

Communication, Dissemination and Exploitation Plan

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Abstract

This document sets out the strategy directing the dissemination, communication, and exploitation activities of the HUCAN Consortium for the project's entire span. This strategy details the precise methods, tools, and approaches to be employed to optimise engagement and impact with the stakeholders identified by HUCAN.

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HUCAN

HOLISTIC UNIFIED CERTIFICATION APPROACH FOR NOVEL SYSTEMS BASED ON
ADVANCED AUTOMATION

HUCAN

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List of acronyms

Acronym	Description
AI	Artificial intelligence
ATC	Air Traffic Controllers
ATM	Air Traffic Management
ANSP	Air Navigation Service Providers
CA	Consortium Agreement
CDE	Communication, Dissemination and Exploitation
ER	Exploratory Research
IPR	Intellectual Property Rights
IR	Industrial Research
KER	Key Exploitable Results
M	Month
ML	Machine learning
R&D	Research and Development
ROI	Return On Investment
SCG	Stakeholder Consultation Group
S3JU	SESAR 3 Joint Undertaking
TOC	Table of Contents
UTM	Unmanned Traffic Management
WP	Work Package

1 Introduction

The present deliverable details the Communication, Dissemination and Exploitation (CDE) Plan for HUCAN. It sets out the communication objectives, overarching messages and chosen media to ensure the project is easily understood. The means of communication encompass the project's public website, social media, and other methods.

This report also spells out the tactics the project will employ for dissemination or utilisation of its results, detailing a comprehensive activity plan including a timeline and metrics to gauge its influence and efficacy.

The exploitation chapter describes the project's methodology to optimally utilise project outcomes, amplify the project's impact and guarantee the persistence of its primary undertakings, results, and tools even post-completion.

The HUCAN CDE Plan was formulated in the project's early phases and is encompassed within WP6 – Communication and stakeholders' engagement. Deep Blue team, leading WP6, will oversee the holistic execution, administration and the aid to the tasks outlined in this CDE Strategy. They will also generate the primary tools and resources for use throughout the project, aligned with the S3JU Communications Strategy.

This document delineates:

- Aims of the Strategy
- Targeted demographics and associated communication and dissemination goals
- Principal tools and channels for communication and dissemination to engage the audience
- A collection of Key Performance Indicators (KPIs), and the associated hurdles and challenges to achieve these KPIs

Achieving the goals of the CDE Strategy will be facilitated by the synergy of its elemental tasks and the active engagement of all collaborators in their execution. Partners are anticipated to:

- Launch promotional and dissemination drives both nationally and across Europe
- Harness their personal networks
- Contribute updates and content for the digital communication campaign via social platforms and the website (e.g. keeping the WP Leader informed of significant events)
- Inform the WP Leader when a news piece or article regarding the project is released in their native language
- Engage with the project's posts across diverse social media platforms
- Recognise and attend pertinent events to champion the project and its 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.

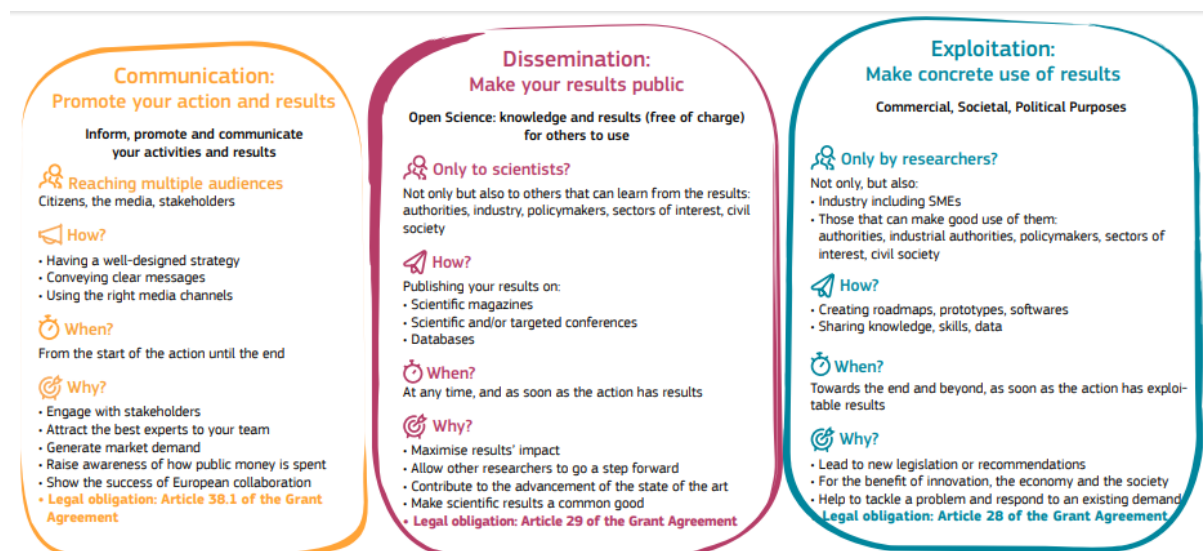


Figure 1 Definitions of communication, dissemination and exploitation in Horizon Europe

1.2 Objective of the Strategy

The main purpose of the HUCAN CDE Plan is to provide partners with a complete structure containing guidelines, duties, and schedules to adjust the strategic distribution of the project. Additionally, the Plan propels partners to leverage their personal communication avenues (like company websites and social media accounts) to amplify the HUCAN dissemination effort.

Specific objectives include:

- To increase the visibility of HUCAN and its achievements
- Highlighting HUCAN's objectives, and later spotlighting its results as the project nears conclusion
- Articulately presenting project outcomes to pertinent stakeholders, underscoring the merit of the novel solutions devised
- To identify and use the right channels to efficiently communicate with the target groups and stakeholders

Additionally, the Strategy delineates numerous tasks destined to realise the aforementioned aims, such as:

- Developing the project website that stands as the main entry point for every news and update of HUCAN
- Produce the necessary supporting material to ensure an effective dissemination, including printed material (i.e. brochure, poster, roll-up) and digital materials (videos, social media cards)
- Prepare and share press releases, factsheets and other relevant material, to inform about the latest news and developments of the project to the media
- Identify potential ways for ensuring all project outcomes beyond the duration of the project

As the first release of the HUCAN CDE Plan, this document is crafted to possess fluidity and adaptability. It's a dynamic and **living document** set for periodic evaluations and updates during the project's course, with two explicit intervals slated for review and update of the Plan (M13 and M19).

1.3 Applicable reference material

1. HUCAN Grant Agreement, number: 101114762
2. European Research Executive Agency, [Communication, dissemination & exploitation what is the difference and why they all matter](#), 16/06/2023
3. [S3JU Communications Strategy \(02.00 edition\)](#)
4. S3JU Communications Guidelines (0.03 edition), available on STELLAR
5. S3JU, [Project communication at a glance](#)
6. [S3JU Visual Charter \(update 11/2022\)](#)
7. SESAR 3 Joint Undertaking Project Handbook, Edition 01, April 2022, available on STELLAR
8. DES DSD CDE Plan - Annex I - Press releases, available on STELLAR
9. DES DSD CDE Plan - Annex II – Events, available on STELLAR
10. DES DSD CDE Plan - Annex III – Web presence, available on STELLAR

2 Project introduction

2.1 About HUCAN

HUCAN focuses on the evolution of Air Traffic Management (ATM) through the integration of advanced automation including Artificial Intelligence (AI) - based technologies. Recognising the rapid advancements in automation and AI and their potential in transforming the ATM landscape, HUCAN aims to bridge the gap between current practices and a future where technology and human capabilities merge. At its core, the project seeks to **develop a novel certification method that combines technical reliability with a human-centric approach**. The intention is to establish a unified framework for the certification and approval of ATM-related systems, including those powered by AI solutions. Moreover, HUCAN endeavours to create guidelines and toolkits to aid manufacturers in streamlining the development of such technologies. Rooted in a collaborative standard, the project leverages case studies to ensure a comprehensive approach, with the ultimate goal of shaping future legislative and regulatory measures in the realm of advanced automation and AI certifications.

2.2 Project main key messages

Key message	Description
Pioneering AI integration in aviation	The HUCAN project is at the forefront of integrating Artificial Intelligence into Air Traffic Management, revolutionising the aviation industry with cutting-edge technology for enhanced safety and efficiency
Certifying the future of airspace management	The HUCAN project aims to establish new benchmarks in certification, ensuring that the integration of advanced automation and AI in aviation meets the highest standards of safety, reliability and regulatory compliance.
Collaborative Innovation for Advanced Aviation Systems	The HUCAN project embodies a collaborative approach, uniting industry experts, researchers and regulatory bodies to co-create the next generation of air traffic management systems, driving innovation and excellence in the global aviation sector.

Table 1 HUCAN Key messages

2.3 Keywords³

Keyword	Definition
ATM automation	ATM automation refers to the systematic use of technology, especially computers and other automated systems, to manage and control air traffic without or with minimal human intervention. This ensures

³ For the “Definition” of HUCAN Keywords, we used these references: [EUROCONTROL - Glossary](#), [SKYbrary](#), [EASA Pro](#), [ICAO](#), [SESAR 3 Joint Undertaking](#).

	streamlined operations, increased efficiency, and safety in managing flight paths, aircraft spacing, and overall airspace management.
Certification methodology	A certification methodology is a structured process or system employed to validate and verify the competence, capability, or performance of a product, system, or individual. In the aviation context, this often involves rigorous testing, inspections, and evaluations to ensure that equipment, processes, or personnel meet predefined standards and safety criteria.
Artificial Intelligence and Machine Learning integration	The incorporation of AI and Machine Learning (ML) technologies into systems or processes. AI is the broader concept of machines being able to perform tasks in a way we would consider "smart", while ML is a current application of AI that allows systems to automatically learn and improve from experience without being explicitly programmed. In aviation, this integration can facilitate tasks ranging from predictive maintenance to enhanced traffic management.
Human-Centric approach	A human-centric approach places the human aspect at the core of decision-making, design, and operational processes. It emphasises the importance of human roles, skills, and expertise, even as technology and automation advance. Such an approach prioritises human safety, comfort, and efficiency, ensuring that technological advancements enhance human capabilities rather than replace them.
Aviation legal regulations	Set of rules, standards, and guidelines established by aviation authorities to govern and oversee aviation activities. They ensure the safety, security, and orderly development of civil aviation. These regulations cover various aspects of aviation, including aircraft design, pilot training, air traffic control operations, airport operations, and passenger rights, to name a few. Compliance is mandatory for stakeholders in the aviation industry.

Table 2 HUCAN Keywords

2.4 Focal point for communications, dissemination and exploitation

Name	Role	Email address
Serena Fabbrini	Communication and dissemination Manager	serena.fabbrini@dblue.it
Paola Lanzi	Exploitation Manager	paola.lanzi@dbleru.it

Table 3 Focal points of contact

2.5 Stakeholders identification

In the realm of aviation, particularly when integrating advanced technologies such as AI and refining ATM automation systems, the identification of stakeholders is pivotal to ensure a holistic approach that takes into account the interests and concerns of all relevant entities. Here, we outline key stakeholders pertinent to the HUCAN project and the wider aviation sector:

Stakeholder	Description	Content
Producers and manufacturers	Entities that design, build, and refine aviation technologies, including those centred on AI and automation. They are on the frontline of introducing innovations to the aviation sector.	Guidelines and toolkit developed by HUCAN Workshops and seminars on AI integration in ATM systems Feedback mechanisms for improvements and future developments
ANSPs	They are responsible for ensuring the safe movement of aircraft within their designated airspace and on the ground at airports. ANSPs would be directly impacted by any changes or improvements in ATM automation.	Best practices and guidelines on the integration of AI in ATM Certification methods developed by HUCAN Periodic reports on the advancements of HUCAN Guidelines and toolkit developed by HUCAN
Public authorities and policy makers	Organisations such as the European Aviation Safety Agency (EASA) play a key role in setting standards and regulations for member states, influencing both policy and practice.	Summaries on the project's findings Recommendations, guidelines and lessons learnt for legislative and regulatory changes
SESAR 3 JU Community	The SESAR JU Community encompasses a broad spectrum of stakeholders in the European aviation research sector. They collaborate to modernise and harmonise air traffic management in Europe, playing a significant role in guiding and influencing research priorities and technological developments.	Regular project updates and reports Invitations to workshops, conferences, and stakeholder engagement events
General public	Beyond just the passengers, the broader public has interests in aviation due to its economic, societal, and environmental impacts. Their perception and acceptance of new technologies and practices can influence aviation policy and commercial decisions.	Infographics and easy-to-understand summaries on the importance of HUCAN. Press releases and media kits for wider dissemination

Table 4 Preliminary identified stakeholders

3 Communication

3.1 Communications objectives and strategy

The core communication objectives of HUCAN are:

1. **Raise awareness:** enhance the understanding of the project's goals, methodologies, and outcomes within the targeted communities, notably the stakeholders identified earlier.
2. **Stakeholder engagement:** actively engage with specific stakeholders to gather feedback, seek collaborations, and promote the benefits of the project.
3. **Disseminate knowledge:** share findings, methodologies, and best practices of the project with experts in the field and other relevant stakeholders to ensure the research's tangible application.
4. **Promote adoption:** advocate of the adoption of the certification methodologies, AI tools, and best practices developed within HUCAN.

To achieve these objectives, and therefore delivering an effective and efficient communication, the information will be personalised for the different categories of stakeholders. Personalisation will not be limited to information content, but it will also consider the style of the message and the means through which it is spread (e.g., document, website, social media). HUCAN communication plan will identify the most appropriate set of means for each category of stakeholders.

Finally, to ensure that **communications are consistent within SESAR**, the project consortium will be in constant contact with the SJU Communications office in order to:

- Ensure that project communications and outreach milestones are integrated into broader SJU communications scheduling and planning
- Review strategies, key messages, targeted audiences and communications material on SESAR solutions so that consistency with SJU's core objectives is ensured
- Develop joint outreach activities taking into account established cooperative arrangements by the SJU or with the European Commission within the context of SESAR
- Benefit from support of the SJU for various events and conferences
- Maximise outreach by using SJU communications channels and cooperative arrangements to further cascade relevant content

Given the nature of the HUCAN project and its focus on specific public rather than the general media, the communication strategy will be tailored accordingly. Here's the proposed approach:

1. **Targeted Communication:** direct the communication efforts predominantly at the identified stakeholders. This ensures that the content reaches those who can derive the most value from it and influence the project's objectives.
2. **Tailored content:** as each stakeholder group has its distinct interests, tailor the communication content to resonate with them specifically. This includes using the appropriate technical language, addressing their concerns, and highlighting the benefits most relevant to them.

3. **Quality over quantity:** prioritise few, well-structured and impactful communication initiatives over a barrage of messages. This might include specialised workshops, webinars, or seminars, where meaningful exchanges can occur.
4. **Interactive platforms:** employ platforms where there's room for interaction (e.g. roundtables or online forums). Here, stakeholders can ask questions, provide feedback, and engage in discussions, allowing for a more in-depth understanding of their concerns and needs.
5. **Regular updates:** while the number of communication actions might be limited, ensure that stakeholders are updated at significant project updates or when crucial findings are available.

3.2 Communication target audiences

To achieve effective communication for the HUCAN project, it's essential to tailor messages and methods based on the specific target audience.

Using a high-level conceptual categorisation of the target audience identified by HUCAN, it is possible to identify at least three main clusters:

- **Aviation specialised audience**, further identified in:
 - **Producers and manufactures**
 - **ANSPs and airlines**
- 1. **Public authorities and policy makers** (European Commission, SESAR 3 JU, regulatory and safety agencies)
- 2. **Interested general public** (citizens, local association, media)

Table 5 outlines the target audiences, channels of communication and the core message for each.

Target	Channel	Message
Aviation specialised audience	Website, press and media, social media, communication events, publications and newsletters	Raise awareness, generate understanding, engage, ensure impact, promote networking, engage for collaborations, engage for exploitation
Public authorities and policy makers	Website, press and media, social media, communication events, publications and newsletters	Raise awareness, generate understanding, engage, ensure impact, inform on social acceptance results, promote networking, Engage for exploitation
Interested general public	Website, press and media, social media, communication events	Raise awareness, generate understanding on the project and future benefits

Table 5 Communications target audiences

3.3 Visual identity: branding and acknowledgements

The visual identity serves as the primary element for a consistent, compelling, and impactful communication framework.

The HUCAN visual identity has been shaped following the S3JU Visual Charter that specifically aims to:

1. Build brand recognition and thereby brand value;
2. Improve the efficiency of both internal and external communications;
3. Produce a professional and consistent visual identity across all media.

The HUCAN logo (in Figure 2) has been provided by S3JU. Other key elements of visual identity have been provided by S3JU, including the font (Titillium regular) and the colour deep blue (HEX: #00306F) identified for Exploratory research projects.

HUCAN

Figure 2 Project logo

All project-related communication and dissemination actions will recognise EU backing, showcasing the European flag and funding declaration (Figure 3, right), in line with the Grant Agreement, chapter 4, section 2, article 17.2. Furthermore, for cohesive messaging and to establish brand identity, HUCAN will incorporate the SESAR logo (Figure 3, left) in all promotional materials pertaining to its project initiatives.



Figure 3 S3JU and EU logos. For all CDE actions, HUCAN will acknowledge EU funding by displaying the EU emblem and S3JU logo, in addition to the project logo

3.3.1 HUCAN mood board

Within the broader scope of branding and acknowledgements, the creation of a HUCAN mood board plays a pivotal role. This visual tool is the result of extensive image research, meticulously curated to encapsulate the project's core themes: ATM, AI, and certification processes. The mood board serves

as a cornerstone for the project's visual identity, guiding the aesthetic direction for images utilised across various platforms, including social media and the official website.

The mood board is crafted to resonate with the essence of the HUCAN project, presenting a collage of imagery that reflects innovation, precision, and the intersection of human expertise with advanced technology. It is a strategic blend of graphics and photographs that convey the sophistication of AI systems, the dynamics of modern ATM, and the rigorous nature of certification in the aviation sector. Each element selected for the mood board is purposeful. It includes:

- **Technological imagery.** Representing AI, with visuals that signify algorithms, data processing, and intelligent systems.
- **Aviation Graphics.** Depicting elements of ATM, such as control towers, aircraft, and global air traffic patterns.
- **Certification symbols.** Incorporating icons and motifs that represent approval, standards, and quality assurance.

The mood board serves a distinct role, separate from the creation of a concept image. While the concept image will provide a specific visual representation of the project's end goal or product, the mood board is a broader, inspirational tool. It's used primarily to guide and influence the project's aesthetic and thematic direction, ensuring that all visual and conceptual elements developed throughout the project are aligned and cohesive. The mood board acts as a visual reference point for the project team, helping to maintain a consistent style and mood in all communications, designs, and implementations related to HUCAN.

By translating HUCAN themes into a visual format, the mood board ensures a coherent brand experience across all the communications actions. It not only strengthens the project's identity but also assists in conveying complex concepts in an accessible and aesthetically pleasing manner. The mood board is not merely a collection of images; it is a visual narrative that tells the story of HUCAN's ambition to harmonise AI with ATM for a safer, more efficient future in aviation.

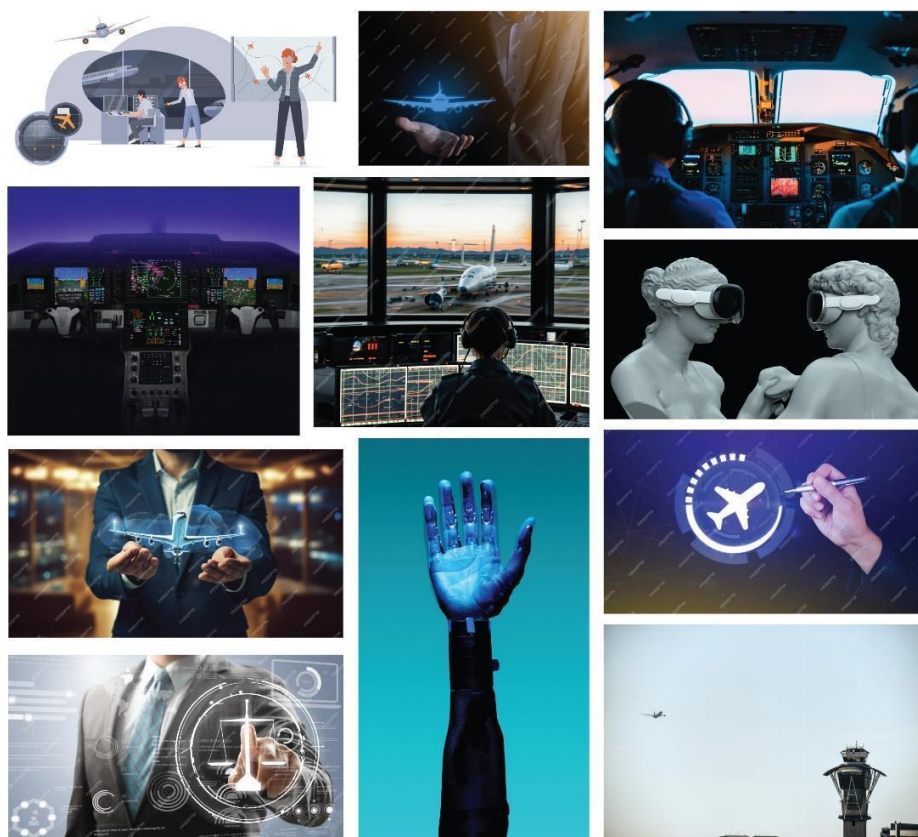


Figure 4 HUCAN final mood board

3.4 Communication channels

3.4.1 Website

The development of a dedicated website⁴ is central to HUCAN's communication strategy. As of the submission of this deliverable, the website is under development: by M6 it will be a primary avenue for disseminating our project's goals, achievements, and other relevant details.

The website aims to serve as the principal dissemination platform, catering to both scientific communities and the broader public. The interactive and user-friendly layout will ensure easy navigation and access to pertinent information.

Key features of the website will include:

1. **General information:** a comprehensive overview of the project, a detailed introduction to the consortium, and an outline of the significant activities that the project encompasses.

⁴ The website will be hosted on the Deep Blue Server (www.dblue.it)

2. **News section:** this dynamic section will be updated regularly, reflecting the latest developments and milestones achieved by the project. It aims to keep the stakeholders and general public informed about our progress.
3. **Reference material:** a repository where visitors can access essential documents, research findings, publications, and other material integral to the project.
4. **Events calendar:** an organised timeline of significant upcoming events, including workshops, presentations, conferences, and seminars. Accompanying each event listing, users will find related materials such as presentations, agendas and more, fostering engagement and keeping our audience informed.

In addition to the HUCAN website, SESAR provides a **dedicated webpage on the SESAR official website** [<https://www.sesarju.eu/projects/hucan>]: this webpage serves as a vehicle of communication news and updates to a wider public. The communication and dissemination leader will keep informed the SESAR Communication office to maintain updated this webpage with the latest news.

A preliminary version of the HUCAN website TOC is provided.

Page	Content
Home Page	Header with logo and menu Banner with title and picture Project description Project objectives Timeline Carousel with latest news Footer with funding acknowledgments, contacts, social media links
About page	Context Objectives and methodology Expected outcomes Related activities/projects Stakeholder Consultation Group
Consortium	Logos and description
Products	PU Deliverables Scientific Publications Communication and dissemination material
News & events	News & events Archive
Gallery	Photographs Videos

Table 6 HUCAN preliminary website TOC

3.4.2 Press and media

Engaging with the press and media is a crucial aspect of ensuring HUCAN reaches a broader audience and generates public awareness and interest. While the communication strategy leans towards specific target audiences, media play a crucial role in shaping public opinion and conveying complex topics to a general audience in an understandable manner.

Media activity	Date	Link
<i>Past contribution</i>		
Press release: HUCAN Project takes off: leading the way in AI-enabled ATM certification and automation guidelines	23/10/2024	N/A
Taking a holistic approach to AI-enabled ATM certification and automation guidelines	24/10/2023	https://sesar.eu/news/taking-holistic-approach-ai-enabled-atm-certification-and-automation-guidelines

Table 7 Contribution to external media

3.4.3 Social media

In the era of technology social media platforms have become important tools for communication reaching out to others and building connections. These platforms allow us to engage directly with a range of people, gather their input and create a sense of community focused around common goals. In our project we have specifically chosen two social media platforms; LinkedIn and X. The platforms have become active at the end of M2.

Expected social media KPIs are provided in chapter 3.5.

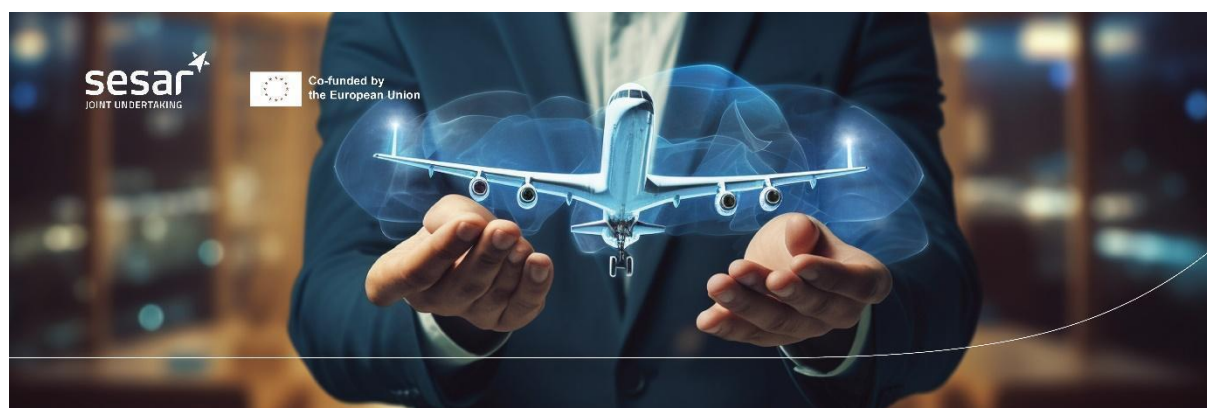


Figure 5 Social media banner

3.4.3.1 LinkedIn

Since its launch, in October 2023 our LinkedIn profile has played a role in connecting with industry specialists. LinkedIn is the channel for the HUCAN project to engage with professionals deeply involved in aviation, automation and AI technology.

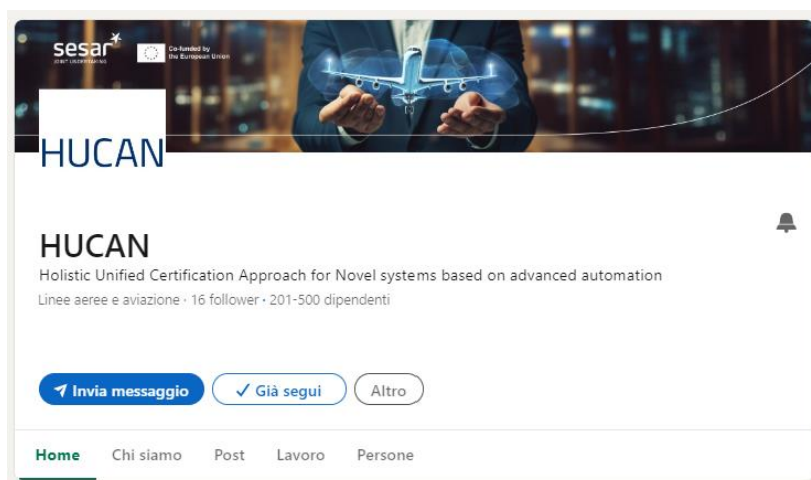


Figure 6 HUCAN LinkedIn profile (update, November 2023)

LinkedIn holds significance for the project as it is widely recognized as the leading professional network on the internet. Within its environment, HUCAN will share insights and updates but also engage in conversations with experts who play a crucial role in advancing the project's objectives. It serves as a platform where innovative ideas thrive and collaboration thrives due to shared interests in driving progress.

Through LinkedIn HUCAN endeavours to build a network of decision makers and domain experts. This enables us to exchange knowledge and foster partnerships that are instrumental in shaping the initiatives foreseen. The interactive nature of LinkedIn allows users to receive feedback on project's achievements, which is invaluable for aligning the project with industry needs and expectations. This exchange of ideas helps gain insights into the sector's dynamics while tailoring our solutions to real world applications.



Figure 7 Example of HUCAN social media cards

3.4.3.2 X

In October 2023, our X profile, formerly known as Twitter, was created as a medium to disseminate news and updates on the HUCAN project. This platform has been tailored to inform our followers quickly about the latest advancements and milestones, ensuring that we maintain real-time communication about the project's progress. X's immediacy and broad reach enable us to impart succinct and compelling messages to a worldwide audience effortlessly.



Figure 8 HUCAN X profile (update, November 2023)

This platform proves invaluable in enhancing our project's visibility, igniting discussions, and informing and engaging with our community. The capacity to retweet and interact with stakeholders' content

extends our reach beyond our immediate network, fostering a wider community united by an interest in the HUCAN project's cutting-edge advancements.

3.4.4 Communication events

HUCAN will organise events and take part in external events to promote the work throughout the duration of the project. Events will be organised following the guidelines provided in the *DES DSD CDE Plan - Annex II - Events*.

Attending and participating in relevant European events is a strategic way to communicate the HUCAN project's progress, network with industry experts, and stay abreast of the latest developments in the field. Below, Table 8 summarises a preliminary list of forthcoming events that align with the project's scope and objectives.

Each event offers a unique platform for presenting our findings, engaging with potential collaborators, and enhancing the project's visibility among key industry players. Active participation, through presentations, exhibitions, or panel discussions, will be considered to maximise the impact of the project's presence at these events.

Event	Date	Place	Information to be shared	Importance for the project
SESAR Innovation Days	28-30 Novembre 2023	Seville	Research findings, prototype demonstrations (future editions), and future research directions	Showcasing SESAR R&D activities
	2024 edition	TBD		
Airspace World	19-21 March 2024	Genevra	Innovative approaches in ATM automation, AI integration in air traffic systems, and industry collaborations.	Premier event for air traffic management
	2025 edition	Lisboa		
Aerospace Tech Week Europe	18-19 April 2024	Munich	Technological advancements, AI applications in aerospace, and implications for future workforce skills	Trends in aerospace technology, AI, and automation
European Aviation Conference	Mid-2024	TBD	Project objectives, advancements in certification methodology, and regulatory implications.	Aviation policy, economics, and regulation focus
Air Traffic Control Association (ATCA) Annual	Mid-2024	TBD	Key learnings, insights on human-centric ATM approaches, and stakeholder engagement strategies	Global ATM professional assembly

Table 8 Events

3.4.5 Publications and newsletters

Publications/newsletters/printed material	Description	Date	Link
<i>Past contributions</i>			
News: Taking a holistic approach to AI-enabled ATM certification and automation guidelines	News on SESAR website	24/10/2023	Link
Poster for SIDs 2024	Rollup for the exhibition at SIDs 2023	Novembre 2023	N/A, (see Figure 9)
<i>Forecasted contributions</i>			
Newsletter	To inform on project activities, results etc	When results are available, to announce participation/organisation of events	N/A
Other online contents (leaflets, factsheets, flyers, brochures)	To inform on project activities, outcomes etc	When needed (e.g., organisation of events or participation to events)	N/A

Table 9 Printed material

HUCAN

HOLISTIC UNIFIED CERTIFICATION
APPROACH FOR NOVEL SYSTEM
BASED ON ADVANCED
AUTOMATION AND ARTIFICIAL
INTELLIGENCE

September 2023 – February 2026

OVERVIEW

The HUCAN project aims to pioneer certification methods for new ATM systems with a focus on human centred advanced automation and AI technologies. The HUCAN approach to certification will be tested through case studies on dynamic airspace use and capacity on demand.

OBJECTIVES

-  Landscape of **advanced automation** within the EU digital strategy for mobility and ATM
-  Robust EU **legal and regulatory framework** on certification in aviation and ATM
-  Methods and procedures for **certification of highly automated systems**
-  Specific **guidelines and toolkit** for advanced automation-based ATM systems design

CASE DRIVEN APPROACH

Four case studies will be used to support the design and the validation of the holistic and unified approach to certification defined by the project

- 1 DYNAMIC AIRSPACE SECTORING**
Improvement of middle airspace utilisation obtained by means of dynamic optimization of the airspace sector configuration
- 2 AI-POWERED DIGITAL ASSISTANT IN TMA**
The OA goal is to enhance runway efficiency by optimizing aircraft routing, ensuring adherence to procedures, and preventing potential conflicts
- 3 DYNAMIC AIRSPACE RECONFIGURATION SERVICE FOR U-SPACE**
Dynamic U-Space volumes definition and information exchanges between ATM and U-space
- 4 DYNAMIC ALLOCATION OF TRAFFIC BETWEEN ATCO AND SYSTEM**
Improvement of upper airspace utilisation by means of dynamic allocation of traffic between the ATCO and system

LET'S KEEP IN TOUCH!



Join the HUCAN community!



This project has received funding from the SESAR 3 Joint Undertaking under grant agreement No 101114762 under European Union's Horizon Europe research and innovation programme.

Consortium:



Figure 9 Rollup developed for HUCAN's participation at SIDs 2023

3.4.6 Videos

HUCAN is committed to creating videos and digital materials aimed at showcasing the project's objectives and its benefits to the community, documenting the demonstration activities undertaken, and communicating the results achieved by the project.

Videos	Description	Planning	Link
The future of flight: human-centric AI in ATM (tentative)	A concise and engaging video showcasing the HUCAN project's journey, highlighting the significant achievements and focusing on the innovative guidelines developed, demonstrating their impact and effectiveness in advancing ATM	Toward M26	N/A

Table 10 Video

3.5 Communication key performance indicators (KPIs) and success criteria

Action	KPIs	Success criteria	Currently achieved	Last update	Annual growth
Web presence	Number of visits	100 unique (per month)	N/A	N/A	N/A
	Search engine position (keyword: "HUCAN Project")				
	Average time of visit	More than 1.00 minute			
Press and media	# of press releases	3	N/A	N/A	N/A
	# articles (online & printed)	3+			
Social media	# posts published (overall)	100+ posts published (overall)	N/A	N/A	N/A
	# followers on X and LinkedIn combined	200+ (overall)			
Newsletter	# of newsletter disseminated	3	N/A	N/A	N/A
Events	# of networking activities	2	N/A	N/A	N/A
	# Participation in external events	8+			
Promotional material (brochures, roll-ups etc.)	# copies distributed (aggregated)	1000, 500 mainly digital	N/A	N/A	N/A

Table 11 Communication KPIs and success criteria

4 Dissemination

The dissemination plan for the HUCAN project is an integral component, structured to efficiently share knowledge and innovations with a wide array of stakeholders within the aviation sector and beyond. This strategy is rooted in a comprehensive understanding of the distinct needs and interests of each stakeholder group and is tailored to ensure the effective broadcasting of information that meets these specific requirements.

The dissemination strategy for the HUCAN project is meticulously designed to align with the specific needs and interests of our stakeholders. The process involves several crucial steps:

- 1 **Stakeholder analysis.** The HUCAN project undertakes a detailed analysis of the main clusters of targeted stakeholders, which encompasses industrial stakeholders, the research community, and policy and decision-makers. This analysis is instrumental in adapting the dissemination content to the stakeholders' unique characteristics and expectations
- 2 **Content definition.** The definition of dissemination content is a dynamic process within the HUCAN project. Initial stages emphasise promoting the project through general informational channels, such as the website and informational posters. As the project advances, the focus shifts to the dissemination of technical findings through specialised avenues, including scientific publications and presentations at conferences and seminars.
- 3 **Strategic matching.** The HUCAN project employs a strategic matching process that aligns the stakeholders' profile and informational needs with the customised content prepared for dissemination. This ensures the utilisation of appropriate means and styles of communication to achieve impactful engagement with the intended audiences.

The outcomes anticipated from these dissemination activities are multifaceted. They are expected to foster a broader understanding of the HUCAN project's goals and progress, facilitate the adoption of its outputs, and stimulate industry-wide dialogue that can lead to actionable changes in the ATM domain.

By incorporating these strategies, the HUCAN project ensures that its pioneering work in ATM automation and AI integration is communicated effectively, reaching those who can most benefit from and contribute to its success.

4.1 Dissemination objectives and strategy

The primary objectives of our dissemination plan include:

- **Informing stakeholders.** Ensuring that all relevant stakeholders are kept informed of the project's progress, findings, and successes.
- **Maximising impact.** Leveraging dissemination activities to maximise the project's impact within the aviation industry and related fields.

- **Encouraging adoption.** Encouraging the adoption of the project's outputs through clear and compelling showcases of their potential and applicability.
- **Enduring dialogue.** Establishing and maintaining a dialogue with the community that fosters an ongoing exchange of ideas and feedback.

The dissemination strategy revolves around the identification of key messages and tailoring the delivery of these messages to suit different platforms and audiences. Activities will be carefully planned to ensure maximum reach and effectiveness, taking into consideration the nature of the content and the preferences of the target audience.

4.2 Dissemination channels

Channel	Objective	Tools	Link	Information to be shared
Journals	Disseminate project results to a specialised audience	i.e. Scientific publications, technical publications	N/A	Project approach, methodologies and results
Conferences and Events	Disseminate project results to a specialised audience, promote discussion, gather feedback, networking	i.e. Posters, oral presentations, roll-ups, infographics, videos, pictures.	N/A	Project results
Website	Disseminate project results to a specialised audience	i.e. Videos, Presentations, scientific publications, PU deliverables, infographics, videos, pictures	N/A	Project results
Social Networks	Disseminate project results to a specialised audience	i.e. Videos, Presentations, scientific publications, PU deliverables, infographic, videos, pictures.	N/A	Project results

Table 12 Dissemination channels

4.2.1 Open access to scientific publications

In alignment with the principles of Open Science, HUCAN is committed to publishing its research findings in a manner that facilitates easy and free access to all. The project unites partners from academia, industry, and end-users to ensure a wide array of research outcomes, enriching the diversity and applicability of its scientific contributions.

Collaborative efforts within HUCAN encompass the entire research cycle—from discovery and review to assessment and sharing—ensuring a comprehensive approach to Open Science. By disseminating findings through open access journals and platforms, HUCAN anticipates a significant increase in research visibility. Open access publishing is known to boost citation rates and broaden the dissemination of research, leading to a higher impact.

To maximise the reach and accessibility of its scientific publications, the HUCAN project ensures that research outcomes are available without financial barriers. All scholarly articles produced by the project will be uploaded to either general or discipline-specific repositories trusted within the respective research fields, concurrent with or prior to the publication date. This is coupled with careful adherence to copyright conditions, ensuring that publications are available under licences such as CC-BY that permit commercial usage.

In Table 13, some examples of relevant scientific journals that could be targeted by HUCAN are given.

Scientific papers/ presentations	Link	Information to be shared
Aerospace	Link	HUCAN achievements and results
Journal of Aerospace Operations	Link	HUCAN achievements and results
Journal of Air Transport Management	Link	HUCAN achievements and results
Transport Policy	Link	HUCAN achievements and results
Artificial Intelligence	Link	HUCAN achievements and results

Table 13 Scientific papers, publications and presentations

4.2.2 Dissemination events

The dissemination of the HUCAN project results will be carried out through a combination of targeted activities and events. A series of meetings and workshops will be organised to involve key stakeholders, especially regarding WP4 activities, to agree on scope and level of detail for the HUCAN approach, develop the new approach for approval and certification and update and improve the new approach using the results from the case studies and validation.

A **final dissemination** event will be organised toward the end of the project (M24-M30) targeting all partners, the members of the Stakeholder Group, the S3JU, external experts and the general public. Aim of the Final dissemination event is to maximise the awareness about the results achieved and

discuss their exploitation within the ATM community. The dissemination event will be hosted at the European University Institute premises in Florence (Italy).

When participating in third party's events such as forums, exhibitions, conferences or public events, work in progress will be presented through presentations, posters and conference papers to engage people, gauge their reactions, and get feedback. The public presentations will be available on the project website. All partners will oversee presentation and poster production, with the help of WP6 Leader. National and international conferences will be an important opportunity to share achievements with experts in the field.

In addition to both internal and third parties' meetings and workshops, the list of events showcased in Table 8 will be considered also for dissemination purposes.

4.2.3 Workshops within Stakeholder Consultation Group (SCG)

The HUCAN project plans to organise a series of workshops in conjunction with the Stakeholder Consultation Group (SCG), which aim to be a fundamental aspect of stakeholder engagement. The workshops will act as interactive platforms that enable stakeholders to engage directly with the project's progress, offering them an immersive chance to comprehend, evaluate, and endorse the research findings. The workshops have been designed to provide an all-inclusive depiction of the project's integration into the wider ATM framework, as well as a practical encounter with the project's outputs.

Their aim is twofold: firstly, to facilitate transparent communication about the HUCAN project's advancements; secondly, to offer a forum for gathering priceless feedback that will direct prospective research and development. These meetings aim to facilitate a participatory setting in which stakeholders can express their requirements and expectations, guaranteeing that the project stays in line with the actual needs of the ATM sector.

4.3 Dissemination target audiences

The target audiences for dissemination are closely aligned with those identified for communication.

Target	Channel	Benefits from the project	Expected feedback
Industrial Stakeholders	Industry conferences, workshops, direct communication	Access to advanced certification methodologies and integration of AI in ATM systems.	Insights on practical application, interest in adoption, technical feedback
Research Community	Academic journals, symposia and workshops, networking platforms and events	Contribution to the body of knowledge in AI and automation within ATM	Academic evaluate, suggestions for further research, potential collaboration

Policy and decision Makers	Policy briefings, roundtable discussions, official reports	Information to shape future policies and standards in aviation	Guidance on regulatory implications, recommendations for legislative considerations
HUCAN Stakeholder Group members	Dedicated meetings, newsletters, direct engagement	Direct involvement in project evolution, early access to findings and technologies	Constructive feedback on project outputs, user experience, adoption barriers
ANSPs	Professional forums, targeted emails, webinars	Innovative solutions to enhance airspace management and operations	Operational feedback, user acceptance, implementation challenges

Table 14 Dissemination target audiences

4.4 Dissemination KPIs and success criteria

Action	KPIs	Success criteria	Currently achieved	Last update	Annual growth
Academic Publications	# articles in international peer-reviewed scientific journals	5	N/A	N/A	N/A
Events	# participation in external events and seminars	5+	N/A	N/A	N/A
	# meetings organised with the Stakeholders Group	2			

Table 15 Dissemination KPIs and success criteria

5 Stakeholder engagement strategy

The HUCAN project places great importance on stakeholder involvement as a crucial aspect of its strategic plan. The project identifies target audiences from the outset, devises key messages, and employs tailored communication channels and materials to ensure maximum efficacy in engaging each group.

Acknowledging the significance of such engagement, stakeholders are incorporated throughout all stages of implementation and evaluation. Effective integration is crucial for promoting long-term adoption and acceptance of the project's solutions, and for facilitating their successful exploitation.

HUCAN utilises its partners' extensive networks to ensure that information about the project life cycle is effectively transmitted to relevant stakeholders. This approach enables the collection of valuable feedback, raises awareness, and encourages active involvement in project activities. The HUCAN consortium is set to interact primarily with three communities:

Community	Description
Targeted users of project outputs	This includes industrial stakeholders, manufacturers, and regulatory authorities, all of whom are essential in understanding operational concerns related to advanced automation and in shaping realistic expectations around certification processes
SESAR's Exploratory Research projects	The R&D community working within these projects will provide a critical perspective on the project's innovation and research trajectory.
Scientific community	Researchers engaged in the domain of advanced automation for ATM will contribute to the scientific rigour and validation of the project's findings

Table 16 The HUCAN consortium is set to interact primarily with three communities

The Stakeholder Consultation Group (SCG) will serve as the nexus for stakeholder engagement. This group will be involved in direct and ongoing dialogues to discuss the project's outputs and their practical applications. Collaboration with the SCG will be the cornerstone of stakeholder engagement, ensuring that all parties contribute to a comprehensive understanding of the project's impact and are aligned with the project's goals. This collaborative approach is designed not only to inform but also to listen and adapt, ensuring that the HUCAN project remains responsive to the needs and insights of its stakeholders.

The Consortium has strategically decided, in accordance and with the help of HUCAN Programme manager, to **integrate select SESAR projects into the SCG**, particularly those aligned with the SESAR flagship of *Capacity-on-demand and dynamic airspace* and *Artificial Intelligence for aviation*. **These projects were chosen based on their demonstrated interest in connecting with the HUCAN project**, either due to their existing focus on certification challenges or the recognition of certification's importance within their scope.

A notable aspect of these SESAR projects is their varied levels of maturity, a factor that is of essential relevance to the HUCAN initiative. This diversity in developmental stages among the projects within the SCG is crucial as it offers a broader perspective and deeper insights into the challenges and opportunities within the domain of ATM automation and AI integration. The involvement of these projects is not just passive; they actively complement the use cases analysed in the HUCAN project. By bringing specific issues, unique perspectives, and real-world challenges to the table, they enrich the project's research and development process. Their contributions are expected to fuel reflection, provide distinct issues for consideration, and enhance the depth and applicability of the project's work.

Moreover, these projects will play a pivotal role in testing the validity and scalability of the HUCAN project's outputs, particularly the developed methods and guidelines. This testing will not only provide practical feedback on the applicability of these results but also serve as a test for their effectiveness in diverse operational contexts.

The table below shows the SESAR projects that at M3 agreed to be part of the SCG.

Project Acronym	Project name	Flagship	Project type
SMARTS	Smart sectors	Capacity on demand and dynamic airspace	ER (Applications-oriented)
HARMONIC	Harmonised network through smart technology and Collaboration	Civil military interoperability and coordination	Fast track
ISLAND	Intelligent suite for local and network demand and capacity balance	Civil military interoperability and coordination	Fast track
FASTNet	Future Data Services and Applications for airports and Network	Capacity on demand and dynamic airspace	Fast track
Other eligible projects which may be included in HUCAN SCG			
TINDAIR	Tactical Instrumental Deconfliction And in flight Resolution	N/A (Project completed)	Large scale demonstrations
PJ34-W3 AURA	PJ34-W3 AURA - ATM U-Space Interface	N/A (Project completed)	IR
CORUS-XUAM	Concept of Operations for European U-space Services - Extension for Urban Air Mobility	N/A (Project completed)	Large scale demonstrations
Metropolis 2	A unified approach to airspace design and separation management for U-space	N/A (Project completed)	ER

DACUS	Demand and Capacity Optimisation in U-space	N/A (Project completed)	ER
TAPAS	Towards an Automated and exPlainable ATM System	N/A (Project completed)	ER
MAHALO	Modern ATM via Human/Automation Learning Optimisation	N/A (Project completed)	ER
COTTON	Capacity optimisation in trajectory-based operations	N/A (Project completed)	ER
ADAPT	Advanced prediction models for flexible trajectory-based operations	N/A (Project completed)	ER

Table 17 List of SESAR projects involved in HUCAN SCG (update November 2023)

The SCG's strategy for engaging key sector actors in validating HUCAN's research results involves:

- 1 **Continuous dialogue.** Maintaining open lines of communication with stakeholders through the SCG, ensuring their perspectives are considered throughout the project's lifecycle.
- 2 **Collaborative review.** Engaging stakeholders in collaborative review sessions where research findings and project outputs are presented and critically evaluated.
- 3 **Validation workshops.** Conducting dedicated workshops where stakeholders can test and validate the research outcomes, providing practical feedback on their applicability.
- 4 **Integration feedback.** Taking the insights from these validation activities and integrating them back into the project to refine and enhance the research outcomes.

During the course of the HUCAN project, a series of **dedicated meetings** will be organised, considering also the topics of other HUCAN workshops, to maximise the benefits of the outcomes. These meetings aim specifically to gather valuable feedback and inputs from the projects participating in the SCG. These meetings are designed to facilitate a fruitful exchange of ideas and experiences, providing an essential platform for the SCG members to voice their insights, concerns, and suggestions. The feedback collected from these interactions will be instrumental in refining the HUCAN project's methodologies and outputs, ensuring they are aligned with real-world needs and effectively address the challenges faced by the ATM community.

6 Exploitation

The HUCAN project is dedicated to maximising the impact of its findings and ensuring successful post-project exploitation. To achieve this goal, it is imperative to perform a thorough evaluation. Such an evaluation should encompass various factors, for instance, assessing stakeholders' interests in HUCAN outputs, the operational applicability of the project's findings, the usefulness of the proposed analyses, methods, guidelines, and toolkits for ATM stakeholders, and the feasibility of sustaining initiatives beyond the project's conclusion.

Based on a solid foundation established by current literature reviews and cutting-edge assessments, early proactive actions have been taken in the research design. The key focus centres on how the HUCAN results can be immediately applied by ATM stakeholders and identifying post-project activities that are feasible for sustained use. To tackle these challenges, the consortium has taken a diversified approach that aligns with the features of the two key tools developed in HUCAN:

1. **Certification method.** A comprehensive approach that ensures systematic accreditation over time.
2. **Guidelines for advanced automation systems design and toolkit for guidelines application.** Easily accessible and proactive guidelines that complement the certification method.

The project is well positioned to further extend regulatory insights obtained from HUCAN in the medium term. These strategies have been specifically developed to align with the current landscape of innovation and predict future tendencies that will attract the attention of ATM stakeholders towards the outcomes of HUCAN.

To ensure the optimal utilisation of the project's findings, the consortium has enlisted pertinent stakeholders, encompassing project members and participants in the SCG. Consequently, they will serve as the key channels for the first application of the outcomes. Furthermore, the consortium is planning to investigate how the deliverables (certification methods, design guidelines, and toolkit) can be extended to other research domains.

6.1 Project exploitable results

The following list presents the project results that the HUCAN Consortium has identified as worth being exploited during the project and after its completion.

The definition of key exploitable results provided in the below is preliminary: this list will depend heavily on what HUCAN will achieve; therefore, it will change throughout the duration of the project to reflect additional or different achievements and lessons learned. An update to this list, together with the period when each result is expected to be available to the S3JU, and after the approval, for the exploitation, will be provided in the intermediate CDE report due at M13.

KER	IPR	Main users	Other users
Certification methods	Open	Regulatory Authorities Research Networks (different from aviation and ATM)	Industrial stakeholders; Producers and manufacturers; ANSPs
Design guidelines and toolkit	Open	Industrial stakeholders; Producers and manufacturers; ANSPs	Research Networks (different from aviation and ATM)

Table 18 HUCAN preliminary KER (Key Exploitable Results)

6.2 Exploitation strategy and objectives

Specific actions for exploitation include:

Exploitation strategy. These guidelines – drafted at M3 and reviewed accordingly during the lifetime of HUCAN - will serve as a definitive guide for market exploitation, outlining the full strategy, market analysis, and key actions for partners to continue beyond the project’s lifespan.

Joint exploitation agreement. Integrating with the Consortium Agreement, this will delineate commercial pathways for the exploitation of project outputs, offering commercial opportunities for all parties involved.

The exploitation activities are structured into three phases, forming an “Exploitation Path”:

1. **Initial phase (M1-M6).** This involves mapping project outputs and conducting a preliminary market analysis.
2. **Mid phase (M6-M18).** In this phase, a deeper market analysis is undertaken, an initial exploitation plan is drafted, and the plan is validated with stakeholders.
3. **Final phase (M18-36).** The project will finalise exploitable outputs, perform ROI analysis, and solidify the exploitation agreement.

By instituting this strategic framework, the HUCAN project ensures a systematic approach to exploitation, aiming for the project’s outputs to have a lasting impact and practical application within and potentially beyond the ATM sector.

At M3, HUCAN partners have developed a preliminary Individual Exploitation Plans which will ensure full impact for the project and are outlined below grouped depending on the partner category:

Type of partner	Preliminary Individual Exploitation Plans
R&D centres and academic institutions	Non-profit research institutes will mainly improve their competencies and thus promote new lines of research in the innovative and digital solutions for forestry. Furthermore, they will implement the results of the project in follow-up application projects in scientific alliances as well as in industrial cooperation

Technology providers	Technology providers will mainly bridge HUCAN to eventually enlarge their own commercial offer towards the forest-wood industry, to support the development and replication of the KERs in different domains and to exploit the HUCAN results in several innovation-oriented communities and initiatives
Public authorities and policy makers	Public authorities will make use of the solutions internally. Policy makers will take advantage of the recommendations, guidelines and lessons learnt.

Table 19 Preliminary Individual Exploitation Plans

6.3 Exploitation of results

Partner	KER	Exploitation potential	Level of interest in the exploitation	Role	Exploitation strategy	Target sector	Target users
DBL	New approach for approval and certification of newly proposed operations based on advanced automation	Currently there are no approved methodologies available for the certification of new innovative air transport systems such as advanced automation, AI-based systems. The new approach developed in HUCAN aims to fill that gap.	High	Owner	Publications, involvement in new research projects, recommendations to EU and EASA	ATM in Europe	Authorities, Aviation sector
	Preliminary guidelines for advanced automation systems design and toolkit for guidelines application	The guidelines will have the purpose to support the design of certification-proof technologies. To this end they have a high exploitation potential.	High	Owner	Publications, involvement in new research projects, recommendations to EU and EASA	ATM in Europe	
NLR	New approach for approval and certification	Currently there are no approved methodologies available for the certification of new	High	Owner	Publications, involvement in new research projects,	ATM in Europe	Authorities, Aviation sector

	of newly proposed operations based on advanced automation	innovative air transport systems such as advanced automation, AI-based systems. The new approach developed in HUCAN aims to fill that gap.			recommendations to EU		
EUI	Methodological approach for certification of AI-powered aviation systems	Legal Compliance and Certification: The methodology likely involves a systematic approach to ensuring AI-powered aviation systems comply with legal regulations and standards. This can be exploited by aviation companies to streamline their certification processes, ensuring that their technologies meet legal requirements effectively. Risk Mitigation: The methodology might provide techniques to identify potential legal risks associated with AI-powered aviation systems. Understanding and mitigating these risks is crucial for the safe deployment of advanced technologies in aviation. Companies could use this knowledge to proactively	High	Owner	Consultancy, publications, involvement in new research projects, recommendations to EU	ATM and other automated transportation management (trains, cars etc.) in Europe	Academia, policy-makers

		address legal challenges. Regulatory Engagement: The methodology may offer insights into engaging with regulatory authorities. Understanding how to navigate legal frameworks and work collaboratively with regulatory agencies is essential for gaining approval for AI-powered aviation systems. This information can be exploited to facilitate smoother interactions with regulatory bodies.					
DLR	New approach for approval and certification of newly proposed operations based on advanced automation.	Currently there are no approved methodologies available for the certification of highly automated and AI-based systems in the area of air traffic management. The holistic approach developed in HUCAN fills the gap	High	Owner	Consultancy, Publications, Involvement in new research projects, Recommendations to EU, Standard setting, Internal adoption	Air Traffic Management, Aviation, Transport, Energy and Space	Industry, Academia, SMEs, Policy-makers, Authorities
CIRA	Case studies introduction : level of automation analysis and certification issues (D4.1) Preliminary guidelines for advanced automation	The exploitation potential is related to refinement of the toolkit, the actual consolidation and application of the guidelines in real ATM systems and to a broader set of use cases	High	Owner	Consultancy, Publications and participations to other research projects, recommendations to civil aviation authorities, to industries	Aviation and Space	Industry, SMEs, Policy-makers, Authorities

	systems design and toolkit for guidelines application (D5.2)						
D-FLIGHT	New approach for approval and certification of newly proposed operations based on advanced automation.	There are currently no approved methodologies available for the certification of new innovative Air Traffic Management (ATM) and Unmanned Traffic Management (UTM) systems as automation and AI-based systems. The new approach developed within HUCAN aims to fill this gap.	High	Owner	Publications, involvement in new research projects, recommendations to EU	ATM and UTM	ATM and UTM solution providers, Authorities

Table 20 HUCAN Exploitation grid

6.4 Data protection strategy

HUCAN Data Management Plan (D1.1) details the handling of generated or re-used data. It governs the data management practices, sharing protocols, and preservation methods, assuring that the integrity of the research is upheld even as it is opened to the world. The DMP and the related policies are compliant with the EU legislation on the protection of personal data.

More information on HUCAN data protection strategy will be presented in the following releases of the CDE Plan.

6.5 IPR management

The Intellectual Property Rights (IPR) management within the HUCAN project is structured to achieve several key objectives, central to fostering a productive collaboration environment and safeguarding the interests of all partners involved. The overarching goals are to:

1. **Encourage effective partnership.** Stimulate collaborative effort among partners during the project's lifespan.
2. **Motivate contributions.** Incentivise input from all partners, regardless of their specific project responsibilities.
3. **Protect commercial interests.** Safeguard the commercial interests of the partners, ensuring that intellectual property is well managed and secure.
4. **Facilitate exploitation.** Provide a clear path for further research developments and commercial exploitation of project outcomes.

The management of knowledge and IPR is defined within the Grant Agreement (GA), the rules for participation, and the Consortium Agreement (CA) between the HUCAN partners. Specific activities within work packages are designated for handling these aspects, with a dual focus of proactively ensuring the protection of IPRs for new systems and solutions.

The Exploitation Leader will oversee the implementation of these IPR principles and the preparation for exploitation, providing regular and on-demand reports to the coordinator. Knowledge management specifics will be further delineated in the CA to preclude inconsistencies with IPR issues defined by the partners.

Key elements of the IPR management strategy will include:

1. **Secure intellectual property.** Ensuring intellectual property developed within the project is protected in the interest of all partners.
2. **Commercial exploitation rights.** Granting all partners joint non-exclusive rights to commercially exploit the IP produced in the project.
3. **Use of pre-existing IPR.** Allowing partners cost-free licences to utilise each other's pre-existing IPR for project purposes while the project is in operation.

The approach to IPR and knowledge management will be thoroughly detailed and regulated in the CA, which will be aligned with the GA's terms. The CA will also catalogue each partner's background that may be utilised to achieve project objectives. Ownership of foreground IP will reside with the generating party, who will also bear the primary responsibility for protecting and managing these results.

7 Overview of communication and dissemination activities

Activity	Channel/Tool	Objective	Target audience	KPIs	Success criteria	Frequency /date
Website activity	HUCAN website	Raise awareness on project goals, activities, and achievements. Disseminate project results.	Specialized and non-specialized audience	Number of visits Average time of visit	100+ unique (per month) More than 1.00 minute	Constant monitoring and updating to follow the project progresses
Social media activity	Posts on LinkedIn and X	Raise awareness on project goals, activities, and achievements	Specialized and non-specialized audience	# # posts on LinkedIn # posts on X # followers on X and LinkedIn combined	1+ posts per week 1 post per week 200+ overall	1+ post per week on LinkedIn, 1 post per week on X
Non-scientific articles, press releases	Trade press	To inform on project activities, results etc	Specialized and non-specialized audience	# press releases # articles	3 3+	Combined with relevant activities/achievements
Newsletter	HUCAN newsletter	To inform on project activities, results etc	Specialized and non-specialized audience	# newsletter released	3	1 per year
Promotional material (brochures, roll-ups etc.)	HUCAN promotional materials	Raise awareness on project goals, activities, and achievements	Specialized and non-specialized audience	# copies distributed (aggregated)	1000, 500 mainly digital	Copies distributed/downloaded
Video	HUCAN video	Raise awareness on project goals, activities, and achievements	Specialized and non-specialized audience	# video	1	Toward M26

Participation to external events (e.g., conferences, exhibitions)	Online and offline events, posters, oral presentations, roll-ups, infographics, videos, pictures.	Disseminate project results, promote discussion, gather feedback, networking.	Specialized audience	# external events	8+	At least 3 per year
Organization of dissemination events	Online and offline events, presentations, infographics, focal groups, workshops.	Raise awareness in society/ local policy makers/ industrial stakeholders. disseminate project results.	Specialized and non-specialized audience	# events organized (e.g. networking activities)	2	Meetings with SCG.
Academic Publications	Peer reviewed journals	Disseminate project results	Specialized audience	# articles in international peer-reviewed scientific journals	5	N/A
Dissemination events (e.g. third parties events and SCG meetings)	Third parties events and SCG meetings	Disseminate project results, validation of the results, networking	Specialized audience	# participation in external events and seminars	5+	N/A
				# meetings organised with the SCG	2	M6, M18

Table 21 Overview of communication and dissemination activities