

6G-SANDBOX

Supporting Architectural and technological
Network evolutions through an intelligent, secured
and twinning enabled Open eXperimentation
facility

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activities and SNS program collaboration

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ABSTRACT

This report is structured around two main pillars. The first provides a final overview of the project's dissemination and communication activities, as well as its collaboration with other initiatives, increasing visibility, while fostering stakeholder engagement. The second pillar describes the project's involvement in the SNS JU program and its collaboration with other projects and cooperative actions that enhanced impact and knowledge exchange.

KEYWORDS

Impact, Communication, Dissemination, Website and Social Media, SNS JU Collaboration

1 INTRODUCTION

Communication, dissemination, and SNS JU collaboration activities played an important role throughout the lifecycle of the 6G-SANDBOX project, helping to increase the visibility of the project and ensure that its progress and results reached all the relevant stakeholders but also the wider audience. Through a combination of communication campaigns, scientific dissemination, participation in major events, and engagement with the wider 6G community, the project promoted its objectives, achievements, and experimentation results to researchers, industry stakeholders, policy makers and other relevant audiences.

A key aspect of these activities was the close collaboration with the Smart Networks and Services Joint Undertaking (SNS JU) ecosystem. Through joint workshops, webinars, demonstrations, working groups, and other collaborative initiatives, 6G-SANDBOX worked closely with SNS JU projects and Working Groups to exchange knowledge, create synergies, and contribute to the development of the European 6G landscape.

This deliverable provides an overview of the communication, dissemination, and SNS collaboration activities carried out during the second reporting period, highlighting the main achievements, key events, strategic collaborations, and performance indicators achieved by the project.

2 REPORT ON COMMUNICATION AND DISSEMINATION ACTIVITIES

2.1 INTRODUCTION

This final WP6 6G-SANDBOX deliverable contains reports on communication and dissemination activities carried out during M19–M42 (July 2024 – June 2026). To facilitate the reader, some content previously presented in earlier deliverables is repeated here.

The comprehensive impact plan for 6G-SANDBOX encompassed both offline (leaflets, posters, etc.) and online communication (website, social media, newsletters, etc.) and dissemination activities. This last one included participation in high-esteemed events such as EuCNC, 6G Summit and Mobile World Congress, as well as scientific dissemination in IEEE conferences, collaboration with SNS JU projects, working groups, and relevant national, European, and international initiatives.

While the planned activities and their timing were continuously refined throughout the project, the communication and dissemination strategy was structured into distinct stages. The final stage (M37–M42), corresponding to the extended project period, provided an opportunity to maximize the visibility and impact of the project's outcomes through intensified dissemination of results, participation in major events, scientific publications, final demonstrations, and targeted stakeholder engagement activities. These stages are illustrated in Figure 1.

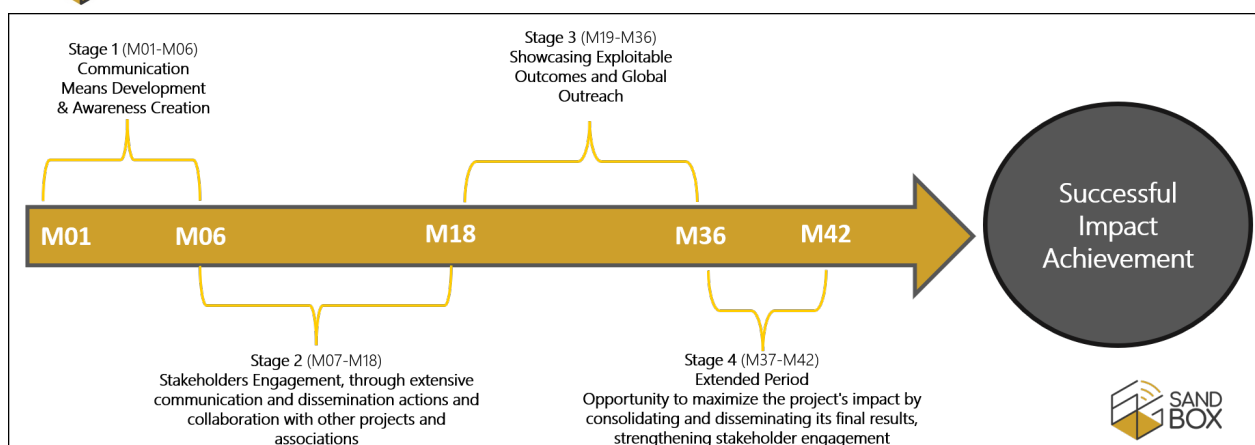


Figure 1 - 6G-SANDBOX Dissemination and Communication Plan Core Structure Timeline + Extension

2.2 COMMUNICATION REPORT – PERIOD 2 (M19 – M42)

This section focuses on the Communication Activities carried out during the 2nd Reporting Period (M19–M42). Table 1 below presents the figures for the period M19–M36, as well as the cumulative totals including the extended project period M37–M42, in relation to the Communication KPIs. As this Deliverable is finalized before the due date (30th of June 2026), the Communication KPIs including the Statistical Dashboards of the website and the social media are reported as they stood on the **19th of June 2026**.

Furthermore, this chapter will provide notable changes or highlights worth mentioning.

Table 1: 6G-SANDBOX Communication KPIs vs Communication Achievement (M19-M36)

Channel	Activities/KPIs (M36)	M1-M18	M19-36	Total P1+P2	Total (M1 – Until M42 – 15 June 2026)
Online presence (M1-M42)	6G-SANDBOX Website >5,000 website visitors ~2-minute Average duration of visits >5,000 Number of page views >100 website news	6G-SANDBOX Website (M1-M17) 9 328 website visitors 1m4sec Average duration of visits 38 455 Number of page views 86 website news	6G-SANDBOX Website (M18-M16) 10 378 website visitors 1m39sec Average duration of visits 47,468 Number of page views 82 website news	6G-SANDBOX Website 19 706 website visitors 1m42sec Average duration of visits 85 319 Number of page views 178 News	6G-SANDBOX Website ≈ 23 100 website visitors 1m83sec Average duration of visits ≈ 94 162 Number of page views >190 News
Social media (M1-M42)	6G-SANDBOX social media accounts in X, LinkedIn, Facebook, Instagram: >1,000 Number of total followers in all social media channels >750 Number of total posts in all social media >50,000 Engagements/Reactions/Reach	1 139 Number of total followers in all social media channels 601 Number of total posts in all social media >118,000 Engagements/Reactions/Reach	≈ 784 Number of total followers in all social media channels 397 Number of total posts in all social media >105,000 Engagements/Reactions/Reach	≈ 1923 Number of total followers in all social media channels 998 Number of total posts in all social media >220,000 Engagements/Reactions/Reach	≈ 2 090 Number of total followers in all social media channels ≈ 1 032 Number of total posts in all social media >260,000 Engagements/Reactions/Reach
Press releases,	>10 Press releases	13 Press Releases	11 Press Releases	24 Press Releases	25 Press Releases

Articles and Interviews (M3-M42)	>15 Online Articles and Interviews Communication of project news, events, results; Increased awareness.	28 Articles 2 Interview	15 Articles 2 Interviews	43 Articles 4 Interviews	43 Articles 4 Interviews
Promotional material (M4-M42)	Leaflets: >2 versions Posters: >2 versions Stickers	1 Introduction Brochure (Tri-fold), 2 Leaflets (Toolkit and OC3) 1 Introductory Poster 400 stickers	1 Poster on Experimentation + 2 updates 1 Poster on Trials 2 Poster and Brochure Updates	10 Poster/Brochures/Leaflets and updates	11 Poster/Brochures/Leaflets and updates
Video clips (M7-M42)	>10 Number of videos	3 Videos	20 videos	23 videos	23 videos + 3 Platforms videos on website
Newsletters (M3-M42)	12 Issues of eNewsletters (issued quarterly)	6 Newsletters	6 Newsletters	12 Newsletters	12 Newsletters

2.2.1 PROJECT WEBSITE

The project website was launched in M1, and it is the main communication channel of the project and acts as a repository of the work done throughout the life of the project. During the second period of the project and until M42, the following additions and adjustments were made which supported the objectives and the greater impact of the project in the most efficient way.

1. Home Page

In March 2026, a new diagram of the 6G-SANDBOX Architecture was introduced on the Home Page (see Figure 2). Additionally, before EuCNC 2026 & the 6G Summit, a new feature was introduced in the webpage, promoting and inviting the conference participants to experience the live 6G private network deployed in the EuCNC exhibition space (see Figure 3).

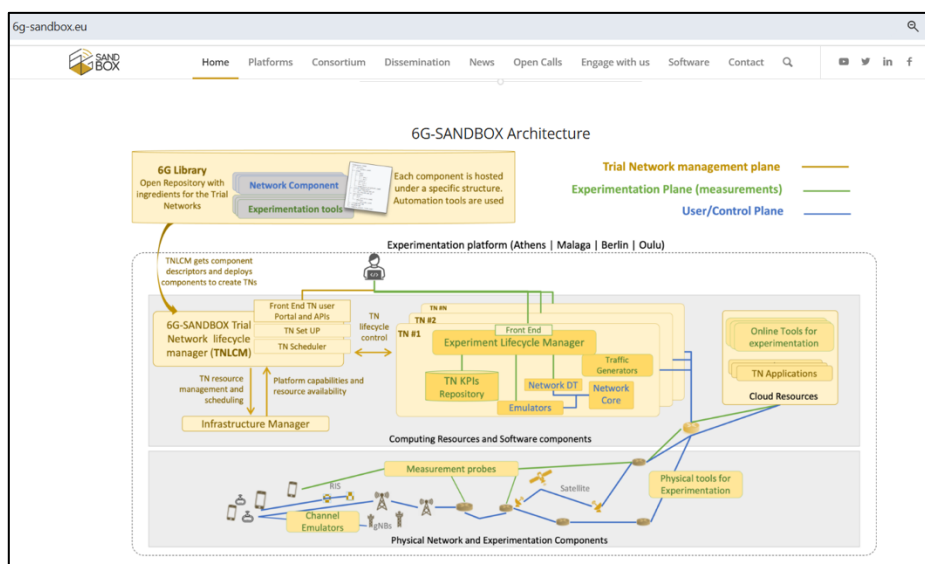


Figure 2 - 6G-SANDBOX Website – 6G-SANDBOX Architecture

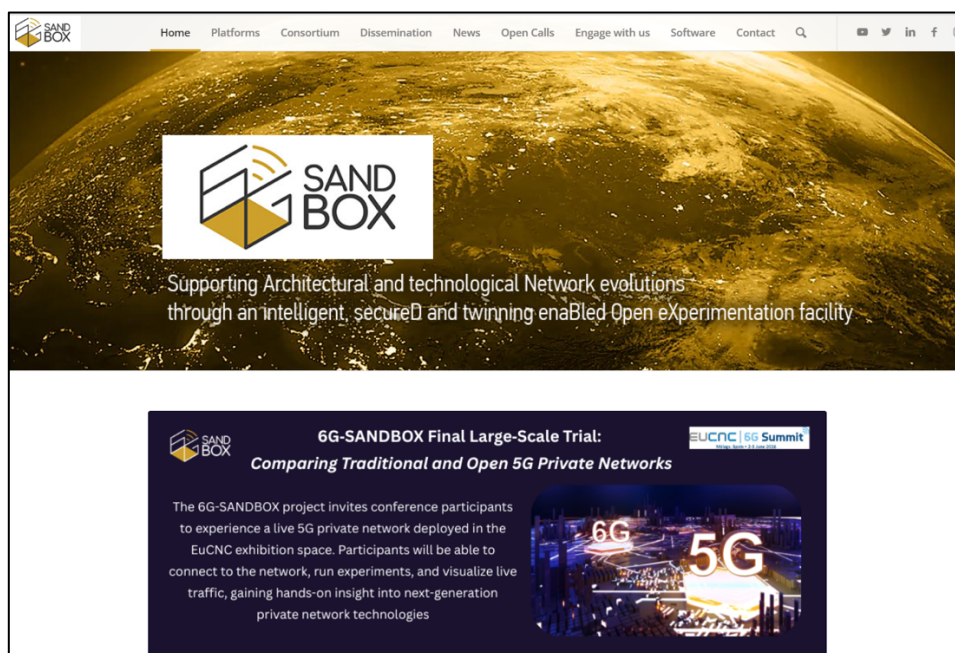


Figure 3 - 6G-SANDBOX Website – Invitation to EuCNC 2026 participants

2. Open Calls Menu (<https://6g-sandbox.eu/opencall/>)

In July 2024, the Open Calls Menu was updated to include the final winners and statistics of Open Call 2. Later, in 2025, all Open Call Menus were updated to display the statistics and winners. The sub-menus were also restructured, with an aim to ease navigation for website visitors, with the final sub-menu structure illustrated below in Figure 4. Additionally, the content of the pages was enriched with more information for each project. Winners were asked to submit .pdf forms describing their results, as well as recorded presentations and/or videos, as shown in Figure 5.

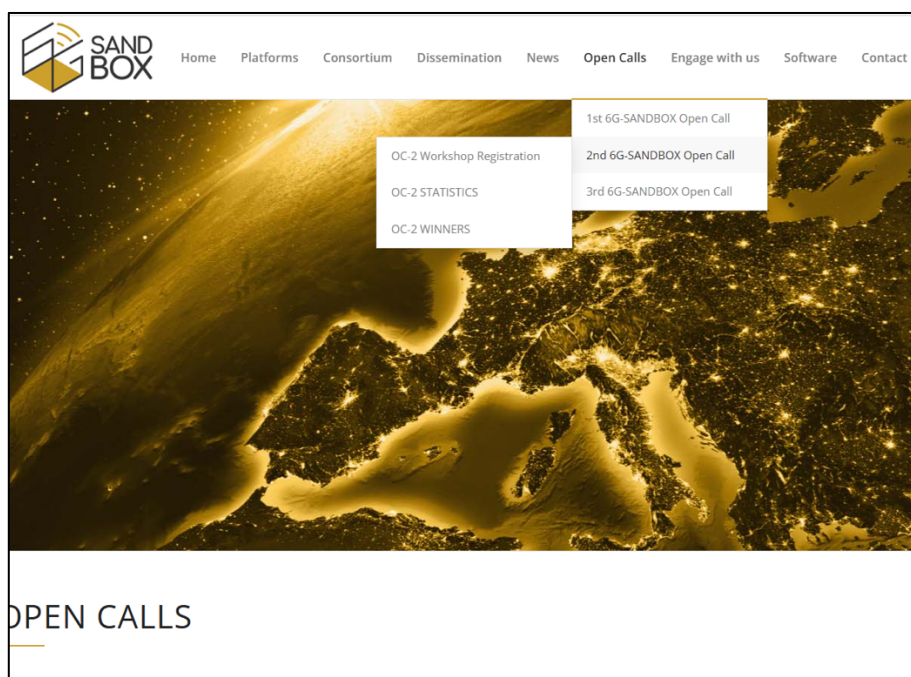


Figure 4 - 6G-SANDBOX Website Open Call Menu

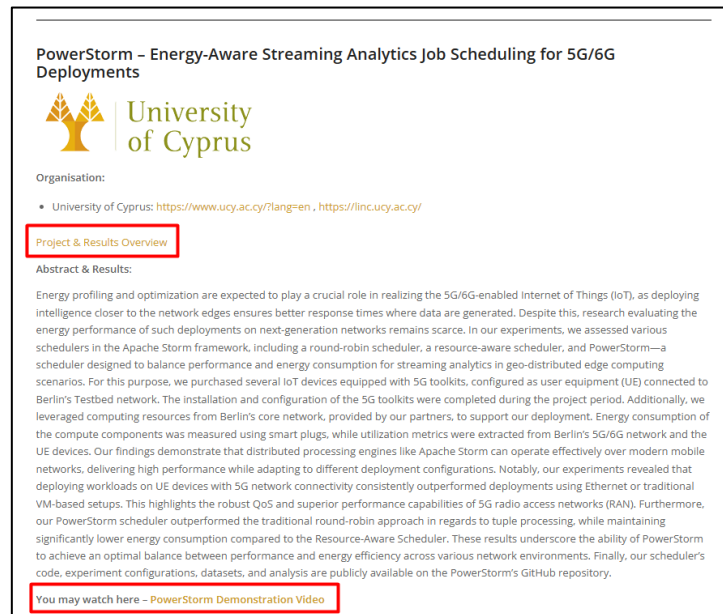


Figure 5 - 6G-SANDBOX Website – Open Caller Communication Results example

2. Platforms Menu (<https://6g-sandbox.eu/pilot-6g-sites/>)

By the end of 2025, the platform architecture images for each platform were updated to reflect the latest changes and the extensions of the Open Calls, shown in Figure 6. In the final semester of the project in M40, it was decided to include videos created by each platform leader to describe the Platforms capabilities as per Figure 7.

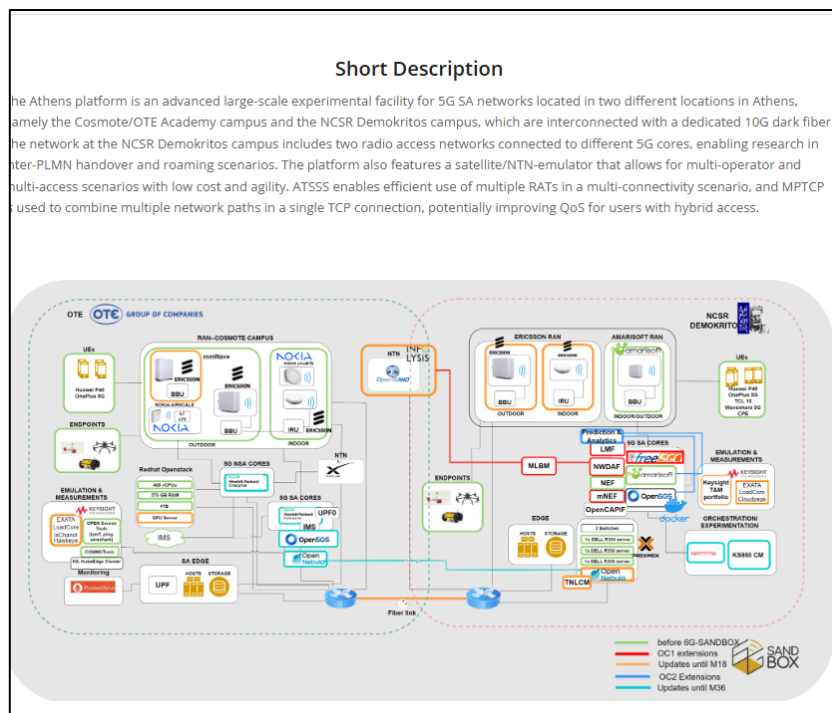


Figure 6 - 6G-SANDBOX Website – 4 Platforms updates

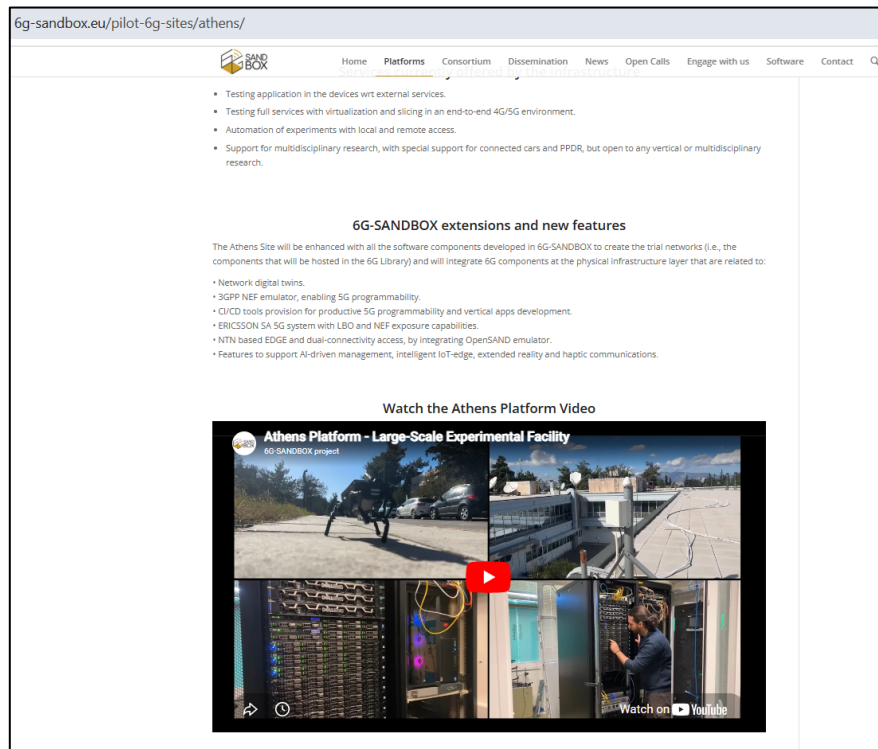


Figure 7 - 6G-SANDBOX Website – Athens Platform Video example

3. Engage with us Menu (<https://6g-sandbox.eu/engage-with-us/>)

The Engage with Us menu was enriched by the end of 2024 with a new sub-menu aimed at promoting established collaborations with external third parties. By the end of 2025, the menu was further expanded with additional sub-menus, gradually introducing news and relevant information about the upcoming 6G Trials and inviting external parties to apply. The final example of this menu can be seen in Figure 8.

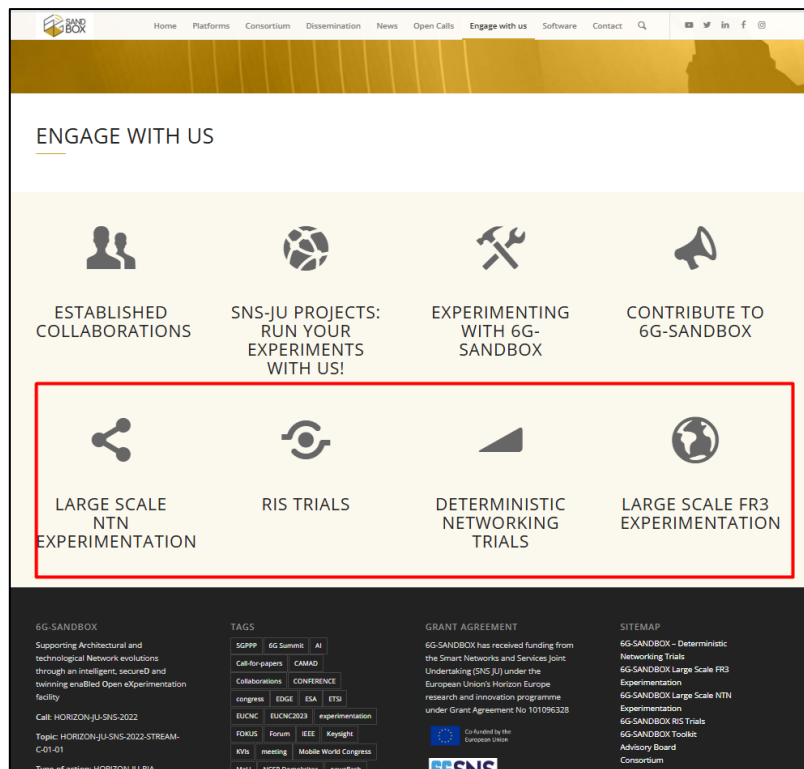


Figure 8 - 6G-SANDBOX Website – Engage with us Menu

4. Software Menu (<https://6g-sandbox.eu/software/>)

The Software menu was introduced towards the end of 2024 to provide a centralized access point for the software resources developed within the project and to support experimenters in their interaction with the 6G-SANDBOX platform. Over time, the menu was gradually structured into four dedicated sub-menus: **GitHub**, **Marketplace**, **Toolkit**, and **Development Roadmap**. Together, these sections aimed to facilitate accessibility, transparency, and collaboration within the 6G-SANDBOX ecosystem, supporting both project partners and external experimenters. These menus were kept up to date as necessary to reflect the progress of the project, and are illustrated in Figure 9.

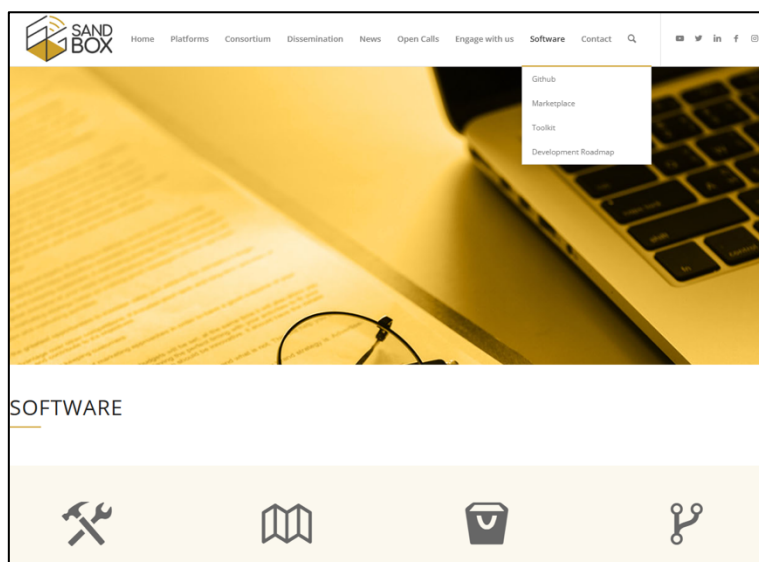


Figure 9 - 6G-SANDBOX Website – Software Menu

Finally, menus such as ‘News’, ‘Dissemination’, ‘Communication Material’, and others related to the marketing aspects of the project were frequently updated to reflect all recent activities of the project such as, the latest news, newsletters, presentations, workshops, press releases, articles, and other such material.

2.2.2 SOCIAL MEDIA

As already stated in D6.1 and reported in D6.2 the 6G-SANDBOX adopted the most influential social networks for communication purposes and to communicate project achievements, disseminate scientific and technical results, promote events and demonstrations, and engage with the wider 6G research and innovation community.

The different social media channels (LinkedIn, X, Facebook, Instagram) are used to communicate 6G-SANDBOX activities and announcements. 6G-SANDBOX also hosted a dedicated YouTube channel that included related recordings/videos. As per the writing of this Deliverable the platforms have more than **2,000** followers, with LinkedIn to be the most influential platform with more than **1660** followers. The reader may find more information on the statistics in the Chapter on **Monitoring, Control and Evaluation of Communication /Dissemination**. Communication activities focused on showcasing experimentation results, Open Call activities, demonstrations, strategic collaborations, scientific publications, and participation in major international events such as EuCNC & 6G Summit, Mobile World Congress, IEEE conferences, and SNS JU initiatives.

Through a combination of regular updates, event promotion, multimedia content, and partner engagement, social media channels contributed significantly to increasing the visibility of the project and strengthening its presence within the European and international 6G ecosystem.

More specifically, the social media posts covered among others the following throughout the period M19-M42:

- Partners' dissemination activities, such as presentations, panel discussions, participation in workshops at various events and conferences, as well as demo booths, and organized events.
- Announcements of Open Calls results and promotion of the projects selected through the Open Calls.
- Memoranda of Understanding and related announcements.
- Participation in MWC 2025 and EuCNC 2026, including pre-announcements and updates about planned activities.
- Highlights and updates from the 6G-SANDBOX plenary meetings
- Communication on 6G-SANDBOX Webinar
- YouTube 6G-SANDBOX Videos
- 6G-SANDBOX project technical achievements and progress (e.g 6G-SANDBOX Toolkit)
- Announcements and promotion of the project's newsletter issues.
- News from SNS JU community (e.g., Newsflashes/Newsletters, Journal etc)

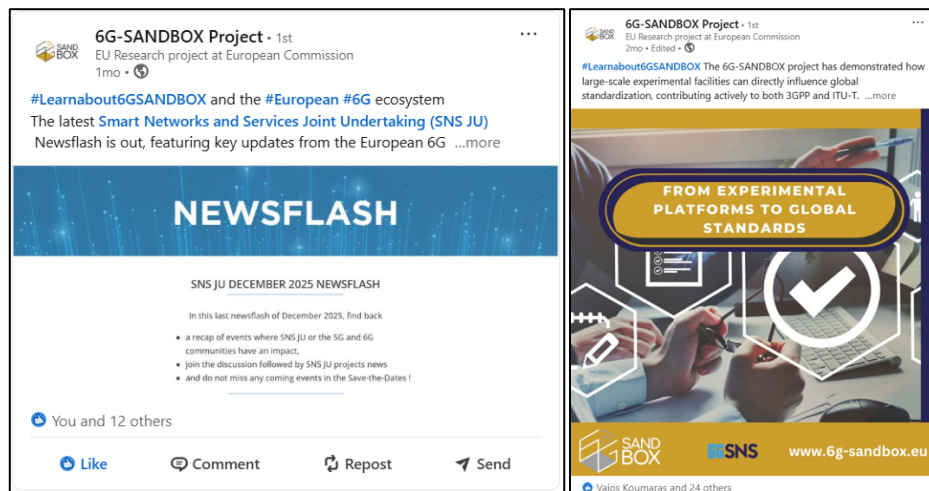




Figure 10 - 6G-SANDBOX Social Media examples

Moreover, through the project's communication efforts and the consistent tagging of SNS JU in its social media posts, 6G-SANDBOX was frequently featured on the SNS JU website, social media channels, and newsflashes.

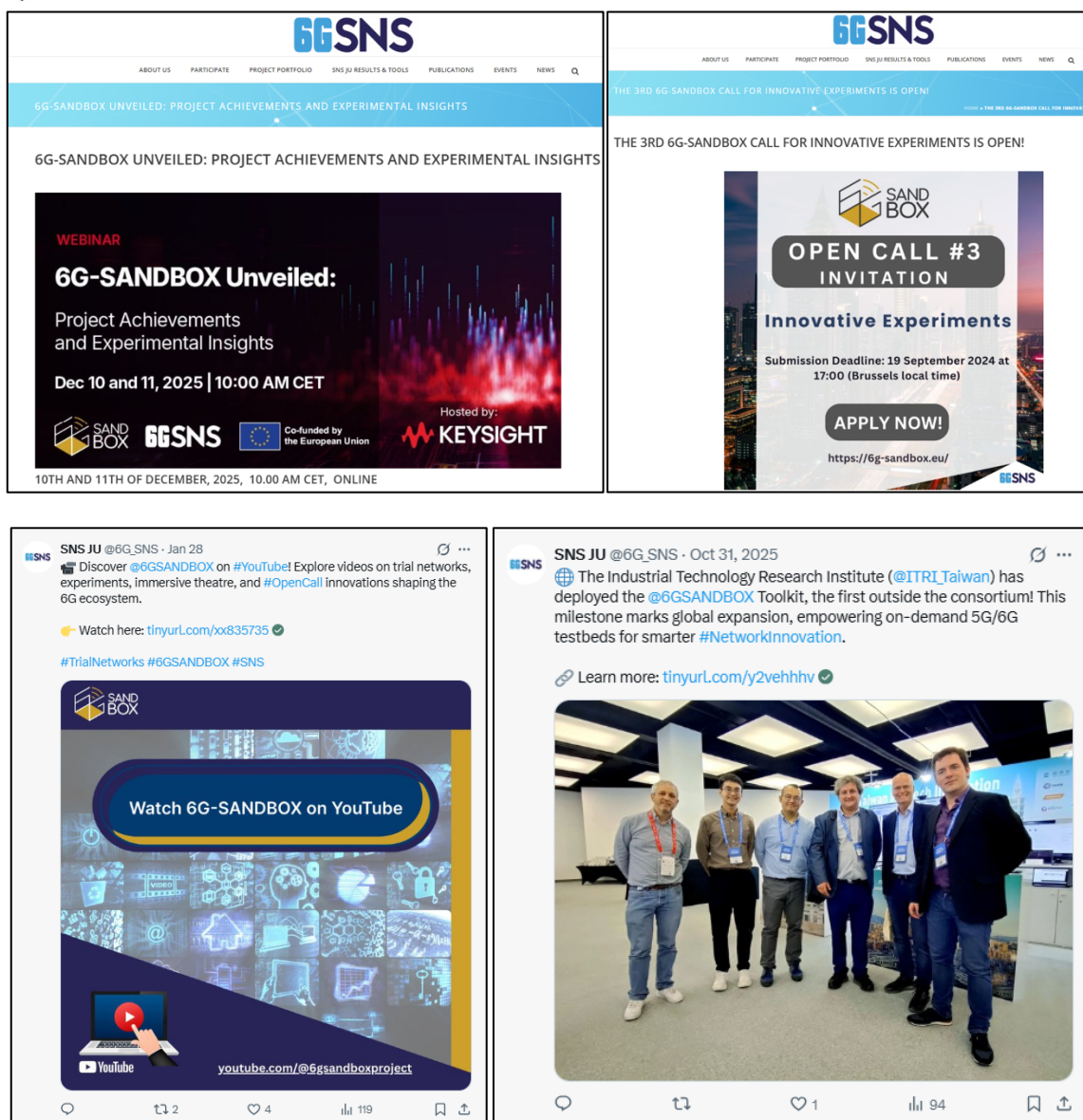


Figure 11 - 6G-SANDBOX at SNS JU media Platforms

2.2.2.1 YOUTUBE CHANNEL (<https://www.youtube.com/@6GSANDBOXPROJECT/VIDEOS>)

The 6G-SANDBOX YouTube Channel hosts videos produced by the Consortium but also Open Call beneficiaries, providing additional visibility to third-party experiments and innovations developed on top of the 6G-SANDBOX infrastructure.

During the full period, the channel hosted 23 videos and reached 60 subscribers. The published content generated **32,867 impressions**, resulting in **1,725 views** and **58.2 hours of watch time**, demonstrating the channel's effectiveness in promoting project progress and engaging stakeholders from academia, industry, and the wider research community. By disseminating both consortium-generated content and Open Call outcomes, the channel, even though it targets a **niche** target audience, contributed to increasing the visibility of the 6G-SANDBOX project, fostering community engagement, and supporting the project's communication and dissemination objectives.

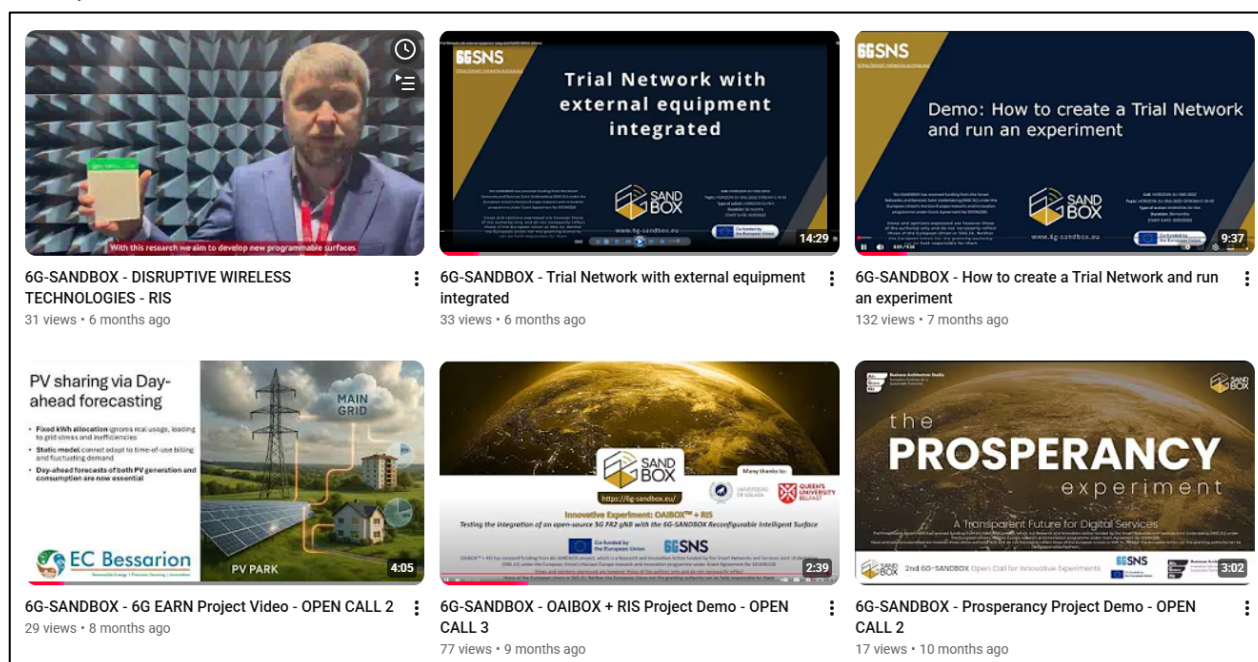


Figure 12 - An example of the 6G-SANDBOX YouTube home page

2.2.3 PRINTED MATERIAL (<https://6g-sandbox.eu/leaflets-posters/>)

In 2025, both the Introductory Poster and the Brochure were updated to reflect the correct Open Call dates and to incorporate the updated logo of the OTE partner. Furthermore, the Experimentation Poster was revised to include the latest partner-related updates and to provide a more detailed presentation of the 6G-SANDBOX experiments. Additionally, a new poster was developed in October 2025 to announce the **Large-Scale Trials** planned for S1 2026 (see Figure 13). The poster was introduced at the 6G-SANDBOX demo booth during the Thinknet 6G Summit 2025, held on 28–29 October 2025 in Nuremberg, Germany. Finally, during EuCNC 2026 & 6G Summit, the project circulated a new leaflet summarizing the **Achievements of the project** (see Figure 14).



Figure 13 - 6G-SANDBOX Poster on Large Scale Trials



Figure 14 - 6G-SANDBOX EuCNC 2026 Poster on Key Achievements

2.3 DISSEMINATION ACTIVITIES – PERIOD 2 (M19-M42)

This section is separated into two main sub-sections; the first one will present the period from **July 2024 to December 2025 (P2)** and the second one the extended period of months **(M37-M42)**. Overall, the Dissemination KPIs were achieved until December 2025, but the 6 months extension gave us the opportunity for greater exposure and some more key activities such as more scientific publications and the project's final participation at EuCNC 2026 & 6G Summit.

2.3.1 DISSEMINATION ACTIVITIES – PERIOD 2 (M19 – M36)

This section focuses on the Dissemination Activities performed, related metrics and relevant information, which took place during the second period of the project (July 2024 – December 2025).

As outlined in the 6G-SANDBOX Communication and Dissemination Plan (D6.1), the reporting period spans Phase 2 (M13–M24), Phase 3 (M25–M36), and, we must include the extended final phase (M37–M42). Throughout these stages, partners built upon the dissemination foundation established during the first project year, progressively intensifying their efforts to enhance the project's visibility, outreach, and overall impact.

Key dissemination activities included the publication of project progress and results through deliverables, scientific publications, IEEE conferences, exhibitions, industry it is, SNS JU initiatives, white papers, and collaborative engagements with other projects and international initiatives. In particular, 6G-SANDBOX maintained a strong presence in flagship international venues such as the **EuCNC & 6G Summit**, where partners contributed through workshops, special sessions, panels, and demonstrations. Additionally, our presence was strong at **Mobile World Congress** and complementary activities included participation in industry and community events such as the **5G Forum**, Tech Day Madrid workshops, SNS JU webinars, and targeted dissemination sessions with key stakeholders, strengthening engagement with both academic and industrial audiences.

The following sections provide a detailed overview of all dissemination activities carried out within the project. For ease of reference, Table 2 summarizes the overall dissemination KPIs of 6G-SANDBOX, alongside the annual targets defined in D6.1.

Table 2: 6G-SANDBOX Dissemination KPIs per year

Planned Activities	Dissemination metrics	Overall Target	Period	Y1	Y2	Y3
# of scientific papers in journals and conferences	Number of publications	>60	M9-M36	4	20	36
# of presentations in scientific events, fairs, conferences and workshops	Number of presentations	>20	M3-M36	4	6	10
# of Poster sessions, Panel Discussions, webinars	Number of poster sessions, panel Discussion, etc.	>5	M13-M36	-	2	3
# of workshops/special sessions 18rganized/co-organised	Number of events	>5	M18-M36	-	1	4
# of actions/liaison with other projects of the cluster and related associations	Number of actions	>10	M3-M36	2	3	5
# of events/conferences/fairs actively participated/attended	Number of events	>20	M3-M36	4	6	10

2.3.2 SUMMARY OF DISSEMINATION ACTIVITIES

This section focuses on the detailed presentation of the Dissemination Activities, performed during the second period of the project. Table 3 summarizes all the successfully performed 6G-SANDBOX dissemination activities in relation to the targets set in D6.1 (which are noted in Table 2).

Table 3: 6G-SANDBOX Dissemination Achievements for P1+P2 vs KPIs

Planned Activities	Dissemination metrics	Overall Target	Period	Target Y1 2023	Actual Y1	Target Y2 2024	Actual Y2	Target Y3 2025	Actual Y3	P2 M19-M36	Total P1+P2
# of scientific papers in journals and conferences, SNS JU white Papers and brochures	Number of publications	>60	M9-M36	4	15	20	29	36	26	41	69
# of presentations in scientific events, fairs, conferences and workshops	Number of presentations	>20	M3-M36	4	32	6	41	10	31	47	104
# of Poster sessions, Panel Discussions	Number of poster sessions, panel Discussion etc	>5	M13-M36	-	5	2	5	3	4	7	14
# of workshops/special sessions, webinars 19rganized/co-organised	Number of events	>5	M18-M36	-	7	1	3	4	3	4	13
# of actions/liaison with other projects of the cluster and related associations	Number of actions	>10	M3-M36	2	13	3	7	5	12	16	32
# of events/conferences/fairs actively participated/attended	Number of events	>20	M3-M36	4	24	6	25	10	13	27	62

2.3.2.1 SCIENTIFIC PAPERS IN JOURNALS, CONFERENCES, WHITE PAPERS

The second period of the project, 6G-SANDBOX project successfully submitted, **8 Journal Papers, 19 conference papers, 1 6G-SANDBOX White paper** and contributed to **7 6G-IA, and SNS JU white papers**. Finally, **7 papers** were derived from Open Call projects.

Starting with the category White papers/6G SNS Collaboration, 6G-SANDBOX published, in August 2024, a highly important white paper titled *“Third Party Experimentation: Engagement Process and Technical Information”* served as a comprehensive guide for potential experimenters, outlining how they can engage with and benefit from the 6G-SANDBOX facility. Moreover, the 6G-SANDBOX consortium has contributed through the participation of its partners in 6G-IA and SNS JU Working Groups, supporting the initiation and delivery of five white papers and one journal publication, as reported in Table 4: 6G-SANDBOX Publications.

Moreover, the 6G-SANDBOX partners contributed to the dissemination of research results through 8 peer-reviewed journal publications in high-esteemed journals. The first journal paper of the second period, entitled *“A 3D-Printing Metasurface-Augmented Half-Circle Maxwell Fisheye Lens for Millimetre-Wave Analogue Beamforming”*, was published in *Journal of Physics D: Applied Physics*, 2024 by Queen’s University Belfast partner.

In May 2025, the ICTficial partner delivered *“Roads Infrastructure Digital Twin: Advancing Situational Awareness through Bandwidth-Aware 360° Video Streaming and Multi-View Clustering”*, in IEEE Open Journal of Vehicular Technology, contributing to digital twin frameworks for smart roads. This activity was followed by the NCSR ‘Demokritos’ partner who delivered the journal paper titled *“Adversarial Robustness in Cognitive Systems: A Trustworthiness Assessment Perspective for 6G Networks”*, in Electronics, June 2025, highlighting various BERT-based cognitive coordinators in 6G networks.

Then, the same month, University of Málaga contributed with *“Evaluation of MTIP, MPTCP and MPQUIC for a Time-Sensitive Application”*, in IEEE Network, a study which compares the behavior of the Multi-connection Tactile Internet Protocol (MTIP) with two other well-known multipath protocols, Multipath TCP (MPTCP) and Multipath QUIC. Subsequently, additional contribution in the same journal in July 2025 included *“Deterministic Networking Empowered Robotic Teleoperation”* by ICTficial.

Further contributions comprise *“AIORA: An AI-Native Multi-Stakeholder Orchestration Architecture for 6G Continuum”*, in IEEE Network, 2025, with ICTficial and Telefónica to be among the authors; *“Enabling Modular and Intelligent IoRT Systems: Integrating the Model Context Protocol for Semantic Decoupling at the Edge”*, in IEEE IoT Magazine and *“Towards Robust & Secure Blockchain-based Communications in ITS”*, in IEEE Transactions on Vehicular Technology, 2025, with ICTficial being the author or co-author respectively.

Moreover, the second significant dissemination activity is the publication of papers in conferences and high-esteemed events.

In September 2024, ICTficial was among the co-authors of the paper *‘Semantic-enhanced Digital Twin for Industrial Working Environments’*, which was presented in proceedings of the 1st Global IoT and Edge Computing Summit (GIECS 2024), Brussels, Belgium.

Moreover, at IEEE CAMAD 2024, held on 23 September 2024, as part of the 1st ATHENA Workshop “Empowering 6G Networks”, four papers were presented: *“An AI-assisted User-Intent 6G System for Dynamic Throughput Provision”*, *“The B5G Athens Experimentation Platform”*, *“Multi-Connectivity Enhancements for the 6G Era”*, and *“Field Trial Validation of 5G-Connected UAVs towards QoS and Handover Analysis”*, derived from the collaboration of NCSR ‘Demokritos’, OTE, INFOLYSIS, and Lenovo.

In December 2024, the conference paper *‘Fairness-Utilization Trade-off in Wireless Networks with Explainable Kolmogorov-Arnold Networks’* submitted by University of Oulu and ICTficial was presented in the proceedings of IEEE Virtual Conference on Communications 2024, in December during the session 5: Machine Learning 2.

Finally, closing the year 2024, within the context of the prestigious IEEE GLOBECOM 2024, two conference papers were presented. The first paper, entitled *“External Memories of PDP Switches for In-Network Implementable Functions Placement: Deep Learning-Based Reconfiguration of SFCs”*, authored by University of Oulu and ICTficial, was presented in the session NGNI-S02: Deep Learning for Next Generation Networks. The second paper, entitled *“Demonstration on an EMDC with ML-Enabled Scaling and QKD-Secured Connectivity”*, with the IS-WIRELESS partner among the co-authors, was presented in the session MWN-S01: 5G/6G Networks.

The next year, in 2025, and in the context of EuCNC & 6G Summit 2025 which was held on the 3rd-6th of June 2025, in Poznan, Poland, the paper *‘Developing Adaptive Calibration and Benchmarking Methods for 6G Performance Measurement – Implementation and Conclusions from 6G-SANDBOX’* was presented in the context of OPE1 – Measurements and management of 5G/6G networks. The paper was a collaborative effort among Keysight, OTE, NCSR ‘Demokritos’, University of Oulu and University of Malaga.

Right after, within the same month, the 11th IEEE International Conference on Network Softwarization (IEEE NetSoft 2025) was held in Budapest, Hungary, from 23 to 27 June 2025. In this context, the paper entitled *“Deep Learning Based Service Composition in Integrated Aerial-Terrestrial Networks”*, submitted by University of Oulu and ICTficial, was presented during Short Papers Session 2: Machine Learning for Network Optimization by University of Oulu.

Finally, the summer 2025, closed with a conference paper titled *“GCA-YOLO: An Edge-optimized Traffic Sign Detection Model”* was presented in the proceeding of 2025 IEEE World Congress on Services which took place in Helsinki, Finland from the 7th to 12th of July 2025 submitted by ICTficial.

Later in fall, on the 10th-12th of November, 6G-SANDBOX project was a technical supporter of the 2nd ATHENA Workshop, “Empowering 6G Networks: Advancements in Research Infrastructures, Adaptive Frameworks, and Global Architectural Evolution.”

During the workshop paper acknowledging 6G-SANDBOX *“Prototyping an AI-Driven Cognitive Coordinator for Mapping User Intent to Trustworthiness in 6G Networks,”* highlighting innovations in AI-driven 6G network management was presented by NCSR “DEMOKRITOS”. The paper was a joint effort from the NCSR and INFOLYSIS partners.

Moreover, in December 2025 and in the context of IEEE GLOBECOM 2025, three papers were presented at IEEE GLOBECOM 2025 which was held in Taipei, Taiwan; *“Deep Learning-based Moving Target Defence for Federated Learning against Poisoning Attack in MEC Systems with a 6G Wireless Model”*, *“Traffic Steering-based Anomaly Prevention for User Request Provision in 6G Network Slices”*, and *“Adaptive Multiple Access and Service Placement for Generative Diffusion Models.”* Authors of these works include researchers from University of Oulu and ICTficial.

All the above publications collectively highlight the active involvement of 6G-SANDBOX partners in scientific dissemination and support the advancement of 6G research and innovation, in line with the project’s objectives.

In Table 4 below the reader can find the list of the above publications, as well as the publications derived from Open Calls, resulting from the work carried out within the Open Call projects with the support of the 6G-SANDBOX facilities.

All the publications are also available at <https://6g-sandbox.eu/dissemination/publications/>

Table 4: 6G-SANDBOX Publications for Period 2

JOURNAL PAPERS	
2024	
1	Alali, Bader, Dmitry Zelenchuk, and Muhammad Ali Babar Abbasi. ‘A 3D-Printing Metasurface-Augmented Half-Circle Maxwell Fisheye Lens for Millimetre-Wave Analogue Beamforming’ . <i>Journal of Physics D: Applied Physics</i> 58, no. 4, November 2024: 045304. https://doi.org/10.1088/1361-6463/ad8c55
2025	

2	Oussama El Marai, Sotirios Messinis, Nikolaos Doulamis, Tarik Taleb, and Jukka Manner, ‘Roads Infrastructure Digital Twin: Advancing Situational Awareness through Bandwidth-Aware 360° Video Streaming and Multi-View Clustering’ , IEEE Open Journal of Vehicular Technology, Vol. 6, May 2025, pp. 1348–1362; DOI: 10.1109/OJVT.2025.3572405 , ZENODO
3	Ilias Alexandropoulos, Harilaos Koumaras, Vasiliki Rentoula, Gerasimos Papanikolaou-Ntais, Spyridon Georgoulas & George Makropoulos, ‘Adversarial Robustness in Cognitive Systems: A Trustworthiness Assessment Perspective for 6G Networks’ , Electronics 2025, 14(11), 2285, June 2025; https://doi.org/10.3390/electronics14112285
4	D. Rico, F. Luque-Schempp and P. Merino, “Evaluation of MTIP, MPTCP and MPQUIC for a Time-Sensitive Application,” in <i>IEEE Network</i> , p1-1, June 2025, DOI: 10.1109/MNET.2025.3583261 https://ieeexplore.ieee.org/document/11050396/
5	C. Yang, H. Yu, Q. Guo, T. Taleb, J. C. Requena, and K. Tammi, ‘Deterministic Networking Empowered Robotic Teleoperation’ , IEEE Network, vol. 39, issue 4, pp. 280-289, July 2025; DOI: 10.1109/MNET.2024.3483930 , ZENODO
6	Nuria Molner, Luis Rosa, Fulvio Risso, Konstantinos Samdanis, David Artunedo, Rob Smets, Tarik Taleb, and David Gomez-Barquero, ‘AIORA: An AI-Native Multi-Stakeholder Orchestration Architecture for 6G Continuum’ , IEEE Network, August 2025, pp. 1–1; DOI: 10.1109/MNET.2025.3596343 , ZENODO
7	A. Yoshimura, Y. Chen, J. Nakazato, T. Taleb, M. Tsukada, and H. Esaki, ‘Towards Robust & Secure Blockchain-based Communications in ITS’ , IEEE Transactions on Vehicular Technology, October 2025, pp. 1–5; DOI: 10.1109/TVT.2025.3619191 , ZENODO
8	Qize Guo, Yan Chen, Tarik Taleb, and Chao Yang, ‘Enabling Modular and Intelligent IoRT Systems: Integrating the Model Context Protocol for Semantic Decoupling at the Edge’ , IEEE IoT Magazine, November 2025, p. 99; DOI: 10.1109/MIOT.2025.3615709 ; ZENODO
CONFERENCE PAPERS	
2024	
9	Goncalves Machado, Gabriel; McKernan, A.; Gu, C.; Zelenchuk, D.; Saikia, M.; Yurduseven, Okan; Cotton, S.; Abbasi, Muhammad Ali Babar, ‘A Modified 1-Bit Unit-Cell for mmWave RIS Optimized at Extreme Incident Angle’ , in Proc. 2024 IEEE AP-S/URSI Symposium, July 2024 DOI: 10.1109/AP-S/INC-USNC-URSI52054.2024.10685974 ; (ZENODO) *6G-SANDBOX acknowledgement is missing by mistake, but the content of the paper reflects the work of QUB partner on 6G-SANDBOX
10	Chao Yang, Qize Guo, Hao Yu, Yan Chen, Tarik Taleb, and Kari Tammi, ‘Semantic-enhanced Digital Twin for Industrial Working Environments’ , in Proc. Of Global IoT and Edge Computing Summit (GIECS 2024), Brussels, Belgium, Sep. 2024; DOI: https://doi.org/10.1007/978-3-031-78572-6_1 ; Springer Link: https://link.springer.com/chapter/10.1007/978-3-031-78572-6_1 , (ZENODO)
11	I. Alexandropoulos, V. Rentoula, D. Fragkos, N. Gkatzios, ‘An AI-assisted User-Intent 6G System for Dynamic Throughput Provision’ , in Proc. <i>IEEE CAMAD 2024</i> , October 2024, (ZENODO)
12	H. Koumaras, D. Fragkos, V. Pitsilis, G. Makropoulos, G. Lyberopoulos, E. Theodoropoulou, F. Setaki, I. Mesogiti, D. Diakakis, N. Gkatzios, C. Fragkos, V. Koumaras, ‘The B5G Athens Experimentation Platform’ , in Proc. <i>IEEE CAMAD 2024</i> , October 2024, (ZENODO)
13	Dimitrios Dimopoulos, Apostolis K. Salkintzis, ‘Multi-Connectivity Enhancements for the 6G era’ in Proc. <i>IEEE CAMAD 2024</i> , October 2024, (ZENODO)
14	G. Makropoulos, I. Manolopoulos, H. Koumaras, G. Lyberopoulos, F. Setaki, E. Theodoropoulou, I. Mesogiti ‘Field Trial Validation of 5G-Connected UAVs towards QoS and Handover Analysis’ , Proc. <i>IEEE CAMAD 2024</i> , October 2024, (ZENODO)
15	S. Kianpisheh, T. Taleb, “External Memories of PDP Switches for In-Network Implementable Functions Placement: Deep Learning Based Reconfiguration of SFCs,” IEEE GLOBECOM 2024, pp. 2623-2628, December 2024, DOI: 10.1109/GLOBECOM52923.2024.10901445 ZENODO
16	S. Rommel, P. Kulesza, A. Flizikowski, A. Kumar, M. M. Mowla, S. Ahearne, B. Cimoli, and I. T. Monro, “5G Demonstration on an EMDC with ML Enabled Scaling and QKD-Secured Connectivity” in IEEE GLOBECOM 2024 Cape Town, South Africa, December 2024 (DOI) ZENODO
17	Masoud Shokrnezhad, Hamidreza Mazandarani, and Tarik Taleb, ‘Fairness-Utilization Trade-off in Wireless Networks with Explainable Kolmogorov-Arnold Networks’ , in Proc. <i>IEEE Virtual Conference on Communications 2024</i> , December 2024; DOI: https://doi.org/10.48550/arXiv.2411.01924 , ZENODO

2025	
18	Saleem, I., Abbasi, M. A. B., Mukhopadhyay, S., Zelenchuk, D., Inaltekin, H., & Abbas, S. M., ‘Significance of Extreme Reflection Angles in RIS-Assisted Wireless Networks’ , in proc. 2025 19 th European Conference on Antennas and Propagation (EuCAP), Stockholm, Sweden, March-April 2025, DOI: 10.23919/EuCAP63536.2025.10999713 , ZENODO
19	Ferhad Kasem, Gabriel MacHado, Simon Cotton, Muhammad Ali Babar Abbasi, Dmitry Zelenchuk, ‘Experimental Verification of Broadband mmWave RIS-Aided Communications: Codebook-Based Beam Steering and Indoor Channel Measurements’ , in proc. 2025 19 th European Conference on Antennas and Propagation (EuCAP), Stockholm, Sweden, March-April 2025, DOI: 10.23919/EuCAP63536.2025.10999970 , ZENODO
20	Ivanovic, F., Setaki, F., Pauanne, A., Koumaras, H., Herrera Diaz, P., Dieudonne, M., Reimer, B., & Bakshi, A. (2025, June 6). Developing Adaptive Calibration and Benchmarking Methods for 6G Performance Measurement – Implementation and Conclusions from 6G-SANDBOX . European Conference on Networks and Communications & 6G Summit 2025 (EuCNC 2025), Poznan, Poland. ZENODO
21	Mohammad Farhoudi, Masoud Shokrnezhad, Somayeh Kianpisheh, and Tarik Taleb, ‘Deep Learning Based Service Composition in Integrated Aerial-Terrestrial Networks’ , in Proc. 2025 IEEE 11 th International Conference on Network Softwarization (NetSoft), Budapest, Hungary, June 2025; ZENODO
22	Peiyan Yuan, Yifan Pei, Chenyang Wang, Xiaoyan Zhao, Zhou Liu, and Tarik Taleb, ‘GCA-YOLO: An Edge-optimized Traffic Sign Detection Model’ , in Proc. 2025 IEEE World Congress on Services, Helsinki, Finland, July 2025, pp. 359-364, DOI: 10.1109/ICWS67624.2025.00051. ZENODO
23	Harilaos Koumaras, Spyridon Georgoulas, Georgios Batsis, Evangelos Anagnostopoulos, Vaios Koumaras, George Makropoulos, ‘Prototyping an AI-Driven Cognitive Coordinator for Mapping User Intent to Trustworthiness in 6G Networks’ , November 2025, IEEE SDN-NFV 2025 ZENODO
24	Somayeh Kianpisheh, Tarik Taleb, Jari Linatti, and JaeSeung Song, Deep Learning based Moving Target Defence for Federated Learning against Poisoning Attack in MEC Systems with a 6G wireless Model’ , in Proc. IEEE Globecom 2025, Taipei, Taiwan, Dec. 2025. ZENODO
25	Zhao Ming, Kai Dong, and Tarik Taleb, ‘Traffic Steering based Anomaly Prevention for User Request Provision in 6G Network Slices’ , in Proc. IEEE Globecom 2025, Taipei, Taiwan, Dec. 2025. ZENODO
26	Hamidreza Mazandarani, Mohammad Farhoudi, Masoud Shokrnezhad, and Tarik Taleb, Adaptive Multiple Access and Service Placement for Generative Diffusion Models’ , in Proc. IEEE Globecom 2025, Taipei, Taiwan, December 2025. ZENODO
WHITE PAPERS & 6G-IA & SNS JU WHITE PAPERS	
2024	
27	6G-SANDBOX, Third Party Engagement Guide V1.0 , August 2024
28	6G-IA Vision Working Group, European Vision for the 6G Network Ecosystem , November 2024
29	SNS JU Reliable Software Networks WG – Network & Service Management Advancements – Key frameworks and Interfaces towards open, Intelligent and reliable 6G networks , December 2024
2025	
30	SNS JU TB – AI/ML as a Key Enabler of 6G Networks: Methodology, Approach and AI-Mechanisms in SNS JU , January 2025
31	SNS JU Test, Measurement, and KPIs Validation (TMV) WG, 6G KPIs – Definitions and Target Values , January 2025
32	SNS JU, 6G Architecture WG – Towards 6G Architecture: Key Concepts, Challenges and Building Blocks , May 2025
33	SNS CO-OP, SNS JOURNAL/2025 , June 2025
34	SNS JU, SNS JU Trial and Pilots – Brochure No1 , June 2025
PUBLICATIONS DERIVED from OPEN CALLS	
2024	
35	A. Giannopoulos, S. Spantideas, G. Levis, A. Kalafatis, P. Trakadas, ‘COMIX: Generalized Conflict Management in O-RAN xApps – Architecture, Workflow, and a Power Control case’ , 2024 IEEE 100 th Vehicular Technology Conference (VTC2024-Fall), October 2024, IEEE Explore – REACT-6G project,
36	S. Kalafatis; G. Agrafiotis; K. Giapantzis; A. Lalas; K. Votis, ‘Experiments with Digital Security Processes over SDN-Based Cloud-Native 5G Core Networks’ , 2024 27 th Conference on Innovation in Clouds, Internet and Networks (ICIN), March 2024, DOI: 10.1109/ICIN60470.2024.10494481 . – ARROW Project
37	G. Agrafiotis; S. Kalafatis; K. Giapantzis; A. Lalas; K. Votis, ‘Advancing Cybersecurity with AI: A Multimodal Fusion Approach for Intrusion Detection Systems’ , 2024 IEEE International Mediterranean Conference on Communications and Networking (MeditCom), July 2024, DOI: 10.1109/MeditCom61057.2024.10621237 – ARROW Project

38	Zanini, L. Petrucci, I. Palamà, G. Bianchi, and S. Bartoletti, “Towards End-to-end Implementation of 5G Positioning with Off-the-shelf Devices” , 2024 IEEE 100 th Vehicular Technology Conference: VTC2024-Fall, Washington DC, October 2024, DOI: 10.1109/VTC2024-Fall63153.2024.10757829 – ANALYSAT Project
39	C. D. N. Kyriakidou, I. Pittaras, A. M. Papathanasiou, G. Xylomenos, G.C. Polyzos “Performance of Smart Contract-based Digital Twins for the Internet of Things” , MIDD4DT '24: 25 th International Middleware Conference, 2 nd International Workshop on Middleware for Digital Twins, December 2024, DOI: https://dl.acm.org/doi/10.1145/3702636.3703442 – SCDT Project
2025	
40	Otero-Mosquera, J., Meleiro Estévez, A., Fondo-Ferreiro, P., Luque-Schempp, F., Gil-Castiñeira, F., & Merino-Gomez, P. (2025, June 6) “Reproducible Key Performance Indicator (KPI) Measurement Experiments in 6G Networks under Mobility Conditions” , European Conference on Networks and Communications & 6G Summit 2025 (EuCNC 2025), Poznan, Poland. – 6G-MOBKPI project (ZENODO)
41	C. Barjau Estevan; J. S. Roldán; B. Iñesta; D. Gómez-Barquero; M. del Mar Moreno Escaño, “Design of an End-to-End and Open-Source 5G MBS SDR Validation Pilot” , IEEE International Symposium on Broadband Multimedia Systems and Broadcasting, June 2025 – 6G-VLCBOX project (ZENODO)

2.3.2.1 PRESENTATIONS IN SCIENTIFIC EVENTS, FAIRS, CONFERENCES, WORKSHOPS

During the second period of the project, the project partners delivered a total of **47 presentations** at various events and conferences. Overall, 6G-SANDBOX was very well represented at international conferences and events, SNS JU events, local events, as well as events organized by other projects or in collaboration with them. The partners maintained a consistent and dynamic presence, effectively promoting the project while addressing both its technical dimensions and its broader experimental impact.

Table 5 provides a chronological overview of all presentations delivered under the project. In the same section, selected presentations are described in greater detail, including information on the presenting partners and the specific events where they were delivered.

Table 5: 6G-SANDBOX Presentations

#	EVENT	PARTNER	DATE / LOCATION	TITLE
July – December 2024				
1	2nd Conference on Radiocommunications and Teleinformatics	IS-WIRELESS	11th – 14th September 2024, Poznan, Poland	IS-Wireless: Experience from the participation in 6G projects
2	SNS JU Webinar ,Collaborations between C/D and A/B projects‘	FOGUS	4th October 2024, Online	The 6G-SANDBOX Case
3	3rd EU-TAIWAN 6G SNS Joint Workshop, ,EU-TAIWAN Projects Experience Sharing and Future Plan Session‘	Keysight	8th October 2024, Tapei, Taiwan	6G-SANDBOX Experimentation
4	IEEE Future Networks World Forum, Symposium on 6G Communications, Dubai, UE	Keysight	15th-17th October 2024, Dubai, UE	6G-SANDBOX Research Program Portfolio
5	IEEE CAMAD 2024 - Empowering 6G Networks: First Workshop on Advancements in Research Infrastructures, Adaptive Frameworks and Global	Lenovo	21st-23rd October 2024, Athens, Greece	Multi-Connectivity Enhancements for the 6G era

	Architectural Evolution (Athena 2024) – Part 1			
6	IEEE CAMAD 2024 - Empowering 6G Networks: First Workshop on Advancements in Research Infrastructures, Adaptive Frameworks and Global Architectural Evolution (Athena 2024) – Part 2	INFOLYSiS	21st-23rd October 2024, Athens, Greece	An AI-assisted User-Intent 6G System for Dynamic Throughput Provision
7	IEEE CAMAD 2024 - Empowering 6G Networks: First Workshop on Advancements in Research Infrastructures, Adaptive Frameworks and Global Architectural Evolution (Athena 2024) – Part 3	NCSR“DEMOKRITOS”	21st-23rd October 2024, Athens, Greece	Field Trial Validation of 5G-Connected UAVs towards QoS and Handover Analysis
8	Annual CWI Symposium – Intelligent & Sustainable Wireless Networks	Queen’s university of Belfast	24th October 2024, Belfast, UK	Reconfigurable intelligent surfaces and antennas for mm-wave applications
9	12th Fuseco Forum, rack 2 Session 2 Workshop „How Campus Networks Enable 6G – Ecosystems and Technologies Beyond 5G“ (Part 1)	Keysight	7th-8th November 2024, Berlin, Germany	6G-SANDBOX: Update on Experimentation Results
10	12th Fuseco Forum, rack 2 Session 2 Workshop „How Campus Networks Enable 6G – Ecosystems and Technologies Beyond 5G“ (Part 2)	Telefónica	7th-8th November 2024, Berlin, Germany	Technology Validation and Measurement Campaigns for Non-terrestrial Networks
11	NTN Workshop – Hexa-X-II	Keysight	7th November 2024, Online	Study in digital twin to assess the impact of massive random access in sparse NTN Leo constellation
12	NTN Workshop – Hexa-X-II	University of Málaga	7th November 2024, Online	NTN/TN integration with a focus on multi-connectivity
13	ETSI, Software and Standards for Smart Networks and Services Conference & Hackfests, France, SESSION 4	FOGUS	12th-14th November 2024, Sophia Antipolis, France	SDG OpenCAPIF – A Common Framework for API Exposure and Consumption
14	ARMMS RF & Microwave Society	Queen’s university of Belfast	19th November 2024, The Cambridge Belfry, Cambourne, UK	RIS Hardware Optimization at Extreme Incident Angles for mmWave Communication Application
15	IEEE Virtual Conference on Communications 2024	University of Oulu	3rd-5th December 2024, Virtual	Fairness-Utilization Trade-off in Wireless Networks with Explainable Kolmogorov-Arnold Networks
16	IEEE GLOBECOM 2024	IS-WIRELESS	8th-12th December 2024	5G Demonstration on an EMDC with ML-Enabled Scaling and QKD Secured Connectivity

January- December 2025				
17	6G Laboratory Opening, University of Malaga	Keysight	17th January 2025, Malaga, Spain	6G-SANDBOX & 6G Lab – Let’s run experiment!
18	New Space and Solutions Event, Spain	University of Málaga	17th -21st March 2025, Sevilla, Spain	Victoria Satélite: Integración de redes 6G y satélite en la Red Victoria en el contexto de 6G-SANDBOX
19	ETSI 6G Monday	FOGUS	14th April 2025, Sophia Antipolis, France	The 6G-SANDBOX Approach on Leveraging and Contributing to Open Source
20	5G FORUM 2025	University of Málaga	12th-16th May 2024, Sevilla, Spain	Los Proyectos Europeos que desarrollan y prueban 6G sobre Red Victoria
21	EuCNC 2025 & 6G Summit – Workshop 3 – Integrating Network Digital Twinning into Future AI-based 6G Systems	Keysight	3rd June 2025, Antwerp, Belgium	6G-SANDBOX presentation
22	EuCNC 2025 & 6G Summit – Workshop 4 – Workshop on Results and findings from SNS B5G large-scale trials and experimentations	University of Málaga	3rd June 2025, Antwerp, Belgium	Session 1 – Platform and network solutions – 6G-SANDBOX presentation
23	EuCNC 2025 & 6G Summit – Workshop 4 – Workshop on Results and findings from SNS B5G large-scale trials and experimentations	Keysight	3rd June 2025, Antwerp, Belgium	Session 2 – Results from the trials and experimentations – 6G-SANDBOX Presentation
24	EuCNC 2025 & 6G Summit – Workshop 16: 6G Experimentation Methodologies, Pitfalls, and Best Practices	Keysight	3rd June 2025, Antwerp, Belgium	Approaches on how to calibrate a testbed in an experimental platform, best practices
25	EuCNC 2025 & 6G Summit – Workshop 17: EU-US Cooperation on Advanced Research Platforms	EURESCOM	3rd June 2025, Antwerp, Belgium	SNS JU Programme Approach Towards Data Re-usability and the 6G-SANDBOX Toolkit
26	EuCNC 2005 & 6G Summit – Technical Track: OPE1 – Measurements and management of 5G/6G networks	Keysight	4th June 2025, Antwerp, Belgium	Developing Adaptive Calibration and Benchmarking Methods for 6G Performance Measurement
27	11th IEEE International Conference on Network Softwarization, Budapest	University of Oulu	24th June 2025, Budapest, Hungary	Deep Learning Based Service Composition in Integrated Aerial-Terrestrial Networks
28	SIRADEL Webinar ,“Advanced Simulation and Testing Solutions for B5G/6G Enabling Technologies”	Keysight	3rd July 2025, Online	6G-SANDBOX Introduction and Live application of Keysight and Siradel Solution
29	NTN FORUM 2025	Keysight	9th September 2025, Online	From Orbit to Opportunity: Unlocking NTN Potential with 6G Technologies

30	28th International Workshop on Smart Antennas 2025 (WSA 2025)	Keysight	18th September 2025, Erlangen, Germany	Keynote Speech: Overview of past and future 6G Technologies trials – Announcement of RIS Trials
31	6G-RIC Research and Innovation Cluster project Meeting	Keysight	14th – 15th October 2025, Berlin, Germany	Is Wireless Layer Testing Dead? How 6G will change the way we test Networks?
32	ThinkNet 6G Summit 2025,	Keysight	28th – 28th October 2025, Nuremberg, Germany	6G-SANDBOX project, Results and ist Future
33	5th NTN-Workshop: Towards a unified TN-NTN system	Keysight	6th November 2025	One Network, All the Time: Ensuring Performance in a Converged TN-NTN Ecosystem
34	IEEE Future Networks World Forum, Symposium on Future Networks/6G Communication	Keysight	10-12 November 2025, Bangalore, India	6G-SANDBOX Project
35	11th IEEE Conference on Network Function Virtualization and Software Defined Networks (IEEE NFV-SDN 2025)	NCSR ,DEMOKRITOS’	10-12 November 2025	Prototyping an AI-Driven Cognitive Coordinator for Mapping User Intent to Trustworthiness in 6G Netwo
36	SME WG Plenary Meeting	INFOLYSIS	2nd December 2025	6G-SANDBOX Overview and Announcements (Webinar, Trials)
37	SNS JU unveils ist 2025 Top-10 Key Achievements: Leading Europe’s 6G Innovation	FOGUS	3rd December 2025	6G-SANDBOX: Experimentation Infrastructure as a Service (EiaaS) Toolkit
38	6G-SANDBOX Webinar: 6G-SANDBOX Unveiled: Project Achievements and Experimental Results DAY 1	Keysight	10th Decemeber 2025	6G-SANDBOX project Introduction
39	6G-SANDBOX Webinar: 6G-SANDBOX Unveiled: Project Achievements and Experimental Results DAY 1	FOGUS	10th Decemeber 2025	The Trial Networks Concept
40	6G-SANDBOX Webinar: 6G-SANDBOX Unveiled: Project Achievements and Experimental Results DAY 1	Fraunhofer – Fokus	10th December 2025	Trial Infrastructures
41	6G-SANDBOX Webinar: 6G-SANDBOX Unveiled: Project Achievements and Experimental Results DAY 1	Keysight	10th December 2025	Introduction to Experiments
42	6G-SANDBOX Webinar: 6G-SANDBOX Unveiled: Project Achievements and Experimental Results DAY 2	University of Málaga	11th December 2025	Experimental Results – PHY Layer & Propagation (RIS)

43	6G-SANDBOX Webinar: 6G-SANDBOX Unveiled: Project Achievements and Experimental Results DAY 2	Keysight	11th December 2025	Experimental Results – Programmable Scalable ORAN networks
44	6G-SANDBOX Webinar: 6G-SANDBOX Unveiled: Project Achievements and Experimental Results DAY 2	IS-WIRELESS	11th December 2025	Experimental Results – Application Oriented Results
45	6G-SANDBOX Webinar: 6G-SANDBOX Unveiled: Project Achievements and Experimental Results DAY 2	NOKIA	11th December 2025	Testbeds callibration and benchmarking
46	6G-SANDBOX Webinar: 6G-SANDBOX Unveiled: Project Achievements and Experimental Results DAY 2	Keysight	11th December 2025	Experimental Results – PHY Layer & Propagation (RIS)
47	IEEE GLOBECOM 2025	Keysight	11th December 2025	Next G – A Confluence of 6G & AI with the Digital Twin Bridge

1. 2nd Conference on Radiocommunications and Teleinformatics

The 2nd Conference on Radiocommunications and Teleinformatics took place on 11th-14th September at Poznań University of Technology, Poland. Robert Gdowski, Innovation Manager at IS-Wireless, presented insights from participating in European 6G projects, including 6G-SANDBOX. The 6G-SANDBOX project was showcased as a representative example of IS-Wireless' 5G/6G laboratory and testbed deployments. The presentation highlighted the project's strategic importance within the Smart Networks and Services Joint Undertaking (SNS JU), recognizing its role as one of the three core 6G testbed projects supporting researchers across Europe.

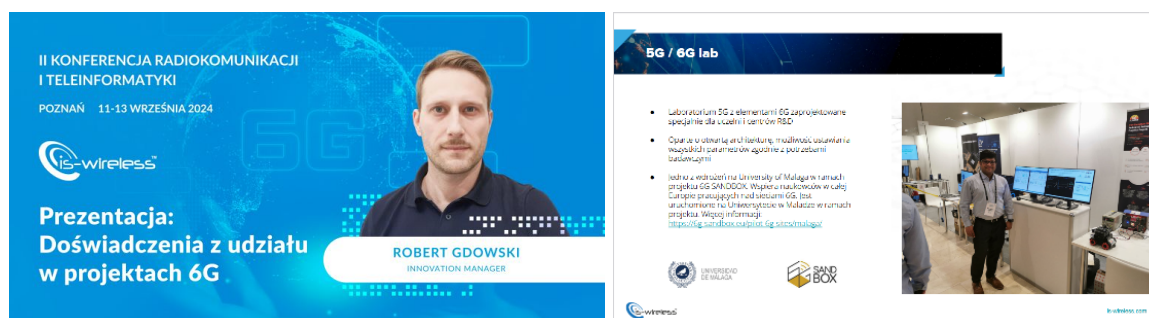


Figure 15 - Indicative Representation of 6G-SANDBOX contributions to the Second Conference on Radiocommunications and Teleinformatics

2. 3rd EU-TAIWAN 6G SNS Joint Workshop ‘EU-TAIWAN Projects Experience Sharing and Future Plan Session’

On the 8th October 2024, during the 3rd EU–Taiwan 6G SNS Joint Workshop, Michael Dieudonne, Project Coordinator of 6G-SANDBOX from Keysight Technologies, presented the project in the “EU–Taiwan Projects Experience Sharing and Future Plan” session and participated in the panel discussion on “6G Trial Network.”



Figure 16 - Project Coordinator Michael Dieudonne presenting 6G-SANDBOX at the EU-Taiwan Projects Experience Sharing and Future Plan Session

3. IEEE Future Networks World Forum, Symposium on 6G Communications

The IEEE Future Networks World Forum was held in Dubai on 15–17 October 2024. In this context, Isaam Maaz from Keysight Technologies presented during the Symposium on 6G Communications, showcasing Keysight’s research portfolio with a focus on 6G-SANDBOX testbeds, digital twins, and experimentation opportunities.

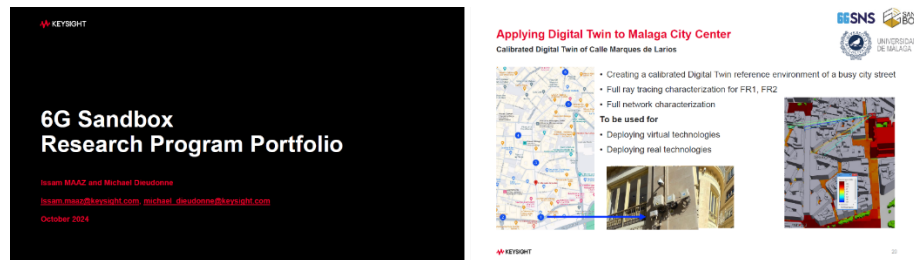


Figure 17 - Indicative Representation of 6G-SANDBOX contributions to the IEEE Future Networks World Forum Symposium

4. IEEE CAMAD 2024 – 1st ATHENA WORKSHOP

On the 21st-23rd of October 2024, IEEE CAMAD 2024, took place in Athens, Greece. There, in the context of the Workshop ‘*Empowering 6G Networks: First Workshop on Advancements in Research Infrastructures, Adaptive Frameworks and Global Architectural Evolution (Athena 2024)*’, our partners LENOVO, INFOLYSIS and NCSR ‘Demokritos’ presented the following 3 papers:

- Alexandropoulos, V. Rentoula, D. Fragkos, N. Gkatzios, ‘An AI-assisted User-Intent 6G System for Dynamic Throughput Provision’, in Proc. IEEE CAMAD 2024, October 2024
- Dimitrios Dimopoulos, Apostolis K. Salkintzis, ‘Multi-Connectivity Enhancements for the 6G era’ in Proc. IEEE CAMAD 2024, October 2024, (Accepted)
- G. Makropoulos, I. Manolopoulos, H. Koumaras, G. Lyberopoulos, F. Setaki, E. Theodoropoulou, I. Mesogiti ‘Field Trial Validation of 5G-Connected UAVs towards QoS and Handover Analysis’, Proc. IEEE CAMAD 2024, October 2024

To learn more about 6G-SANDBOX project role in the event please read section Organized and co-organized events, workshops, special sessions .



Figure 18 - 6G-SANDBOX related papers are presented at IEEE CAMAD 2024

5. Annual CWI Symposium – Intelligent & Sustainable Wireless Networks

On the 24th of October 2024, our partner, Queen's University Belfast hosted their Annual Symposium. This event showcased the future Antennas and Propagation and their pivotal role in advancing 6G technologies. Topics covered a wide range of applications, including Wireless Communications, Sensing, Imaging, and the Internet of Things (IoT). During session 1, ANTENNAS & PROPAGATION, Dr. Dmitry Zelenchuk, presented RIS and antennas and QUB's work in 6G-SANDBOX.

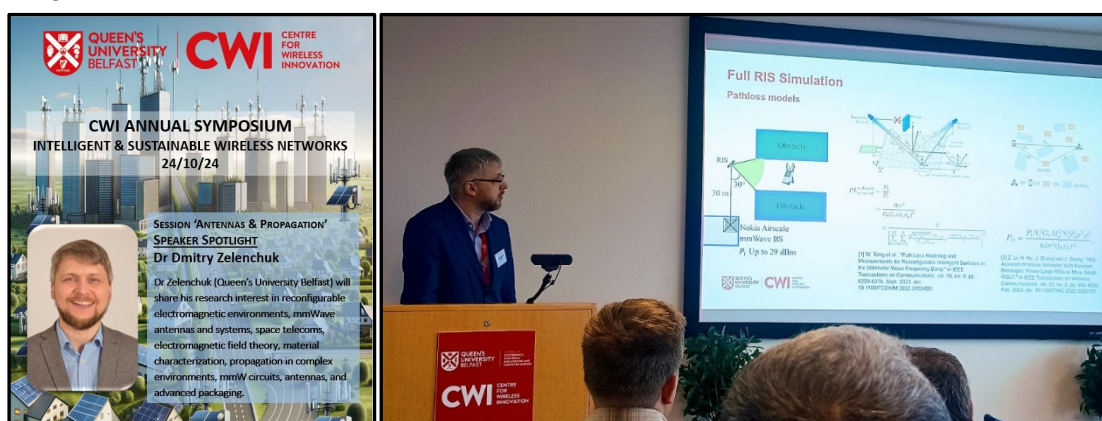


Figure 19 - Dr Zelenchuk from QUB presents RIS and Antennas alongside QUB's contributions to 6G-SANDBOX at the annual CWI symposium

6. NTN workshop – HEXA-X-II

On the 7th of November, Michael Dieudonne, María Isabel Quesada Gil from Keysight and Delia Rico from University of Málaga, participated in the NTN workshop, organized by HEXA-X-II and other NTN projects like 6G-NTN, ETHER and 5G-STARDUST with a primary goal of fostering mutual learning and collaboration.

Our partners delivered two presentations:

- **NTN/TN integration with a focus on multi-connectivity** – University of Málaga presented 6G-SANDBOX efforts in NTN/TN integration with a focus on multi-connectivity.
- **Study in digital twin to assess the impact of massive random access in sparse NTN Leo constellation** – Keysight presented the 6G for the deployment of satellite networks in the paradigm of non-terrestrial networks (NTN).

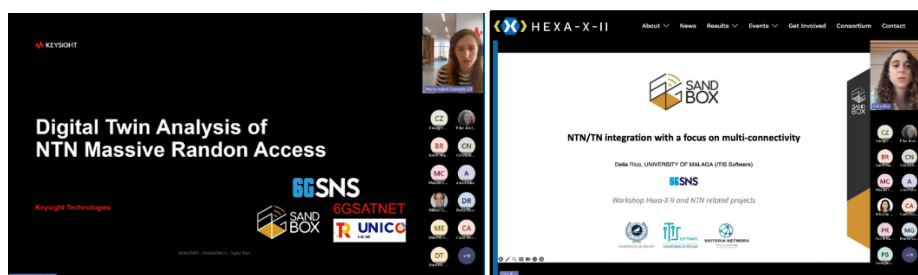


Figure 20 - 6G-SANDBOX researchers presenting at the HEXA -X -II NTN Workshop

7. IEEE GLOBECOM 2024

In the context of the IEEE GLOBECOM 2024, which was held in Cape Town, South Africa, on the 8th-12th of December, a paper by IS-Wireless partner, acknowledging the 6G-SANDBOX project, was presented during the session MWN-S01: 5G/6G Networks. The paper, titled ‘5G Demonstration on an EMDC with ML-Enabled Scaling and QKD Secured Connectivity’.



Figure 21 - 6G-SANDBOX Partner IS-Wireless presents a paper relating to work done in 6G-SANDBOX at GLOBECOM 2024

9. New Space and Solution Event

The New Space & Solutions event took place in Seville from March 17th to 21st. In this context, Dr. Delia Rico, from University of Málaga, delivered a presentation titled **“Victoria Satellite: Integration of 6G and Satellite Networks into the Victoria Network in the context of 6G-SANDBOX.”**



Figure 22 – 6G-SANDBOX related presentations done by Dr Rico and Prof. Pedro Merino-Gomez from UMA at the New Space and Solution Event

10. ETSI 6G MONDAY

The 6G Monday event was held on the 14th of April 2025 in Sophia Antipolis, France and showcased EU-funded projects contributing to the development of 6G standards. Dr. Dimitris Tsolkas, Vice Chair of the ETSI SDG OpenCAPIF

and a representative of FOGUS, presented the 6G-SANDBOX project during Session 3 titled 'From Research to Standards – EU Projects Making Real Impact in ETSI.' Moderated by David Boswarthick, ETSI's Director of Strategy & Innovation. Dr. Dimitris Tsolkas highlighted the 6G-SANDBOX project's approach on leveraging and contributing to open-source.

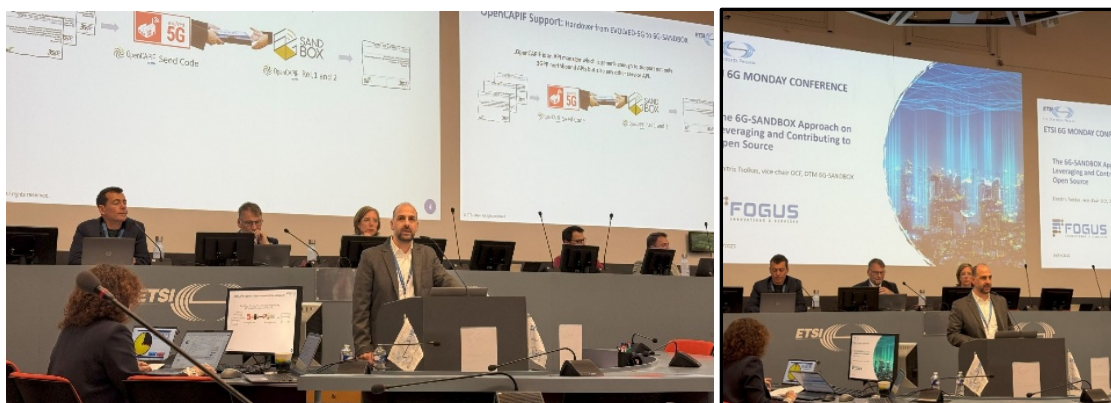


Figure 23 - Dr Tsolkas presents 6G-SANDBOX at ETSI 6G Monday

11. EuCNC 2025 & 6G Summit

On the 3rd to 6th June 2025, EuCNC & 6G Summit, one of the most annual prestigious events, took place in Poznan, Poland. 6G-SANDBOX project was there for 3rd consecutive year, with various activities. 6G-SANDBOX project was actively represented across six high-profile workshops, a special session, and a technical track, contributing to discussions that shape the future of 6G experimentation and innovation. Here are the key highlights:

Presentations in Workshops

Workshop 3: Integrating Network Digital Twinning into Future AI-based 6G Systems

6G-SANDBOX contributed to this collaborative session with projects including 6G-TWIN, SEASON, PREDICT-6G, and others. Project coordinator, Michael Dieudonné (Keysight Technologies) presented 6G-SANDBOX.

Workshop 4: Results from SNS B5G Large-Scale Trials and Experimentations

Our project was represented by Prof. Pedro Merino Gómez (University of Málaga) at Session 1 – Platform and network solutions and Filip Ivanovic (Keysight) at Session 2 – Results from the trials and experimentations.



Figure 24 - Prof. Pedro Merino Gómez from UMA presents results from 6G-SANDBOX at EuCNC 2025

Workshop 16: 6G Experimentation Methodologies, Pitfalls, and Best Practices

Organized by our project coordinator, Michael Dieudonné, this workshop brought together insights from 6G-SANDBOX, CONVERGE, 6G-XR, TRIALSNET and more. The 6G-SANDBOX presentation was entitled ‘Approaches on how to calibrate a testbed in an experimental platform, best practices’.



Figure 25 – Project Coordinator Michael Dieudonné presents 6G-SANDBOX approaches to testbed calibration at Workshop 16 at EUCNC 2025

Workshop 17: EU-US Cooperation on Advanced Research Platforms

Anastasius Gavras (Eurescom) presented the “SNS JU Programme Approach Towards Data Re-usability and the 6G-SANDBOX Toolkit”, reinforcing international collaboration on experimentation infrastructure.



Figure 26 - Anastasius Gavras from EURE presents the 6G-SANDBOX Toolkit at Workshop 17 at EUCNC 2025

Presentations in Technical Track

Technical Track: OPE1 – Measurements and Management of 5G/6G Networks

The 6G-SANDBOX paper presented by Filip Ivanovic, from Keysight which was built on insights from Deliverable 5.3 ‘Intermediate Report on KPI and KVI Validation’ entitled ‘*Developing Adaptive Calibration and Benchmarking Methods for 6G Performance Measurement – Implementation and Conclusions from 6G-SANDBOX*’. The paper addresses a key challenge in 6G experimentation: how to make performance results meaningful and comparable across virtualized, platform-diverse environments. With 6G’s reliance on virtualized and Service-Based Architectures (SBA), contextualizing performance is more complex than in previous generations.

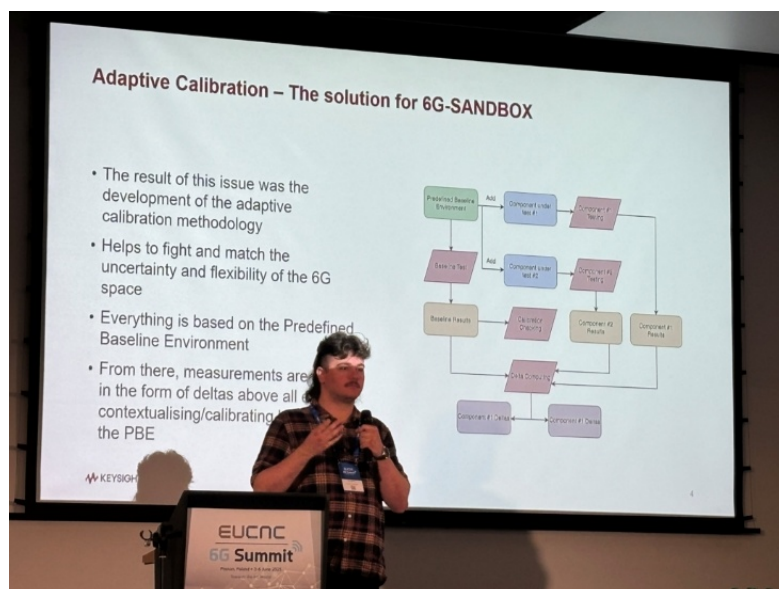


Figure 27 - Filip Ivanovic from KEYD presents a paper related to benchmarking of virtualized deployments at EUCNC 2025

12. 11th IEEE International Conference on Network Softwarization (IEEE NetSoft 2025)

The IEEE NetSoft 2025 took place in Budapest, Hungary, from 23 to 27 June 2025. The paper acknowledging 6G-SANDBOX, titled “Deep Learning Based Service Composition in Integrated Aerial-Terrestrial Networks”, co-authored by the University of Oulu and ICTficial, was presented by Mohammad Fahroudi during Special Session SPS2: Machine Learning for Network Optimization on the 24th of June.



Figure 28 - Mohammad Fahroudi presents a paper relating to work done in 6G-SANDBOX at IEEE NetSoft 2025

13. 6G-RIC (Research and Innovation Cluster) project meeting

Giovanni D’Amore from Keysight Technologies attended the Berlin 6G-RIC (Research and Innovation Cluster) project conference on the 14-15th of October 2025. With the help of more than 60 associate partners from academia, business, and the public sector, the 6G-RIC initiative unites 32 research groups from 20 universities and research organizations. Giovanni presented “Is Wireless Layer Testing Dead?” at the event. He highlighted the 6G-SANDBOX trial network as a robust framework for cross-layer, AI-driven, and system-wide validation. The presentation also showcased the 6G-SANDBOX advancements in digital twin technology, artificial intelligence, and reconfigurable

intelligent surfaces (RIS), along with a preview of the upcoming large-scale trials involving RIS and non-terrestrial networks (NTN).



Figure 29 - Giovanni D'Amore from KEYB presents 6G-SANDBOX trial networks at the 6G-RIC conference in 2025

14. IEEE Future Networks World Forum, Symposium on Future Networks/6G Communication

On the 10–12 November 2025, the Project Coordinator Michael Dieudonné from Keysight Technologies participated in the Symposium on FN/6G Testbeds, which was held in the context of the IEEE Future Networks World Forum, at Bangalore, India. At this context he delivered a presentation on 6G-SANDBOX testbeds, Digital Twins, while also promoting the project's experimentation opportunities and the upcoming Large-Scale 6G Trials.

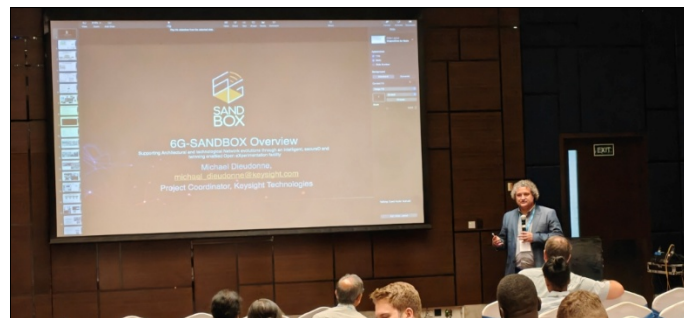


Figure 30 - Project Coordinator Michael Dieudonné presents 6G-SANDBOX at the IEEE Future Networks World Forum 2025

15. SNS JU Webinar 'From Research to Impact: Exploring the Top-10 Key Achievements of SNS JU Projects

On the 3rd of December, SNS JU organized a webinar entitled 'From Research to Impact: Exploring the Top-10 SNS JU Top Achievements' giving the opportunity to the winning projects to present their achievements. Dr. Dimitris Tsolkas from Fogus Innovations and Services P.C. partner presented the 6G-SANDBOX ElaaS Toolkit.



Figure 31 - Dr Tsolkas presents the 6G-SANDBOX ElaaS Toolkit at the SNS JU Key Achievements webinar in 2025

16. IEEE GLOBECOM 2025

In the context of the IEEE GLOBECOM 2025 and on the 11th of December 2025, Project coordinator Michael Dieudonne, was one of the speakers of the Executive Forum, delivering a presentation entitled “Next G – A Confluence of 6G & AI with the Digital Twin Bridge.” In his talk, 6G-SANDBOX was referenced as part of the experimental work that contributed to the insights presented in the panel, and he promoted the 6G Trials that the project had announced earlier that year.



Figure 32 - Project Coordinator Michael Dieudonne presents work relating to 6G-SANDBOX at GLOBECOM 2025

2.3.2.2 PANEL DISCUSSIONS, POSTER SESSIONS

During the second period of the project, the Consortium participated in 5 Panel Discussions and 1 Poster Session. These engagements provided valuable opportunities for the partners to present the project’s progress, share insights on cutting-edge 6G technologies.

In Table 6, the activities are listed and some of them are further described.

Table 6: 6G-SANDBOX Panel Discussion/Poster Sessions

#	EVENT	PARTNER	DATE / LOCATION	TYPE OF EVENT
JULY– DECEMBER 2024				
1	3rd EU-TAIWAN 6G SNS Joint Workshop	Keysight	8 October 2024	Panel Discussion: 6G Trial Network
2	6GEM General Assembly	Keysight	6-7 November 2024	Poster Session
JANUARY- DECEMBER 2025				
3	Smart Living Marbella Event	University of Malaga	27-28 March 2025	Panel Discussion: Smart Tourism: How 5G and 6G Technology Influence Various Aspects of Tourism
4	EuCNC 2025 & 6G Summit – Workshop 1: Immersive Communications Powered by ISAC and RIS Technologies	Keysight, University of Malaga	3 June 2025	Panel Moderation and contribution “6G Perspectives: Driving Innovation in Sensing and Connectivity”
5	EuCNC 2025 & 6G Summit – Workshop 10: Integrated Sensing and Communications initiative on the European research framework	University of Malaga	3 June 2025	Panel Discussion 3: Real life experiences
6	IEEE GLOBECOM 2025	Keysight	8-12 December 2025	Panel ‘IPA-14 Global 6G Testbed Collaboration for Open, Intelligent, and Interoperable Innovation’

1. 3rd EU-TAIWAN 6G SNS Joint Workshop

On October 8, 2024, the 3rd EU-TAIWAN 6G SNS Joint Workshop brought together leading experts to discuss the future of 6G innovation. Representing 6G-SANDBOX, the Project Coordinator Michael Dieudonne from Keysight delivered a presentation during the session ‘EU-Taiwan Projects Experience Sharing and Future Plan’ and participated in a lively panel discussion on ‘6G Trial Network’.



Figure 33 - Project Coordinator Michael Dieudonne presents 6G-SANDBOX at the 3rd EU-TAIWAN 6G SNS Joint Workshop

For more information about the event and 6G-SANDBOX contribution visit [here](#).

2. 6GEM's Project's General Assembly

In the context of the 6GEM project's General Assembly, which was held on the 6th-7th of November 2024, at the Fraunhofer FOKUS premises, 6G-SANDBOX was part of the poster session with the intention to attract new experiments for 6G-SANDBOX platforms. Our project coordinator, Michael Dieudonne, represented the project and our newly released poster on Experimentation was presented.



Figure 34 - Project Coordinator Michael Dieudonne represents 6G-SANDBOX at 6GEM 2024

2. Smart Living Marbella Event

On the 27th-28th March 2025, the Smart Living Marbella event gathered leading experts in innovation and digital transformation at the Palacio de Congresos y Exposiciones Adolfo Suárez in Marbella. Among the speakers was Prof. Pedro Merino Gómez, Director of the Institute for Software Technology and Software Engineering (IT IS University of Malaga) and Technical Manager of 6G-SANDBOX project. Prof. Merino contributed to the roundtable: *"Smart Tourism: How 5G and 6G Technology Influence Various Aspects of Tourism"* moderated by Carmen Aguayo, Professor at the University of Málaga, the panel also included:

- Elena Luque, Co-founder and Project Director at Sebka Technology
- Paco Jaén, Corporate Director of Operations at Ximenez Group and Head of R&D
- Cristóbal Martín Ayala, Business Manager at Avigilon

In his talk, Pedro Merino presented the Málaga Platform and 6G-SANDBOX project. He also highlighted how specific 6G innovations are poised to transform tourism:

- **JCAS** (Joint Communication and Sensing): Enhances real-time location and environmental awareness, enabling context-aware services for tourists.
- **RIS** (Reconfigurable Intelligent Surfaces): Improves connectivity in dense urban and indoor environments like museums, airports, and historic sites.
- **NTN (Non-Terrestrial Networks) & 5G Integration**: Ensures high-speed coverage in remote or underserved tourist areas, including natural parks and maritime zones.



Figure 35 - Prof. Pedro Merino Gómez representing 6G-SANDBOX at the 2025 Smart Living Marbella event

For more information you may visit: <https://www.smartlivingmarbella.es/>

3. EuCNC 2025 & 6G Summit Panel Discussions

In addition to the presentations delivered during the EuCNC & 6G Summit 2025, project partners actively contributed to the following panel discussions.

Workshop 1: Immersive Communications Powered by ISAC and RIS Technologies

Under the moderation of the Project Coordinator Michael Dieudonné, a panel titled “6G Perspectives: Driving Innovation in Sensing and Connectivity” took place. The project’s Technical Coordinator Pedro Merino Gómez also participated in the discussion as a panelist, sharing insights on the role of sensing and connectivity innovations in the evolution of 6G systems.



Figure 36 - Project Coordinator Michael Dieudonné and Dr. Gómez participate in a panel regarding innovation in sensing and connectivity at EuCNC 2025

Workshop 10: Integrated Sensing and Communications in the European Framework

Pablo Herrera from University of Málaga, represented our project in the panel discussion ‘Real life experiences’ along with 6G-PATH project. This workshop co-organized by 15+ SNS projects, reflecting the momentum of ISAC research across Europe.

Table 7: 6G-SANDBOX events organized and co-organized workshops, special sessions and info sessions

#	EVENT	PARTNER/PROJECTS	DATE / LOCATION	TYPE OF EVENT
JULY- DECEMBER 2024				
1	IEEE CAMAD 2024	6G-SANDBOX, SAFE-6G, ENVELOPE, ECOeNET, OPTIMIST, ORIGAMI, SOVEREIGN, 5G TACTIC, 6G EWOC	21-23 October 2024, Athens, Greece	Workshop: Empowering 6G Networks: First Workshop on Advancements in Research Infrastructures, Adaptive Frameworks and Global Architectural Evolution (Athena 2024)
JANUARY – DECEMBER 2025				
2	6G Research Laboratory Opening	University of Malaga, Keysight	17 January 2025, Malaga, Spain	Impact Event
3	IEEE NFV-SDN 2025	6G-SANDBOX, 6G-VERSUS, SAFE-6G, ENVELOPE Project, aerOS Project, O-CEI Horizon, 5G-TACTIC, ECO-eNET, OPTIMIST and SOVEREIGN MSCA Project	10-12 November 2025, Athens Greece	Workshop 3: Empowering 6G Networks: 2 nd Workshop on Advancements in Research Infrastructures, Adaptive Frameworks, and Global Architectural Evolution
4	6G-SANDBOX Webinar	6G-SANDBOX Consortium	10-11 December 2025	6G-SANDBOX Unveiled: Project Achievements and Experimental Insights

1. IEEE CAMAD 2024 – 1st ATHENA WORKSHOP

The IEEE CAMAD 2024 Conference was successfully held in Athens on 21st – 23rd October 2024. The 6G-SANDBOX project technically sponsored the conference, alongside other projects. In addition, 6G-SANDBOX co-organised the workshop entitled: “*Empowering 6G Networks: First Workshop on Advancements in Research Infrastructures, Adaptive Frameworks and Global Architectural Evolution (ATHENA 2024)*”. This workshop was jointly organized with SAFE-6G, ENVELOPE, ECOeNET, OPTIMIST, ORIGAMI, SOVEREIGN, 5G TACTIC, and 6G-EWOC, and chaired by Dr. Harilaos Koumaras from NCSR “Demokritos”, a 6G-SANDBOX partner. The call for papers resulted in 19 accepted and presented papers, reflecting strong engagement from the research community. Project partners INFOLYSiS, NCSR “Demokritos”, OTE, and LENOVO actively contributed through organization, technical support, and scientific dissemination.

Conference Papers

The following papers, as already reported in previous sections, related to 6G-SANDBOX were accepted and presented at IEEE CAMAD 2024:

1. Alexandropoulos, V. Rentoula, D. Fragkos, N. Gkatzios, “*An AI-assisted User-Intent 6G System for Dynamic Throughput Provision*,” Proc. IEEE CAMAD 2024, October 2024.
2. H. Koumaras, D. Fragkos, V. Pitsilis, G. Makropoulos, G. Lyberopoulos, E. Theodoropoulou, F. Setaki, I. Mesogiti, D. Diakakis, N. Gkatzios, C. Fragkos, V. Koumaras, “*The B5G Athens Experimentation Platform*,” Proc. IEEE CAMAD 2024, October 2024.
3. D. Dimopoulos, A. K. Salkintzis, “*Multi-Connectivity Enhancements for the 6G Era*,” Proc. IEEE CAMAD 2024, October 2024.
4. G. Makropoulos, I. Manolopoulos, H. Koumaras, G. Lyberopoulos, F. Setaki, E. Theodoropoulou, I. Mesogiti, “*Field Trial Validation of 5G-Connected UAVs towards QoS and Handover Analysis*,” Proc. IEEE CAMAD 2024, October 2024.

Demo Booth

NCSR “DEMOKRITOS”, INFOLYSiS, and OTE Group of Companies (HTO) hosted a demo booth where the B5G Athens Experimentation Platform was presented by George Makropoulos and Dr. Harilaos Koumaras. The paper “*The B5G*

Athens Experimentation Platform” by H. Koumaras et al. (Proc. IEEE CAMAD 2024) was showcased as part of this demo, highlighting the platform’s capabilities and its contribution to advancing 6G research infrastructures.

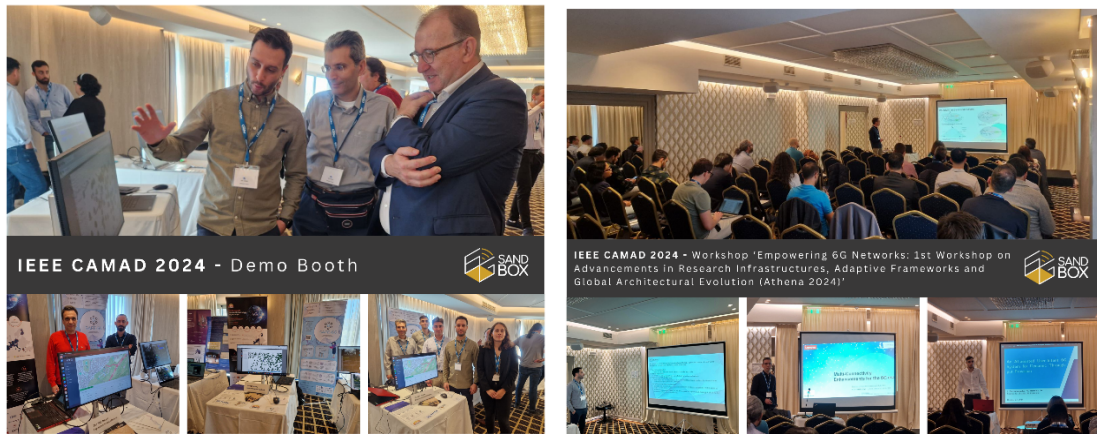


Figure 39 - The 6G-SANDBOX Demo Booth at IEEE CAMAD 2024

The reader may find out more about the event [here](#).

3. 6G Research Laboratory Opening Event at University of Málaga

On the 17th of January 2025, the University of Málaga celebrated the inauguration of two innovative research infrastructures for 6G technology: the Keysight – UMA 6G Research Laboratory and the Victoria Network, a private 5G/6G R&D&I network designed to enhance innovation across Spain.

6G-SANDBOX’s Role: The Keysight-UMA 6G Research Lab is a direct outcome of the 6G-SANDBOX project, offering a cutting-edge environment for:

- AI-driven real-time network monitoring (IoT, satellite, smart applications)
- 5G/6G performance testing & energy efficiency improvements
- Digital twins & large-scale mobile network emulation

The event hosted 65 attendees, and the inauguration ceremony was led by the University’s Rector, Teodomiro López. The University of Málaga further amplified the event’s impact by releasing a [YouTube video](#) and a [Press Release](#) in Spanish, generating significant media attention. As a result, Pedro Merino, on the 21st of January gave an interview on [Canal Málaga Radio y Televisión](#). Furthermore, on the 22nd of February, the teams of Keysight and University of Málaga hosted journalists from [Canal Sur TV](#) for a special broadcast dedicated to the 6G Research Lab.



Figure 40 - The official opening of the Keysight-UMA 6G Research lab, a direct outcome of 6G-SANDBOX

4. 6G-SANDBOX Webinar: '6G-SANDBOX Unveiled – Experimentation, Platforms & Technical Insights'

On the 10-11th of December 2025, 6G-SANDBOX consortium successfully organized the webinar '6G-SANDBOX Unveiled – Experimentation, Platforms & Technical Insights'. The event attracted more than 250 unique attendees, representing more than 300 unique organizations, demonstrating strong interest from academia, industry, and the wider 6G community. During the 2-day event, the consortium showcased the latest developments, platform capabilities, and experimental breakthroughs of the 6G-SANDBOX project.

Both webinar days featured interactive elements, including live poll, throughout the sessions and dedicated live Q&A discussions at the end of each day.

The webinar featured expert presenters from the 6G-SANDBOX consortium:

- Michael Dieudonne, Keysight
- Pedro Merino Gómez, University of Málaga
- Adam Flizikowski, IS-Wireless
- Bjorn Riemer, Fraunhofer FOKUS
- Dimitris Tsolkas, Fogus
- Joao Ferreira, Keysight
- Juan Torres Arjona, Nokia
- Matteo Pagin, Keysight

Below the reader may find the webinar Agenda and few screenshots from the event:

Day 1 – December 10, 2025 (10:00–11:20 CET)

Focus: Platform, Infrastructure and Experimentation Framework

- Welcome and Introduction to 6G-SANDBOX
- Trial network concept and ease of experimentation
- Platform overview
- Digital Twin
- Conclusions
- Outlook: Next-generation experiments (H1/2026)
- QA, Open Discussion

Day 2 – December 11, 2025 (10:00–11:20 CET)

Focus: Experimentation Results and Technical Insights

- Introduction
- Experimentation Results (Part A): PHY Layer and Propagation
- Experimentation Results (Part B): Programmable/scalable ORAN networks
- Experimentation Results (Part C): Application-oriented results
- Towards 6G KPI, calibration, and measurement results
- Conclusions
- Outlook: Next-generation experiments (H1/2026)
- Open Discussion

Finally, some key data for the event include the following:

- **423 registrations** for the two-day webinar series.

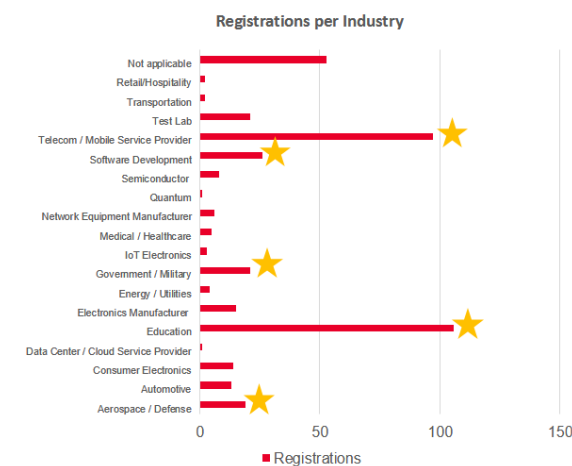
- **257 unique attendees**, reflecting solid conversion from registration to participation.
- **308 unique organizations represented**, indicating strong industry and research interest.
- **Active audience engagement**, with 124 poll responses submitted during the sessions.
- Meaningful technical interaction, evidenced by 10 audience questions raised during live Q&A.

After the event, the link for the recorded webinar was sent to all subscribed participants with a unique open rate of **44.6%**.

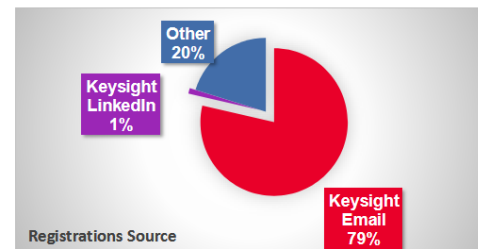
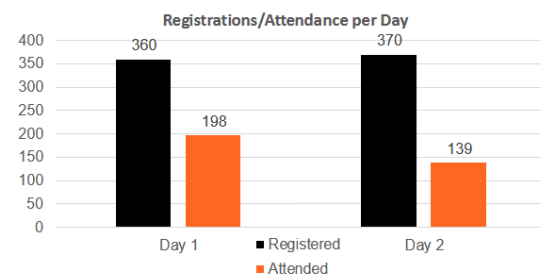
Additionally, some figures sum up the event and the engagement of the participants.

Registrations

Key registration highlights



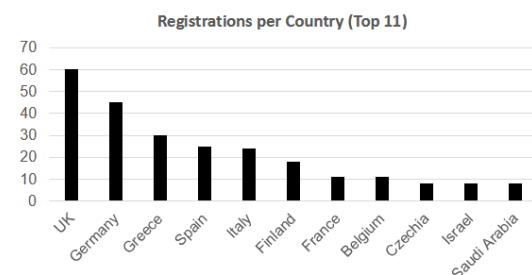
KEYSIGHT



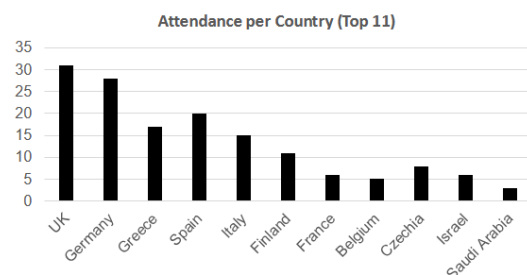
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Registrations vs Attendees

Attendees and countries



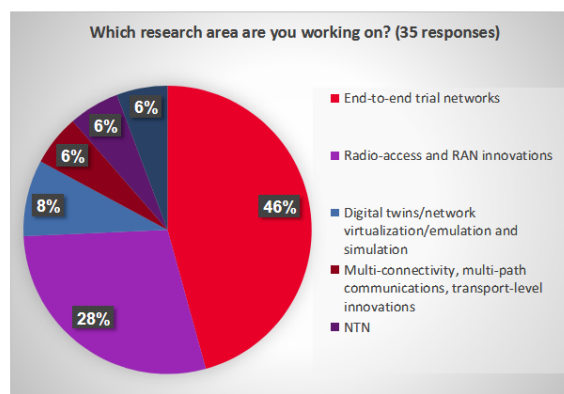
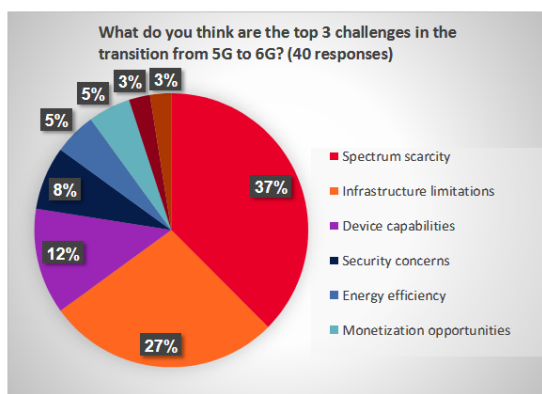
KEYSIGHT



5

Polls Participation and Insights

Total (124 attendees participated into poll questions)

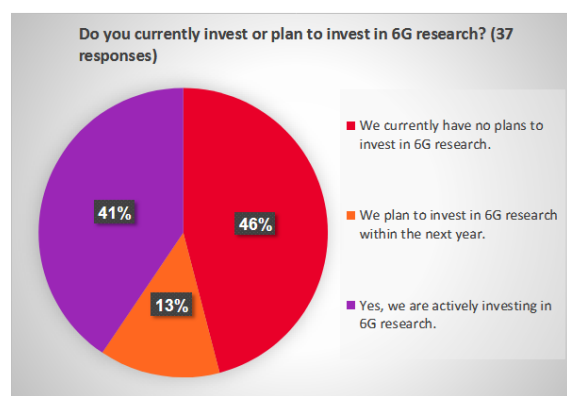
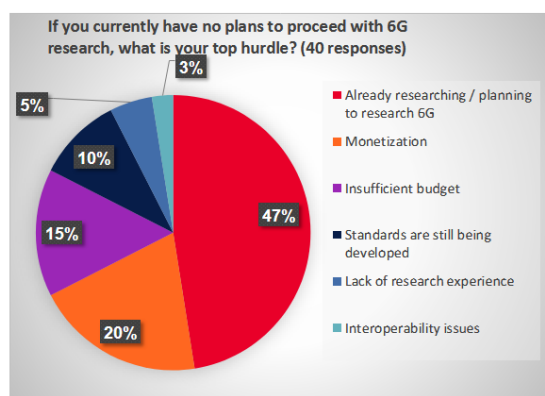


KEYSIGHT

6

Polls Participation and Insights

Total (124 attendees participated into poll questions)



KEYSIGHT

7

Polls Participation and Insights

Total (124 attendees participated into poll questions)

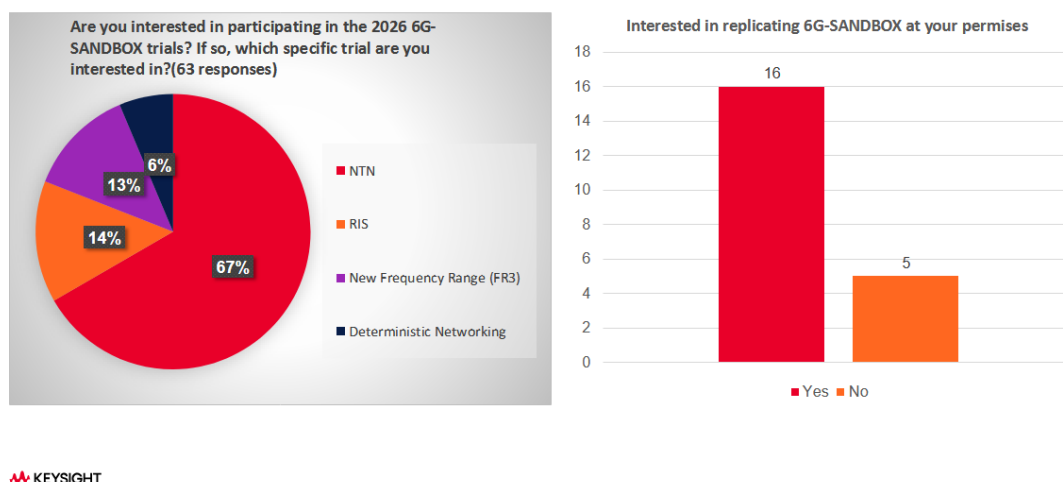


Figure 41 - Statistics regarding the December 2025 webinar hosted by 6G-SANDBOX

The link to the event: <https://online-events.keysight.com/keysight-technologies7/6g-sandbox-unveiled>

2.3.2.4 ACTIONS/LIAISON WITH OTHER PROJECTS OF THE CLUSTER AND ASSOCIATIONS

As in the first reporting period, the second period was characterized by extensive engagement with other projects, initiatives, and collaborations with third-party organizations and institutions. Most of the activities are already described and reported in previous sections and will also be reported in Error! Reference source not found.. The table below highlights the key actions undertaken, and some selected activities are presented further below in more detail.

Table 8: 6G-SANDBOX Actions and Liaisons with other Projects and Associations

Actions and Liaisons with other Projects of the cluster and Associations		
#	EVENT	Collaboration
JULY- DECEMBER 2024		
1	MoU with Universiti Malaya	Joint Action with the Institution
2	SNS JU Webinar 'Collaborations between C/D and A/B projects'	SNS JU Activity
3	3 rd EU-TAIWAN 6G SNS Joint Workshop, EU-TAIWAN Projects Experience Sharing and Future Plan Session	SNS JU Activity
4	IEEE CAMAD 2024	Co-organised Workshop with other SNS JU projects
5	NTN workshop – HEXA-X-II	Participation at an SNS JU project workshop
6	6GEM project's General Assembly	Participation with a 6G-SANDBOX poster
JANUARY – DECEMBER 2025		

7	MWC 2025 Demo with Centric Project	SNS JU projects – Joint Demo
8	EuCNC 2025 & 6G Summit – Workshop 3: Integrating Network Digital Twinning into Future AI-based 6G Systems	SNS JU Project collaboration 6G-SANDBOX, 6G-TWIN, SEASON, PREDICT-6G, DESIRE6G, VERGE, DETERMINISTIC6G, ACROSS
9	EuCNC 2025 & 6G Summit – Demos with other initiative and projects	Joint Demos with ITRI, CONVERGE and 6G-FLAGSHIP
10	EuCNC 2025 & 6G Summit – Workshop 4: Workshop on Results and Findings from SNS B5G large-scale trials and experimentations	Joint contributions with other SNS JU Projects – 6G-BRICKS, FIDAL, Imagine-B5G, SUNRISE-6G and ENVELOPE
11	EuCNC 2025 & 6G Summit – Workshop 10: Integrated Sensing and Communications initiative on the European research framework	SNS JU Project collaboration with MULTIX, HEXA-X II, TIMES, 6G-SANDBOX, TERRAMETA, OPTI-6G, ECO-eNET, 6GTANDEM, iSEE-6G, 6Gth SENSE, 6G-SENSES, BeGREEN, 6G-PATH, 6GMUSICAL, ISLANDS, INSTINCT, 6GINTENSE.
12	EuCNC 2025 & 6G Summit – Workshop 16: 6G experimentation methodologies, pitfalls and best practices	SNS JU Project collaboration with CONVERGE, 6G-XR, SUNRISE-6G, 6G-EWOC, ORIGAMI, EXIGENCE, TRIALSNET and FIDAL
13	EuCNC 2025 & 6G Summit- Special Session 15: Software-based Evolution Towards the 6G Era	SNS JU Projects Joint Presentation 6G-SANDBOX, FIDAL, and ENVELOPE
14	IEEE NFV-SDN 2025	Co-organised Workshop with other SNS JU projects
15	ESA and 6G-SANDBOX for NTN Trials	Joint Action with ESA

1. Memorandum of Understanding (MoU) with Universiti Malaya Event

On the 17th July 2024, the 6G-SANDBOX project signed a Memorandum of Understanding (MoU) with Universiti Malaya to advance innovation in the field of 6G networks. This marked the second major MoU signed by 6G-SANDBOX with an Asian organization, reinforcing its commitment to promoting global cooperation in 6G research. Read may read the MoU Press Release [here](#).



Figure 42 - The signing of the MoU between the Universiti Malaya and 6G-SANDBOX

2. ESA and 6G-SANDBOX join forces to pioneer large-scale non-terrestrial network

On the 17th of October 2025, 6G-SANDBOX and ESA Connectivity and Secure Communications joined forces to pioneer large-scale NTN Trials. ESA as a partner brings unique expertise and hardware from its Space for 5G/6G and Sustainable Connectivity programme. This collaboration was confirmed through [Press Release](#).

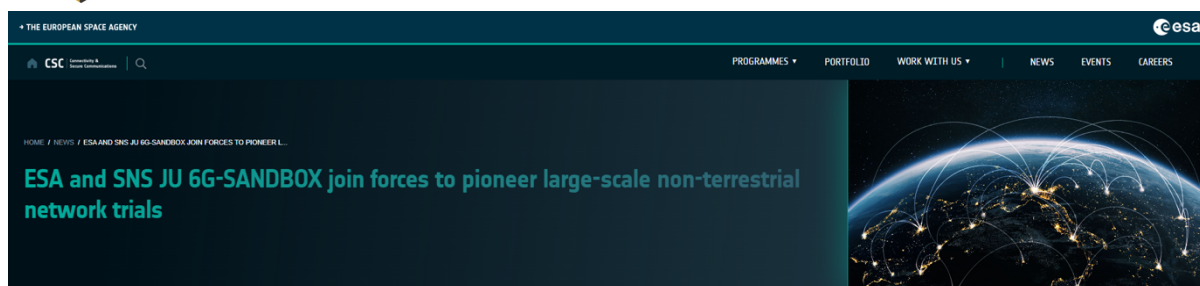


Figure 43 - Announcement of collaboration between ESA and 6G-SANDBOX

2.3.2.5 EVENTS/CONFERENCES/FAIRS ACTIVELY PARTICIPATED/ATTENDED

During the second reporting period, the 6G-SANDBOX Consortium actively engaged in a wide range of events, including SNS JU ecosystem and local initiatives, high-profile conferences, and major industry exhibitions, **27 in total**. This extensive involvement highlights our strong commitment to the project and its dissemination and demonstrates our leadership within the rapidly evolving research of the 6G ecosystem.

Hereby, the reader may find an exhaustive list of these events, and **a description of additional actions such as booths and demonstrations that do not fall within the Dissemination KPIs table**.

Table 9: Events, Conferences, Fairs attended by 6G-SANDBOX

#	Event/Conference	Date
JULY- DECEMBER 2024		
1	IEEE International Symposium on Personal Indoor and Mobile Radio Communication	2-5 September 2024
2	2 nd Conference on Radiocommunications and Teleinformatics	11-14 September 2024
3	SNS JU Webinar ‘Collaborations between C/D and A/B projects’	4 October 2024
4	3 rd EU-TAIWAN 6G SNS Joint Workshop, EU-TAIWAN Projects Experience Sharing and Future Plan Session’	8 October 2024
5	IEEE Future Networks World Forum, Symposium on 6G Communications	15-17 October 2024
6	IEEE CAMAD 2024 -Empowering 6G Networks: First Workshop on Advancements in Research Infrastructures, Adaptive Frameworks and Global Architectural Evolution (Athena 2024)	21-23 October 2024
7	Annual CWI Symposium – Intelligent & Sustainable Wireless Networks	24 October 2024
8	6GEM project’s General Assembly	6-7 November 2024
9	12 th Fuseco Forum 2024	7-8 November 2024
10	NTN workshop – HEXA-X-II Workshop	7 November 2024

11	ETSI, Software and Standards for Smart Networks and Services Conference & Hackfests	12-14 November 2024
12	ARMMS RF & Microwave Society, The Cambridge Belfry, Cambourne, UK	19 November 2024
13	IEEE Virtual Conference on Communications 2024	3-5 December 2024
14	IEEE GLOBECOM 2024	8-14 December 2024
January 2025 – December 2025		
15	Mobile World Congress 2025	3-6 March 2025
16	New Space and Solution Event	17-21 March 2025
17	Smart Living Marbella Event	27-28 March 2025
18	ETSI 6G MONDAY	14 April 2025
19	5G FORUM 2025	12-16 May 2025
20	EuCNC 2025 & 6G Summit	3-6 June 2025
21	11 th IEEE International Conference on Network Softwarization (IEEE NetSoft 2025)	23-27 June 2025
22	28 th International Workshop on Smart Antennas 2025	16-18 September 2025
23	Thinknet 6G Summit 2025	28-29 October 2025
24	11 th IEEE Conference on Network Function Virtualization and Software Defined Networks (IEEE NFV-SDN 2025)	10–12 November 2025
25	IEEE Future Networks World Forum	10–12 November 2025
26	SNS JU Webinar: Exploring the Top-10 SNS JU Top Achievements'	3 December 2025
27	IEEE GLOBECOM 2025	8–12 December 2025

1. IEEE International Symposium on Personal Indoor and Mobile Radio Communication

On 2nd and 5th of September 2024, during the IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), project partner Nokia hosted a booth showcasing its telepresence platform. The demonstration featured a solution organized for 5G networks, leveraging cutting-edge Extended Reality (XR) technologies developed within the 6G-SANDBOX project. The innovative demonstration was awarded the Best Demo Award at the symposium, highlighting its technical excellence and impact in the field of advanced wireless communications.



Figure 44 - NOKIA showcases work done in collaboration with 6G-SANDBOX at the IEEE International Symposium on Personal, Indoor and Mobile Radio Communication

2. 12th FUSECO Forum 2024

The 12th FUSECO Forum, was held on November 7th and 8th 2024 by our partner Fraunhofer FOKUS, provided a platform for key discussions on the future of 5G and 6G technologies. In the context of the workshop “How Campus Networks Enable 6G – Ecosystems and Technologies Beyond 5G” our Project Coordinator Michael Dieudonne from Keysight presented an update on experimentation outcomes, while David Artuñedo from Telefónica shared insights on technology validation and non-terrestrial network measurement campaigns with a presentation entitled ‘Technology Validation and Measurement Campaigns for Non-terrestrial Networks’. A dedicated demo booth with the latest 6G-SANDBOX poster on Experimentation encouraged new experimenters to engage.



Figure 45 - Presence of many 6G-SANDBOX partners at the 12th FUSECO Forum in 2024

3. ETSI, Software and Standards for Smart Networks and Services Conference & Hackfests (SNS4SNS)

From 12th to 14th November 2024, the SNS4SNS Conference was held in Sophia Antipolis, France. The event highlighted the relationships between open-source initiatives, industry standards, and academic research in driving innovation, fostering interoperability, and ensuring the long-term viability of communication networks. In this context, NCSR “Demokritos” participated with a dedicated demo booth. The demos showcased the integration of OpenCAPIF with the 6G-SANDBOX experimentation platform, enabling secure and standardized API exposure for beyond-5G (B5G) networks.

- The first demonstration integrated OpenCAPIF with an open-source Network Exposure Function (NEF), where the NEF acted as an API provider within the CAPIF ecosystem. This setup exposed 5G network capabilities from the 6G-SANDBOX infrastructure to third-party Application Functions (Afs) in full compliance with 3GPP standards.

- The second demonstration integrated OpenCAPIF with the aerOS Meta Operating System (MetaOS), enabling standardized API exposure for IoT–edge–cloud continuum services orchestrated across the 6G-SANDBOX testbed.

Both demonstrations leveraged the 6G-SANDBOX experimentation platform spanning two interconnected sites, Cosmote/OTE Academy and NCSR “Demokritos”. The integration of OpenCAPIF with the 6G-SANDBOX infrastructure, featuring dual radio access networks, inter-PLMN handover support, and multi-connectivity capabilities (ATSSS/MPTCP), enabled realistic validation of secure and standards-compliant API exposure mechanisms for future 5G and 6G service development across network and computing continuums.



Figure 46 - NCSR Demo booth at SNS4SNS

2. Mobile World Congress 2025

The 6G-SANDBOX project was present, for the 3rd consecutive year, at the Mobile World Congress, held on 3rd – 6th of March 2025 in Barcelona, showcasing its latest innovations through demos. At the Keysight Technologies booth, Project Coordinator Michael Dieudonné presented the “Digital Twins for 6G” demo, enabling access to 6G technologies, city-scale simulations, and lab-to-live calibration. The demo attracted strong interest and sparked discussions on advanced experimentation using the 6G-SANDBOX platform. Additionally, 6G-SANDBOX contributed to a Dynamic AI-Enabled Sensing demonstration at the InterDigital booth, in collaboration with the CENTRIC project, illustrating how AI can enhance sensing accuracy using existing 3GPP signals in dynamic environments. The project also featured at the booths of Fraunhofer FOKUS, IS-Wireless, and OpenNebula Systems, underlining the strong collaboration and integration across the 6G ecosystem.



Figure 47 - Project Coordinator Michael Dieudonné presents work relating to 6G-SANDBOX and its collaboration with CENTRIC at MWC 2025



Figure 48 - Various 6G-SANDBOX partners presenting related works at MWC 2025

3. EuCNC 2025 & 6G Summit – 6G-SANDBOX Booth

From 3–6 June 2025, the 6G-SANDBOX project showcased its latest experimentation results at the EuCNC & 6G Summit 2025 in Poznań, Poland, with a strong presence in the exhibition area through an interactive demo booth. Visitors experienced hands-on demonstrations highlighting key 6G experimentation capabilities, including:

- 5G NR O-RAN Trial Network Setup, where a full on-site system connected to the 6G-SANDBOX trial environment allowed visitors to deploy their own virtual trial network and explore energy consumption, performance, and cybersecurity in real time.
- Joint Communication and Sensing (JCAS) applications developed in collaboration with Industrial Technology Research Institute.
- An immersive XR “Teleportation” experience, developed with CONVERGE Project and other 6G Flagship initiatives.

The demos attracted strong interest from attendees and sparked valuable discussions on future 6G experimentation.



Figure 49 - The 5G O-RAN Trial Network Demo at EUCNC 2025

4. 5G-FORUM 2025

The 5G-FORUM took place on the 12th-16th of May 2025, bringing together leading voices and innovators from the telecoms industry. As in previous years, our partners, the University of Málaga and Nokia, hosted booths at the event featuring also the 6G-SANDBOX project. Especially, at Nokia's booth, the team had created a 6G-SANDBOX poster dedicated to Nokia's role in the project.



Figure 50 - UMA and NOKIA participate in 5G-FORUM 2025, presenting work relating to 6G-SANDBOX

17. Thinknet 6G Summit 2025

The Thinknet 6G Summit 2025, held on 28–29 October 2025 in Nuremberg, Germany, brought together over 200 leading voices from research, industry, politics, and the startup ecosystem to shape the next generation of wireless connectivity. The event was organized by Bayern Innovativ, with the 6G-SANDBOX project participating through a dedicated demo booth. The booth was supported by Project Coordinator Michael Dieudonné (Keysight Technologies), Björn Riemer (Fraunhofer FOKUS), Marc Emmelmann (Fraunhofer FOKUS), and Radu Lupoai (Keysight Technologies). At the booth, a live demo of the Trusted Network (TN) concept was showcased, featuring a local gNodeB and user equipment (UE) operating within a shielded box environment. In addition, the demonstration presented results related to Digital Twin technologies and Reconfigurable Intelligent Surfaces (RIS), highlighting key innovations developed within the project. The latest project poster promoting the latest announcement for the upcoming 6G Trials was also featured in the booth.



Figure 51 - KEYB and FOKUS present a demo of 6G-SANDBOX related work at Thinknet 6G Summit 2025

2.3.2.6 OTHER IMPACT EVENTS

In this section, we present additional events that do not fall under the traditional dissemination categories described above. Nevertheless, these activities had significant impact and played an important role in increasing the visibility of the 6G-SANDBOX project, as well as in promoting its valuable contributions to the 6G ecosystem.

1. A State Secretariat for Telecommunications and Digital Infrastructures delegation pays a visit to the University of Malaga

On the 28th of October 2024, a delegation from the State Secretariat for Telecommunications and Digital Infrastructures visited the “José María Troya Linero” Institute of Software Technology and Engineering at the University of Malaga. The aim of the visit was to show the research infrastructure Victoria Network and the 5G+Tactile and 6G-SANDBOX projects. Our project coordinator Michael Dieudonne guided them through the new Keysight room in the Ada Byron building, and they also visited the Keysight facilities at the University of Málaga, gaining a close-up view of the research advancements. The IT IS UMA delegation was led by its director and our Technical Manager, Pedro Merino, and Professor Almudena Díaz, who head the 6G activities at the institute. The the Press Release can be found [here](#).



Figure 52 - State Secretariat for Telecommunications and Digital Infrastructures visits the 6G-SANDBOX premises in Malaga

2. 6G-SANDBOX Open Call 3 ‘ARMOR PROJECT’ at Cyber Ireland Event

Funded under 6G-SANDBOX Open Call 3 the ARMOR project (Adversarial Resistance and Model Optimization for Robustness) is a cutting-edge initiative focused on enhancing the security and resilience of AI-native Open Radio Access Networks (Open RAN). On the 12th of March at Cyber Ireland event on ‘Cybersecurity and AI in Software Development’, Dr. Chamara Sandeepa, PhD researcher at the Network Softwarization and Security Labs (NetsLab) presented ARMOR’s objectives and early outcomes. The presentation highlighted ARMOR’s role in enabling automated security validation and vulnerability detection for Open RAN deployments across the 6G Cloud-Edge continuum.

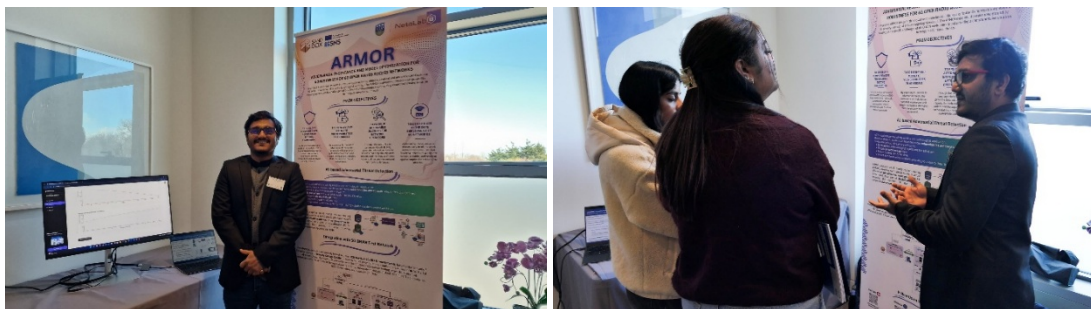


Figure 53 - 6G-SANDBOX Open Call Project "ARMOR" is presented at Cyber Ireland

2.4 DISSEMINATION ACTIVITIES – PERIOD M37-42 AND CONSOLIDATED DISSEMINATION TABLE

The project extension enabled the implementation of additional dissemination activities, with the highlight being the project's final participation at the EuCNC & 6G Summit 2026. This extension provided an enhanced opportunity to reach key stakeholders, strengthen engagement with the wider 6G community, and further amplify the project's impact and visibility. Table 10 presents the actual achievements against the defined KPIs for the entire project duration, including Period 1 (P1), Period 2 (P2), and the extension phase.

Table 10: 6G-SANDBOX Dissemination Achievements for P1+P2+ Extended Period vs KPIs

Planned Activities	Dissemination metrics	Overall Target	Period	Target Y1 2023	Actual Y1	Target Y2 2024	Actual Y2	Target Y3 2025	Actual Y3	P2 M19-M36	Total P1+P2	M37-M42 (Extension)	Total FINAL
# of scientific papers in journals and conferences, SNS JU white Papers and brochures	Number of publications	>60	M9-M42	4	15	20	29	36	26	41	69	7	76
# of presentations in scientific events, fairs, conferences and workshops	Number of presentations	>20	M3-M42	4	32	6	41	10	31	47	104	12	114
# of Poster sessions, Panel Discussions	Number of poster sessions, panel Discussion etc	>5	M13-M42	-	5	2	5	3	4	7	14	1	15
# of workshops/special sessions, webinars 56rganized/co-organised	Number of events	>5	M18-M42	-	7	1	3	4	3	4	13	7	20
# of actions/liaison with other projects of the cluster and related associations	Number of actions	>10	M3-M42	2	13	3	7	5	12	16	32	9	41
# of events/conferences/fairs actively participated/attended	Number of events	>20	M3-M42	4	24	6	25	10	13	27	62	10	72

2.4.1 SCIENTIFIC PAPERS IN CONFERENCES

In 2026, 6G-SANDBOX produced 7 scientific publications, including both journal and conference papers. Two journal articles were published, covering topics such as digital twins for protocol validation and reconfigurable intelligent surfaces for B5G/6G communications, with leading partner from University of Malaga and Queen's Belfast University respectively.

Moreover, Queen's University Belfast contributed with two additional conference papers focusing on RIS-assisted localization techniques for 6G networks. The first, entitled "*Impact of RIS Size on Machine Learning-Enabled Beam Sweeping for User Localization*," was presented at EuCAP 2026 in April 2026, while the second, "*Efficient Angular Localization in RIS-Assisted mmWave Network via Learning-Based Estimations*," was presented at the 32nd International Conference on Telecommunications (ICT 2026) in May 2026.

Furthermore, two papers were accepted and presented at EuCNC 2026 & 6G Summit. The first, "*An ORIGAMI Use-Case Validation via 6G-SANDBOX Experimentation*", was a joint contribution from Keysight and FOGUS partners in collaboration with ORIGAMI Project, while the second, "*Beam Me There: Virtual Teleportation using XR over 6G*", was led by Nokia.

In addition, the conference paper "*Investigating the Impact of Various Underlying Hardware Factors on Virtualised Network Deployments – Implementation and Conclusions from 6G-SANDBOX*", a collaborative effort by Keysight, NCSR, and FOGUS, was accepted for presentation at the IEEE Symposium on Measurement in Networking and Communications in July 2026.

Table 11 shows the full list.

Table 11: 6G-SANDBOX Publications for the Extended Period

JOURNAL PAPERS	
1	Rafael López-Gómez, Delia Rico, Laura Panizo, María-del-Mar Gallardo 'Towards a formal digital twin of the PTP protocol using automata learning' , Journal of Logical and Algebraic Methods in Programming, June 2026, https://doi.org/10.1016/j.jlamp.2026.101142
2	Gabriel G. Machado, Ferhad Kasem, Adrian McKernan, Chao Gu, T. David Cooper, Muhammad Ali Babar Abbasi, Simon L. Cotton, Okan Yurduseven, Dmitry Zelenchuk 'Design and Experimental Characterization of a Wideband Dual-Polarized mmWave Reconfigurable Intelligent Surface for B5G/6G Communications' , IEEE Transactions on Antennas and Propagation, May 2026, DOI: 10.1109/TAP.2026.3685272
CONFERENCE PAPERS	
3	Md Tarek Hassan, Dmitry Zelenchuk, Muhammad Ali Babar Abbasi, Irina Munina 'Impact of RIS Size on Machine Learning-Enabled Beam Sweeping for User Localization' , in proc. EuCAP 2026, April 2026
4	Md Tarek Hassan, Dmitry Zelenchuk, Muhammad Ali Babar Abbasi, and Arif Ullah, 'Efficient Angular Localization in RIS-Assisted mmWave Network via Learning-Based Estimations' , in proc. 32nd International Conference on Telecommunications (ICT 2026), May 2026
5	Dena Markudova, Viktoria Vomhoff, Stefan Geissler, Matteo Pagin, Steffen Gebert, Arturo Jose Torrealba Ferrer, Dimitris Tsolkas, Pablo Herrera Diaz, Andres Garcia-Saavedra, Andra Lutu 'An ORIGAMI Use-Case Validation via 6G-SANDBOX Experimentation' , in Proc. EuCNC 2026 & 6G Summit, June 2026
6	Alvaro Villegas, Pablo Perez, Marta Orduna, Juan Torres, and Ester Gonzalez-Sosa, 'Beam Me There: Virtual Teleportation using XR over 6G' , in Proc. EuCNC 2026 & 6G Summit, June 2026
7	Filip Ivanovic, Lukas Fasken, The Dao, Vasilis Pitsilis, Björn Reimer 'Investigating the Impact of Various Underlying Hardware Factors on Virtualised Network Deployments - Implementation and Conclusions from 6G-SANDBOX' , in Proc. IEEE Symposium on Measurement in Networking and Communications, July 2026

2.4.2 PRESENTATIONS SCIENTIFIC EVENTS, FAIRS, CONFERENCES, WORKSHOPS

During the last extended period of the project, the partners delivered a total of 7 presentations at events and conferences. In Table 12 all presentations are reported and further below are presented in more detail.

Table 12: 6G-SANDBOX Presentations for the Extended Period

#	EVENT	PARTNER	DATE / LOCATION	TITLE
January 2026 – June 2026				
1	Eindhoven University of Technology Seminar	IS-WIRELESS	17th February 2026	Experimentation Results and Technical Insights
2	Fidal Project- Webinar on KPI Reporting Methodologies and Results	Fraunhofer – Fokus	24th February 2026	Adaptive Calibration and Benchmarking Methods for 6G Performance Measurements – Implementations and Conclusions from 6G SANDBOX
3	EuCAP 2026	Queen’s Belfast University	19th -24th April 2026	Impact of RIS Size on Machine Learning-Enabled Beam Sweeping for User Localization’
4	CySat’26	IS-WIRELESS	19th-20th May 2026	Scalability and resilience of TN/NTN domains with disaggregated 5G LiquidRAN-the perspective of EU funded research projects
5	ICT 2026	Queen’s Belfast University	20-22 May 2026	
6	6G LINO: From lab validation to real-world NTN trials workshop	Keysight	28th May 2026	The 6G-SANDBOX NTN Large-Scale Trials
7	EuCNC 2026 & 6G Summit - Workshop 1: 6G non-terrestrial networks: from theory to practice – Moving towards in-orbit 6G experiments	Keysight	2nd June 2026	The 6G-SANDBOX - NTN Large-scale Trials
8	EuCNC 2026 & 6G Summit - Workshop 3 - Rethinking Test, Measurement, and Validation for 6G Networks	Keysight	2nd June 2026	Data Collection and Data Reusability for TMV
9	EuCNC 2026 & 6G Summit - Workshop 12 - Advancing Network Digital Twins (NDTs) for AI-driven 6G systems: Insights, applications, and cross-project synergies	Keysight	2nd June 2026	6G-SANDBOX: Key focus: Results from Digital Twin work applied to the 6G-SANDBOX project, from measurement to prediction of technology performance in energy consumption use case
10	EuCNC 2026 & 6G Summit - AIU2 – Applications, IoT, Use cases	Nokia	3rd June 2026	Beam Me There: Virtual Teleportation using XR over 6G
11	EuCNC 2026 & 6G Summit – Special Session 7 - Cascaded Funding in SNS Program – Accomplishments, Challenges, and Future Potential	Keysight	5th June 2026	Experimentation on networking aspects

12	EuCNC 2026 & 6G Summit - Cascaded Funding in SNS Program – Accomplishments, Challenges, and Future Potential	Eurescom	5th June 2026	SNS parent projects about open calls – survey results
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1. 6G-SANDBOX Experimentation Results at Eindhoven University of Technology

On the 17th February 2026, Adam Flizikowski from the IS-Wireless partner delivered a presentation titled “6G-SANDBOX Experimentation Results and Technical Insights” at Eindhoven University of Technology (TU/e), the Netherlands. The seminar took place from 10:00–11:00 at the Flux building on campus and was hosted by the CWT/e (Centre for Wireless Technology Eindhoven) research group. The group leaders, represented by Ulf Johannsen, together with colleagues from TU/e who attended the session. During the seminar, Adam highlighted:

- The 6G-SANDBOX toolkit availability
- The platform’s support for large-scale trials
- Practical experimentation results
- Key technical insights on workload placement, drawing from hands-on experience within the project

The discussion that followed was highly engaging. Participants expressed strong interest in:

- The possibility of replicating the 6G-SANDBOX setup
- The feasibility of interconnecting a local SANDBOX island with existing ones

The session provided an excellent opportunity to present the platform’s capabilities and explore potential collaboration paths with TU/e researchers.



Figure 54 - Adam Flizikowski presents 6G-SANDBOX experimentation results at the Eindhoven University of Technology

2. TMV WG and the FIDAL Webinar on KPI Reporting Methodologies and Results

On 24 February, the TMV WG and the FIDAL project co-hosted a webinar on KPI Reporting Methodologies and Results. During the event, Björn Riemer from Fraunhofer FOKUS presented “Adaptive Calibration and Benchmarking Methods for 6G Performance Measurements – Implementations and Conclusions from 6G-SANDBOX” on behalf of the project. The webinar also featured contributions from projects in Streams C and D, including 6G-BRICKS, ENVELOPE, iSEE-6G, and IMAGINE-B5G, which presented their work and key findings within the KPI workstream.

‘The discussion highlighted the importance of aligned KPI frameworks and harmonized measurement methodologies to ensure comparability and reproducibility across the SNS JU ecosystem as Europe advances toward 6G.’

More information [here](#).

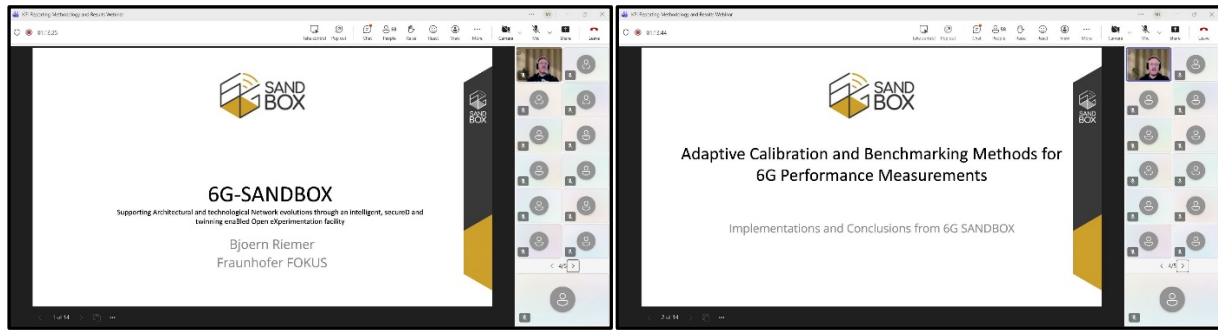


Figure 55 - Björn Riemer from FOKUS presents 6G-SANDBOX experimentation results at TMW WG webinar

3. 6G-SANDBOX at CySat'26

On 19th – 20th May 2026, Arkadiusz Czuba (Research & Innovation Engineer, IS-Wireless) presented at the CySat'26 conference in Paris. His presentation, was titled: *“Scalability and resilience of TN/NTN domains with disaggregated 5G LiquidRAN-the perspective of EU funded research projects”*. The presentation is based on and promotes solutions developed within EU-funded research projects, including 6G-SANDBOX project.



Figure 56 - Arkadiusz Czuba from IS-Wireless presents work related to 6G-SANDBOX at CySat'26

4. 6G LINO: From lab validation to real-world NTN trials Workshop

On 28th May 2026, the Smart Networks and Services Joint Undertaking (SNS JU) and the European Space Agency (ESA) jointly organized a workshop on pioneering 6G experimentation initiatives, with a particular focus on TN/NTN (Terrestrial Network/Non-Terrestrial Network) integration and the 6G-LINO project.

The workshop represented the first implementation step of the Memorandum of Intent signed between SNS JU and ESA on 16 October 2025. It brought together key stakeholders from the European Commission, the 6G Smart Networks and Services Industry Association (6G-IA), ESA, SNS JU projects, and the wider European research and innovation community active in the field of TN/NTN convergence.

6G-SANDBOX contributed to the event through a presentation delivered by our Project Coordinator **Michael Dieudonné from Keysight**, who provided information about the 6G-SANDBOX NTN Large-Scale Trials which have taken place as also the conclusions and Lessons Learnt. More information [here](#).

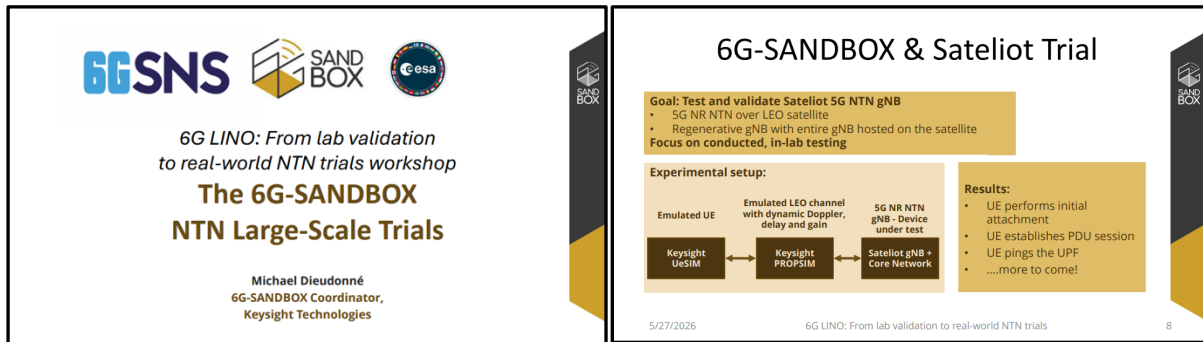


Figure 57 - Indicative representation of 6G-SANDBOX presentations at 6G LINO

5. EuCNC 2026 & 6G Summit Presentations

On the first day of the EuCNC & 6G Summit 2026. 2nd of June 2026, 6G-SANDBOX actively contributed to three workshops with presentations, addressing key research challenges and technological developments in the evolution of 6G networks.

Workshop 1: “6G Non-Terrestrial Networks: From Theory to Practice – Moving Towards In-Orbit 6G Experiments”

This workshop brought together representatives from industry, research organisations, and space-sector stakeholders to discuss the latest advances in Non-Terrestrial Networks (NTNs) and their role in future 6G systems. On behalf of 6G-SANDBOX, Matteo Pagan (Keysight Technologies) presented “The 6G-SANDBOX – NTN Large-Scale Trials”, highlighting the project's activities and experimentation capabilities for validating NTN technologies and use cases.



Figure 58 - Dr Pagan from KEYD presents results from 6G-SANDBOX Large Scale Trials at EUCNC 2026

Workshop 3: “Rethinking Test, Measurement, and Validation for 6G Networks”

Organised by our project coordinator Michael Dieudonné (Keysight Technologies), this workshop focused on the increasing complexity of Test, Measurement and Validation (TMV) methodologies required for future 6G systems. Michael Dieudonné delivered the presentation “Data Collection and Data Reusability for TMV”, presenting approaches developed within 6G-SANDBOX to support efficient data management, reuse, and benchmarking across heterogeneous experimentation environments. 6G-SANDBOX was also featured in the presentation from Luis Cordeiro representing SUSTAIN 6G, DESIRE-6G, 6G-PATH and 6G-SANDBOX ‘KPI to KVI transformation’ showing the results from ICTficial trial.



Figure 59 - Project Coordinator Michael Dieudonne hosts Workshop 3 at EUCNC 2026

Workshop 12: “Advancing Network Digital Twins for AI-Driven 6G Systems: Insights, Applications and Cross-Project Synergies”

This workshop explored the role of Network Digital Twins (NDTs) in supporting AI-driven network management and optimisation in future 6G networks. Michael Dieudonné presented “6G-SANDBOX: Results from Digital Twin Work Applied to the 6G-SANDBOX Project – From Measurement to Prediction of Technology Performance in an Energy Consumption Use Case”. The presentation showcased the project's work on leveraging Digital Twin technologies to enhance performance assessment, prediction capabilities, and energy-efficiency evaluations.



Figure 60 - Project Coordinator Michael Dieudonne presents results from 6G-SANDBOX at Workshop 12 at EUCNC 2026

AIU2 – Applications, IoT, Use cases

On the 3rd of June, Pablo Pérez from Nokia presented the paper acknowledging 6G-SANDBOX ‘Beam Me There: Virtual Teleportation using XR over 6G’ during the AIU2 – Applications, IoT, Use cases Session. In this paper, we present a mobile Virtual Teleportation application demonstrating a practical use case of eXtended Reality (XR) for human communication. A functional prototype was developed in the 6G-SANDBOX project where we measured the impact of 5G network performance in context of the project test-sites.



Figure 61 - Pablo Perez from NOKIA presents work related to 6G-SANDBOX at AIU2 at EUCNC 2026

Special Session 7: Cascaded Funding in SNS Program – Accomplishments, Challenges, and Future Potential 6G-SANDBOX played a leading role in Special Session 7, dedicated to the impact and future evolution of cascaded funding mechanisms within the SNS Research and Innovation programme. The special session, chaired by Halid Hrasnica (Eurescom / 6G-SANDBOX), who also presented ‘SNS parent projects about open calls – survey results’. Matteo Pagin also delivered a presentation titled ‘Experimentation on networking aspects’.



Figure 62 - Dr Pagin from KEYD and Halid Hrasnica from EURE present work from 6G-SANDBOX at Special Session 7 at EUCNC 2026

Finally, in **Special Session 9: Architecture Advancements towards 6G: Pre-Standardization, Key Technology Enablers, and Facing Challenges** 6G-SANDBOX was featured in the presentation ‘Integration of Non-Terrestrial Networks in 6G: An Architecture Review’ a collaborative presentation from NexaSphere, 6G-NTN, NEXUS, ETHER, UNITY-6G, 6G-SANDBOX, SUNRISE-6G projects presented by Tomaso de Cola.

2.4.3 PANEL DISCUSSION

On 3 June 2026, 6G-SANDBOX participated in the special session “*Global 6G Testbed Collaboration for Open, Intelligent and Interoperable Innovation*” at the EucNC & 6G Summit 2026. The session brought together representatives from leading international 6G research initiatives, testbed platforms, industry stakeholders, and research organizations to discuss the role of global collaboration in accelerating 6G innovation and deployment.

Michael Dieudonné (Keysight Technologies), Coordinator of the 6G-SANDBOX project, participated in the panel discussion “Global 6G Collaboration for Open, Intelligent, and Interoperable Innovation: NTN, AI-RAN and ISAC as Key Enablers for Integrated 6G Systems”. The panel provided an opportunity to exchange perspectives with representatives from major international initiatives, including SNS JU projects, UK research programmes, TNO, and Taiwan’s 6G-FORMOSA initiative.



Figure 63 - Project Coordinator Michael Dieudonné represents 6G-SANDBOX at the Global 6G Collaboration Panel at EUCNC 2026

2.4.4 ORGANIZED AND CO-ORGANIZED WORKSHOPS, WEBINAR

During the last six months of the project, 6G-SANDBOX continued its dissemination and engagement activities by co-organising four webinars as part of a webinar series under the SNS JU umbrella, as well as two workshops at EuCNC 2026 and the 6G Summit. These events provided opportunities to present project results, exchange experiences with related initiatives, and engage with stakeholders from academia, industry, and the broader 6G community. In Table 13 the reader may find the list of these events and further below their description in more detail.

Table 13: 6G-SANDBOX organized and co-organized workshops and webinar for the Extended Period

#	EVENT	PARTNER/PROJECTS	DATE / LOCATION	TYPE OF EVENT
JANUARY-JULY 2026				
1	6G SNS Vertical Innovations Webinar Series, a four-part online event	6G-SANDBOX, 6G-PATH, and Fidal	26 March 2026	Webinar - Industry, Mobility and Smart Cities

2	6G SNS Vertical Innovations Webinar Series, a four-part online event	6G-SANDBOX, 6G-PATH, and Fidal	23 April 2026	Webinar - Education, Media & Entertainment
3	6G SNS Vertical Innovations Webinar Series, a four-part online event	6G-SANDBOX, 6G-PATH, and Fidal	22 May 2026	Webinar - PPDR & Emergency
4	EuCNC 2026 & 6G Summit	Co-organised by SNS JU Projects (6G-SANDBOX, UNITY-6G, ETHER, 5G-STARDUST, 5G EMERGE)	2nd June 2026	Workshop 1 - Workshop 1 - 6G non-terrestrial networks: from theory to practice – Moving towards in-orbit 6G experiments
5	EuCNC 2026 & 6G Summit	Co-organised by Michael Dieudonne on behalf of 6G-SANDBOX	2nd June 2026	Workshop 3 - Rethinking Test, Measurement and Validation for 6G Networks
6	EuCNC 2026 & 6G Summit	Co-organised by 6G-SANDBOX, 6G-Leader, 6G-XR, Digit Africa, 6G-MIRAI, 6G-ARROW, CONVERGE, PASSIONATE, FABRIC, Slices RI, 6GXCEL	2nd June 2026	Workshop 16: International Cooperation for AI-Native RAN for 6G
7	6G SNS Vertical Innovations Webinar Series, a four-part online event	6G-SANDBOX, 6G-PATH, and Fidal	25th June 2026	Health

1. 6G SNS Vertical Innovations Webinar Series

The 6G SNS Vertical Innovations Webinar Series, jointly organized by the 6G-PATH, 6G-SANDBOX and FIDAL projects under the SNS JU, provided a platform to showcase innovative use cases and experimentation results from open-call projects across a range of strategic vertical sectors. The series highlighted how advanced 5G and emerging 6G technologies can support the development, validation, and deployment of innovative services with tangible societal and industrial impact.

The 4 webinars focused on key vertical domains: (i) Industry, Mobility and Smart Cities, (ii) Education, Media and Entertainment, and (iii) Public Protection and Disaster Relief (PPDR) and Emergency Scenarios. Across all sessions, participating projects demonstrated the value of large-scale experimentation facilities, cross-sector collaboration, and real-world validation in accelerating the adoption of next-generation network technologies.

During the first webinar *‘Industry, Mobility and Smart Cities’* which was held on the 26th of March 2026, the project, funded by 6G-SANDBOX Open Call 3, Camouflage Antenna, was resented by Mr. Rafik Addacci from AGC Glass Europe.

In the second webinar *‘Education, Media and Entertainment’*, which was held on the 23rd of April 2026, the project funded by Open Call 3, 6G-VLCBOX was presented by Jaime Sanchez Roldan from Universitat Politècnica de València.

The third webinar *‘Public Protection and Disaster Relief (PPDR) and Emergency Scenarios’*, the project ‘RESCUE’ by Sant’Anna School of Advanced Studies, funded by Open Call 2, was presented by Piero Castoldi and Molka Gharbaoui.

Finally, the fourth webinar ‘Health’ was organized on the 25th June and the project HART: Health Awareness via Radio Technology, submitted by Huawei and funded by Open Call 3, was presented by Massimiliano Maule.

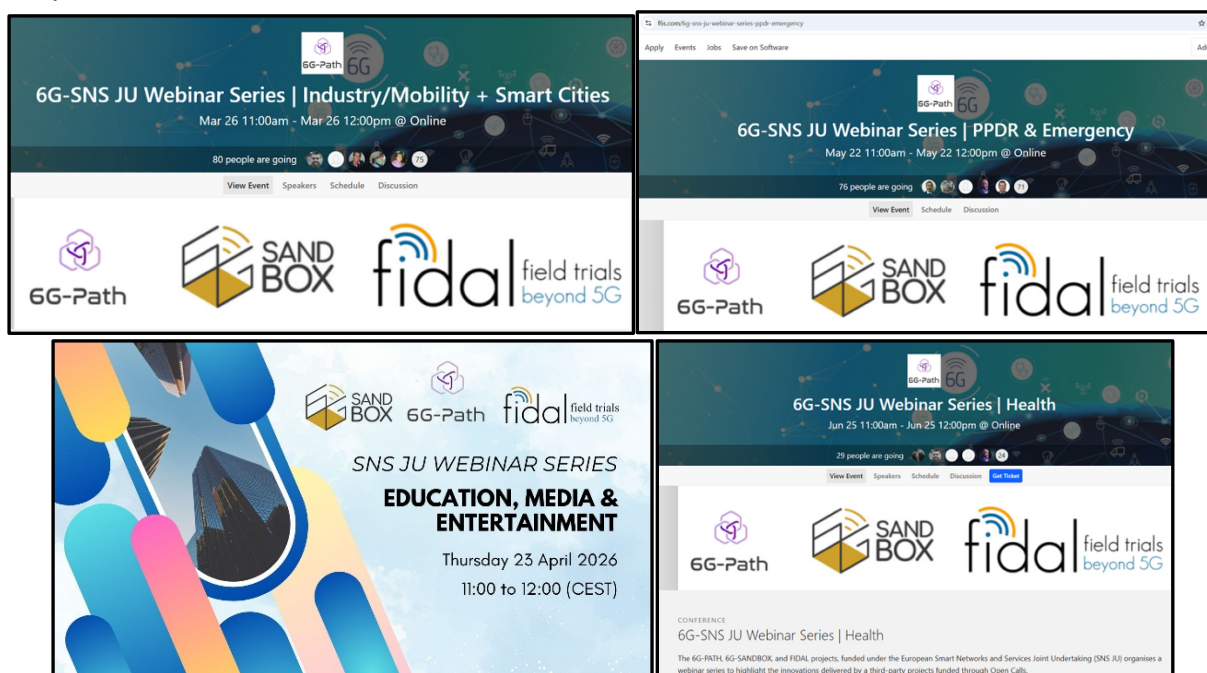


Figure 64 - Indicative Representations of 6G-SANDBOX participation in the 6G SNS Vertical integrations webinar series

2. EuCNC 2026 & 6G Summit Workshops

Within the framework of EuCNC 2026 & 6G Summit, 6G-SANDBOX actively contributed to the organisation and co-organisation of 2 workshops.

In particular, **Workshop 1: “6G non-terrestrial networks: from theory to practice – Moving towards in-orbit 6G experiments”** was co-organised by SNS JU projects including 6G-SANDBOX, UNITY-6G, ETHER, 5G-STARLUST, and 5G-EMERGE. The workshop focused on the evolution of non-terrestrial networks (NTN), addressing the transition from theoretical frameworks to experimental validation and highlighting pathways towards in-orbit 6G experimentation and integrated terrestrial/non-terrestrial architectures.

In addition, **Workshop 3: “Rethinking Test, Measurement and Validation for 6G Networks”** was organised in collaboration with Michael Dieudonné on behalf of 6G-SANDBOX. The workshop addressed the increasing complexity of 6G systems and the need for novel methodologies for testing, measurement, and validation across the full network lifecycle. An Open Discussion focusing on key takeaways and identified best practices, recommendations for SNS JU projects’ TMV activities, next steps toward sustainable 6G TMV frameworks. was moderated by Anastasios Gavras from EURECOM. More information [here](#).



Figure 65 - Workshops run by 6G-SANDBOX at EUCNC 2026

Finally, **Workshop 16: “International Cooperation for AI-Native RAN for 6G”** was co-organised by 6G-SANDBOX together with the SNS JU projects 6G-Leader, 6G-XR, DigitAfrica, 6G-MIRAI, 6G-ARROW, CONVERGE, PASSIONATE, FABRIC, SLICES-RI, and 6G-XCEL within the framework of **EuCNC 2026 & 6G Summit**. The workshop brought together experts from Europe and international partner regions to discuss the evolution of AI-native Radio Access Networks (RAN) as a key enabler for future 6G systems.



Figure 66 - 6G-SANDBOX participates in Workshop 16 at EUCNC 2026

2.4.5 ACTIONS/LIAISON WITH OTHER PROJECTS OF THE CLUSTER AND ASSOCIATIONS

The last period included also engagement with other projects, and collaborations with third-party organizations and institutions. All activities are already described and reported in previous sections. Table 14 below highlights the key actions undertaken.

Table 14: 6G-SANDBOX Actions and Liaisons with other Projects and Associations for the extended period

Actions and Liaisons with other Projects of the cluster and Associations		
#	EVENT	Collaboration
JANUARY 2026 – JULY 2026		
1	Fidal Project- Webinar on KPI Reporting Methodologies and Results	TMV Working Group and the FIDAL Project
	Mobile World Congress 2026	Demo in collaboration with CENTRIC Project and Nokia Bell Labs
2	6G SNS Vertical Innovations Webinar Series, a four-part online event	6G-SANDBOX, 6G-PATH, and Fidal
3	6G LINO: From lab validation to real-world NTN trials workshop	6G-LINO, ESA, SNS JU
4	EuCNC 2026 & 6G Summit Demos	Demos in collaboration ESA, ITRI, iTrust6G
5	EuCNC 2026 & 6G Summit- Special session 5 “Global 6G Testbed Collaboration for Open, Intelligent and Interoperable Innovation”	6G-SANDBOX and 6G-SENSES, the UK’s JOINER and TITAN, the Netherlands’ TNO, and Taiwan’s 6G-FORMOSA
6	EuCNC 2026 & 6G Summit -Workshop 1	Co- organised by SNS JU Projects (6G-SANDBOX, UNITY-6G, ETHER, 5G-STARLUST, 5G EMERGE)
7	EuCNC 2026 & 6G Summit – Workshop 3	Contributions from 6G-SANDBOX, 6G-PATH, 5G-TACTIC, OPTI6G, 6G-XCEL, 6G-SENSES, Multi-X, I-See6G, 6G-EWOC, 6G-BRICKS, SUSTAIN-6G and DESIRE-6G.
8	EuCNC 2026 & 6G Summit – Workshop 12	Contributions from 6G-TWIN, 6G-SANDBOX, MARE, 6G-PATH, SUNRISE-6G, FLECON-6G, UNITY-6G, 6G-DALI, 6G-Cloud, ENVELOPE, 6G Future Network Services, INTACT, SECASSURED and cPAID.
9	EuCNC 2026 & 6G Summit – Special Session 7	6G-SANDBOX, 6G-PATH, FIDAL, IMAGINE-B5G and ENVELOPE.
10	EuCNC 2026 & 6G Summit - Special Session 9	Architecture WG initiative

2.4.6 EVENTS/CONFERENCES/FAIRS ACTIVELY PARTICIPATED/ATTENDED

During last reporting period, the 6G-SANDBOX Consortium engaged in a range of events, including Mobile World Congress 2026 and EuCNC 2026 & 6G Summit, **10 in total**.

Table 15 contains an exhaustive list of these events, and **a description of additional actions such as booths and demonstrations at Mobile World Congress and EuCNC 2026 & 6G Summit, that do not fall within the Dissemination KPIs table**.

Table 15: Events, Conferences, Fairs attended by 6G-SANDBOX

#	Event/Conference	Date
JANUARY 2026 – JUNE 2026		
1	Eindhoven University of Technology Seminar	February 2026
2	Fidal Project- Webinar on KPI Reporting Methodologies and Results	February 2026
3	Mobile World Congress 2026	March 2026
4	EuCAP 2026	April 2026
5	ICT 2026	May 2026
6	CySat'26	May 2026
7	6G LINO: From lab validation to real-world NTN trials workshop	May 2026
8	6G SNS Vertical Innovations Webinar Series, a four-part online event	April to July 2026
9	EuCNC 2026 & 6G Summit	June 2026
10	IEEE Symposium on Measurement in Networking and Communications	July 2026

1. Mobile World Congress 2026 – Demo Booth

The 6G-SANDBOX project participated in the Mobile World Congress (MWC) 2026, held from 2–5 March 2026 in Barcelona, where the project was hosted at the Keysight Technologies demo booth. Our Project Coordinator, Michael Dieudonne, together with Giovanni D’Amore, was present at the booth to answer questions about the project and to run the demonstration entitled **“High-Order MIMO Evaluation”**, developed in collaboration with the CENTRIC Project and Nokia Bell Labs.

The project team was also honoured to welcome representatives of the Smart Networks and Services Joint Undertaking (SNS JU), including Erzsébet Fitori, Executive Director; Javier Albares, Head of 5G/6G Programmes; Pavlos Fournogerakis, Deputy Head of Programmes; and Chiara Mazzone, Programme Officer.

The demonstration received very positive feedback from visitors throughout the event.

Developed in cooperation with Nokia Bell Labs, the demonstration presented an assessment of an AI-based Channel State Information (CSI) compression model using both 3GPP-compliant and ray-traced channel models. The results

illustrated how Keysight solutions can help ensure consistent AI performance as RAN complexity and scale continue to grow.

In addition, visitors to the booth had the opportunity to watch videos about the 6G-SANDBOX platform and learn more about the project's objectives, developments, and outcomes. The event provided an excellent opportunity to increase the visibility of the project, engage with stakeholders, and showcase key results to the wider telecommunications community.



Figure 67 - KEYB presenting work relating to 6G-SANDBOX at MWC 2026

2. EuCNC 2026 & 6G Summit Demos

The project's final appearance at the EuCNC 2026 & 6G Summit represented a fitting finale of its dissemination journey. With demonstrations, collaborative showcases, and communication activities prominently displayed across multiple locations within the exhibition venue, the project achieved exceptional visibility and engagement. Its results and innovations were widely acknowledged by attendees, reinforcing the project's reputation and legacy as a key contributor to the European 6G research and innovation landscape.

The most impressive demo/large scale trial was the **6G-SANDBOX Final Large-Scale Trial: Comparing Traditional and Open 5G Private Networks**. The 6G-SANDBOX project invited conference participants to experience a live 5G private network deployed in the EuCNC exhibition space. Participants were able to connect to the network, run experiments, and visualize live traffic, gaining hands-on insight into next-generation private network technologies. The trial uniquely featured two complementary 5G private network deployments operating side by side:

- A traditional vendor-integrated 5G private network, delivering a production-ready, carrier grade solution with commercial 5G radio access, an integrated 5G Core, and centralized management for secure and reliable enterprise connectivity.
- An open, end-to-end O-RAN private network, integrating open-source and third-party components to demonstrate interoperability, flexibility, and performance, supported by Keysight test solutions for visibility, analytics, and cloud-native UE emulation.

This side-by-side deployment enabled a direct comparison between integrated and open 5G private networks, highlighting their respective strengths as building blocks toward future 5G and 6G systems.

Results: **ORAN Private network:** 250+ subscribers from academia and industry.



Figure 68 - 6G-SANDBOX powered demos at EUCNC 2026

Moreover, at 6G-SANDBOX Booth #65, 2 more impressive demos were in progress

- **XR-Based Remote Demonstration: Immersive Teleportation to the 6G Innovation Lab.** This demonstration presented an immersive XR experience that virtually teleports EuCNC attendees to a live 6G innovation laboratory in Málaga. Using XR headsets, up to five participants could simultaneously observe and interact

with a real-time AI PHY demonstration running on an advanced development testbed supporting AI-based physical layer algorithm training under realistic RF conditions. Powered by Nokia immersive communication technology, the setup streams 360-degree video and bidirectional audio, with zoom-in capabilities to highlight instruments and system details. The demo illustrated both the capabilities of the AI PHY testbed and the role of future 6G networks in enabling low-latency immersive communication for distributed experimentation and collaboration. **This demo was also available at NOKIA Booth.**

- **Radio Tomography Imaging using Cameras and Sub-THz Radio Links.** This demo showcased a sub-THz sensing system leveraging high-frequency wireless links for radio tomography imaging. It highlighted how a single radio system can simultaneously enable communication and environmental sensing without requiring active scanning beyond regular data transmission. The attenuation map generated as an object moves across the line-of-sight radio link is used to construct a radio image in the sub-THz domain. This approach is particularly relevant for future 6G systems, where efficient spectrum utilization is essential. The work demonstrated that continuous sub-THz radio links can effectively support practical high-frequency sensing applications. This demo is supported by the 6G Flagship and the Business Finland-funded 6GReMade project and is conducted in collaboration with 6G-SANDBOX (Keysight & the University of Oulu, leveraging the in-kind contribution from Virginia Diodes Inc.)





Figure 69 - 6G-SANDBOX Powered Demos at EUCNC 2026

Moreover, 6G-SANDBOX was represented through several additional demonstrations, including collaborations with the European Space Agency (European Space Agency) and ITRI (Industrial Technology Research Institute), while another demo was showcased at the booth of partner University of Málaga. One of the highlights of these days was the visit of a high-level delegation from the European Commission, the SNS JU, and the Spanish government, who had the opportunity to experience all these demonstrations firsthand.

European Space Agency (ESA) and 6G-SANDBOX Demo: The 6G-SANDBOX project invited stakeholders and technology partners to experience a live demonstration of a 5G NR Non-Terrestrial Network (NTN) connection, deployed directly at the EuCNC exhibition site. The trial was carried out using a European Space Agency (ESA) mobile platform, where a van equipped with a portable antenna establishes a live link to a Low Earth Orbit (LEO) satellite. Through this demonstration, participants will witness the end-to-end realization of a 5G NTN connection in a realistic and mobile setup. The system showcased how a terrestrial user terminal can successfully access 5G services via satellite, highlighting the feasibility of extending 5G coverage beyond traditional ground-based infrastructure.



Figure 70 - ESA and 6G-SANDBOX joint demo at EUCNC 2026

Industrial Technology Research Institute and 6G-SANDBOX Demo – ITRI has long been dedicated to the development of 6G NTN (Non-Terrestrial Network) technology. ITRI's 5G NR base station complies with 3GPP Rel. 17 and Rel. 18 enhancement standards and has completed OTA (Over-the-Air) integration and verification with international partners including ESA, MediaTek, Airbus, Eutelsat OneWeb, and Sharp. In this participation in the 6G SANDBOX NTN Trial field testing and verification activities, ITRI will integrate equipment from companies such as Hispasat GEO, Keysight, UMA, and NxgSAT, and showcased its NTN base station solution at EuCNC & 6G Summit 2026.



Figure 71 - ITRI and 6G-SANDBOX joint demo at EUCNC 2026

University of Málaga - Demo Booth: The University of Malaga, in collaboration with nxgsat and Hispasat, and in the context of the 6G-SANDBOX project, presented a live demonstration of a 3GPP NTN Release 18-compliant 5G NR SDR User Equipment operating over a transparent GEO satellite payload. The demonstration used the Hispasat 30W-6C satellite in Ku-band to establish full end-to-end connectivity between the UE and gNB under real satellite channel conditions. Visitors were able to observe live traffic services both in the uplink and in the downlink over a GEO satellite link.



Figure 72 - UMA and 6G-SANDBOX joint demo at EUCNC 2026

In addition, 6G-SANDBOX was showcased at the Nokia's partner booth, featured a demonstration at the iTrust6G booth, and was further represented across several booths of Open Call beneficiaries and the SNS JU booth, significantly extending the project's visibility and outreach throughout the exhibition area.



Figure 73 - NOKIA and 6G-SANDBOX joint demo at EUCNC 2026



Figure 74 - 6G-SANDBOX Consortium members at EUCNC 2026

2.5 M19-M42 MILESTONES – COMMUNICATION AND DISSEMINATION ACTIVITIES

During the reporting period (M19-M42), MS10-MS19 milestones have been successfully fulfilled, and certain communication and dissemination actions have been performed, linked directly to these milestones. The following 2 tables (Table 16 and Table 17) present the respective communication and dissemination actions triggered by the fulfilment of the MS10-MS20 milestones.

Table 16: Key Technical Milestones achieved and related Communication Actions performed (M9-M42)

Key Technical Milestones achieved and related Communication Actions performed (M19-42)				
Year	MS#	Milestone Description	Deadline	Communication Activities
	11	1st round of experiments/ implementations started.	31/07/2024	Social Media Campaign The achievement of these milestones was supported by a wide range of communication activities carried out within the 6G-SANDBOX project. In particular, the Open Calls were promoted through the project website and social media channels, supported by targeted outreach campaigns inviting companies, SME and research organisations to collaborate with the project.
	12	Publication of 2nd OC	31/10/2024	
	13	Final 6G-SANDBOX facility design completed.	31/12/2024	Website Dedicated website pages were also created under the ‘Open Calls’, “Engage with Us” and ‘Software’ section to facilitate interaction with stakeholders, providing information on how organizations could collaborate with the project, participate in experimentation activities, or contribute technologies to the 6G-SANDBOX ecosystem. These communication actions helped raise awareness of the project’s facilities, attract experimenters - including participants without funding - and encourage engagement with the experimentation infrastructure. Poster: An ‘Experimentation Poster’ was created to attract potential experimenters. It was used in events and also it was featured on the website and social media. The White Paper on ‘THIRD PARTY EXPERIMENTATION: Engagement process and technical information’ was

				communicated on all our platforms including website and Newsletter, Newsletters #7 #8 #10 #11 #12 Include content to support those milestones including Deliverables.
YEAR 3	14	Final 6G KPI & KVI definition and validation methodology released	30/04/2025	Further to the forementioned communication activities, when the Open Calls were finalized, Open Callers were recommended to provide Project and Results Report, Presentations and Videos for their projects. All this material was communicated through our website and our social media. A '6G-SANDBOX Key Achievements' Poster was introduced in EUCNC 2026 to conclude the project.
	15	Start of 2nd round of experiments/ implementation	30/04/2025	
	16	6G-SANDBOX Open call Technology Add-on completed	30/06/2025	
	17	Second 6G-SANDBOX testbed released	30/06/2025	
	18	Final results on KPIs and KVIs validation published	31/08/2025	
	19	OC experimentation completed	30/09/2025	
	20	Successful Final Review	31/12/2025	

Table 17: Key Technical Milestones achieved and related Dissemination Actions performed (M9-M42)

Key Technical Milestones achieved and related Dissemination Actions performed (M19-42)				
Year	MS#	Milestone Description	Deadline	Dissemination Activities
YEAR 2	11	1st round of experiments/ implementations started.	31/07/2024	Public dissemination through EuCNC 2024 activities, where ongoing experimentation and trial networks were showcased in demos and workshops. 6G-SANDBOX presented multiple trial network demonstrations and experimentation updates at the
	12		31/10/2024	

		Publication of 2nd OC		EuCNC & 6G Summit 2024 (June 2024) , including ORAN, RIS and digital twin demos.
	13	Final 6G-SANDBOX facility design completed.	31/12/2024	Disseminated via technical deliverables and presentations , including architecture and framework updates in project newsletters and dissemination section (deliverables) Indicative events • IEEE Xplore publication dissemination of EuCNC 2024 papers (project results released publicly) • Post-EuCNC 2024 dissemination of demos and trial network results
YEAR 3	14	Final 6G KPI & KVI definition and validation methodology released	30/04/2025	EuCNC 2025 demonstrations and facility showcase. Multiple presentations and demo booth.
	15	Start of 2nd round of experiments/ implementation	30/04/2025	EuCNC 2025 paper on performance measurement and benchmarking 'Developing Adaptive Calibration and Benchmarking Methods for 6G Performance Measurement - Implementation and Conclusions from 6G-SANDBOX'.
	16	6G-SANDBOX Open call Technology Add-on completed	30/06/2025	6G-SANDBOX Webinar, showcased Trial infrastructure and experiments results.
	17	Second 6G-SANDBOX testbed released	30/06/2025	Indicative Events that partners participated and disseminated progress and results • IEEE CAMAD 2024 – Athens (workshop + demo booth + papers + ATHENA workshop) • 3rd EU-Taiwan 6G SNS Joint Workshop (panel on 6G trial networks) • IEEE Globecom 2024 +2025 • Mobile World Congress 2025 • EuCNC 2025 & 6G Summit (Poznań) • IEEE NFV-SDN 2025 (Athens) • EuCNC 2026 & 6G Summit (Malaga)
	18	Final results on KPIs and KVIs validation published	31/08/2025	
	19	OC experimentation completed	30/09/2025	
	20	Successful Final Review	31/12/2025	

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3 MONITORING, CONTROL AND EVALUATION OF COMMUNICATION /DISSEMINATION

As outlined in D6.1 and reported in D6.2, the effectiveness of 6G-SANDBOX communication channels was continuously monitored throughout the project's lifespan to ensure that the objectives of the communication plan are met. In parallel, a structured procedure has been established for the efficient reporting of dissemination activities. These control and monitoring processes are presented in detail on D6.1 but are covered in brief below for convenience.

Reporting of Dissemination/Communication Activities

1. SharePoint Platform for Material Sharing

- Dedicated folders for partners to upload photos, presentations, and other relevant materials.
- An Excel file titled *"WP6 Activities Reporting"* where partners log their dissemination activities.

2. Tracking and Discussion of Dissemination and Communication KPIs during Face-to-Face (F2F) Meetings

3. Performance Evaluation and Statistical Dashboards

Google Data Studio was used to monitor monthly data from all communication channels. The resulting statistical data are shared internally through graphical dashboards accessible via SharePoint using static Google Data Studio URLs.

- Social media dashboards were produced quarterly.
- Each communication channel has its own dedicated dashboard, including a variety of Key Performance Indicators (KPIs) to facilitate efficient performance assessment.

These monitoring and reporting mechanisms ensure that both dissemination and communication activities are tracked effectively, allowing the project to maximize its outreach and impact.

3.1.1 PERFORMANCE EVALUATION AND STATISTICAL DASHBOARDS

As already stated in D6.1 and reported in D6.2, Google Data Studio assisted in monitoring the monthly data of the communication channels. The produced statistical data are internally released in graphical Dashboards (accessible online at SharePoint through static Google Data Studio URLs).

Specifically, the 6G-SANDBOX Social Media Google Data Studio Statistical dashboards were regularly issued at quarterly intervals and the comparison of dashboards referring to different periods revealed positive changes, trends, or deviations, which derived from the evolution of communication strategy and the project progress (e.g., followers increase, number of posts, impact achievement, penetration increase and visibility awareness, etc.).

Below we present in detail the overall results, M1-M42 and in the Annex 1 the reader may find the:

1. **June 2024 – December 2025 – Period 2**, including June 2024, as this month was not included in the previous reporting Deliverable.
2. **The extended period from January 2026 to June 2026 (Annex 1)**

3.1.2 WEBSITE STATISTICAL DASHBOARDS

Full Period from December 2022 (pre-posting) – June 2026

Website

The 6G-SANDBOX website continued to serve as a key communication channel throughout the project, attracting more than **23,000** users and generating over **94,000** page views and **42,000** sessions by June 2026. Visitors originated from a broad international audience, with strong engagement across Europe, North America, and Asia. The website recorded more than 230,000 interactions (events) and maintained an **engagement rate of 44%**, demonstrating sustained interest in the project's activities, results, and experimentation facilities. (<https://datastudio.google.com/u/0/reporting/14f7d803-4797-48f1-ab5e-0e55f451232f/page/pmtsB>)

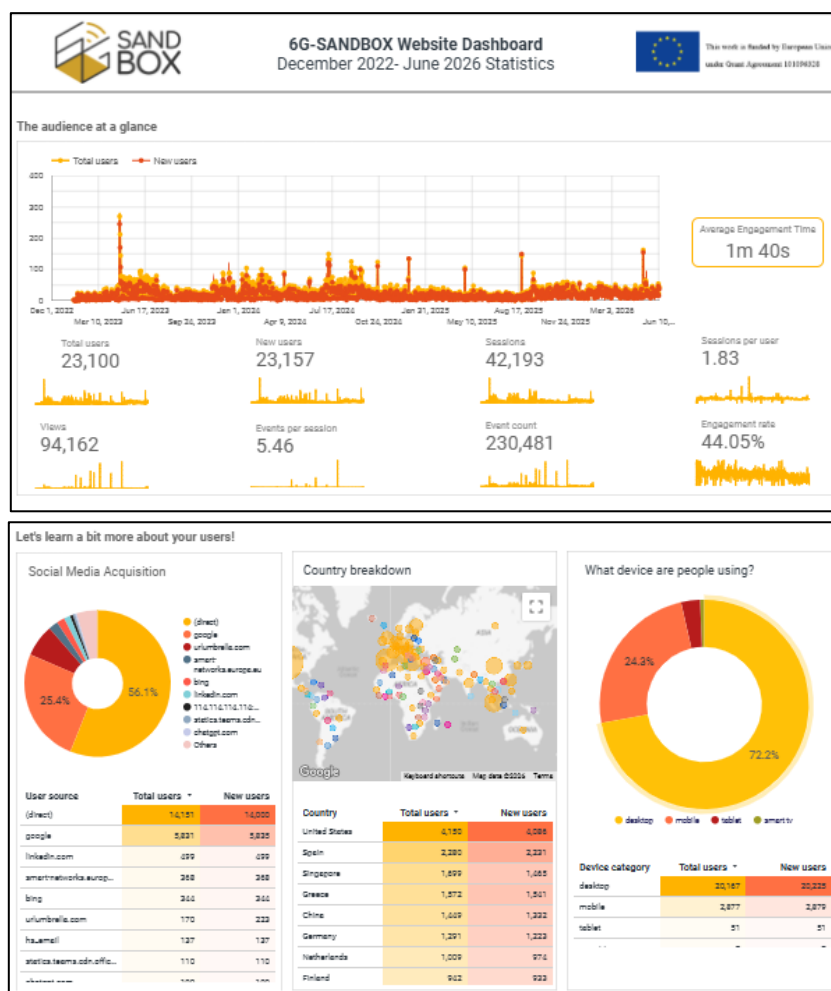


Figure 75 - 6G-SANDBOX Website Analytics

3.1.3 LINKEDIN PLATFORM

LinkedIn platform proved to be the most impactful dissemination channel of 6G-SANDBOX, enabling continuous engagement with the project's target audiences. By June 2026, the account had published **325 posts**, achieving over **218,000 views**, **7,200 reactions**, and **420 reshares**, while building a community of **more than 1,660 followers**. The sustained growth and high visibility achieved on LinkedIn significantly contributed to the dissemination of project results and the promotion of 6G-SANDBOX activities across industry, academia, and the research community. Based on the available dashboard metrics, the LinkedIn page achieved an estimated engagement rate of approximately **3.5%**, reflecting a strong level of audience interaction and demonstrating the effectiveness of the project's communication activities. (<https://datastudio.google.com/u/0/reporting/534c3d45-adff-4aa9-a748-0d7c77c5c7dd/page/1SSqB>)

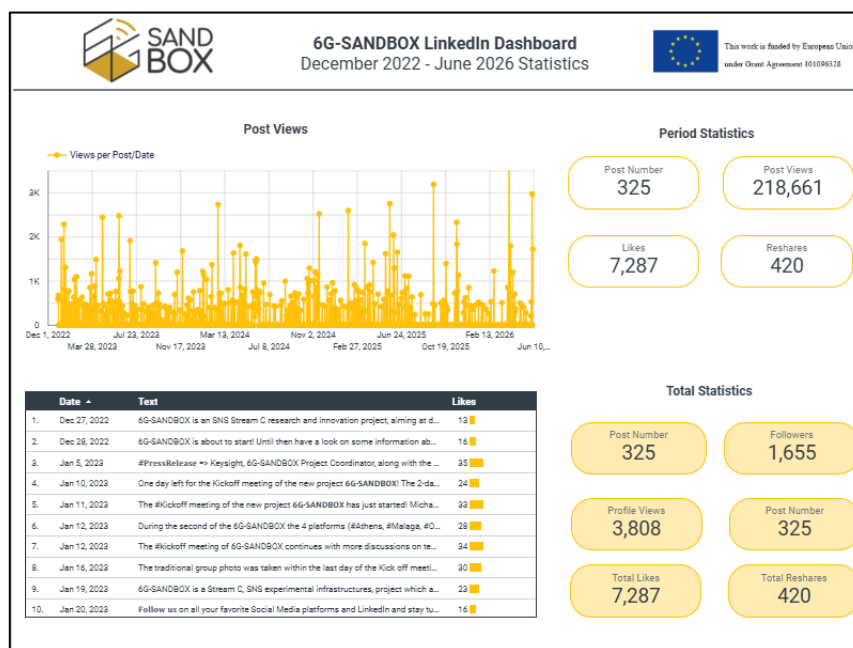


Figure 76 - 6G-SANDBOX LinkedIn Analytics

3.1.4 X PLATFORM

X Platform with **272** followers is the second most important platform for 6G-SANDBOX. From December 2022 to June 2026, the 6G-SANDBOX X account published **278** tweets, generating **23,356** impressions and **2,488** engagements, corresponding to an engagement rate of approximately **11%**. The account also recorded 821 likes and 169 retweets, demonstrating active interaction with the project's content and supporting the dissemination of 6G-SANDBOX activities and results. (<https://datastudio.google.com/u/0/reporting/534c3d45-adff-4aa9-a748-0d7c77c5c7dd/page/1SSqB>)

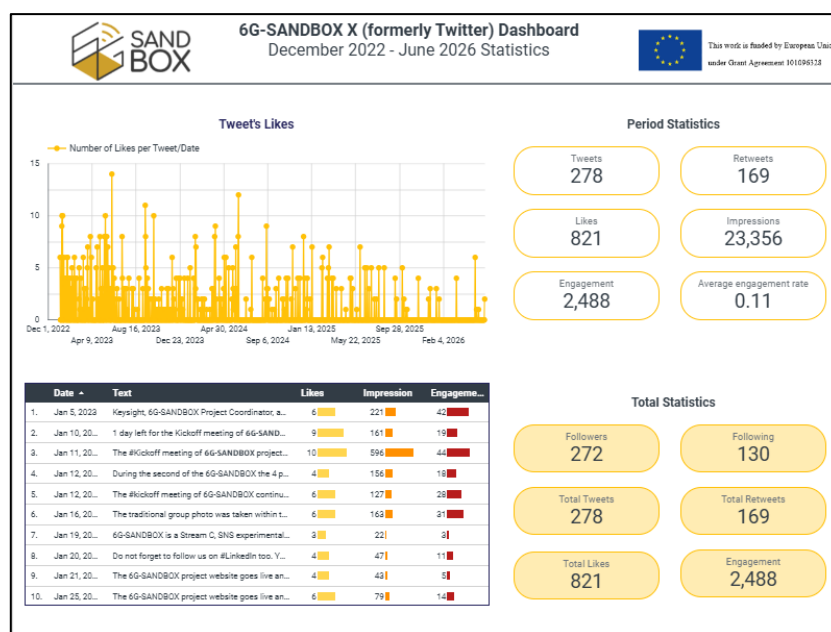


Figure 77 - 6G-SANDBOX X/Twitter Analytics

3.1.5 INSTAGRAM PLATFORM

The 6G-SANDBOX Instagram account supported the project's dissemination activities through 201 posts published between December 2022 and June 2026. During this period, the account generated **5,467 impressions**, reached **4,432**

users, and received **921 likes**, corresponding to an estimated **engagement rate of 16.8%**. Although Instagram was not the project's primary communication channel, the platform achieved strong audience interaction, demonstrating effective engagement with its followers, and extending the visibility of project news and activities.

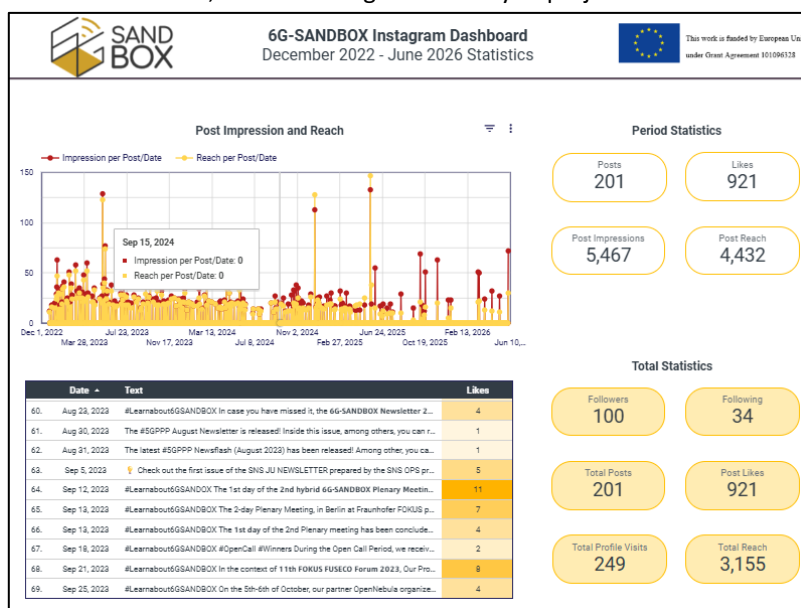


Figure 78 - 6G-SANDBOX Instagram Analytics

3.1.6 FACEBOOK PLATFORM

The 6G-SANDBOX Facebook page contributed to the project's online dissemination activities through **246 posts** published between December 2022 and June 2026. During this period, the page achieved a total **reach of 6,311 users**, generated **4,557 engagements**, and received **867 likes**. Despite its comparatively smaller follower base, Facebook recorded a high level of audience interaction, demonstrating the effectiveness of the platform in engaging a dedicated community interested in the project's activities and results. (<https://datastudio.google.com/u/0/reporting/6e7feb4-c275-4e1d-9716-79af09aeb2f5/page/j5mpB>)

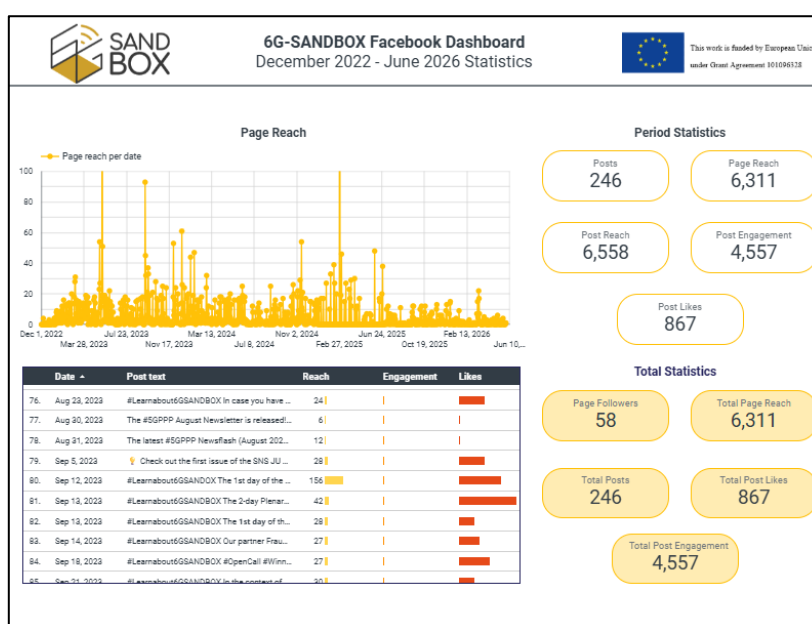


Figure 79 - 6G-SANDBOX Facebook Analytics

To sum up the performance of each platform, LinkedIn was the project's flagship dissemination channel in terms of reach and community size, while Facebook, Instagram, and X achieved particularly strong engagement levels within their respective audiences.

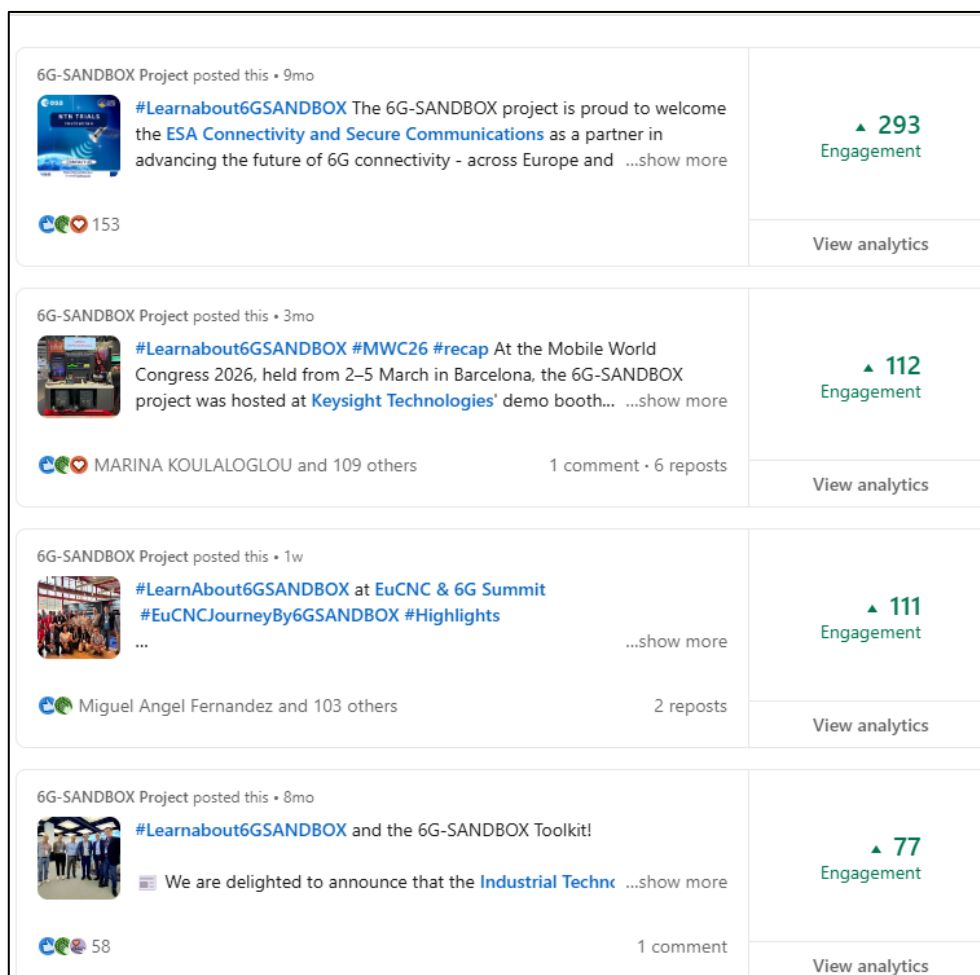


Figure 80 - 6G-SANDBOX LinkedIn – Most Popular LinkedIn posts during the second period

4 SNS PROGRAM COLLABORATION

4.1 INTRODUCTION

6G-SANDBOX is aware of the requirement to implement this project as part of a programme of complementary grants as specified in the SNS work programme. It acknowledges the roles and commitments of the EC, the SNS JU board, the Network Europe technology platform, the 6G Infrastructure Association, the 5G for Europe Action Plan and commits to constructive interactions with these bodies. 6G-SANDBOX commits to work with its peer SNS JU projects as required under article 7 of the grant agreement that requires arrangements set out in a written collaboration agreement with the participants of the other project.

This implies an organizational structure for the SNS JU, although the details of it are a work-in-progress. However, we assume that the governance of the programme will be very similar to the governance of its predecessor programme 5G PPP. Hence, we assume a Steering Board (SB), a Technology Board (TB) and several Working Groups (WGs) as the working structure of the SNS JU projects' collaboration mechanisms. The 6GSANDBOX has implemented the following measures:

- Appointment of an SB mandated representative (project coordinator), who will represent the project in the SB meetings and will participate and contribute to the SNS JU activities and report progress against programme commitments. A deputy SB member has been appointed as well
- Appointment of a TB mandated representative (technical manager), who will represent the project at TB meetings and will contribute fully to actions to determine the progress against the programme key performance and key value indicators. A deputy TB member has been appointed as well.
- Appointment of representatives (and their deputies) to join WGs, who will contribute to and, as necessary, edit position papers, deliverables, and reports from the working groups, proactively driving working groups closely related to project goals.

4.2 PARTICIPATION IN SNS JU AND 6G IA BODIES AND WORK GROUPS

It is fully understood by 6G-SANDBOX that, while the grant agreements are contracted at project level, success may be evaluated in the programme context. So, under article 7 of the complementary grant agreements, this programme level responsibility is understood as part of the project undertaking. 6G-SANDBOX has allocated sufficient resources for the interaction with the SNS JU programme at all levels, e.g., SB, TB, WGs, as well as joint dissemination activities and programme representation. Sufficient budget has been planned for travel costs and contributions to programme level events and dissemination material. Resources for participation in SB and TB are included in Task 6.4; for participation at WGs at the work packages that relate to the subject of the working groups. The bodies and work groups are differentiated in SNS JU project bodies and WGs, and 6G IA workgroups as follows:

SNS JU projects bodies and work groups	6G IA work groups
Steering board	Open Smart Networks and Services
Technology board	Pre-Standardization
5G/Beyond 5G Architecture	Spectrum
Software Networks	Vision and Societal Challenges
Network Management & QoS (dormant)	Security
Test, Measurement and KPIs Validation	Trials
	5G for CAM
	SME (Networld Europe)

The project has appointed the following individuals as contacts to the activities of the SNS JU programme:

Body/group	Liaison person	Deputy liaison person
Steering board (PM)	Michael Dieudonne (Keysight)	Pedro Merino (Univ. Of Malaga)
Technology board (TM)	Pedro Merino (Univ. of Málaga)	Dimitris Tsolkas (Fogus Innovations & Services)
5G/Beyond 5G Architecture	Harilaos Koumaras (NCSR)	Anastasios Gavras (Eurescom)

		Dimitris Tsolkas (Fogus Innovations & Services)
Software Networks	Adam Flizikowski (ISRD)	
Network Management & QoS (dormant)		
Test, Measurement and KPIs Validation	Anastasius Gavras (Eurescom)	Michael Dieudonne (Keysight)
Open Smart Networks and Services	George Makropoulos (NCSRD)	Nikolaos Gkatzios (INFOLYSIS) Dimitris Tsolkas (Fogus Innovations & Services)
Pre-Standardization		
Spectrum (not active)		
Vision and Societal Challenges	Anastasius Gavras (Eurescom)	Ioanna Mesogiti (COSM)
Trials	Pedro Merino (Univ. Of Malaga)	
5G for CAM	Dimitris Fragkos (NCSRD)	
SME	Vaios Koumaras (INFOLYSIS)	Dimitris Tsolkas (Fogus Innovations & Services)
Communications (not listed under https://6g-ia.eu)	Anastasius Gavras (Eurescom)	Marina Koulaloglou (INFOLYSIS)

4.2.1 PARTICIPATION IN SNS TASK FORCE ON OPEN CALLS

The SNS Task Force on Open Calls has been established to provide a discussion forum among SNS projects (so-called parent projects) implementing the mechanism of Financial Support to Third Parties (FSTP) and organizing corresponding competitive Open Calls. The main purpose of the forum is to discuss various issues occurring while implementing Open Calls and try to find the most efficient way to solve them, based on feedback exchange among the projects. Besides covering the day-to-day implementation issues, the Task Force also considered several issues and laid down best practices and corresponding recommendations for overall FSTP implementation, based on the concrete experiences in the SNS program.

The main results achieved by the Task Force are listed below:

- Adoption of a Redress Procedure towards OC proposers during submission and after evaluation phases
- Provision of optional Templates for Financial and Technical Reporting from the parent OC projects towards SNS and EC
- Regular provision of Open Calls Statistics on the SNS website and towards various SNS and EC services
- Publication of open calls results – abstracts from OC sub-projects, available on the SNS website (picture below)
- Organization of a series of webinars (1st half 2026), presenting outcomes of the OC projects along particular areas (networking, verticals, etc.)

- Organization of special session at EUCNC 2026 “Cascaded Funding in SNS Program ~ Accomplishments, Challenges, and Future Potential ~

SUMMARY OF EXPERIMENTS AND IMPLEMENTATIONS

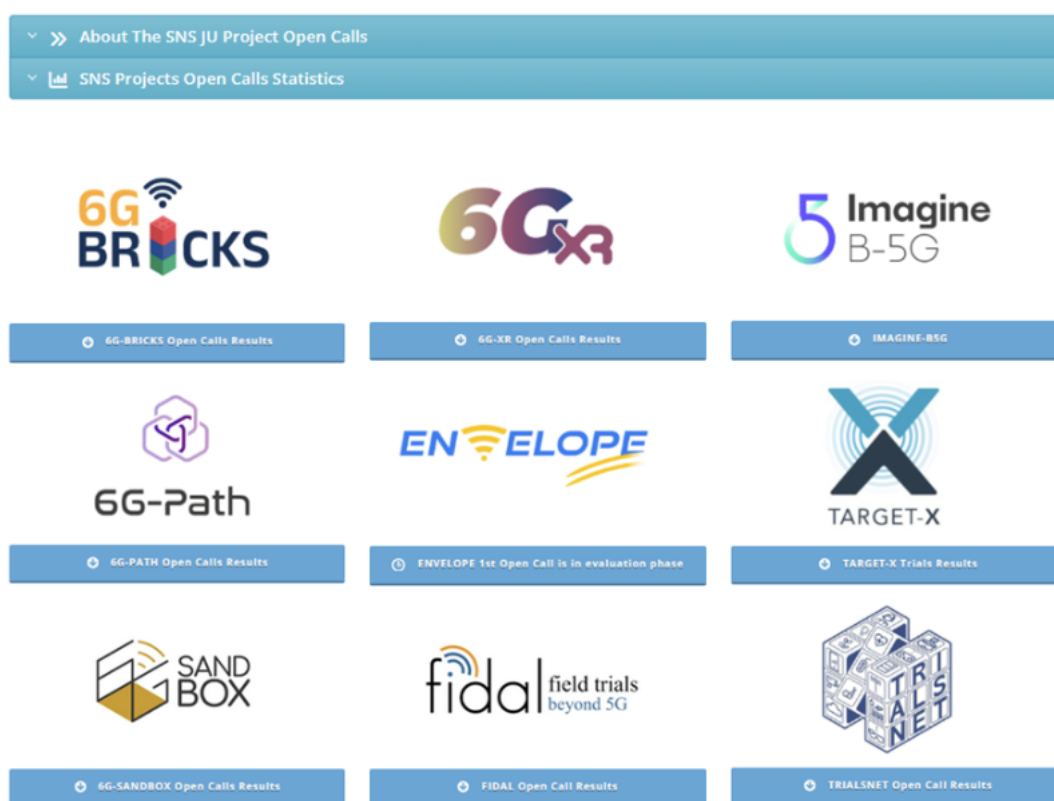
Results Achieved by Third Parties Involved in SNS JU Projects through the Mechanism of Cascading Funding – Open Calls

INTRODUCTION

Cascading funding is a financial support model used for innovation projects. Under this approach, the European Union facilitates access to funding for SMEs, start-ups, and other smaller entities developing innovative products and services. The aim is to optimise the distribution of resources and stimulate the growth of technological and research initiatives across various sectors.

Within the SNS Programme, several projects presented below have been implementing open calls.

In the following, we present a summary of experiments and implementations conducted within the scope of the SNS JU Programme. This page is considered a living document and will be updated regularly.



EDITORIAL

The publication has been created from valuable contributions received from the SNS Open Calls participants, which have been consolidated by the editors:

Figure 81 - 6G-SANDBOX presenting the results of its participation in the Task Force on Open Calls

The Task Force has been regularly providing inputs to SNS journals and other program level publications as well as regularly reported about its activities at the SNS Steering Board meetings. The Task Force held audio meetings once a month, where besides the above reported activities we share best practices (e.g., eligibility models, monitoring methods of projects, cross project collaborations, open call timings, finance info) among the parent project, to improve and efficiently implement the Open Calls.

Since spring 2025, the Task Force has been chaired by 6G-SANDBOX representative Halid Hrasnica (Eurescom GmbH).

4.2.2 ASSESSMENT OF WORKLOAD FOR INTERACTION WITH WORKING GROUPS

In the following section, we assess the principal workload for the liaison persons listed above in their engagement with the SNS JU programme Work Groups (WGs). The information below is valid for all WGs and differs in case a project member is assuming a chair or co-chair function of a WG. The main workload for the liaison person is to participate in the conference calls and meetings of the WGs. Physical meetings are not common for the work of the WGs but can only occur under exceptional circumstances. Conference calls are the norm, and depending on the WG plan, take place every two to four weeks and last normally no more than 90 minutes (with the exception perhaps of the architecture WG in 5G PPP that required 120 minutes). This primary activity can be shared also with the deputy liaison person. Depending on the topics being discussed, it is the responsibility of the liaison person to report back to the project or introduce project proposals to the WG. Examples of these activities are:

- If the WG drafts a white paper to which the project can contribute, ask the related project partners to compile contributions to the white paper in production. Usually, these contributions range from a few paragraphs up to a few pages. The contributions are typically communicated via the liaison person between the project and the WG.
- If the project wants to draft a white paper and it seems like a good idea to engage with other projects, then bring the project's proposal for a joint white paper into the WG for discussion/decision. In this case normally the WG will ask the proposing project to ensure that an editor is available. Editorship of a white paper is obviously more work, but editorship is not necessarily assigned to the liaison person by default.

Often the WGs organise project presentations along the interesting topics of the WG. These presentations can be used to directly liaise with projects in case of substantial mutual interest. The liaison person mediates for a good presentation to the WG or presents project contributions directly.

- WGs organise webinars or conference sessions to which the projects interested in the subject contribute to the organisation and execution. Similarly, this activity is not necessarily assigned to the liaison person by default.
- Occasionally review draft white papers for quality. The general interaction pattern can be intermittent during white paper drafting. The workload for chair or co-chair is higher due the following additional duties to:
 - Organise conference calls and meetings
 - Provide agenda and minutes of conference calls and meeting
 - Track activities of the WG for reporting to the steering board
 - Maintain the terms of reference document for the WG
 - Report regularly to the steering board

4.2.3 DIRECT COLLABORATION WITH OTHER PROJECTS AND INITIATIVES

6G-SANDBOX collaborates or plans to collaborate with other collaborative projects in Europe and potentially worldwide. Beyond SNS JU projects, several projects of the 5G PPP are still active and with which a collaboration is meaningful. Finally, 6G-SANDBOX is preparing a MoU that can facilitate collaboration with the European Space Agency (ESA). The following table lists the projects, the area of collaboration, and the main partner(s) through which the collaboration is being facilitated.

Project / Initiative	Liaison partner	Collaboration topics
ARIADNE (5G PPP)	EURE	Channel models
6G-BRAINS (5G PPP)	EURE	Channel models
EVOLVED-5G	UMA, NCSRD, TID, FOG, INF, COS	CAPIF, NEF, Network Apps, Malaga and Athens platforms
6G-BRICKS	ISRD	Cell free Virtual RAN

CampusOS	FOKUS	6G-SANDBOX attempts to establish a collaboration with the German Lighthouse project CampusOS as such that CampusOS may use the toolset available at the Berlin Platform of 6G-Sandbox to conduct performance evaluations of 5G campus networks.
ESA	TID, UMA, KEYS, ON	Connect 6G-SANDBOX Málaga Testbed to ESA 6G Lab at Oxford (UK); Connect other 6G-SANDBOX sites to ESA labs when they install NTN support; Conduct trials and demos integrating satellite and terrestrial 5G and 6G technologies and implementing use cases in different vertical domains; Set up an open innovation laboratory to be potentially interconnected with other open innovation laboratories in ESA facilities or in other locations;

5 FINAL OVERVIEW OF THE PROJECT IMPACT M1-M42 - CONCLUSION

Throughout its lifetime, 6G-SANDBOX maintained a strong and continuously growing presence within the European and international 6G research and innovation ecosystem through communication, dissemination and extensive collaboration activities.

Activities evolved from raising awareness of the project vision and the four experimentation platforms during the initial stages to showcasing mature platform capabilities, experimental results, Open Call outcomes, and large-scale trial initiatives during the final phases.

In 2023, the efforts focused on introducing the 6G-SANDBOX concept and engaging the wider research and industrial community around the project's experimentation vision. The project actively participated in key events, including the ETSI Research Conference, the IEEE CSCN 2023, the International Conference on 6G Networking, IEEE GLOBECOM, and others. A major milestone was the project's participation in EuCNC & 6G Summit 2023. The year was also marked by the establishment of significant international collaborations through the signing of two strategic Memoranda of Understanding (MoUs). In June 2023, 6G-SANDBOX signed an MoU with the European Space Agency (ESA) and later in November 2023, the project signed an MoU with the Industrial Technology Research Institute (ITRI) of Taiwan. These collaborations significantly expanded the international reach of 6G-SANDBOX and reinforced its role as a global experimentation platform for future communication networks.

As the project entered a more advanced stage, dissemination efforts increasingly focused on presenting technical achievements and demonstrating the value of the 6G-SANDBOX experimentation framework. Participation in EuCNC & 6G Summit 2024 provided a major opportunity to showcase developments related to digital twins, Open RAN integration, AI-assisted network management, and advanced experimentation methodologies. The project also maintained a strong presence through scientific publications, international and European conference presentations, workshops, demonstrations, and more SNS JU collaborative activities. Beyond technical dissemination, 2024 marked an important year for strengthening international cooperation. Building on the collaborations established in 2023 with the European Space Agency (ESA) and the Industrial Technology Research Institute (ITRI) of Taiwan, 6G-SANDBOX signed a Memorandum of Understanding with the Universiti Malaya in July 2024. The agreement aimed to advance innovation in 6G networks and promote global cooperation in future communication technologies, representing the project's second major collaboration with an Asian organisation. Through these strategic partnerships, 6G-SANDBOX

expanded its international reach and created opportunities for knowledge exchange and collaboration across Europe and Asia.

The year 2025 marked the culmination of the project's technical and dissemination activities. With experimentation facilities fully operational and Open Call projects successfully executed, dissemination focused on demonstrating validated results and communicating the value generated by the platforms. 6G-SANDBOX maintained a prominent presence at EuCNC & 6G Summit 2025 through technical presentations, demonstrations, workshops, and networking activities. The consortium also contributed to scientific and industrial discussions through IEEE conferences and other events, highlighting advances in AI-native networking, Open RAN experimentation, Non-Terrestrial Networks (NTN), Reconfigurable Intelligent Surfaces (RIS), digital twins, and large-scale end-to-end experimentation. A particularly important milestone was the inauguration of the **Keysight–UMA 6G Research Laboratory** and the **Victoria Network** at the University of Málaga in January 2025. Developed as a direct outcome of the 6G-SANDBOX project, the new research infrastructure provides advanced capabilities for real-time network monitoring, digital twin experimentation, large-scale network emulation, and 5G/6G performance and energy-efficiency testing. The year 2025 closed with 6G-SANDBOX being selected among the Smart Networks and Services Joint Undertaking (SNS JU) 2025 Top-10 Key Achievements, and the 6G-SANDBOX Webinar.

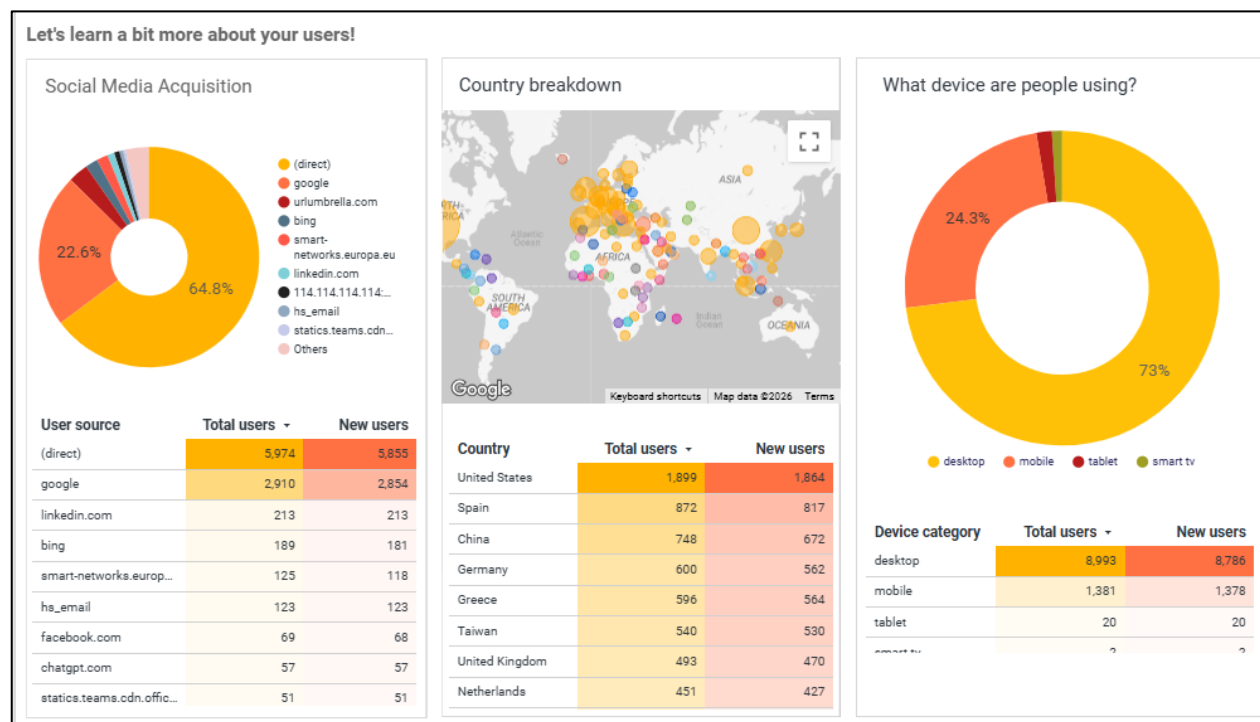
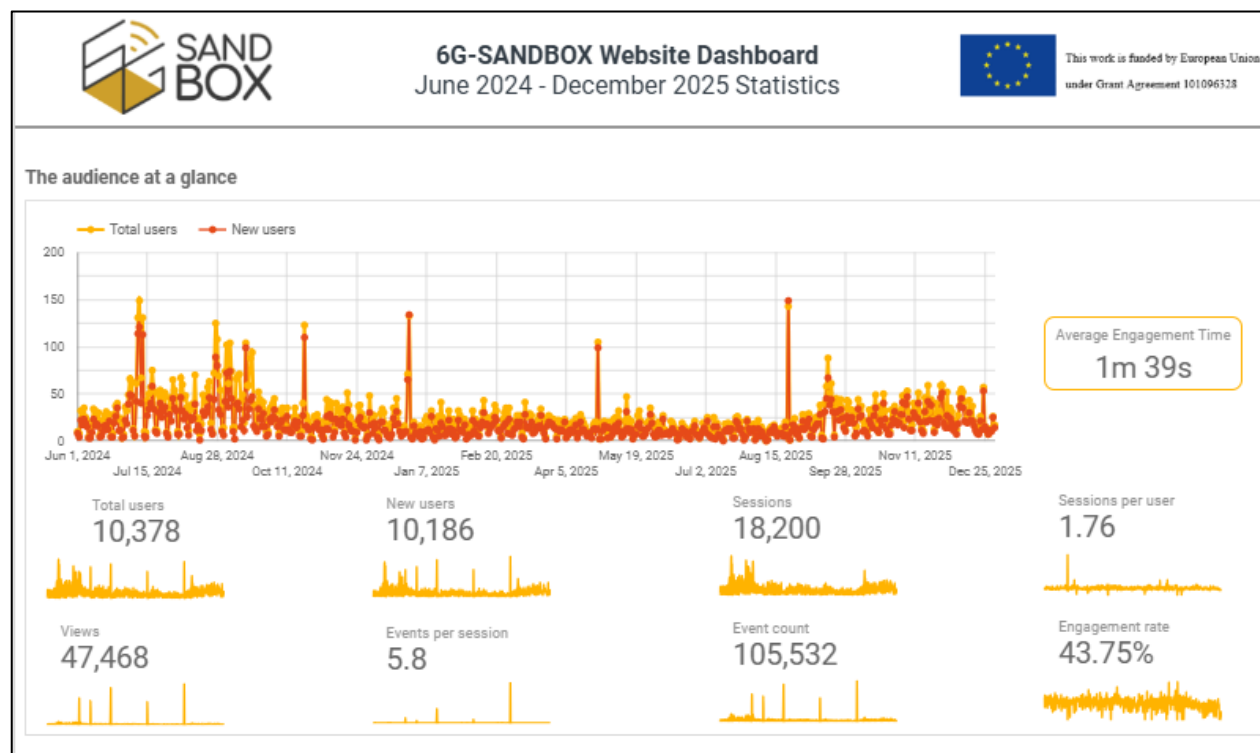
In the final project phase in 2026, the key highlight of the year was the project's participation in **Mobile World Congress (MWC) 2026** and **EuCNC & 6G Summit 2026**, which represented the culmination of three years of dissemination and community-building activities. EuCNC 2026 & 6G Summit marked the project's largest and most comprehensive presence at the conference series, featuring an extensive portfolio of demonstrations, technical presentations, workshops, and networking activities. Among the flagship demonstrations was the **6G-SANDBOX private 5G network showcase**. Notably, two demonstrations were presented in collaboration with the **European Space Agency** and the **Industrial Technology Research Institute**, highlighting the tangible outcomes of the strategic partnerships established through the project's MoUs and showcasing the international dimension of the 6G-SANDBOX ecosystem.

Beyond the successful achievement of all dissemination and communication KPIs, the most important outcome of the project's efforts was the creation of a lasting impact on the European 6G ecosystem. 6G-SANDBOX project established itself as a recognized reference platform for 6G experimentation. Consequently, the project's legacy extends far beyond numerical indicators, encompassing reusable experimentation infrastructures, strengthened international partnerships, increased stakeholder engagement, enhanced exploitation potential, and a significant contribution to Europe's leadership in next-generation communication networks.

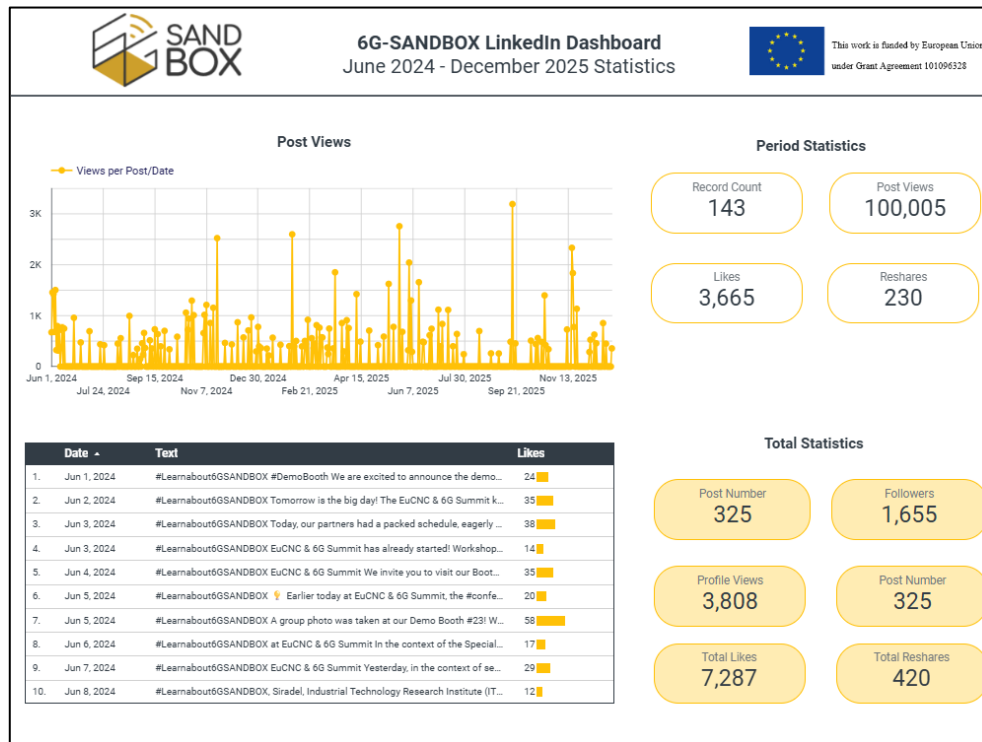
6 ANNEX 1

1. Statistical Dashboards Second Period – June 2024 – December 2025 (June 2024 was not included in previous deliverable)

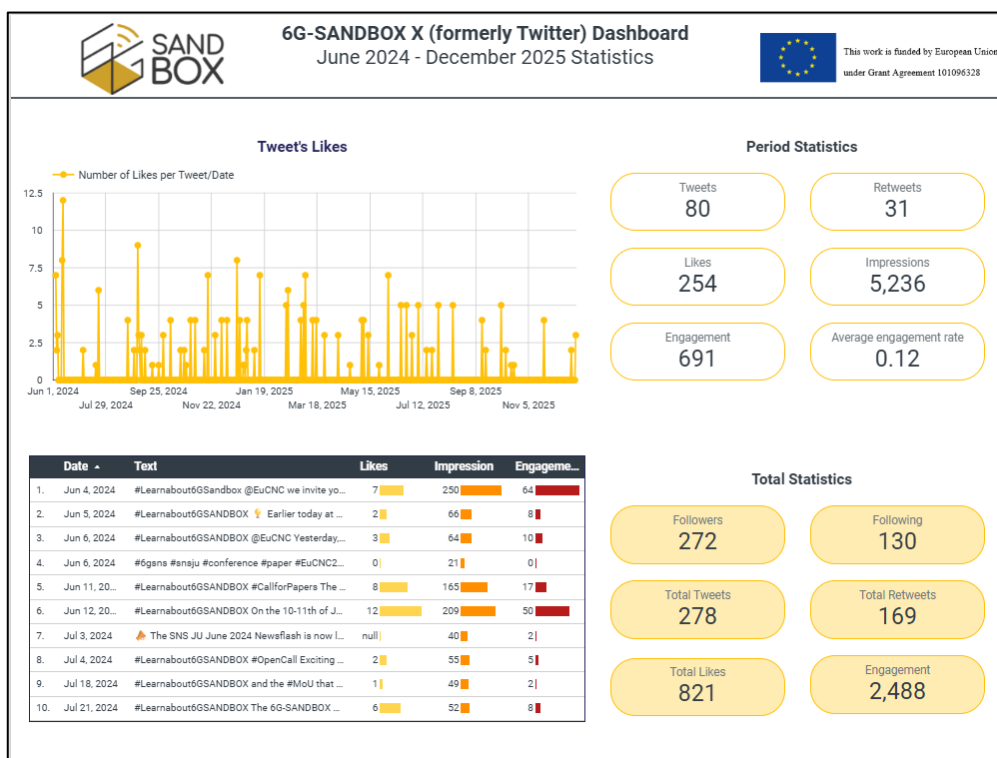
Website (<https://datastudio.google.com/u/0/reporting/cf7c7ad3-4e2f-4acc-ba9d-9c13f0819af3/page/pmtsB>)



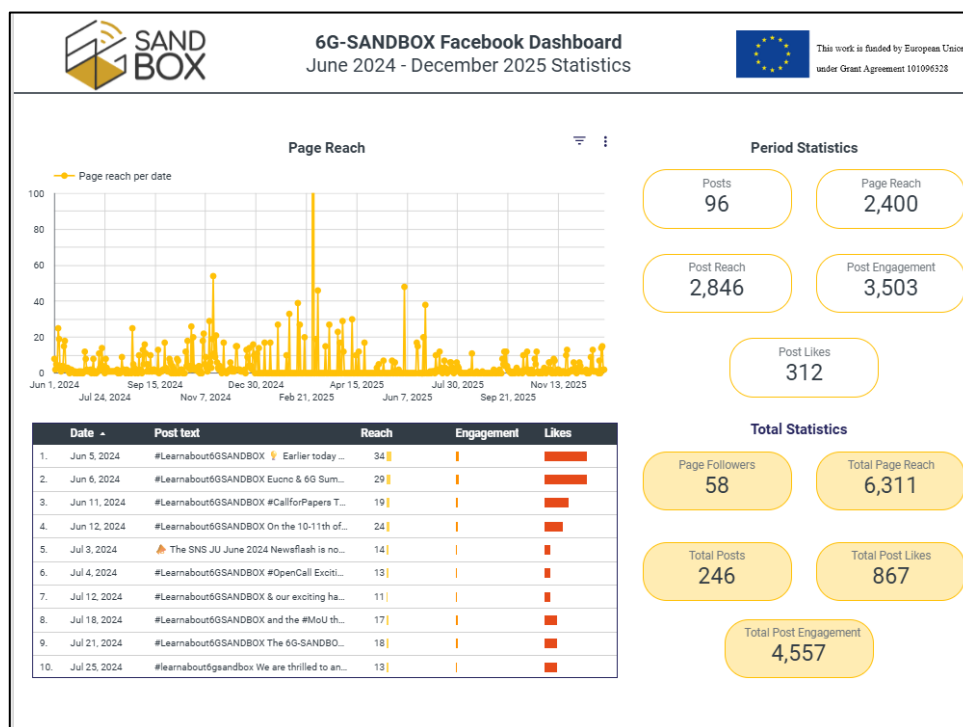
LinkedIn (<https://datastudio.google.com/u/0/reporting/ff962de9-470a-416b-9958-209f613bfcc4/page/1SSqB>)



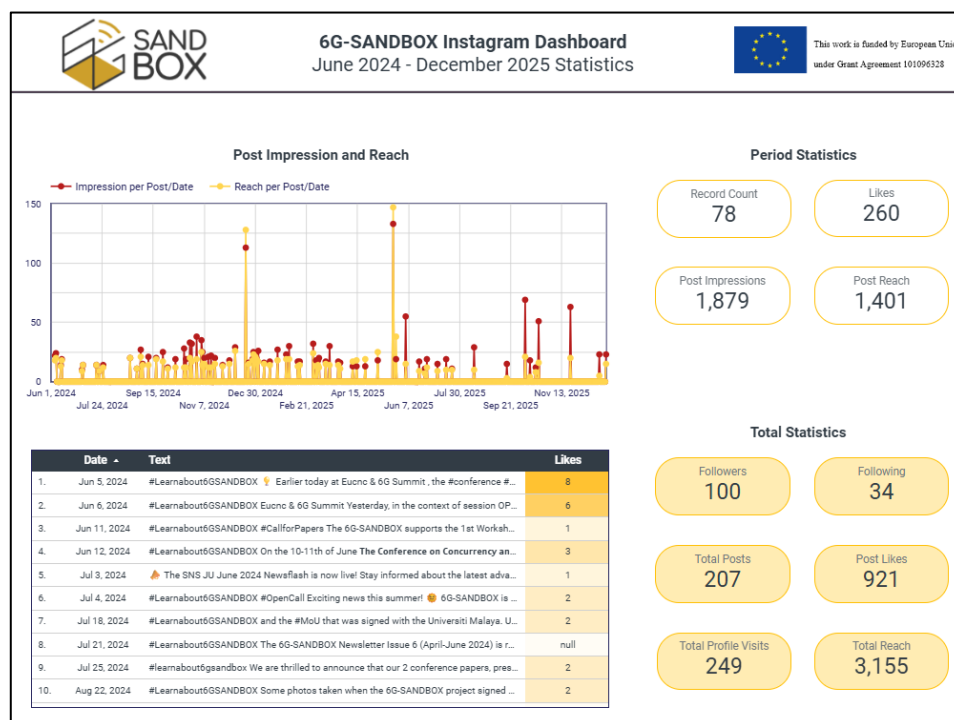
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Facebook (<https://datastudio.google.com/u/0/reporting/e096cc87-cfb0-4e31-8192-4d5a7ba0e592>)

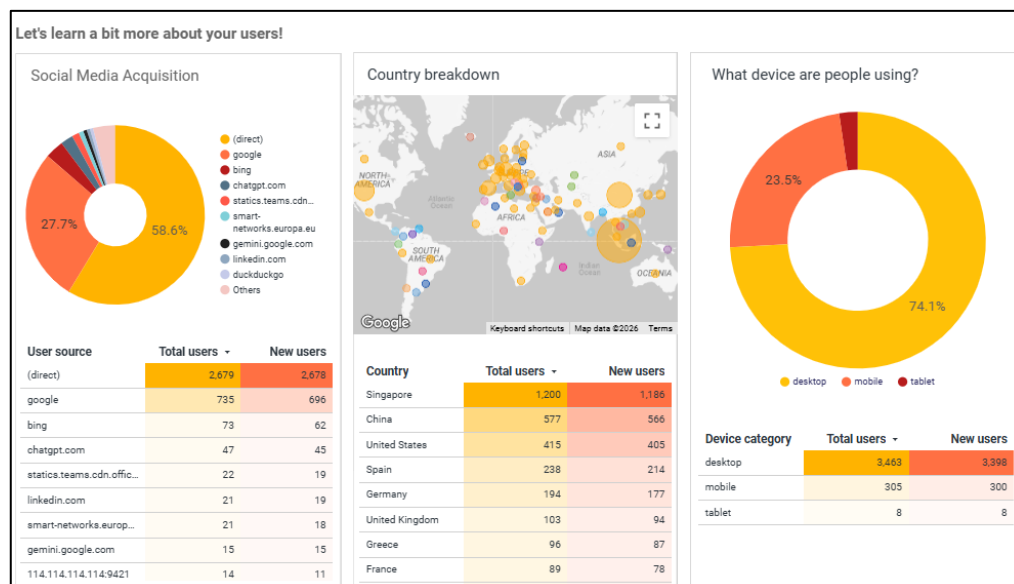
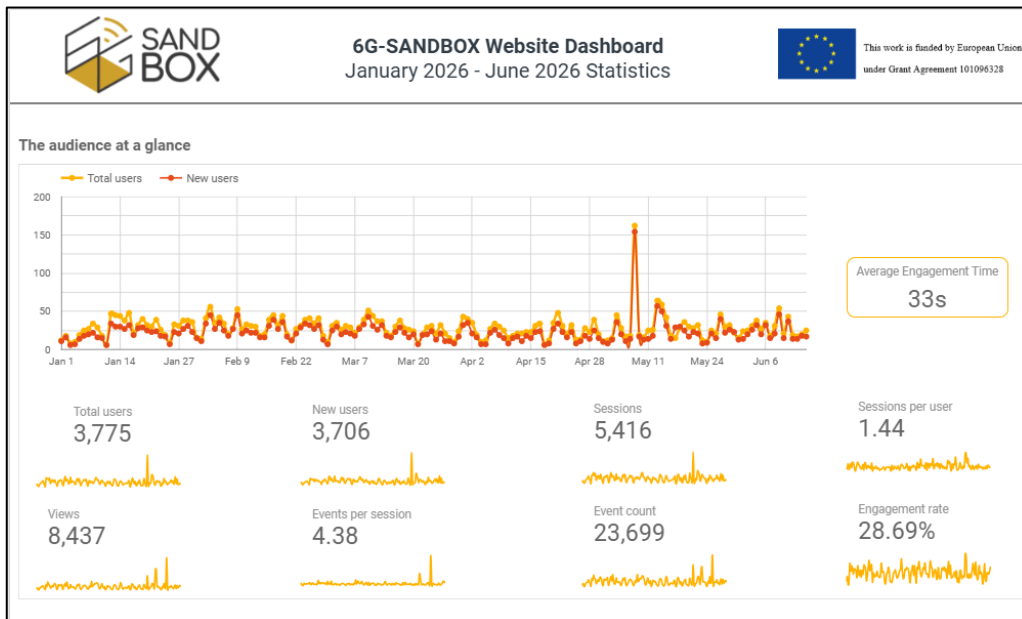


Instagram (<https://datastudio.google.com/u/0/reporting/c47671f1-ffd3-4806-8f78-14bbe7c62553>)



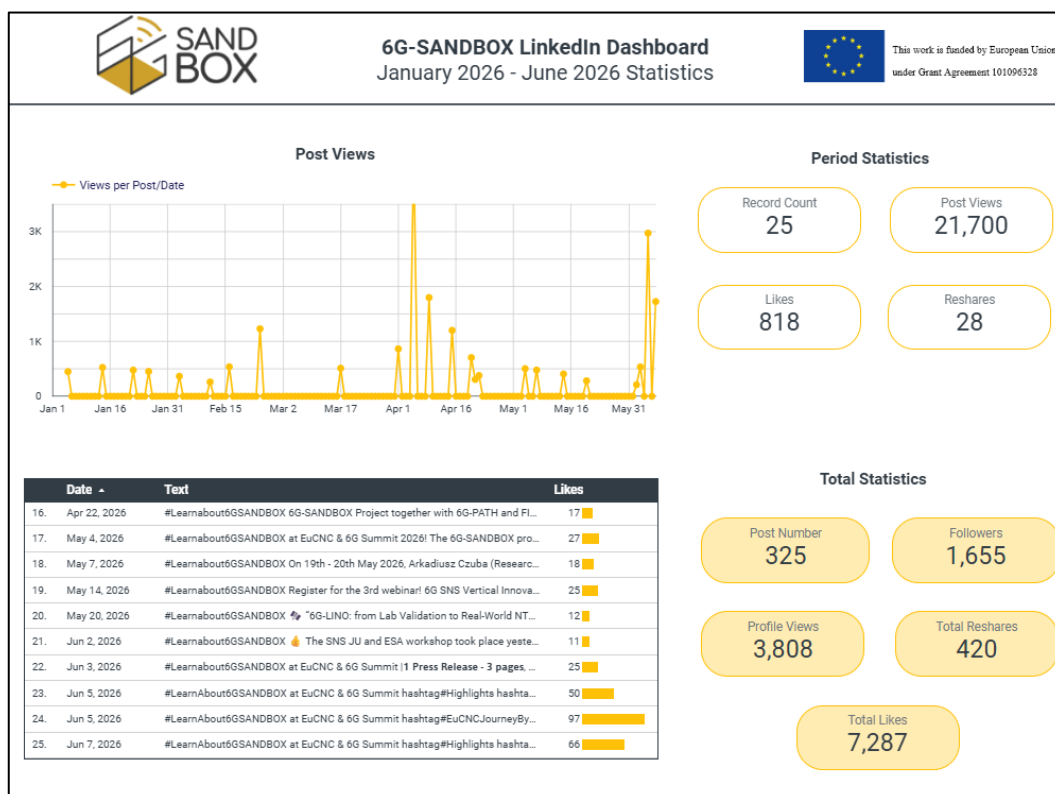
2. Statistical Dashboards Extended Period: January 2026 – June 2026 (until 18 June 2026)

Website (<https://datastudio.google.com/u/0/reporting/6765640a-a317-4b03-bf3e-21fca3b8d372>)

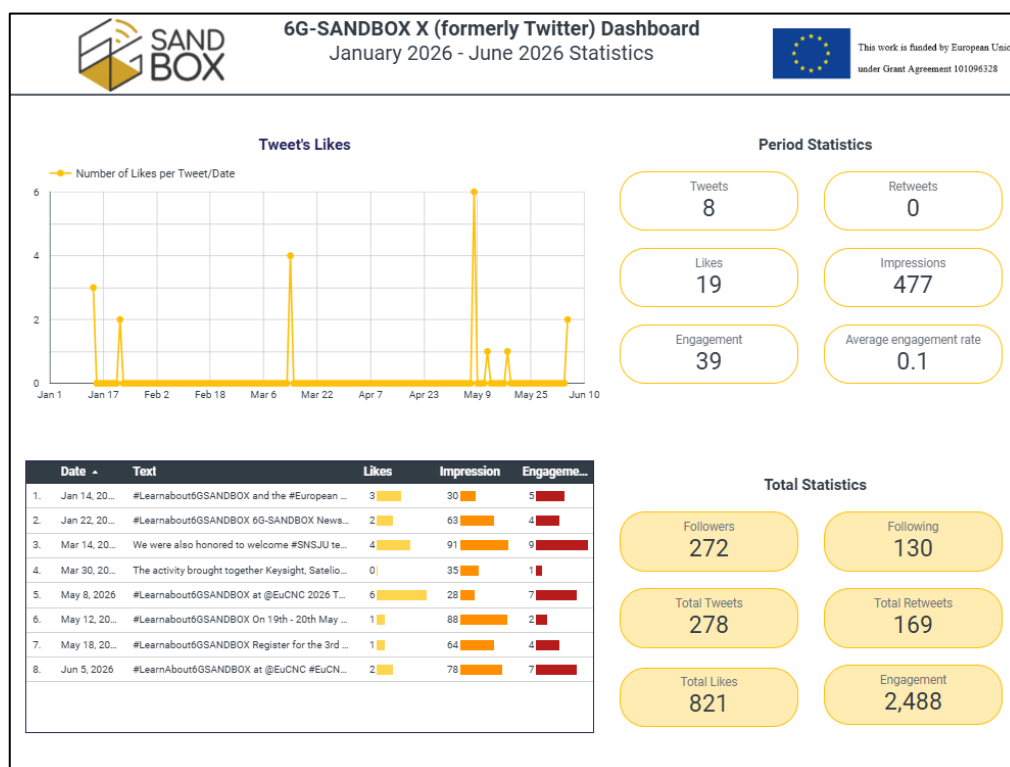


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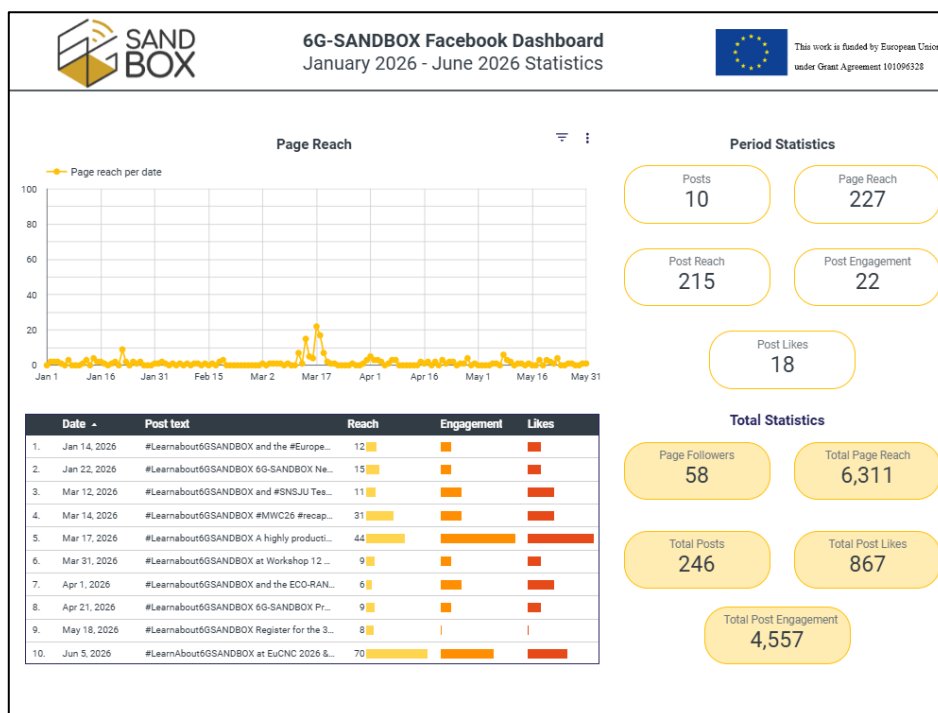


X Platform (<https://datastudio.google.com/u/0/reporting/3b5ddf32-02fa-4e39-b6cb-10d3f1ed5eea>)



Facebook

Platform

<https://datastudio.google.com/u/0/reporting/84e73b78-208a-4947-813d-24dfeed427a3/page/j5mpB>


Instagram

Platform

<https://datastudio.google.com/u/0/reporting/2c5cf829-d76f-40af-b864-4623f58f603a/page/rKQqB>
