EXPLORATORY RESEARCH

sesar JOINT UNDERTAKING

D6.2 Final dissemination report

Deliverable ID:	**D6.2**
Dissemination Level:	**PU**
Project Acronym:	**Modus**
Grant:	**891166**
Call:	**H2020-SESAR-2019-2**
Topic:	**SESAR-ER4-10-2019** **ATM Role in Intermodal Transport**
Consortium Coordinator:	**BHL**
Deliverable Lead	**BHL**
Edition date:	**30 November 2022**
Edition:	**00.01.00**
Template Edition:	**02.00.02**

EUROPEAN PARTNERSHIP Co-funded by the European Union

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Document History

Edition	Date	Status	Author	Justification
00.01.00	30 November 2022	Release	Modus Consortium	New document to review by the SJU

Copyright Statement

Modus

[MODELLING AND ASSESSING THE ROLE OF AIR TRANSPORT IN AN INTEGRATED, INTERMODAL TRANSPORT SYSTEM]

This deliverable is part of a project that has received funding from the SESAR Joint Undertaking under grant agreement No 891166 under European Union's Horizon 2020 research and innovation programme.

Abstract

The following document (D6.2): Final dissemination report presents the key results of the project and summarises the most important recommendations. It highlights the dissemination, communication and exploitation strategies of the SESAR JU exploratory research action "Modus" used to maximise its outreach to targeted audience, including the final Modus brochure highlighting the key results of the project, as well as recommendations for the different target groups.

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1 Introduction

This document brings together Modus communication, dissemination and exploitation activities and channels used to reach the target groups according to Modus objectives and strategy developed in the Modus Communication, Dissemination and Exploitation Plan (Deliverable 6.1).

The Modus Project

Modus *"Modelling and assessing the role of air transport in an integrated, intermodal transport system"* has been a 30-months project (June 2020 to November 2022), funded by the SESAR JU under the European Union Horizon 2020 research and innovation programme.

In the context of increasing environmental awareness, regulatory measures, capacity shortages across different modes, or the need for a more seamless and hassle-free passenger journey, the future evolution of European travellers' demand for mobility is still unknown, as well as its potential impacts on the European transport system. The optimisation and alignment of multimodal transport is therefore of utmost importance for the overall performance of the (future) European transport system, especially in regard to providing a seamless and hassle-free journey for passengers as well as mitigating (air) capacity constraints.

The Modus Solution aimed at developing a modelling approach for the assessment of seamless door-to-door multimodality and passenger experience in Europe. The Modus approach has been applied to evaluate the impact of an improved, joint air-rail transport system between various city pairs, characterising the contribution of air traffic management (ATM) and air transport to the improvement of travellers' multimodal journeys.

The Solution deployed passengers' modal choice decisions based on a combination of airport and railway connectivities, city archetypes and respective catchment areas. This enabled door-to-door journey modelling for a variety of passenger types, using the modal choice modelling output to adjust individual passenger itineraries in the air-rail network.

As a further contribution, the Solution considered various future scenarios that depict different potential development pathways of air-rail mobility, including a significant short-haul shift from air to rail, traffic growth with strong technological support, or a move towards a more decentralised, remote and digital mobility. Based on this, the Modus modelling approach can be used as a tool to assess the resulting impacts on capacities, predictability and the environment across these scenarios and for multimodal journeys.

Project objectives:

- To understand in a better way how ATM and air transport can better contribute to improving passengers' intermodal journeys and how this translates into an enhanced performance of the overall transport system;
- To explore and model the connection and dependence between ATM/air transport and other transport modes, with a special focus on the interplay between short and medium air and rail connections;

- To identify the main barriers to achieving European (air) mobility goals and how air transport can evolve by efficiently connecting information and services with other transport modes to achieve the 4 hours door-to-door goal and a seamless journey experience for passengers.

2 Communication Plan

2.1 Communication Definition and Objectives

Figure 1: Definition and objectives of Communication

2.1.1 Definition

"Communication on projects is a strategically planned process that starts at the outset of the action and continues throughout its entire lifetime, aimed at promoting the action and its results. It requires strategic and targeted measures for communication about (i) the action and (ii) its results to a multitude of audiences, including the media and the public and possibly engaging in a two-way exchange"[1]

2.1.2 Objectives

The Communication Plan of Modus was ensured in line with Article 38.1 of the Grant Agreement, from the start to the end of the project to reach out to society and to show the impact and benefits of EU-funded R&I activities e.g. by addressing and providing possible solutions to societal challenges.

Modus communication objectives:

- To raise awareness about project objectives and development to stakeholders and external actors;

[1] "*Making the Most of your H2020 project*". European IPR Helpdesk. March 2018.

https://bluebioeconomy.eu/wp-content/uploads/2021/01/EU-IPR-Brochure-Boosting-Impact-C-D-E_0.pdf

- To implement and update an online presence (website, social media) and other communication material to ensure continuous outreach of the project outcomes and the transferability of knowledge;
- To foster knowledge among all project partners and the SESAR JU ecosystem.

2.2 Communication Target Audience

In the case of Modus, the target audience is based on multiple audiences beyond the project's own community including media and the broad public. As the project was focused on multimodal mobility system the target audience goes beyond the common SESAR target audience including the railway sector:

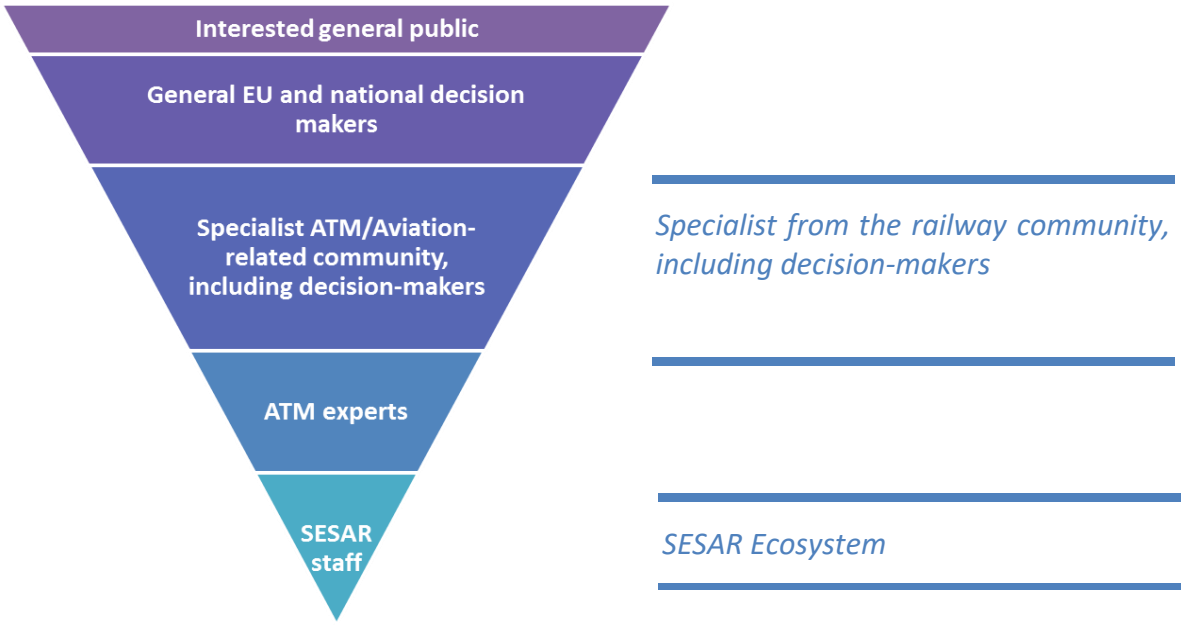


Figure 2: Message segmentation vs. Target audience

Target	Specific examples	Objectives	Means of communication
General public		Provide media, social networks and multipliers with up-to-date, transparent, easy-to-use information on advances in intermodal transport and future solutions to close gaps	Public website with news highlights; communication material such as newsletters or teasers; communication via social media (mainly Twitter and LinkedIn)
European and national authorities, regulatory bodies	National and regional governments, European Commission, other decision makers	Raise awareness about project objectives and development specially regarding gaps and barriers within an	Public website; participation in European conferences and communication with advisory councils, action groups and intermodal committees; articles in the SJU e-News or UIC e-News,

	ERA (European Railway Agency) DG MOVE, EU Joint Research Centre	intermodal transport system Support networking of decision makers with industry, academia and the Modus consortium	articles on EUROCONTROL's website, social media posts and newsletter
Aviation community	Airports, airlines	Raise awareness for gaps and barriers within an intermodal transport system	Public website; communication with advisory councils (including e.g. ACARE which the consortium partners are an active member of); open access scientific publications; articles in the SJU e-News, articles on EUROCONTROL's website, social media posts and Skyway newsletter. ECTL, with the support of ENAC, brought its deep knowledge on how to reach the aviation market and related stakeholders
Railway community	Railway operators (including rail intermodal actors, high-speed railway operators), infrastructure managers	Raise awareness for gaps and barriers within an intermodal transport system Support railway stakeholders in informed decision making regarding future alignment between transport modes Support networking between modes	Public website; dissemination at European industry-relevant conferences and communication with advisory councils; open access scientific publications the impact of intermodal integration on airside and landside operations (and other); articles in the UIC e-News. UIC, used its network to reach the railway community and stakeholders
GDS (Global Distribution Systems) organisations	Amadeus, etc.	Raise awareness for gaps and barriers within an intermodal transport system Support stakeholders in informed decision making regarding future alignment between transport modes	Public website; communication with advisory councils, action groups and intermodal committees; open access scientific publications the impact of intermodal integration on airside and landside operations (and other); articles in the SJU e-News or UIC e-News, articles on EUROCONTROL's website, social media posts and Skyway newsletter
Project partners and SESAR JU Ecosystems	Partners of the consortium, related EU projects	Foster knowledge among all project partners and the SESAR JU ecosystem	Internal communications and exchanges via the wiki like platform 'Ingrid'; organisation of internal meetings; participation

			on external workshops and conferences proposed by SESAR

2.3 Channels/Activities used to address the audience

A wide range of channels has been used, and activities were undertaken to reach the above-mentioned communications objectives and target groups:

- A coherent visual identity including the project logo, templates and poster;
- Developing an online presence in the form of project website, social media channels (Twitter https://twitter.com/modus_project and LinkedIn: https://www.linkedin.com/company/moduseuproject/);
- Periodic Enews letters have been published through the usual channels of the different members of the consortium involved in the project all along the project;
- Internal communication has been assured by a managing information system, mailing list and regular meetings;
- External communication has been based on a list of key messages about Modus to be shared with the target audiences.

2.3.1 Project Visual Identity

2.3.1.1 Logo

The logo was developed by a graphic designer after a dedicated briefing about the philosophy of Modus. It is designed to illustrate multimodality and more specifically the integration of air and rail transport as it is one of the objectives that Modus aims to achieve.

Three proposals have been presented to the project partners, all of them visualise an airplane and railway tracks in the same colour to further emphasise on integration between the two modes of transport. The colours were chosen with fidelity to the SESAR JU visual identity.

Modus	*Final version approved 14 September 2020* *(available in PNG and vector image versions)*
MODUS	Discarded option
Modus	Discarded option

Figure 3: Logo proposals

2.3.1.2 Project Flyer

An A5 flyer was made. It contains a synthetic description of the project background, objectives and expected outcomes as well as facts and figures and the list of partners. A digital version of the flyer has been made available for download on the project website and disseminated through social media accounts of project partners.

Figure 4: Flyer

2.3.1.3 Project Communication Kit

All the project deliverables and presentations followed the templates provided by the SESAR JU alongside the logo of the project.

Available template documents:

Figure 5: Deliverable Word template

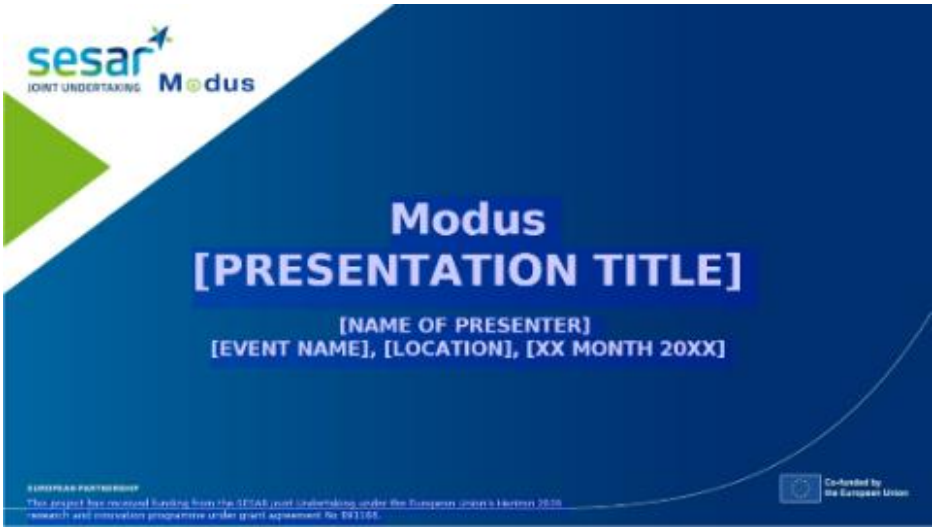


Figure 6: PowerPoint presentation template

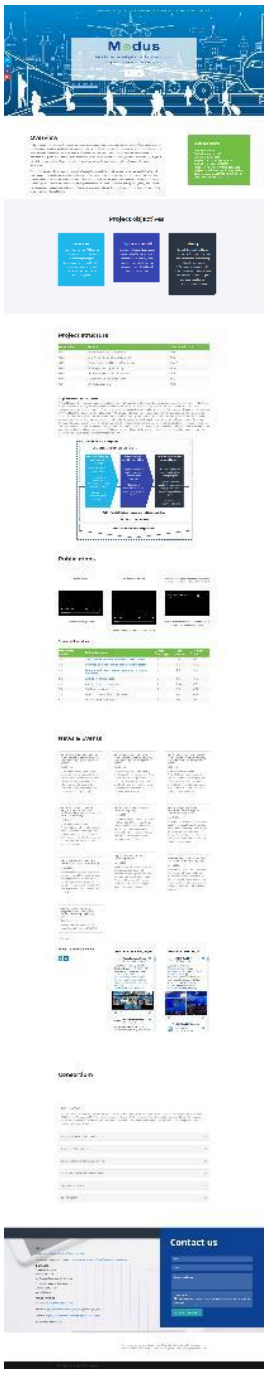
Figure 7: Wallpaper to identify Modus project contacts during online meetings

A communication kit has been shared with the partners respecting the SJU communication guidelines.

All Modus graphic communication (website, PPTs and document templates, poster…) was adapted to the new SESAR graphic charter in March 2022.

2.3.2 Online Presence

2.3.2.1 Project Public Website



A dedicated website was set up at the beginning of the project using the already set graphic identity. The URL of the website is Modus-project.eu. The website is publicly accessible, mobile friendly and is linked to Google Analytics to keep track of visitors. The public website contains the following pages:

Homepage: this page provides an overview of the project alongside a fact and figures section displaying the main facts about the project (budget, coordinator, timeline etc.). The page also contains a News feed and integrates the social media of the project;

Overview: on this page, visitors can find the most information about the project including the context and the objective of the project, as well as the methodology of its implementation;

Consortium: this page includes the logos, descriptions and links of all project partner websites;

Publications: all public deliverables of the project have been displayed in this section and are available for download once submitted and validated, as well as, events presentations, posters and brochure;

News and events: here all past and upcoming events are displayed. Newsletters and press releases are available in this section as well to keep visitors up to date with the developments and activities of the Modus project;

Contact: this page consists of a contact form that is automatically directed to the project coordinator and the dissemination WP leader.

The footer displays the EU flag and the SESAR JU logo, and the Grant Agreement number. It also includes the Modus website cookies policy.

The structure of the public website is adapted and be amended to suit the project and partner's requirements as delivery occurs. The website will remain online after the end of the project for at least three years.

Figure 8: Modus website homepage

Google Analytics and Google's tools for webmasters were used to analyse the RSS feeds and web page use. From June 2020 to November 2022, the website was visited by 7873 visitors (3582 returning users and 4291 new users) for 6430 sessions (see below).

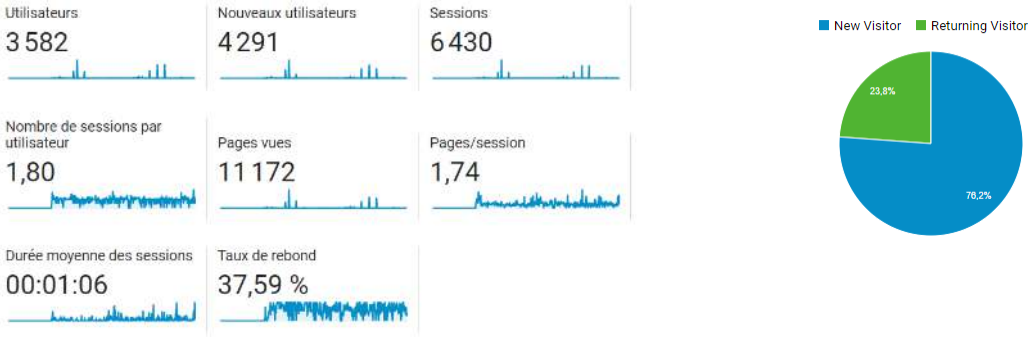


Figure 9: Number of visitors of Modus website

2.3.2.2 Social Media

The communication of the project benefited from a strong and efficient presence in social media. Twitter and LinkedIn were the two preferred media for this purpose.

A Modus Twitter and LinkedIn accounts were launched at the beginning of the project. It has been used to convey messages from the Modus project, from the SESAR JU, the partners of the project and from actors of the aviation, railways and from the transportation sector regarding multimodality. To ensure a strong synergy Modus' Twitter and LinkedIn accounts did regularly tag the SESAR JU, repost and liked SESAR JU Twitter content with a special focus on other SESAR multimodal projects' contents.

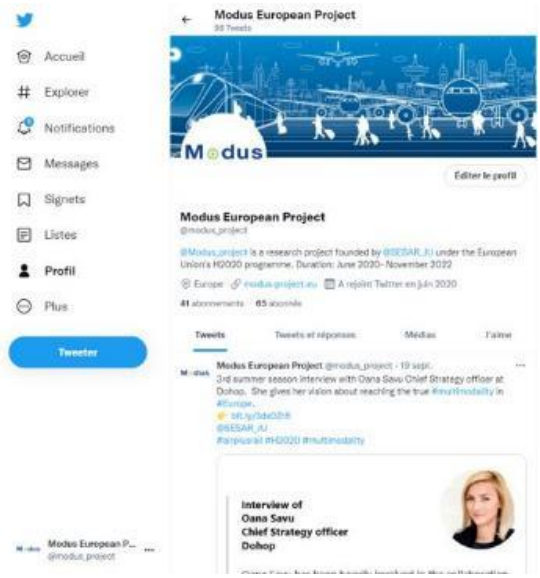


Figure 10: Tweet example

2.3.2.2.1 Number of Tweets on Modus Twitter

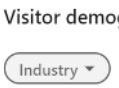
Between June 2020 and September 2022: 101 tweets, 20 994 Tweets impressions, 20 mentions, 66 followers.

Figure 11: Number of followers on Twitter Modus

2.3.2.2.2 Number of Posts on LinkedIn Modus

Since the beginning of the project, 30 posts have been done on Modus LinkedIn.

Total number of visitors (between September 2021 and November 2022): 675
Total number of followers: 185 followers



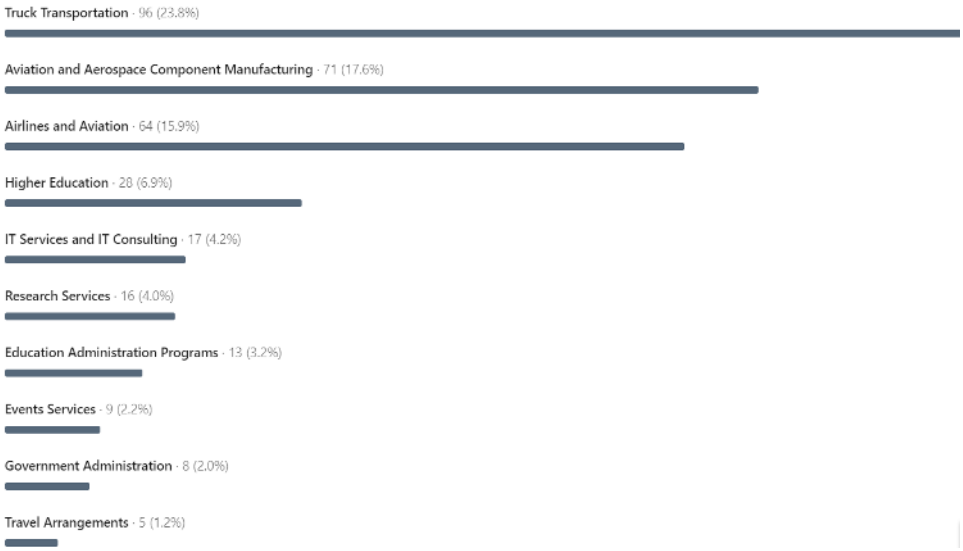


Figure 12: Visitors demographic on Modus LinkedIn

Most of visitors came from transportation (especially rail and aviation), research (7.9%), business development (9.2%), and project management (10.4 %).

In addition to the Twitter account, LinkedIn has been used as another social media medium to spread the word about Modus by using the already existing networks of the project partners.

LinkedIn is a platform most often used for business-to-business communication and to create a professional image for both individuals and corporations. Modus has opted for a company page https://www.linkedin.com/company/moduseuproject (Modus EU). LinkedIn Company pages cannot follow other users. Thus, the success of the Modus EU page relied with the active promotion of the page by consortium partners. Many of the consortium partners use LinkedIn for their own personal professional communication and as such followed the Modus EU page as well as liked and shared content posted by Modus. Posts from Modus focused on published results as well as promoting workshops.

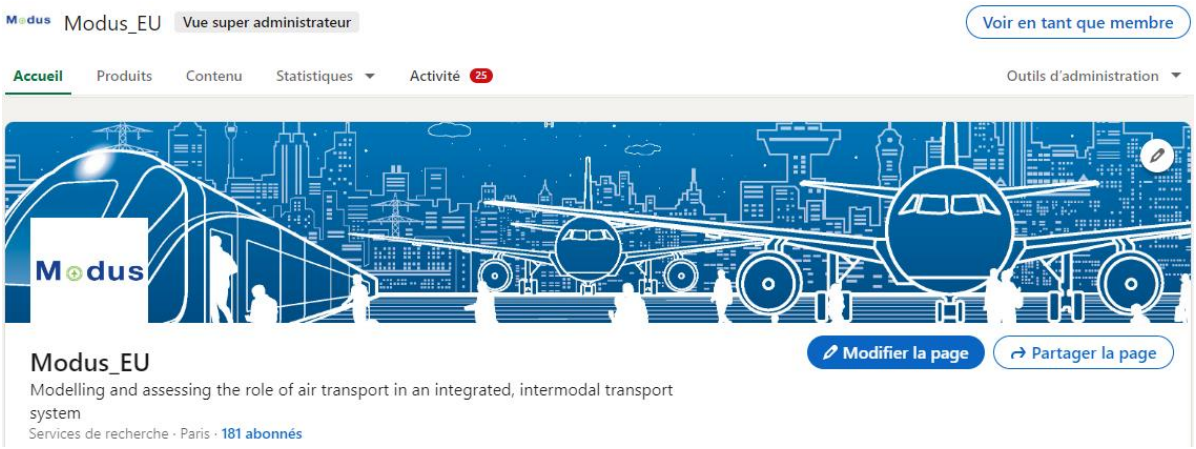


Figure 13 LinkedIn administrator page

These two social media have been used, all along the project life, to disseminate Modus results and to enhance the visibility of SESAR JU to the largest audience possible, in the aviation, railways and in the transport sector in general. They benefited from the large presence of SJU and of the project partners in the social media.

Partners posting to social media sites used the #Modus_EU hashtag so that these posts could be easily identified and relayed to other social media platforms and our project website.

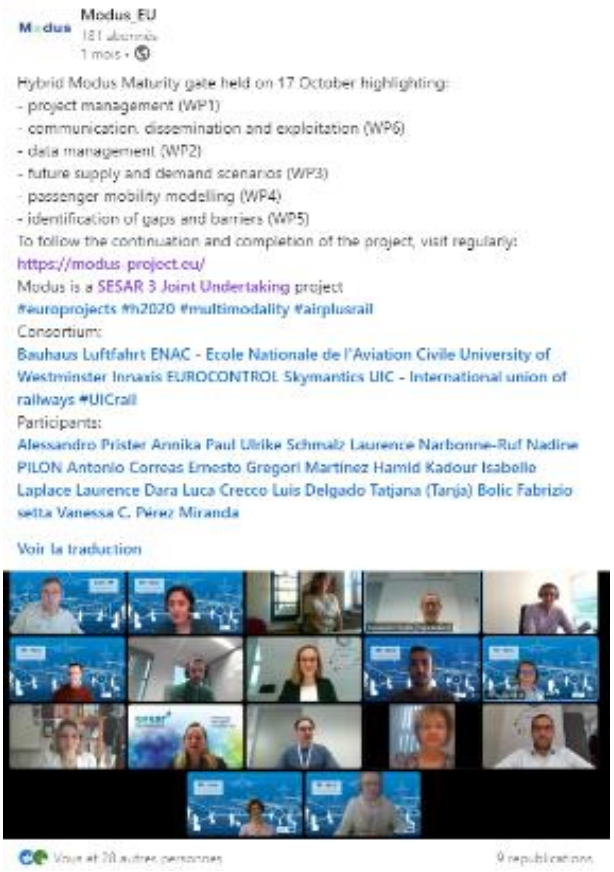


Figure 14: LinkedIn post example

2.4 E-Newsletters

Regular information has been published through the usual channels of the different members of the consortium involved in the project, such as:

- UIC e-News (articles were published in the UIC electronic letter for each Modus event, like Kick-off, deliverables and workshops), as well as for any important result achieved by the project partners. The UIC e-News is sent to more than 4000 addresses in the railway community all around the world. An article entitled “Official launch of the European Project Modus (modelling and assessing the role of air transport in an integrated, intermodal transport system) on 2 June 2020” was published in the UIC e-News #696 of 16 June 2020 (https://uic.org/com/enews/nr/696/article/official-launch-of-the-european-project-modus-

modeling-and-assessing-the-role). This article and the following are made available on the project website;

- SESAR JU channels. Annika Paul, Modus coordinator from Bauhaus Luftfahrt, interview has been published on the SESAR JU website (https://www.sesarju.eu/index.php/news/flying-multimodal-way);
- Existing communication and dissemination channels of the partners involved in Modus (such as Skyway Newsletter) have also been used. These include (electronic) newsletters, websites of the project partners and partner related communication or working events.

2.5 Internal Communication

The purpose of the internal communication has been to facilitate the exchange of knowledge among the partners and to ensure a smooth interaction and flow of information from the initial stage so that partners could share information, update activities and relevant documents in a timely manner.

Below the tools based on communication technologies that have been used to ascertain effective communication between partners for the efficient implementation of the project activities are presented.

2.5.1.1 Management Information System

Based on the partners experience in collaborative research, the team worked on InGrid a wiki-like online Management Information System. The tool (at https://research.innaxis.org) is secure to the partners. This software platform has been properly adapted to the specific requirements of the project. The suitability of InGrid for this kind of project has been largely proven by several partners of the consortium in the past years with very satisfactory results. The main objective of this private area was to facilitate communication among the consortium members, with the European Commission representatives and the members of the Industry Board gaining access to a dedicated area to exchange and inform on the project. InGrid has been the main working tool for the project for pure R&D content, communication purposes within the consortium, as well as for Management activities.

2.5.1.2 Mailing-Lists

According to the Project Management Plan, a general mailing list has been generated to ensure that all project staff members involved in the project are included in all internal communications. Mailing lists are also created depending on the needs, e.g. for WP leaders.

2.5.1.3 Project Meetings

Web conference meetings took place on a regular basis.

Types of meetings have been the following:

- Kick-off meeting
- Because of the pandemic, regular progress web meetings were organised online in order to work on the on-going tasks, assess the progress and the remaining work and exchange between work packages; in addition to that, there were meetings on a regular basis to discuss open issues, report on progress and align flows between work packages;

- WP and tasks periodic meeting, during which, implicated partners contributed, commented and discussed the progress of the work of a specific WP or task. WP and tasks meetings were more frequent and were mostly held over web-conferences;

- Industry Board and expert workshops: Industry Board members and potential additional experts were invited to participate in workshops to evaluate the progress and results of the project and provide input to the relevant tasks;

- Intermediate and final review meetings have been held respectively at M16 and M29 with the presence of the consortium partners, SJU and potentially external partners to evaluate the overall development of the project and to prepare for the dissemination and exploitation/sustainability of the project results.

2.6 External Communication: Messages Communicated

The external communication focused on informing about and promoting the Modus project and its results to the target audience. The members promoted Modus actions and its results by providing targeted information to multiple audiences in a strategic and effective manner.

The consortium agreed on the following text about Modus that every partner can use to introduce the project. This text is supposed to be understandable by the general public and decision makers.

About Modus:

Slogan: *Modelling and assessing the role of air transport in an integrated, intermodal transport system*

Description: In the context of increasing environmental awareness, regulatory measures, capacity shortages across different modes, or the need for a more seamless and hassle-free passenger journey, the future evolution of European travellers' demand for mobility is still unknown, as well as its potential impacts on the European transport system. The optimisation and alignment of intermodal transport is therefore of utmost importance for the overall performance of the (future) European transport system, especially in regard to providing a seamless and hassle-free journey for passengers as well as mitigating (air) capacity constraints.

The main objective of the project is the analysis of the performance of the overall transport system by considering the entire door-to-door journey holistically and assessing the role of air transport within an integrated, intermodal approach.

For this purpose, Modus identifies and assesses (future) drivers for passenger demand and supply of mobility in terms of their impact on passenger mode choice. This enables the development of multiple scenarios of future mobility paths, taking into account aspects such as new regulatory contexts meeting new environmental standards, or new transport operators' business models, covering a time horizon of 2040+.

The following are some of the key messages about Modus shared with the target audiences:

- The project shall contribute to better integrate and connect ATM and air transportation with other modalities.

- The project shall contribute to improve the passenger experience during door-to-door journeys, including a better understanding of customer, market and societal expectations and opportunities, leading to a customer-centric transport system.
- The contribution to the development of capabilities to evaluate mobility concepts, infrastructure and performance.

In promoting activities, members used:

The EU emblem (no need for prior approval from the SJU), downloadable from here: https://europa.eu/european-union/about-eu/symbols/flag_en

The "Supported by SESAR Joint Undertaking" logo, downloadable from here: SESAR Joint Undertaking | Use of SESAR Logos (sesarju.eu)

Reference to the grant funding from Horizon 2020: This project has received funding from the SESAR Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 891166.

2.7 Indicators to Measure Success for each Communication Channel

Communication Channels	Key Performance Indicators	Target Value	Real Value
Project website	Total visits to project's website	5000 per year	7873
Social media	Number of post views and number of followers on Twitter, LinkedIn, and ResearchGate	20 contacts per partner (140)	185 followers LinkedIn + 66 followers Twitter
Newsletter	Number of publications	1 per year	1 + 22 News items on the Modus Website
Promotional material	Number of flyers and brochures distributed	200 per year	Teaser, Youtube, posters were published
UIC Channels	UIC E-Newsletter	4500 per newsletter 3500 media contacts per release	22 articles in UIC E-Newsletter

3 Dissemination Plan

3.1 Dissemination Definition and Objectives

3.1.1 Dissemination Definition

The public disclosure of the results by any appropriate means (other than resulting from protecting or exploiting the results), including by scientific publications in any medium.[2]

Figure 16: Definition and objectives of Dissemination

3.1.2 Dissemination Objectives

The Dissemination Plan of Modus focused on describing and ensuring that results will be available for others to use at any time and as soon the action has results.

Modus dissemination objectives:

- To disseminate project development and results to stakeholders and external actors;
- To implement and update dissemination material to ensure continuous outreach of the project outcomes;
- To organise and participate in key events to ensure cooperation and establish liaisons with related projects and initiatives;
- To foster knowledge among all project partners and the SESAR JU ecosystem (especially with SESAR projects related to multimodality) to maximise the impact of EU-funded research;
- To mobilise leading experts from different business and industry sectors to participate and contribute to workshops;
- To publish the scientific and practical results (where possible) during the whole project and especially during the dissemination phase and beyond.

[2] "*Making the Most of your H2020 project*". European IPR Helpdesk. March 2018.

https://bluebioeconomy.eu/wp-content/uploads/2021/01/EU-IPR-Brochure-Boosting-Impact-C-D-E_0.pdf

3.2 Dissemination Target Audience

To maximise the dissemination effectiveness, Modus adapted the contents of its messages to the audiences that may take an interest in the potential use of the results (e.g. scientific community, industrial partner, policymakers). The table below identified the needs of the different Modus target groups and proposed a set of channels and actions for each.

Target	Specific examples	Objectives	Means of dissemination
Aviation community	Airports, airlines	Raise awareness for gaps and barriers within an intermodal transport system	Public website; Invitation to participate in the Industry Board; dissemination at European industry-relevant conferences and communication with advisory councils (including e.g. ACARE which the consortium partners are an active member of); open access scientific publications on the impact of intermodal integration on airside and landside operations; articles in the SJU e-News.
Railway community	Railway operators (including rail intermodal actors, high-speed railway operators), infrastructure managers	Raise awareness for gaps and barriers within an intermodal transport system Support railway stakeholders in informed decision making regarding future alignment between transport modes Support networking between modes	Invitation to participate in the Industry Board; public website; dissemination at industry-relevant conferences and UIC meetings; open access scientific publications on the impact of intermodal integration on airside and landside operations (and other); articles in the UIC e-News. UIC brought its deep knowledge on how to reach the railway community and related stakeholders.
GDS (Global Distribution Systems) organisations	Amadeus, etc.	Raise awareness for gaps and barriers within an intermodal transport system Support stakeholders in informed decision making regarding future alignment between transport modes	Invitation to participate in the Industry Board; public website; dissemination at European conferences, action groups and intermodal committees; open access scientific publications the impact of intermodal integration on airside and landside operations (and other); articles in the SJU e-News or UIC e-News, social media posts.
European and national authorities, regulatory bodies	National and regional governments, European Commission, other decision makers	Raise awareness for gaps and barriers within an intermodal transport system	Invitation to participate in the workshops on Modus topic exchange and assessment; public website; dissemination at European conferences and

	ERA (European Railway Agency) DG MOVE, EU Joint Research Centre, OECD	Support policy makers and the European Commission in informed decision making regarding future alignment between transport modes, and the role of ATM Support networking of decision makers with industry, academia and the Modus consortium Identify most impactful gaps and potential solutions	communication with advisory councils (including e.g. ACARE which the consortium partners are an active member of), action groups and intermodal committees; open access scientific publications the impact of intermodal integration on airside and landside operations (and other); articles in the SJU e-News or UIC e-News, social media posts.
Scientific community	ANSP, EUROCONTROL, SESAR JU, researchers, academics, conference chairs, coordinators of ongoing and former relevant projects	Demonstrate priority on research results, support excellence in science and maintain European scientific leadership with peer-reviewed published results Raise awareness for state-of-the-art, recent advances and challenges in an intermodal transport system Support networking of academia with peer group scientist, decision makers, industry and the Modus consortium	Invitation to participate in the workshops on Modus topic exchange and assessment; dissemination at European conferences and workshops; open access scientific publications the impact of intermodal integration on airside and landside operations (and other

3.3 Dissemination Channels and Activities

A wide range of activities has been undertaken to reach the above-mentioned objectives:

- Participation in and organisation of dedicated events to increase an effective dissemination of the project outcomes to target stakeholders;
- Publishing of scientific and technical papers of the project findings;
- Motivation of project partners to engage their networks.

3.3.1 Creation of an Industry Board

Modus partners established an Industry Board (IB) in the first months of the project. The board members and other experts have contributed to the assessment of results obtained during different stages of the course of the Modus project.

This board included:

- Members of the aviation, railway and transportation industry, and

- Experts from different air and railway scientific institutions

The IB has been an input across the entire Modus project, and was thus involved in the identification of future demand and supply scenarios, the assessment of passenger mobility modelling, and the identification of gaps and barriers in regard to improving the performance of the overall transport system. The involvement of IB members and other experts contributing relevant expertise to a particular topic was considered essential during different stages of the project. Industry Board members together with other experts have been solicited in a questionnaire and in two workshops as well as expert interviews to collect their views on drivers influencing the demand and supply within the future European transport system, and on the future air transport with air-rail complementarity aspects.

3.3.2 Publications/Articles

List of Modus publications during the project:

- Paul (2020), Flying, the multimodal way! in: SESAR JU E-News, June 2020.
- Paul (2020), Greener airports operations Flying, the multimodal way! in: SESAR JU E-Workshop, November 2020. *
- Paul (2020) Modus: Modelling and Assessing the Role of Air Transport in an Integrated, Intermodal System, in: SESAR Innovation Day 2020, online December 2020. *
- Paul (2021) Modus project update and expert survey in: ACARE WG1, January 2021 *
- N. Pilon (2021) Is the future of European transport multimodal?, in: EUROCONTROL/INO internal newsletter, Feb. 2021.
- Paul, (2021), How the ATM Scientific Community can support the Multimodal Transportation System Effectiveness. in: Agency Research Team (ART) workshop on passenger-centred mobility, online, June 2021. *
- Cook (2021), Key Performance Indicators in: Agency Research Team (ART) workshop on passenger-centred mobility, online, June 2021. *
- Paul (2021), Passenger travel behaviour in a future multimodal system - Insights from the Modus project", in: UIC Customer Experience Management Platform (CEMP) Workshop, June 2021. *
- Montlaur, L. Delgado, C. Trapote-Barreiram (2021) Analytical Models for CO2 Emissions and Travel Time for Short-to-Medium-Haul Flights Considering Available Seats. Sustainability MDPI in: Sustainability, Journal 2021.
- Paul (2021) Modus: Modelling and Assessing the Role of Air Transport in an Integrated, Intermodal System, in: SESAR Innovation Day 2021, online December 2021 *
- Paul (2022), What could future air-rail multimodal mobility look like? Insights from the Modus project; in: Presentation for the EU Parliament Committee on the Modus project regarding 'Aviation, maritime and rail transport in a multimodal EU transport system: comparative advantages between modes and efficiency gains of integration - PART 2: best practices in multimodal integration analysis and design', 16 May 2022. *

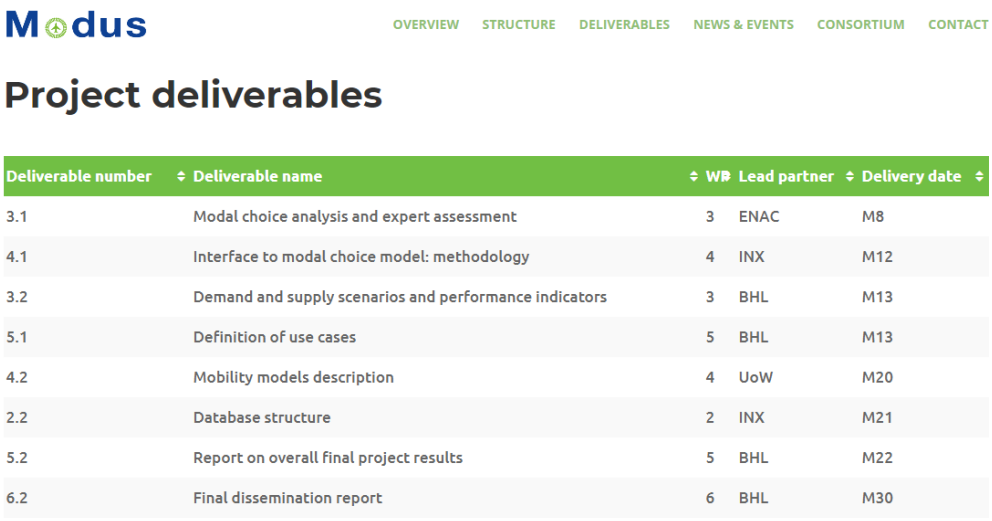
- P. Arich, T. Bolic, I. Laplace, N. Lenoir, S. Parenty, A. Paul, C. Roucolle (2022), Substitution path between air and rail in Europe: a measure of demand drivers, in: WCRR 2022, Birmingham, June 2022.
- N. Pilon (2022), Modus Scenarios for Future of Multimodal Travel: Horizon 2040, in: Passenger Terminal Expo, Paris, June 2022. *
- U. Schmalz (2022), Future Technologies and Trends - Assessing Drivers of Change, in: ILA Berlin, June 2022, https://www.youtube.com/watch?v=pQbJjXVTd6. *
- Paul, U. Schmalz, I. Laplace, A. Cook, T. Bolic, V. Perez, N. Pilon (2022), Developing Multimodal, Air-Rail Scenarios for Europe (Modus project), in: Air Transport Research Society World Conference, Antwerp + online, Aug. 2022. *
- P. Arich, T. Bolic, I. Laplace, N. Lenoir, S. Parenty, A. Paul, C. Roucolle (2022) Substitution path between air and rail in Europe: a measure of demand drivers in: ATRS, Antwerp, online, August 2022. *
- Correas, A. Correas, E. Gregori (2022), Quantification Model for Local Itineraries in Urban and Peri-Urban Areas Using Open Data, in: ETC 2022, Milan, Sept. 2022. *
- P. Arich, I. Laplace, S. Parenty, C. Roucolle, A. Paul, T. Bolic (2022), Air and rail competition in Europe: measures of substitution paths, in: INAIR 2022, Bratislava, November. 2022.
- Paul, U. Schmalz, I. Laplace, A. Cook, T. Bolic, V. Perez, N. Pilon (2022), Future multimodal mobility scenarios within Europe, in: Transport Research Arena Conference, Lisbon, November 2022.
- Perez (2022), Modus Scenarios for Future of Multimodal Travel: Horizon 2040, in: World Passenger Festival, Amsterdam, November 2022. *

** presentations in events, workshops, congresses.*

All public deliverables of the project have been displayed in a specific section in the Modus website and are available for download as are events presentations, open access publications and flyers.

Modus Twitter and LinkedIn accounts have been used as efficient tools to make stakeholders aware of Modus results to the various target groups through social media.

All publications and events are available in Sygma and STELLAR databases.



Modus

OVERVIEW STRUCTURE DELIVERABLES NEWS & EVENTS CONSORTIUM CONTACT

Project deliverables

Deliverable number	Deliverable name	WP	Lead partner	Delivery date
3.1	Modal choice analysis and expert assessment	3	ENAC	M8
4.1	Interface to modal choice model: methodology	4	INX	M12
3.2	Demand and supply scenarios and performance indicators	3	BHL	M13
5.1	Definition of use cases	5	BHL	M13
4.2	Mobility models description	4	UoW	M20
2.2	Database structure	2	INX	M21
5.2	Report on overall final project results	5	BHL	M22
6.2	Final dissemination report	6	BHL	M30

Figure 17: List of Modus project deliverables

3.3.3 Participation in Key External Events

The following events have been used as relevant platforms to promote Modus actions and disseminate the results to a wide audience. The list has been enlarged with events organised by the rail community to reinforce the effect of the dissemination of SESAR JU projects to the rail sector, to create awareness and future synergies. Due to the Covid-19 situation some of the planned activities changed their dates and venue and were organised remotely.

Events	Key Modus target groups	Dates
SESAR webinar "Greener airport operations" (online) https://www.youtube.com/watch?v=FZuVtL_pKoc	Scientific community, relevant stakeholder groups (e.g. ANSP, Airports, Airlines, EUROCONTROL, SESAR JU, Universities and Research Centres in air transport & ATM).	November 2020
SESAR Innovation Days (online/Budapest) www.sesarju.eu/sesarinnovationdays	Scientific community, relevant stakeholder groups (e.g. ANSP, Airports, Airlines, EUROCONTROL, SESAR JU, Universities and Research Centres in air transport & ATM matters). Modus final project results will be presented during the dissemination phase of the project like SESAR Innovation Days 2022.	December 2020 December 2021 December 2022
Air Transport Research Society World Conference (Antwerp), Belgium ATRS (atrsworld.org)	Scientific community, relevant stakeholder groups (e.g. aviation researchers, airlines, airports).	August 2022

Workshop "What could future air-rail multimodal mobility look like?" (Brussels) https://multimedia.europarl.europa.eu/fr/webstreaming/tran-poldep-b-workshop_20220516-1645-COMMITTEE-TRAN	European Parliament	May 2022
ILA (Berlin) https://www.ila-berlin.de/en	Aviation industry	June 2022
WCRR - World Congress on Railway Research (Birmingham) https://www.wcrr2022.co.uk/	Scientific community, relevant stakeholder groups (e.g. railway operators, infrastructure managers) WCRR is the world's largest international congress on railway research.	Jun 2022
Passenger Terminal Expo (Paris) https://www.passengerterminal-expo.com/en/	Airport, airline, authority, regulator and government teams as well as their consultants, architects and suppliers.	June 2022
European Transport Conference (Milan) https://aetransport.org/en-gb/etc	Scientific community, relevant stakeholder groups (transport practitioners and researchers from all over Europe).	September 2022
INAIR Congress (Bratislava) Air and Rail Competition in Europe: measures of substitution paths (Bratislava) http://www.inairportal.uniza.sk/	Transport community	November 2022
Symposium Nachhaltige Luftfahrt (Hambourg) https://www.vdi.de/fileadmin/veranstaltungen/cp_va_files/a0d3add6-7625-4531-ac0f-3fc73c297ac1.pdf	Scientific community	November 2022
TRA (Transport Research Arena) (Lisbon) www.traconference.eu/	Scientific community, relevant stakeholder groups (e.g. railway and other transport operators) TRA is the largest event entirely dedicated to European Research and Technology Conference on transport and mobility.	November 2022
World Passenger Festival (Amsterdam)	Transport leaders and global public to discuss the	November 2022

https://www.terrapinn.com/conference/passenger-festival/	technologies, strategies and opportunities in transport usage.	

All partners were active in the promotion and dissemination, by joining major events and conferences and presenting objectives, results and achievements of the project.

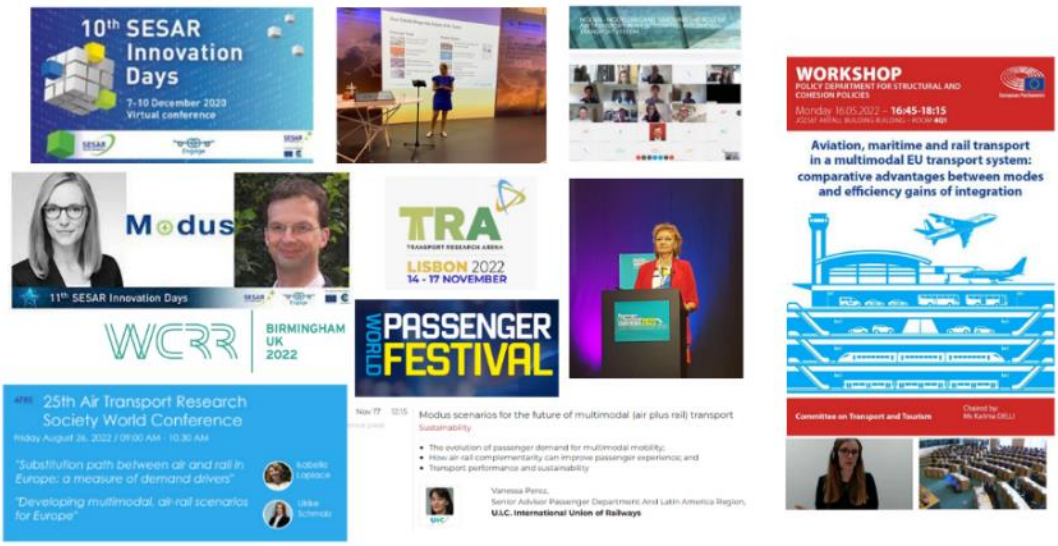


Figure 18: Modus participation in external events

A dashboard was created with most relevant elements and potential events to help the consortium to follow up the dissemination activities (deadlines, status, important short links to information…).

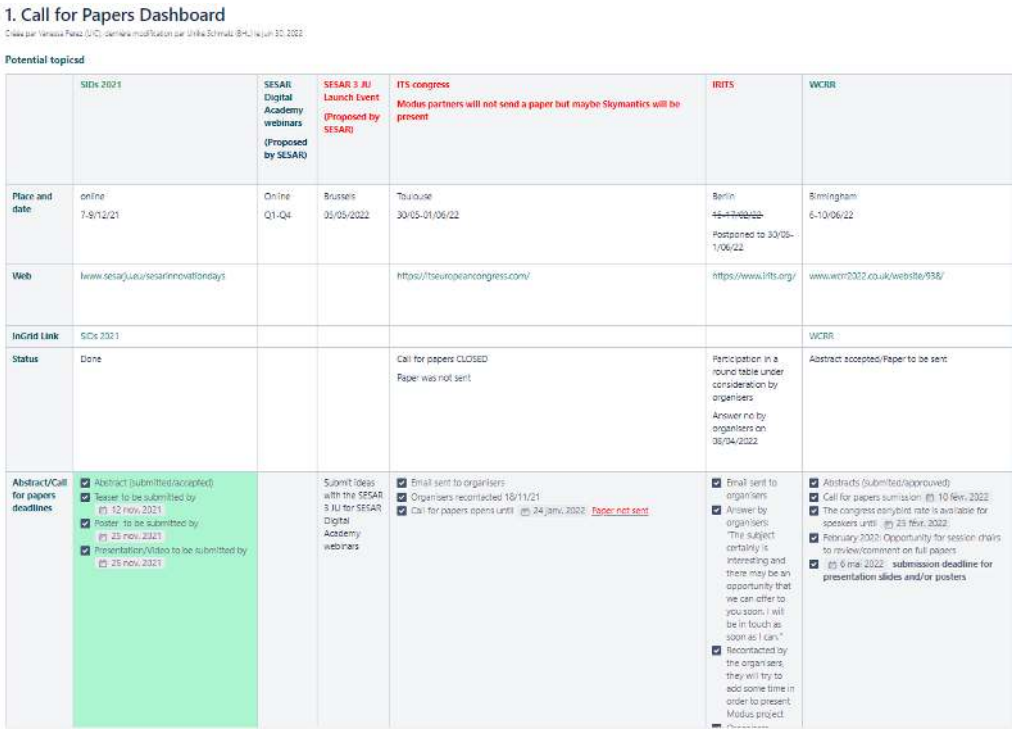


Figure 19: Modus project events dashboard

The project submitted technical/scientific papers to the SESAR Innovation Days and separately to the ATM R&D seminar or the ICRAT conference.

3.3.4 Clustering with Related EU-Projects

Modus worked closely with complementary projects and disseminated the outcomes in particular to the Europe's Rail JU, as the Modus outcomes are particularly relevant for the Innovation Programme 4 "IT Solutions for Attractive Railway Services", and the SJU.

Some of our partners were already involved as partners or coordinators in other on-going projects. Furthermore, Modus has participated in the workshops on multimodality organised by SESAR on 29 September 2020, 5 February 2021, 16 November 2021, ER4 multimodality with the objective to inform on the project and liaise with ongoing projects on similar or related topics and (when possible) promote joint activities/events.

Link to other projects and networks examples:

Project/Networks/Publications	Synergies/Cooperation/Exchange
CAMERA (EU-H2020) 2017-2021	Within the CAMERA several European transport high-level strategies are analysed and key performance areas as well as indicators are identified; these are assessed in terms of how well the current research landscape is addressing these. Both the strategies analysed here as well as the identified gaps and barriers in regard to future research needs provided valuable input for Modus. Especially WP5 focuses on the development of various use cases that foster the achievement of EU high-level transport strategies.
DATASET2050 (EU-H2020) 2014-2017	The project provided various very good publications on demand and supply drivers, passenger archetypes, or door-to-door travel metrics; especially the drivers provide a sounds basis to be further developed and extended within Modus WP3 as well as the extension of passenger archetypes, which are applied in WP3 and WP4 of Modus.
ACARE WG1 ongoing	The ACARE working group 1 provided an excellent platform to share and discuss Modus (interim) results, obtain feedback from various experts, and to foster developments towards meeting EU high-level transport goals and necessary steps which are being identified within Modus; the ACARE WG1 members participate in the Modus expert survey conducted online.
SESAR JU ER4 projects (2020-2022) • TRANSIT • IMHOTEP • X-TEAM D2D • SYN-AIR	Within the SESAR JU intermodality area, there are five projects, including Modus which exhibit a high level of collaboration potential and realising exchange as well as synergies, with all of these projects focusing in general on an intermodal transport system with air transport as an essential part, and the passenger door-to-door journey. Modus consortium participated in the workshops between all projects to present the objectives of each and highlighting high-level synergies.

	Based on the initially identified commonalities, the projects agreed to exchange on a regular basis on the following topics (inter alia), meetings (online) were scheduled accordingly: • Development and assumptions regarding use cases (first meeting in October 2020) • Passenger profiles and scenarios • Used data sources and availability • Other topics identified along the course of the different projects Modus invited the project consortium of the other four projects to its Workshops discussing and assessing the drivers for future mobility supply and demand. Furthermore, there have been bilateral exchanges between Modus and projects on identified topics, i.e. where there might be exchange of knowledge possible. During TRA conference (Nov. 2022) SESAR Multimodality projects joined forces to highlight how to overcome barriers to data sharing and enhance multimodal door-to-door seamless transport Modus also contributed to the SESAR publication published on November 2022: *Exploring the boundaries of air traffic management*, including the Modus project.
Engage KTN (SESAR-EU-H2020) 2018-2022	The Engage network and platform provided an opportunity for the Modus project to engage in helping to align exploratory and industrial research, by providing research results, fostering discussions and exchanging with experts from different areas within and outside of SESAR. It also helped to improve connectivity between projects, especially ER and IR, and to improve researcher visibility and communications.

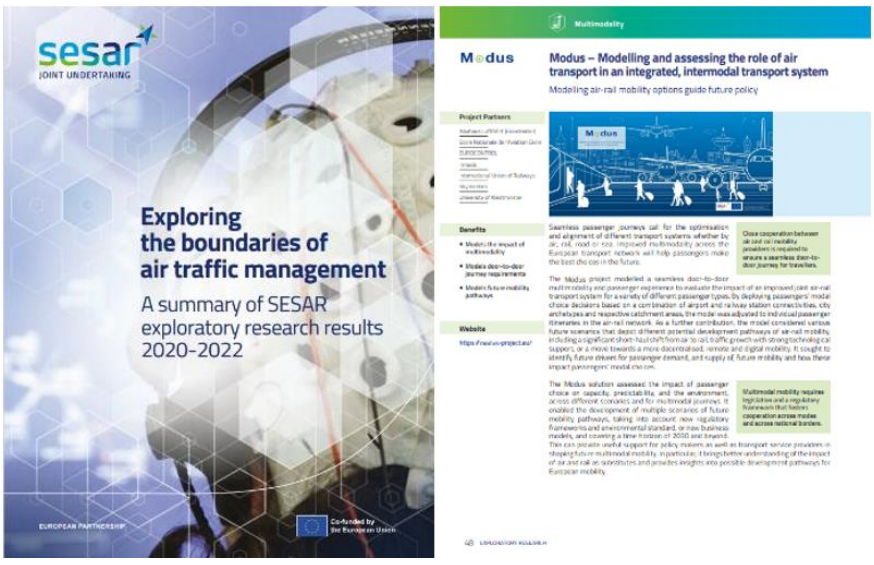


Figure 20: SESAR publication *Exploring the boundaries of air traffic management*, including Modus

3.3.5 E-Newsletter

The project produced two electronic newsletters. The newsletters were released in 2021 and 2022. They provided up-to-date information on the status and achievements of the project. INX and SKY have been in charge of one newsletter each, with the contribution of all partners concerning the content of these newsletters.

In order to ensure that the widest audience possible is reached, each partner used its own mailing list. The newsletters have also been uploaded on the project webpage.

Additionally, the consortium partners have used their own networks to widely disseminate the results of the project.

The first e-newsletter was sent in December 2021 by INX. The average on Innaxis opened was 13% and 103 clicks on the links.

Figure 21: Email performance of the first newsletter

3.3.6 Final Brochure and Dissemination Workshop

Once all the deliverables will be published, a final Modus brochure following Modus graphic elements will present the key results of the project, as well as recommendations for the different target groups.

In addition to having the general information about Modus, it will provide more detailed information about the project´s results acting as a means of exploitation.

This brochure will be disseminated through targeted mailing with target group members using a final Newsletter and a press release. A pdf version will be available on the project website. Social media have been used to promote this document.

The final dissemination workshop to be held at the beginning of 2023 will be the occasion to disseminate the brochure with the final results.

Figure 21: Modus poster with Modus graphic elements

3.4 Indicators to Measure Success for each Dissemination Channel

Dissemination Channels	Key Performance Indicators	Target value	Real value
Creation of an Industry Board	Number of Workshops	3 workshops	2 workshops
Conferences	Number of presentations	5 per year	22
Scientific publications	Number of publications	2 per year	4
Project website	Total visits to project's website	5000 per year	7873
Social media	Number of post views and number of followers on Twitter, LinkedIn, and ResearchGate	20 contacts per partner (140)	185 followers LinkedIn + 66 followers Twitter
Newsletter	Number of publications	1 per year	2 + 23 News Modus Website
Promotional material	Number of flyers and brochures distributed	200 per year	Teaser, Youtube, posters were published
UIC Channels	UIC E-Newsletter Press releases issued in 3 languages: English, French, German)	4500 per newsletter 3500 media contacts per release	Press Release published at the end of the project to disseminate last results

4 Exploitation Measures

4.1 Definition and Objectives

Figure 22: Definition and objectives of Exploitation

The utilisation of results in further research activities other than those covered by the action concerned, or in developing, creating and marketing a product or process, or in creating and providing a service, or in standardisation activities[3].

4.2 Objective

According to EC Research and innovation participant portal glossary/reference terms, the exploitation objective is to effectively use project results through scientific, economic, political or societal exploitation routes aiming to turn R&I actions into concrete value and impact for society. The exploitation of Modus results are intended to be used in further research as well as tailored for policy recommendations, including how policy makers can be reached, especially beyond the project duration. The respective exploitation strategy of Modus ensured that the impact of the project outcomes has been maximised during the project implementation and especially after the completion of the project activities.

The objectives of Modus exploitation activities are to:

- ensure outreach of the project outcomes and the transferability of knowledge;
- mobilise leading experts from different business and industry sectors to participate and contribute to exploitation events;
- collect the scientific and practical knowledge from the project deliverables and adapt them into usable recommendations and tools;

[3] "*Making the Most of your H2020 project*". European IPR Helpdesk. March 2018.

https://bluebioeconomy.eu/wp-content/uploads/2021/01/EU-IPR-Brochure-Boosting-Impact-C-D-E_0.pdf

- generate user-friendly contents based upon scientific, as well as users' knowledge and experiences;
- increase awareness and dissemination to ensure that end-users are aware of the Modus evaluated technologies, considered guidelines and recommendations;
- expand the base of operations using, among others, strategic partnerships to include all the parties in the value chain;
- motivate project partners into engaging their networks.

4.3 Exploitation Target Audience

The exploitation activities aimed at enabling different stakeholders and Modus project partners to make concrete use of research results. The target audience includes both user groups outside of the Modus project, and Modus consortium partners.

Target groups	Topics	Means
Industry (airports, airlines, railway operators)	Insights into traveller archetypes, travel behaviour and modal choice decision making; Passenger mobility modelling: schedule design and disruption impact	Leveraging Modus results via: Publications on industry stakeholder platforms; participation in relevant workshops and conferences. Scientific findings have been translated into potential courses of action regarding the implementation of an optimised European transport system, and the role of different transport service providers. The results have been provided in the form of reports (deliverables) as well as scientific publications which are accessible and applicable for operators within the aviation and rail communities, and beyond. This includes the assessment and discussion of how key performance indicators from the ATM sector are being affected.
Scientific community	Modelling approaches Extension of Mercury G2G model and RNEST tool integrating rail layer; Enhancement of modal choice analysis Travel demand and supply analysis Development and modelling application of traveller archetypes	Scientific journal publications; participation in conferences; leveraging results in teaching (novelties in modelling); exchange on modelling and validation of further modelling extensions.

	Identification and assessment of future drivers for mobility supply and demand Quantification of scenario parameters and integration into passenger mobility modelling	
Policy makers	Implications of joint air-rail mobility and incentives for different mobility providers. Topic contributions may refer to, inter alia, the establishment of multimodal cooperation with respect to specific city archetypes or European regions, insights regarding disruption management and the implications for service providers, assessment of KPAs (especially Capacity, Predictability, Environment), travel behaviour assessment and implications for door-to-door journeys.	Engagement with national and EU policy makers within the scope of each partner's scientific communication and dissemination activities (e.g. ACARE; ERA; Umweltbundesamt (DE); VDI (DE); DG MOVE; EU Joint Research Centre). Policy makers have already been addressed as part of the communication and dissemination activities from an early stage of the project; e.g. in form of participating in the Modus workshops, or attending conferences with policy maker attendance (e.g., TRA conference; TRAN workshop). The results of the Modus project will be used by the consortium partners in further discussions and exchanges concerning the design of a multimodal European mobility system.

The European Commission pursues an initiative which aims to use research and innovation project results to shape policy making, “Projects for Policy (P4P)”: https://ec.europa.eu/info/research-and-innovation/strategy/support-policy-making/scientific-support-eu-policies/p4p_en. In order to support the European Commission in evidence-based policy making, the Modus project results will also be highlighted to this particular initiative. In line with the objectives of P4P, Modus can contribute by:

- providing evidence for policy development and design in the area of an optimisation of in intermodal, integrated European transport system;
- highlighting gaps or barriers in current policy frameworks or approaches;
- helping to develop new opportunities and innovative activities for any area of policy-making across Europe and the world.

In addition to providing Modus results for the exploitation by user groups external to the project, the exploitation intentions of Modus partners are the following:

Partners	Contributions to exploitation of Modus results
BHL	BHL has been exploiting Modus results via the publication in relevant scientific journals as well as presentation of results at various national and international conferences or workshops, especially beyond the scope of the project. In addition to this, BHL will continue to discuss and exploit the findings on its own platforms, such as its yearbook or bi-annual symposium. Furthermore, BHL will foster the advancement of new multimodal transport solutions, drawing on the results from the Modus project, and highlight the role of air transport within the participation in international conferences, action groups, or committees.
ECTL	ECTL has been exploiting the results at international and European high-level conferences and seminars on the air transport system that ECTL organised or attended. It will also continue to disseminate the results through its members and by organising international conferences, seminars and workshops. New insights gained from Modus on evolution of demand and supply for air travel in intermodal air-rail transport will be inputs to future ECTL Challenges of Growth reports.
ENAC	ENAC has been exploiting Modus results through the publication of scientific articles in scientific journals and through presentations of these articles to various international scientific conferences. Modus results on the modelling of potential evolution of air-rail demand and supply will be used by ENAC to reinforce and continue its research on door-to-door multimodal air transport. Presentations of Modus results to relevant stakeholders' groups so as to boost their interest and convince them to help us going forward on multimodal transportation research by exploiting Modus results.
INX	INX has been exploiting Modus results through publishing scientific papers in research conferences, journals, seminars or workshops. The door-to-door data-driven model of the European transport system with air mode being its focal point provides new insights into the state of the progress of multimodal mobility in Europe. Innaxis will continue to present the results of Modus to interested stakeholders and partners to boost its cooperation and networking activities and continue building the work performed on the multimodal mobility research in the past years.
SKY	SKY has been exploiting the results by incorporating new door-to-door mobility insights and patterns into its research tool for passenger routing mobility. The intent has been and is to present results to the wide mobility and transportation community and leveraging on new models and algorithms for modal choice, supply and demand forecasts driving mobility behaviour. SKY will also draw on synergies regarding current international initiatives to foster collaborative mobility solutions based on open geospatial data for urban and inter-urban transportation networks.
UIC	UIC has been exploiting the results at international and European high-level conferences and seminars on rail system that UIC organises or attends. UIC will also continue to disseminate the results through its 200 members worldwide. Results regarding potential environmental benefits such as gains in CO_2 emissions will be

Partners	Contributions to exploitation of Modus results
	used as inputs to the UIC Sustainable Development Unit. UIC aims to promote best practices and will use its platforms to continue to exploit the results with railway stakeholders and associated partners.
UoW	UoW has been considering the outcome from Modus as part of it research activities focusing on the production of scientific papers in research conferences, journals, seminars. Moreover, the advancement of the state-of-the art has been and will be exploited as capabilities for further research opportunities. Also, the results and experiences from Modus will be incorporated into teaching activities, by presenting them as part of the Air Transport Planning and Management MSc which is delivered by UoW. Mercury, developed in conjunction with INX, has been enhanced and extended in Modus, providing new state-of-the art updates for further research. Modus will contribute to the material used with these various activities, increasing the potential exploitation of the results by policy makers and stakeholders.

5 Key Project Milestones and Communication/ Dissemination Activities

A list of planned activities and milestone dates including participation in the identified events has been developed as follows. This planning has been integrated into the STELLAR Communication & Dissemination Register.

Although only the kick-off meeting and the Industry Board workshops have been added to the milestone list, due to their importance, it has to be noted that web conference meetings have been organised regularly (progress and management meetings, WP and task periodic meetings, Industry Board and expert workshops, intermediate a final review meeting) with the presence of the consortium partners and with SJU and potentially external partners, when appropriate, to evaluate the overall development of the project and prepare for the dissemination and exploitation of the project results.

The last six months of the project have been the most intense in terms of the dissemination of the project results, through scientific publications, newsletters and participation in international events. The website and social media as well as the consortium partners' channels have been used to communicate and disseminate during the whole project.

As explained in Section 3.3.3 "*Participation in Key External Events*", a list of events from the railway sector has been added in the review of this document as potentially interesting to disseminate the results of the project. Attendance at all the events initially identified was not possible, due to limitations of resources (time and budget). However, an extensive list of events has been added to choose the most relevant ones with the aim of creating awareness of SESAR activity in the rail sector, in order to look for synergies and to inspire future cooperation between air and rail sectors.

Item	Type	Date	Audience	Who
Kick-off meeting	Meeting	M1 (June 2020)	Partners and SESAR staff	Consortium
Website (to be developed during the whole project)	Tool	M3 (August 2020)	General public	UIC
LinkedIn (to be used during the whole project)	Tool	M3 (August 2020)	General public, Rail and Aviation Community	UIC
Twitter (to be used during the whole project)	Tool	M3 (August 2020)	General public	UIC
SESAR Workshop on multimodality	Meeting	M4 (September 2020)	SESAR Ecosystem	BHL
Modus Management plan and project internal collaborative web platform	Deliverable	M5 (October 2020)	Confidential, only for members of the consortium (including Commission Services)	BHL

Item	Type	Date	Audience	Who
Communication, dissemination and exploitation plan	Deliverable	M6 (November 2020)	Confidential, only for members of the consortium (including Commission Services)	UIC
SESAR webinar "Greener airport operations"	Event	M6 (November 2020)	Aviation Community: Industry, Research, Policy Makers	BHL
SESAR Innovation Days	Event	M7 (December 2020)	Aviation Community: Industry, Research, Policy Makers	UIC BHL
POPD Requirement No.2	Deliverable	M8 (January 2021)	Confidential, only for members of the consortium (including Commission Services)	BHL
H-Requirement N.1	Deliverable	M8 (January 2021)	Confidential, only for members of the consortium (including Commission Services)	BHL
Modus workshop	Meeting	M8 (January 2021)	Industry Board and additional experts from different transport sectors	UIC
Participation in ACARE	Event	M9 (February 2021)	Aviation Community: Industry, Research, Policy Makers	BHL
Data Management Plan	Deliverable	M11 (April 2021)	Confidential, only for members of the consortium (including Commission Services)	INX
Modal choice analysis and expert assessment	Deliverable	M13 (June 2021)	Public	ENAC
Agency Research Team (ART) workshop on passenger-centred mobility	Workshop	M13 (June 2021)	Aviation Community	Consortium
Customer Experience Management Platform (CEMP) Workshop	Workshop	M13 (June 2021)	Railway community	Consortium
Interface to modal choice model: methodology	Deliverable	M16 (July 2021)	Public	INX
Definition of use cases	Deliverable	M16	Public	BHL

Item	Type	Date	Audience	Who
		(September 2021)		
Scientific Publication Sustainability journal	Publication	M16 (September 2021)	Scientific Community	Consortium
Demand and supply scenarios and performance indicators	Deliverables	M17 (October 2021)	Public	BHL
Communication, dissemination and exploitation plan V.1.2	Deliverable	M17 (October 2021)	Confidential, only for members of the consortium (including Commission Services)	UIC
Newsletter	Publication	M18 (November 2021)	General Public	INX
SESAR Innovation Days	Event	M19 (December 2021)	Aviation Community: Industry, Research, Policy Makers	Consortium
Participation in ACARE	Event	M21 (February 2022)	Aviation Community: Industry, Research, Policy Makers	BHL
Database structure	Deliverable	M21 (February 2022)	Public	INX
Modus workshop	Meeting	M21 (February 2022)	Industry Board and additional experts from different transport sectors	UIC
Workshop "What could future air-rail multimodal mobility look like?" (Brussels)	Workshop	M24 (May 2022)	European Parliament	Consortium
Passenger Terminal Expo (Paris)	Event	M25 (June 2022)	Aviation Community	Consortium
Scientific publication	Publication based on WCRR workshop	M25 (June 2022)	Scientific Community	Consortium
World Congress on Railway Research (Birmingham)	Event	M25 (June 2022)	Railway Community	Consortium
ILA (Berlin)	Event	M25 (June 2022)	Aviation Community	BHL
ATRS World Conference (Antwerp/ online)	Event	M28 (August 2022)	Aviation Community	BHL, ENAC
Mobility Models description	Deliverable 4.2	M26 (October 2022)	Public	UoW

Item	Type	Date	Audience	Who
Report on overall final project results	Deliverable	M27 (September 2022)	Public	BHL
European Transport Conference (Milan)	Conference contribution	M28 (September 2022)	Transport community	Consortium
World Passenger Festival (Amsterdam)	Presentation	M30 (November 2022)	Transport community	UIC
Final dissemination report	Deliverable	M30 (November 2022)	Public	BHL
Transport Research Arena 2022 (Lisbon)	Conference publication	M30 (November 2022)	Transport community	Consortium
INAIR Congress (Bratislava) Air and Rail Competition in Europe: measures of substitution paths	Scientific publication	M30 (November 2022)	Transport Community	ENAC
Symposium Nachhaltige Luftfahrt	Symposium	M30 (November 2022)	Industry and scientific community	BHL
European Aviation Conference	Poster presentation	M30 (November 2022)	Scientific community	BHL
SESAR Innovation Days	Event	M31 (December 2022)	Aviation Community: Industry, Research, Policy Makers	Consortium

6 Conclusion

This deliverable has elaborated upon the dissemination, communication and exploitation strategies that the Modus consortium has undertook in order to ensure a wide distribution of project results. The Modus consortium has been led in this endeavour by the dissemination manager, UIC. The main targeted groups as well as messages and tools that the consortium used have been laid out.

The plan fully follows the latest version of the Communication Guidelines SESAR 2020 projects, version 07.00.00, 14 January 2019 and with the requirement of uploading approved deliverables to STELLAR.

7 Applicable Reference material

[1] Communications Guidelines SESAR 2020 Projects, edition 07.00.00, 14 January 2019

[2] Modus Grant Agreement Description of Action - GA-891166-Modus

[3] Making the Most of your H2020 project". European IPR Helpdesk, March 2018

[4] STELLAR, SESAR Tool Enabling collaborative ATM Research, https://stellar.sesarju.eu

[5] InGrid, Agile project management tool for Modus, https://research.innaxis.org

[6] European ATM Master Plan Portal, https://www.atmmasterplan.eu/

[7] Modus communication website, https://modus-project.eu/

8 Contact Details

Should you need further information on Modus project do not hesitate to contact us:

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To be informed on Modus project and results please check our Website and follow us in Social Media:

Website https://modus-project.eu/

LinkedIn https://www.linkedin.com/company/moduseuproject

Twitter https://twitter.com/modus_project

9 Abbreviations and Acronyms

ATM	Air Traffic Management
BHL	Short name of Modus Coordinator: Bauhaus Luftfahrt e.V
DG MOVE	European Commission's Directorate-General for Mobility and Transport
ECTL	Short name of Modus partner: EUROCONTROL
ENAC	Short name of Modus partner: École Nationale de l'Aviation Civile
EU	European Union
GDS	Global Distribution System
IB	Industry Board
INX	Short name of Modus partner: Innaxis
IP	Intellectual Property
MIS	Management Information System
OECD	Organisation for Economic Co-operation and Development
OGC	Open Geospatial Consortium
R&D	Research and development
R&I	Research and innovation
SESAR	Single European Sky ATM Research
SJU	SESAR Joint Undertaking
SKY	Skymatics Europe SL
UIC	Short name of Modus partner: Union Internationale des Chemins de fer
UoW	Short name of Modus partner: University of Westminster
WP	Work Package