



Dissemination and Use Plan

Document Change Record

Issue	Release Date	Change Description/Reason (Ref.)	Page/Chapter Affected
01	29.05.2026	Initial Issue	all

This document is based on document D5.3 "Dissemination and Use Plan" with the document number IIMEO-FBK-D-0020_01. The changes compared to this document are as follows:

- Minor edits all pages
- Social media: Twitter – canceled page 14
- ResearchGate – canceled paragraph 4.5.1
- Updated LinkedIn information table 4-4
- Updated list of General Dissemination Activities pages. 9, 13, 27
- Updated reference period paragraph 5.7
- Dissemination and communication at events paragraph 5
- Updated activities content and KPI status table 6-1
- Updated dissemination and communication activities table table 6-1



IIMEO

IIMEO

Title

Dissemination and Use Plan

Project Name

IIMEO – Instantaneous Infrastructure Monitoring by Earth Observation

Project Number

101082410

Deliverable number

D5.4

Document Number

IIMEO-FBK-D-0039

Issue / internal Revision

01 /03

Status/Release Date

Released / 29.05.2026

Dissemination Level

Public



Funded by the
European Union

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PREFACE

In 2022, a European Consortium¹ has been selected by the European Commission to implement the project "*Instantaneous Infrastructure Monitoring by Earth Observation*" (IIMEO). IIMEO is funded by the European Union under the Horizon Europe programme as an innovation action with €2.8 million and runs until 31 May 2026. It aims to develop and demonstrate key technologies for the global monitoring of critical infrastructures from space in near real time. A pilot application will be the monitoring of railway lines.²

"Energy supply, communications, transportation – our globalized society is highly dependent on functioning infrastructures. Typical examples are roads and railway lines, but also water pipelines, data cables and power lines," explains OHB project coordinator Daro Krummrich. "Just how critical these infrastructures are for daily life becomes particularly apparent when disruptions occur. These can be caused by natural disasters, extreme weather events or deliberate manipulation. In order to be able to restore the functionality of critical systems promptly after an incident, it is important to quickly gain an overview of the overall situation. This is why IIMEO is about detecting infrastructure malfunctions automatically, across large areas and in near real time, regardless of local weather and lighting conditions."

Infrastructure monitoring is an appropriate use case for satellite-based systems regarding the principles of "NewSpace: Since global coverage and revisit times of less than one hour are required for infrastructure monitoring, the project partners assume that a suitable constellation in low Earth orbit (500 to 900 kilometers altitude) will consist of at least 24 small satellites.



Figure 0-1: Schematic of IIMEO's objectives

Synthetic Aperture Radar (SAR) imaging radar instruments are to be used as payloads, which will be supplemented by sensors for the wavelength range of visible light (VIS). This will enable high-resolution images to be generated even at night and under heavy cloud cover.

Another focus of the project is the development of algorithms. Since continuous global monitoring of infrastructure with SAR and VIS sensors produces gigantic amounts of data, it is necessary that these are already processed on board the satellites. This is to avoid the data downlink being a bottleneck in the system. Davide Di Domizio, Research Programme Administrator at the European Health and Digital Executive Agency (HaDEA) and in charge of IIMEO, explains: "In 2022, the Horizon Europe work programme set the ambitious goal of demonstrating the performance of key technologies for future Earth observation systems by 2028. With the development of the planned on-board data processor, IIMEO is well positioned to make an important contribution to this mission."

As the development phase is complete, all relevant key technologies are integrated in an airborne technology demonstrator to verify the suitability of the technical solution before sending it into space as satellite payload. The goal of the flight campaign conducted in 2025 was to demonstrate the end-to-end prototype downstream service, including on-board data processing. The automated detection of obstacles on railway tracks is to serve as an example application. The national company for the management of railway infrastructure in Serbia was won as a cooperation partner and pilot user. Slobodan Rosić, Serbian Railway Infrastructure Risk Manager, points out: "A satellite-based automatic monitoring system makes it possible to collect high-quality information about the condition of the infrastructure in real time without having to interrupt regular traffic and without the need for personnel on site." . "



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1 INTRODUCTION

In the last decades, space-based Earth observation applications have been experiencing significant growth. This is because of acquisition sensor technology improvement, the launch of novel missions, the use of satellite constellations, the shift toward open access data policies, the increase of data variety and availability, etc. In parallel we observed an increase in data storage and processing capabilities, paving the way for the (re)development of solutions for robust management of new/old applications, as well as growing user interest in remote sensing-based technologies and solutions. This creates a positive loop where users push towards more specific application requirements like real time processing for instantaneous monitoring and research groups and industry reply with more advanced solutions. To feed this loop the project should reach out to the relevant target groups in the research, user and stakeholder communities using various channels and formats. Impact indicators will be monitored over the duration of the project with the purpose of assessing the impact of IIMEO communication and dissemination activities. The resulting impact assessments will guide potential corrections to the dissemination plan, and alignment to the exploitation plan will support post-project continuation of dissemination activities including a use plan for long-term circular business.

1.1 Purpose of this Document

Communication and dissemination of ongoing project activities and results are crucial pillars of the IIMEO project which ensures the usability and sustainability of the project achievements. The main objectives of these activities are to 1) support the dissemination of project results to connect and raise the interest of the relevant scientific community within the EU and beyond; 2) promote awareness and raise visibility of the project, its objectives and outputs; 3) ensure that the project, its results and achievements are widely communicated to the relevant and identified target audiences in a suitable way.

Accordingly, this Deliverable provides an overview of planned, ongoing and past dissemination and exploitation activities as well as dissemination objectives and channels, target groups and the exploitation approach for each project outcome. It also contains on accomplishment of the predefined KPIs and relevant metrics.

The current and future dissemination and communication strategies are discussed in section 2. In section 3, KPIs are listed in tabular format, reporting on activities to date and the status of the KPIs.

An outlook including activities in the focus of the consortium's work for the next 18 months (begin of M19 to end of M36) and a preliminary list of activities and events for this period is given in section 4.



2 DISSEMINATION, COMMUNICATION & EXPLOITATION STRATEGY

The dissemination and communication strategy for the IIMEO project heavily depends upon work done as part of “Communication, Dissemination, Exploitation & Roadmap to Space” (WP5), which foresees the activities discussed in the following paragraphs to ensure the uptake of the results, the visibility of the project and the transfer of knowledge to other stakeholders. The project partners are involved in local and international dissemination events in order to target a wider audience. The local events are organised by the partners responsible for the coordination of the case study to show the progress and the activities realised at the local level and to get feedback. The final international/European event will be proposed to illustrate the results and promote synergies with relevant EU projects and initiatives in Bremen or Brussels in collaboration with the appropriate EU institutions.

2.1 Dissemination & Communication Strategy

The Communication Strategy for IIMEO (Communication and Community Building) aims at implementing regular activities throughout the 36 months, ensuring continuous content production (web, social media), outreach and stakeholder engagement based on the SMART approach. The strategy involves communication specialists, search engine optimisation (SEO) experts and copywriters with good knowledge of the topics addressed. The dissemination strategy of the project will be shaped to the information needs of the identified target audiences, this will result in a set of scientific, technical or policy related publications to be created.

Communication mainly refers to informing the general public (e.g., social media posts or content on the website) about IIMEO. Communication content is mainly released by the coordinator. For any dissemination-related issues the following email address will be used within the project: iimeo.dissemination@ohb.de. For general contact, the mail address iimeo.info@ohb.de is available.

Dissemination consists of 4 main activities: i) Local and international dissemination events; ii) Publications (scientific, technical, policy-makers); iii) Synergies with other initiatives; iv) Collaboration with other funded actions.

2.2 Exploitation Strategy

The exploitation strategy is meant to ensure systematic and sufficient exploitation of the project results both during the lifetime of this project and after the project end. During the lifetime of the project, the publicly visible exploitation activities will mainly be academic, i.e. the publication of datasets to be used by the scientific community, research papers explaining what we will have done with those datasets with the corresponding findings, as well as engaging with the general public to build interest and support for IIMEO activities.

The exploitation after the project end will be prepared during the project in two orthogonal directions, one technical and the other commercial. To be useful to regular monitoring of railways and other infrastructure, the airborne research demonstrator must evolve into a space-based service. The preliminary plan to achieve this is to adapt sensors, most importantly SAR, in a future follow-up demonstrator mission, as well as hard- and software – such as the on-board processing unit, communication links and sensor data processing to correct for atmospheric effects – for a demonstrator mission in space using a single satellite about few years after the end of the IIMEO project. For most infrastructure monitoring applications, such a demonstrator would still be insufficient, e.g. in terms of revisit time, but it allows to complete the critical step from air to space, sort out the space-specific issues and, once the demonstrator runs acceptably, scale up to a complete satellite constellation, which, in turn, would be sufficient to operate a useful IIMEO service.

A space-based demonstration mission, however, is more expensive than an airborne demonstrator and a regular service using a satellite constellation is not viable using research funding alone. Thus, the step into space needs discussions with interested organisations, e.g., ESA and DLR, as well as with possible further investors who may be interested in running or using such a service.

To exploit synergies and be attractive to more potential customers, while focusing on railways, IIMEO will additionally consider other use cases regarding infrastructure with similar properties, e.g., being geographically dispersed such as roads and powerlines. Further details are available in [1] and [2]. The work on this has been started already as mentioned in section 3.8. To assess the viability of different use cases, a market



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analysis will be carried out during the project lifetime, and use cases will be discussed with possible stakeholders, who, in turn, are also to be identified during this project.

While the commercial aspects of exploitation will only be shared within the project and the European Commission in the “Sustainability and Business Development Report”, we will publicly share the technical exploitation plans in the “Roadmap to Space and for Future Earth Observation Services” [2].

2.2.1 Overall Exploitation Plan

As per the IIMEO Grant Agreement [3], the roadmap to space [2] will include the following:

Algorithms, which will have been demonstrated within the airborne demonstration for geo-referencing regular (VIS) images as well as SAR image data, will have to be adapted for spaceborne applications.

Methods for change detection and anomaly detection in regular (VIS) and SAR images will have to be adapted to handle data acquired from space. This includes compensating for atmospheric effects as well as adjusting and re-training machine-learning models with data adequately reflecting the characteristics of imagery acquired from space.

The TRL of SAR and VIS data fusion to improve anomaly and change detection results will have to be increased for its application on a satellite. A further element is the on-board processing hardware platform that has to be extended to achieve real-time change detection from space with a spatial resolution of up to 50 cm.

To make space-based operation useful for other use cases as well, datasets both to train machine-learning models as well as to validate anomaly and change detection methods for other use cases, e.g. motorways instead of railways, will have to be created.

2.2.2 Exploitation Plan per Partner

Just as the contributions of the IIMEO partners to the project are different depending on the company interests and competencies, different aspects of the exploitation strategy are carried out by different partners. These are as follows:

OHB-DC: Main interest in the project results: Validation of the proposed on-board data processor design in combination with adaptations to and the distribution of the algorithms on the on-board and the off-board data processor to significantly reduce the required data transfer from satellite to ground without reducing the performance of the services; use of the system design and algorithms for future small satellite constellations; develop downstream services which can be integrated into a commercial platform.

NIS: Several exploitation modalities will be pursued by NIS. These modalities include: i) Academic research: Publication in academic conferences and journals focusing on open access publications; ii) Education and training: As university partner, NIS will use results and expertise gained from IIMEO related to remote sensing-based railway infrastructure monitoring to ensure that related educational course content is updated in line with the developing state-of-the-art; iii) End-user involvement: NIS will involve the Serbian Railway Infrastructure early on in the project.

FBK: Exploitation will be done by FBK in the remote sensing, artificial intelligence community by publishing newly developed methodologies. Contribution to the literature will rise from the ability to understand and process very high resolution (<50cm) SAR data at 35GHz and identify changes in infrastructures like railways. This knowledge will be the base to design novel methods devoted to changes in other kinds of infrastructures and/or other applications with Ka-band data.

AWS: Communication to the technical community will be done by AWS focusing on the space technology community, primarily in ESA/EU governmental community workshops and meetings, EDA/EDF/Nato S&T community workshops and meetings, space technology & application conferences (such as IAC or IAA Smallsat for Earth Observation). For the commercial exploitation AWS will use the designed hardware/algorithm for its microsatellite SCORE SAR payload, which is currently being discussed with commercial and governmental stakeholders for Earth observation (X and Ka-band) or Space Situation Awareness (Ka-band), as proposed for instance in the EDF CAPTECH Space TBB2 and TBB3. For that, AWS will also cooperate with the European satellite prime integrators and operators. Nevertheless, it must be respected that this is a sensitive technology (named in the Wassenaar Agreements for Export Control), meaning that some countries/regions will be not accepted for the outreach/exploitation (e.g., China or Russia).



FHR: Fraunhofer FHR will exploit the results in the radar and radar signal processing community. The project has outstanding scientific potential as it involves several competences, such as sensor technology, algorithms and space technology. FHR has extensive data and scenarios at its disposal to advance its own sensor and algorithm development. In particular, the findings regarding space technology open up new markets for FHR. The research results achieved will be published in at least one renowned scientific journal listed in the SCI/SCIE with a high impact factor by the end of 2026. The results can be published at conferences on radar (e.g. IRS, EuMW, Radar), on signal processing (EuSAR, ISPRS, SPIE) or other workshops & meetings (ESA, etc.). The research results will also be incorporated into teaching and training of young scientists (PhD students).

ATB: Main interest in the project results: Platform and using satellite and other data for services for Earth observation, customization of potential services particularly in the Bremen region and Northern Europe, further development and commercialization; further research projects.



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3 ACTIVITIES IN THE REPORTING PERIOD AND KPI STATUS

The essential results concerning dissemination and communication instruments and KPIs (Table 3-1, Table 3-2) are presented to form a basis for the structured reporting by the end of the project.


Table 3-1: General Communication Activities KPIs

#	Measure	Driver	Action	KPI
1	Monthly Web content	Regular information updates with SEO-driven approach	Identify and publish new content on a regular basis.	YR1: min. 2/month, YR2: min: 3/month, YR3: min 4/month
2	In-house newsletters	Different stakeholders are informed in a timely manner	Produce and circulate monthly newsletter	YR1: min 6, YR2: min 8 YR3: min 10
3	Promotional material, including video content	Specific audiences receive tailored and timely messages	Design and produce focused material	YR1: min 3 YR2: min. 6 YR3: min 12
4	Press releases targeting major stakeholders on supply/demand sides	Raise interest and recruit actors (e.g., developers, end-users) & supply side actors (e.g., security solution providers).	Produce press releases targeting different media channels and audiences	YR1: min 1 for provider audiences; YR2: min 1/major stakeholder category; YR3: min 2
5	Press releases for general public	Raise interest amongst non-specialized audiences	Lightweight blog for non-specialized channels	≥ 2 press clippings
6	Visibility of IIMEO in channels used by different stakeholder categories	Ensure back-links/branding recognition to website through synergies and social media; General brand recognition is demonstrated	Liaise and engage with initiatives with journalists and LinkedIn groups; Produce a survey for brand recognition	≥ 20 back-links across major stakeholders ≥ 50 responders identified IIMEO (questionnaire)



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Table 3-2: Communication KPIs for Stakeholders and Community Engagement

#	Measure	Driver	Action	KPI
	Social media content: Twitter	Grow community; Regular stakeholder engagement gives important insights into interest	Publish tweets, including SMART-based campaigns & monitor outcomes	YR1: min 4/month YR2: min 8/month YR3: min 16/month
2	Social media content: LinkedIn, ResearchGate	Grow community Regular stakeholder engagement gives important insights into interests/concerns	Publish posts, make relevant tweets, including SMART-based campaigns & monitor outcomes	YR1: min 1 post/month YR2: min. 2 posts/month YR3: min 4 posts/month
3	Stakeholder database	Early identification of prospective marketplace and service stakeholders	Develop a database of contacts for community development and stakeholder engagement	300 profiled & engaged stakeholders by M12; over 500 by M24, and 800 by M36
4	Exhibitions / workshops with free access	Ensure outreach to non-specialised audiences	Show IIMEO to visitors in lively, lightweight environment	≥ 1 exhibitions/workshops ≥ 50 non-specialized attendees
5	F2F interactions with local people	Ensure engagement with “real people” at the local level	Work with pilot partners to co-host an open day or similar, including media presence	≥ 1 local events ≥ 3 appearances in local media
6	Marketing events, e.g. trade fairs	Ensure direct engagement with major stakeholders	Host a stand decked with demos, videos, info material	Min. 1 in YR2 and 2 in YR3

Concerning the social media KPI in Table 3-2, it became evident in the early phase of the project that highly technical content generated only limited engagement on LinkedIn. This trend was further reinforced by LinkedIn’s ongoing shift toward a more general social media platform with a declining focus on strictly business-oriented content. As a result, the dedicated IIMEO channel was discontinued. Instead, content was integrated into established channels with significantly larger audiences (e.g., OHB SE), and dissemination efforts were strengthened through scientific, public, and business events.

3.1 Project Webpage

(Table 3-1: KPI #1)

The consortium has set up a website (Figure 3-1) with the address <https://www.iimeo.eu> to provide information on the purpose, objectives and current status of the project and the consortium partners. The website content targets relevant stakeholders, potential users and the general public and contains information on ongoing activities and achievements. The website is regularly updated with promotional material and news Figure 3-2, and includes basic information about all partners Figure 3-3.

The following measures listed in Table 3-1 are associated with the creation and maintenance of the website:

Develop project website (Table 3-1 #1): The project website was developed within the first 4 months and launched at month 4 (see Figure 3-1). Since then, continuous updates have been incorporated to represent the current project status and activities.

Web content update (Table 3-1 #1): Since the launch of the project website, content such as press releases (Figure 3-6) and newsletters (Figure 3-5) have been created on a regular basis while the usability of the website has been curated for multiple platforms (mobile, tablet, etc.).



Web content has been created and news published, accessible at <https://www.iimeo.eu/news>.



Figure 3-1 IIMEO Website homepage.

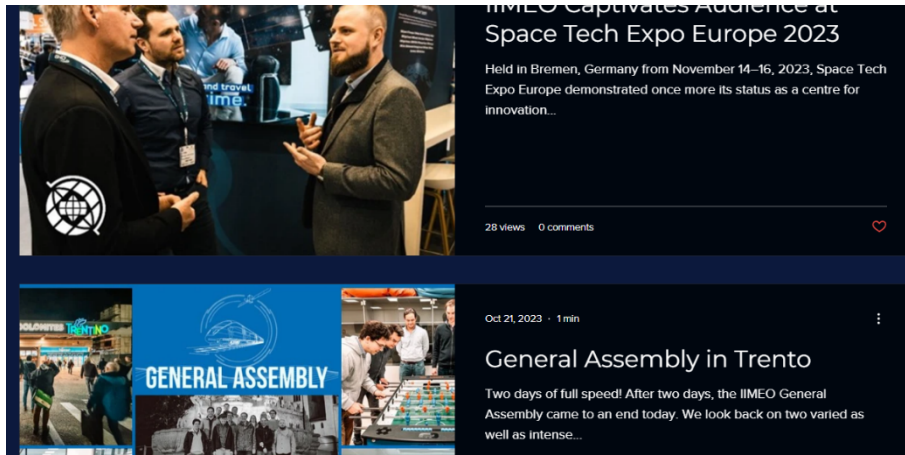


Figure 3-2 IIMEO Website news.

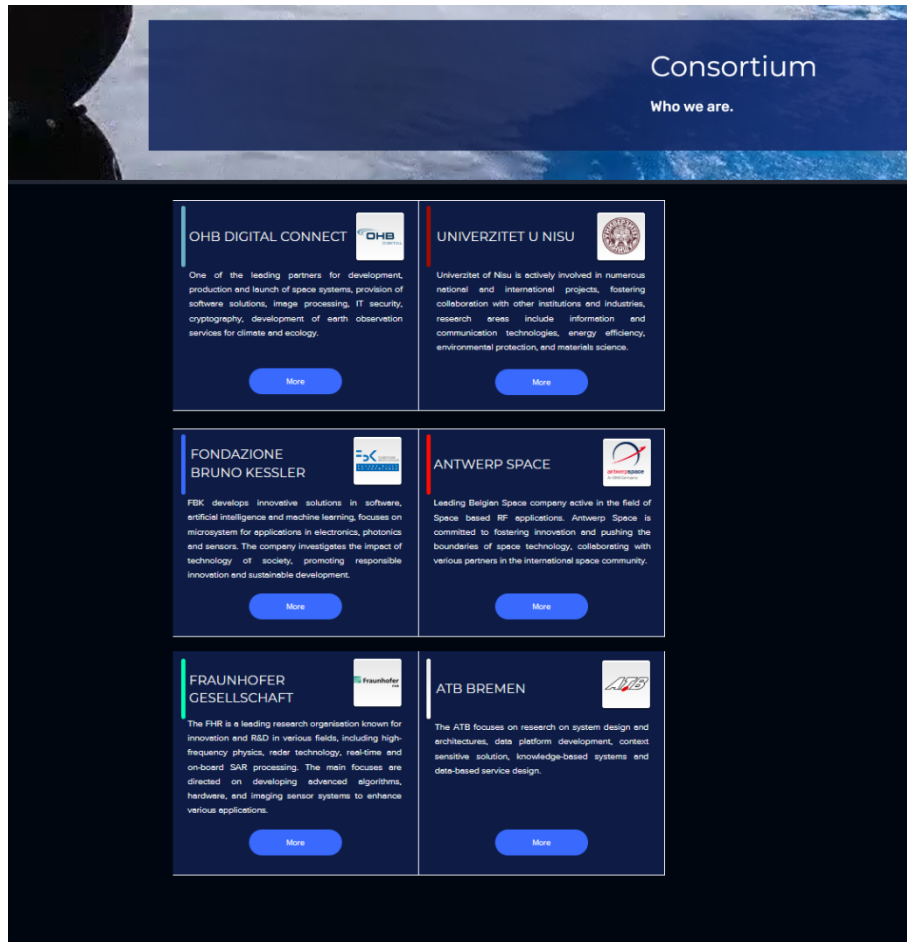


Figure 3-3 IIMEO Website consortium.

An additional website¹ has been set up by the coordinator, bundling the work results of several publicly funded projects in the context of adapting urban spaces and infrastructure to the consequences of climate change. The section on IIMEO is accessible at: <https://ohb-theo.de/theo-projects/iimeo/>.

¹ <https://ohb-theo.de/theo-projects>



Figure 3-4 IIMEO page on ThEO.

3.2 Newsletter

Newsletter (Table 3-1 #2): An initial news/info letter has been published (available here). Figure 3-5 shows the appearance of it (front page). Future (in-house) newsletters to be circulated in the relevant communities will be managed by OHB (see stakeholder table (Table 3-2) via a dedicated subscription & distribution system. In addition, subsequent newsletters will be announced and posted on the IIMEO website and distributed via the project community's mailing list.



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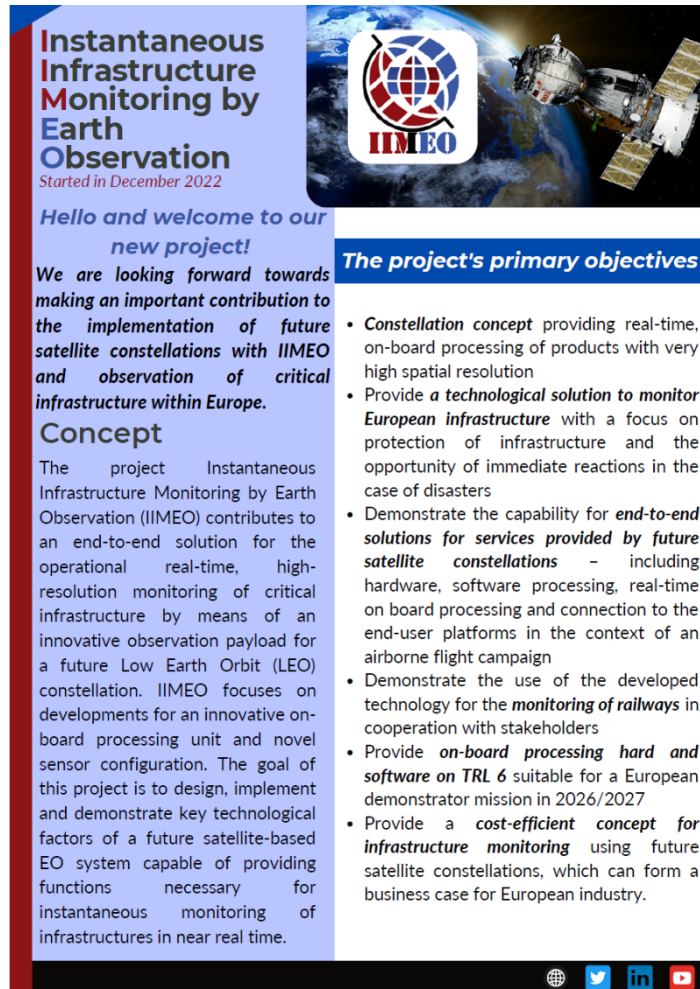


Figure 3-5 IIMEO Newsletter appearance.

3.3 Press release

Press release (Table 3-1 #4 and #5): Press releases will be produced for relevant milestones like the project launch, demo presentation or the end of project. They are expected to reach a wider audience including end-users and non-specialised actors, see Figure 3-6.

The project presentation/launch press release has been published on 30/03/2023. Figure 3-9 shows the appearance of press release #1 on the OHB website². Variations of that release focusing on their respective contributions to the project were emitted by Fraunhofer (May, 11th 2023)³, FBK and the European Commission. The release issued by the coordinator was also taken up by Defence Industry Europe and raumfahrer.net.

The publication of the first press release resulted in an interview with German daily newspaper “Der Tagesspiegel” showcasing the objectives of the project and their relevance for the general public.

²<https://www.ohb.de/en/news/monitoring-critical-infrastructure-from-space-ohb-digital-connect-coordinates-iimeo-project>

³<https://www.fhr.fraunhofer.de/en/press-media/press-releases/2023/monitoring-of-critical-infrastructure-from-space--fraunhofer-fhr-is-working-on-the-iimeo-project.html>



3.4 Brochure/Flyer

Brochure/Flyer (Table 3-1 #5): Brochures have been produced for raising interest amongst non-specialised audiences. They are intended to reach a wider audience including end-users and the general public.

Figure 3-7 shows the appearance of the 1st brochure/flyer, Figure 3-8 shows the updated 2nd version of the flyer.



IIMEO

<p>Title</p> <p>Project Name</p> <p>Project Number</p> <p>Work Package</p> <p>Document Number</p> <p>Issue / internal Revision</p> <p>Author</p> <p>Contributors</p> <p>Status/Release Date</p> <p>Dissemination Level</p>	<p>Press release on the funding of IIMEO</p> <p>IIMEO – Instantaneous Infrastructure Monitoring by Earth Observation</p> <p>101082410</p> <p>WP 5 – Communication, Dissemination, Exploitation and Roadmap to Space</p> <p>IIMEO-OHBDC-HO-0001</p> <p>01 / 01</p> <p>Phil Daro Krummrich, OHB DC</p> <p>EC, SRI</p> <p>Preliminary /</p> <p>Public</p>
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Name	Responsibility	Signature/Date
P.Krummrich	Author	










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Figure 3-6 IIMEO press release #1 cover page.



The brochure is divided into several sections:

- CONSORTIUM:** Lists partners including OHB Digital, ANB, and Fraunhofer.
- Instantaneous Infrastructure Monitoring by Earth Observation:** A key project goal, started in December 2022.
- Project Coordinator:** Phil Daro Krummrich, OHB Digital Connect GmbH, Bremen, Germany.
- Objectives:**
 - To work towards improving the safety and reliability with EO satellites for critical European infrastructure;
 - To build a system which demonstrates that special infrastructure monitoring by earth observation actually works by providing a real user with real railway monitoring data from a satellite platform (i.e., plane);
 - To keep track of process to ease similar, future projects;
 - To develop a plan to deploy IIMEO on an actual LEO constellation.
- POTENTIAL PILOT USER:** SRI JSC (Serbian Railway Infrastructure and its main interests), including a list of interests and risks.
- MAIN TECHNOLOGIES:** Discusses SAR and VIS sensors, edge computing, and data transfer bottlenecks.
- OVERVIEW:** A flowchart showing the system architecture from satellite to ground station and user.

Figure 3-7: IIMEO brochure/flyer (1st version)



OHB DIGITAL

IIMEO

Instantaneous Infrastructure Monitoring by Earth Observation

OHB Digital Connect GmbH
 Manfred-Fuchs-Platz 2-4
 28359 Bremen
 Germany
 Email: iimeo.coordinator@ohb.de
<https://www.iimeo.eu/>

The IIMEO project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement No. 101082410.

Why monitoring of infrastructure?

Energy supply, communications, transportation – our globalised society is highly dependent on functioning infrastructures. Typical examples are roads and railway lines, but also water pipelines, data cables and power lines. Just how critical these infrastructures are for daily life becomes particularly apparent when disruptions occur. These can be caused by natural disasters, extreme weather events or deliberate manipulation. In order to be able to restore the functionality of critical systems promptly after an incident, it is important to quickly gain an overview of the overall situation. This is why IIMEO is about detecting infrastructure malfunctions automatically, across large areas and in near real time, regardless of local weather and lighting conditions.

Towards a state-of-the-art satellite system

The Innovation action IIMEO provides an on-board data processor under the principles of New Space. It prepares new satellite constellations in low earth orbit with a global coverage and revisit times of less than one hour. Synthetic Aperture Radar (SAR) Imaging radar instruments are to be used as payloads, which will be supplemented by sensors for the wavelength range of visible light (VIS). This will enable high-resolution images to be generated even at night and under heavy cloud cover.

Another focus of the project is the development of algorithms. Since continuous global monitoring of infrastructure with SAR and VIS sensors produces gigantic amounts of data, it is necessary that these are already processed on board the satellites. This is to avoid the data downlink being a bottleneck in the system. Davide Di Domizio, Research Programme Administrator at the European Health and Digital Executive Agency (HaDEA) and in charge of IIMEO, explains:

"In 2022, the Horizon Europe work programme set the ambitious goal of demonstrating the performance of key technologies for future Earth observation systems by 2028. With the development of the planned on-board data processor, IIMEO is well positioned to make an important contribution to this mission."

Beyond theory: Airborne technology demonstrator

Upon completing development, key technologies will form an airborne demonstrator. In 2025, a flight campaign will demonstrate the end-to-end prototype, showcasing onboard data processing for automated railway track obstacle detection. IIMEO partnered with Serbia's railway infrastructure management for this project.

Figure 3-8: IIMEO brochure/flyer (2nd version)



Start | Newsroom | Monitoring critical infrastructure from space: OHB Digital Connect coordinates IIMEO project

30. March 2023

PRESS RELEASE

Monitoring critical infrastructure from space: OHB Digital Connect coordinates IIMEO project

SURVEILLANCE OF RAILWAY TRACKS AS PILOT PROJECT

Bremen, 30.03.2023. The project "Instantaneous Infrastructure Monitoring by Earth Observation" (IIMEO) proposed by a European consortium coordinated by OHB Digital Connect GmbH, a subsidiary of space and technology group OHB SE, has been selected for implementation by the European Commission. IIMEO is funded by the European Union under the Horizon Europe programme as an innovation action with €2.8 million and runs until 30 November 2025. It aims to develop and demonstrate key technologies for the global monitoring of critical infrastructures from space in near real time. A pilot application will be the monitoring of railway tracks.

"Energy supply, communications, transportation – our globalised society is highly dependent on functioning infrastructures. Typical examples are roads and railway lines, but also water pipelines, data cables and power lines," explains OHB project coordinator Daro Krummrich. "Just how critical these infrastructures are for daily life becomes particularly apparent when disruptions occur. These can be caused by natural disasters, extreme weather events or deliberate manipulation. In order to be able to restore the functionality of critical systems promptly after an incident, it is important to quickly gain an overview of the overall situation. This is why IIMEO is about detecting infrastructure malfunctions automatically, across large areas and in near real time, regardless of local weather and lighting conditions."

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Funded by the European Union.

DEVELOPMENT OF SATELLITES AND ALGORITHMS

To this end, a satellite system is to be developed within the framework of the project. The intended use case calls for the principles of New Space. Since global coverage and revisit times of less than one hour are required for infrastructure monitoring, the project partners assume that a suitable constellation in low Earth orbit (500 to 900 kilometres altitude) will consist of at

Figure 3-9 IIMEO press release appearance.

3.5 Social media channels

Table 3-2: KPI #1, #2

The project's social media channels have been established to give IIMEO visibility in a wide community including scientific and non-scientific stakeholders.

3.5.1 LinkedIn

LinkedIn is a business and employment-oriented platform that declares about 850 million users, spread in 200 countries. Being an online social network that is tailored for professionals it is well suited to disseminate research results as those expected from the IIMEO project.

The IIMEO LinkedIn page⁴ currently has a **total of 178 followers (May, 2026)** and has **posted more than 30 contributions**. Figure 3-10 shows the LinkedIn IIMEO start page and Figure 3-11 shows examples of posts.

With LinkedIn catering to the interests and information needs of a large community with several categories of actors, effort has been dedicated to publishing posts targeting those different categories.

⁴ <https://www.linkedin.com/company/iimeo-europe>

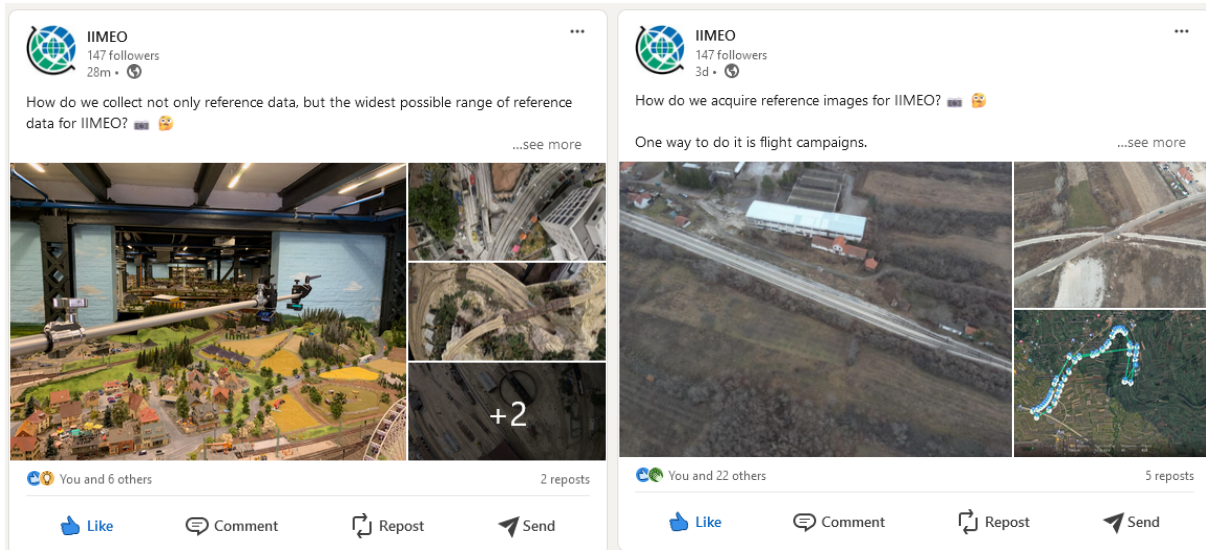


Figure 3-10: Screenshot of the most recent IIMEO LinkedIn posts.

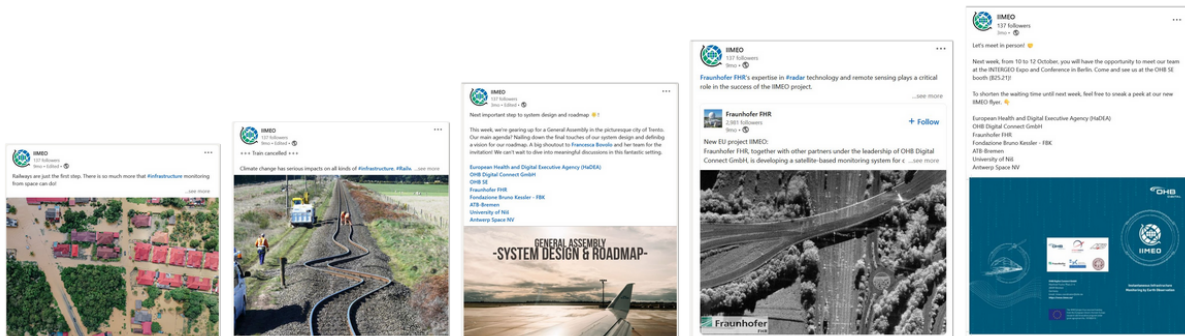


Figure 3-11: Screenshot of selected IIMEO LinkedIn posts.

3.5.2 ResearchGate

Please note that on February 23, 2023, ResearchGate announced that Projects will be discontinued from March 31, 2023⁵. Accordingly, there will not be an IIMEO ResearchGate page.

3.5.3 Twitter/X

Twitter is one of the most popular social networking and microblogging service, with more than 368 million monthly active users in 2022. It is also widely used in the scientific community as a tool to disseminate results of innovation activities and to communicate with stakeholders. However, since the rebranding to "X", many users have left the platform and there have been discussions about hate speech and the censorship of critical posts or the blocking of unwanted users. The partners have therefore decided to refrain from establishing an IIMEO twitter account (see Table 3-2).

⁵ ResearchGate Retiring Projects, [Online]. Available: <https://www.researchgate.net/researchgate-updates/retiring-projects>



3.6 Stakeholder Database

The Table 3-3 below identifies the target audiences of the IIMEO communication strategy and defines the communication objectives to maximise the IIMEO project's exposure.

Table 3-3 Stakeholder table

Target Group	Description	Interest in the project
Industry, SMEs and Entrepreneurs	Stakeholders from industry	<ul style="list-style-type: none"> Utilisation of project's results in operations and in R&D activities for development of new products and services; Amplification of innovation in railway (or similar) infrastructure
Railway Infrastructure Stakeholders	Railway Infrastructure Managers (IMs) and Railway Undertakings (RUs): The project could provide IMs and RUs with valuable data to optimize their operations and improve efficiency and safety in railway sector	<ul style="list-style-type: none"> Utilisation of project's result to develop novel monitoring services to gather high-quality information about the condition of the infrastructure in real time without having to interrupt regular traffic and without the need for personnel on site
Researchers and Academics	Researchers and academics working in universities, research centres, R&D departments of industry	<ul style="list-style-type: none"> Advancing research post-project; Training personnel & students; Translation to real-life industry cases through the re-use of results.
Technology Clusters	European initiatives and clusters, research communities, associations	<ul style="list-style-type: none"> Inclusion of project results to collaborative research activities (roadmap, white papers, etc.); Dissemination of project results to their members and stakeholders; Participation in project events for knowledge exchange.
Standards bodies	Standards bodies and industry discussion groups	<ul style="list-style-type: none"> Development of roadmaps for standards; Input for standardisation activities.
General Public	General public and anyone interested in the project	<ul style="list-style-type: none"> Understand the value of European research; Stimulate innovation in unexpected groups of society.

3.7 IIMEO Dissemination and communication at events

The IIMEO consortium has been active at different events to raise awareness for the project itself, the concept and expected outcome as well as for the preparation of activities in the pilot regions in the south part of Serbia along the Serbian part of pan-European Corridor X towards North Macedonia and further south towards Greece. In this reporting period until month 18, IIMEO was a topic at the following events indicated in Table 3-4:



Table 3-4 : Communication activities

Communication Activity Name	Description	Target audience	Communication channel	Outcome
IIMEO LinkedIn channel	Launch of the official IIMEO LinkedIn channel	Citizens	Social media	Currently 178 followers
IIMEO in NDR programme "DAS!"	Short spot about OHB and mentioning of IIMEO in German Norddeutscher Rundfunk TV show "DAS!"	Citizens	TV/Radio campaign	Significant number of viewers in Northern Germany
IIMEO project website	Release of the official IIMEO project website	Citizens	Website	Positive feedback from viewers, ~550 views
FHR at Wachtberg Forum	Short presentation of project at "Wachtberg Forum"	Industry, business partners	Event (conference, meeting, workshop, internet debate, round table, group discussion, etc.)	Positive feedback, some interested questions from audience
INTERGEO Expo and Conference 2023	Participation and presentation of IIMEO on the INTERGEO Expo and Conference 2023 event	Research communities	Event (conference, meeting, workshop, internet debate, round table, group discussion, etc.)	~ 17.000 professional visitors
News Article in "Tagesspiegel"	News article about IIMEO in the German newspaper "Tagesspiegel" about IIMEO	Civil society	Media article	> 300.000 regular readers
IIMEO project presentation	2nd version of the general IIMEO project presentation	Citizens	Website	Positive feedback
OHB press release	Official IIMEO press release on OHB website and social media	Citizens	Press release	Positive feedback, resulted in article in "Der Tagesspiegel"
ATB internal presentation	Presentation of IIMEO to related research community	Research communities	Event (conference, meeting, workshop, internet debate, round table, group discussion, etc.)	ca. 15 attendees from different research communities



Table 3-5 : Dissemination Activities

FBK press Release	Official IIMEO press release of Fondazione Bruno Kessler	Citizens	Press release	Positive feedback (from related research community)
IIMEO project flyer	1st version of the IIMEO project flyer	Citizens	Print materials (brochure, leaflet, posters, stickers, banners, etc.)	Positive feedback, incorporated in the 2nd version
FHR press release	Press release on website and social media	Citizens	Press release	Positive feedback, some requests from related research community
Presentation at Fraunhofer EMI Institut	Presentation of project at Fraunhofer EMI Institute	Research communities	Other	Positive feedback, possible cooperation in a similar field under evaluation
IIMEO project flyer	2nd version of the IIMEO project flyer	Citizens	Print materials (brochure, leaflet, posters, stickers, banners, etc.)	Positive feedback from interested audiences
OHB-DC IIMEO presentation at VDI Meeting	Talk about Earth Observation activities including IIMEO at a VDI meeting in Bremen, Germany	Specific user communities (if applicable)	Event (conference, meeting, workshop, internet debate, round table, group discussion, etc.)	~50 attendees, VDI members and general public, positive feedback
IIMEO project presentation	1st version of a general IIMEO project overview presentation, made available via the website	Citizens	Website	Positive feedback, has been incorporated into the updated version
OHB-DC at Space Tech Expo 2023	IIMEO project presentation at Space Tech Expo Europe 2023 in Bremen, Germany	Research communities	Exhibition	~ 6000 visitors (professional and general public); positive feedback from interested audience
IIMEO project information	IIMEO project information made available at NIS website in the category of Horizon projects with NIS participation	Academia and research community	Website	~ 10000 visitors (Academia and research community); positive feedback
Project / Use case presentation.	Presentation at the urbanclim workshop.	Academia and research community	Workshop	



Dissemination Activity Name	Type of Dissemination Activity	Target audience reached	Description of the objective(s) with reference to specific project output (max 200 ch.)
Project Presentation	Conferences	Research communities	Project presentation at the Sixth International Conference "Mechanical Engineering in the 21st Century – MASING 2023"
Project Presentation	Conferences	Research communities/Industry	IIMEO partner NIS (Faculty of Mechanical Engineering, University of Niš, Serbia), hosted the Workshop "Advanced satellite-based technology in land transport" within the XXI International expert-scientific Conference on Railway RAILCON '24. IIMEO project was presented in the Workshop along with 3 other EU/ESA funded projects related to the use of satellite data in land transport
Project Presentation	Conferences	Research communities	Project presentation at the XVII International Conference on Systems, Automatic Control and Measurements SAUM 2024 (November 14, 2024 – November 15, 2024), Nis, Serbia
Publication	Journal article	Research communities/Industry	NIS published a journal paper: Banic M, Ristic-Durrant D, Madic M, Klapper A, Trifunovic M, Simonovic M, Fischer S. The Use of Earth Observation Data for Railway Infrastructure Monitoring—A Review. Infrastructures. 2025; 10(3):66. https://doi.org/10.3390/infrastructures10030066
Paper presentation at the Conference	Conferences	Research communities/Industry	NIS publication "Recent Advancements in EO-based Monitoring of Railway Infrastructure" presented at the 4th International Conference on Cognitive Mobility CogMob2025.
Publication	Journal article (Conference proceedings)	Research communities/Industry	NIS publication: Milan Banić, Danijela Ristic-Durrant, Alina Klapper, Dietrich Kuhn, Milos Simonovicć, and Szabolcs Fischer, Recent Advancements in EO-based Monitoring of Railway Infrastructure,



			https://link.springer.com/chapter/10.1007/978-3-032-13898-9_39
Publication	Journal article (Conference proceedings)	Research communities/Industry	M. Zanetti, F. Bovolo, "Instantaneous infrastructure monitoring by Earth Observation: SAR-based railway obstacle detection," SPIE 2024, SPIE Conference on Artificial Intelligence and Image and Signal Processing for Remote Sensing XXX, Edinburgh, United Kindom, 16 – 19 September 2024.

Table 3-6 : Other Dissemination Activities

Dissemination Activity Name	Type of Dissemination Activity	Target audience reached	Description of the objective(s) with reference to specific project output (max 200 ch.)
Project presentation	Conferences	Local authorities Specific end user communities	BREsilient- Resilient Future City of Bremen
Project presentation	Other	Local authorities Specific end user communities	FBK Annual Scientific Report 2023
Project Presentation	Other	Local authorities Specific end user communities	FBK Annual Scientific Report 2024
Keynote talk	Conferences	Research community/Industry/End users	IIMEO Keynote talk (Prof. Milan Banić, NIS) at the CogMob2025
Project Presentation	EC/HaDEA workshop	EU Project Community	Presentation of IIMEO at the Workshop on EU-Funded R&I for Earth Observation Technologies in 2025
Project Poster	Poster at HaDEA booth at LPS	Research Community / Industry	OHB DC prepared one poster of the poster-rotation shown by HaDEA at the ESA Living Planet Symposium 2025
Airborne Demonstrator Poster Presentation	Conferences	Research Community / Industry	OHB DC presented a poster specifically on the airborne demonstrator using VIS and SAR at ESA Living Planet Symposium 2025.
Presentation of IIMEO results.	Workshop	Research Community / Industry (DLR)	We've presented results from IIMEO at the "Workshop on Future Spaceborne Radar Systems" at DLR.



(Oral) Presentation	Conferences	Research Community / Industry	Talk showing some results of IIMEO and discussing how to use them in future applications at Fraunhofer's 2026 National Forum for Remote Sensing and Copernicus.
(Oral) Presentation	Conferences	Research Community / Industry	Talk on Instantaneous infrastructure monitoring by Earth Observation: SAR-based railway obstacle detection at SPIE Conference on Artificial Intelligence and Image and Signal Processing
(Oral) Presentation	Conferences	Research Community / Industry	M. Zanetti, S. Palm, F. Bovolo on A Demonstrator For Space-Borne Tiled Sar-Based Real-Time Railway Obstacle Detection, expected 2026.
(Oral) Presentation	Workshop	Research communities / public	OHB DC delivered a presentation titled <i>"From Pixel to Planning: Using Satellite Data and AI to Create Livable Cities,"</i> including IIMEO, as part of the <i>Geodetic Colloquium (Summer Semester 2026)</i> organized by Leibniz University Hannover and the DVW.
(Oral) Presentation	Conference	Research community/Industry/End users	OHB DC presented the talk "Satellite Data in Combination: Dynamic Monitoring and Evidence Generation for Civil Security" at the Forum for Remote Sensing and Copernicus 2026.

Table 3-7 : Project Workshops

Name of the event	Date and duration	City/Country
KO Workshop	07-09/03/2023	Bremen, DE
2nd Workshop	17-19/10/2023	Trento, IT
3rd Workshop	07/2024	online
4th Workshop	8-9/10/2024	Nis, RS
5th Workshop	04/2025	Norden , DE



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Name of the event	Date and duration	City/Country
6 th Workshop	18-20/05/2026	Bremen, DE



3.8 Exploitation Activities

As laid out in the exploitation strategy in Sec. 2.2, two directions along which to exploit the developments of this project have been defined: first to generalize different use cases and infrastructures with properties similar to the characteristics of railway infrastructure, and second to move the IIMEO technology to space.

The first step in the first direction is the identification of such similar use cases. The results are documented in the document D1.1: State-of-the-art Update, Requirements and Use Cases Specifications [1], which has been submitted in June 2023.

As maturity increases, the IIMEO team works towards more reuse opportunities in terms of the system and system elements (see Roadmap document [2]).

We report here some examples of potential use cases and refer the reader to D1.1 [1] for further details:

- Pipelines;
- High voltage power lines;
- Dikes;
- Roads;
- Waterways;
- Natural disasters;
- Environmental monitoring (e.g., forests).

Other applications have also been considered:

- Early warning;
- Prevention;
- Monitoring;
- Response;
- Inspection.

Further IIMEO outcomes can benefit other industrial projects.

IIMEO contributes to the understanding the benefits and limitations of both SAR and VIS data in the context of infrastructure monitoring, the project results can be reused for different SAR/optical data and/or applications. New SAR illumination modes can be derived from real-time imaging use case analysis. The IIMEO project is contributing to supporting Master and PhD students, as well as teaching activities.

Regarding the second direction, it is important to maintain the exploitability with respect to space-based operation of the technology under development in IIMEO as the project progresses. To this end, we reviewed, technical constraints imposed by satellites intended to be operated in low Earth orbit (LEO), the orbit itself and data downlinks from LEO satellites to the ground. Moreover, we reviewed what can be expected in terms of computational capacity and from data compression techniques. The findings are documented in [1] and will be used as guardrails to prevent the project from steering into developments which would make the exploitation of IIMEO developments in space much more difficult.



4 OUTLOOK

A few communication and dissemination activities will happen after the end of project, it is planned to analyse funding possibilities from institutional organisations (e.g. ESA and DLR), new EU call as well as from commercial investors.



5 REFERENCES

- [1] IIMEO Consortium, *IIMEO-ATB-D-0003, State-of-the-art Update, Requirements and Use Cases Specifications*, 2023.
- [2] IIMEO Consortium, *IIMEO-OHBDC-D-0011, Roadmap to space and for future Earth observation services*, 2024.
- [3] European Health and Digital Executive Agency (HaDEA), *Instantaneous Infrastructure Monitoring by Earth Observation (101082410 - IIMEO), IIMEO-EC-CTR-0001, 01*, 2022.
- [4] IIMEO Consortium, *IIMEO-ATB-D-0003, State-of-the-art Update, Requirements and Use Cases Specifications*, 2023.

**Dissemination and Use Plan****Appendix A Abbreviations & Nomenclature**

Abbreviation	Meaning
AD	Applicable Documents
ATB	Institut Für Angewandte Systemtechnik Bremen GmbH
AWS	Antwerp Space N.V.
CA	Consortium Agreement
CI	Configuration Item
CIP	Continuous improvement process
EB	Executive Boards
EC	European Commission
ECSS	European Cooperation for Space Standardization
FBK	Fondazione Bruno Kessler
FHR	Fraunhofer-Institut für Hochfrequenzphysik und Radartechnik FHR
FRAUNHOFER	Fraunhofer-Institut für Hochfrequenzphysik und Radartechnik FHR
GA	Grant Agreement
IIMEO	Instantaneous Infrastructure Monitoring by Earth Observation
IPR	Intellectual Property Rights
ISO	International Organization for Standardization
LEO	Low Earth Orbit
LLI	Long-Lead-Item
NC	Non-Conformance
NCR	Non-Conformance-Report
NCTS	Non-Conformance Tracking System
NIS	University of Nis
NRB	Non-Conformance-Review-Board
OHB DC	OHB Digital Connect GmbH
PA	Product Assurance

**Dissemination and Use Plan**

Abbreviation	Meaning
PC	Project Coordinator
PU	Public
QA	Quality Assurance
QM	Quality Management
RD	Reference Documents
RES	Classified R-UE/EU-R – EU RESTRICTED under the Commission Decision No2015/444
RTD	Research and Technology Development
S&T	Science and Technology
SAB	Security Board
SAR	Synthetic Aperture Radar
SEN	Sensitive
TRR	Test Readiness Review
WP	Work Package