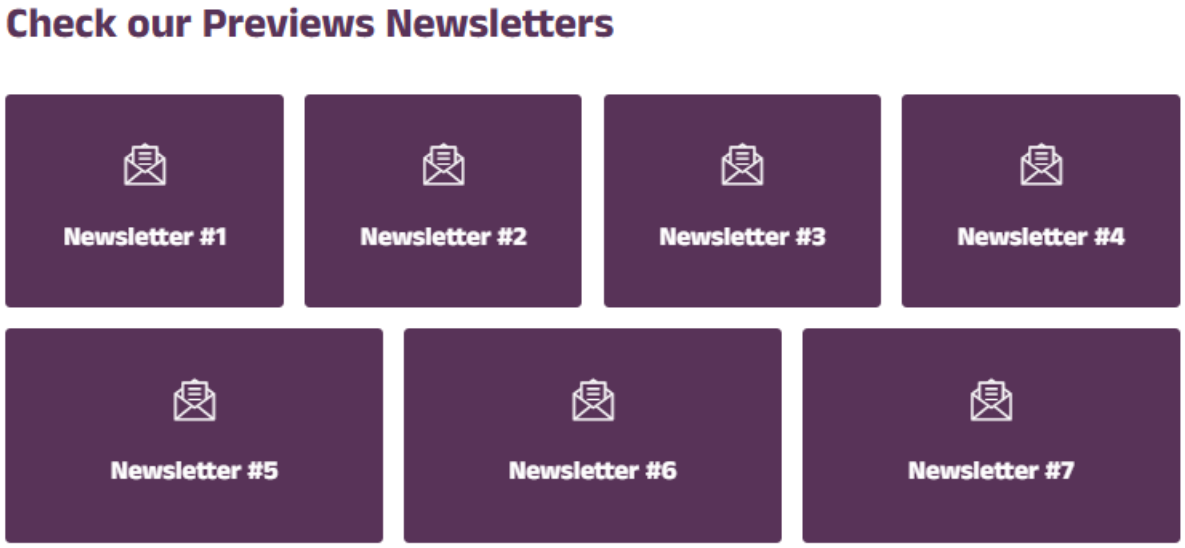

Figure 24. Newsletters as shown on ADROIT6G website tab.

In addition to its own dedicated eNewsletter series, ADROIT6G achieved extended visibility through regular inclusion in external communication channels of the broader 6G ecosystem. In particular, **the project was featured in four of the Smart Networks and Services Joint Undertaking (SNS JU) Newsflashes[7] as well as in their Annual Journals for the years 2023, 2024, and 2025**. The inclusion of ADROIT6G in **seven SNSJU communication activities** provided access to a wider audience beyond the project's immediate network, including policy makers, industry stakeholders, and the wider research community. ADROIT6G Consortium appreciates the support of SNSJU and its efforts towards enhancing projects' visibility through a structured and well-managed communicated strategy. In addition to the above, ADROIT6G was featured in CYENS Newsletter[8] in March 2024, marking one additional communication channel.

[7] SNS Newsflash & Newsletters - SNS JU

[8] Some of the amazing work happening around the center

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4.5 Press releases

Press releases constituted another supportive channel for ADROIT6G dissemination of achievements. This communication channel enabled visibility beyond the immediate research community, extending to the general public. The project leveraged **five (5)** online publishing platforms and **four (4)** partner communication channels, totally **eight (9) channels** to promote key milestones, such as the project launch and plenary meetings, participation in joint activities with other SNSJU projects, and partner-driven innovations. In deliverable D6.2, there were 6 press releases reported, while 2 were missed to be reported before M19. Another 1 press release was published during the last phase of the project, **achieving nine (9) Press Releases in total** by M42 (Table 12). Screenshots from the latest press-releases are provided in Figure 25.

Figure 25. Latest Press Release

Table 12. List of Press Releases (M19 -42).

Title	Magazine/ Website	Language	Contributing Partner	Link	Date
To Innovation to Impact ανέδειξε τη μετάβαση του deep tech από την έρευνα στην πράξη!	biznow	GR	ISI/ATH	Download	June-2026

The press release activity also reflected the strong involvement of consortium partners in amplifying project visibility through their own networks and communication channels. Contributions from consortium partners such as NOVA, CYENS, ISI/ATH, ORO and eBOS, highlighted the project's alignment with European 6G research priorities and its role within the wider SNS ecosystem. By disseminating project progress, technological developments, and organisational achievements, press releases contributed to strengthening ADROIT6G's external positioning and supported its overall dissemination and impact maximisation strategy.

4.6 Multimedia

Multimedia content constituted a key component of the ADROIT6G communication strategy, enabling the project to convey complex technical concepts in an accessible and engaging manner. In particular, the production of videos, including promotional ones, technical demonstrations, tutorials and interviews, supported the visibility of project objectives, use cases, and results across a wide range of stakeholder groups.

These multimedia contents were disseminated through project's channels such as the project website, YouTube, and LinkedIn accounts, complementing traditional dissemination activities. In addition, they were leveraged in

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partner communication activities, helping to reinforce key messages across multiple audiences. This approach significantly enhanced the project's outreach capacity, closely achieving the planned communication KPIs through the production and dissemination of **17 Multimedia contents: 3 promotional videos, 4 online training tutorials, 3 technical demonstrations, 2 television interviews, 2 HEXA-II presentation recordings, and 3 PoC interviews,** thereby enabling complex technical outcomes to be communicated in a clear, engaging, and reusable format that reached both specialised and non-specialised audiences over time. All this multimedia reached over 9K views on YouTube, with the highest contribution of views coming from the television interviews.

4.6.1 Promotional Videoclips

1. **Title: ADROIT6G Project Presentation**
   Description: The project showcased its innovative advancements in the 6G telecommunications sector during the "Introducing the SNS Projects" webinar, which was part of the "6G SNS Lunch Time Webinars" series Figure 26a. This presentation is available on YouTube with over 100 views, and highlights significant progress in network reliability, latency reduction, and spectrum efficiency. The increased visibility from the webinar significantly enhances Adroit6G's reputation, attracting potential collaborators within the 6G SNS cluster. This not only amplifies the project's influence but also expands its reach, fostering greater interest and support from key stakeholders within the sector.
   Release Date: February 2023

2. **Title: ADROIT6G Distributed Artificial Intelligence-Driven Open & Programmable Architecture for 6G Networks**
   Description: A high-level video created to outline the key technologies at the core of the ADROIT6G project Figure 26b. The video serves as an essential resource, providing a visual and comprehensive overview of our advancements in Distributed Artificial Intelligence, Open & Programmable Architecture, and user-centric 6G solutions. It also highlights the innovative approaches and significant research contributions that are driving the future of telecommunications.
   Release Date: May 2024

Figure 26. a) Project Presentation – Video Recording; b) Promo Video 1; c) Right: Promo Video 2

3. **Title**: **ADROIT6G Proof of Concepts**
   Description: A detailed video created to outline ADROIT6G Proof-of-Concepts Figure 26c. The video serves as an essential resource, providing a visual and comprehensive overview of what 6G can really enable, bringing future 6G capabilities closer to reality. From immersive Extended Reality (XR) experiences to Industrial IoT and collaborative robotics, ADROIT6G PoCs are demonstrated as simplified concepts through the video, explaining how next-generation networks will transform industries and society.

Release Date: May 2026

Also, it is worth mentioning that during EuCNC & 6G Summit 2026, ADROIT6G PoC1 was recorded by SNSJU Comms. Specifically, our project partner, Dr. Fotos Frangoudes, was filmed while providing a live demonstration on PoC1 – Holographic Teaching at the Booth. The video is currently under production, and planned to be released the upcoming months, counting the 4th promotional video of the project.

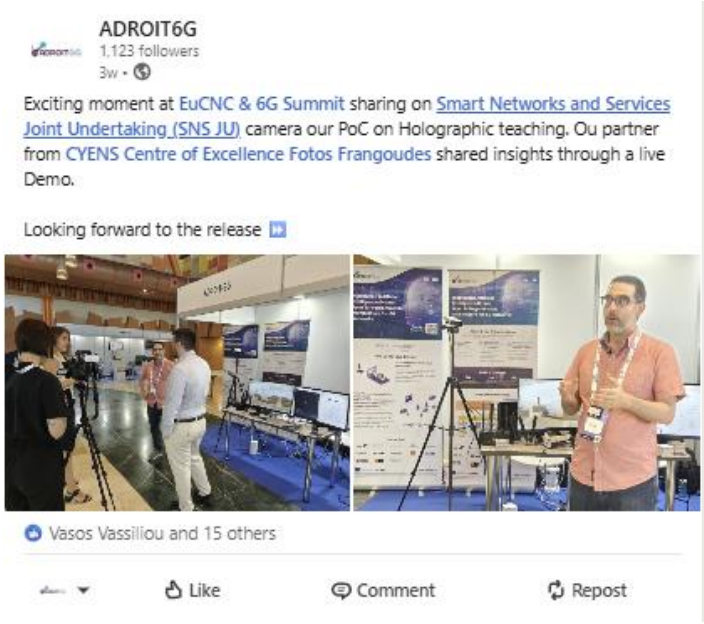

Figure 27. Dr. Fotos Frangoudes (CYENS) delivering a PoC Live Demo to SNSJU for a video production.

4.6.2 Other videos & recordings

ADROIT6G has developed and disseminated a set of videos beyond the promotional ones as part of its communication and capacity-building activities, aiming to support knowledge transfer and facilitate the understanding of the project's key technological concepts. These include a) 4 Online Training Tutorials as presented in Chapter 3.3.2 , b) 3 Technical Demonstrations as presented in Chapter 3.4.2., and c) 2 HEXA-X-II WS Presentation recordings. Screenshots of several ADROIT6G related videos and recordings are visible in Figure 26.

In brief, these multimedia content provides accessible and structured guidance on selected technical components, targeting both research and industrial audiences interested in next-generation communication systems, AI-driven network management, and distributed intelligence frameworks. For instance, the tutorials have been designed using simplified but still technical language, in order to be approachable to a broader audience beyond 5G/6G experts. They included mainly illustrations, graphical abstracts and real-life examples. A storyboard-style break down of one of the tutorials (Holographic Teaching) is depicted in Figure 28, in order to show how complex concepts were turned into clear, intuitive steps, making the content more approachable for a broader audience, including non-specialists. With the same approach all four Online Training Tutorials were developed.

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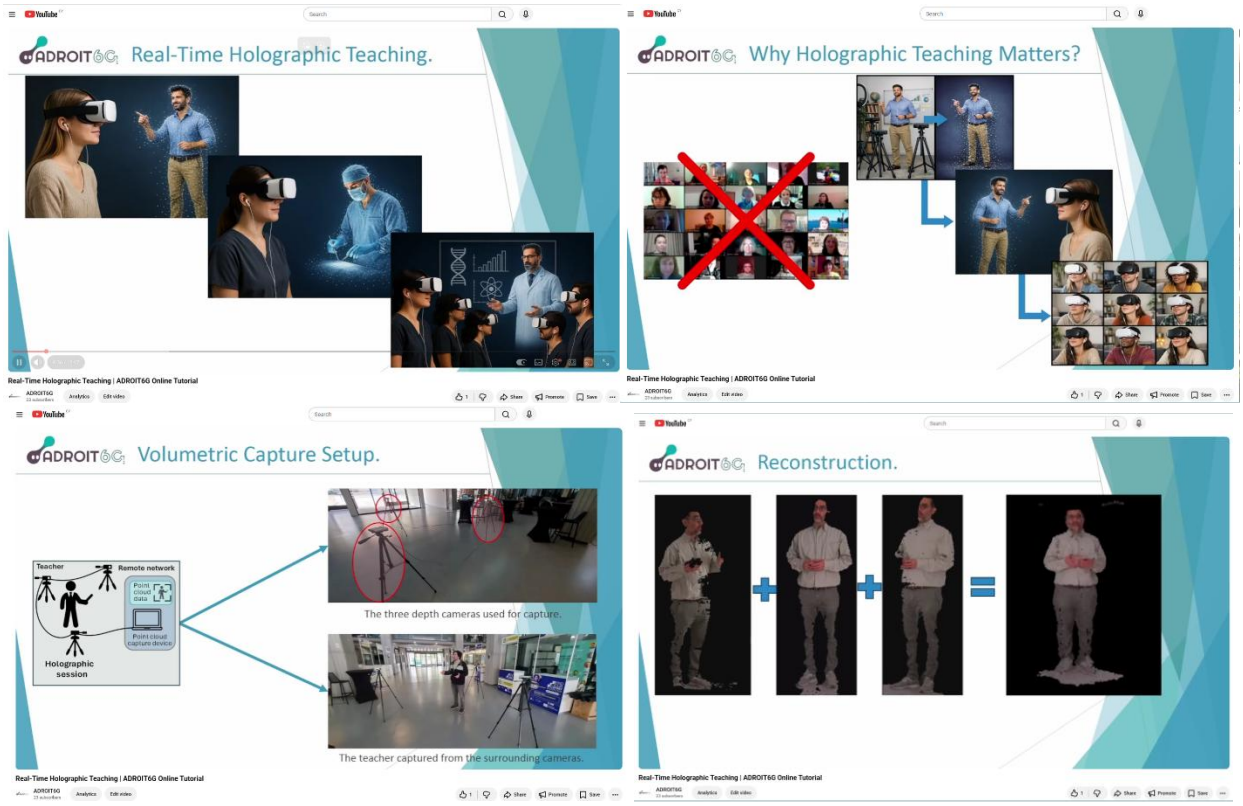

Figure 28. Storyboard-style break down of one of the tutorials on Holographic Teaching depicting the simplified approach during the development of the Online Training Tutorials.

4.6.3 Interviews

The interviews developed within the ADROIT6G project provided an effective means to present project results, technical progress, and innovation outcomes in a clear and accessible format to a broad audience. By engaging researchers, industry partners, and project stakeholders in structured discussions, the interviews helped bridge the gap between complex 6G-related developments and broader audiences, while also showcasing the value and impact of the project's Proofs of Concept (PoCs). The interviews listed below were in both video & online designed formats; and are fully accessible through the ADROIT6G website.

1. ADROIT6G Interview: PoC1 AI-driven Management & Orchestration Framework (ISI/ATHENA & NXW, June 2026)
2. ADROIT6G Interview: PoC2b NTN & Rail Automation (NOVA & ORO, June 2026)
3. ADROIT6G Interview: PoC3 Collaborative Construction Robotics (CAFA)

The last three interviews were developed as written interview articles, providing a more structured and in-depth presentation of each PoC. For these, eBOS prepared dedicated two-page layouts, combining concise explanatory text with carefully designed visuals to ensure clarity and readability (Annex I). In addition, tailored cover images were created to support dissemination across social media channels, enhancing visual appeal and engagement with wider audiences. This approach allowed the project to repurpose technical content into communication-friendly formats, facilitating broader outreach beyond traditional academic or technical communities.

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Figure 29. Cover images as thumbnails for the Interviews communication through ADROIT6G channels.

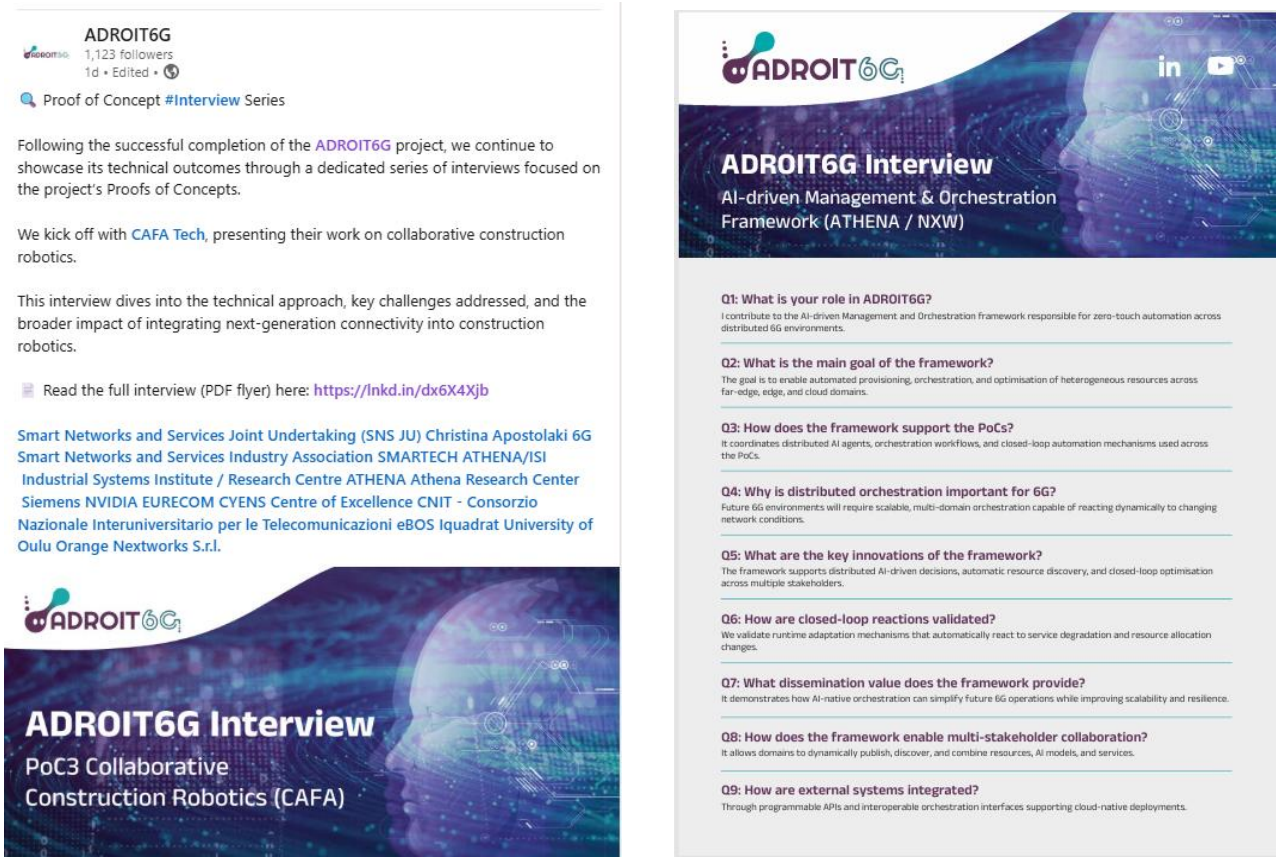

Figure 30. LinkedIn post of PoC Interview Series (left); Format of released interviews in website – example (right).

4.7 General Public Talks

The ADROIT6G project actively engaged with the public through **sixteen (16) activities**, while eleven (11) of those were performed between M19-42. Those activities included public talks at University Events & Open Days, and at events organised by partners, as detailed in Table 13. These public talks, delivered by project partners, aim to share insights on 6G advancements, foster dialogue, and inspire innovation within the broader community. Similarly, ADROIT6G's participation in Open Days and Events Organised by Partners, provided an interactive platform to showcase its research, demonstrate technological breakthroughs, and engage directly with diverse audiences. These efforts highlight project's commitment transparency, education, and community involvement in advancing 6G technology.

Table 13. ADROIT6G public talks and participation in Open Days.

No	Partner	Event name	Type	Date	Type	Participants Approx. number	Link
1	ORO	National Entrepreneurship and Innovation Network Conference 2024	Events Organised by partners	Sep-24	Public talk/ presentation	100	Download
2	ORO	DefCamp 2024	Events Organised by partners	Nov-24	Public Talk/ poster	400	Download
3	ISI/ATH	6G: From Theory to Practice	Open Days	Mar-25	Public Talk/ Presentation	60	Download
4	ISI/ATH	BEYOND Expo 2025	Open Days	Apr-25	Public talk/ Panel	200	Download
5	ISI/ATH	High School Visit – 6G & AI Technologies	Open Days	Apr-25	Public Talk/ Presentation	100	Download
6	ORO	Cloud Native Days (CNDs) 2025	Events Organised by partners	May-25	Public talk/ presentation	60	Download
7	ISI/ATH	Tutorial on "AI-Native 6G Networks" Computer Science Department of Saint-Luis University, Madrid	Events at Universities	Mar-26	Public talk/ presentation	100	Download
8	OULU	University of Oulu Science Day	Open Days	Apr-26	Public talk/ poster	150	Download
9	ISI/ATH	High School of Aigio Visit	Events at Universities	Mar-26	Public talk/ presentation	60	Download
10	ISI/ATH	Corinth Middle School visit	Events at Universities	Mar-26	Public talk/ presentation	50	Download
11	ALL	Innovation to Impact: Deep Tech in Action	Events Organised by partners	Jun-26	Public talk/Present ation	150	Download

A brief explanation of each public engagement activity is listed below:

- **National Entrepreneurship and Innovation Network Conference (CRAI) 2024**

ORO participated in CRAI conference with a talk/presentation by Cristian Patachia, Development and Innovation Manager. The event held on 23-24 September 2024, in Palas Iași for the 6th edition of the Conference of the Entrepreneurship and Innovation Network (CRAI), organized by the "Gheorghe Asachi" Technical University of Iași and the Association for Entrepreneurial Education, in partnership with the Romanian American Foundation, with the support of Orange Romania, the Romanian Commercial Bank and the City Hall of Iași.

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Figure 31. Left: CRAI 2024 Banner Photo, Right: Speaker snapshot

- **DefCamp 2024**

Orange Romania represented ADROIT6G at the DefCamp conference in Bucharest. At the event, ADROIT6G was both showcased at a booth and also having a talk, highlighting ADROIT6G's high-level architecture, platform features, and use cases. Discussions with the public also covered the project's implications for future cybersecurity strategies and its potential to address emerging threats. This event was pivotal in raising awareness and understanding of ADROIT6G's potential impact on the cybersecurity landscape.

Figure 32. ORO participation with a public talk/poster at DefCamp 2024.

- **6G: From Theory to Practice**

This public event, co-organised with the University of Patras, supported the dissemination and outreach objectives of the ADROIT-6G project by introducing students and researchers to key concepts and practical dimensions of 6G technologies. The session combined presentations and live demonstrations, highlighting ADROIT-6G's focus on network intelligence and immersive applications as key enablers of next-generation communication systems.

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Figure 33. Open Day & Public Event at the University of Patras.

- **BEYOND EXPO 2025 – AI &6G Panel**

The ADROIT6G project contributed to the co-organisation of a panel at BEYOND Expo 2025 focusing on the role of artificial intelligence in next-generation networks. The event provided a valuable platform for engagement with industry stakeholders and the wider public, supporting the dissemination of the project's vision, objectives, and ongoing activities. The panel featured distinguished speakers, including Prof. Christos Verikoukis (Project Coordinator), Vasileios Theodorou, Georgios Gardikis, and Dimitris Katsianis, who shared insights on the transformative role of AI and machine learning in shaping future 6G systems (Figure 34).

Figure 34. Panel "Leveraging Artificial Intelligence & Machine Learning for Next Generation 6G Networks", BEYOND Expo 2025.

- **High School Visit at ISI/ATH – 6G & AI Technologies**

ISI/ATH welcomed students from a local high school (11th High School of Patras) at their premises in April 2025. ADROIT6G was introduced to the students through a talk and demonstrations on 5G, 6G, and artificial intelligence. This Open Day at University offered students an introduction to emerging technologies and their real-world applications, while highlighting ADROIT6G advancement in the field of 6G Technologies.

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Figure 35. Talk and tour delivered to high-school students visiting ISI/ATH premises.

- **Cloud Native Days (CNDs) 2025**

Cloud Native Days (CNDs) are global, community-organized events that gather adopters and technologists from open source and cloud native communities. This was the second time the event organised in Romania, and an exciting opportunity to ORO for bringing the community together. The aim was to provide a platform for professionals and experts from all levels and backgrounds to learn, network, and share their knowledge on all things cloud native. A total number of 1000 visitors from different industries & countries, private and public sector attended the event. Our project partner (ORO) has delivered a talk related to Telco cloud transformation with support of AI/ML, where ADROIT6G architecture and achievements have been presented, including demos in the dedicated booth.

Figure 36. Marius Iordanche public talk on ADROIT6G architecture at CNDs 2025.

- **Tutorial on "AI-Native 6G Networks" Computer Science Department of Saint-Luis University, Madrid**

Project Coordinator, prof. Christos Verikoukis, delivered a tutorial titled "AI-Native 6G Networks" at the Computer Science Department of Saint-Luis University, in Madrid, Spain. The presentation was presented to departmental students and academic staff and aimed to provide the wider aspect of AI-Native Networks. The presentation was also a joint effort between several SNSJU projects such as 6GINTENSE, FLECON-6G, 6G-BRICKS and others.

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Figure 37. Project Coordinator, Prof. Christos Verikoukis presenting to Saint-Luis University students.

- **University of Oulu Science Day**

UniOulu Science Day is University of Oulu's biggest interdisciplinary science event of the year open for the whole university community. It is organised by the Centres for Multidisciplinary Research, the profiling themes and the Thule Institute together with researchers from all over our university. The event is designed to facilitate knowledge sharing and networking among all researchers and students at the University of Oulu. ADROIT6G was represented by Mounssif Krouka with a public talk/poster, highlighting OULU's advancements in the project.

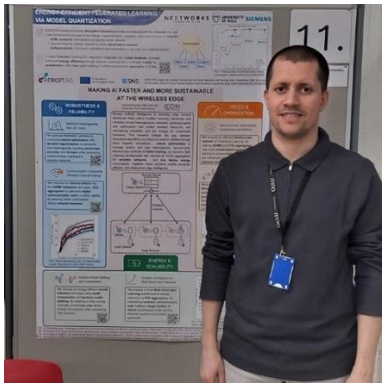

Figure 38. ADROIT6G presentation at University of Oulu Science Day by Mounssif Krouka (OULU).

- **Students visit at University of Patras**

As part of its outreach and engagement activities, ADROIT6G hosted two group of students from Corinth Middle School and the Vocational High School of Aigio ISI/ATH premises. The visit provided a valuable opportunity to engage with students specialising in Computer Science and to discuss emerging technological trends, including ADROIT6G, as well as their future career pathways. During the session, students were introduced to the team's research activities, experienced an interactive virtual reality (VR) application, and explored the role of next-generation networks and AI in enabling such innovations.

Figure 39. Lab visit of school students at SMARTECH Lab, getting familiar with ADROIT6G technologies (VR).

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- **Innovation to Impact: Deep Tech in Action – Final project event to general public**

ADROIT6G organised its final event as part of the "Innovation to Impact: Deep Tech in Action" initiative, where it showcased the project's key results and achievements. The event provided a platform to present the project's work on AI-driven, cloud-native, and zero-touch 6G network architectures, highlighting advancements in distributed intelligence, edge–cloud orchestration, and autonomous network management. By demonstrating its developed concepts and solutions in a collaborative environment involving stakeholders from research and industry, ADROIT6G illustrated the progress made towards enabling intelligent and programmable next-generation communication systems. The final event also served as an opportunity to disseminate outcomes and reinforce the project's contribution to Europe's evolving 6G ecosystem.

Figure 40. Impact to Innovation Communication material featuring ADROIT6G and two ADROIT6G demos are listed.

Figure 41. Captures during the Innovation to Impact Final Event in Athens.

5 Exploitation

5.1 Current Exploitation Status Overview

At the conclusion of ADROIT6G, the consortium has successfully transitioned from the conceptual exploitation planning stage to a mature exploitation portfolio supported by validated technologies, integrated Proof-of-Concepts (PoCs), scientific publications, open-source developments, industrial demonstrations, and intellectual property activities. The exploitation activities performed throughout the project have demonstrated that the developed technologies are not isolated research outputs but interoperable building blocks capable of supporting future 6G infrastructures and services.

The final integration and validation activities performed within Work Package 5 confirmed that the technological components developed across the project operate cohesively within complete end-to-end workflows. Rather than validating isolated functional modules, the project demonstrated integrated AI-driven orchestration, distributed intelligence, cloud-native deployment, programmable networking, and far-edge computing operating together in representative 6G scenarios. This considerably increases the exploitation readiness of the project outputs by reducing the technological risks associated with future adoption.

Furthermore, exploitation activities have benefited from close interaction with dissemination, communication, standardisation, and IPR management activities. The visibility obtained through scientific publications, conference participation, industrial exhibitions, SNS JU collaboration, and engagement with industrial stakeholders has increased awareness of ADROIT6G technologies and facilitated discussions regarding future collaborations beyond the project lifetime.

The current status of the Exploitation Task is best depicted through the latest version of the Key Exploitable Results Table:

Table 14. KER Table at Adroit6G Project Closure.

ADROIT6G KER - Phase 2 Description	By whom	Type	Licensing	Services	Time to market - Phase 2
Enhance flexibility and efficiency in network traffic management.	NVD	P	OS	Su, T, C, E	2-3 years
Scalable, secure & energy efficient inter-domain data sharing & distribution	NXW	P	OS	T, E	Freely available as community versions by M36, extended further until 4y after the end of the project
Full automation in AI/ML pipelines and tasks deployment and execution in virtualized edge/cloud infrastructures for training and inference tasks	NXW	S	OS	Su, T, E	1-2 years

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Develop energy-efficient AI orchestration frameworks	CYENS	P	OS	T, E	Freely available as community versions by M36, extended further until 4y after the end of the project
AI and Analytics Engine Orchestration	NXW	P	OS	Su, T, C, E	Freely available as community versions by M36, extended further until 4y after the end of the project
Open datasets for the training of AI models	CNIT, CYENS	*P*	*OS*	*T, E*	*Freely available as community versions by M36, extended further until 4y after the end of the project* *TO DO: Publish open datasets on GitHub or equivalent.*
Code will be made publicly available by the end of the project	CNIT	S	OS	Su, T, E	Code will be made publicly available by the end of the project
Store and search AI models using metadata.	CNIT, NXW	S	Commercial/ OS	Su, E	1-2 years
Multi Modal Generative Models capable of synthetic cross generation of missing / corrupted modalities.	EURE	P	Commercial/ OS	Su, E	Freely available by M36, extended for 4 years
Optimize resource allocation in AI-centric networks.	CYENS	*P*	*Commercial*	*Su, T, C, E*	*3-4years*
Optimize resource allocation across edge and RAN.	CNIT, OULU	S	Commercial/OS	Su, T, C, E	3-4years
Enhance task off-loading efficiency in distributed networks.	*CYENS*	*P*	*Commercial*	*Su, T, C, E*	*3–4 years*
Decentralize network infrastructure for efficient resource allocation.	*CYENS*	*S*	*Commercial*	*T, E*	*3–4 years*
Decentralized spectrum management, allowing autonomous, self-learning decentralized spectrum management, allowing autonomous, self-learning networks to optimize resource allocation dynamically	CYENS, EBOS	P	Commercial/ OS	T, E	3–4 years

5.1.1 Maturity of the Key Exploitable Results

Compared with the initial exploitation plan established during the first project year, the Key Exploitable Results have significantly evolved both technically and strategically.

Several KERs have progressed from conceptual research ideas to validated software frameworks integrated into the project PoCs. Others have evolved into reusable software components suitable for incorporation into commercial platforms, while several research-oriented KERs have matured into reusable scientific assets supporting future collaborative research.

The final KER portfolio demonstrates an effective balance between commercial innovation and open innovation. Commercially oriented KERs include programmable networking technologies, distributed orchestration frameworks, AI-driven management solutions, far-edge computing technologies, and autonomous network control mechanisms. At the same time, open innovation is supported through publicly available datasets, AI models, software repositories, federated learning algorithms, and AI pipeline management tools.

The exploitation strategy therefore no longer considers the KERs as independent outputs but as complementary technologies capable of forming complete software ecosystems for future AI-native 6G networks.

5.1.2 Commercial Readiness

Commercial exploitation has progressed considerably during the second half of the project.

Industrial partners have aligned the developed technologies with their internal product roadmaps and innovation programmes, identifying practical integration opportunities rather than treating ADROIT6G as a stand-alone research activity.

For Orange Romania, cloud-native orchestration technologies, Kubernetes-based deployments, GitOps methodologies, and the integration of operator platforms with cloud-native infrastructures represent realistic candidates for incorporation into future operator solutions. The collaboration with industrial technology partners demonstrates that ADROIT6G technologies address real industrial requirements instead of purely academic challenges.

NVIDIA has transformed the P4 programmable networking developments into reusable software components that can support future programmable network products and SDKs. By integrating ADROIT6G innovations within an already established development ecosystem, the project results can potentially reach a significantly larger industrial community than would otherwise be possible.

CYENS has developed one of the most comprehensive exploitation roadmaps within the consortium. The evolution of the UE-VBS concept into a complete BDIx-enabled orchestration platform illustrates how research outputs can progressively evolve into commercial software products. The planned combination of SDK licensing, professional services, long-term support, certification programmes, and industrial reference architectures establishes a realistic commercial pathway extending well beyond the project duration.

Other industrial and SME partners continue evaluating opportunities for integrating distributed AI orchestration, edge intelligence, synthetic data generation, and resource optimisation technologies into future commercial offerings.

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Overall, the consortium considers that the commercial exploitation activities have successfully moved from opportunity identification towards concrete product integration planning.

5.1.3 Open Source and Community Building

One of the distinguishing characteristics of ADROIT6G has been the balanced approach between proprietary innovation and open innovation.

Several software components developed during the project are scheduled for public release after project completion. These include AI orchestration components, federated learning algorithms, AI pipeline management frameworks, distributed AI software modules, and datasets supporting AI model training and validation.

The publication of these assets serves several complementary objectives.

First, open-source publication increases the scientific reproducibility of the project results, enabling independent researchers to validate and extend the developed methods.

Second, publicly available software encourages industrial experimentation by lowering adoption barriers for SMEs, start-ups, and research laboratories interested in AI-native 6G technologies.

Third, open-source communities provide an important mechanism for sustaining software evolution after the conclusion of the funded project. Instead of remaining static deliverables, software assets can continue evolving through external contributions, bug fixes, performance improvements, and new application scenarios.

Consequently, open-source exploitation should not be regarded as an alternative to commercial exploitation but rather as a complementary mechanism that increases technology visibility, accelerates adoption, and stimulates innovation ecosystems.

5.1.4 Scientific Sustainability

Scientific exploitation represents another major success of the project.

The consortium has generated an extensive body of scientific knowledge that will continue to produce impact after project completion. Publications, conference presentations, invited talks, doctoral research, master's theses, undergraduate projects, and educational activities have all contributed to embedding ADROIT6G innovations within the broader scientific community.

Several partners have already incorporated project concepts into university curricula, ensuring that future engineers and researchers become familiar with AI-native networking, distributed intelligence, edge computing, federated learning, programmable networking, and autonomous orchestration technologies.

Equally important, the project has created a network of scientific collaborations extending across Europe. These collaborations provide an excellent foundation for future Horizon Europe proposals, SNS JU projects, bilateral research initiatives, and international cooperation.

The scientific sustainability of ADROIT6G therefore extends well beyond its publications, encompassing the development of human capital, research infrastructures, and long-term collaborative networks.

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5.2 Phase 3 of Exploitation Strategy

5.2.1 Objectives

The third exploitation phase represents the transition from project execution to long-term sustainability.

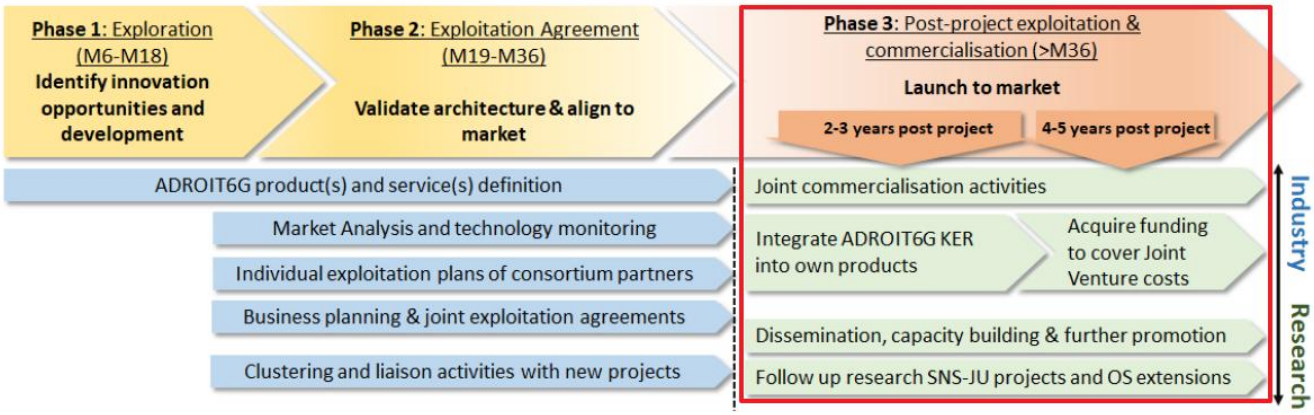

Figure 35. Left: ADROIT6G Exploitation plan and timeline

Whereas the first phase concentrated on identifying exploitable assets and the second phase focused on validating their technical feasibility, Phase 3 aims to maximise the long-term socio-economic and scientific impact of the project.

The principal objectives are:

- integrating mature technologies into industrial products and services;
- extending research outcomes through follow-up European and national projects;
- increasing adoption through open-source publication;
- strengthening intellectual property portfolios where appropriate;
- contributing to relevant standardisation activities;
- expanding industrial collaborations;
- supporting education, training, and knowledge transfer;
- ensuring the sustainability of the developed software ecosystems.

The success of this phase will ultimately be measured not by the number of deliverables produced but by the continued use, evolution, and adoption of ADROIT6G technologies after project completion.

5.2.2 Commercial Partners

Commercial partners will focus primarily on transforming validated project technologies into operational products and services.

Future activities include integrating AI-driven orchestration functions into existing cloud-native platforms, incorporating programmable networking technologies into commercial networking products, extending edge computing capabilities with distributed intelligence, and offering AI-native orchestration capabilities for industrial verticals including telecommunications, smart cities, healthcare, manufacturing, logistics, and defence.

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Several partners also foresee dual-licensing models that combine community editions with enterprise-grade commercial offerings, allowing broader technology adoption while maintaining sustainable business models.

Industrial collaborations initiated during ADROIT6G are expected to continue through bilateral agreements, innovation projects, customer pilots, and participation in future European initiatives.

5.2.3 Research Partners

Research organisations will ensure the long-term scientific evolution of ADROIT6G.

The technologies developed during the project will provide the scientific basis for future Horizon Europe proposals, SNS Joint Undertaking projects, Digital Europe initiatives, national funding programmes, doctoral research, and collaborative international projects.

Beyond research funding, partners will continue exploiting the generated knowledge through scientific publications, invited talks, educational activities, open-source software, publicly available datasets, and collaborative experimentation.

Several universities have already committed to incorporating ADROIT6G technologies into advanced graduate courses and laboratory activities, ensuring that the project contributes to educating the future workforce required by European 6G ecosystems.

Moreover, the validated PoCs developed during ADROIT6G provide reusable experimental platforms that can support future research beyond the original project objectives, significantly reducing development effort for subsequent initiatives.

5.3 Long-Term Sustainability Roadmap

5.3.1 Vision Beyond the Project

The completion of ADROIT6G does not represent the end of the consortium's activities but rather the transition towards a new phase where the developed technologies are expected to evolve into sustainable research assets, industrial products, open-source ecosystems, and standardisation contributions. The consortium recognises that the commercialisation and widespread adoption of advanced 6G technologies typically extend well beyond the duration of a single research project. Consequently, the long-term sustainability strategy has been designed to ensure that the project's outcomes continue to generate scientific, technological, economic, and societal value in the coming years.

The sustainability roadmap builds upon the three exploitation phases established during the project. Having completed the identification of exploitable assets (Phase 1) and their validation through implementation and demonstration (Phase 2), the consortium now enters Phase 3, which focuses on long-term adoption, technology transfer, continuous innovation, and ecosystem growth.

The roadmap is based on five complementary sustainability pillars:

1. continuous technological evolution;
2. commercial exploitation;
3. scientific sustainability;

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4. open innovation and community development;
5. contribution to European 6G leadership.

Together, these pillars ensure that ADROIT6G remains an active contributor to the European 6G ecosystem after the end of the funded project.

5.3.2 Technology Evolution

The technologies developed during ADROIT6G will continue evolving through the individual roadmaps of the consortium partners.

Several software components have been designed with modular architectures that allow further functionality to be added without fundamental redesign. Distributed AI orchestration, programmable networking, cloud-native deployment mechanisms, AI model lifecycle management, synthetic data generation, federated learning, edge resource orchestration, and autonomous decision-making mechanisms constitute technological foundations that will continue to evolve in response to industrial requirements and future research challenges.

The consortium expects that future developments will increasingly incorporate:

- trustworthy and explainable AI;
- AI safety and policy-based governance;
- semantic communications;
- digital twins for communication networks;
- AI-native network management;
- intent-based autonomous orchestration;
- distributed multi-agent intelligence;
- sustainable and energy-aware computing.

These developments naturally extend the technological innovations initiated within ADROIT6G and position the consortium to address future 6G and beyond-6G research priorities.

5.3.3 Sustainability of Software Assets

A major objective of the sustainability roadmap is to ensure that software developed within ADROIT6G remains available, maintained, and reusable after project completion.

Where appropriate, software components will be released as open-source projects under suitable licensing models, allowing external researchers, developers, SMEs, and industrial stakeholders to adopt and extend the developed technologies.

For software with commercial potential, partners will continue maintaining proprietary implementations while simultaneously contributing selected generic components to open-source communities whenever this increases adoption and interoperability.

Software sustainability activities include: long-term maintenance of public repositories, documentation improvements, user tutorials, API standardisation, continuous integration pipelines, community support mechanisms and compatibility with emerging cloud-native infrastructures.

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The consortium considers software sustainability to be essential for ensuring that research investments continue generating value after the formal conclusion of the project.

5.4 Future Exploitation through Standardization and Ecosystem Engagement

Standardisation has been recognised throughout ADROIT6G as a strategic mechanism for maximising the long-term impact of the developed technologies. During the project, consortium members actively participated in SNS JU Working Groups, 6G AI activities, ETSI-related discussions, and international scientific forums.

Following project completion, partners intend to strengthen these activities by contributing technical knowledge derived from the validated Proof-of-Concepts and experimental results.

Future engagement will primarily target: ETSI Zero-touch network and Service Management (ZSM), ETSI ISG ENI; ETSI MEC, 3GPP evolution towards 6G, IETF networking activities, Linux Foundation networking initiatives, CNCF cloud-native projects, Sylva open telecom cloud ecosystem, Open-source AI communities supporting telecommunications.

Rather than submitting isolated technical contributions, the consortium intends to promote complete architectural concepts developed within ADROIT6G, including distributed AI orchestration, cloud-native network management, AI lifecycle management, programmable networking, federated learning, and edge intelligence.

Continued participation in SNS JU Working Groups will also facilitate collaboration with successor projects, promoting interoperability, avoiding duplication of effort, and strengthening the overall European research ecosystem.

The consortium further intends to remain actively engaged in major international events such as EuCNC & 6G Summit, Mobile World Congress, IEEE Globecom, IEEE ICC, ACM CoNEXT, CAMAD, and specialised AI and cloud-native conferences, ensuring continued visibility of ADROIT6G technologies.

5.5 Partner-Specific Future Exploitation Plans

The long-term exploitation strategy reflects the complementary expertise of the consortium partners and recognises that different organisations will pursue different exploitation pathways depending on their missions, capabilities, and target markets.

Orange Romania

Orange Romania will continue integrating cloud-native operational methodologies developed during ADROIT6G into its internal innovation activities. The project outcomes related to GitOps methodologies, Kubernetes orchestration, cloud-native lifecycle management, and programmable infrastructure will support future operator platforms and service automation solutions. Continued collaboration within the Sylva ecosystem and participation in cloud-native initiatives will facilitate technology transfer into operational telecommunications environments.

NVIDIA

NVIDIA intends to further develop the programmable networking technologies investigated during the project by integrating P4-based software components into future SDKs and programmable networking platforms. The

objective is to provide reusable software capabilities supporting high-performance programmable data planes, AI-enabled networking, and accelerated edge computing infrastructures.

CYENS

CYENS plans to commercialise the evolved UE-VBS concept through the development of the BDIx SDK, a modular software platform supporting autonomous multi-agent orchestration for distributed edge environments. Future developments will include policy management, explainable AI, safety mechanisms, federated learning, digital twins, orchestration templates, and developer toolkits.

The commercialisation strategy foresees multiple business models including software licensing, professional services, consulting, technical support, integration services, certification programmes, and customised deployments targeting healthcare, industrial automation, smart cities, and critical infrastructures.

CNIT

CNIT will continue exploiting the Crowdsourcing AI concept through additional European research projects and open-source software releases. The developed methodologies for distributed AI training, collaborative learning, AI model sharing, and resource-efficient orchestration will continue evolving through scientific collaborations and future research initiatives.

University of Oulu

The University of Oulu will extend its work on federated learning, model quantisation, and energy-efficient AI by pursuing additional Horizon Europe proposals, national research programmes, and industrial collaborations. The developed algorithms will continue being refined and publicly released as reusable research software while simultaneously supporting future patent activities and doctoral research.

ISI/ATHENA Research Center

ISI/ATH will continue disseminating ADROIT6G technologies through scientific publications, doctoral education, teaching activities, industrial exhibitions, and participation in future SNS JU projects. The project results will remain embedded within educational programmes and research infrastructures supporting next-generation AI-native communication networks.

Other Consortium Partners

The remaining consortium members have similarly committed to incorporating ADROIT6G technologies into their respective research agendas, innovation roadmaps, industrial collaborations, and educational activities. Collectively, these individual plans create a complementary exploitation ecosystem in which commercial, scientific, and societal impacts reinforce one another.

5.6 Expected Impact After Project Completion

The consortium expects the impact of ADROIT6G to continue growing well beyond the formal end of the project.

5.6.1 Scientific Impact

The project establishes new research directions in distributed artificial intelligence, AI-native network architectures, programmable networking, federated learning, and cloud-edge orchestration. The generated scientific knowledge will continue supporting publications, doctoral research, educational programmes, and future collaborative projects.

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5.6.2 Technological Impact

The validated software components provide reusable technological building blocks that significantly reduce development effort for future European research initiatives and industrial innovation projects. The modular architecture developed within ADROIT6G facilitates integration with future 6G platforms and emerging cloud-native ecosystems.

5.6.3 Industrial Impact

Industrial partners expect to integrate several ADROIT6G innovations into future commercial offerings, contributing to more autonomous, efficient, programmable, and sustainable communication infrastructures. The technologies developed within the project are expected to accelerate digital transformation across telecommunications, manufacturing, healthcare, smart cities, logistics, and public services.

5.6.4 Societal Impact

By enabling more efficient utilisation of computing and networking resources, distributed intelligence, energy-aware AI, and autonomous management, ADROIT6G contributes to reducing operational costs, improving sustainability, lowering energy consumption, and supporting the broader European Green Deal objectives.

5.6.5 European Impact

The project strengthens Europe's strategic autonomy in 6G technologies by advancing open, interoperable, AI-native network architectures developed through collaboration among leading industrial companies, SMEs, universities, and research organisations. The continuation of these collaborations through future SNS JU and Horizon Europe projects will further reinforce Europe's global leadership in next-generation communication systems.

5.7 Exploitation Outcomes

The exploitation activities performed throughout ADROIT6G have successfully transformed ambitious research objectives into a coherent portfolio of exploitable technological assets with demonstrated scientific and commercial value.

Compared with the initial exploitation strategy defined at project inception, the consortium has considerably expanded both the maturity and the scope of its exploitation ecosystem. The project has produced validated software frameworks, integrated Proof-of-Concepts, open-source components, scientific knowledge, intellectual property, standardisation contributions, educational material, and industrial innovation opportunities that collectively establish a solid foundation for long-term impact.

The transition into Phase 3 marks the beginning of a new stage in which exploitation is no longer centred on project execution but on sustained adoption, technology transfer, industrial innovation, scientific excellence, and ecosystem growth. Commercial partners will integrate mature technologies into future products and services, while research organisations will continue extending the project's scientific contributions through collaborative research, education, open-source initiatives, and international cooperation.

By combining commercial exploitation, scientific sustainability, standardisation engagement, open innovation, and continued participation in the European 6G ecosystem, ADROIT6G has established a robust long-term

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exploitation framework capable of ensuring that its innovations continue creating value well beyond the lifetime of the project. The consortium is therefore confident that ADROIT6G will remain an important reference point for future AI-native 6G research and innovation, contributing to Europe's ambition of developing secure, sustainable, programmable, and intelligent communication networks.

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6 Standardization Activities

6.1 ETSI ZSM PoC#19 on "AI-enabled predictive closed loops: network slice automation and performance optimization for collaborative robots"

Building on the roadmap outlined in Deliverable D6.2, ADROIT6G has successfully progressed its contribution to standardisation through the ETSI Zero-touch network and Service Management (ZSM) framework. In particular, the project has moved from the planning phase to the concrete implementation stage of an ETSI ZSM Proof-of-Concept (PoC), achieving a key milestone by the end of its project cycle. Even though a slight change on the original plan caused a delayed submission, ADROIT6G consortium managed to proceed with a successful proposal and its approval. The PoC proposal was formally submitted to ETSI ZSM at the beginning of 2026 and has since been successfully reviewed and approved by the PoC Management Board. The approved PoC proposal[9], confirms the relevance and maturity of ADROIT6G technical contributions in the context of zero-touch network and service management.

6.1.1 Overview

In brief, the ZSM PoC aims to showcase a zero-touch network and service management solution, capable to deploy virtualized AI-enabled closed loop functions in support of prediction of network slice performance degradation in collaborative robots' application scenarios. The PoC targets the AI-enabled and automated operation of vertical services and network slices through zero touch closed loops, with deployment of services for prioritized traffic (URLLC) in support of collaborative robot operations. The goal is to validate the zero-touch deployment and operation of virtualized closed loop functions, integrated with an MLOps framework for training and deployment of ML models, that make use of ML-enabled analytics (for prediction of network slice performance) and ML-enabled decision (for network slice congestion identification and remediation) to guarantee ultra-low latency communications for collaborative robots.

The PoC has been developed using the AI-enabled network and service management solutions developed in ADROIT6G, including the AI/ML framework and MLOps capabilities for lifecycle management of AI/ML models. The implementation of these solutions is aligned with the ZSM standards. More specifically, the design architecture of the proposed PoC follows the automation principles of ZSM 003, while the AI-driven closed loop-based automation, which integrates a closed loop governance and an MLOps platform, is aligned with the ZSM 009-1, ZSM 009-2 and ZSM 009-3.

Following the roadmap previously defined in D6.2, ADROIT6G prepared a PoC proposal focusing on distributed closed-loop automation enabled by AI/ML mechanisms in multi-stakeholder environments. The proposal builds upon the innovations developed within WP3 and WP4, including the crowdsourcing AI/ML framework and AI-driven automation capabilities, and aligns with ETSI ZSM priority topics such as "Automation in Multi-Stakeholder Ecosystems" and "Intent-driven Closed-Loop Automation". Moreover, the ZSM PoC has been proposed and developed based on the ADROIT6G PoC#3 Collaborative Construction Robots (scenario on network slice automation and performance optimization for collaborative robots through AI-enabled predictive closed-loops). In particular, the PoC has integrated several components of the ADROIT6G architecture, namely the Service Orchestrator, the Resource Orchestrator, the Closed Loop Governance, the AI/ML framework and MLOps platform, the AI-driven closed loop functions, all integrated in the ADROIT6G ORO testbed, offering an indoor full 5G Standalone (SA) infrastructure, comprising 5G RAN, Core, Edge Computing with network slice capabilities. On the application side, the CAFA Robot Application has been integrated and used. It is a distributed robotics test application designed to generate and measure network traffic between multiple robots and a central control

[9] ZSM_POC_19.pdf

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station. The primary purpose of the application is to evaluate the impact of different network (slice) configurations on application performance, particularly communication latency. The application simulates a fleet of robots operating in a shared environment using the Gazebo simulator [3]. Each robot produces realistic data streams, including video and LiDAR sensor data, and receives control commands from a Control Station. These data streams are relayed through 5G-enabled mini-PCs which emulates real robot devices and execute the virtual robot applications.

6.1.2 Timeline

The PoC Team (NXW, ORO, CAFA, ISI/ATH) has been established in accordance with ETSI ZSM requirements, involving a combination of project partners representing different roles across the value chain, including research organisations and industry stakeholders. The team has been responsible for the implementation, integration, and validation of the proposed solution, following the PoC timeline discussed and approved by the ETSI ZSM group, as reported in Table 14. The PoC milestones have successfully achieved, with the implementation phase concluded by M42. The results of the PoC have been showcased through a demo at the 2026 EuCNC & 6G Summit in Malaga[10], contributing to the visibility of ADROIT6G within the standardisation ecosystem and reinforcing its impact on future 6G-related standards. An additional showcase is planned for early July 2026 at the IEEE MeditCom conference, which will bring the formal PoC project end with the PoC report presented to the ETSI ZSM group.

Table 14 ETSI ZSM PoC#19 timeline

PoC Milestone	Milestone description	Target Date	Additional Info
P.S	PoC Project Start	February 2026	
P.P	PoC Proposal submission	March 2026	Submission to ZSM PoC Management Team for approval.
P.M1	PoC internal milestone 1: components deployment and initial integration	April 2022	Baseline PoC components deployed and integrated in the Orange Romania testbed. Preparation of 5G network setup. Identification of network metrics and KPIs to be collected for AI/ML models training.
P.M2	PoC internal milestone 2: implementation of AI-enabled closed loop components	May 2022	Closed loop functions for networks slice performance prediction and optimization ready. AI/ML models ready and trained.
P.M3	PoC internal milestone 4: PoC execution	May 2022	All PoC components integrated, including management and orchestration stack, closed loop governance and closed loops, MLOps platform, vertical applications, and ready for evaluation.
P.D1	PoC demo #1	June 2026	Showcasing PoC results at 2026 EuCNC & 6G Summit conference.

[10] https://www.linkedin.com/feed/update/urn:li:activity:7468320646742192129/

P.D2	PoC demo #2	July 2026	Showcasing Final PoC results at 2026 IEEE MeditCom conference.
P.R	PoC Report	July 2026	Final feedback and PoC report document for discussion within ETSI ZSM community
P.E	PoC Project End	July 2026	Final feedback and PoC report document for discussion within ETSI ZSM community

6.1.3 Contributions

As part of these ZSM PoC activities, a set of contributions have been prepared, presented and discussed by the PoC team to the ETSI ZSM group, as indicated in the Table 15. More general information about the ADROIT6G ZSM PoC#19 can be found on the ETSI ZSM wiki[11].

Table 15 ETSI ZSM contributions prepared by ADROIT6G related to the PoC#19

ETSI ZSM contribution	Title and Description
ZSM(26)000050	"*ZSM PoC Proposal on AI-enabled cognitive closed loops*" • PoC#19 proposal to the ETSI ZSM group, following the ETSI ZSM related template
ZSM(26)000060	"*Presentation on ZSM PoC Proposal on AI-enabled cognitive closed loops*" • Slideset to present in a technical ETSI ZSM meeting the PoC proposal and get feedback about
ZSM(26)000050r1	"*ZSM PoC Proposal on AI-enabled closed loops*" • The final approved PoC proposal, resulting from the discussion with ETSI ZSM group and from the implementation of the received feedback
ZSM(26)000135 (reserved at the time of writing)	"*POC#19 AI-enabled predictive closed loops Report*" • PoC#19 final report to document the results and achievements of the PoC activity to the the ETSI ZSM group.

Overall, this achievement represents a significant step forward in the project's standardisation efforts, demonstrating a clear pathway from research and innovation to tangible contributions within recognised industry frameworks such as ETSI ZSM.

6.2 NetworldEurope SME WG

The NetworldEurope SME Working Group promotes standards awareness and highlights SME success stories, acting as an important platform for showcasing innovation and strengthening the role of small and medium-sized enterprises (SMEs) in the evolution of 5G and beyond technologies. Through its activities, the Working Group facilitates knowledge exchange, supports SME engagement in standardisation processes, and increases the visibility of their contributions within the European research and innovation ecosystem.

[11] https://zsmwiki.etsi.org/index.php?title=PoC_19_AI-enabled_predictive_closed_loops

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In this context, EBOS participates as a member of the SME 6GIA[12] WG, contributing to ADROIT6G's broader standardisation and ecosystem alignment efforts. The project has benefited from access to the Working Group's initiatives, including regular meetings, workshops, and awareness campaigns on topics such as standardisation processes and 3GPP engagement (Figure 42). These activities, along with the promotion of European SME expertise and success stories, provide valuable insights and opportunities to monitor developments, identify collaboration potential, and support the positioning of ADROIT6G results within the wider European landscape.

Figure 42. Snapshot from the SNSJU April 2026 Newsletter featuring the standardization work of SME WG.

Overall, this participation ensures that ADROIT6G remains connected to relevant SME-driven initiatives and informed about ongoing trends in standardisation, contributing to its objective of linking research outcomes with broader industrial and policy developments in the 5G/6G domain.

[12] SME – 6G IA

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7 IPR Management

7.1 IP Protection through patents

Effective Intellectual Property Rights (IPR) management has been a key priority for ADROIT6G, ensuring that the project's innovative outcomes are adequately protected and can be successfully exploited beyond the project's lifetime. In line with its strategy to safeguard commercially valuable results "for Europe" and "within Europe", the project initially set a target of filing at least three patent applications (D6.2). This objective has been successfully exceeded, with the consortium achieving a total of **four patent applications** and **one published (granted) patent**, clearly demonstrating the technological maturity, innovation capacity, and industrial relevance of the project results.

In particular, Siemens has contributed significantly to the project's IPR portfolio through multiple patent applications addressing in-network computing and orchestration mechanisms. These include methods for configuring and operating networks and network devices capable of processing data within the network itself, as well as solutions for orchestrating network functions and workflows in distributed environments.

The University of Oulu has also contributed a published patent focusing on collaborative machine learning, introducing mechanisms for optimising distributed training processes by considering both radio channel conditions and energy consumption. This work addresses key challenges related to the scalability and sustainability of AI/ML in 6G networks, further enhancing the project's technological impact.

7.2 Filed Patents

By M42 the following patent application have been submitted to EPO and/or USPTO:

1. "Method to configure a network for in-network computing of network data, method to operate a network device, function orchestration module for a network, network device for a network, network, computer program product and computer-readable storage medium" (Filed September 2023- SIE):

The invention relates to a method for configuring a network to allow now complex calculations based on payload data. A programmable data plane is dynamically configured to capture the data packets of interest for further processing. Thus, data can be processed in a distributed way along the network elements used for data transmission. The invention provides a practical realization of ADROIT6G's distributed computing paradigm by transforming network devices into orchestrated execution points for application-specific processing functions. By dynamically generating, placing, securing, and managing compute functions across the communication fabric, it contributes to the convergence of networking and computing that is central to future 6G infrastructures.

2. "Method to configure a network for in-network computing, method to operate a network for in-network computing of network data, workflow orchestration module for a network, network, computer program product and computer-readable storage medium" (Filed September 2023- SIE)

The invention relates to a method for configuring a network to support in-network computing of data, carried out by a workflow orchestration module. The method involves receiving a workflow specification that defines how network data is to be processed along a given network path. The workflow is then decomposed into a sequence of workflow functions, each corresponding to a specific processing step and described by its own function specification. These workflow functions are subsequently assigned to appropriate network devices, and their corresponding specifications are provided to a function orchestration module within the network for execution.

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This approach aligns with the objectives of the ADROIT-6G project, particularly in enabling intelligent, distributed processing and orchestration across next-generation network infrastructures.

3. **Collaborative training of a machine learning model considering estimated energy consumption (Published[13], 1 March 2025 - OULU)**

The invention relates to a method in which a network node trains a first machine learning model to select optimal training modes for the collaborative training of a second machine learning model across multiple devices. The selection is based on radio channel state information and estimated energy consumption for each device. The method further includes distributing both models to the devices, collecting and sharing channel state information among them, receiving their selected training modes, and conducting iterative collaborative training of the second model.

This approach is closely aligned with the ADROIT-6G project, as it supports adaptive, energy-efficient, and communication-aware distributed intelligence, which is essential for scalable and efficient AI-driven services in next-generation networks.

4. A Method for Deploying Resource Clusters Among Mobile Communication Nodes (Filed, December 2024 -SIE)

The invention describes a system design (and its components) that allows for resilient orchestration of compute resources in mobile infrastructures such as satellite systems, robot swarms, or AGV fleets. It proposes the subdivision of the mobile infrastructures into stable (and eventually static) clusters, exposing the more dynamic mechanisms solely to the top-level clusters. One idea of the invention is to have two or more levels of orchestration to reduce the complexity of optimizing the computing and communication resource assignment in scenarios with large amount of distributed resource providing devices and where both the client nodes but also the infrastructure resource nodes are moving.

The proposed hierarchical resource-clustering concept aligns closely with ADROIT6G's vision of distributed compute-continuum infrastructures, enabling scalable orchestration of communication and computing resources across dynamic non-terrestrial networks such as satellite constellations. By reducing orchestration complexity, supporting workload handovers, and enabling federated multi-domain operation, the invention contributes to ADROIT6G objectives on autonomous network management, resilience, and seamless service provisioning in future 6G environments.

Overall, the achieved results go beyond the initial expectations and confirm the effectiveness of ADROIT6G's IPR management approach. By systematically identifying, protecting, and managing its key innovations, the project ensures a solid foundation for future exploitation, facilitates technology transfer, and enhances its contribution to both industrial uptake and standardisation in the evolving 5G and 6G ecosystem.

[13] Espacenet – search results

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Figure 43. EP Patent Register/ EP4767595 status for latest filed ADROIT6G patent.

8 Conclusions

At the conclusion of ADROIT6G, the project has successfully achieved its WP6 objectives, demonstrating a comprehensive and impactful contribution to the evolution of next generation 6G networks. The consortium has effectively transitioned from initial audience reach to a broader audience through its mature portfolio of validated technologies, supported by integrated Proof-of-Concepts (PoCs), scientific outputs, open-source contributions, and exploitation activities. These results confirm that ADROIT6G developments are not isolated innovations, but interoperable and scalable building blocks capable of supporting future 6G infrastructures and services.

Dissemination and communication activities played a central role in maximising project impact. Through active participation in major scientific conferences, industrial events, workshops, and community initiatives, ADROIT6G ensured strong visibility and engagement with key stakeholders across academia, industry, and policy. ADROIT6G not only achieved its D&C KPIs but most of the times exceeded it. One major mismatch was the high number of expected contributions to SDO with adoption status. Taking into consideration the early stage of 6G technologies and the difficulties of those advancements reaching standardization level outcomes, the consortium was unable to reach the KPI of >6. However, ETSI ZSM PoC and other standardization awareness activities along the way offered valuable contributions to the field. These efforts facilitated knowledge transfer, fostered collaboration, and reinforced the project's positioning within the European 6G ecosystem, while also contributing to standardisation and open-source initiatives.

From an exploitation perspective, ADROIT6G established credible and sustainable pathways for the uptake of its results. The project adopted a balanced approach combining commercial exploitation with open innovation, ensuring that its KERs can support both industrial deployment and wider community adoption. This approach strengthens long-term sustainability and aligns with European priorities for open, interoperable, and programmable 6G systems.

Overall, ADROIT6G has delivered measurable impact across technological innovation, ecosystem engagement, and dissemination excellence, contributing to Europe's leadership in 6G and providing a solid foundation for continued research, innovation, and exploitation beyond the project lifetime.

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