



## D6.2 IMPACT CREATION MID-TERM REPORT

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Authors	Klaudia dos Santos (MARTEL)
Reviewers	Sophie Staheyeff (D4P), Carla Amatetti (UNIBO)
Abstract	This deliverable provides a report on communication and dissemination activities pursued by the 6G-NTN consortium during the first half of the project. It also reports on the achieved progress against set targets and goals. In addition to tracking and reporting on the progress, the deliverable presents the amended strategy and plan for communication and dissemination, which will be pursued by the consortium during the second half of the project to guarantee 6G-NTN's broad visibility and uptake of its results.
Keywords	Communication, dissemination, impact creation, community building, stakeholder engagement, KPIs

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SEN	Sensitive, limited under the conditions of the Grant Agreement	
Classified R-UE/ EU-R	EU RESTRICTED under the Commission Decision <a href="#">No2015/ 444</a>	
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\* R: Document, report (excluding the periodic and final reports)

DEM: Demonstrator, pilot, prototype, plan designs

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

DATA: Data sets, microdata, etc.

DMP: Data management plan

ETHICS: Deliverables related to ethics issues.

SECURITY: Deliverables related to security issues

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



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## EXECUTIVE SUMMARY

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This deliverable, prepared by WP6, builds on deliverable D6.1 *Dissemination and Communication Strategy and Plan*, submitted to the EC on April 30, 2023, and the set of Key Performance Indicators (KPIs) defined and agreed on before the project launch. The document describes pursued communication and dissemination activities, as well as tools and channels used by the 6G-NTN consortium to maximize the visibility of the project during its first 18 months, i.e., since the project kickoff in January 2023, up to the project mid-term in June 2024. The document also outlines communication and dissemination activities planned for the remainder of the project.

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## ABBREVIATIONS

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<b>AI</b>	Artificial Intelligence
<b>D</b>	Deliverable
<b>EC</b>	European Commission
<b>GDPR</b>	General Data Protection Regulation
<b>KPIs</b>	Key Performance Indicators
<b>M</b>	Month
<b>ML</b>	Machine Learning
<b>NTN</b>	Non-Terrestrial Networks
<b>SEO</b>	Search Engine Optimization
<b>T</b>	Task
<b>UE</b>	User Equipment
<b>VNF</b>	Network Functions Virtualization
<b>WP</b>	Work Package
<b>6G</b>	Sixth-Generation Wireless

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## 1 COMMUNICATION AND DISSEMINATION M1-M18

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### 1.1 COMMUNICATION AND DISSEMINATION STRATEGY

To ensure 6G-NTN's wide visibility and maximize its impact, a comprehensive communication, dissemination, and community-building strategy (outlined in more detail in deliverable D6.1 *Dissemination and Communication Strategy and Plan*) was developed at the beginning of the project. The strategy sets the overall project communication and dissemination framework and provides directions for individual members of the 6G-NTN consortium so that they can smoothly and effectively perform their own outreach activities.

The strategy has been followed by the project partners since the project kick-off. Specific tools and activities developed and used in the first half of the project are described in the subsections below.

### 1.2 COMMUNICATION AND DISSEMINATION OBJECTIVES

As planned during the proposal preparation, 6G-NTN communication and dissemination activities will be conducted throughout the whole project lifespan with an aim to ensure the project's broad promotion and effective showcasing of the developed concepts, technologies, use cases, and results. This ambition translates into the following impact creation-related objectives:

- Ensure broad visibility and raise awareness about 6G-NTN, spreading knowledge about the project and its results, establishing a distinctive and recognisable identity that will support marketing efforts.
- Reach, stimulate and engage a critical mass of relevant stakeholders to ensure that (a) 6G-NTN concepts and activities are effectively and properly disseminated to the targeted audiences for maximum participation and promotion; (b) the results of the project are effectively showcased, leading to validation, improvement and possibly further adoption of the developed technologies and concepts.
- Facilitate exploitation of the outcomes of the project and promote the development of innovative solutions based on 6G-NTN's technologies and architectures.
- Foster impactful contribution to relevant scientific domains and standardisation bodies as appropriate and relevant to planned exploitation plans and the outcomes of the project.
- Ensure close collaboration with the 6G SNS program and projects, while establishing liaisons with relevant initiatives in research and innovation domains.

### 1.3 COMMUNICATION AND DISSEMINATION TOOLS AND CHANNELS

#### 1.3.1 Visual identity

The work within Work Package (WP) 6 started with the design of the 6G-NTN visual identity. In that context, the following assets were developed: color palette, logo and icon with different variations, typography, and templates for deliverables and presentations. Besides, a style manual was developed and shared with all project partners to ensure that the project's visual



identity is coherent and recognizable across all channels and materials used by the consortium to promote 6G-NTN. The 6G-NTN visual identity elements have been and will continue to be integrated in all promotional and dissemination materials produced by the project.

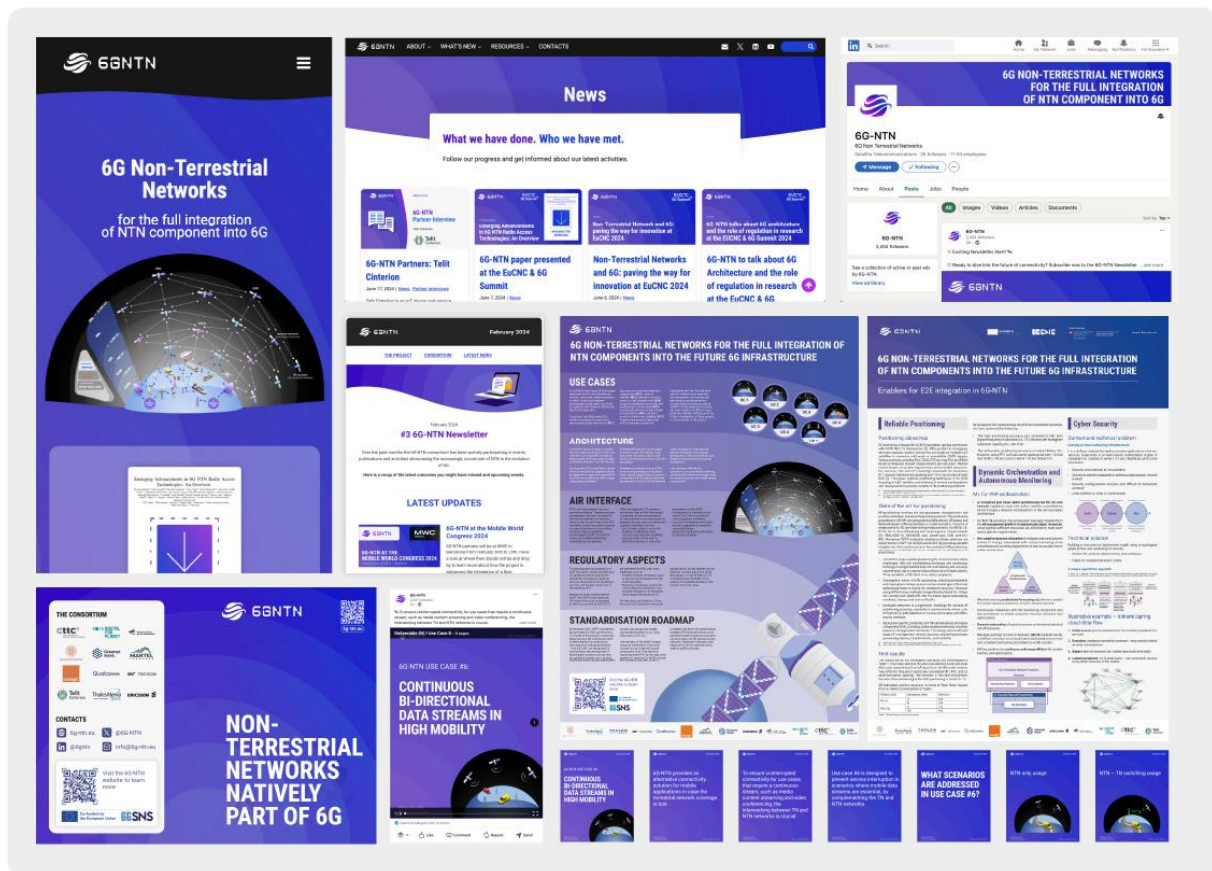


Figure 1: Overview of the 6G-NTN visual identity applied across communication and dissemination materials

## 1.3.2 Website

### 1.3.2.1 Structure and content

The 6G-NTN project website was developed in the first months of the project to serve as the project's main information hub. The website, which is characterized by a clear and easily navigable communication interface, gives visitors access to all relevant information about the project. The website is structured in the following manner:

#### ➤ About

- About 6G-NTN: presenting the project vision and providing an overview of the main objectives and expected impacts of the project.
- Use Cases: introducing the 7 use cases identified by the project.
- Consortium: presenting 15 organizations involved in 6G-NTN.
- 6G SNS Cluster: providing a brief overview of the European Smart Networks and Services Joint Undertaking.

#### ➤ What's New?

- News: featuring news items covering the most relevant project activities.
- Events: calendar of events relevant or related to 6G-NTN.
- Press Releases: press releases published throughout the project's runtime.

- Newsletter: newsletter subscription process and a library of newsletters sent throughout the project's runtime.
- Press clippings: press clippings and articles mentioning 6G-NTN and its partners.

#### ➡ Resources

- Publications: featuring all scientific publications related to the project, including full papers and abstracts available for download.
- Produced Materials: material designed by 6G-NTN (flyers, brochures, infographics, posters, etc.).
- Videos: videos linked from the 6G-NTN YouTube channel.
- Public Deliverables: list of downloadable public deliverables submitted by the 6G-NTN consortium and approved by the European Commission (EC).
- Presentations & Talks: list of downloadable presentations delivered by the 6G-NTN project partners at external events.

#### ➡ Contact

This page includes links to all 6G-NTN social media channels and provides a dedicated contact form for visitors who wish to contact the project consortium.

Besides, the website features the funding acknowledgement, which reads, “6G-NTN project has received funding from the Smart Networks and Services Joint Undertaking (SNS JU) under the European Union’s Horizon Europe research and innovation programme under Grant Agreement No 101096479. This work has received funding from the Swiss State Secretariat for Education, Research and Innovation (SERI).” The website also provides information on the data kept and how they are used in alignment with the General Data Protection Regulation (GDPR) under the Privacy Policy and Cookie Policy links (footer of the webpage).

As one of the main promotional and dissemination channels, the 6G-NTN website is periodically updated to ensure that its content is relevant and interesting for visitors. Besides, close attention is paid to Search Engine Optimization (SEO), keywords, and cross-references, which helps to drive traffic to the website.

#### 1.3.2.2 Website traffic statistics

At the time of writing (June 20, 2024), the website counted **13,331 unique visitors** who generated **30,604 page views**.

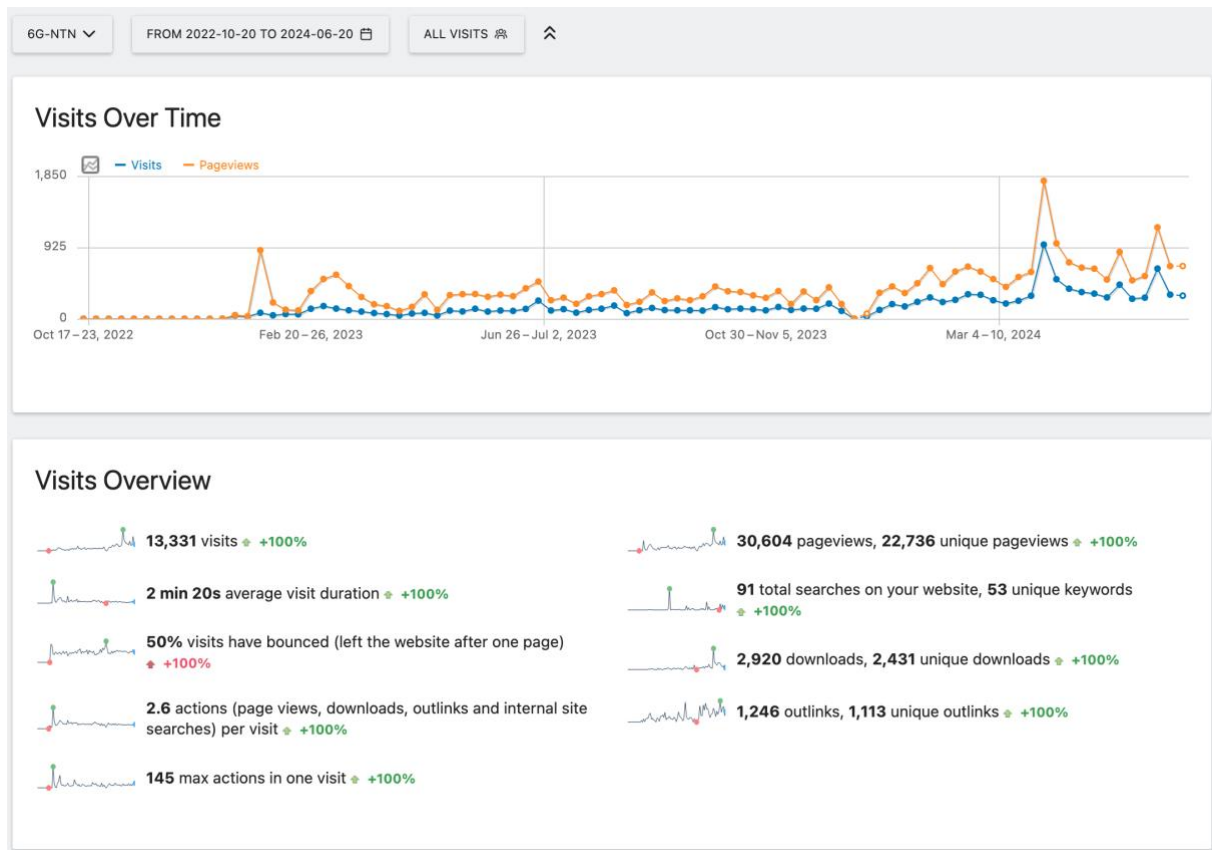


Figure 2: Overview of the visits to the 6G-NTN website from 20.10.2022 to 20.06.2024. Data tracked using Matomo

The most frequently visited pages include:

1. Homepage: **6,847 unique visitors** who generated **9,606 page views**.
2. News: **3,236 unique visitors** who generated **4,320 page views**.
3. About 6G-NTN: **1,780 unique visitors** who generated **2,422 page views**.
4. Events: **1,677 unique visitors** who generated **2,244 page views**.
5. Scientific Publications: **1,682 unique visitors** who generated **2,114 page views**.

6G-NTN							
FROM 2022-10-20 TO 2024-06-20							
ALL VISITS							
Pages							
PAGE URL	PAGEVIEWS	UNIQUE PAGEVIEWS	BOUNCE RATE	AVG. TIME ON PAGE	EXIT RATE	AVG. PAGE LOAD TIME	
<a href="#">/index</a>	9,606	6,847	46%	00:00:47	61%	3.1s	
<a href="#">news</a>	4,320	3,236	54%	00:01:01	56%	1.98s	
<a href="#">about-6g-ntn</a>	2,422	1,780	60%	00:01:10	57%	2.19s	
<a href="#">event</a>	2,244	1,677	44%	00:01:05	65%	2.56s	
<a href="#">scientific-publications</a>	2,114	1,682	46%	00:00:54	71%	2.49s	
<a href="#">consortium</a>	1,475	1,191	66%	00:00:51	61%	2.02s	
<a href="#">use-cases</a>	1,470	1,140	61%	00:01:00	66%	2.03s	
<a href="#">public-deliverables</a>	1,270	1,085	69%	00:00:56	57%	2.92s	
<a href="#">presentation-talks</a>	690	608	71%	00:02:26	64%	2.9s	
<a href="#">6g-sns-funding</a>	630	505	47%	00:00:48	53%	1.89s	
<a href="#">events</a>	569	399	45%	00:00:33	31%	1.23s	
<a href="#">download</a>	427	347	44%	00:00:58	79%	3.6s	
<a href="#">promotional-materials</a>	404	359	48%	00:01:04	28%	1.54s	
<a href="#">videos</a>	336	276	56%	00:01:45	48%	1.38s	

Figure 3: Visitors per page analytics for the 6G-NTN website from 20.10.2022 to 20.06.2024. Data tracked using Matomo

### 1.3.3 Newsletter

The 6G-NTN newsletter is sent out three times a year and includes regular updates on the project work and activities, relevant news from project partners, and updates on the 6G and NTN landscapes. The newsletter also contains information about the upcoming project engagements and relevant events.

To date, four newsletters have been sent out to 6G-NTN subscribers. All published newsletters have been uploaded on the project website.

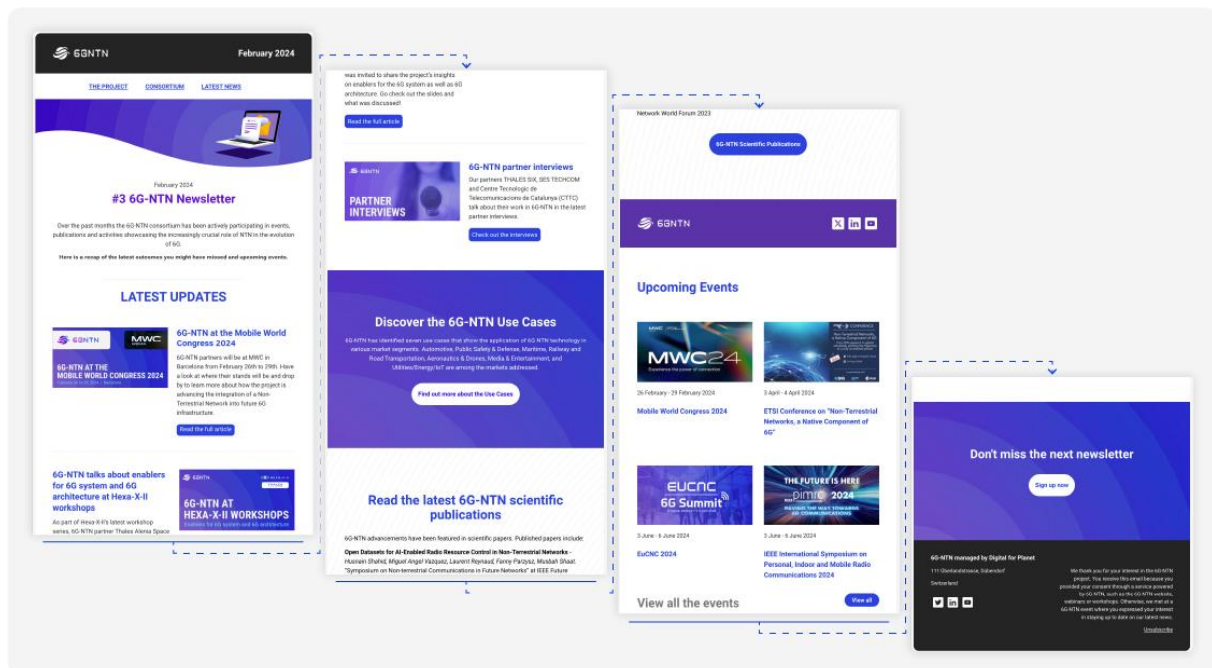


Figure 4: Example of the project newsletter (February 2024 edition)

The mailing list was created based on online subscription, giving the possibility to share the project newsletter via mass mailing. A registration functionality allowing the interested visitors to subscribe to the newsletter ensures that all actions comply with the requirements of the GDPR.

The platform used to build and spread the Newsletter is MailerLite, a trusted tool with dependable accessibility and privacy tools and settings, able to easily provide an easy to view and use newsletter for all users.

### 1.3.4 Communication campaigns

#### 1.3.4.1 Meet the consortium

The first campaign was launched in December 2023 with the aim of introducing all 6G-NTN project partners. The introductions were made via focused articles describing the partners' organizations and their roles in the project, their unique contributions to the 6G-NTN team, the key people involved in the project, as well as the importance of the 6G-NTN project to their organizations.

#### 1.3.4.2 Deliverables snapshots

The second campaign was launched in April 2024, with the aim of shedding light on the technical work performed within the project and providing a snapshot of submitted deliverables. By publishing a visually friendly summary of project deliverables, the consortium aims to gather interest of a wider group of stakeholders who might otherwise feel overwhelmed by the full documents submitted to the EC. Thanks to the campaign, a non-technical audience gets a good understanding of the work performed within the project, while the technical audience gets a good overview of the deliverable content, which helps them decide if the given deliverable is of interest to them.



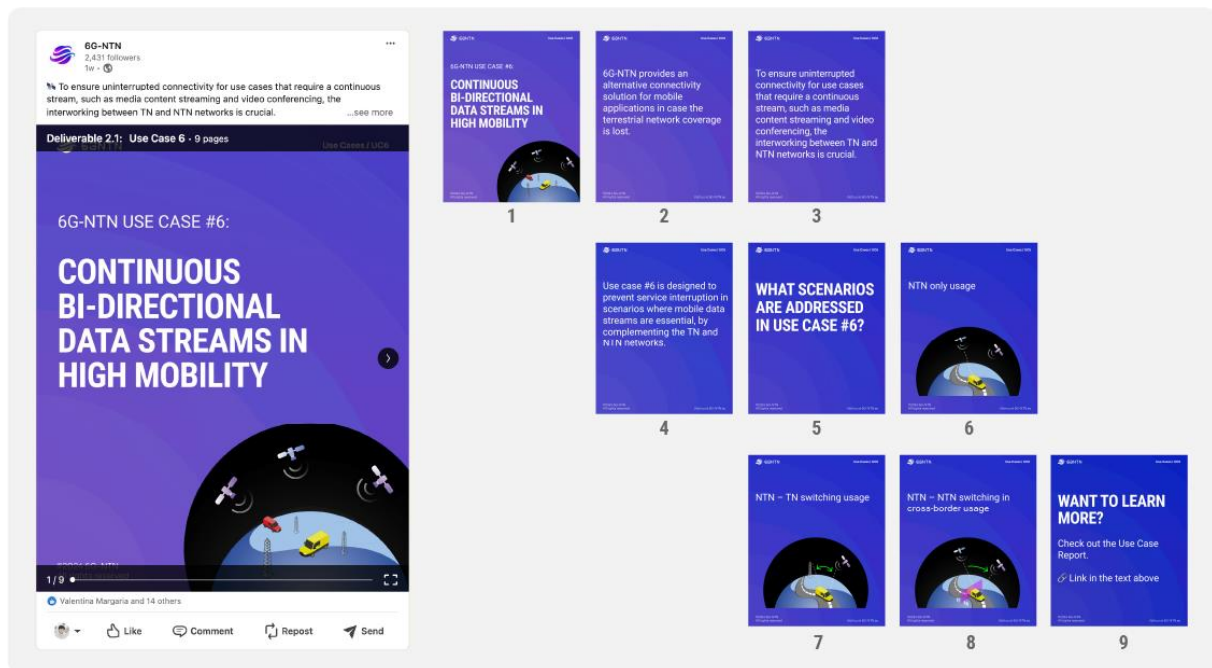


Figure 5: Example of a deliverable snapshot: on the left is an example of the post on the project social media channels (LinkedIn carousel); on the right is a sequence of 9 slides forming the carousel

### 1.3.5 Social media channels

6G-NTN enjoys an extraordinary performance on social media. The project channels are followed by an international audience composed of researchers and industrial players from the following sectors: telecommunications, higher education and research services, IT services and IT consulting, semiconductor manufacturing, software development, satellite communications, communications equipment manufacturing, and defense and space manufacturing, among others. The majority of followers come from the following areas: Greater Bengaluru Area, India; Greater Paris Metropolitan Region, France; Greater Delhi Area, India; Greater Munich Metropolitan Area, Germany; London Area, United Kingdom; Greater Barcelona Metropolitan Area, Spain; Greater Bologna Metropolitan Area, Italy; Greater Toulouse Metropolitan Area, France; Greater Hyderabad Area, India; and the San Diego Metropolitan Area.

The channels are actively and regularly animated with content, ranging from the 6G-NTN partners' active participation in events, the promotion of the periodic newsletter to rise subscriber numbers, and more specific communication campaigns, such as the 'Meet the consortium' or the 'Deliverable snapshots' mentioned earlier. The posts on LinkedIn always feature the partners' handles to ensure maximum reach and repost potential, as well as the SNS JU's and the EC's tags. Furthermore, relevant hashtags are also an integral part of the posts, including recurring ones, such as #6G and #NTN, and more specific ones, such as #EuCNC, as demonstrated in Figure 6.

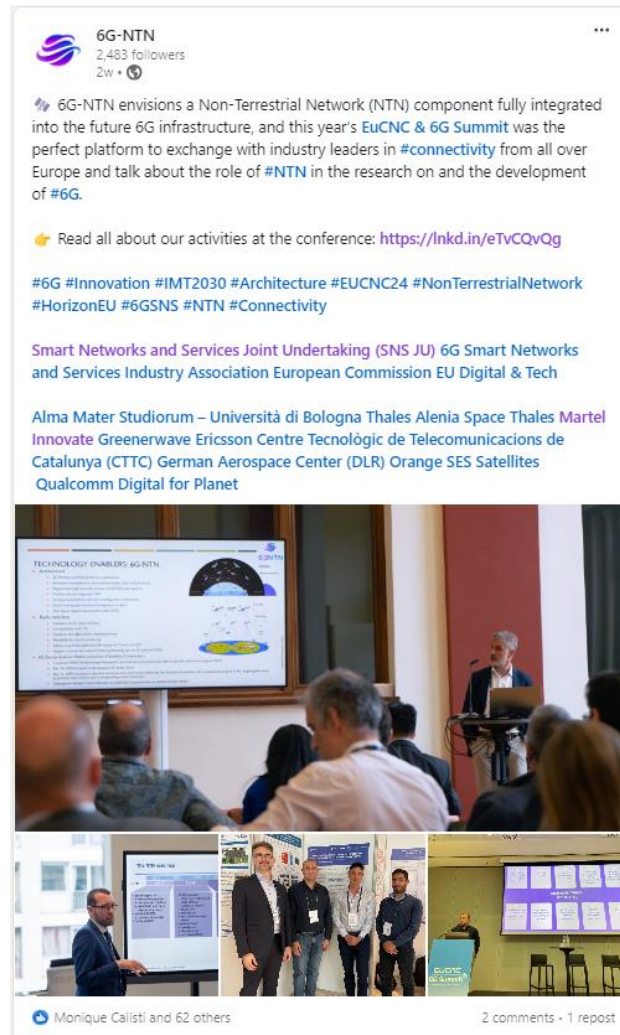


Figure 6: Example of a LinkedIn post including pictures of an event 6G-NTN partners participated in, the link to the article summarizing the event's key learnings, and the partners' handles and relevant hashtags.

The follower base has been steadily growing since the project started. At the time of writing (June 20, 2024), the project counted **2'450 followers on LinkedIn** and **314 followers on X** (formerly Twitter). It is worth noting that the LinkedIn follower base of the 6G-NTN project is incomparably larger than that of any other SNS JU project.

## 1.3.6 Events

### 1.3.6.1 Attended

The 6G-NTN consortium has participated in a variety of events to present and promote the project and network with relevant stakeholders. Some of the attended events include:

- EuCNC & 6G Summit 2024, June 3-6, 2024, Antwerp, Belgium
- PSCE 2024 Spring Conference, June 4-5, 2024, Vienna, Austria
- 6G World webinar "What's stopping a 'Network of Networks' working in practice?" April 30, 2024, online
- MWC 2024, February 26-29, 2024, Barcelona, Spain
- Hexa-X-II Workshop on 6G architecture and standardization, January 26, 2024, online

- EUREKA Info Day 2023, November 14, 2023, Luxembourg
- IEEE Future Network World Forum 2023, November 13-15, 2023, Baltimore, USA
- one6G Summit, November 9-10, 2023, Munich, Germany
- Fourth Visions for Future Communications Summit, November 7-8, 2023, Lisbon, Portugal
- 28th Ka and Broadband Communications Conference, October 23-26, 2023, Bradford, UK
- Thematic days on NTN communications (organized by the CNRS GDRs RSD & ISIS), October 19-20, 2023, Toulouse, France
- VTC2023, October 10-13, 2023, Hong Kong, China
- European Wireless 2023, October 2-4, 2023, Rome, Italy
- FOKUS FUSECO Forum, September 14–15, 2023, Berlin, Germany
- IEEE WiSEE 2023, September 6-8, 2023, Aveiro, Portugal
- IEEE AESS Summer School, “Frontier Technologies for Space 2.0 Communications”, August 29 – September 1, 2023, online
- EuCNC & 6G Summit 2023, June 6-9, 2023, Gothenburg, Sweden
- 4<sup>th</sup> SNS Lunchtime Webinar, March 6, 2023, online
- MWC 2023, February 27 - March 2, 2024, Barcelona, Spain
- World Satellite Connectivity Summit, February 9-10, 2023, Prague, Czech Republic
- ETSI Research Conference: Maximizing the Impact of European 6G Research through Standardization, February 6-8, 2023, Sophia Antipolis, France

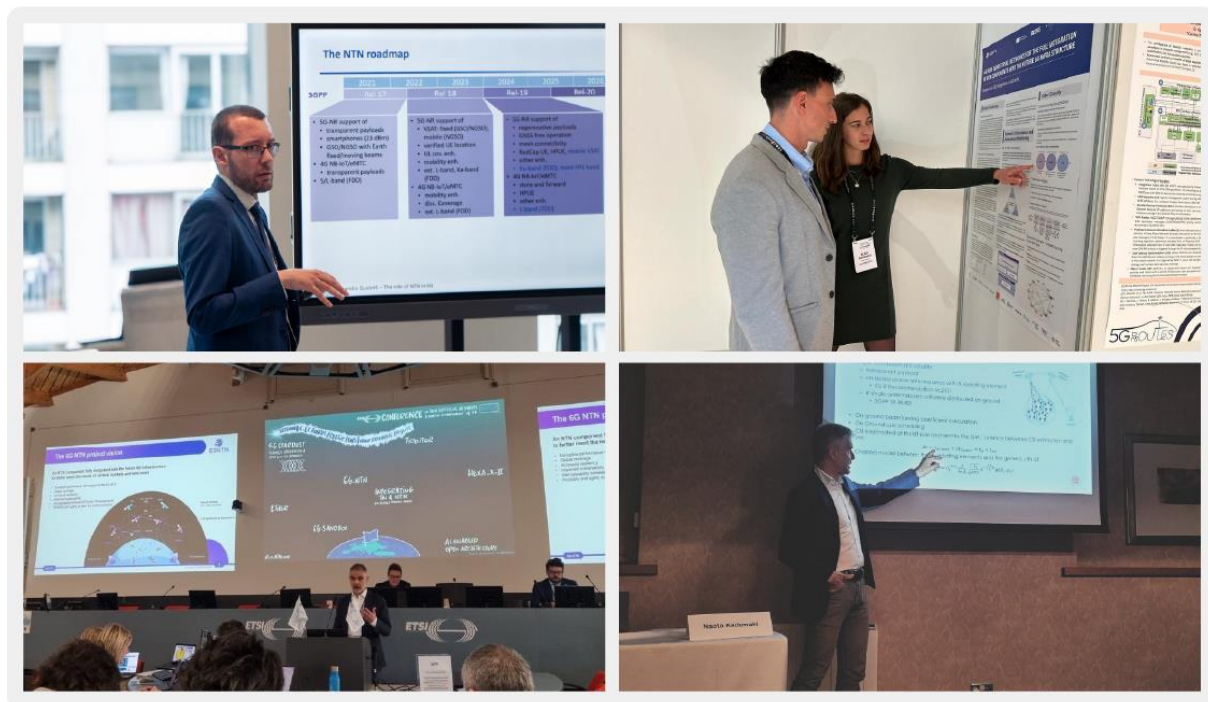


Figure 7: Photographs of 6G-NTN partners participating in events

The presentations delivered by 6G-NTN project partners at events are available on the project website, <http://www.6g-ntn.eu/presentation-talks/>.



### 1.3.6.2 Organized

In addition to attending external events to present the project and network with relevant stakeholders, the 6G-NTN consortium was also actively involved in the organization of the following events:

- ➡ ETSI webinar “Essential Discussions about NTN for 6G,” May 16, 2024, online
- ➡ ETSI conference “Non-Terrestrial Networks, a Native Component of 6G,” April 3-4, 2024, Sophia Antipolis, France
- ➡ The 6G series workshop by Hexa-X-II, February 13-14, 2024, online

### 1.3.7 Videos

To date, the project produced five videos, all in the form of recorded expert interviews.

- ➡ [6G-NTN in a nutshell](#), published in April 2023, featuring the Project Coordinator, Alessandro Vanelli-Coralli, the Technical Project Coordinator, Nicolas Chuberre, and the Communication Manager, Monique Calisti. In the video, these three key project partners provide a sneak peek of the project, explaining what 6G-NTN is about, stressing its significance and pointing out the technological ambitions of the project, the technologies that 6G-NTN plans to advance, also explaining the importance of planned collaboration with the other SNS projects.
- ➡ [“6G-NTN Standardization Roadmap](#), published in August 2023, featuring Mohamed El Jaafari (Thales Alenia Space). The interview provides insights into the project's roadmap to integrate its innovations into standards and contribute to Europe's technological leadership in NTN.
- ➡ [6G-NTN at MWC2024](#), published in March 2024, featuring the Project Coordinator, Alessandro Vanelli-Coralli. The interview focuses on 6G-NTN's key takeaways from the Mobile World Congress 2024 held in Barcelona, Spain, and their implications for Non-Terrestrial Networks and their incorporation into 6G. Vanelli-Coralli also explains that 6G-NTN covers an essential aspect of connectivity that had been overlooked so far – the sky – and confirms that the project is aligned with the industry's wants and needs in terms of 6G development.
- ➡ [6G-NTN at MWC2024](#), published in April 2024, featuring the Technical Project Coordinator, Nicolas Chuberre who talks about main highlights from the Mobile World Congress 2024, held in Barcelona, Spain, and what this means for Non-Terrestrial Networks and their integration into 6G. His interview also touches upon what 6G-NTN has achieved, including the use cases and architectural trade-offs, as well as the project's plan to partake in the standardization process of 6G with bodies, such as ETSI.
- ➡ [6G-NTN at the EuCNC & 6G Summit 2024](#), featuring the Project Coordinator, Alessandro Vanelli-Coralli. This interview posted in June 2024 includes the project's presence at the event, and how 6G-NTN contributes to sustainability and standardization. Short snippets of this interview will be published on social media, driving viewers to the full interview on the project's YouTube channel.



Figure 8: Examples of 6G-NTN video interviews

All project videos have been featured on the 6G-NTN website as well as the social media channels and are available on the project YouTube channel, <https://www.youtube.com/@6G-NTN-eu>.

### 1.3.8 Produced materials

6G-NTN produced two flyers to date, (1) a general introductory flyer, which introduces the project concept, features the funding acknowledgment, and provides contact details, and (2) a more comprehensive architecture & use cases brochure featuring the project vision, innovation potential, project use cases, 6G-NTN architecture, the consortium members, funding acknowledgment, and contact details.

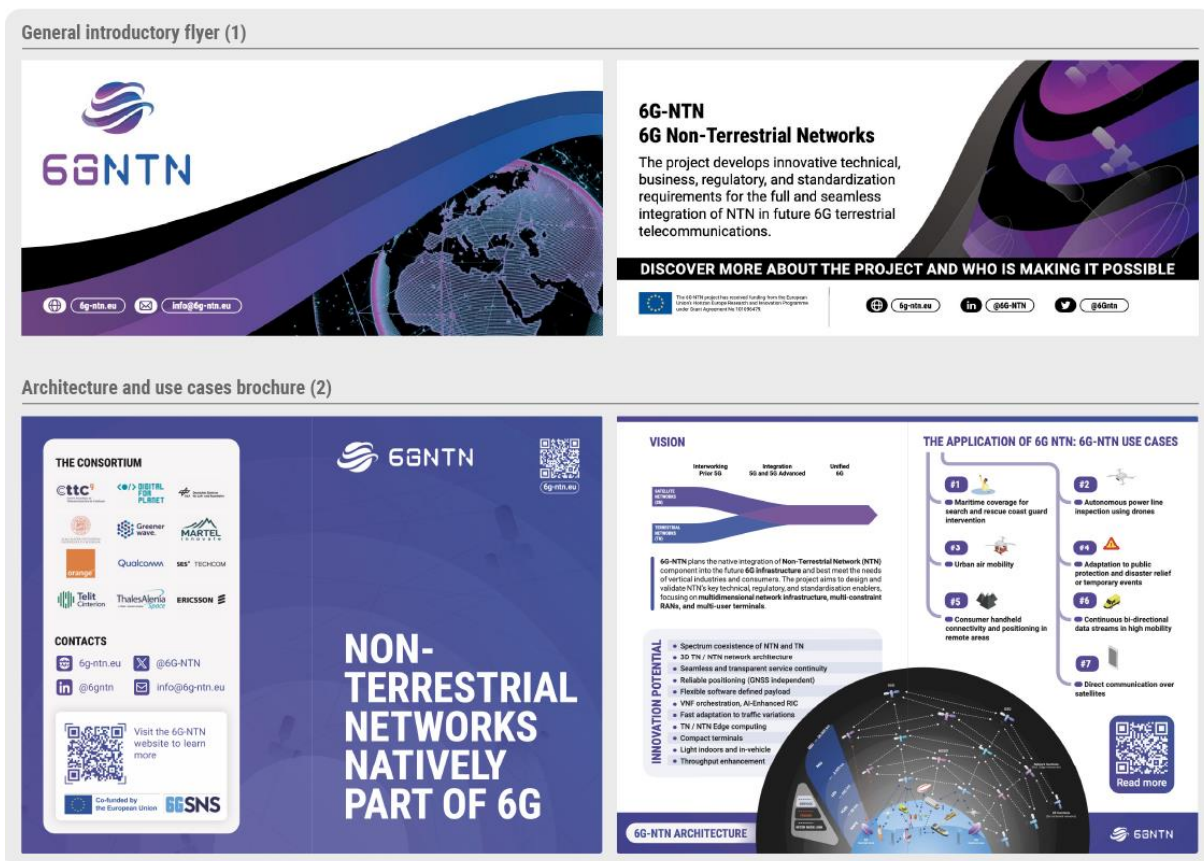


Figure 9: 6G-NTN flyers

The flyers/brochures were and will continue to be distributed both digitally and physically, e.g., at events such as MWC, EuCNC & 6G Summit, one6G Summit, among others.

Besides, the consortium produced two posters, which were presented at attended events, namely:

- A poster with a general project overview featuring project use cases, the 6G-NTN architecture, air interface, regulatory aspects, and the standardization roadmap, presented at the ETSI conference “Non-Terrestrial Networks, a Native Component of 6G,” which took place in Sophia Antipolis, France on April 3-4, 2024.
- A scientific poster titled, “6G Non-Terrestrial Networks for the Full Integration of NTN Components into the Future 6G Infrastructure,” which focuses on three important aspects of the transition from 5G to 6G networks, aligning with ambitious goals of advanced connectivity, extended coverage, improved reliability and trustworthiness on networks (innovative positioning methods based on UE-application demands; AI/ML resource forecasting for VNF orchestration; methods for securing VNF deployment), presented at the EuCNC & 6G Summit 2024, which took place in Antwerp on June 3-6, 2024.



Figure 10: 6G-NTN posters

### 1.3.9 Publications

#### 1.3.9.1 Scientific publications

The 6G-NTN consortium is committed to bringing research results closer to the public and adheres to the open access guidelines set by the Horizon Europe work program. In line with these guidelines, all scientific publications emerging from the project are freely available to interested parties. To date, 10 papers developed as part of 6G-NTN have been published (see Table 1). A list of all published papers is also available on the project website.

*Table 1: Scientific papers published by the 6G-NTN project partners*

Title	Authors	Publication venue	Publication date
“Emerging Advancements in 6G NTN Radio Access Technologies: An Overview”	Husnain Shahid; Carla Amatetti; Riccardo Campana; Sorya Tong; Dorin Panaitopol; Alessandro Vanelli-Coralli; Abdelhamed Mohamed; Chao Zhang; Ebraam Khalifa; Eduardo Medeiros; Estefania Recayte; Fatemeh Ghasemifard; Ji Lianghai; Juan Bucheli; Karthik Anantha Swamy; Marius Caus; Mehmet Gurelli; Miguel A. Vazquez; Musbah Shaat; Nathan Borios; Per-Erik Eriksson; Sebastian Euler; Zheng Li; Xiaotian Fu	EuCNC & 6G Summit 2024	June 2024
“Federated Beamforming with Subarrayed Planar Arrays for B5G/6G LEO Non-Terrestrial Networks”	M. Rabih Dakkak; Daniel Gaetano Riviello; Alessandro Guidotti; Alessandro Vanelli-Coralli	Workshop WS-12: 6G Architecture at the 2024 IEEE Wireless Communications and Networking Conference (WCNC 2024)	April 2024
“Federated Cell-Free MIMO in Non-Terrestrial Networks Architectures and Performance”	Alessandro Guidotti; Alessandro Vanelli-Coralli; Carla Amatetti	IEEE Transactions on Aerospace and Electronic Systems	February 2024



“Assessment of Beamforming Algorithms with Subarrayed Planar Arrays for B5G/6G LEO Non-Terrestrial Networks”	M. Rabih Dakkak, Daniel Gaetano Riviello, Alessandro Guidotti and Alessandro Vanelli-Coralli	IEEE Future Networks World Forum’s Symposium on Non-Terrestrial Communications in Future Networks	November 2023
“Open Dataset for AI- Enabled Radio Resource Control”	Husnain Shahid; Miguel Angel Vazquez; Laurent Reynaud; Fanny Parzysz; Musbah Shaat	IEEE Future Networks World Forum’s Symposium on Non-Terrestrial Communications in Future Networks	November 2023
“Analysis of Graph-based User Scheduling for Ka-Band LEO NTN Systems”	Bilal Ahmad; Daniel Gaetano Riviello; Bruno De Filippo; Alessandro Guidotti; Alessandro Vanelli-Coralli	28th Ka and Broadband Communications Conference (Ka BSC)	October 2023
“RAN Functional Splits in NTN: Architectures and Challenges”	Riccardo Campana; Carla Amatetti; Alessandro Vanelli-Coralli	Arxive	September 2023
“NTN: from 5G NR to 6G”	Mohamad Sayed Hassan; Chiranjib Saha; Ji Lianghai; Alberto Rico Alvarino; Jun Ma; Le Liu; Qiang Wu	2023 IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE)	September 2023
“O-RAN based Non-Terrestrial Networks: Trends and Challenges”	Riccardo Campana; Carla Amatetti; Alessandro Vanelli-Coralli	EuCNC & 6G Summit 2023	June 2023
“Improved Graph-based User Scheduling for Sum-Rate Maximization in LEO-NTN Systems”	Bilal Ahmad; Daniel Gaetano Riviello; Alessandro Guidotti; Alessandro Vanelli-Coralli	IEEE ICASSP’s Signal and Data Processing for Next Generation Satellites (SDP-NGS) workshop	June 2023

### 1.3.9.2 White Papers

Besides publishing scientific papers, 6G-NTN also published a White Paper titled, [“Vision on Non-Terrestrial Networks in 6G system \(or IMT-2030\): Use Cases, Requirements, and Possible Standardization Approach – A Perspective from the 6G-NTN Project.”](#) The White Paper, coauthored by Thales Alenia Space France, Ericsson Sweden and Ericsson France, Qualcomm France, SES Techcom, Thales – SIX, Telit Cinterion, GreenerWave, Martel Innovate, Digital for Planet, CTTC, German Aerospace Center – DLR, and Alma Mater Studiorum - University of Bologna, was released at the ETSI Conference “Non-Terrestrial Networks, a Native Component of 6G,” which took place on April 3-4, 2024, in Sophia Antipolis, France. In this White Paper, the 6G-NTN consortium provides a consolidated view on NTN in 6G. The paper includes an identification of the targeted market segments, connectivity scenarios, general design principles for NTN in 6G followed by a proposed standardization approach. The paper is freely available on the project website.

## 1.4 TARGET GROUPS

The identification and engagement of diverse stakeholder groups have been one of the key components of 6G-NTN’s communication, dissemination, and community-building strategy since the project start. At the early project stages, the consortium performed an exercise of positioning the 6G-NTN stakeholders on the stakeholder map presented in Figure 11, which helped the project partners visualize the relationships with the different target groups and understand who has interest in or influence over the project and can therefore contribute to its development and success.

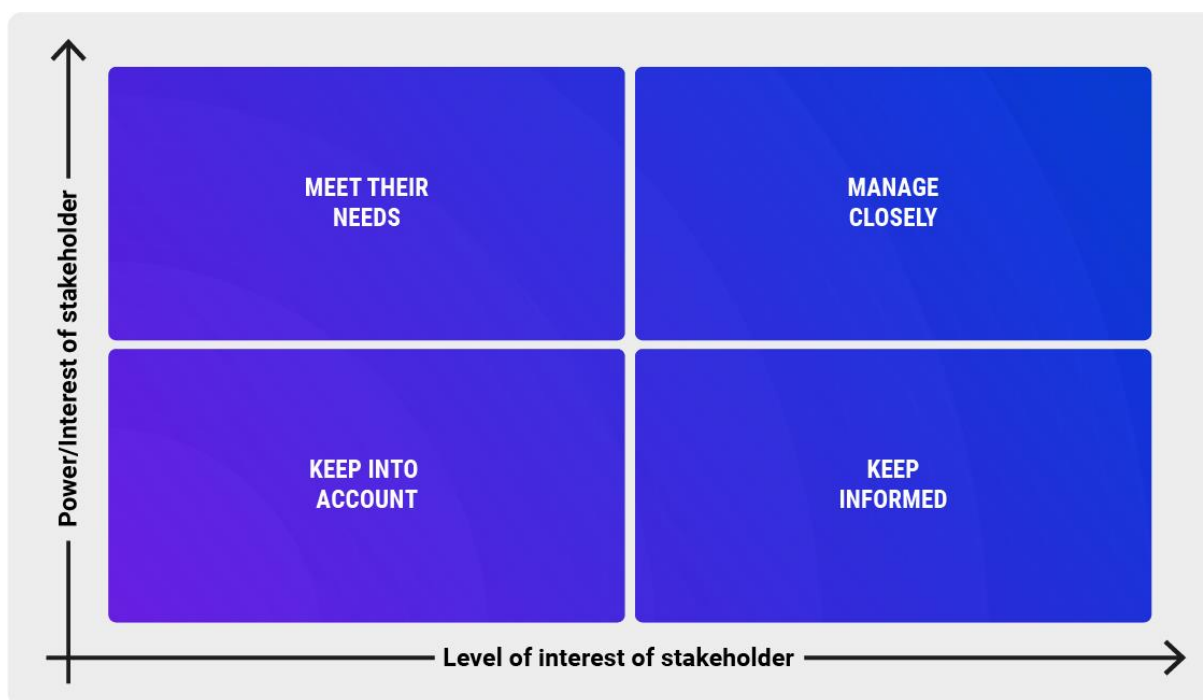


Figure 11: Stakeholder map

The x-axis represents a stakeholder’s level of power or influence over the project while the y-axis indicates their level of interest in the project. A stakeholder’s position on the map determines how the consortium engages with them, including the intensity and frequency of engagement. Periodically reevaluating, and, if needed, remapping the 6G-NTN stakeholders

allows us to alter our messages and engagement strategies to best meet the stakeholders' interests and needs.

The identification and mapping of stakeholders supports the project success in several ways:

- ➡ By identifying relevant individuals, groups, or organizations that might impact or be impacted by the project, we make sure that no important group is overlooked.
- ➡ By classifying stakeholders based on their influence and interest, we can prioritize our engagement efforts to focus on those who have the most significant impact on the project or those who are most affected by project work and results.
- ➡ Understanding stakeholders' positions and interests makes it easier to craft personalized communication strategies to ensure the right message reaches the right groups.
- ➡ By identifying potential areas of concern, resistance, or opposition early on, we can anticipate and address potential challenges proactively, before they become project risks.

The most relevant project stakeholders, their position on the stakeholder map, and the respective engagement strategies for each target group are described in the communication matrix presented in Table 2.

Table 2: 6G-NTN communication matrix

Target audience	Position on the stakeholders map	Outreach and engagement goals	Outreach and engagement instruments	Outreach frequency
<b>Relevant R&amp;I projects, especially within SNS JU, 6G-IA, IoT, Cloud, AI, and security contexts (e.g., 5G-STARDUST, HORSE, ETHER, HELENA)</b>	This group of stakeholders has been placed on the “manage closely” square on the stakeholder map.	Create liaisons and synergies to foster sustainable cooperation.	Project content (white papers, deliverables news items, videos, posters) promoted via the project website and social media channels; Presentations and networking at relevant events; Distribution of printed promotional material at events; Invitations to project workshops and webinars; Publication of key findings and project results in open access journals.	Sharing research outputs on the project website and in online open source based databases (ad-hoc); Bi-weekly animation of social media channels; News items published on the project website bi-monthly; Newsletter sent out to subscribers three times per year; Synthesis of project deliverables published monthly on social media; Regular participation in the SNS JU, NetWorldEurope, 6G-IA and other commonly coordinated activities, e.g., monthly participation in the SNS Communication Task Force.
<b>Industry, including telco operators, ICT vendors/providers, software developers, and players across various verticals</b>	This group of stakeholders has been placed on the “manage closely” square on the stakeholder map.	Foster collaboration to integrate and enrich project outcomes and reinforce the NTN ecosystem with proper research outcomes, dissemination, and discussion	Project content (white papers, deliverables, news items, videos, posters) promoted via the project website and social media channels; Presentations and networking at relevant events; Distribution of printed promotional material at events; Invitations to project workshops and webinars; Publication of key findings and project results in open access journals.	Sharing research outputs on the project website and in online open source-based databases (ad-hoc); Presentations, meetings, and networking at relevant conferences (at least once per quarter); Synthesis of project deliverables published monthly on social media; Bi-weekly animation of social media channels; News items published on the project website bi-monthly; Newsletter sent out to subscribers three times per year.



<b>SMEs, innovators, and startups especially in the space, satellite and wireless communication domains</b>	This group of stakeholders has been placed on the “keep informed” square on the stakeholder map.	Support the creation of opportunities for new actors, especially SMEs and start-ups, to become part of the NTN ecosystem.	Project content (white papers, deliverables, news items, videos, posters) promoted via the project website and social media channels; Presentations and networking at relevant events; Distribution of printed promotional material at events; Publication of key findings and project results in open access journals.	Sharing research outputs on the project website and in online open source-based databases (ad-hoc); Presentations, meetings, and networking at relevant conferences (at least once per quarter); Synthesis of project deliverables published monthly on social media; Bi-weekly animation of social media channels; News items published on the project website bi-monthly; Newsletter sent out to subscribers three times per year.
<b>Researchers</b>	This group of stakeholders has been placed on the “keep informed” square on the stakeholder map.	Extend the researchers’ involvement in the NTN development and create liaisons and synergies to advance research and knowledge sharing.	Publication of key findings and project results in open access journals; Project content (white papers, deliverables, news items, posters, videos) promoted via the project website and social media channels; Presentations and networking at relevant events; Distribution of printed promotional material at events; Invitations to project workshops and webinars.	Sharing research outputs on the project website and in online open source-based databases (ad-hoc); Presentations, meetings, and networking at relevant conferences (at least once per quarter); Synthesis of project deliverables published monthly on social media; Bi-weekly animation of social media channels; News items published on the project website bi-monthly; Newsletter sent out to subscribers three times per year.
<b>Public authorities, NTN and SatCom initiatives/fora, and policymakers (e.g., ESA, GOVSATCOM)</b>	This group of stakeholders has been placed on the “manage closely” square on the stakeholder map.	Create liaisons to ensure information exchange and support NTN related policy definition.	Project content (white papers, deliverables, news items, videos, posters) promoted via the project website and social media channels; Presentations and networking at relevant events; Distribution of printed promotional material at events; Invitations to project workshops and webinars; Publication of	Sharing research outputs on the project website and in online open source-based databases (ad-hoc); Presentations, meetings, and networking at relevant conferences (at least once per quarter); Newsletter sent out to subscribers three times per year.

			key findings and project results in open access journals.	
<b>European and international initiatives, such as ADRA, AIOTI, BDVA, HPC, GAIA-X, FIWARE, etc.</b>	This group of stakeholders has been placed on the “manage closely” square on the stakeholder map.	Create liaisons to promote cross-collaboration and leverage synergies with related activities.	Project content (white papers, deliverables, news items, videos, posters) promoted via the project website and social media channels; Presentations and networking at relevant events; Distribution of printed promotional material at events; Invitations to project workshops and webinars; Publication of key findings and project results in open access journals.	Sharing research outputs on the project website and in online open source-based databases (ad-hoc); Presentations, meetings, and networking at relevant conferences (at least once per quarter); Newsletter sent out to subscribers three times per year.
<b>Standardization bodies and open source initiatives (e.g., 3GPP, ETSI, Open SatCom)</b>	This group of stakeholders has been placed on the “manage closely” square on the stakeholder map.	Ensure proper definition of NTN-related standards.	Project content (white papers, deliverables, news items, videos, posters) promoted via the project website and social media channels; Presentations and networking at relevant events; Distribution of printed promotional material at events; Invitations to project workshops and webinars; Publication of key findings and project results in open access journals.	Sharing research outputs on the project website and in online open source-based databases (ad-hoc); Presentations, meetings, and networking at relevant conferences (at least once per quarter); Newsletter sent out to subscribers three times per year.
<b>Civil society and the general public</b>	This group of stakeholders has been placed on the “keep into account” square on the stakeholder map.	Raise awareness and interest in the subject of wireless communication and explain the importance of the EU investment into communication infrastructure technologies; Increase understanding of the importance and potential of Pan-European collaboration; Showcase what the public money is invested in and why (present benefits).	Engaging content published on the project website and social media channels (white papers, deliverables, news items, communication campaigns, videos); Publication of key findings and project results in open access journals.	Bi-weekly animation of social media channels; News items published on the project website bi-monthly; Newsletter sent out to subscribers three times per year; Sharing research outputs on the project website and in online open source-based databases (ad-hoc); Synthesis of project deliverables published monthly on social media.

By leveraging a multi-channel communication approach, the project has been able to effectively communicate its objectives, work, and results while also promoting relevant initiatives and events and fostering synergies with relevant organizations and projects.

## 1.5 COMMUNITY BUILDING

The ever-growing 6G-NTN community is composed of researchers and industrial players from several sectors including telecommunications, higher education and research services, IT services and IT consulting, semiconductor manufacturing, software development, satellite communications, communications equipment manufacturing, and defence and space manufacturing, among others.

## 1.6 COOPERATION AND LIAISONS

The 6G-NTN consortium recognizes the importance of establishing and maintaining strategic liaisons within the broader SNS ecosystem. These collaborations are essential for exchanging knowledge, aligning efforts, and amplifying the impact of initiatives aimed at fostering Europe's technological sovereignty.

Liaisons within the SNS ecosystem serve multiple strategic purposes, including:

- **Fostering synergies:** By liaising on activities and strategic objectives across projects, we leverage collective and individual strengths and ensure that efforts are complementary and mutually reinforcing, thereby maximizing impact.
- **Knowledge sharing:** Collaboration facilitates the exchange of insights, best practices, and lessons learned, fostering innovation and efficiency across projects.
- **Resource optimization:** Through shared initiatives and resources, projects can achieve more while avoiding the duplication of efforts.
- **Community building:** Engaging with a broader network of stakeholders strengthens and grows the SNS community, promoting a cohesive vision for Europe's technological leadership.

**Coordination with Relevant Initiatives:** The project is committed to maximizing outreach and impact through leveraging existing networks and partnerships of its members and has successfully established close coordination with various standardization bodies, industry forums, and national/international associations, including, but not limited to, 3GPP, ETSI, 6G-IA (and its pre-standardization working group), one6G, and the Satellite Special Interest Group (SSIG), which is led by Nicolas Chuberre, the 6G-NTN Technical Manager. These liaisons have been detailed and expanded in deliverable D6.3.

**Synergies within SNS JU:** The project has also ensured close coordination with related EU-funded projects, facilitating knowledge transfer and preventing duplication of efforts. Special focus has been given to the 6G SNS ecosystem. Active participation and alignment with the broader SNS ecosystem have been achieved through synchronization of outreach efforts, coordination via monthly SNS Communication Task Force meetings, the Steering Board Group, the Technical Board Group, the Architecture Working Group, and the Sustainability Task Force. Collaborative tools and processes, including mailing lists, online meeting tools, and periodic physical meetings (co-located with major community events, like the EuCNC & 6G Summit, have further ensured cohesion within the larger 6G community.

As part of the collaboration with ICT-52 and SNS projects, 6G-NTN:

- coordinated several joint presentations with the other SNS JU NTN-related projects, 5G-STARDUST and ETHER, at the EuCNC & 6G Summit 2024,
- presented at the online Hexa-X-II webinar (February 13-14, 2024) – Nicolas Chuberre, 6G-NTN Technical Project Coordinator presented the 6G-NTN progress on the system view and architecture for 6G,
- presented at the SNS projects-wide workshop organized by Hexa-X-II (January 26, 2024),
- co-organized a bilateral workshop on architecture and technologies with Hexa-X-II (January 22, 2024) – project partners presented the use cases, architecture, radio interface design drivers and the standardization roadmap,
- presented at the Hexa-X architecture workshop at the EuCNC & 6G Summit 2023 – Alessandro Vanelli-Coralli, 6G-NTN Project Coordinator presented the 6G-NTN objectives and initial architecture for 6G,
- coordinated several joint presentations with the other SNS JU NTN-related projects, 5G-STARDUST and ETHER, at the EuCNC & 6G Summit 2023,

with the aim of providing valuable insights and stimulating fruitful discussions on NTN, enriched by perspectives of other 6G ecosystem stakeholders from various world regions.

Finally, Alessandro Vanelli-Coralli, the 6G-NTN Project Coordinator, serves as a member of the Advisory Board of Hexa-X-II, which facilitates the establishment of a permanent liaison with the SNS flagship project.

## 1.7 PROGRESS TRACKING

The 6G-NTN consortium defined a comprehensive set of communication and dissemination KPIs (Table 3) to monitor the progress of impact creation activities.

Table 3: 6G-NTN communication & dissemination KPIs

Measure	Indicator	Target at M36	Status at M18
Project website	N. of unique visitors to the website	≥ 3000	13'331
Social media	N. of followers	Twitter ≥ 500	314
		LinkedIn ≥ 150	2'450
Promotional materials	N. of project presentations	≥ 6	>20
	N. of flyers	≥ 3	2
	N. of posters / roll-ups / banners	≥ 3	2
Publications	N. of scientific publications	≥ 15	10

	N. of White Papers	$\geq 3$	1
Press releases	N. of published press releases	$\geq 5$	1
Newsletter	N. of distributed newsletters	9	4
Videos	N. of published videos	$\geq 6$	5
	Overall N. of views	$\geq 3000$	1K
Organized events	workshops	$\geq 5$	2
	webinars	$\geq 3$	1
	tutorials	$\geq 3$	0
	demos	$\geq 3$	0
Participation to external events (with presentations)	N. of external events partners attended to promote the project	$\geq 3/\text{year}$	>20 (total)

## 2 UPDATED COMMUNICATION AND DISSEMINATION STRATEGY

The project will continue to execute its communication, dissemination, and community-building strategy (outlined in more detail in deliverable D6.1 *Dissemination and Communication Strategy and Plan*) also in the second half of the project, focusing on the activities listed below.

### 2.1 PLANNED COMMUNICATION AND DISSEMINATION ACTIVITIES M19-M36

#### 2.1.1 Project website and social media channels

The consortium will continue to grow the 6G-NTN community and raise awareness about the project work via the established channels including but not limited to the project website and its social media channels (Twitter, LinkedIn, and YouTube). Relevant project findings will be made available as soon as possible to keep the community updated about project activities and results. This will be achieved through communication campaigns, regular publication of news items, social media posts, as well as the project newsletter and ad hoc newsflashes. As one of the main promotional and dissemination channels, the 6G-NTN website will continue to be periodically updated to ensure that its content is relevant and interesting for visitors.

#### 2.1.2 6G-NTN newsletter

The project will continue distributing the newsletter three times a year. The periodic newsletter will include updates on the project work and activities, relevant news from project partners, and updates on the 6G and NTN landscapes. The newsletter will also feature information about the upcoming project engagements and relevant events. Invitations to relevant workshops and webinars, consultations and any other information, which cannot wait for the project newsletter publication will be sent out in the form of a news flash to the same database used for the project newsletter.

#### 2.1.3 Communication campaigns

The consortium will continue publishing snapshots of submitted deliverables to (1) help non-technical stakeholders get a better understanding of the work performed within the project and (2) help the stakeholders with the technical knowledge get a good overview of the content of submitted deliverables so that they can easily identify documents of interest and relevance to them. The Meet the consortium series will also continue to present all partners behind the 6G-NTN project.

#### 2.1.4 Promotional materials

Additional promotional materials will be produced in alignment with event organization and attendance. Among other materials, a third project flyer and a project roll-up will be produced.

#### 2.1.5 Publications

There are several scientific papers in the pipeline, including a paper titled "Performance Evaluation of Fractional Frequency Reuse in Multi-Beam Satellite System" by Husnain Shahid, Miguel Angel Vazquez, Xavier Artiga, Matilde Sanchez-Fernandez, and Alvaro Callejas-Ramos, submitted to the IEEE SPAWC 2024; a paper related to waveform adaptations in NTN, which is currently under preparation; and a paper on dynamic fractional frequency reuse for resource optimization in NTN, which is under preparation.



## 2.1.6 Events

### 2.1.6.1 Attendance

The consortium plans to attend a number of relevant events, among others: IEEE PIMRC 2024 in Valencia, Spain; one6G Summit 2024 in Valencia, Spain; IEEE SPAWC 2024 in Lucca, Italy; MWC 2025 in Barcelona, Spain; EuCNC & 6G Summit 2025 in Poznan, Poland, and relevant one6G Open Lectures held online.

### 2.1.6.2 Organization

In addition to attending relevant conferences, the consortium plans to organize a number of events to share the results and recommendations. These will include online webinars and physical workshops and tutorials. The consortium will do their best to organize physical events in collocation with relevant conferences to minimize costs and maximize impact. As such, the project will organize a workshop titled "6G-NTN: Architectures and Technologies" at the IEEE PIMRC 2024 in Valencia, Spain. The workshop aims to share innovative ideas and insights, shaping new research directions on enabling techniques for integration and flexible network operation of NTN in 6G targeting both infrastructural and technological aspects (more information about the workshop can be found [here](#)). Besides, the consortium plans to organize workshops and tutorials at the EuCNC & 6G Summit 2025 in Poznan, Poland.

## 2.1.7 Stakeholders

To meet the 6G-NTN stakeholders' interests and expectations in terms of communication and dissemination, the consortium will continue to periodically reexamine the target groups and their needs, which will allow us to design well-suited messages and engagement strategies.

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### 3 CONCLUSIONS

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This deliverable provided updates on communication and dissemination activities carried out by the 6G-NTN consortium during the first half of the project and the performance of the 6G-NTN Dissemination and Communication Strategy and Plan against the KPIs defined before the project launch. The report also outlined communication and dissemination activities planned for the remaining 18 months of the project.

We are happy to confirm that the project communication and dissemination strategy is on track, having brought positive results in the first 18 months of the project. With the active support and participation of all 6G-NTN project partners, we were able to meet the targets and even surpass some of the initial objectives. This is largely due to the regular monitoring of performance against the set of communication and dissemination KPIs, which allowed us to track progress and quickly identify areas for possible improvement.