5G-SHEAL
5G- enabled Surgery Planning with Holograms and Educational Streaming for NKUA Aretaieio HospitaL

D6.1 Dissemination & Communication Plan and Tools

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Executive Summary

In the 5G-SHEAL project the widespread adoption of the technological innovations by relevant stakeholders is a crucial component of the project's success. The overall success of 5G-SHEAL and its social impact depend on the dissemination of the developed ideas and the obtained results to a broad audience, ranging from technology focused groups to the general public. By coordinating the tasks related to the communication of the suggested solutions and dissemination of the results, this WP6 aims to raise awareness of 5G-SHEAL.

Deliverable D6.1 describes an initial plan for the dissemination and communication actions to be pursued by the 5G-SHEAL consortium partners. The tools and approaches used to accelerate the project's impact are also described.

The dissemination activities, both ongoing and planned, are described, details are provided on the target audience, on the devised communication strategy, on the overall dissemination targets, and finally also on the means used to achieve those set targets. Relations with other projects as well as related Working Groups are also described.

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List of Acronyms and Abbreviations

TERM	DESCRIPTION
3GPP	Third Generation Partnership Project
5G	Fifth Generation
5GSC	5G Support Community
CEF	Connecting Europe Facility
CSA	Coordination and Support Actions
DAS	Distributed Antenna System
D&C	Dissemination and Communication
EC	European Commission
ETNO	European Telecommunications Network Operators' Association
ETSI	European Telecommunications Standards Institute
EU	European Union
HADEA	European Health and Digital Executive Agency
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
ISO	International Organisation for Standardisation
ITU	International Telecommunications Union
MPN	Mobile Private Network
NKUA	National and Kapodistrian University of Athens
NGMN	Next Generation Mobile Networks
SDO	Standards Developing Organisations
SGI	Services of General Interest
UOA	University of Athens
WP	Work Package

1 Introduction

5G-SHEAL will provide high-quality 5G connectivity to the doctors, students and patients of NKUA Aretaieio University Hospital in Athens, Greece, covering operating rooms, Surgical Wards, Education center and Radiology-Radiotherapy Department, providing 5G indoor coverage towards high capacity, reduced latency, and high reliability mobile services (Figure 1), to enable and demonstrate efficient, state-of-the-art Healthcare and Education domain SGIs and to support the deployment of 5G infrastructure as part of the European Gigabit Society EU strategy.

All the radio resources of this MPN will be accessible only by the users/devices (e.g. VR/XR glasses or smart wearable devices) equipped with designated SIM provisioned cards. Any other SIM card will be prohibited to access this MPN. Emergency communication at the hospital will be granted to medical personnel through the 5G MPN and thus guaranteed coverage, connectivity and capacity will be provided in case of an emergency situation.

The strategic objective of 5G-SHEAL is to facilitate the digital transformation of the NKUA Aretaieio University Hospital, improving surgical outcome through better surgical planning, supporting patients' treatment, and advancing medical students' education through the deployment and operation of a 5G Indoor network that will enable the effective operation of the intended use cases.
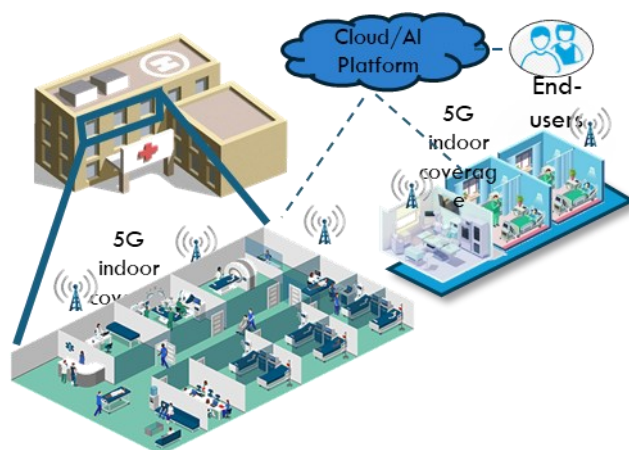
Figure 1: 5G-SHEAL schematic facilities

The use case scenarios to be used for testing and validating the 5G infrastructure will exploit WINGS experience from the wi.CARE+ platform that covers all the essential requirements of today's Digital Health market. ApoQlar5 VSI Holomedicine® platform will be also used focusing on advanced features of the application such as natural rendering and remote mentoring by demonstrating high-quality real-time streaming capability. Indicative examples of use case scenarios include:

- **Patient Monitoring**: e.g. through smart wearable with real time biometric data, HR, SPO2, temp, Blood pressure and GPS position for patients via real-time voice/video communication and 24hrs monitoring center.
- **Surgical Planning**: Before surgery the planning will be discussed with the members of the surgical team to build up the strategic plan and outline the most critical steps during the procedure.
- **Oncology Imaging in Operating Rooms**: For complex oncological cases such as liver, pancreatic, billary and sarcomas the imaging will be evaluated real-time especially for critical structures and update the

surgical planning according to the intra-operative findings and to the information received from 3D imaging at the same time.

- **Imaging related treatment**: Minimally invasive surgery, Radiotherapy and Interventional Radiology are medical procedures that rely on real time or recent imaging. An interesting use case scenario is planned for the visualization of holograms real time during surgery, during radiotherapy and during stereotactic imaging on minimally ablative techniques performed by interventional radiologists.
- **Surgical residency core training**: Surgical trainees will have access to 3D imaging both pre and during the operation and will enhance their skills as they will understand better the critical steps of the procedure and learn how to combine the information gained from imaging to the real world. In addition, there can be other surgical trainees that can virtually access the surgical team's operating view and gain significant surgical exposure.
- **Medical Students education**: During the ward rounds the medical students and the attendant in charge will have real time access to the patient's medical records that will significantly improve their understanding of postoperative medical care and the multifactorial decision making needed to provide standard medical care.
- **Patients' education**: facilitating patient understanding of medical conditions and treatment options through 3D holographic images, providing an interactive and visually enhanced approach to conveying complex medical information.

The use cases of 5G-SHEAL will be elaborated in Deliverable D2.1 "Requirements Analysis and Use Case Definition".

1.1 Structure of the document

The structure of the document is the following:

Section 2 elaborates on the Dissemination and Communication plan and early activities. Specifically, in this Section there is a detailed mention of the dissemination and communication target groups, the foreseen communication channels, and activities as well as the early dissemination and communication activities that took place during the first 3 months of the project i.e. from December 2024 to February 2025. Furthermore, the main stakeholders are categorized, with a particular emphasis on the role of Aretaieio Hospital in disseminating information both across the cross-border region and within its broader sphere of influence at the national level. Additionally, key dissemination and collaboration actions are outlined, including design and production of printed and audiovisual (videos, podcasts) material, organization of meetings and events and execution of targeted social media campaigns to promote the project and its results to the general public as well as to specific target groups.

Section 3 discusses dissemination and communication tools, such as the project's website and social media channels. The creation of a website, Twitter, and LinkedIn account is specifically cited, and abided by general guidelines on publications along with opportunity and activity tracking guidelines.

Section 4 expands on the evaluation and impact assessment and finally, Section 6 provides an overview of the deliverable as well as concluding remarks.

1.2 Relation to other WP6 deliverables

Dissemination activities target specific audiences within the 5G community, the industrial sector, and all relevant stakeholders. Communication activities necessitate the delivery of targeted messages to a wide range of audiences, including the media and the general public. Thus, a cohesive strategy will deliver the communication of all the activities from the beginning until the end of the project.

This deliverable is the first outcome of T6.1 "Dissemination and Communication" activities and in addition to T6.2 "CEF synergies and outreach to other programmes" will manage consortium efforts towards maximizing the final outcome and impact of the project. Both tasks will also feed information to T6.3 "Standardisation, & Regulation" which will contribute to 5G MPN prototyping and standardisation with regards to other relevant EU funded projects and standards and regulatory activities, as well as elaborate on the long-term sustainability of the delivered MPN.

Deliverable D6.1 is related to D6.2, D6.3, D6.4 reports about Dissemination, Communication and Synergy activities, and Standardisation and Regulation which are published in the middle and end of the project respectively (Table 1).

Table 1: Related WP6 deliverables

WP6 deliverable	Description	Lead Beneficiary	Date
D6.2 Dissemination, Communication and Synergy activities report – v1.0	The document contains a record of all the D&C activities of the project for the first 18 months, including an updated D&C plan, as well as the description of all the synergy activities the project has engaged in until M18.	WINGS	M18
D6.3 Dissemination, Communication and Synergy activities report – v2.0	The document contains a record of all the D&C activities of the project and their outcome as well as the description of all the synergy activities the project has engaged in and their results.	WINGS	M36
D6.4 Report on Standardisation and Regulation	The document contains a detailed report on the Standardization and Regulation activities of the 5G-SHEAL relevant works and studies	OTE	M36

2 Dissemination and Communication plan and early activities

The dissemination and communication of information about the project, its objectives, approaches chosen, and results aligned with the CEF 2023-5G-SMARTCOM-EDGE-WORKS call [1], is an important goal of the 5G-SHEAL project. The scope is to achieve this in a professional, high-quality way, and through various communication means and channels. Dissemination and communication activities, as aforementioned, are essential components of any project because the project's work and achievements are only valuable if the relevant communities are aware of them. While early adoption of results within the project consortium is crucial, the real impact emerges from the wider community being informed and adopting the results and findings.

5G-SHEAL dissemination activities will primarily focus on the distribution of knowledge generated by project deployment and experimentation. The goal is to maximize the dissemination of project results through publications and presentations at relevant events. In parallel, the communication activities focus on raising awareness about the project through various channels such as the project website and social media channels, newsletter, leaflets and flyers, and so on. Both dissemination and communication activities target a wide range of stakeholders, including academic, applications' users and industrial communities.

The project team identified and attempted to define key performance indicators to quantify dissemination and engagement activities during the proposal phase; the project team still considers these targets to be relevant and at appropriate levels.

In general, the main objectives of dissemination and communication plan are:

- To provide an understanding of the project's scope, goals and expectations
- To create an active community of stakeholders and third parties
- To deliver awareness of the project among stakeholders impacted by the results activities
- To prepare specific communication material and adapted key messages

2.1 Dissemination and Communication target groups

The 5G-SHEAL project will communicate its results by utilizing a variety of channels and means. Appropriate identification of 5G-SHEAL's target audience is a critical component of active participation of stakeholders in project communication and dissemination activities. The target groups of the two activities are slightly different because the general public is not associated with dissemination activities as they are addressed only to members who can produce impact and benefits to the project's measurable results. Dissemination activities are focusing on groups with technical and scientific backgrounds, institutions, universities, telecommunication industries, and relevant communities, as well as end users with familiar identities. The target groups of the D & C strategy and their interest in 5G-SHEAL are described in Table 2 below.

Table 2: Dissemination and Communication Target Groups and Strategy

Target Group	Description	Interest in the project
A – Healthcare companies, SMEs and Entrepreneurs	Stakeholders from healthcare business, network operators, SMEs and entrepreneurs, operating in the 5G telecommunications domains and/or vertical domains for applications in public safety, education, digital health, etc.	• Utilisation of project's results in operations and in their validation activities for new service and product development.

Target Group	Description	Interest in the project
B –CEF Digital, 5GPPP/6GIA, HE & SNS JU Stakeholders	Participants, project partners and relevant stakeholders active in the CEF Digital projects, 5GSC [2], CSA as well as 5G PPP/6GIA Work Groups [3], projects funded via the H2020, and HE frameworks, projects funded via the SNS framework.	• Identification of common topics. • Synergies and collaborations for results promotion. • Enhancing innovation through results combination. • Co-organisation of events.
C - Policy Makers	Policymakers at any level (e.g. Council of Regions, EC Directorate for Communication, European Radio Spectrum Policy Group).	• Contribution to future directions based on project's acquired knowledge.
D - Standards bodies and fora	Standards bodies, industry fora, open-source organisations (e.g. 3GPP, ETSI, IETF, NGMN, IEEE, ITU-T, ISO).	• Contribution to roadmaps for standards development. • Input for standardisation activities.
E - General Public	General public and anyone interested in the project.	• Understand the value of such European infrastructures. • Stimulate growth in unexpected areas/groups of society.
F - Technology Clusters	European initiatives and clusters, technology communities, associations, (e.g., ETNO, Innovation Union[4], Digital Europe Programme [5], NetWorld Europe [6] .	• Inclusion of project's results to collaborative activities (roadmap, white papers, etc.). • Dissemination of project's results to their members. • Participation in project's events for knowledge exchange.

Project results will be regularly communicated via workshops, webinars, conferences and white papers / peer-reviewed papers, always recognizing the contribution of the EU funding and the CEF programme in general and 5GSC activities in particular. We are also planning quarterly email updates to Greece Ministry of Digital Governance / General Secretariat of Telecommunications and Post and remain available for potential calls upon their request.

2.2 Key Stakeholders

Target groups are often aligned with the stakeholders of a project. However, it is essential at this stage to differentiate more precisely the specific roles of the stakeholders. These roles, along with their interests and engagement approaches, are outlined in the following Table **3**. This analysis forms the foundation for the targeted dissemination of the project's outcomes. By addressing the specific needs of each group, the communication strategy leverages appropriate channels and activities, as outlined in the following sections, to maximize outreach and engagement in 5G-SHEAL.

Table 3: Key Stakeholders: Role, Interests, and Engagement Approach

Stakeholder	Role	Interests	Engagement Approach
WINGS ICT Solutions	Project Coordinator, Healthcare, and Education Applications	Efficient project management, development of healthcare/education use cases	Regular coordination meetings and reporting updates Joint innovation and testing initiatives
apoQlar	Healthcare, and Education Applications	development of healthcare/education use cases	Joint innovation and testing initiatives
OTE Greece	Technical Manager, Owner of Infrastructure	Implementation and integration of 5G infrastructure, network design, and planning	Collaborative technical planning and implementation workshops Coordination for seamless integration and operational management
Aretaieio Hospital	SGI Provider (Healthcare Facility)	Use of 5G-enabled technologies for patient monitoring and medical diagnosis	Continuous feedback on system usability and needs
Patients/Students and Healthcare Staff	End Users	Improved patient care and operational efficiency	Participatory design and feedback sessions
Regulatory Bodies	Approvers of 5G spectrum and permits	Compliance with regulations, ensuring public safety and data security	Regular updates on progress and regulatory compliance
Local Communities	Beneficiaries of improved healthcare services	Access to advanced medical facilities and smart green applications	Public awareness campaigns and outreach programs

To enhance the understanding of stakeholder roles and optimize the project's engagement strategy, the following Table 4 offers a comprehensive overview of the Stakeholder Engagement Plan for the 5G-SHEAL project. It outlines the influence and interest levels of each key stakeholder, the frequency and preferred communication channels for interaction, and the types of information exchanged. This structured approach ensures that all engagement efforts are targeted and effective, fostering collaboration that drives the project's success.

Table 4: Stakeholder Engagement Matrix

Stakeholder	Influence Level	Interest Level	Frequency	Channel	Information Type
WINGS ICT Solutions	Very High	Leading	Weekly	Email, Teams	Strategic planning, status updates
apoQlar	High	Supporting	Weekly	Email, Teams	Progress to goal, status updates
OTE	High	Supporting	Monthly	Email, Teams	Strategic planning, brainstorming
Aretaieio Hospital	Very High	Leading	Weekly	Email, Teams	Feedback sessions, progress updates
Patients/Students and Healthcare Staff	Low	Neutral	Quarterly	Surveys, Email	Feedback on usability, awareness
Regulatory Bodies	Very High	Supporting	Monthly	Email, Teams	Compliance updates, progress reviews
Local Communities	Low	Unaware	Quarterly	Email, Public Events	Awareness campaigns, updates

2.3 Communication Channels & Activities

The 5G-SHEAL communication strategy combines a mix of traditional and disruptive communication channels:

- **Online presence**: A project page has been created (https://5G-SHEAL.eu/) by month M03 and maintained by **WINGS** serving to: i) promote the project's public image and serve as a main online access point for the different target groups and ii) serve as an information source, highlighting project objectives, activities, outcomes and relevant updates.
- **Press and TV/Radio Interviews**: The project will publish approximately 3 press releases (~1 per year) in order to communicate the major project's achievements and the potential of 5G as a future-proof technology for novel services. The consortium will attempt to reach the general audience via TV/radio interviews. **OTE** will be responsible for this activity.
- **Brochures/flyers**: The project will prepare 2 technical brochures providing information about the technical and scientific outcomes of the project. The brochures will also be distributed to local universities, schools, city councils, recreational areas, etc. **All partners** will be involved in this activity.
- **Social media**: The project will use several online social media sites, such as Twitter, LinkedIn and YouTube, as a two-way access between the project partners and the technical and public audience. The consortium will regularly publish announcements and initiate discussions from month M01. The content will be updated on a regular basis and the obtained feedback will help to influence the project's direction. **WINGS** will coordinate this activity.
- **Video clips**: 2 video clips will be produced, which will cover the project's general ideas, demonstrations and presentations and talks that will also include non-technical information about the project, targeting non-expert public. The videos will be available at the project's website during the entire

project's lifetime, while a dedicated link will be used in order to request feedback from the audience. This activity will be coordinated by **WINGS**.

- **Newsletters**: These will be distributed to different mailing lists, to foster inter-communication with other relevant actions, projects and technical communities. The newsletters, available at the project's website, will provide information regarding the project activities, achievements, and results, targeting cross-fertilisation. The first issue will be released at M12 and new issues every 12 months. **OTE** will coordinate this activity.
- **Public engagement**: Consortium members will follow a set of strategies to interact with the general public (e.g., non-scientists, secondary schools, etc.) and inform them about the effect of the results in their everyday life and to create awareness on the differences about facts regarding the societal benefits of the 5G technologies. This set of activities include the use of social media, online video-clips, public talks at schools and university open days, participation at events organised by the local authorities, etc.

2.4 Early activities till February 2025

Even from the early stages of the project, partners have seized opportunities to engage industry with the objectives and vision of 5G-SHEAL. An initial report of those activities is summarized with the following dissemination and communication actions:

- **HaDEA announcement on 53 projects selected for up to €274 million under third CEF Digital calls (October 2024)**

- **5G-SHEAL press release (January 2025)**

- Press release by apoQlar **(January 2025)**

2.5 Initial Actions in the Dissemination and Communication Strategy

The Second Surgical Department and Aretaieio Hospital have led in providing specialised medical services as well as education over a century. It serves as a reference centre for Surgery, with a specific focus on Surgical Oncology. It establishes novel frontiers in medical science and innovatively confronts the scientific community through advancements in education and clinical practice.

5G-SHEAL could enhance approaches to learning through immersive technologies that integrate the actual world with digital or simulated realities.

Through these activities, we aim to present the projects' innovation to the general public, students at all educational levels, and medical residents, thus creating an entirely novel model in learning. This program has the potential to alter the educational procedures and curriculum of the medical school. The following actions are planned.

2.5.1 Workshops

1. **Early in March 2025**, the hospital premises will host a workshop. High school students will attend with the aim of learning about medicine and the use of technology in it. There will be presentations on robotic surgery and how immersive technologies create distinct experiences by merging the physical

world with a digital or simulated reality. The benefits of digitisation and using technology in medical practice will be presented. Within the framework of this event, applications will be made in practice in robotic surgery and surgical simulators, and the 5G SEAL will be presented with relevant technical details, taking into account how familiar the new generation is with new technologies.

Thirty to forty high school students will participate. At the end of the event, we will distribute questionnaires for feedback and evaluation of both the event organisation and the 5G-SHEAL project.

2. **At May 2025**, a team of 50 students from the Laboratory of Biomedical Optics and Applied Biophysics at the School of Electrical and Computer Engineering of the National Technical University of Athens will visit our hospital. The visit constitutes an aspect of the students' orientation about the utilisation of technology in medicine. We will discuss the utilisation of technology in surgical clinical practice and in the experimental molecular laboratory. The integration of technology in medical education will be discussed, and the 5G-SHEAL will be introduced.

We will arrange practical exercises utilising the surgical simulators and the 5G-SHEAL apps. The workshop will last 5-6 hours, following which we will distribute questionnaires and solicit evaluations.

3. **In June 2025**, a group of 80 postgraduate medical students will participate in a two-day clinical course on the three fundamentals of surgical science (surgery, lab, technology). The visit constitutes an experiential engagement for students with surgical science, its applications, and the integration of technology in surgical practices. The agenda includes an introduction including live surgery broadcasting. The integration of technology in medical education will be evaluated and the 5G-SHEAL will be launched.

We will set up practical tasks utilising the surgical simulators, experimental surgeries, experimental laboratory, and 5G-SHEAL applications. The two days' program will include 16 hours training, following which we will distribute questionnaires and solicit evaluations.

4. **During 2025**, all nurses, residents and doctors at the clinic will undergo training in 5G-SHEAL applications before they are implemented in clinical practice.

2.5.2 Media Activities

1. Press Release in NKUA HUB [7], Social Media of the clinic and Medical School [8], Site of the clinic [9].

2. Video of 5G SHEAL will be hosted in Clinic's site and posted in Social Media of the Clinic and of Medical School

3. A TV screen will play the video of 5G-SHEAL in the main lobby of the Hospital

4. Emails with the press release will be send to all our students.

5. Emails to the members of Surgical Committee of NKUA

6. Brochures to all patients that are hospitalised in our hospital.

2.5.3 Interactive face-to-face networking

During the year, all the 5G-SHEAL participants of our hospital will participate in EU-organised events and exhibitions to interact face-to-face with key players and experts of the academic, scientific, commercial, socio-economic, industrial, technical, and medical communities, policy makers, and guideline producers.

Interactive face-to-face networking will enhance public discussions on research, development, standards, or other issues of interest to 5G-SHEAL and the wider community. Also, it will allow the establishment of links

with scientific societies, working groups, and non-governmental/non-profit legal entities relevant to the objectives of the project.

2.5.4 Conference Activities

The initial phase of the 5G-SHEAL project will necessitate engagement with the scientific and medical communities, healthcare providers, industrial stakeholders, and policymakers to promote participation in conferences. The presentations we will organise for national and international conferences will be either oral or poster presentation.

2.5.5 Policy Makers

The objective of implementing the 5G-SHEAL in the 2nd Surgical Clinic of Aretaieio Hospital and the National and Kapodistrian University of Athens is to transform the educational landscape of the medical school. The objective is to create educational opportunities in a dynamic and innovative setting for students and emerging healthcare professionals, employing immersive platforms.

Specifically, immersive technologies: (a) enhance medical education by enabling students to visualise and engage with three-dimensional anatomical models; (b) assist surgeons by superimposing digital information onto the physical environment, enhancing precision and procedural outcomes; (c) assist patients by providing clearer explanations of their conditions and treatments, fostering better comprehension and involvement; (d) optimise time and effort in nursing and treatment practices through the utilisation of applications. Immersive technology possesses the capacity to revolutionise medicine and healthcare entirely.

The University's Medical School and Surgical Department, consistently at the vanguard, will adapt their policies and instructional techniques to incorporate the uses of 5G-SHEAL into the curriculum. Communication with university administrators and the leaders of the medical school councils will be a requirement of the project participants of our Hospital. Members of the program will schedule a presentation at the rectorate at a suitable time to elucidate the project's details, advantages, and the innovations of 5G-SHEAL.

3 Dissemination and Communication Tools

3.1 Project's website and social media channels

In order to effectively ensure 5G-SHEAL's information flow, create awareness, and reach out to the multiple targeted audiences (industry, network operators, SDOs, relevant stakeholders, general public, scientific communities etc.), a variety of traditional and innovative channels will be used, considering the specific characteristics and needs of each targeted group. The following list of proposed communication channels shows the tools already chosen by the consortium to transmit project information.

3.2 Website

The project's website is an important tool for dissemination. It serves as the primary entry point for all interested target groups. As a result, is the primary repository for the project's outputs and resources, where the majority of our online activities take place, or at least where activity records are presented in a clear, organized manner. The official address for the website is https://5G-SHEAL.eu/.

At the initial publication stage, the site has a main page (Figure 2) and three subsections; About (including Objectives and Consortium), Dissemination and Communication (News & Events and Public Deliverables), Contact.
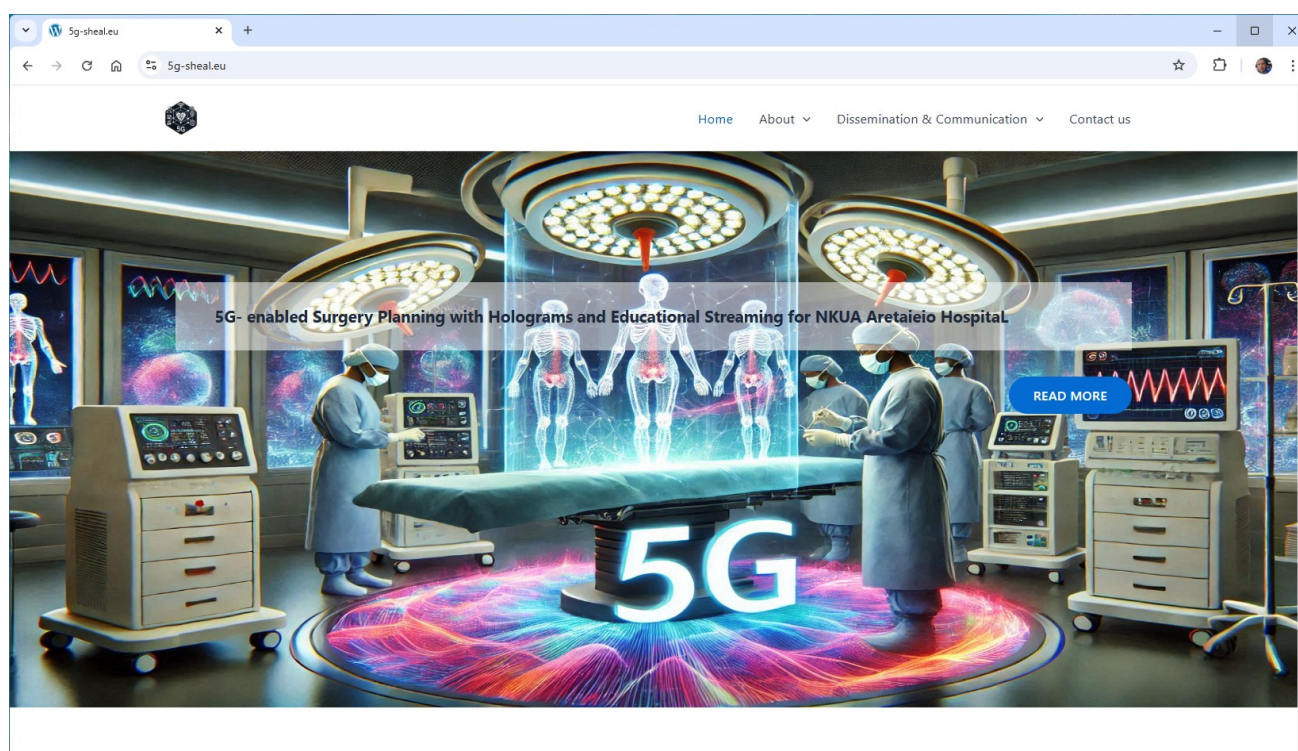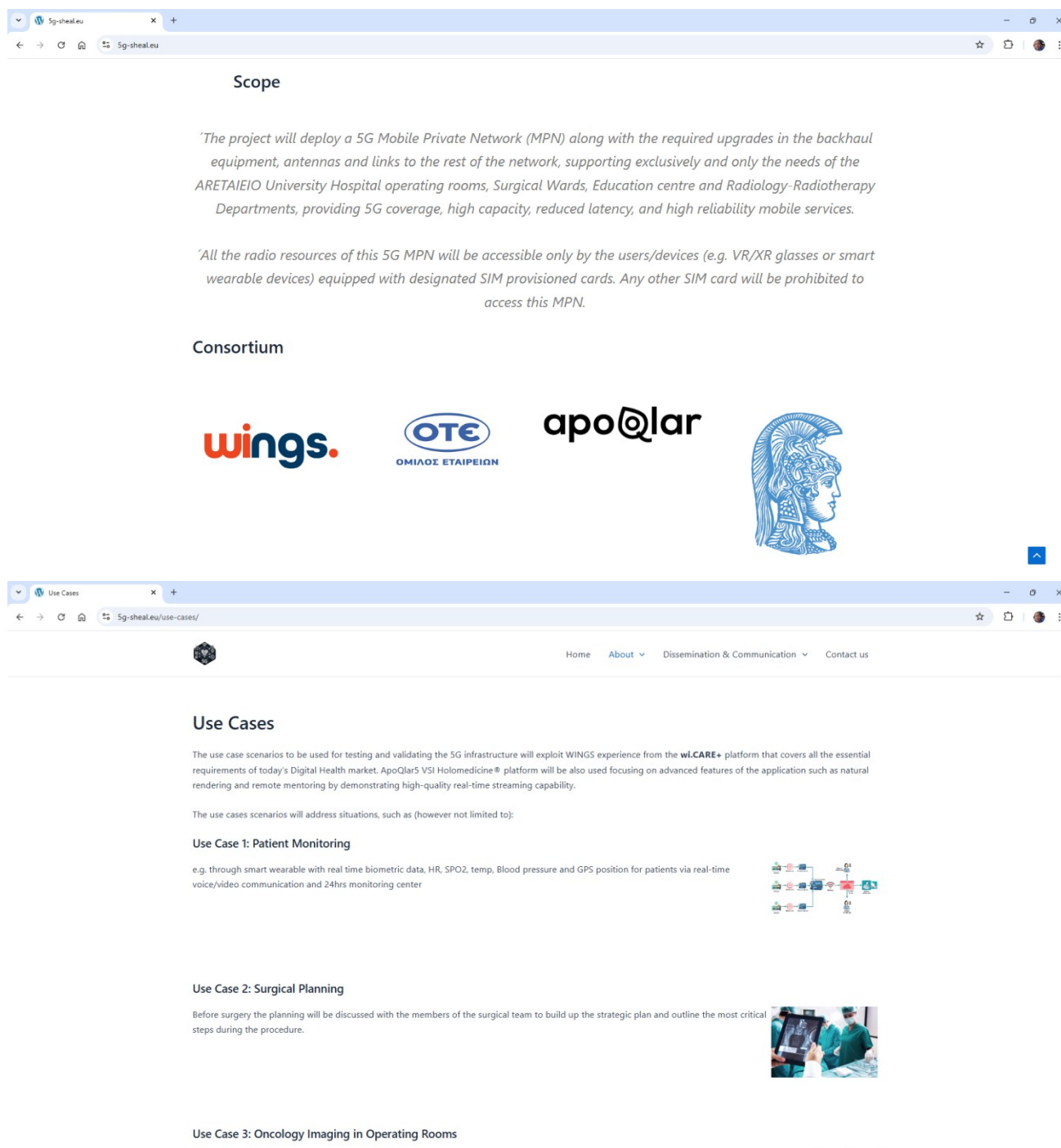
Figure 2: 5G-SHEAL website

3.3 Twitter/X

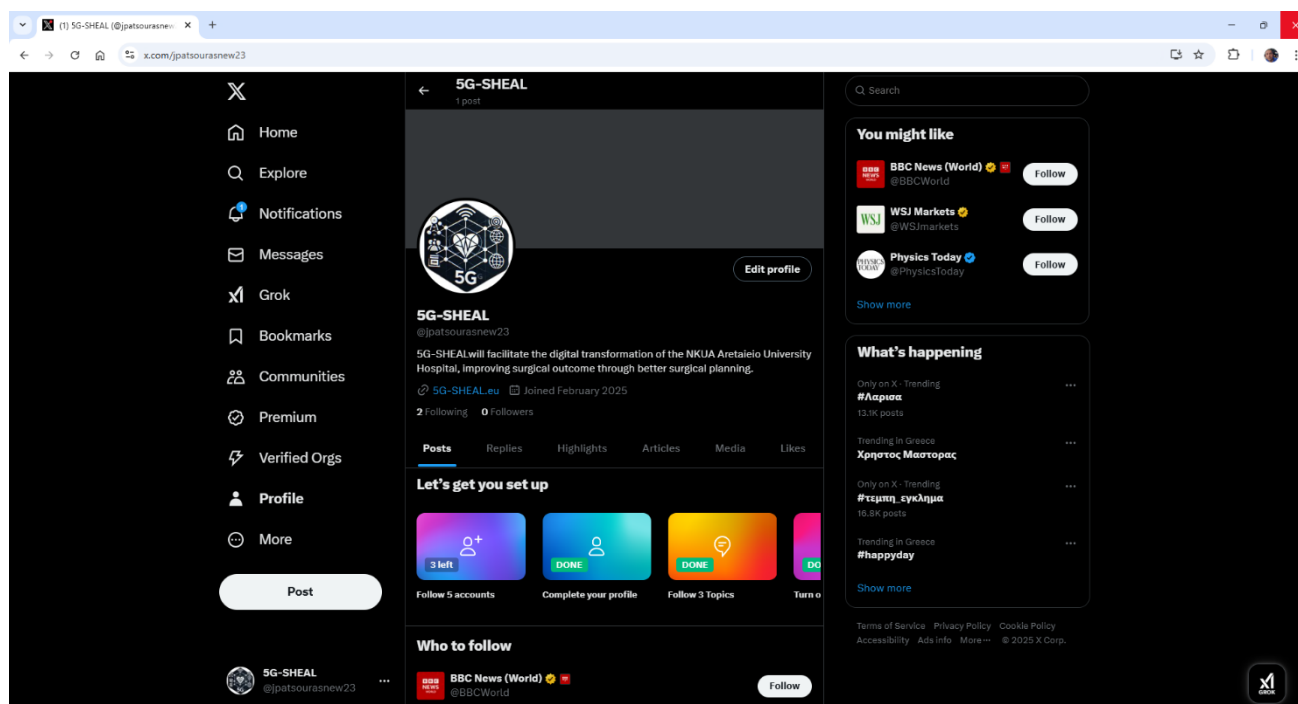Project's official twitter/X account is https://x.com/5G-SHEAL

Figure 3: 5G-SHEAL twitter/X account

3.4 LinkedIn

The partnership is involved in the requirement of communicating the project's progress to a larger community. For this reason, in order to increase project visibility and create a space for professionals and stakeholders to share views, we have created a LinkedIn group (Figure 4) where consortium members interchange ideas and knowledge not only among themselves but also with the larger industrial and scientific community. All project partners have invited stakeholders to this group to communicate 5G-SHEAL progress.
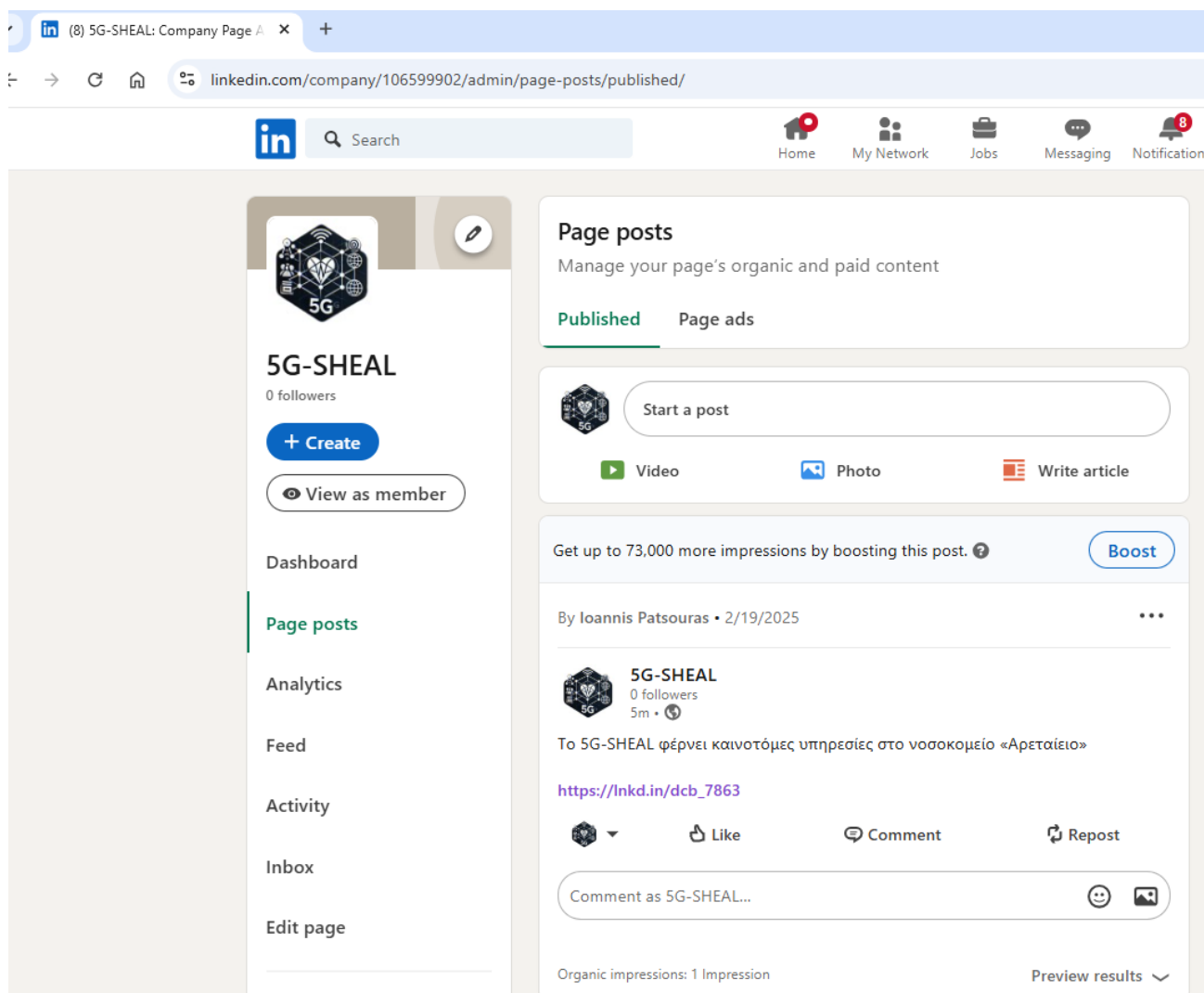
LinkedIn official account is https://www.linkedin.com/company/5g-SHEAL/

Figure 4: 5G-SHEAL LinkedIn account

3.5 Publications and acknowledgement

Before engaging in a communication or dissemination activity expected to have a major media impact, the beneficiaries must inform the Granting Authority.

- If partners post on Twitter, they shall tag the Granting Authority and the CEF programme by using @EU_HaDEA and the dedicated hashtag #CEFDigital. (Note: HaDEA can also be found on LinkedIn (https://www.linkedin.com/company/european-health-and-digital-executive-agency-hadea/mycompany/)
- Every communication activity foreseen for 5G-SHEAL should be communicated to HaDEA in a timely manner to ease coordination and possible exchanges/participation.

Besides these guidelines, prior notice of any planned publication shall be given internally to the Consortium before publication. Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing to the Coordinator and to the Party or Parties proposing the dissemination. If no

objection is made, publication is permitted. Detailed aspects are mentioned in the Grant Agreement ARTICLE 17 — COMMUNICATION, DISSEMINATION AND VISIBILITY.

To ensure high quality of scientific publications it is suggested to follow IEEE instructions such as the "IEEE Authorship Series How to Write for Technical Periodicals & Conferences". Collaborative papers with authors and work from more than one partner are encouraged. All papers or publications related to the project must include the following Acknowledgement:

This work was supported by the European Union's Connecting Europe Facility (CEF) programme under Grant agreement No 101181166. The contents of this publication are the sole responsibility of the authors and do not in any way reflect the views of the EU.

3.6 Opportunity and Activity Tracking

5G-SHEAL employs a spreadsheet-based tracking tool to record dissemination and general engagement activities, as well as to monitor the entire life cycle from initiation to submission, review, and publication. It is a quick way to ensure that all dissemination and communication activities are documented. All partners are responsible for reporting the activities in which they are involved.

This "tracker" keeps records of all different types of community facing activities from identifying "Dissemination Opportunities", to issued "Press Releases", target "Events", given public and restricted "Presentations and Tutorials", "Publications" from first submission to final publication (including DOIs linking to the documents), interactions with organisations and groups.

The tracker collects all details related to the activities and dissemination events, it is updated continuously when specific activities are confirmed or, where necessary, completed.

WINGS, as Dissemination & Communication leader, will be responsible for ensuring that this information is collected. Frequent e-mails will be sent to partners to remind them to report their activities in the previous period.

4 Evaluation and impact assessment

In order to measure the impact of the project and extract an accurate evaluation of dissemination and communication activities, a series of quantitative and qualitative indicators must be taken into account. Measuring these indicators on a regular basis is critical for determining whether additional measures are required to ensure target values are met.

4.1 Quantitative impact assessment

Performance indicators and respective target values have been defined for the various dissemination and communication means as integral part of dissemination and communication plan. Table 5 presents the 5G-SHEAL's communication and visibility quantitative targets and the respective tools. They are measured and evaluated throughout the whole life cycle of the project.

Table 5: Communication outcome, metrics and targets

Communication and dissemination means	Success indicators (description)	Target values
Project website	Search engine optimization metrics	Online by: **month 3** Unique visitors from M12: **100** From M36: **300**
Social media	Number of users/followers	LinkedIn group followers: **>50** Twitter/X followers: **> 30** Re-Tweets:**>30**
Press Releases	Number of press releases	Press releases: **>3**
Newsletters	Number of newsletters	Newsletters: **>3**
Video Clips	Number of video clips and views	Number of online video clips: **2** Number of video views: > **50**
Factsheets / Brochures	Number of factsheets and hardcopies	Technical factsheets: **2** Non-technical factsheets: **2** Hardcopies **> 100**
Flyers/posters & roll-ups	Number of fliers and banners	Project flyers: **>2** Posters & roll-up banners: **>2**

4.2 Qualitative impact assessment

Qualitative indicators are used to complement quantitative ones. They provide information about the quality of the D&C activities that have been implemented. Throughout the project, qualitative assessments will be conducted for multiple dissemination and communication activities with specific goals. To be more specific:

- Project webpage: to determine whether the contents being uploaded to the website are relevant and what else can be added; to determine whether visitors are interested in coming back to the website.
- Events: to comprehend the event's organization quality, the relevance of the contents presented, and overall user satisfaction with the event.
- Newsletters: to understand whether the contents are relevant and accessible and if there is interest to receive future versions/editions of the e-newsletter.

For the qualitative feedback immediate verbal feedback will be sought.

4.3 Monitoring framework

A solid methodology could be developed to assess the impact of the project's outputs, or lack thereof. The following items are included:

- Google Analytics from social media analysis proving statistics on users, industries the user belongs to, geographical breakdown of users visiting the platforms, and so on.
- Interaction with users visiting the website via the "Contact us" form or the social media platforms on specific topics of interest or even queries.
- Reactions (satisfied, unsatisfied, etc.) on published material or event participations.

Once these metrics have been analyzed, any gaps in the project's impact and exposure can be identified, and precautionary measures can be designed. Among these actions could be:

- A specific event, such as a workshop or a webinar, can be organized, and specific target groups who have not shown sufficient interest in the project outcome can be invited to attend, raising awareness of the project and maximizing the impact.
- Collaboration with other related CEF 2023-5GSMARTCOM-EDGE-WORKS projects ensure reachability and cross-fertilization of project outcomes. Sharing communication channels and events between projects increases the impact and reachability of the project to communities that are already aware of the projects' efforts to meet needs and provide benefits and solutions to the industries' shortcomings.

The monitoring remains till the end of the project as an ongoing procedure to orchestrate and accelerate all communication and dissemination activities.

5 Conclusions

This deliverable presents the plan that the 5G-SHEAL project consortium has made up for impacting the academia and the industry ecosystems with dissemination actions. The provided plan spans the activities throughout the project duration. The plan will be constantly kept updated, according to relevant changes and new opportunities that might arise in the ecosystem, as well as within the project consortium, with the final aim of delivering the best possible impact of the project results.

A timeframe for dissemination and communication actions and impact is provided and a list of planned target dissemination and ecosystem engagements activities is elaborated. In future WP6 deliverables, updated reports on the plan will be provided.

6 References

[1]. [CEF-DIG-2023-5GSMARTCOM-EDGE-WORKS](#)
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