

Communication, Dissemination and Exploitation Plan (initial)

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Abstract

This document is the Communication, Dissemination and Exploitation Initial Plan for IFAV3. It contains detailed information about the Communication and Dissemination strategy, and the preliminary Exploitation strategy. It includes targets, key messages, information about branding, channels, social media, publications, events and overall KPIs for IFAV3 project actions.

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IFAV3

INCREASED FLEXIBILITY OF ATCO VALIDATIONS – V3

IFAV3

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1 Introduction

The present deliverable details the communication, dissemination and exploitation plan for IFAV3. It details the communication goals, high-level messages and a short description to be broadcasted in different media with the aim of making the project understandable at a first glance.

The communication means include the project's website, the social media and other relevant means. The deliverable also details the strategy the project will follow to make use of or disseminate the project's results, as a plan of activities including a schedule and metrics to measure its impact and effectiveness.

The exploitation charter explains the project's approach and strategy to make the best use of the project results.

1.1 Definitions

Before getting started, it is important to note the difference between communications and dissemination - see Figure 1. It is important to note that the guidance in this document refers to external communications and not internal communications between project consortium members.

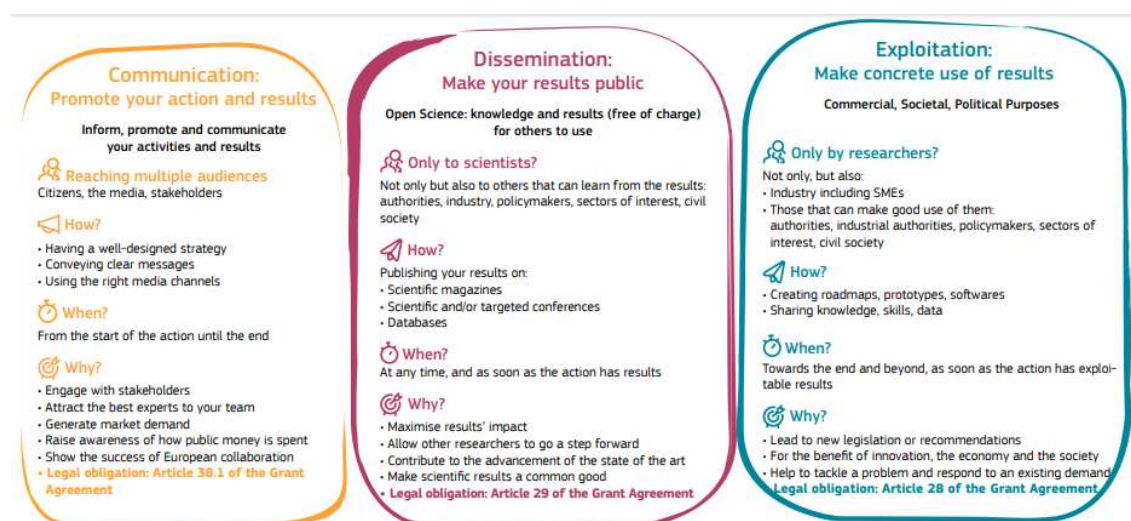


Figure 1: Definitions of communication, dissemination and exploitation in Horizon Europe

1.2 Applicable reference material

[1] SESAR JU Visual Identity Charter, latest version 11/2022

[2] SESAR 3 Joint Undertaking "Multiannual Work Programme 2022-2031"

[3] Grant Agreement number: 101114683

2 Project introduction

2.1 “About” project text

Traffic growth, environmental impact and cost effectiveness issues create a huge demand on the Air Traffic Management (ATM) to continuously optimize its processes and use of resources.

One key resource is the availability of Air Traffic Controllers (ATCO) from the Air Navigation Service Providers (ANSPs). Due to current regulations and practices, the deployment of air traffic controllers to a specific airspace or unit is restricted by unit endorsements, as controllers have to be comprehensively trained on local procedures and circumstances. IFAV3 aims at researching and enabling a more flexible deployment of ATCOs to sectors. This is a very wanted and eagerly awaited improvement in ATM, because it would improve its cost efficiency by Millions of Euros.

The concept behind increased flexibility of ATCO validations (IFAV) has various flexible endorsement strategies based on technical enablers, like specific controller assistance systems that provide support on sector specific procedures and rules, and/or procedural enablers, like ATC task standardization.

Based on prequel SESAR solutions, like PJ.33-01a/b and PJ.10-73 IFAV, this new project will continue the IFAV work done in upper area control, and progress it to V3 / TRL6 maturity. This will be the main part of the project. In addition, about 15% of the project will be spent to transfer the know-how to another beneficial and similar use case: the application of IFAV in a Remote Tower Centre (RTC). This project proposes two solutions that correspond to the described activities, and will include eight validation exercises.

2.2 Project key messages

1. Increased flexibility – SOCIAL ACCEPTANCE/STATE OF THE ART

The increased flexibility of the ATCOs validation processes and the consequent change of standards has been for long an awaited innovation for this environment. In fact, the difficulties that ATCOs may have to maintain their licenses is a well-known issue in ATM and is part of the reason for the shortage of air traffic controllers that may occur due to the high demand.

The goal for IFAV3 is to define a methodological framework to accommodate the current and future currency requirements accepted by the ANSPs community and local National Safety Agencies, namely a Common Unit Competence Scheme framework.

The main focus of the initial IFAV3 **communication** materials will be to highlight the state of the art and outline why IFAV3 could take to a new maturity level a necessary and awaited improvement that will modernize the ATM.

The **dissemination** materials will outline the resources IFAV3 created, comparing the previous environment to the one IFAV3 could introduce.

2. IFAV3's solutions – SOLUTIONS/OUTCOMES

In order to facilitate the understanding of the project and its context, significant attention will be given to integrating , in terms of **communication and dissemination**, the solutions that IFAV3 aims to develop and bring to a new level of maturity.

Moreover, the **dissemination** will focus on the outcomes of the research within the two solutions IFAV3 is delivering.

3. The methodology of an open access research – CONCEPT OF OPERATIONS

IFAV3 is a SESAR and EU funded project. Following European principles, it is essential that methods, methodologies, data and results are shared with the world of the scientific research. IFAV3 aspires to promote the sharing of knowledge and collaborating with other research projects that can enrich the two solutions envisioned.

Sharing these information will enrich both the **communication and dissemination** of IFAV3. Part of the focus will revolve around the concept of open science, to inform the general public/citizens on why is important to nourish knowledge sharing.

Obviously, data, methodologies and results will always be handled with respect for the privacy of those involved and with all information anonymised in accordance with current regulations. Internal regulations to guarantee the security of the data used and which could form the basis of new research once anonymised are also discussed in this document.

2.3 Keywords

Key Word	Definition
ATCO Validations	Airspace is organised in sectors, and each controller is responsible for controlling within one sector only, with the most usual setup being one planner and one executive controller taking full responsibility for a sector. Sector training programmes typically include both classroom and simulator training, as well as on-the-job training with live traffic with an instructor. The training is common for all students. The instructor for the live on-the-job training sessions must be a controller who holds both the sector endorsement and an on-the-job training rating.
Air Traffic Control (ATC)	ATC is a part of ATM operations that focus on managing aircrafts on the ground and in specific air sections.
Unit endorsement/ Flexible endorsement	Due to current regulations and practices, the deployment of air traffic controllers to a specific airspace or unit is restricted by unit endorsements, as controllers have to be comprehensively trained on local procedures and circumstances. The research proposed in this project aims at enabling a more flexible deployment of ATCOs to sectors.
Air Traffic Management (ATM)	A set of operations needed to ensure safety and security to aircrafts in movement. ATM includes air traffic services (in which air traffic control is placed), airspace management and air traffic flow management.

2.4 Focal point for communications, dissemination and exploitation.

Name	Role	Email address
Viviana Couto Sayalero	Communication, Dissemination and Exploitation Manager	viviana.coutosayalero@dblue.it

Table 1: Focal points of contact

2.5 Stakeholders identification

Stakeholder	Content
Researchers/Academics (R&I institutes, Universities, Private research companies)	Science-related information, outcomes
Industry (Air Navigation Service Providers, future industrial stakeholders)	Value of the project, impact for economy, future deployments
Policy-makers (regulators and standardization bodies)	Guidelines and recommendations

Table 2: Stakeholders

3 Communication

3.1 Communications objectives and strategy

At the beginning of the project and through its life cycle, the communication activities intend to:

- **Raise awareness** of the project and its mission to overcome the existing critical gaps.
- **Generate understanding** around the project activities, in the form of transferring key messages to the target audience, verifying that the messages are correctly received and facilitating comprehension.
- **Engage** the target audience in the use of the project results and findings and in further interaction between stakeholders, showing the benefits of the solution proposed.
- **Ensure long-term impact** by showing the profitability of the project outcomes to key decision makers.

To deliver an effective and efficient communication, coherent with these objectives, the type of message, topics and tone of voice will be customised according to each specific target and mean of communication identified.

Moreover, to ensure that **communication is consistent with SESAR visual identity**, the project consortium and WP4 leader will be periodically in contact with the SJU Communications office. This will guarantee that the project communication is well integrated into the broader SJU communication plan. Similarly, the European Union core objectives will be taken into consideration.

Communication, dissemination and exploitation activities will be carried out in the work package 4 (WP4) led by Deep Blue.

3.2 Communication target audiences

The communication plan is tailored for diverse audience, encompassing individuals who share an interest in aviation and digitalisation. Based on this, our strategic approach aims not only to engage, inform, and resonate to each target audience, but also fostering meaningful connections among them.

The main target audiences identified are:

- **General public:** people in some measure interested in general topics pertaining IFAV3. General public could include civil society groups (ATCOs, retired ATCOs, future generations of ATCOs, passengers associations, aviation enthusiasts, etc.) and citizens.
- **Specialized audience:** segment of the population that could be directly affected or interested in IFAV3 impact or outcomes:
 - 1) Air Navigation Service Providers (ANSPs)
 - 2) Users: air traffic controllers, airport operators, pilots, airlines, etc.
 - 3) Scientific community:
 - i) Researchers involved in similar research
 - ii) R&I institutes
 - iii) Universities
 - iv) Private research companies
 - v) Students

- **Policy-makers (regulators and standardization bodies):** this category comprises entities responsible for aligning the allocation of resources and investments with societal and economic priorities:
 - 1) Standardisation and regulatory bodies
 - 2) European Union and European Commission (EU and EC)
 - 3) SESAR 3 Joint Undertaking

Each target audience will be addressed with tailored messages, dedicated channels, and personalised activities, to ensure effective engagement and maximize the impact of our communication efforts. The table below provides a detailed overview of the overall strategy:

Target	Channel	Message	Activities
General public	Website, social media, brochure, press and media	Societal acceptance/ state of the art; Solutions/Outcomes; Concept of operations	Creation of communication campaigns on social media, Sharing of visual and textual materials providing key information on IFAV3 through different channels (posts, infographics), Elaboration of simplified visual representations (concept image, visual gallery), Distribution of informative materials (video, brochures, flyers, posters), Publication of relevant news/events on social media and website
Specialized audience/Industry	Website, social media, events presentations, brochures, video, press and media, newsletters, scientific papers	Societal acceptance/ state of the art; Solutions/Outcomes; Concept of operations	Creation of communication campaigns on social media, Share of informative social media content (posts, infographics), Elaboration of visual representations (concept image, visual gallery), Distribution of materials on the website (presentations, deliverables, brochures, posters), Publication of relevant news/events on social media and website, Publication of scientific articles in journals, Distribution of project newsletter, Invitation to the events
Policy-makers (regulators and standardization bodies)	Website, social media, events, brochures, press and media, newsletters, scientific papers	Societal acceptance/ state of the art; Solutions/Outcomes; Concept of operations	Creation of communication campaigns on social media, Share of informative social media content (posts, infographics), Distribution of materials on the website (presentations, deliverables, brochures, posters), Publication of relevant news/events on social media and website, Publication of scientific articles in journals, Distribution of project newsletter, Invitation to the project events

Table 3: Communications target audiences

To be clear: even if the messages are the same for all three targets, the way these messages will be delivered to every target is deeply different. In fact, every communication will be tailored to fit the specific recipient intended to receive it. The activities column gives a better perspective of how the message will be differentiated and what purposes this differentiation will have.

3.3 Branding and acknowledgements

IFAV3 is a SESAR 3 JU project in the Industrial Research strand. In terms of visual identity and branding, IFAV3 will follow all along the SESAR 3 JU's visual guidelines, included in the latest updates SESAR visual charter. In accordance with these guidelines, the project logo (Figure 2) has been designed in titillium font and Light Blue color (#009DD9), attributed to all the SESAR projects included in the Industrial Research strand. In addition, as allowed by the visual guideline a reverse logo has been created (Figure 3) to be used with darker backgrounds.

A strong brand identity not only establishes immediate recognition but also fosters trust among stakeholders. It serves as a visual representation of an organization's values, mission, and quality standards. Through consistent branding, IFAV3 can convey a unified message across various touchpoints, whether it's on a website, in advertising materials, or through social media.

IFAV3

Figure 2: Project logo

IFAV3

Figure 3. Project logo "white"

In all the communication and dissemination materials, the EU funding will be acknowledged by displaying the EU emblem and funding statement (Figure 4). As well, the SESAR 3 JU logo will be displayed in every communication material (Figure 5). If for any reason the visual logos can't be displayed, the acknowledgments will be transcribed textually.



Figure 4. EU emblem and funding statement



Figure 5. SESAR Joint Undertaking logo

The project's logo and brand components will be incorporated into templates supplied by SJU. These templates serve to strengthen the uniformity of the project's visual identity. Consequently, they have been established and shared with all partners for utilization in presentations, deliverables, and various documents meant for both internal and external communication. These templates prominently feature the project's logo along with its distinctive colors and, as needed, the logos of the partnering organizations. Currently, there are three different formats of templates available:

1. Word format for press releases;
2. Word format for deliverables;
3. PowerPoint format for presentations.

Effective communication throughout the entire project's duration requires active participation from all partners. Each partner is encouraged to generate and share relevant materials using their respective corporate resources. To maintain consistency and uphold the standards of communication, as well as to preserve brand recognition, Deep Blue has developed a "communication toolkit" (Figure 6). This toolkit will be shared and readily accessible on the project's SharePoint platform starting from M4.

The communication toolkit encompasses guidelines for font usage, logo placement, the use of hashtags, and adherence to SESAR's brand identity. It also includes a comprehensive list of the consortium's social media profiles, facilitating the partner engagement throughout the project.

Furthermore, partners are informed within the toolkit that they have the option to request communication materials from the WP4 leader with a minimum notice of 30 days. This proactive approach ensures both high-quality communication materials and effective task management during the project's progression.



Figure 6. Communication toolkit for partners

In section 3.4.3 the header for LinkedIn is presented. The main image chosen for IFAV3, the same as in the communication toolkit, is represented in Figure 7.



Figure 7. IFAV3's main image

To enrich the communication materials, a gallery of images (Figure 8) has been selected, to be used in alternative to the main image (which will remain the first to be used in official occasions).



Figure 8. Gallery of images for IFAV3

The Deep Blue graphic team and the communication and dissemination team will generate a visual representation of IFAV3 through a concept image. This image will be collaboratively crafted, drawing upon input from the WP leaders to capture the faceted nature of the project.

To obtain information from partners, a monthly Google Form will be distributed from M4/M5 to the designated points of contact in each organization. This form will serve as a means for Deep Blue to gather data regarding events, publications, projects connected to IFAV3 and significant milestones achieved by the partners throughout the project's duration. This information will play a pivotal role in supporting communication and dissemination efforts.

3.4 Communication channels

3.4.1 Website

IFAV3's website will grant to the project visibility and interaction at all levels: stakeholders, specialized audience, as well as general public. It will be one of the main tools for achieving communication, dissemination and exploitation objectives. The website will include the following pages:

- **Homepage**
A scroll-down page comprising an overview about the project and its main purpose, including the two explored solutions, a slider with the preview of the latest news and a call to action, inviting visitors to subscribe to the IFAV3 newsletter.

- **About**
Including information about the concept & methodology of the project and information related to the consortium (logos of the partners, and a map of Europe locating them). In this section a call to action inviting other projects to engage with IFAV3 will be present.
- **Resources**
Divided into 3 sections: i) *Deliverables*, including all public deliverables prepared by the partners; ii) *Scientific publications*, including published papers or conferences; iii) *Communication materials*, such as posters, brochures and other media.
- **News**
Aimed to share relevant news and events related to IFAV3 and SJU.

Each page will feature guaranteed links in the header via a main menu, ensuring that users can easily navigate and quickly locate the information they seek. Additionally, a static footer will be integrated into the website, remaining visible on every page. This footer will display the grant agreement, contact information for the project coordinator and communication manager, as well as links to the project's social media profiles.

The website is currently under construction, it will be hosted on the Deep Blue Server and will be found at <https://research.dblue.it/ifav3/>. A second domain will be purchased, leaner and more recognizable (ideally containing at most the word "IFAV3" or "IFAV3project" in the URL), that will redirect to the project's site hosted by Deep Blue's server.

3.4.2 Press and media

In the communication and dissemination strategy, press and media also hold a crucial role due to their capacity to reach a wider audience. Key performance indicators (KPIs) for this strategy involve the issuance of three press releases over the course of the project.

Press releases will be distributed to press offices and publications with the assistance of MediaAddress, a dedicated tool already in use by Deep Blue, which serves as a repository of journalist contacts. These press releases, collaboratively prepared by all partners, will convey and disseminate significant project events and milestones, such as the commencement of validation processes, initial results, noteworthy news, and updates. Partners will be encouraged to translate these press releases into their respective languages and share them with local media outlets to expand their outreach.

To reinforce outreach efforts and fulfill the communication and dissemination objectives, Deep Blue has compiled a database of journals and trade magazines. This database is categorized by topics including aviation, and includes details such as the name, email, website, specific target audience, and topic of each journal or magazine.

Media activity	Date	Link
Press releases	When needed	N/A

Table 4: Contribution to external media.

3.4.3 Social media

One of the main channels for communication and dissemination purposes will be LinkedIn. LinkedIn is an excellent platform to find the targeted audiences for IFAV3.

- LinkedIn profile: <https://www.linkedin.com/company/ifav3>

X (Twitter) has been avoided for IFAV3, as established in accordance with the consortium during the Kick-Off Meeting. In fact, using X for Research and Innovation (R&I) projects is discouraged due to limitations in character count and depth. X's 280-character limit hinders conveying complex research effectively. Its broad user base may not target the right audience for R&I topics, and tweets' fleeting nature limits long-term visibility.

Therefore, promotion of events, news, relevant information from SESAR and the EU/EC, milestones and outcomes from the project, materials and information will always be shared through LinkedIn into tailored messages for specific targets.

To maintain brand awareness, materials for social media have been created in accordance to IFAV3's visual identity, always following SESAR's visual guidelines.

Below are presented:

- LinkedIn header (Figure 9),
- Three different options (Figure 10) for general posts and carousels with the project image (the same three types have been produced for every project image)
- Event templates (Figure 11)
- Event template in use (Figure 12)



Figure 9. LinkedIn header



Figure 10. Options for LinkedIn posts and carousels



EUROPEAN PARTNERSHIP





Figure 11. Templates for events



Figure 12. Template for events in use

As already mentioned in section 3.3 “branding and acknowledgements”, a communication toolkit including guidelines for partners will be distributed.

Based on SESAR Visual Identity Charter, the toolkit focuses in particular on social media, promoting the use of SESAR’s hashtags (#SESAR, #SESAR3JU, #DigitalSky, #EuropeanDigitalSky, #Innovation, #Aviation, #ATM, #AirTrafficManagemen) together with the project’s hashtag #IFAV3. Moreover, partners are encouraged to mention SESAR’s social media accounts and all the consortium’s accounts, and to interact with posts from IFAV3 and SESAR.

Partners are encouraged to share with Deep Blue any relevant material in line with the project, relate to related projects or topics of interest, to share it through social media and create a positive knowledge-sharing mechanism.

3.4.4 Communication events

In Section 4.2.2, the main events for both communication and dissemination purposes are highlighted. IFAV3 will have the opportunity to engage in numerous events for communication and dissemination purposes. Table 5 includes events where the project will be initially presented and promoted. Deep Blue will facilitate and endorse partner participation in events, conferences, fairs, and workshops by crafting customized materials.

As a first example, IFAV3 will participate in the SESAR Annual Conference of 2023, held in Bruxelles the 10th October 2023. For the occasion, a banner has been prepared under the guidelines provided (Figure 13).

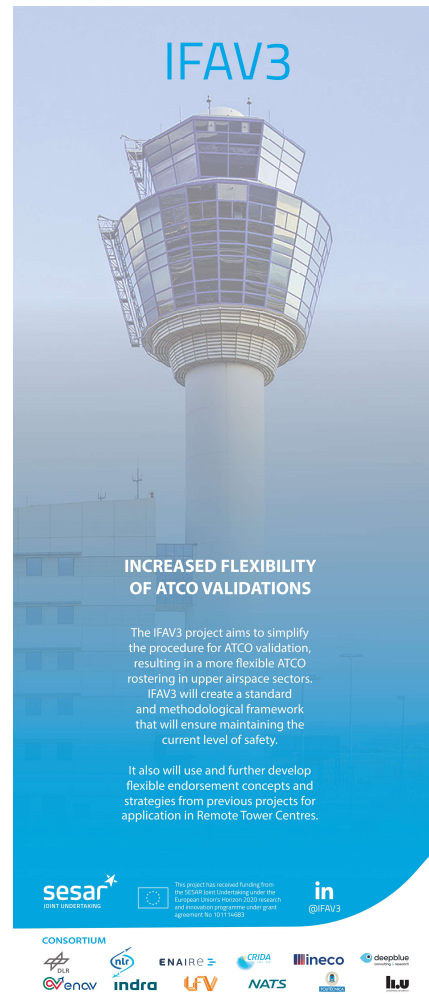


Figure 13. Banner for the 2nd SESAR Annual Conference

Deep Blue will foster and support the participation of the partners to events, conferences, fairs and workshops, also creating tailor-made materials.

Thanks to the google form mentioned above (section 3.3), Deep Blue will keep track of the events (internal or external) attended or organized by partners.

Event	Date	Place	Information to be shared	Importance for the project
Annual conference	10 October 2023	Brussels, Belgium	Poster	Start engaging with SESAR's community and new projects
SESAR Innovation Days	27-31 November '23	Seville, Spain	Overview of the project, ambition and solutions (through a video presentation)	Engage with SESAR's community and new projects, network with stakeholders.

Table 5: Events

3.4.5 Publications and newsletters

IFAV3 will produce 3 project newsletters to share new outcomes, results and insights to stakeholders. In the newsletter, relevant news related to the SJU programme will be included as well.

Printed materials will be generated for distribution at events, complemented by the availability of digital files for online distribution (which partners can print if needed). These printed materials will incorporate a QR code linking to the website to minimize paper usage and reduce waste. Additionally, a project brochure will be crafted with input from WP leaders to effectively communicate IFAV3's ambitions, goals, and objectives to specific target audiences.

E-news will be prepared and published as well, to be shared with SJU and throughout all communication channels. The first example is already published into SJU channels: <https://www.sesarju.eu/news/making-controller-rostering-more-flexible>.

Publications/newsletters/printed material	Description	Date	Link
Newsletter	Including relevant internal updates and SESAR's updates	3 newsletters overall, one per every year of the project	N/A
Brochure	Generic overview of the project	When needed	N/A
E-news	E-news with relevant information from the project	When needed	Example: https://www.sesarju.eu/news/making-controller-rostering-more-flexible

Table 4: Printed material

3.4.6 Videos

At least two videos will be developed during the project's lifetime to communicate and disseminate IFAV3.

- **Video presentation:** a first video presentation will be created through the project's presentation via Power Point. The presentation will include the main purpose of IFAV3, the solutions aimed, ambitions and possible outcomes. This video will be displayed at an initial stage to conferences and fairs, and is thought to help partners describe the project to a broad audience and stakeholders. The Power Point presentation will be looped.
- **Technical video:** a second video will focus on technical aspects of the project to provide a detailed overview with interviews and insight from consortium partners. The first events in presence will be the occasion to shoot the materials and technical interviews. If necessary, online meetings will be held to prepare the video with the partner's points of contact for WP4. The technical video will be updated with results in the future.

For all videos, the guidelines for videos and branding provided by SJU will be strictly followed, including the intro and outro provided by SESAR through STELLAR.

Videos	Description	Planning	Link
Video-presentation	Promotional video to highlight projects' ambitions and solutions	When needed (e.g., organization of events or participation to events)	N/A
Technical video	Video with technical shooting to provide a detailed overview of the project	Once the project will provide the first outcomes	N/A

Table 5: Videos

3.5 Communication key performance indicators (KPIs) and success criteria

Key performance indicators have been set to assess the communication plan's effectiveness. All KPIs will be closely monitored during all the project lifetime.

Action	KPIs	Success criteria	Currently achieved	Last update	Annual growth
Articles on specialised journals	Number of articles published	2	N/A	N/A	N/A
Presentation of poster and talks at international conferences	Number of posters and talks at international conferences	2	N/A	N/A	N/A
Press releases	Number of press releases delivered	3	N/A	N/A	N/A
Project web site	Number of visitors to the project web site	1000	N/A	N/A	N/A
References	Number of references of IFAV in other websites	10	1 (FoxATM newsletter – 6 th September 2023)	September 2023	N/A

Table 6: Communication KPIs and success criteria

4 Dissemination

This section describes the dissemination strategy, objectives, targets, means, KPIs and possible outcomes.

4.1 Dissemination objectives and strategy

Dissemination plays a crucial role in research projects, as it involves sharing findings, best practices, and expertise. This not only benefits the project's stakeholders and current partners but also contributes to the broader scientific community. It is crucial to implement dissemination efforts to facilitate the widespread circulation of data, which can expedite significant advancements in scientific research.

To disseminate our results, we will undertake a series of actions through various channels:

1. **Website:** A dedicated website will serve as the central hub for communication and dissemination. It will provide open access to public deliverables, scientific publications, and communication materials.
2. **Scientific Publications:** Research papers will be authored, submitted, and published in peer-reviewed scientific journals.
3. **Events:** Both internal workshops and external events will be organized and attended to encourage knowledge sharing among participants.
4. **Open Days/Dissemination Events:** Publicly accessible events will be conducted to showcase the methodologies employed in IFAV3 and share our results, fostering knowledge exchange.

4.2 Dissemination channels

The aim of dissemination efforts is to raise awareness regarding the outcomes of IFAV3, promote the exchange of knowledge among researchers, collaborate with other research projects to share valuable insights and expertise and stimulate the development of future research endeavors.

Channel	Objective	Tools	Link	Information to be shared
Journals/ Magazines	Inform stakeholders about results	i.e. scientific publications, technical publications	N/A	Project values, progress, results
Conferences and events	Engage with new projects/stakeholders	i.e. infographics, posters, brochures	N/A	Project values, progress, results
Website	Share project results to broader audiences and reach specific targets	i.e. videos, presentations, scientific publications, infographics	N/A	Project values, progress, results, participation to open dissemination events
Social networks	Reach targeted audiences	i.e. videos, presentations, scientific publications, infographics, digital	N/A	Project values, progress, results participation to open dissemination events

brochures				
Newsletter	Communicate news/updates and disseminate results/methodologies	i.e. text, infographics, scientific publications	N/A	Project values, progress, results, participation to open dissemination events

Table 7: Dissemination channels

4.2.1 Open access to scientific publications

The project will ensure Open Access to all of its peer-reviewed scientific publications. The consortium partners already applied open access policies in the past. For each publication, we will make available the Author Accepted Manuscript (AAM) or Version of Record (VoR) in a repository using CC BY license at the latest at the time of publication. The AAM is the accepted manuscript after peer review, without the final layout by the publisher while the VoR is the published final version with the publisher's layout. We will use trusted repository operated by the consortium partners (e.g. elib.dlr.de) or use Zenodo.

The project will also consider publishing through the Open Research Europe publication platform. When providing the publication, we will also make available the underlying data and provide information about the tools and methods used to draw the conclusions from the underlying data. We carefully evaluate which data can be made available without violating the privacy of the participants. In general, we will only make available anonymized data and will ask the participants for the permission to publish their anonymized data before conducting the exercises. In some cases, the aggregation of data could be necessary to ensure that no identification of the person is possible.

Scientific papers/ presentations	Link	Information to be shared
Journal of Air Transportation, ARC	https://arc.aiaa.org/journal/jat	Results/Outcomes/Methodologies
Human Factors	https://journals.sagepub.com/home/hfs	Results/Outcomes/Methodologies
Frontiers in Future Transportation	https://www.frontiersin.org/journals/future-transportation	Results/Outcomes/Methodologies
Safety Science Journal	https://www.sciencedirect.com/journal/safety-science	Results/Outcomes/Methodologies
Journal of Airport Management	https://www.henrystewartpublications.com/jam	Results/Outcomes/Methodologies

Table 8: Scientific papers, publications and presentations

4.2.2 Dissemination events

The project will participate to numerous conferences, fairs and events throughout its lifetime, to meet and if possible overcome the KPIs presented. In particular IFAV3 will participate, either remotely or in presence, to relevant SESAR and other external events in the aviation field. According to their specific expertise, partners will attend different types of events.

Moreover, Open Days related to the project will be organized to disseminate results and best practices to the stakeholders community.

Table 9 describes the initial plan for the dissemination events. More events will be considered throughout the project's lifetime and the table will be updated and detailed in the next CDE Plan.

Event	Date	Place	Information to be shared	Importance for the project
Joint organisation of Flagship workshops under the umbrella of Engage 2	N/A	N/A	N/A	Engage with other projects in the SESAR environment
SESAR Innovation Days (2024/2025)	N/A	N/A	N/A	Landmark in the european aviation field, SIDs are the best events to participate as a SESAR project, to engage with new projects and stakeholders
SESAR Annual Conference (2024/2025 editions)	N/A	N/A	N/A	Engage with SESAR's community and new projects
Open days	M30	N/A	N/A	Present methodologies/project results and engage with stakeholders

Table 9: Dissemination conferences and workshops

4.3 Dissemination target audiences

Target	Channel	Benefits from the project	Expected feedback
General public	Infographics spread through social media accounts, brochures	Be informed about the latest progress in aviation and the use European funds	Growth in awareness and knowledge with respect to the topics covered, create engagement
Specialized audience	Publication of scientific dissemination materials and organisation of face-to-face events	Enjoy the results and contents generated in the project	Generate interest in the research, adoption of IFAV3 know-how for other research projects, create engagement with IFAV3
Industry (providers, suppliers, future users industries)	Publication of scientific dissemination materials, face-to-face events (fairs, conferences,	Assessment for business opportunities and uptake of the demonstrated solutions	Adopt the IFAV3 know-how for other research projects, create engagement with IFAV3, integrate expertise from stakeholders, implement the demonstrated

	workshops, etc.)		solutions
Policy-makers (regulators and standardization bodies)	Publication of scientific dissemination materials and organisation of face-to-face events	Uptake of the demonstrated solutions	Support on the methodological work of the project, recommendations and feedback on project activities and findings

Table 10: Dissemination target audiences

4.4 Dissemination KPIs and success criteria

The following table contains dissemination KPIs. Unlike communication KPIs, dissemination KPIs are only and exclusively those concerning the dissemination of results, outcomes, data and know-how produced during the course of the project.

Action	KPIs	Success criteria	Currently achieved	Last update	Annual growth
Articles on specialised journals	Number of articles published	2	N/A	N/A	N/A
Presentation of poster and talks at international conferences	Number of posters and talks at international conferences	2	N/A	N/A	N/A
Press releases	Number of press releases delivered	2	N/A	N/A	N/A
Project web site	Number of visitors to the project web site	1000	N/A	N/A	N/A
References	Number of references of IFAV in other websites	5	N/A	N/A	N/A

Table 11: Dissemination KPIs and success criteria

5 Exploitation

5.1 Project exploitable results

The research proposed in this project aims at enabling a more flexible deployment of ATCOs to sectors. This is a very wanted and eagerly awaited improvement in ATM, because it would improve its cost efficiency by Millions of Euros that could be saved yearly in the European Union. The concept behind increased flexibility of ATCO validations (IFAV) are various flexible endorsement strategies, that are based on technical enablers, like specific controller assistance systems that provide support on sector specific procedures and rules and/or procedural enablers, like for example ATC task standardization.

Due to the high maturity level of the solutions aimed, it is expected that the IFAV3 will produce mature recommendations for new standards or proposed changes on regulations, as well as advanced technical knowledge for any tools enabling a technology transfer to industrial partners. This is especially applicable for solution 1 and the products tested in various V3 validation exercises.

5.2 Exploitation strategy and objectives

As various ANSPs are directly taking part in the project, it is expected that project results will trigger and drive in-house operational implementations related to this topic. Solution 1 will produce almost ready-to-use tools with only a little remaining need for further modifications.

The individual exploitation objectives, as defined at the stage of the proposal preparation, are summarized below per partner.

Partner	Plan
DLR	DLR intends to closely work together with EUROCONTROL MUAC in the frame of a cooperation contract, which offers the opportunity to transfer the knowledge and commonly tested tools directly to an end user. Beside that, also a technology transfer with other industrial partners is possible. In any case, results will be published and will lead to an update of student's lessons related to ATM held by DLR in universities
NLR	NLR plans to use the knowledge and experience gained in this project on the one hand to support our customers and be a better consultant and sparring partner when it comes to flexible ATCO endorsement. The closer collaboration with ANSPs, in this project in particular with LFV, would support us gaining more insight into how our theoretical ideas and work relate to the real operation. NLR will, on the other hand, also use the experience for dissemination purposes. NLR foresees to present its findings at a number of conferences
ENAIRES/CRIDA/INECO	ENAIRES, the fourth largest ANSP in Europe, within its strategic plan Plan de Vuelo 2025, includes plans for business model changes: services liberalization, relocation, and globalization. This implies a modernization and digitalization of the system without safety and capacity impairment. New ATCO tools (IFAV), more optimised licencing and training of their ATCO, and new currency requirements will be incorporated to achieve these goals. To do so, their affiliates CRIDA and INECO will work hand in hand with ENAIRES maturing the solutions until their implementation.
DEEP BLUE	DEEP BLUE will enlarge its portfolio of consultancy and training services in the Human Factor domain. Furthermore, it will identify future funding opportunities to

	implement R&D activities building-up on the project foreground.
ENAV	ENAV, as ANSP, is interested in investigating IFAV in Enroute and Remote Tower environments, with the aim to increase the flexibility in ATCOs deployment, in order to foster flexible endorsements, once approved and operational, in all ANSP environments.
INDRA	INDRA as large industrial partner and big supplier of European and worldwide ANSPs is directly taking part in Solution 1, and providing its iTEC platform as validation platform for the first V3 Exercise. This is done for the purpose and with the benefit that tools are directly compatible with this platform, and that any new functions can quickly be integrated in it.
LFV	LFV intends to use the IFAV work and deliverables to drive the optimisation, harmonisation for the operational performance. In particular the remote tower centre running digital ATS is the target user of the IFAV output. Results from smart grouping should go direct to LFV Enroute for safety and human performance assessment in order to be integrated in daily operations.
NATS	NATS' long-term strategic vision is any controller, any airspace, any user, anywhere. To achieve this vision, increased flexibility in ATCO validations is critical. In SESAR 3, NATS will run a joint RTS with INDRA and ENAIRE on a common validation platform. This will enable the tools that have been developed during the work in SESAR 2020 PJ.10-06, PJ.10-W2-73IFAV and PJ.33-W3-01a to be prototyped on the iTEC IBP, NATS' future operational platform. As a result, the system requirements for a deployable solution of increased flexibility in controller validations would be already captured in SESAR 3. Alongside this, NATS will lead on early maturity research looking at how increased level of automation can be used to move towards fully Generic Controller Validations. This underpins NATS' strategic vision, and also enables NATS' roadmap of novel airspace management techniques including dynamic sectorisation and future free route.
UPM	UPM will actively work to engage the national Regulatory body and local National Safety Agency to ensure the long-term adoption of the project solutions, through the internal Spanish NSA working groups where UPM participates on regular basis (such the EASA expert group on human factors...), UPM will further promote the effective integration of project outcomes into the joint Academic Training Programs currently run with certified ATCO Training Providers (SENASA and SAERCO). It will also use the collaboration agreements with other universities which are certified ATC Training Providers (University of Zagreb Faculty of Transport and Traffic Sciences - FTTS in Croatia and Eskişehir Teknik Üniversitesi -ESTU in Turkey) to further accelerate the implementation of the project solutions into their ATCO training programs. Additionally, UPM will enlarge its ATM/ ATC academic and long-life learning program with the experience and knowledge gain in the project and it will update its contents and lessons accordingly. UPM will extent research in this topic including it as part of its PhD program for further development. UPM ATC simulation facilities and ATCO students will be made available for this PhD research line.
LIU	Development of the mathematical models for optimization of human resources is one of the main research areas of the AEAR group at LIU. Application and adjustment of the framework for the needs of the Digital ATSS and ACCs will be synchronized with other research projects conducted by our group. We expect IFAV work to result in several scientific publications, which will be included into the

ongoing PhD studies.

Table 12. Exploitation objectives for partners

5.3 Exploitation of results

Project outputs	Area impacted	Action	Outcomes	When
Validation of results for solution 1 (increased flexibility on ATCO validation)	ATC, ATCOs, ATM, ANSPs, Stakeholders, Policy-makers	Further research, industrial application, licencing	Increased flexibility, decreased workload, new standards, possibly increased safety	Throughout the project, after the end of the project
Validation of results for solution 2 (application on remote tower centres)	ATC, ATM, ATCOs, Policy-makers, Stakeholders	Licencing, application	Cost savings, decreased workload, increased safety, new procedures	Throughout the project, after the end of the project
Knowledge generated within the project	Academia/research, ATM, ATC	Further research, education	Educational materials, further research	Throughout the project, after the end of the project
Increased knowledge on IFAV specific tools applied to remote tower centres	Academia/research, ATM, ANSPs	Further research, possible market validation	Understanding tools that can be applied to remote towers and those that cannot	Throughout the project, after the end of the project
Utilization of IFAV3 tools in upper airspace	ATC, ATM, ATCOs, Policy-makers	Further research, further validation	Increased flexibility on ATCO rostering for air traffic controllers and improved efficiency	Throughout the project, after the end of the project

Table 13: Project internal exploitation of results

Project outputs	Area impacted	Action	Outcomes	When
Validation of results for solution 1 (increased flexibility on ATCO validation)	ATC, ATCOs, ATM, ANSPs, Stakeholders, Policy-makers	Further research, industrial application, licencing	Increased flexibility, decreased workload, new standards, possibly increased safety	Throughout the project, after the end of the project
Validation of results for solution 2 (application on remote tower centres)	ATC, ATM, ATCOs, Policy-makers, Stakeholders	Licencing, application	Cost savings, decreased workload, increased safety, new procedures	Throughout the project, after the end of the project

Knowledge generated within the project	Academia/research, ATM, ATC	Further research, education	Educational materials, further research	Throughout the project, after the end of the project
Increased knowledge on IFAV specific tools applied to remote tower centres	Academia/research, ATM, ANSPs	Further research, possible market validation	Understanding tools that can be applied to remote towers and those that cannot	Throughout the project, after the end of the project
Utilization of IFAV3 tools in upper airspace	ATC, ATM, ATCOs, Policy-makers	Further research, further validation	Increased flexibility on ATCO rostering for air traffic controllers and improved efficiency	Throughout the project, after the end of the project

Table 14: Project external exploitation of results

5.4 Data protection strategy

The IFAV project will generate several datasets during its project's lifecycle: data sets recorded during the various validation activities, surveys, and stakeholder recommendations collected from workshops. These data sets will be handled according to the FAIR principles (findability, accessibility, interoperability, and reusability). The data expected to be generated can be grouped into the following categories:

- Qualitative feedback (Collected during meeting, workshops with controllers/stakeholders, or interview),
- Raw Performance Data (raw measurements recorded during the experiments and validations),
- Aggregated and processed performance data (indicators calculated from raw performance data),
- Technical simulation protocols (e.g. recorded flight data from validation platform),
- Interaction protocols (e.g. recorded interaction of controllers with systems).

Only anonymized data, following personal data protection laws and ethical guidance will be made available. This might prevent that raw performance data from being made publicly available. We will carefully investigate this for every case of recorded dataset. The project will assess the possibility to make data available through the European Open Science Cloud platform. Possibly, data will be shared under CC-BY license. To make sure that data can be reused, we will format the data in a way it is easily processable by other researchers. We will investigate if standards are already defined and use them as much as possible. Otherwise, we will provide with the data a description of the format we applied. The metadata will also be made available, e.g. name of tools used to record it, time and duration of recording and explanation of the relevant context.

5.5 IPR management

The project partners will agree on rules with regards to IP ownership, access rights to Background and Results IP for the execution of the project, the protection of IPR and confidential information. Partners will share the access to IP generated during the project according to the basic IPR rules defined in the GA. All IP is owned by the partners generating it. In case of joint invention, partners enter into an agreement detailing the rights and strategy for commercial exploitation and the ownership shares according to individual contributions. All partners will have access to IP generated in the project if they need it to carry out their project tasks. A Consortium Agreement (CA) on which main conditions are agreed upon will be signed by all project partners before the project start. Regarding the project results, partners will have a proactive policy to protect IP. Know-how generated, when it cannot be protected by any of the mentioned mechanisms, will be protected by trade secret. The IPR will be further detailed in the deliverable D4.2 - CDE Interim Plan.

6 Overview of communication and dissemination activities

Activity	Channel/Tool	Objective	Target audience	KPIs	Success criteria	Frequency/date
Articles on specialised journals	Specialized press	Inform about project activities and results/outcomes	Specialized audience	Number of articles published	2	When relevant results are achieved
Presentation of poster and talks at international conferences	Talks, conferences	Create awareness, disseminate results	Specialized audience	Number of posters and talks at international conferences	2	Throughout the project lifetime
Press releases	Trade press	Information on project activities and results/outcomes	Specialized audience	Number of press releases delivered	2	When relevant results are achieved
Project website	Website	Awareness, dissemination	Specialized and non-specialized audience	Number of visitors to the project web site	1000	By the end of the project
References	Other websites, Newsletters	Scientific knowledge sharing, awareness, dissemination	Specialized and non-specialized audience	Number of references of IFAV in other websites	5	By the end of the project
Newsletter	Online distribution	Awareness, state of the art, dissemination, sharing between partners and stakeholders	Specialized and non-specialized audience	Number of newsletters delivered	3	Throughout the project lifetime
Brochures	Physical distribution or through website/social media	Awareness, dissemination, information on the state of art and results	Specialized and non-specialized audience	Number of copies distributed (digital or physical)	250	Produced for every big event

Technical video	Online distribution (e.g., website) and offline (e.g., conferences)	Inform, illustrate project results	Specialized audience	Number of videos	At least 1	M20-M36
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Table 15: Overview of communication and dissemination Activities

7 List of acronyms

Acronym	Description
ATM	Air Traffic Management
ATC	Air Traffic Control
ATCO	Air Traffic Controller
ANSP	Air Navigation Service Provider
IFAV	Increased Flexibility of ATCO Validations
ATS	Air Traffic Service
KPI	Key Performance Indicator
SID	Sesar Innovation Days
SJU	Sesar Joint Undertaking
EU	European Union
EC	European Commission
FAIR	Findability, Accessibility, Interoperability, Reusability
IPR	Intellectual Property Rights
RTC	Remote Tower Centre
WP	Work Package
NSA	National Safety Authorities
EASA	European Union Aviation Safety Agency
AAM	Author Accepted Manuscript
VoR	Version of Record
CC BY	Creative Commons Attribution License

Table 16: List of acronyms