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Abstract

This deliverable provides a report on communication and dissemination activities pursued by the DYNASAT consortium during the first 12 months of the project. It also reports on the achieved progress against set targets and goals. In addition to tracking and reporting on the progress, this deliverable presents the amended strategy and plan for communication, dissemination, and impact creation, which will be pursued by the consortium during the second year of the project to guarantee DYNASAT's broad visibility and uptake of its results.

Keywords: dissemination, communication, impact creation, KPIs, standardization

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V4.0	15/12/2022	Revision following intermediate technical review related to the website analytics	Clementina Piani (Martel)

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* *R: Document, report (excluding the periodic and final reports)*

HISTORY OF CHANGES

Following the project intermediate technical review meeting, which took place on September 2, 2022, and based on the reviewers' comments sent to the DYNASAT consortium on December 14, 2022, this document has been amended (version 4). Changes have been made in the following sections:

- Section 1.1.2 Website

Following the project intermediate technical review meeting, which took place on September 2, 2022, and based on the reviewers' comments sent to the DYNASAT consortium after the review, this document has been amended (version 3). Changes have been made in the following sections:

- Section 1.1.2 Website
- Section 1.1.5 Social media channels
- Section 1.1.7 Papers/publications

Following the project review meeting, which took place on January 27, 2022, and based on the reviewers' comments sent to the DYNASAT consortium after the review, this document has been amended (version 2). Changes have been made in the following sections:

- Section 1.1.5 Social media channels
- Section 1.1.7 Papers/publications

EXECUTIVE SUMMARY

This document summarizes the communication, dissemination, and standardization activities carried out in the first year of the DYNASAT project (1 December 2020 - 30 November 2021) and outlines the activities planned for the second year of the project. The report builds on deliverable D6.1: *Impact Creation Toolkit*, released on February 25, 2021, and the set of agreed on Key Performance Indicators (KPIs). More specifically, the document provides an overview of communication and dissemination channels and promotional materials used by the project partners, including website, newsletter, social media, events, among others, as well as the standardization roadmap. It also outlines the amended communication, dissemination, and impact creation strategy, which will be pursued during the second year of the project.

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ABBREVIATIONS

5G	Fifth generation (of mobile networks)
6G	Sixth generation (of mobile networks)
B5G	Beyond 5G
EFIS	European Future Innovations System
ESA	European Space Agency
GDPR	General Data Protection Regulation
KPIs	Key Performance Indicators
LEO	Low Earth Orbit
NTN	Non-Terrestrial Networks
SatCom	Satellite Communications
SSIG	Satellite Standardization Interest Group

1 COMMUNICATION AND DISSEMINATION M1-M12

1.1 Communication and dissemination channels and promotional materials

Communication and dissemination activities are central to the overall DYNASAT effort. They are being closely monitored and coordinated to ensure an effective engagement of all targeted stakeholders in the project ecosystem and the broader 5G and satellite ecosystems context. To maximize the impact of DYNASAT, a comprehensive communication, dissemination, and stakeholders' engagement strategy (Impact Creation Toolkit) has been developed and submitted to the European Commission at M5. Its execution began at the early stages of the project and will continue throughout its whole duration. A set of dedicated outreach and communication activities outlined below will support the achievement of project objectives and the broad promotion of project results.

1.1.1 DYNASAT brand identity

Brand identity consists of visible assets, such as logo, color palette, and typography that are created to portray a certain image and distinguish the brand. It defines how those who come in contact with the brand perceive it and influences their opinion about it. Good brand identity provides unique and memorable assets and a unified and consistent 'look and feel' across all outlets (electronic and printed visual media). As such, during the first months of the project, the following assets have been developed as part of the DYNASAT brand identity:

- Color palette,
- Logo and icon with different variations,
- Typography,
- Template for deliverables.

The logo is built horizontally with a main symbol on the right side and the acronym/name of the project to the left. The symbol clearly illustrates DYNASAT's field of research. Three satellites with an ascendant movement slightly to the right represent the idea of evolution and advancement of the DYNASAT research and innovation. The colors are based on blue shades representing technology, science, and future. The symbol with three satellites is used across several promotional channels. The font used for the name/acronym is clean, straight, and solid but with a futuristic touch. Appendix A contains detailed brand guidelines presenting the logo variations, the 'dos and don'ts', colors, and fonts.

A set of slides available for all project partners to present DYNASAT at relevant meetings and online events has also been developed. This presentation template provides a general overview of the project, its objectives, also introducing the consortium members. Figure 1 presents one of the slides developed as part of the project presentation. The presentation template has been uploaded on the online repository, as well as on the project website.

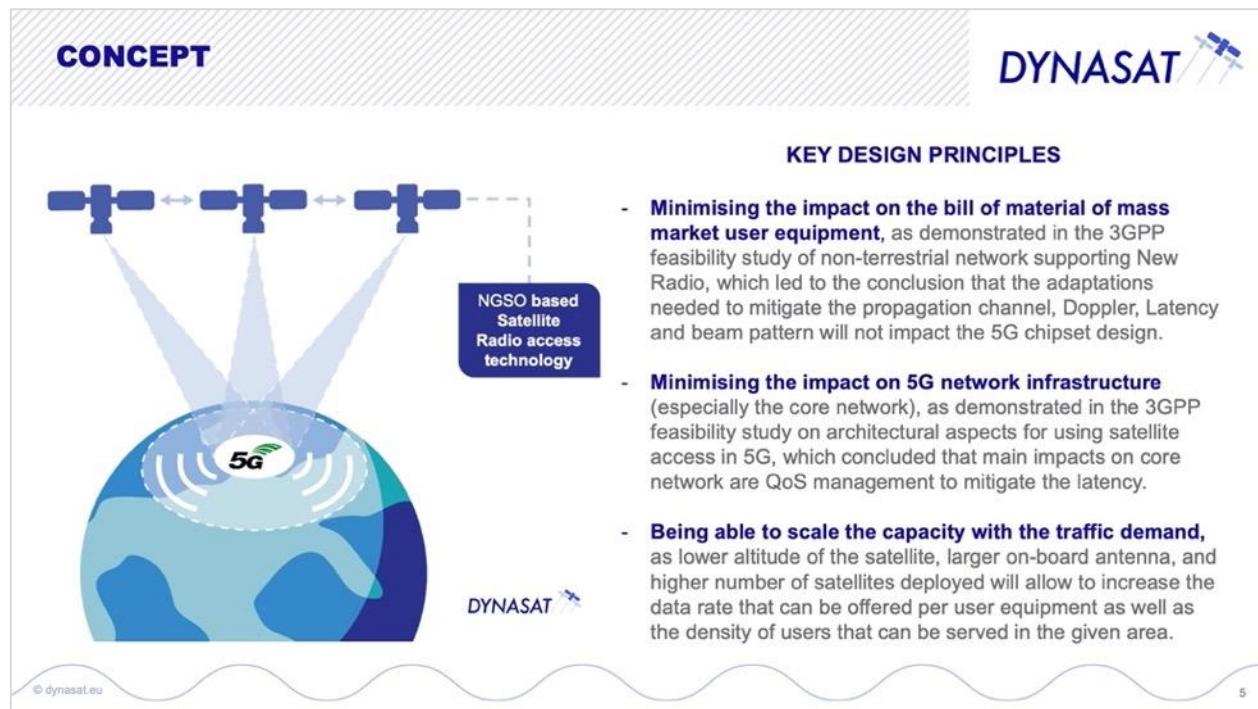


Figure 1: Project overview presentation

1.1.2 Website

The website (see Figure 2), launched at the beginning of the project has been developed to act as an information hub presenting the project's goals, activities, and achievements and it provides the following content:

- General information about the project, its vision, objectives, and anticipated impact,
- A brief introduction to all members of the consortium,
- News items and press releases,
- Repository of resources, such as scientific publications, presentations/talks, and promotional materials,
- Publication of events organized/attended within the framework of the project,
- Contact information,
- Appropriate acknowledgment and reference to the European Union's Horizon 2020 Framework Program funding.

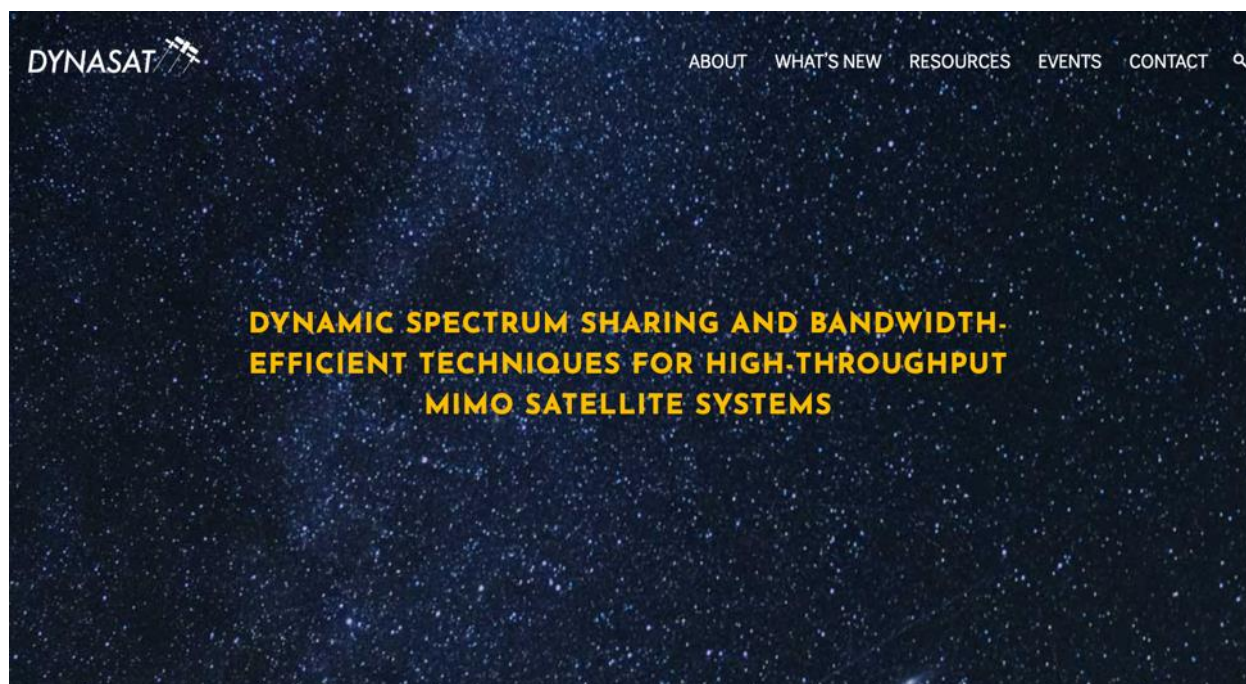


Figure 2: Homepage of the DYNASAT website

The website is being periodically updated according to the evolution of the project. Further updates will be applied as necessary throughout the whole duration of DYNASAT. At the time of writing, January 2022, the website count 917 unique visitors, who generated 3'354 page views and an average visit duration of 1'59" as shown in Figure 3.

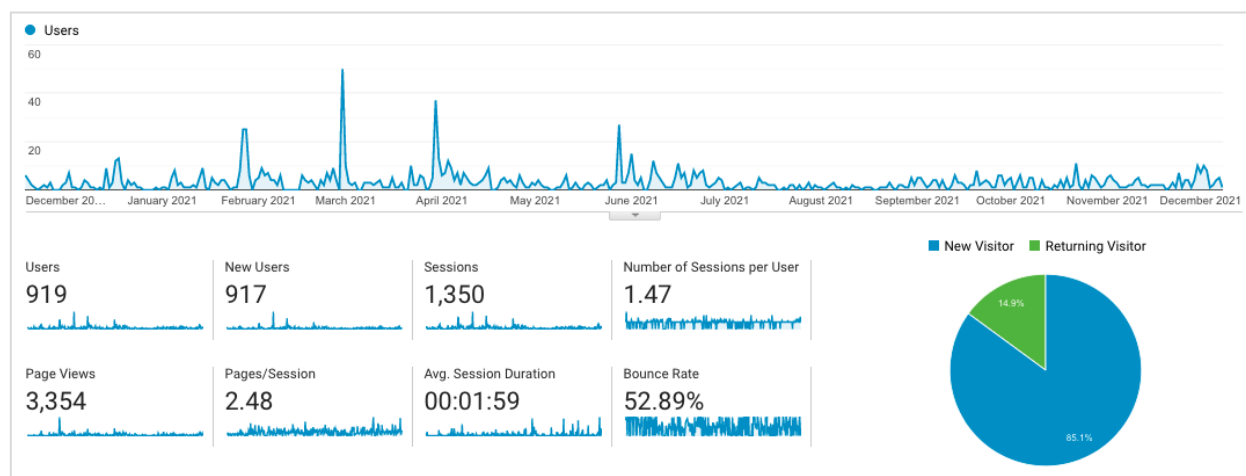


Figure 3: DYNASAT website statistics in January 2022

Figure 4 shows an update of the project's website performance, taking into consideration the period from January 2022 to October 2022. Compared to the previous period, in these 10 months, the website counted 1'371 unique visitors, who visited on average 1.29 sessions each for an average visit duration of 1'17".

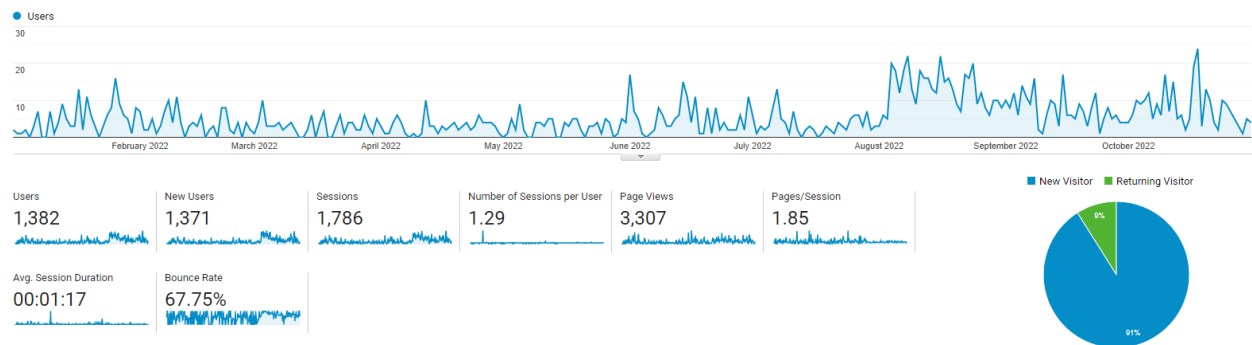


Figure 4: DYNASAT website statistics in October 2022

Figure 5 provides a closer look into the project's website performance in the last three months, from September 2022 to November 2022. In this time frame, the website counted a total of 570 visitors, who visited an overall of 724 sessions.

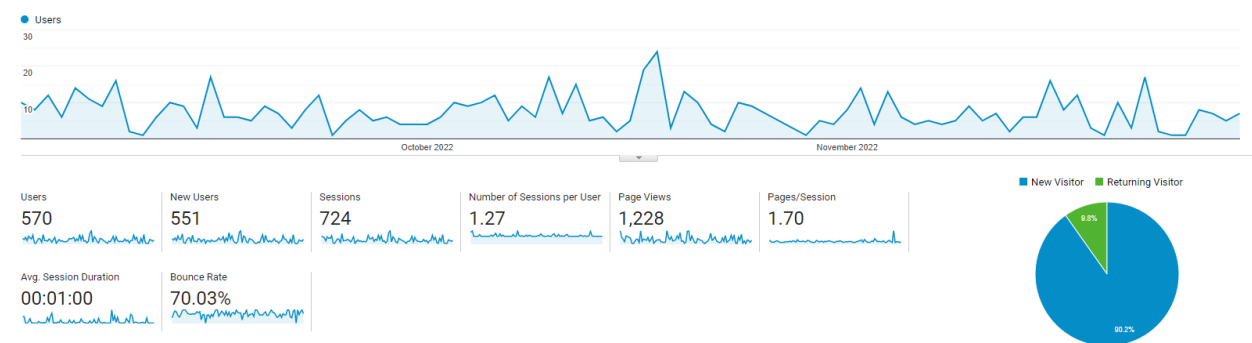


Figure 5: DYNASAT website statistics from September to November 2022

It should be noted that all information and e-mails collected are protected under the General Data Protection Regulation (GDPR). Contact is and will only be made with people who have submitted their inquiries. Similarly, the newsletters are and will continue to be sent out only to individuals who have explicitly requested to receive them. Any person who has subscribed can request for their e-mail address to be removed from the list.

Additionally, the website provides information on data kept and how they are used in alignment with the GDPR under the Privacy policy link (footer of the webpage).

Furthermore, both the EU logo and the following statement are included on the website and in all communication materials, "Funded by the EU's Horizon2020 programme under agreement n° 101004145" to acknowledge the EU funding.

Since its inception, we have been working on supporting the traffic to the website through:

- SEO – the traffic of visits to the website will increase progressively throughout the course of the project thanks to the implementation of strategies oriented to organic traffic, always considering the keywords identified for it.
- Link building – synergies between the project's website and the partners' websites, as well as with other relevant agents of the sector (stakeholders) will be created, encouraging the exchange of links.

Last but not least, we opted for an environmentally responsible website hosting platform, which has been designed to be as energy efficient as possible to limit the unnecessary waste of resources. The web hosting provider, GreenGeeks, puts back three times the power consumed into the grid in the form of renewable energy.

1.1.3 News items and press releases

DYNASAT consortium keeps the general public informed about the project activities by publishing news items and press releases on relevant undertakings. To date, 10 news items and one press release (project kick-off) have been published on the DYNASAT website.

1.1.4 Newsletter

The DYNASAT newsletter is sent out twice a year, providing updates on the 5G and satellite ecosystems, as well as on the project activities, findings, and results. The project newsletters also contain information on the upcoming tasks, events, as well as any relevant news and announcements from the project partners. A mailing list based on subscription has been created, giving the possibility to share the newsletter via mass mailing. A registration functionality allowing interested visitors to subscribe to the newsletter has been available on the DYNASAT website since the project beginning. The design of each newsletter is aligned with the DYNASAT brand identity and is fully responsive to ensure its full readability on any device. The technology behind the newsletter provides enough flexibility to be adapted to the communication needs of the project. All issued newsletters are being uploaded on the website upon their distribution to subscribers. The first edition of the DYNASAT newsletter was sent out in May 2021 and the second in November 2021 (see Figure 4).



Figure 5: DYNASAT newsletter

1.1.5 Social media channels

DYNASAT established its presence on social media channels to regularly promote project activities and outputs while also encouraging a wider discussion on topics related to NTN and SatCom. To date, the project created an active presence on the most popular social media channels, namely Twitter, LinkedIn, and YouTube, which are linked to the project's website.

1.1.5.1 Twitter

DYNASAT uses Twitter, as it is a very dynamic social network covering the news in real-time at a global level. To date, the DYNASAT Twitter account (@dynasat_project) has attracted 56 followers. DYNASAT follows 57 accounts, mostly projects and initiatives in similar fields or of

approximate nature where project partners are or have been involved. The account is used mostly to promote project activities and learn about and cross-share relevant events and activities.

Figure 6 shows the DYNASAT Twitter profile.



Figure 6: DYNASAT Twitter account

Note following the review: DYNASAT aims at reaching 300 followers by the end of the project.

As mentioned during the review meeting, the COVID-19 pandemic has hampered our ability to attend events and network, resulting in a slower attainment of social media followers. Moreover, many aspects and activities of the project are confidential, preventing widespread communication and dissemination. Since the time of the submission of D6.3, DYNASAT Twitter account has seen an increase of followers and greater engagement thanks to a series of implemented activities and complementary factors. Firstly, the project designed and deployed several targeted communication activities such as videos and partners interviews to provide compelling content and increase DYNASAT's online presence. Secondly, in June 2022, the consortium took part in its first in-person event, EuCNC, presenting the project's demos and liaising face-to-face with a plethora of stakeholders. These aspects brought to a greater visibility of DYNASAT online, resulting in a rise of social media contacts and followers. At the time of writing, October 2022, DYNASAT Twitter account has over 150 followers, and we hope to maintain the growth steady now that the project is in a more mature stage with key results to showcase in major events (MWC 2023).

1.1.5.2 LinkedIn

DYNASAT uses LinkedIn as it is a great tool enabling networking with individuals and organizations within the industry and beyond and allowing to share information and stay up to date with the latest developments. To date, the DYNASAT LinkedIn account has attracted 71

followers. Just like with Twitter, the LinkedIn account is used to promote project activities and learn about and cross-share relevant events and activities. Figure 7 presents the DYNASAT LinkedIn profile.

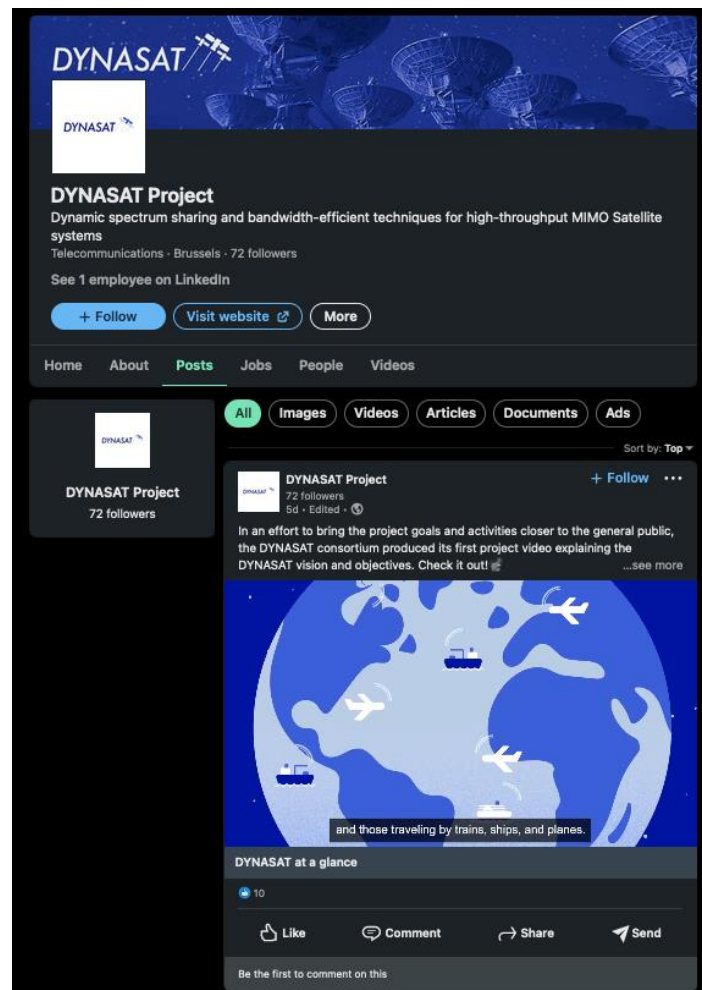


Figure 7: DYNASAT LinkedIn account

1.1.5.3 YouTube

DYNASAT has recently opened a YouTube channel (see Figure 7) to disseminate the project vision, concepts, and objectives by sharing the first project video and to disseminate the interview about the project's standardization activities, conducted with the DYNASAT Project Coordinator by Ms. Mariam Yeghyan, the Policy Researcher at the European Future Innovations System (EFIS) Center. Figure 8 shows the DYNASAT YouTube profile.



Figure 8: DYNASAT YouTube channel

Note following the review: As mentioned during the review meeting, while writing the proposal, we overestimated the number of followers the project would attract. The challenge has been twofold. Firstly, the COVID-19 pandemic has hindered our ability to attend events and network, which has translated into lower numbers of followers on social media. Secondly, many aspects and project activities are confidential, not allowing for widespread communication and dissemination. Nonetheless, we are committed to significantly improving the numbers and have already identified several activities aimed at helping the project gain more online presence and improving the performance versus this KPI. Some of the identified activities include the engagement of communication and marketing departments of individual project partners (e.g., to publish news items about DYNASAT), identifying and reaching out to specialized magazines in the field to explore possibilities for further promotion of the project, and giving a wide coverage to the DYNASAT demonstration scheduled for June 2022 at the EuCNC & 6G Summit in Grenoble. Some improvements have already been noted - at the moment (as of October, 2022), DYNASAT counts 152 on Twitter and 93 followers on LinkedIn.

1.1.6 Promotional materials

The first flyer presenting the project overview (see Figure 8) has been produced in July 2021. The flyer presents the DYNASAT concept (key design principles), project objectives, the innovation potential, and expected impact. It also features some key project facts (like duration, type of action) and the acknowledgment of EU funding. The flyer in digital format is available [on the project website](#).



Figure 9: DYNASAT overview leaflet

1.1.7 Papers/publications

The first published DYNASAT paper entitled “[A System Simulator for 5G Non-Terrestrial Network Evaluations](#)” was authored by Jani Puttonen, Lauri Sormunen, Henrik Martikainen, Sami Rantanen, and Janne Kurjenniemi. The paper was submitted to the 22nd IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM) conference, Workshop on Non-Terrestrial Networks, June 7–11, 2021. The simulator presented in this paper is the baseline for the DYNASAT demonstration development (multi-connectivity and coordinated DSA).

Another paper entitled, “Dynamic Spectrum Sharing and Bandwidth-Efficient Techniques for Integrated Terrestrial and Non-Terrestrial B5G Architecture” was submitted at the end of

September 2021 to the IEEE Communication Magazine, to the featured topic “[Low Earth Orbit Satellites to Enable Access Equality](#)”. The paper presented initial results of DYNASAT with focus on the definition of the system architecture and identification of the most promising techniques that allow to reach the highest gains in terms of spectrum usage efficiency. The limitations of state-of-the-art techniques, some of them borrowed from the terrestrial literature, are identified, together with the needed adaptation to the identified scenarios where terrestrial cells are covered by several satellites. Unfortunately, on this occasion, the reviewers have rejected the paper due to not sufficient novelty level. Another, similar paper describing the first steps of the project was submitted to the IEEE Wireless Communications and Networking Conference on October 15, 2021 but has also been rejected, for similar reasons.

Besides, project partners published a paper, which does not acknowledge DYNASAT directly but can be seen as a preparatory work for DYNASAT: [Design Trade-Off Analysis of Precoding Multi-Beam Satellite Communication Systems](#) authored by Alessandro Guidotti and Alessandro Vanelli-Coralli, submitted to the 42nd IEEE Aerospace Conference, March 6-13, 2021.

Note following the review: Despite it not being developed using the DYNASAT budget, we decided to list “[A System Simulator for 5G Non-Terrestrial Network Evaluations](#)” authored by Jani Puttonen, Lauri Sormunen, Henrik Martikainen, Sami Rantanen, and Janne Kurjenniemi due to its high relevance to the project. Essentially, the simulator presented in this paper is the baseline for the DYNASAT demonstration development (multi-connectivity and coordinated DSA). The paper was submitted to the 22nd IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM) conference, Workshop on Non-Terrestrial Networks, June 7–11, 2021 and will be made fully available in 2023 after the 2-year embargo period. The authors requested that paper is made open access before that date, but the publisher has not accepted the request.

Thanks to a greater maturity of the project, by the time of the intermediate review meeting, several papers were submitted and accepted at major international conferences.

The following scientific publications have been published from project partners after the first submission of this deliverable:

- “[Multi-Connectivity for User Throughput Enhancement in 5G Non-Terrestrial Networks](#)” authored by Mikko Majamaa, Henrik Martikainen, Lauri Sormunen, and Jani Puttonen in the International Conference on Wireless and Mobile Computing, Networking and Communications 2022 (WiMob). 10-12 October 2022, Thessaloniki, Greece.
- [Adaptive Multi-Connectivity Activation for Throughput Enhancement in 5G and Beyond Non-Terrestrial Networks](#) authored by Mikko Majamaa, Henrik Martikainen, Lauri Sormunen, and Jani Puttonen in: International Conference on Software, Telecommunications and Computer Networks 2022 (SoftCOM). 22-24 September 2022, Split, Croatia.
- [Joint Graph-based User Scheduling and Beamforming in LEO-MIMO Satellite Communication Systems](#) authored by Daniel Gaetano Riviello, Bilal Ahmad, Alessandro Guidotti, Alessandro Vanelli-Coralli in: ASMS/SPSC 2022. 6-8 September 2022, Graz, Austria.
- [Evaluation of MU-MIMO Digital Beamforming Algorithms in B5G/6G LEO Satellite Systems](#) authored by M. Rabih Dakkak, Daniel Gaetano Riviello, Alessandro Guidotti, Alessandro Vanelli-Coralli in: ASMS/SPSC 2022. 6-8 September 2022, Graz, Austria.

1.1.8 Project video

In an effort to bring the project goals and activities closer to the general public, the DYNASAT consortium produced its first project video explaining the DYNASAT vision and objectives (see Figure 10).

The video begins with the introduction of the wider context, in which the project operates and talks

about increasing traffic demands, high cost per GB, and the need for higher performance. It introduces the NTN technology as a solution that could help increase digital inclusion by fulfilling the coverage gap on land and by bringing connectivity to people in remote areas and those traveling by trains, ships, and planes. The second part of the video focuses on the role of DYNASAT, i.e., the provision of the necessary mechanisms and technologies that will boost the performance of the 5G NTN access infrastructure and support the growing traffic demand. The video also talks about the potential of DYNASAT that can be seen on four different levels (business, service, ecosystem, standardization). In its final part, the consortium members are introduced. The video is available in the DYNASAT website: <https://www.dynasat.eu/videos/>



Figure 10: DYNASAT overview video

1.1.9 Events

Event organization and attendance is an important aspect of DYNASAT's Communication and Dissemination Plan. Although event organization and attendance has been hindered in 2021 due to the ongoing COVID-19 pandemic, DYNASAT representatives were able to attend a number of online events to promote the project and increase its visibility.

1.1.9.1 EuCNC & 6G Summit 2021

As part of the EuCNC & 6G Summit 2021, the DYNASAT consortium organized a tutorial entitled *Dynamic Spectrum Sharing and Bandwidth-Efficient Techniques in Non-Terrestrial Networks* (see Figure 11). The tutorial took place on June 8, 2021, in a virtual format and covered dynamic spectrum sharing and bandwidth-efficient techniques for integrated terrestrial and non-terrestrial Beyond 5G architecture with an emphasis on non-terrestrial networks component consisting in a mega-constellation of low Earth orbit (LEO) satellites. The event was divided into five parts, each covering a different aspect and presented by different speakers, among which were Prof. Alessandro Vanelli-Coralli and Dr. Alessandro Guidotti (University of Bologna), Dr. Alessandro Ugolini, Dr. Amina Piemontese, and Prof. Giulio Colavolpe (University of Parma), Dr. Heikki Kokkinen (Fairspectrum), Ms. Nadia Arago Higuera and Mr. Laurent Combelles (Thales Alenia Space). Some of the conclusions drawn from the tutorial include:

- Non-Terrestrial Networks are gaining importance in 5G, B5G, and 6G systems.
- Efficient use of allocated bandwidth and available spectrum is to be sought at all system levels.
- Integration with terrestrial networks calls for smart and efficient dynamic spectrum management to deal with inter-system interference.

- Mega-constellations are being designed and deployed.
- In such dense mega-constellation deployments, e.g., several nodes in visibility, intra-system interference can be exploited to improve the efficiency of bandwidth use.
- Techniques addressing the exploitation of inter and intra-system interference have been presented.
- DYNASAT is addressing evolutionary and revolutionary techniques in both scenarios.

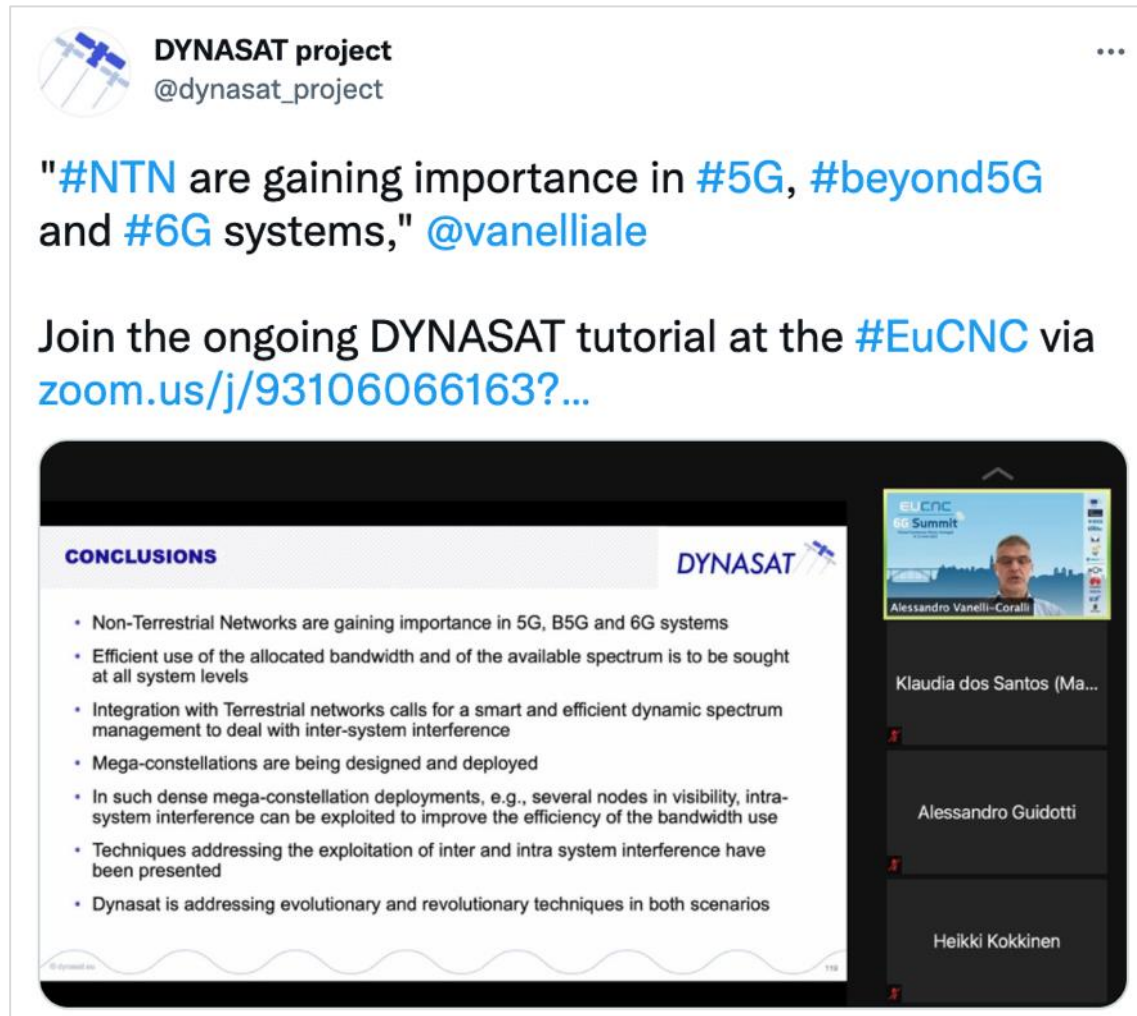


Figure 11: One of the slides presented at the tutorial

1.1.9.2 Evolution of Non-Terrestrial Networks Toward 6G workshop

DYNASAT Innovation and Risk Manager, Dr. Nicolas Chuberre was one of the keynote speakers at the Evolution of Non-Terrestrial Networks Toward 6G workshop, which took place at the IEEE Vehicular Technology Conference. The workshop aimed at bringing together academics, industrial researchers, operators, and regulatory authorities in an effort to identify and discuss the major technical challenges, recent breakthroughs, vision of standards evolvement, new application, and operational mode related to Non-Terrestrial Networks (NTN). The conference was held in a virtual format on September 27-30, 2022. The conference featured world-class plenary speakers, tutorials, technical, as well as application sessions, and an innovative Industry Track, featuring panels and presentations with industry leaders sharing their perspectives on the latest technologies.

It is worth mentioning that Dr. Chuberre was also a part of the technical program committee, together with DYNASAT Project Coordinator, Prof. Alessandro Vanelli-Coralli.

1.1.9.3 Towards Zero Pollution Communication Networks webinar

As part of [The European Green Week 2021](#), on June 3, 2021, Digital for Planet association organized “Towards Zero Pollution Communication Networks” webinar gathering experts from industry and academia whose work focuses on research, development, and adoption of sustainable and pollution-free communication infrastructure. The webinar was live-streamed and generated a lot of interest among its participants. Due to its success and the importance of the discussed topics, the European Commission acknowledged and featured the event in its daily report – EU Green Week 2021 – DAY 4 ROUNDUP.

DYNASAT Project Coordinator was invited to present the potential of SatCom and the importance of projects, such as DYNASAT within this context. During his presentation (see Figure 11), he talked about the indirect and direct impact of 5G/6G on the environment and the non-terrestrial networks’ (NTN) role within this context, emphasizing that NTN will play a fundamental role in reducing the environmental impact of 5G/6G due to optimization of infrastructure and traffic delivery, as well as limited direct impact of the NTN component.

In addition, DYNASAT project partners follow relevant policy, academic, and industry events to stay up to date on developments and relevant initiatives in 5G, B5G, 6G, and satellite ecosystems contexts. As such, among others, we followed Smart Networks and Services Webinar for Verticals, one6G Summit 2021, the 3rd European 5G Observatory Stakeholder Workshop, and Joint ESA & 5G-MAG Workshop - Reinventing Satellite Broadcasting for the 5G Era.



Figure 12: Slides presented at the “Towards Zero Pollution Communication Networks” webinar

1.1.9.4 Mobile KOREA 2021: 6G Global 2021 Ignition for 6G Journey to the Space

DYNASAT Innovation and Risk Manager, Dr. Nicolas Chuberre has been invited as speaker at the 6G Global 2021 Ignition for 6G Journey to the Space conference organized as part of Mobile KOREA 2021. Dr. Chuberre spoke next to other distinguished international experts at Session 3: Satellite Communication Technology, delivering presentation entitled *3GPP NTN standardization: past, current, and future*.

1.2 Cooperation and synergies with other projects and initiatives

According to the analysis carried out at the beginning of the project, there are only a few projects related to 5G NTN development funded under the H2020 calls. UNIBO has already made an informal contact with the project partners in QUANGO (Quango: Quantum Communications with NanoSatellites and 5G protocols, n.d.) and ATRIA (ATRIA: AI-Powered Ground Segment Control for Flexible Payloads, n.d.). Formal liaisons will be established during the second year of the project.

At the same time, the European Space Agency (ESA) is running several studies for the development of 5G NTN under its 5G program. For these reasons, DYNASAT participates in the Satellite Standardization Interest Group (SSIG) established by the ESA ALIX (ESA ALIX project, n.d.) where standardization actions and strategies are being discussed.

Finally, UNIBO is also leading the SatCom Vision and Research Strategy Taskforce of the Network Europe ETP (ETP, n.d.) and, in this role, liaises with most of the European R&D groups interested in SatCom and NTN. More specifically, UNIBO is co-editor of the Network Europe SRIA 2021 and of an upcoming white paper on SatCom in 6G.

1.3 Progress tracking

Table 2 shows the agreed-upon Key Performance Indicators and the progress achieved to date.

Measure	Indicator	Target at M28	Status <i>as of 8/12/2021</i>	Source and methodology
Flyers, posters/rollups	N. of flyers N. of posters/roll-ups <i>(by the end of the project)</i>	> 3 > 4	1 flyer produced	Distribution via participation to and organization of dedicated events. Electronic distribution via the project website
Project website	N. of unique visitors to the website <i>(average per year)</i>	> 1500	919	News, Publications, Videos, Newsletters, Deliverables
Social networks	N. of followers on Twitter, N. of followers on LinkedIn <i>(average of new followers yearly)</i>	300 100	57 72	Keeping DYNASAT profiles on such networks active via regular posting and monitoring
Press releases and publications in the press	N. of press releases issued to specialized and general media channels at key project milestones <i>(by the end of the project)</i>	> 3	1	A press/media kit will be developed containing detailed press releases, videos, publishable images, flyers
e-newsletter (published every 6 months)	N. of newsletters <i>(by the end of the project)</i>	6	1 st sent in May 2021 2 nd send in Nov. 2021	Recording of subscribers to the electronic newsletter.

Videos	N. of videos published on the website and social media and average number of views	2 videos x year 80 views x video	1 project video released	Videos and interviews to support awareness creation and stakeholders' engagement
Scientific publications	Number published or submitted by the end of the project	10+	1 published	Publication linked from DYNASAT website
Participation in events and presentations	Number of external events partners attended to promote the project, including scientific conferences, and number of demos and or presentations	At least 4 events per year	4 events attended in Y1	Attendance proof, presented material, photos, animation of social media channels, events' reports
Webinars (4 by the project end)	Average number of participants	At least 30 participants	1 tutorial organized	
Two Demos at major events (e.g., MWC)	Average number of participants / attendees / visitors	At least 30 participants	Planned for June 2022.	

Table 1 Key Performance Indicators

2 UPDATED COMMUNICATION AND DISSEMINATION STRATEGY

2.1 Planned communication and dissemination activities M13-M24

The DYNASAT Communication and Dissemination Strategy has been defined in deliverable D6.1: *Impact Creation Toolkit*. This strategy will be continued in the second year of the project and will evolve around the following activities:

2.1.1 Communication and dissemination via project website and social media

DYNASAT will continue growing its community 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 (whenever not confidential) to the general public to keep the community updated about relevant project activities and results. This will be achieved through publication of regular news items, press releases, social media posts, and via the bi-yearly project newsletter and ad hoc newsflashes. As the project advances, more presence on social media is to be expected. Twitter and LinkedIn will be used not only to disseminate project results but also to attract new stakeholders to the DYNASAT ecosystem.

2.1.2 Planned events

2.1.2.1 MWC 2022 and the EuCNC & 6GSummit 2022

The initial plan to present the first DYNASAT results at the Mobile World Congress 2022 had to be modified for two main reasons: a very high price of the event and because of the ongoing COVID-19 pandemic that could affect the physical participation in the event. The consortium decided that the project will instead invest in a strong presence at the EuCNC & 6GSummit 2022, which will take place in Grenoble, France in June 2022. Among other promotional activities, DYNASAT will organize its first demonstration under the leadership of MAGISTER and with support of all project partners. The project will develop an attractive software demonstration, which will present the combined gain of the designed, evaluated, and evolved selected techniques developed during the project. The live demonstration will take place at the project booth.

2.1.2.2 Other relevant events

Although event participation will most likely continue to be hindered in 2022 due to the ongoing COVID-19 pandemic, the consortium aims to be present at a number of relevant events in order to promote DYNASAT activities and increase the project's visibility. Table 2 presents relevant conferences taking place in Y2 of the project where the consortium intends to promote DYNASAT.

Name	Type	Target audience	Date and place
Joint ESA & 5G-MAG Workshop "Reinventing Satellite Broadcasting for the 5G Era"	Workshop	Industry, researchers	1 December 2021 online
IEEE Global Communications Conference	Conference Hybrid (in-person and virtual event)	Researchers, academics	7 - 11 December 2021 Madrid, Spain
Aerospace Conference	Conference	Researchers, academics, Industry	5 -12 March 2022 Big Sky, Montana, USA
IEEE Wireless	Conference	Researchers,	10 - 13 April 2022

Communications and Networking Conference 'Boosting Verticals into Wireless Orbit'		academics	Austin, Texas, USA
EuCNC 2022	Conference	EC funded projects, policy makers, researchers	7-10 June 2022 Grenoble, France
IEEE International Conference on Communications	Conference Hybrid (in-person and virtual event)	Researchers, academics	16 - 20 May 2022 Seoul, South Korea
ACM SIGCOMM 2022	Conference	Industry representatives	22 - 26 August 2022 Amsterdam, Netherlands

Table 2 Targeted external events taking place in Y2

2.1.3 Production of promotional materials

Additional promotional materials will be produced in alignment with event organization and attendance. As such, before the EuCNC 2022, a poster, roll-up, and a second project flyer will be produced. The production of a second video covering the first project results is also scheduled for Y2 of the project.

2.1.4 Planned papers/publications

As the project advances, more papers are expected in 2022. For example, three papers are planned for the EuCNC & 6GSummit 2022. The papers will deal with the design and performance of the short-term bandwidth-efficient techniques studied in WP3, WP4, and WP5. The project will also explore the possibility of submitting a paper to a Special Issue should a relevant Special Issue be launched.

It is also worth mentioning that DYNASAT is committed to bringing research results closer to the public and adheres to the Open Access guidelines set by the H2020 work programme. In line with these guidelines, all of the scientific publications emerging from the project will be available through an Open Access repository, OpenAIRE, allowing for easier linking with the EU-funded projects. This will increase the accessibility to the obtained results to a wider community, which can be further enhanced by including the repository in registries of scientific repositories, such as DataCite and Databib. Depending on the venue, the publications will become available through the "gold" or "green" Open Access model.

2.1.5 Liaisons with relevant projects and initiatives

Regarding project liaisons, according to the report described in sections 1.1.9 and 1.1.10, DYNASAT will reinforce its presence in the relevant groups and, in particular, will establish liaisons with the QUANGO and ATRIA projects. Regarding the involvement in the Networld Europe and 5GIA groups, DYNASAT will propose a presentation of the project results in one of the group meetings occurring in the second or third quarter of 2022, according to the maturity of the DYNASAT results.

2.1.6 Partners' individual communication and dissemination plans

MARTEL will continue leading WP6 and executing activities described in the Impact Creation Toolkit. More specifically, MARTEL's work will focus on:

- website management

- project promotion on social media channels
- publishing news items
- sending out the bi-yearly project newsletter
- production of promotional materials
- providing support in event organization and promotion

UNIPR plans to attend the 2022 IEEE Wireless Communications and Networking Conference (WCNC 2022) to present initial steps of the DYNASAT project. WCNC 2022 is an IEEE annual event focused on the wireless research field and that will take place from 10 April to 13 April in Austin, Texas. The design and performance of the short-term bandwidth efficient techniques studied in WP3, WP4, and WP5 will be presented at international conferences. In fact, it was agreed to submit three papers on these topics to EuCNC 2022.

UNIBO will focus on scientific dissemination through publications in major conferences and journals (all publications will be made Open Access when allowed by the editor's policy). The organization of a workshop at one of the major IEEE conferences is also planned for 2022.

TASF, on behalf of DYNASAT, will continue to liaise with relevant associations of which the company is a member, including the European & Middle East Satellite Operator Association (ESOA), the Next Generation Mobile Networks Alliance, and the Satellite Standardization Special Interest Group (SSIG).

MAG will target scientific publications in major conference and journals and promote them on the company website and social media channels. It will also present first project results at conferences, in addition to leading the organization of first project demonstration at the EuCNC & 6G Summit 2022.

FS will author academic conference papers and journal articles and promote them on its company website in addition to presenting DYNASAT at academic and commercial Dynamic Spectrum Access related conferences.

3 STANDARDIZATION

3.1.1 Standardization roadmap

The following contributions on NTN in Rel-18 candidate features including potential feature related to DYNASAT were submitted to 3GPP RAN#92-e (June 14-18, 2021), 3GPP RAN#93-e (September 13-17, 2021), and the 3GPP TSG RAN Rel-18 workshop (June 28-July 2, 2021):

- RP-211746 – Candidate enhancements for NTN in Rel-18
- RWS-210600 – Email discussion summary for RAN-R18-WS-non-eMBB-Thales
- RP-212574 – Moderator's summary for discussion [93e-34-NR-NTN-WID]
- RP-212593 – Moderator's summary for discussion [93e-34-NR-NTN-WID]
- RP-212616 – Moderator's summary for discussion [93e-34-NR-NTN-WID]

3.1.1.1 5G-IA Pre-Standardization Working Group

In January 2021, DYNASAT joined the pre-standardization working group of the 5GIA. Notwithstanding the fact that DYNASAT is not funded under the 5GPPP related calls, it was deemed important to follow the pre-standardization activities of the group and, possibly, establish liaisons with other projects with similar or complementary objectives.

3.1.1.2 Interview with the EFIS Center

On November 9, 2021, the DYNASAT Project Coordinator was interviewed by Ms. Mariam Yeghyan, the Policy Researcher at the European Future Innovations System (EFIS) Center about the DYNASAT standardization efforts. The project has been contacted by the team at the EFIS Center and the University of Applied Sciences Krems in the context of the ongoing project “Scoping study for supporting the development of a Code of Practice for researchers on standardization – RTD/2021/SC/005”. The contact has been made as a follow-up to the online survey focused on standardization activities of Horizon 2020 projects that the DYNASAT Project Coordinator recently filled in and asked for further contribution in a form of an interview. The interview focused on success factors and barriers in relation to the valorization of the project results thanks to the involvement in standardization activities. The main take-aways from the conversation included:

- The DYNASAT project contributes to standardization through its project partners, several of which have been involved in the development of integrated Terrestrial and Non-Terrestrial Networks for over two decades.
- DYNASAT benefits from the presence and input of key actors of the NTN standardization in 3GPP and SatCom in ETSI.
- DYNASAT has two main research streams: One of them aims to contribute to the development the NTN standardization while the second one is dedicated to blue skies research in preparation of new NTN systems.
- The standardization success of a project cannot be defined solely as the inclusion of a technique or technology into a standard.



Figure 13: Interview with the EFIS Center

4 CONCLUSIONS

This document reports on the impact creation activities conducted in the first year of the DYNASAT project, including progress against the set KPIs and presents the communication and dissemination plans for the second year of the project.

The various types of promotional activities conducted by WP6 under the leadership of MARTEL with active contribution from the entire DYNASAT consortium will ensure the successful promotion of the work performed by the project consortium and uptake of its results, benefiting project stakeholders and the extended DYNASAT community.