



Deliverable 9.3

Interim report: Dissemination, Communication and Exploitation

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Abstract: An interim report on all dissemination and communication activities performed (M1-M18).

Information Table

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List of Acronyms

Acronym	Definition
AI	Artificial Intelligence
CERTH	Centre for Research & Technology Hellas
DBL	Deep Blue
HE	Horizon Europe
HIT	Hellenic Institute of Transport
IA	Intelligent Assistant
UC	Use Case

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Executive Summary

Deliverable D9.3 is an interim report on all dissemination activities performed. The document has been produced by Centre for Research and Technology Hellas (CERTH) / Hellenic Institute of Transport (HIT) team.

The HAIKU dissemination strategy relies on the following pillars:

1. Identification of dissemination stakeholder target groups

The identification of dissemination stakeholders is based on HAIKU results and the project consortium's network of contacts. Additional information about the process is to be provided in **D2.2 Analysis of Societal Impact (M18)**. The identified Target groups are:

- All the end-users of HAIKU Use Cases: Pilots, Air Traffic Controllers, UAM Controllers, Drone Operators, Airport Safety Managers, Passengers.
- All the aviation stakeholders (e.g. airports, industry, research community, general public) interested in improving safety.

2. Creation of communication material and planning of activities

The following table presents the dissemination activities for the HAIKU Project. It describes the communication materials that have already been produced and will produced during the project.

Table 1: Communication material

Communication material	Usage
HAIKU logo	Project visual identity
Project flyer	General dissemination of project in events, conferences, meetings
Roll Up Banner & Poster	General dissemination of project in events, conferences, meetings
PowerPoint template	For project related presentations
HAIKU Introductory Video	Planned video for increasing visibility of the project's key outputs and outcomes
Use Case Videos	6 Use Case videos, in order to promote our UCs and IA prototypes

3. Website, newsletters and social media strategy

- Website

The HAIKU website is the main channel of the project to disseminate its activities and results. The website: <https://haikuproject.eu/> has been designed to be simple and user-friendly as a central hub for all relevant information about the project. More analytical details can be found at **D9.1: HAIKU Project Website**.

- Newsletters

In order to create and increase awareness about project initiatives and outcomes, six electronic newsletters will be sent to the project website subscribers, as well as to the entire HAIKU network.

- Social media

HAIKU relies on social media to reach stakeholders. An overview of the social media activities and results are depicted in the following table

Table 2: Social Media

Social Media platform	Account name/group	Creation date	Followers	Target
Twitter®	@HAIKUproject_EU	September 2022	341	400 followers
LinkedIn®	HAIKU EU Project	September 2022	380	500 followers

4. Stakeholder meetings and final conference

Three stakeholder meetings were/will be organised in the duration of the project:

- 1st Dissemination Event, 26th-27th June 2023, Brussels
- 2nd Dissemination Event, 30th April 2024, Brussels
- 3rd one to be organised during M35-M36

These events aim to gather input, present project views, and collect feedback for calibration. The final conference, held in the last project year (M35-M36), serves to share HAIKU achievements with interested parties and amplify the impact of the results.

1 Introduction

1.1 Purpose and scope

The D9.3 Interim report: Dissemination, Communication, and Exploitation is a deliverable of the HAIKU project, outlining key activities conducted during the project’s M1-M18 period. These activities aim to enhance the visibility of the project’s key outputs and outcomes, as well as disseminate information about its overall implementation and activities.

1.2 Deliverable structure

This document contains the following sections:

Section 1: Introduction and scope of the deliverable

Section 2: HAIKU logo visual identify

Section 3: Project flyer

Section 4: Roll Up Banner & Poster

Section 5: PowerPoint Template

Section 6: HAIKU videos

Section 7: Dissemination & stakeholder dialogue




Section 8: Exploitation

2 HAIKU logo- visual identity

2.1 HAIKU logo

The HAIKU logo has been developed by Deep Blue. Different variations of the logo have been created for online applications and social media. The consortium has finally reached a consensus for the version presented below in Table 3.

Table 3: Logo

	Plain logo
	Logo and full acronym explanation
	Pictogram

2.2 Use Cases logos (total 6)

Each Use Case possesses its distinctive identity and logo. CERTH collaborated with UC leaders to co-design the logos. The UC logos aim to summarise the main points of each UC in a coherent image. All the logos are depicted below in Figure 1.

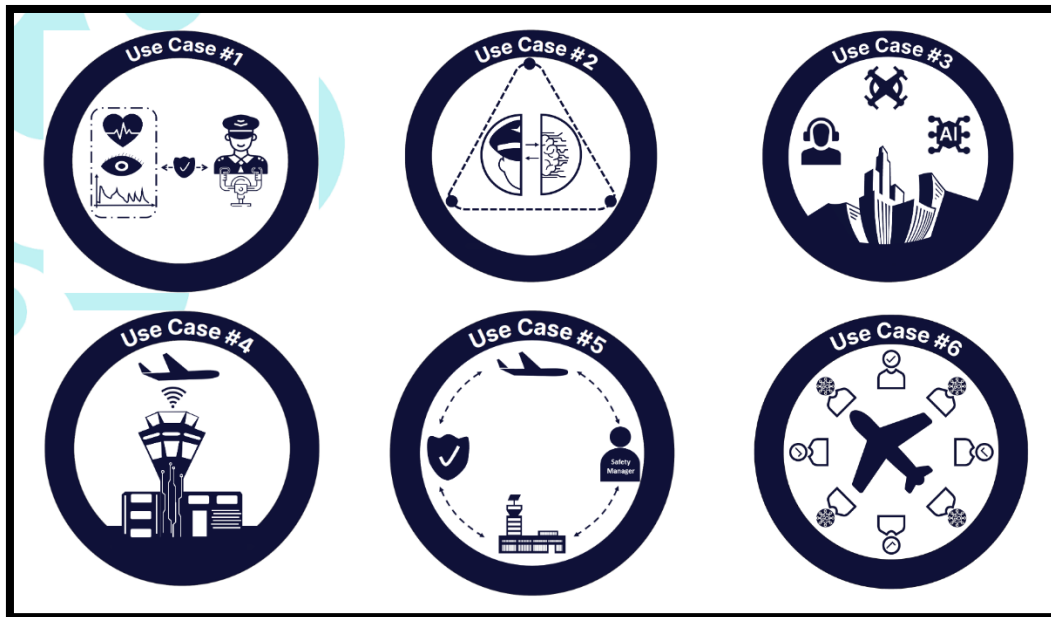


Figure 1: Use Cases logos

3 Project flyer

The project flyer is an essential tool to raise awareness about the HAIKU project. Its content has been designed by DBL, EUROCONTROL and CERTH/HIT. Specifically, the leaflet provides all the necessary information in a concise form regarding the project and its objectives. The flyer is a threefold A4 flyer and provides the following info:

- Project logo
- Company logos of project partners
- Website address
- Social media addresses
- Project goal
- The human-centred approach
- Vision etc.

The leaflet is available [HERE](#).



VISION

Developing safe, secure, trustworthy and effective Human-AI partnerships in aviation systems

CONSORTIUM
We are 17 Partners from 10 different countries, bringing together Human Factors expertise, domain's key end-users and technology suppliers of excellence

END-USERS
TUI GROUP
London Luton Airport

What will we deliver?

Goal
HAIKU aims to pave the way for human-centric AI in the aviation domain.
Our challenge is to deliver truly human-centric AI-based Digital Assistant prototypes, capable of integrating human values, needs, abilities and limitations. These Digital Assistants will dynamically learn from human users and continuously evolve over time.

We adopt a truly human-centred approach
Our work starts from users' needs and evaluates how technology can facilitate human activity and, ultimately, improve safety.

Three key research questions are driving our work

- What is the recommended Human-AI partnership for each AI aviation application?
- What does it mean for AI to be explainable?
- How do we best train Digital Assistants?

INDUSTRY

- Smart Human-AI Teaming
- Explainability as a Two-Way Street
- Towards an AI-friendly Workforce

SOCIETY

- Socially Acceptable AI
- Personalisation of AI

ASSURANCE

- Human Factors, Safety, and Security assessment Framework
- Acceptable Means of Compliance for AI
- Legal and Liability Assessment

Use Case #1 - Led by ENAC
Digital Assistant in the cockpit to assist in "startle response" adverse events

Use Case #2 - Led by Thales
Digital Assistant in the cockpit to assist in route planning/replanning

Use Case #3 - Led by Linköping University and LfV
Digital Assistant for Urban Air Mobility coordinator to assist in traffic management

Use Case #4 - Led by FerroNATS
Digital Assistant for tower (and remote tower) controllers to assist in routine and repetitive tasks for aircraft on approach

Use Case #5 - Led by Engineering
Digital 'Overwatch' to improve airport day-to-day safety through dynamic data analysis

Use Case #6 - Led by CERTH/HT
Airport Digital Assistant to monitor risk factor conditions associated with indoor spread of infectious diseases


A 36-month project founded by the Horizon Europe R&I Program
(September 2022 - August 2025)

This project has received funding by the European Union's Horizon Europe research and innovation programme HORIZON-CL5-2021-06-01-03 under Grant Agreement no 101075332

Figure 2: Flyer

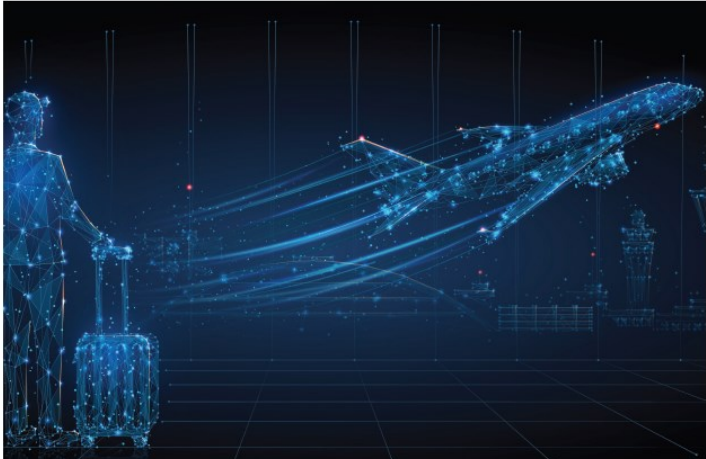
4 Roll Up Banner & Poster

A Roll-Up Banner was also created by CERTH. It presents the project logo and acronym, use cases logos and project consortium logos. The overall graphics design was subcontracted to a professional designer. The Roll-Up Banner is a popular type of display stand and have the advantage of being retractable-by rolling into a compact transportable form and easy to assemble. It will be used for all HAIKU Events. This banner can be adapted also for poster dimensions A1-A0 dimensions. The Roll Up Banner is available [HERE](#).




Haiku


Human AI teaming Knowledge and Understanding for aviation safety




Paving the way for human- centric AI-based Intelligent Assistants in a range of aviation contexts.




Startle Response Aid




Route Planning Support




UAM Traffic Management



Remote Tower Support





Airport Safety Watch





Airport Virus Watch


Consortium












































End Users








 This project has received funding by the European Union's Horizon Europe research and innovation programme HORIZON-CL5-2021-D6-01-13 under Grand Agreement no 101075332

Figure 3: Roll Up Banner

5 PowerPoint template

A PowerPoint template was developed by DBL and is available for every consortium partner to use either for project meetings or promoting the project and its results.

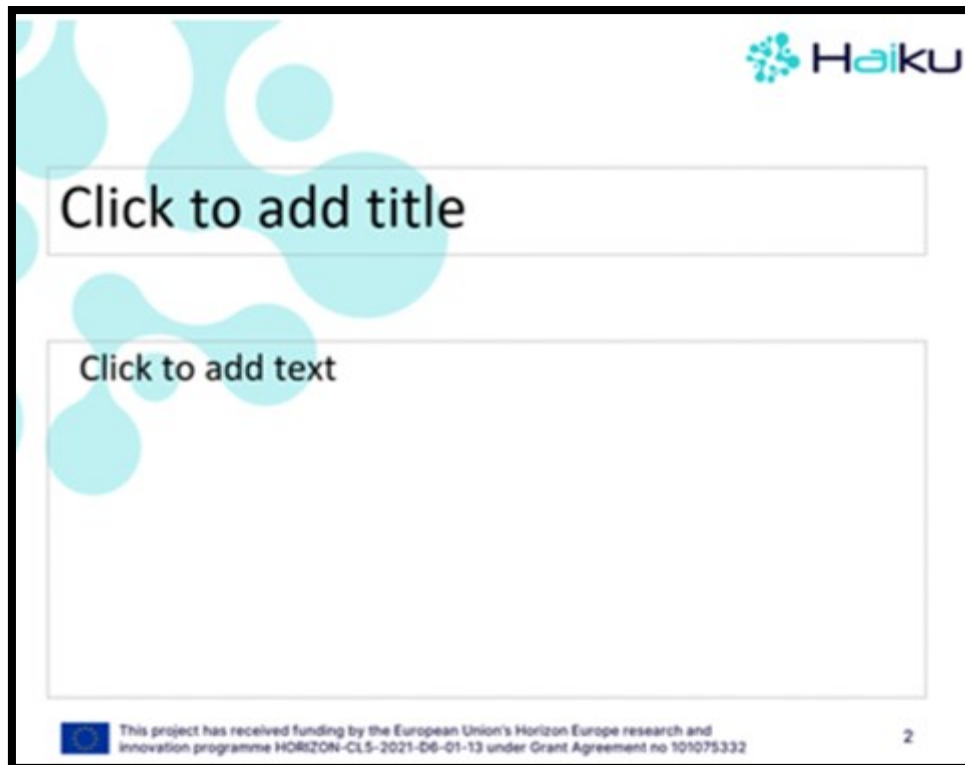


Figure 4: PPT template

6 Videos

6.1 HAIKU Introductory Video

A 2-3 minute HAIKU introductory video will be produced and uploaded on YouTube in order to increase awareness about the project's scope, objectives and results. The use of YouTube will allow the video to reach a wider broader general audience. Furthermore, the video will be embedded on the HAIKU website to expand its viewership beyond the YouTube platform. The production of the video has been planned for Year 2 (by CERTH/HIT).

6.2 Use Cases videos

In order to promote our UCs and IA prototypes, 6 Use Cases videos have been produced (by DEEP BLUE). The videos show the application of the IA in a concrete scenario and how it's used to solve specific problems. The release strategy for each one of them is the following:

- Use Case #1 video → released M16: <https://haikuproject.eu/use-case-1-video/>
- Use Case #2 video → to be released
- Use Case #3 video → to be released
- Use Case #4 video → released M15: <https://haikuproject.eu/use-case-4-video/>
- Use Case #5 video → to be released M19
- Use Case #6 video → to be released

7.1 Dissemination and stakeholder dialogue

In order to ensure an effective dissemination and stakeholders’ dialogue the HAIKU project will have three main communication actions comprising:

- Creation of audio-visual material (project website, newsletter, social media)
- Publications (press releases, articles in scientific journal)
- Event participation / Networking (inter/national conferences, workshops).

The following section includes the activities that will be used to increase the project’s visibility as well as disseminating the outcomes and main products to the target stakeholder groups. A stakeholder’s analysis will be included to D2.2 Analysis of Societal Impact (M18).

7.1 Stakeholder meetings

Overall the dissemination strategy is based on combining the communication and dissemination material and activities while the project evolves around its key milestones and main outputs.

Three stakeholder meetings are planned to happen in the duration of the project (M12, M24, M36) and will target end-users/stakeholders aiming at providing input for the project’s views, activities and results. The M12 event took place on 26th-27th June 2023. We will start organise the M24 event, which will take place on 30th April 2024 in Brussels. The events will also serve the purpose of presenting, collecting feedback results that will be developed by HAIKU.

7.1.1 - 1st HAIKU Dissemination Event

The 1st HAIKU Dissemination Event took place on 26th-27th June, 2023 at EUROCONTROL (Brussels).



Figure 5: Invitation for the event

The workshop addressed the question: *What can we really expect from AI in aviation, in 2030 and beyond?* HAIKU presented insights on the future of aviation, the related key challenges and the potential for AI applications in this safety-critical industry. A range of experts from all aviation segments – ATM, Cockpit, UATM, Airport joined at the event. With the [SafeTeam Project](#) as our special guest, we had interesting presentations and fruitful discussions as part of our networking with other EU projects. An analytical report about the 1st HAIKU Dissemination Event has been released [HERE](#).



Figure 6: 1st HAIKU Dissemination Event

During the 1st HAIKU Dissemination Event, a report about the future of AI aviation from HAIKU viewpoint has been presented (by Deep Blue).

What can we really expect in 2030 and beyond? What are the dominant features characterising the evolution of the coming years? To read more about the foreseen future aviation landscape, please visit [HERE](#).

7.1.2 - 2nd HAIKU Dissemination Event

On April 29th-30th, 2024, the FLY AI Forum (<https://www.eurocontrol.int/event/fly-ai-forum-2024>) is set to occur at EUROCONTROL premises in Brussels. The HAIKU project has been chosen to participate in **Session 5: Human AI Teaming, scheduled for Day 2 (April 30th, 2024)**. This presents a significant opportunity for HAIKU to host the 2nd Dissemination Event on that day, with the presence of key FLY AI partners such as the European Commission, EASA, ASD, CANSO, EDA, EUROCAE, IATA, IFATCA, IFATSEA, ACI EUROPE, NATO, and the SESAR 3 JU. The HAIKU project will be showcased in the most effective manner during this event.

7.1.3 - Final conference

The final HAIKU conference will be held in the last year of the project (late M35 to early M36), aiming to spread the achievements of HAIKU to all potentially interested parties. The final conference will be advertised in advance at all social media platforms, project website and newsletters.

7.2 Timing of Social media, websites updates & dissemination activities

When a project action is set to occur, it will be distributed via our website and social media accounts (table 4). In addition, non-project related postings on social media will take place, i.e. links to interesting results from other projects, news articles, reports or studies. The posts will be made by CERTH/HIT while all partners can contribute in finding content.

Table 4: Postings on social media and website updates

Project action	Website news section	Twitter	LinkedIn	Responsible partner	Schedule
Release of public deliverables	x	x	x	CERTH	Upon approval
Project meetings (technical meetings & workshops)	x	x	x	CERTH	Based on occurrence
Participation in conferences or events	x	x	x	CERTH	Based on occurrence
Project website launch	x	x	x	CERTH	M3
Newsletter	x	x	x	CERTH	M18, M23, M27, M30, M34, M36
Flyer	x	x	x	CERTH	M5
Scientific publications	x	x	x	CERTH	Based on occurrence

The social media channels of the HAIKU reflect activities, events and achievements of the project are an important online communication tool.

The social media used are Twitter and LinkedIn. These platforms give the possibility to share the activities of the HAIKU to large audiences of stakeholders potentially interested in the project.

Table 5: Frequency of postings on social media

Number of postings	Social media platform		Frequency
	Twitter	LinkedIn	
	2	2	Per month

7.2.1 Twitter

The Twitter® platform has been chosen for the online dissemination purposes as a dynamic, powerful mean to share information through short, to-the points posts (tweets). The twitter account of the HAIKU can be accessed through the following link: https://twitter.com/HAIKUproject_EU.

The **@HAIKUproject_EU** Twitter account was created in September 2022 and is maintained and updated by CERTH. Tweets from the HAIKU account can be distinguished into two categories: 1) project related tweets (i.e. the release of project deliverables; upcoming project meetings; participation of consortium members in conferences or any type of event; promotion of project survey/interviews; project website updates) and 2) more general tweets regarding news relevant to aviation news about human factors, relevant studies to the topics covered by HAIKU project and retweets of other posts from research projects/ groups/users/EU relevant research accounts.

Hashtags (#) and handles (@) will be used in the HAIKU tweets to reach specific target groups and accounts. Tweets will contain the following groups: #AI #aviation #aviationsafety #humanfactors #HorizonEU #cinea_eu

The HAIKU Twitter account as of 16/02/2024 has **341** followers and **54** posts.



Figure 7: Twitter

7.2.2 LinkedIn

LinkedIn® is a professional network and discussions are rather fact based. The LinkedIn account **HAIKU EU Project**, was created on September 2022, will be used to engage with a professional public in discussions and to disseminate project results. The content that is published on the group is based on the aforementioned guidelines as Twitter.

The HAIKU LinkedIn group as of 16/02/2024 has **380** members and **64** posts.

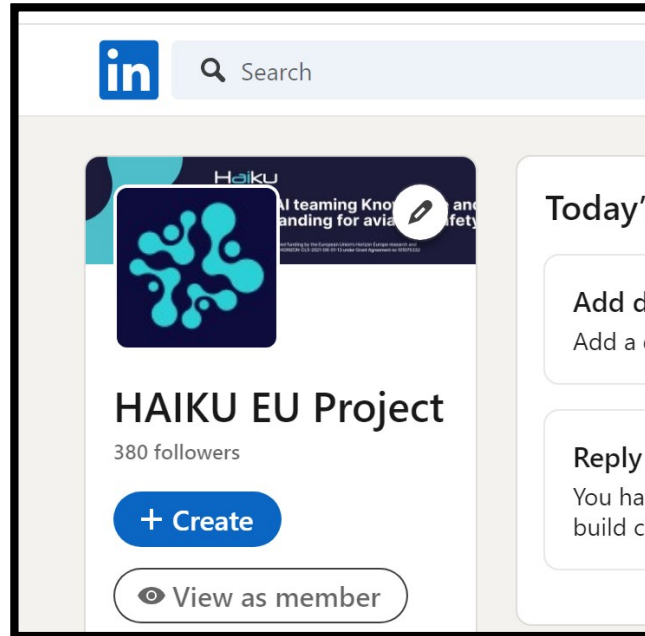


Figure 8: LinkedIn

7.3 HAIKU Website

The HAIKU website <https://haikuproject.eu/> was launched online in December 2022 under the main responsibility of CErTH. DBL and EUROCONTROL have supported the website creation process by providing content and support to the overall process. The project website is one of the most important dissemination tools that will introduce the project’s aspects and results to the public. The website contains all the following sections:

- About
 - Vision
 - Approach
 - Consortium
 - Advisors
- Use Cases (UC#1, UC#2, UC#3, UC#4, UC#5, U#C6)
- Products
 - Deliverables
 - Dissemination material (leaflet, presentations, reports, videos)
 - Publications
 - Interactive Landscapes
- News-events
- Contact us form
- Newsletter subscription area

- Social media links (links to Twitter, LinkedIn and YouTube channel)

Additional information regarding the project website can be found in **D9.1 HAIKU Project Website**.

As of 10th February 2024, HAIKU’s official website has received 1.487 visits, of which 1.463 are new users. In figure 6, there is a list of the top ten countries that visit the site, with Italy holding the top spot, France holding the second spot, Greece taking the third spot, etc.

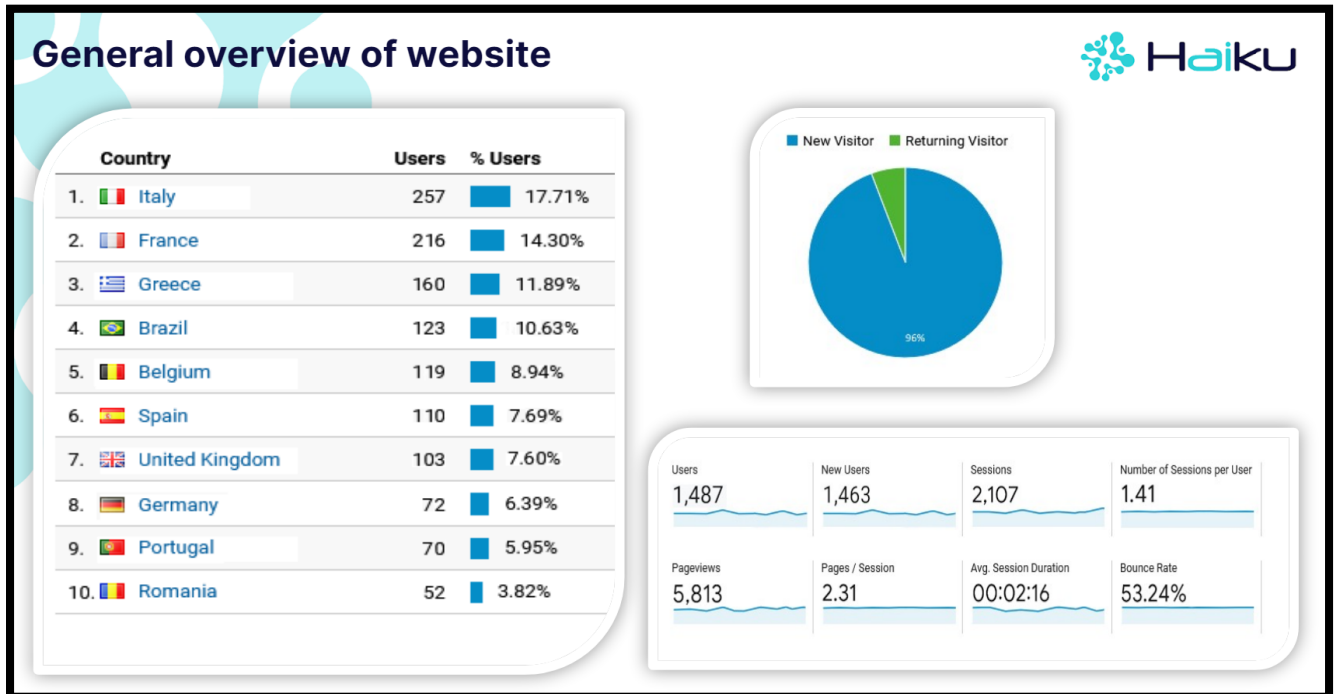


Figure 9: Website statistics

7.4 Electronic newsletters (e-news)

Six E-newsletters will be sent to the subscribed users on the project website, and overall HAIKU network of contacts, in order to create awareness about project initiatives and outcomes. The e-news will contain information such as:

- summaries of the past deliverables and project results
- information on plenary or project meetings
- review of dissemination activities i.e. attendance of consortium members in conferences etc.
- advertisement of project surveys
- information on social media and website
- information on stakeholder workshops and final conference

Table 6 presents the newsletters that will be created, their respective month of release, content and the partner allocation. The release of newsletters is supposed to take place at different periods based on D9.2 HAIKU Dissemination, Communication and Exploitation Plan. As the number of subscribers wasn’t enough, it was decided internally to postpone the newsletters. So far, 72 subscribers have signed up.

Table 6: Newsletters

Newsletter	Month	Content
1	19	Will present the preparation of: <ul style="list-style-type: none"> - Vision and Scenarios - Human-AI Teaming Framework and Design Document
2	23	Will present the design framework and concepts
3	27	Will present the strategy for XAI and analysis of societal impact.
4	30	Will present: <ul style="list-style-type: none"> - Case studies and results of validation activities - Updated validation strategy and plan
5	34	Will present: <ul style="list-style-type: none"> - Case studies and results of validation activities - Updated validation strategy and plan
6	36	Will presents: <ul style="list-style-type: none"> - Guidance on safety culture enhancements for future aviation WIA systems - Guidance on future workforce requirements

7.5 Press releases

HAIKU will produce press releases to general press and traditional media aiming to disseminate main results and project activities. The press releases will be linked to the main workshops and final international conference in order to disseminate the activities at local and international level. The final international conference will be covered both by traditional media, i.e. local newspapers as well as more general press. The remaining of the general press releases will cover news and results of the project with the aim of reaching both industry stakeholders and the public.

7.6 Scientific publications and other types of dissemination activities

7.6.1 Publications

Scientific publications are one of the most important dissemination activities for reaching out to the academic and research community. Table 7, presents the five publications that have been published in scientific journals or conferences. The subject of the journals is related to the different technical WPs covering methodologies used in the project, data, and results. The majority of the publications will be open access to ensure availability of the results to the wider research community and the public.

Table 7: Publications

Partner	Publication	Link
CERTH	Agent Based Modelling of COVID-19 Transmission at an Airport	
CERTH	Integrated Passenger Routing System in Airport Common Areas for Preventing the Spread of COVID-19	
CERTH	Passenger Routing Algorithm for COVID-19 Spread Prevention by Minimising Overcrowding	https://haikuproject.eu/passenger-routing-algorithm-for-covid-19-spread-prevention-by-minimising-overcrowding/
EUROCONTROL	The Future Impact of Digital Assistants on Aviation Safety Culture	https://haikuproject.eu/the-future-impact-of-digital-assistants-on-aviation-safety-culture/
EUROCONTROL	The Impact of Artificial Intelligence on Future Aviation Safety Culture	https://www.preprints.org/manuscript/202401.1624/v1

7.6.2 Conferences

Communication about HAIKU will take place at both national and international levels through participation in conferences and other public events. Table 8 presents the conferences in which HAIKU partners have participated.

Table 8: Conferences

Partner	Date	Conference	Website
EMBRAER	18-21 October 2022, Barcelona	12th EASN Conference	https://easn.net/newsletters/issues/easn-newsletter-october-2022
DBL	08-10 March 2023, Geneva	Airspace World	https://airspaceworld.com/
EUROCONTROL	13-15 April 2023, Lausanne	IHIET Conference	https://ihiet.org/series.html
EMBRAER & DBL	5-8 September 2023, Salerno	13th EASN Conference	https://easnconference.eu/
DBL	20-22 September 2023, Turin	CHIItaly 2023 - Crossing HCI and AI	https://chitaly2023.it/
CERTH	20-22 September 2023, Iraklion	ICTR 2023	https://www.ictr.gr/default.aspx
CERTH	20-22 October 2023, Athens	ICED 2023	https://iced.eap.gr/
LIU	07-09 February 2024, Umeå	WASP-HS Winter Conference	https://wasp-hs.org/event/winter-conference-2024/

7.6.3 Workshops

Several workshops have been organized and attended by HAIKU partners. Table 9, presents the 13 workshops run to date.

Table 9: Workshops

Partner	Date	Workshop
DBL organiser, EUROCONTROL, LIU	3 November 2022, Rome	Human-Centred AI concept Workshop
LFV & LIU	22 November 2022, Norrköping, Sweden	Use Case 3: Urban Air Mobility" internal workshop
SKYWAY, EUROCONTROL, DBL	17 January 2024, Madrid	HAZOP Workshop for Use Case 4
DBL & all partners	1 February 2023, Brussels	HAIKU 2023 Landscape Workshop
CERTH	16 March 2023, Thessaloniki	Use Case #6 Workshop
SKYWAY, DBL	12 April 2023, Alicante	Alicante Airport visit and interviews for UC4
LFV, LIU	14 April 2023, Norrköping, Sweden	Use Case #3 AI ConOps workshop
DBL	17 May, Rome	Future Workshop in Aviation
THALES, CATIE, DBL organiser, EUROCONTROL, LIU, SKYWAY	28 June 2023, Brussels	Future Workforce in Aviation - WP8 Workshop
LFV & DBL	13 June 2023, Stockholm, Sweden	Future Workforce Workshop
CERTH & DBL	4 July 2023, Thessaloniki	Use Case #6 Workshop-Journey Map
DBL	7 September 2023, Brussels (online)	EDA AI Action Plan Workshop
EMBRAER	28-31 October 2023, online	IncoSE IW2023 (International Workshop)

7.6.4 Other Events & Webinars

HAIKU partners actively took part in 15 additional general events and presented in 3 webinars, as detailed in Table 10.

Table 10: Other Events & Webinars

Partner	Date	Event
CERTH/HIT	04 November 2022 (Brussels)	EATEO Seminar
LFV	24 November 2022 (Malmö)	Universal AAM Strategies
DFKI	15 December 2022	Webinar: An overview on XAI Interaction
DBL	23 March 2023	Webinar: Data Augmentation for using machine learning in aviation
CERTH/HIT	09 February 2023 (Amigdaleonas, Kavala)	Egnatia Aviation Open Day
DEEP BLUE	20 February 2023 (Trento)	Company Presentation Seminar
EUROCONTROL	01-02 March 2023 (Brussels)	SAFETY TEAM-ST34
SUITE 5	09 May 2023	Meeting with Industry Stakeholders
EMRAER	27 June 2023	SETI 2023
EUROCONTROL	July 2023	HAIKU (in EUROCONTROL's newsletter)

EUROCONTROL, LIU, LFV	13 August 2023	Webinar:UTM simulators
CERTH/HIT	09-17 September 2023	87th Thessaloniki International Exhibition & Congress Center
EUROCONTROL (& CHPR, SKYWAY, THALES)	20-21 September 2023 (Birmingham)	CRA FORUM (FAA-ECTL Meeting on HAT)
CERTH/HIT	29 September 2023	Researcher night
EUROCONTROL (& SKYWAY, CHPR)	26-27 October 2023 (Paris)	TIM ' <u>Human-Systems Integration</u> '
CERTH/HIT	23 November 2023	Cranfield University
SUITE 5	24 November 2023	Presentation of HAIKU and of UC5/4 objectives and work (without disclosing partners data) to Athens Airport experts
ENAC	December 2023 (Toulouse)	ENAC Open Day

7.7 Acknowledgement of EU funding

As the project is funded by the EU (HE) programme, all communication and dissemination material must clearly acknowledge the receipt of EU funding through the display of the EU flag and the following text referring to Horizon Europe:

*“This project has received funding from the European Union’s Horizon Europe research and innovation programme **HORIZON-CL5-2021-D6-01-13** under Grant Agreement no **101075332**”.*

7.8 Open access

Dissemination of project results will follow open access principles where confidentiality level of data allows it. Public deliverables and datasets, in addition to being accessible on the project website, will also be uploaded to the Zenodo open-access repository. This platform facilitates the linking of deliverables, datasets, and other content with a specific project, Grant Agreement and funding scheme. Zenodo will ensure continued access to the project results even after the HAIKU website goes offline.

8 Exploitation

The HAIKU exploitation methodology was structured with the aim of supporting the partners in the definition of the project exploitation strategy.

8.1 Exploitation Workshop

During the first year, two exploitation workshops was held. As the 1st Year was too early to define what is exploitable, partners were grouped according to the Use Cases and invited to share their exploitation strategies. Table 11, presents the exploitation workshop results:

- Identify stakeholders
- Exploitation potential
- Exploitation strategy
- Target sector, users, clients, audience
- Possible competitors

Table 11: Results from first exploitation workshop

Use Case #1 Startle effect in the cockpit	Involved partners: ENAC, DFKI
Stakeholders	Airlines and pilots, safety departments, training centres, regulators and incident investigators, HF Community
Exploitation Potential	Provide guidelines to higher TRL, identify technological limitations to help develop more advanced prototype, dataset and training (public)
Exploitation Strategy	Publications, Service offering for consultancy
Target Sector	Aviation industry (aircraft manufacturer, general aviation)
Target users/clients/audience	Aviation scientific community (AI, human factors, HCI etc.)
Possible competitors	As we are not offering a product, there is no competition
Use Case #2 Planning in the cockpit	Involved partners: Thales, Embraer, DFKI, Bordeaux INP, CATIE
Stakeholders	Engineering department, business units, HF community, airlines, other industries
Exploitation Potential	Tools and methods to develop Intelligent Assistants, technical enablers for HAT, tools to reduce complexity in the cockpit
Exploitation Strategy	Service offering for consultancy, internal adoption, publications.
Target Sector	Aviation, automotive, space, maritime, transport in general
Target users/clients/audience	Designer engineers, operators (drivers, pilots), airlines and vehicles owners, regulators, researchers, SMEs
Possible competitors	Emerging tech companies
Use Case #3 Urban Air Mobility	Involved partners: LiU, LFV

Stakeholders	Software companies, regulators, UAM developers, airspace users
Exploitation Potential	City municipality, city planners, safety planners
Exploitation Strategy	HMI, Prototype system, publications, demonstration, product, guidelines to EU-city planners, research knowledge.
Target Sector	Cities, legislative
Target users/clients/audience	Logistic companies, regulators, UAM developers
Possible competitors	The market is still at a research stage, with a number of research groups working on this topic.
Use Case #4 Digital Tower	Involved partners: FerroNats, Suite5, DFKI
Stakeholders	ANSP, tower service providers, airport manager, AI developers, port control in maritime, transport, software companies, airspace users (i.e. pilots)
Exploitation Potential	Design guidelines for Digital assistant, liability guidelines
Exploitation Strategy	Commercial exploitation vs non-commercial, HMI, prototype system-incremental step, models of digital assistant
Target Sector	ATM, transport, aviation, tech development
Target users/clients/audience	Airspace, ATCO, clients
Possible competitors	Software companies, research projects
Use Case #5 Airport safety management	Involved partners: Engineering, EUROCONTROL, Suite5, Luton Airport (as external stakeholder)
Stakeholders	Transport and aviation industry/customers, airport group
Exploitation Potential	Publications, data models, customised data management platform, use case as whole
Exploitation Strategy	Validation in other airports with common characteristics, then airports with different characteristics, publications, consultancy service offering
Target Sector	Airport ground (fleet) transportation flight safety
Target users/clients/audience	Other airports, insurance companies, academic, vehicles owners-ports
Possible competitors	-
Use Case #6 Airport Spreading virus COVID-19) prevention	Involved partners: CERTH
Stakeholders	Transport and aviation industry/customers, airport group
Exploitation Potential	Modelling and monitoring in other sectors, in general in large transportation hubs
Exploitation Strategy	Validation in other airports with common characteristics, then airports with different characteristics, then in other transportation hubs, publications, consultancy service offering

Target Sector	Aviation, transport, medical, passengers (expand to other sector)
Target users/clients/audience	Airports
Possible competitors	Current monitoring is done via a thermographic camera, to identify individuals with symptoms, tracking (mobile and GPS), monitoring platform, metro platform in London

8.2 Exploitation Questionnaire

In the project's second year, each partner was contacted directly to establish the exploitation strategy tailored to their respective companies.

Table 12 presents the exploitation questionnaire results by each organization:

- Key exploitable result
- Exploitation potential
- Your interest in the exploitation
- Your role in the exploitation
- Exploitation strategy
- Target sector
- Target users/clients/audience

Table 12 Exploitation Workshop

Partner	Key exploitable result. Description: The key exploitable results identified by your company/organization.
DEEP BLUE	Societal Acceptance Framework (WP2), IA Concepts Generation Methodology plus IA concepts themselves (WP3), XAI Design on UC4 (WP4/5), MOC Framework (WP7), AI-CRM Training Packages plus Methodology to design the future workforce and future skills (WP8)
EUROCONTROL	Factors approach to Human-AI Teaming configurations
SKYWAY	Improved ATC capacity and safety awareness for ANSP/Airport operators
CHPR	IA Concepts Generation Methodology plus IA concepts themselves (WP3), Societal Acceptance Framework (WP2), XAI Design on UC4 (WP4/5), MOC Framework (WP7)
LIU	Scientific publications and presentations, novel research findings, collaborative partnerships,
THALES	Tools to assist pilot in decision-making
BORDEAUX INP	Enhanced expertise and experimental capability
CATIE	Disseminating scientific publications and research results on HAT, progressing in TRL prototypes and increasing expertise in the field of HAT
DFKI	Scientific publications and presentations, novel research findings, collaborative partnerships, with a focus on XAI and HCI studies involving IA concepts and prototypes
ENGINEERING	AI-based intelligence assistant
LFV	Early results/findings on ConOps for human-AI teaming in UTM/UAM and scientific publications
ENAC	<u>Open source Eye tracking data processing library (ArGaze)</u>
SUITE 5	Airport Safety Incident AI-powered dashboard, ML-based Air Traffic Sequence optimisation

CERTH/HIT	Prototype for wireless counting, Android application for routing, health and safety tool, publications and presentations
EMBRAER	Guidelines for HF Methods and tools for pilot assistance assurance development, Pilot assistance tools and concepts and their artifacts
Partner	Exploitation potential Description: What is the exploitation potential of each exploitable result?
DEEP BLUE	<ul style="list-style-type: none"> • Societal Acceptance Framework-> (RESEARCH, COMMERCIAL) companies looking to implement AI in their services might leverage the framework; • IA Concepts Generation Methodology -> (RESEARCH, COMMERCIAL) for industry, companies looking to design/Develop innovative concepts; • XAI Design on UC4 -> (COMMERCIAL) this will improve consultancies related to HF and UI design by expanding to XAI. • MOC Framework (RESEARCH, COMMERCIAL) -> industries that are looking to develop IA and to train new staff. • AI-CRM training packages (COMMERCIAL) -> new training modules available for industry covering CRM aspects in a AI context • Methodology to design the future workforce and future skills -> (RESEARCH, COMMERCIAL): this could become a service for industries to analyse the impact on technological changes on the human role)
EUROCONTROL	The HF approach will be adapted to other SESAR AI projects ongoing and just started
SKYWAY	Improve ATC capacity and safety KPIs
CHPR	<p>IA Concepts Generation Methodology -> (RESEARCH, COMMERCIAL) for industry, companies looking to design/Develop innovative concepts</p> <p>XAI Design on UC4 -> (COMMERCIAL) this will improve consultancies related to HF and UI design by expanding to XAI</p> <p>Societal Acceptance Framework-> (RESEARCH, COMMERCIAL) companies looking to implement AI in their services might leverage the framework</p>
LIU	Expertise and knowledge development with respect to theoretical underpinnings of human-ai teaming and automation transparency. Deepened partnerships with international industries and organisations.
THALES	Reduce pilot workload, improve mission efficiency for airliners
BORDEAUX INP	Provide expertise in HAT design, communication and collaboration. Expertise in integrating AI into social-technical systems
CATIE	Spread knowledge and work on new related projects linked to HAT.
DFKI	Extending expertise and knowledge with respect to research and development in human-ai teaming, user-centered AI and HCI. Deepened partnerships with industry and other international partners. Detecting and reducing physical and cognitive load of workers to improve efficiency and safety.
ENGINEERING	AI-based intelligence assistant, holds significant potential for exploitation, particularly in enhancing airport safety and operational efficiency. This result is designed to transform various safety and operational data into actionable insights, aiding staff in proactive decision-making. This system is envisioned to serve as a critical infrastructure component for airports, aiming to understand root causes and patterns of past incidents and to assist in short and long-term operational planning. The exploitation potential is thus multifaceted, with applications in improving safety protocols, predictive analytics for airport operations, and as a decision support tool for airport safety personnel.
LFV	Exploitation potential is considered low at this stage because of early concept. However, LFV believes new knowledge could be used as a baseline for future research.

ENAC	Allowing laboratories and industrial to exploit eye tracking device capabilities in real time
SUITE 5	Significant potential for providing this solution to any airport that is considering to monitor and predict safety incidents (around Europe)
CERTH/HIT	Use in airports across Europe
EMBRAER	Improve cockpit safety & Improve airline effectivity and efficiency
Partner	Your interest in the exploitation. Description of the interest in the exploitation of such result.
DEEP BLUE	DBL aims to find new business opportunities and other stakeholders that might leverage the project's results
EUROCONTROL	EUROCONTROL is a key SESAR partner involved in a number of new AI research projects including DARWIN, JARVIS and CODA. We aim to further research in the Human-AI Teaming domain for the purposes of enhancing aviation
SKYWAY	Participate in the exploitation (design and set up) for other airports/ANSPs
CHPR	To discover new business prospects and identify additional stakeholders who could benefit from the outcomes of the project.
LIU	International partnerships and collaborations in research; strengthen LiUs presence in internation aviation research
THALES	Improve quality of our products
BORDEAUX INP	Improve operator performance by reducing the constraints on them and improving working conditions (stress, fatigue, psychosocial risks, etc.)
CATIE	With HAIKU, CATIE's global presence in the aeronautics industry is strengthened by its involvement in these international partnerships and collaborations in the fields of aeronautics research and industry
DFKI	Strengthening networks in aviation industry and research; finding new business opportunities for consulting and exploitation of the research results, establishing new research collaborations.
ENGINEERING	Engineering has a decennial consolidated presence on Safety and Security market. HAIKU result could be of high interest for the ENG's Managed Operations unit that is directly involved in enhancing safety and operational efficiency. In the security and intelligence sector, ENG has several related customers in Italy and around the world, with a particular interest in advanced intelligence tools to increase the effectiveness of their processes and reduce costs. The HAIKU result could be a new step in the research on innovative technologies and solutions to be adopted in the security domain, which will improve the involved companies offer to its customers. This result will be integrated in the current offerings or in new solutions to convey them to several existing (and potential) customers
LFV	LFV is interested in further developing the results/findings by involving in new research projects both nationally and internationally
ENAC	Possible contribution from other communities
SUITE 5	Suite5 aims to commercialize this result and offer it as a service to interested stakeholders
CERTH/HIT	Use as a complete service
EMBRAER	<ul style="list-style-type: none"> • Ability to improve new product development (pilot assistance) • New products offer
Partner	Your role in the exploitation. Description of your role in the exploitation process of the result; try to be as specific as possible. Please note that you are one of the owners of the exploitable result if you contributed to its development. You are a beneficiary partner if you are interested in exploiting a result produced by other partners.

DEEP BLUE	DBL can help companies use HAIKU's outcomes during the whole process, from onboarding to implementation
EUROCONTROL	Our role is to integrate the final HF approach into the SESAR Human Performance Assessment Process, which is applied to all SESAR projects with a Human Factors element
SKYWAY	Our role in the exploitation process would be to offer the full integration package (initial design, simulator scenarios, set up and testing)
CHPR	Assist organizations in integrating HAIKU's results
LIU	Our role in the exploitation process is to contribute to the development of knowledge and expertise within the research area, to disseminate findings and lessons learned, and engage with society and industry.
THALES	-
BORDEAUX INP	Providing our expertise in the design of new HAT systems
CATIE	Utilizing our expertise in Human factors and human AI Teaming to contribute to the design of innovative HAT systems
DFKI	Publishing knowledge incl. open data and code, licencing, establishing spin-offs.
ENGINEERING	ENG is the main actor in the realization of the AI-based intelligence assistant prototype. The main output of Use Case 5 will be that of an AI-based intelligence assistant prototype that will aid in the transformation of airport safety and operational data into actionable insights to be conveyed to the LLA safety staff as well to the LLA NATS for supporting them in their day-to-day work towards improving airport safety. This will be done by providing a required infrastructure that will assist the personnel in evaluating and understanding the root causes and patterns of past incidents and coming closer to a position where the Intelligence Assistant can indicate factors that need to be taken into consideration for the short and long term planning of the airport operations, triggering the LLA staff to perform predictive actions. The final prototype coming out of Use Case 5 will reach TRL 6, being able to analyse heterogeneous data and identify trends, hotspots, safety pinch-points, and other factors that are relevant to airport safety, focusing on the three different cases which formulate the scope of this use case, namely incorrect taxiing, pushback errors & hold point busts.
LFV	LFV role is to contribute to an efficient evaluation and formulation of requirements for AI-system-teamwork and collaborate with national regulators and potential UTM/UAM stakeholders
ENAC	Our role will be to maintain and update the library and provide support to use it in the future
SUITE 5	Suite5 acts as the owner of the dashboard that was created by the company, and will pursue the commercial exploitation of it. Delivering the implementation of the AI/Optimisation algorithms and the UI development, based on the designs made by DBL
CERTH/HIT	CERTH is the owner of the tools provided and will exploit them as such
EMBRAER	<ul style="list-style-type: none"> • Disseminate and train staff for the new tools and methods • Work with standardization groups (e.g. SAE 34/Eurocae 114) • Further support trade-offs and developments on new concepts • Develop further R&D cooperation/collaboration partnerships
Partner	Exploitation strategy. Explanation of how you intend to exploit such result. Examples of possible exploitation strategies: "product sale", "service offering", "consultancy", "publications", "involvement in new research projects", "recommendations to EU", "standard setting", "internal adoption".
DEEP BLUE	DBL will offer consultancies, services, products, and produce publications

EUROCONTROL	adoption by other projects will be the main exploitation strategy, as well as an academic research paper on the method.
SKYWAY	Service offering, consultancy, involvement in new research projects, internal adoption
CHPR	Offer consultancies, services etc.
LIU	Publications, presentations, involvement in new research projects, education
THALES	Improve quality of our products, involvement in research projects, standard setting (support EASA in HAT certification process)
BORDEAUX INP	Consulting, involvement in new research projects, education
CATIE	Engagement in consultancy services, active involvement in emerging research, and participation in new projects
DFKI	Consultancy, publications, involvement in new research projects, establishing spin-offs, recommendations to EU, standard setting, education
ENGINEERING	<p>A consolidated business model addressing pricing and licensing issues as well as market segments will be assessed and validated with the aim to drive a successful exploitation through:</p> <ul style="list-style-type: none"> • Licences, subscription-based policy/licensing: Based on the subscription policy, a monthly fee depending on the enabled services and the size of the monitored/controlled infrastructure will be charged. • The business models to be explored are licensing and SaaS, but other models will be taken into consideration according to the needs of different potential users and based on innovative adoption models.
LFV	LFV intends to exploit the results by contributing to publications and involving in new research projects
ENAC	Publications, involvement in new research projects, conferences, workshops
SUITE 5	<ul style="list-style-type: none"> • Service Offering to airports, as well as consultancy on AI-relevant stuff and on data management procedures. • Product Sale, followed by the customisation of the algorithms as each airport has a different layout
CERTH/HIT	Service offer and sales in airports
EMBRAER	<ul style="list-style-type: none"> • Internal training / internal adoption • Involvement in new R&D opportunities • Standards development • Publications
Partner	Target sector. Description of your target sector of application. Examples of target sectors are "Air traffic management in Europe", "HF networks in EU"etc.
DEEP BLUE	Aviation in general, HF networks in EU, Other safety critical domain (e.g. maritime, healthcare etc.)
EUROCONTROL	Air traffic management and cockpit research and innovation
SKYWAY	Air traffic management in Europe
CHPR	HF networks in EU , Aviation in general
LIU	Air traffic management in Europe, HF networks in EU, Education and training in EU
THALES	Commercial A/C
BORDEAUX INP	Civil and military cockpits research
CATIE	Regional and large commercial aviation
DFKI	DFKI is addressing all main sectors. From this project we expect findings that can be particularly exploited in the aviation, space and automotive sector as well as the health sector
ENGINEERING	The target market for the AI-based intelligence assistant is primarily the sector of Critical Infrastructures (CI) which is broad and includes various domains. We can include also the Safety and Security market
LFV	UTM/UAM in Sweden and Europe

ENAC	Any sector for which eye tracking usage is relevant, including Ar traffic control and cockpits
SUITE 5	Airports worldwide
CERTH/HIT	Passenger routing and health and safety air quality management
EMBRAER	<ul style="list-style-type: none"> • Airlines • OEM • Regulator
Partner	Target users/clients/audience. Description of the target users/clients/audience of your exploitation activity.
DEEP BLUE	Users operating in aviation (such as airports, airlines, control towers, or businesses) and other safety critical domains (e.g. hospitals, ship companies, etc.)
EUROCONTROL	Projects such as DARWIN, JARVIS and CODA, and project leaders in Human AI Teaming outside SESAR, e.g. Airbus
SKYWAY	ANSPs and Airport operators
CHPR	Safety critical domains & users operating in aviation
LIU	ANSPs, UAM/UTM stakeholders, HF networks, academic journals, industry and academic conferences and venues
THALES	Airframer
BORDEAUX INP	Airframer
CATIE	Airframer, research and aviation industry
DFKI	<ul style="list-style-type: none"> • Academic and industry stakeholders • Researcher, practitioners and students • Academic and industry venues
ENGINEERING	<ul style="list-style-type: none"> • Critical Infrastructure Operators in private and public sectors, CI Management Teams and CI Owners • Security companies and federal authorities • Industry market operating in the security sector, which could be interested to integrate AI-based intelligence assistant
LFV	ANSPs and UTM/UAM stakeholders e.g. U-space Service Providers (USSP), UAM/UAS operator etc.
ENAC	Research laboratories and industrials
SUITE 5	Air Traffic Controllers
CERTH/HIT	Passengers and airport staff
EMBRAER	<ul style="list-style-type: none"> • OEM product development engineering • Supply chain • Airlines (users)

8.3 Next steps

In terms of exploitation plan, discussions were held during meetings with EASA in October 2023, focusing on the application of EASA AI guidance to HAIKU Use Cases. Furthermore, HAIKU's involvement in EASN Conferences (in 2022 and 2023) facilitated collaboration with other projects, such as the [SafeTeam Project](#), fostering a sense of clustering within the field.

The forthcoming phases of the exploitation strategy will involve engaging in future meetings and events, including dedicated workshops focused on exploitation with stakeholders (more information about stakeholders can be found at D2.2 Analysis of Societal Impact).

The objective of these gatherings is to assemble input, showcase project perspectives, and gather feedback for fine-tuning. The ultimate conference, scheduled for the project's concluding year (M35-M36), will be a platform to disseminate HAIKU's accomplishments to interested parties and magnify the influence of the outcomes.