



Innovation and Capacity building

in Agricultural Environmental and Rural UAV Services



ICAERUS

D5.2: Plan for dissemination & exploitation including communication activities

Version B

**WP5: Ecosystem Building, Open Calls & Business and
Governance Modelling**

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Expert opinion on deliverable/ Comment	Steps towards addressing it
<p><i>However it is not clear how will ICAERUS perform in the multiplier and sustainability phase? This seems not well thought off, and is not yet well described and also measures to maximise the impact are not well described</i></p>	<p>A box has been added under the Multiplier Effect Category to highlight the progress made under each category presented in Figure 6, since the submission of the deliverable in M24 (pg 16-17, and one for the Sustainability Phase (pg 18). An additional sub-heading for next steps of these phases has been added to the conclusion (pg 96)</p>
<p><i>Given the fact that the project has reached many milestones/KPIs already - it is unclear what the activities and achievements are in these final and crucial phases. This should be better explained.</i></p>	<p>A subheading of the next steps has been included for upcoming achievements to outline some activities planned for the end of the project (96)</p>

Executive Summary

The Plan for dissemination & exploitation, including communication activities (Deliverable 5.2) provides definitive guidelines for ICAERUS partners to:

- effectively share the project, its results, and benefits with society
- transfer knowledge and describe results so that they are available for use/re-uses
- define concrete pathways for that use/reuse.

As the second iteration of the deliverable, this document also provides updates from the monitoring of the strategy and KPIs that were established in the original document submitted in September 2022.

The ICAERUS project

ICAERUS is a four (4) year project funded by Horizon Europe (HE) that aims to showcase the **effective, efficient, and safe deployment of drones** in applicable settings and to **identify risks** and **added values** associated with their use. This is being done using five (5) specific drone applications Use Cases (UCs) representing the **most important sectoral and societal drone usage purposes** in Europe. The project is also fostering innovation to address agricultural and rural community driven challenges through Financial Support to Third Parties (FSTP) which is distributed to twenty (20) sub-projects within two (2) distinct types of calls, each with two (2) launches. PUSH Open Calls for innovation development and PULL Open Calls for farming, forestry, and rural challenges.

Dissemination Exploitation and Communication (DEC) Methodology and Approach

The DEC plan is organised in four (4) distinct phases, each with their own objectives. The first phase **Vision** (M1-M12) was used to establish the foundation of subsequent communication, dissemination, and exploitation of project results. The visual identity, communication channels and first brochures and banners were prepared. The project is currently approaching the end of the second phase **Raise Cognition** (M13-M28) and has been marked by active stakeholder engagement at events and strengthening cooperation with sister project's SPADE and CHAMELEON. The third phase **Multiplier Effect** (M29-M48) will focus on results dissemination and exploitation, with emphasis on the demo events of the use cases as well as the results of the open call sub-projects. The final phase **Sustainability** begins after the project concludes and aims to extend the exploitation of project results.

Target Groups

Six (6) distinct target groups ([Figure 1](#)) have been identified in order to tailor dissemination content and communication channels to different interests and needs.

Objectives and Key Performance Indicators (KPIs)

- **Dissemination objective:** ensure the project's outcomes, knowledge, and opportunities are effectively diffused to the appropriate target communities, making research results widely accessible.
- **Communication objective:** raise public awareness of the project through a range of strategically planned actions that are accessible to internal and external stakeholders, the media, and the general public.
- **Exploitation objective:** capture the innovation potential and added value of project results by providing pathways for the use/reuse of project results.

Specific dissemination, communication, and audience KPIs have been established to provide measurable and monitorable targets for evaluating progress and taking corrective measures when necessary.

The project has also adopted the multi-actor approach to consider all relevant forms of experience and knowledge from a diverse range of stakeholders to achieve project aims. In particular by:

- Focusing on communication information that matters to the end users.

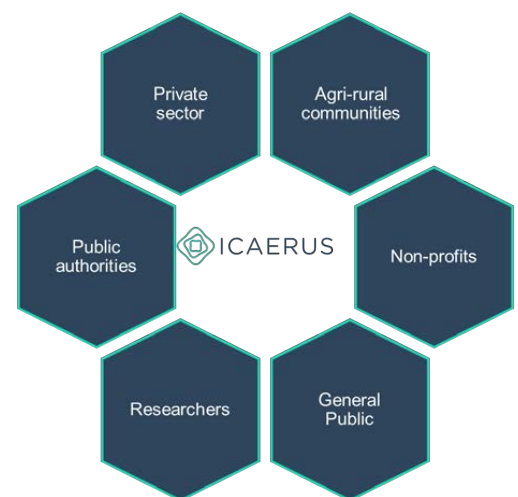


Figure SEQ Figure * ARABIC 1: ICAERUS

- E.g., blog posts featuring different aspects of the project such as Open Call information, *Hoverview* which provides more technical drone informaiton.
- Using audience appropriate language.
 - E.g., different channels are used depending on the audience, such as social media for the general public, scientific publication for academic community and contributions to industry magazines for private sector and drone enthusiasts.
- Translate material
 - E.g., all press releases and brochures have been translated into partners languages, the latest series of posters/banners are currently being translated.
- Capitalising on partners' existing networks.
 - E.g., hosting workshops and demos with farmers, presenting the project at other consortium meetings
- Seeking synergies with other projects and initiatives.
 - E.g., joint workshops and webinars with CHAMELEON, SPADE and other EU funded projects.

Open Calls

In the context of the DEC plan, the Open Calls will require two distinctive priorities for allocating effort. First **promoting the open calls** and second **spreading the results**. The promotional phase involves posting the call on the EU funding and tenders' portal and the OpenCall Hub and providing extensive information on the ICAERUS website. Promotional campaigns that include blog posts, social media posts, press releases, posters/banners, and webinars and/or workshops are used to attract applicants once the call is open. To spread the results once the sub-projects have started, a dedicated series of social media and blog posts announce the sub-projects and the organisations behind them, and a dedicated tab of the website is prepared to feature information and updates as they become available. Sub-projects also receive ICAERUS promotional material to present their work within the content of the ICAERUS open calls.

Planning and Continuous Reporting

From the start of the project monthly reporting forms have been shared with partners to provide input on their dissemination and communication activities in order to maintain their accountability and engagement as well as to facilitate ongoing monitoring. A similar process is in place for planning event participation, synergy identification and publication planning, with a spreadsheet shared regularly requesting details on what is currently being planned. A brainstorming sheet is also included so that partners may include events or projects/initiatives that they are aware of but may not have committed to.

Dissemination Activities

The Dissemination KPIs have been organised in five (5) distinct categories. Targets for the entire span of the project have been determined and distributed both yearly and per partner.

D1- Organisation and participation of events. This includes organisation of workshops, webinars, demo events and event participation. All KPI targets have been achieved so far, most have been exceeded. For example, collectively partners have participated in **84** events, **29** of which were attended by the coordinating organisation AUA.

D2- Scientific publications. This includes both peer reviewed scientific publications and industry articles. The targets have also been met, with five (5) scientific publications already accepted and another four (4) are under review.

D3- Synergies. This includes participation in alliances, working groups and joint activities with other initiatives as well as signing Letters of Interest (LoI) or Memorandums of Understanding (MoU). Targets have also been met or exceeded, and cooperation remains a strong focus for upcoming DEC phases.

D4- Outreach to policy and decision makers. This will be undertaken through policy white papers to European Directorate Generals (DGs) and national/regional government officials. Targets are for the final year of the project.

D5- ICAERUS ecosystem, this includes representation and fairs and exhibitions. Partners have already exceeded the project target by attending seventeen (**17**) such events across Europe.

Communication Activities

Communication KPIs are organised along three (**3**) categories and are also distributed on a yearly basis and per partner.

C1- Branding material, including the visual identity, logo, communication channels, banners, brochures, and their translation. All targets have been achieved or exceeded, with the creation of two (**2**) roll up project banners and seven (**7**) that can also be printed as posters for the use cases and the two (**2**) open calls, however additional banners are expected to feature results. Translations are made into Greek, Dutch, Spanish, Catalan, Lithuanian, North Macedonian and French.

C2- Digital outreach, encompasses blog posts and social media posts as well as printing material. Already **336** posts have been made across the project's five (**5**) social media channels, and **46** blog posts have been published.

C3- Multiplier campaigns, which include newsletters, press releases, interviews, videos, and podcasts. All KPI targets have been achieved or exceeded and preparations are underway for KPIs such as podcasts that are not expected until the last two (**2**) years of the project.

To track the progress of the communication channels various analytics are collected. Some of particular interest include:

- Website users: **6, 532**
- Average website engagement time: **2m37s**
- LinkedIn: **1073** followers
- Facebook: **6,609**-page reach, **2,300** interactions, **170** followers
- X: **131** users, **135** posts with **642** average monthly impression since May 2023
- YouTube: **9** videos published, **915** views, **36** subscribers, **38.9** hours watch time
- SlideShare: **194** views, **15** interactions
- Newsletter: **5** issues, **237** subscribers, **793** total opens and **219** total clicks

Exploitation Activities

The preliminary exploitation plan which will be expanded upon over the project's duration, aims to ensure the use/re-use of project results, highlight the project's added value to promote further scientific development and promote sustainable growth through industry competitiveness and evidence-based policy. Seven (**7**) Key exploitation results (KERs) have been identified ([Figure 2](#)).

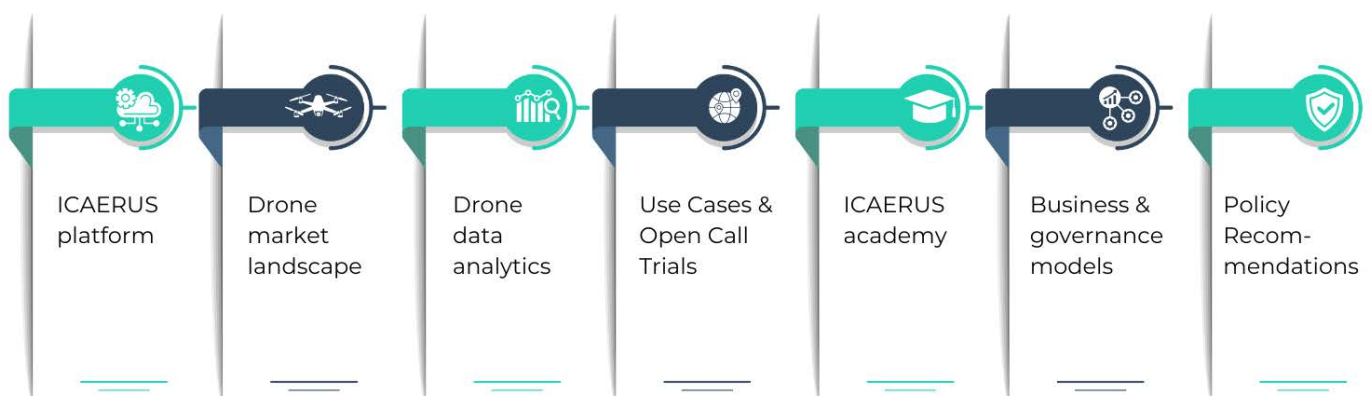


Figure 2: ICAERUS Key Exploitable Results

A characterisation form was shared with partners to review the KERs established in the proposal phase and provide necessary updates. Additional results are expected, particularly from the use cases and open calls. Partners are expected to inform RFF and AUA when a new result has been determined, so that a characterisation form can be sent to gather information on the scope of exploitation, the target groups, and

the means of exploitation. The result will be reviewed and validated by the consortium before being added to the project's list of KERs.

Intellectual Property Rights (IPR) Strategy

ICAERUS will examine the protection of any results that could potentially be commercially or industrially exploited, and if possible, reasonable, and justified, protect them. The Intellectual Property (IP) strategy involves identifying and characterising IP and validating with the consortium before being added to the list. So far, the **ICAERUS platform**, **Drone Data Analytics Library (DDAL)** and **ICAERUS Academy** were identified as results subject to IP, and while the DDAL has not identified IPR, the platform identified copyleft, while the academy identified both copyright and creative commons.

In addition, the consortium will publish the overall project results in the project website, publications, and seminars, without charging intellectual property rights. All partners will deposit scientific peer reviewed publications in a centralised repository (Open Research Europe) as mandated by the Horizon Europe "Open science policy.

Over the course of the project RFF will ensure partners understand the basics of IP, and the exploitation of their results. At least one IP workshop will be offered to the consortium and adapted for the value-added services. The goal is to provide an overview of the means of protection, the status of results and IP, and to answer any questions that partners may have. RFF is not able to provide protection of results but may suggest seeking legal support for certain IP.

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Abbreviations

AKIS	Agricultural Knowledge and Innovation System	API	Application Programming Interface
CAP	Common Agricultural Policy	CC 0	Creative Common Public Domain Dedication
CC-BY	Creative Commons Attribution International Public Licence	DDAL	Drone Data Analytics Library
DEC	Dissemination, Communication, Exploitation,	DIH	Digital Innovation Hub
DG	Directorate General	EASA	European Union Aviation Safety Agency
EASN	Innovation in Aviation and Space International Conference	EC	European Commission
ECPA	European Conference on Precision Agriculture	EFSA	European Food Safety Authority
EU	European Union	ETSI	European Telecommunications Standards Institute
EUPL	European Union Public License	FAIR	Findability, Accessibility, Interoperability, Reusability
FAQ	Frequently Asked Questions	FSTP	Financial Support to Third Parties
HE	Horizon Europe	ICT	Information and Communications Technology
ICUAS	International Conference on Unmanned Aircraft Systems	IEEE	Institute of Electrical and Electronics Engineers
IP	Intellectual Property	IPR	Intellectual Property Rights
ISO	International Organisation for Standardisation	KER	Key Exploitable Result
KPI	Key Performance Indicator	LCA	Life Cycle Assessment
LCC	Life Cycle Costing	LoI	Letter of Interest
IoT	Internet of Things	ISR	Intelligence, Surveillance, Reconnaissance
M	Month	MoU	Memorandum of Understanding
No	Number	NDA	Non-Disclosure Agreement
OC	Open Call	OCT	Open Call Trial
PO	Project Officer	R & D	Research and Development
R & I	Research and Innovation	SIMA	International exhibition of technologies and solutions for efficient and sustainable agriculture
SME	Small Medium Enterprise	SWOT	Strengths, Weaknesses, Opportunities, Threats
TAM	Technology Acceptance Model	TWG	Technical Working Group
QR	Quick response	UAS	Unmanned Aircraft Systems
UAV	Unmanned Aerial Vehicle	UAV-g	European Drone Forum, Unmanned Aerial Vehicles in Geomatics
UC	Use Case	UK	United Kingdom
UVP	Unique Value Proposition	VM	Verification Mean
WP	Work Package		

1. Introduction

This section provides an overview of the ICAERUS project, focusing on the challenges, aim, and approach of the project as a whole. It will also introduce the consortium and describe the structure of this deliverable, which is the second iteration of the plan for dissemination and exploitation, including communication activities.

Project Overview

Drones are a digital technology that has the potential to significantly contribute to the Farm to Fork, Biodiversity, and **Digital strategies** and align with the **Green Deal 2030**, supporting both **food security** and **sustainable development**. Drone uptake has been increasing for a range of practical agricultural applications because they are:

- Able to perform increasingly complex tasks
- Highly efficient and flexible
- Do not damage the environment or ecosystems.

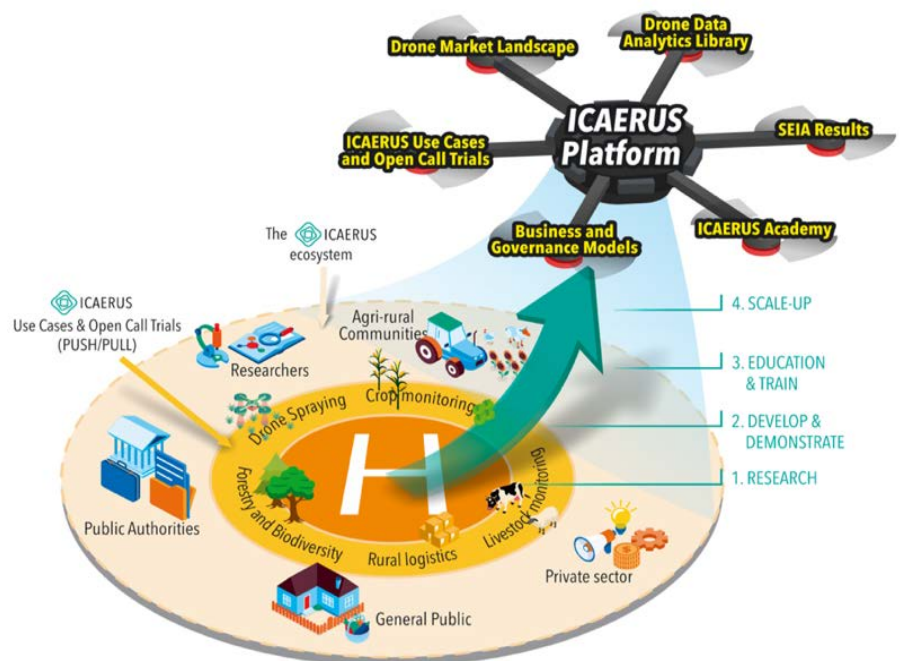
Despite these benefits, drones are currently used in varying degrees across European Union (EU) member states due to **socio-economic, environmental, and regulatory challenges** such as:

- Costly investment
- Knowledge gaps, data protection and technology misuse
- Environmental conditions significantly limit the use of drones
- Regulatory restrictions
- Safety regulations

ICAERUS aims to tackle these challenges by supporting and showcasing the **effective, efficient, and safe deployment of drones** in applicable settings and to **identify risks** and **added values** associated with their use.

ICAERUS' vision is to explore opportunities for drones and provide a complete, interconnected account of their potential and impact as multi-purpose vehicles in EU agriculture, forestry, and rural areas.

ICAERUS utilises an **application-oriented** approach ([Figure 3](#)) to explore multi-purpose drone use in five (5) specific drone applications, representing the **most important sectoral drone usage purposes** in Europe. The ICAERUS Use Cases include **Crop Monitoring, Drone Spraying, Livestock Monitoring, Forestry and Biodiversity Monitoring** and **Rural Logistics**. ICAERUS is also working to use research, technology optimisation, demonstration, and drone education to create an effective, trusted, and safe environment for the EU drone service market to flourish while contributing to the achievement of the EU's **decarbonisation, digitalisation and resilience objectives**. This is being done through the development of an open access-drone data analytics library (DDAL), featuring datasets and algorithms, as well as the extensive analysis of the drone market



landscape. The Open University (OU) is developing an open access course based upon the main focus areas of the project to build capacity and understanding of drones, business models and their potential in agriculture and rural areas. The project also offers financial support to third parties (FSTP) through two distinct types of open calls (OCs), targeting drone innovators (PUSH OCs) and end users or rural communities (PULL OCs). All of the project results are being consolidated onto the ICAERUS platform, providing a single, easy to navigate access point.

ICAERUS Consortium

The thirteen (13) member consortium represents (Figure 4) seven (7) EU countries and the United Kingdom (UK) and was developed to reinforce a multi-actor approach by linking partners from academia and research institutes, industry including drone manufacturers and service providers, and non-profit organisations. The ICAERUS consortium includes:



- Three (3) distinguished research institutes and universities (AUA, WU, OU) with extensive research capacities in the agricultural sector, and a specific focus on digitisation, behavioural research, social sciences and humanities, distance learning, and capacity building.
- Six (6) industry stakeholders and technology Small, Medium Enterprises (SMEs) (GS, NSW, ART, NMN, EI, AGFT). These organisations have substantial experience in smart farming solutions, forestry, and drone applications in rural areas to demonstrate expert knowledge in cutting-edge industrial processes, drone solutions development, research, and innovation.
- Four (4) NPOs (IDELE, AFL, HCPA RFF). These organisations have established extensive agricultural end-user networks that will be utilised to gain insights for market research, demonstration activities and support the evaluation process.

This diversity of expertise will ensure the successful delivery of the project results.

Deliverable Overview and Report Structure

D5.2 Plan for dissemination & exploitation, including communication activities, describes the dissemination, exploitation, and communication (DEC) strategy for effectively sharing the project and its results, building a strong ecosystem, and ensuring the continued exploitation after the project's completion. This report also acts as a guideline and reference for partners to ensure project objectives are met. The report is structured in the following six (6) sections (Figure 5):

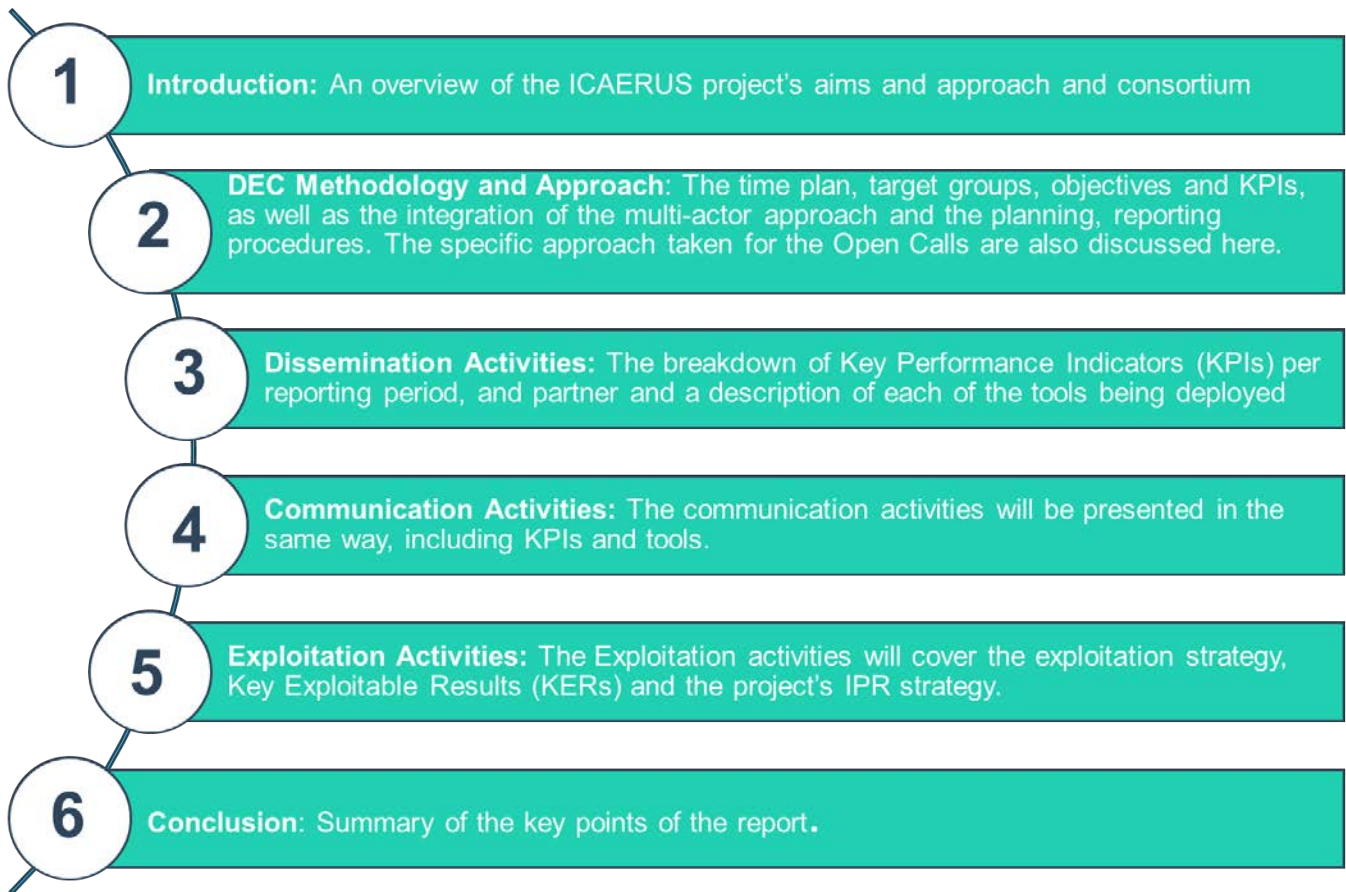


Figure 5: Sections of the plan for dissemination & exploitation including communication activities

This is the second iteration of D5.2 Plan for dissemination & exploitation including communication activities which was first submitted in September 2022 (M3). This version includes the current status of the Key Performance Indicators (KPIs) based upon ongoing reporting and monitoring as well as plans for the upcoming phase. It will also continue to act as a guiding reference for consortium partners with regards to the DEC activities. The third and final iteration of this deliverable will be submitted in April 2026 (M46).

DEC Methodology and Approach

2.1 ICAERUS DEC Time Plan

The DEC plan has been organised into **four (4)** distinct **phases** ([Figure 6](#)) to set clear goals and objectives for the duration of the project, starting in Month (**M1**) and extending eight (**8**) **years beyond** its completion. Each phase has an overarching objective that will provide focus to activities and create a steady workflow attuned to the work done and results produced by other work packages (WPs).

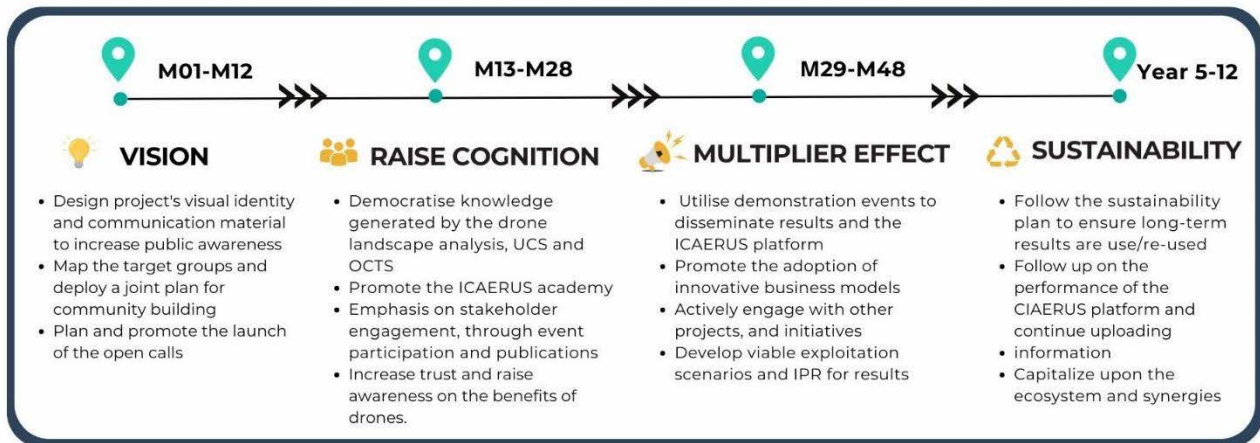


Figure 6: Timing of the implementation phases of DEC activities

Vision (M1-M12)

The first year of the project was used to **establish the foundation** for all subsequent communication, dissemination, and exploitation of results. The project's visual identity, templates and communication material were created, and the first iteration of the DEC plan delivered and shared with partners to act as a reference for all activities, procedures and KPIs related to DEC. This phase also included the preparation of open call documents and the launch and promotion of the 1st PUSH OC. Furthermore, event planning, and the start of synergy building, particularly with projects funding under HE-CL6-GOV-2021, CHAMELEON and SPADE. Finally, this phase was also used to set the standards and practices for partner reporting on dissemination and communication activities.

Raise cognition (M13-M28)

The project is currently in the second phase of the DEC implementation which involves **more intensive communication** about the project and disseminating the results generated by use cases and the drone market landscape. **Stakeholder engagement** and synergy building is the central focus as increased awareness early will enable more effective exploitation of results later. Extensive stakeholder engagement through event participation and the establishment of a working group by HCPA have already contributed to the objective of increasing trust and awareness around the benefits of drones. Five (5) academic papers and book chapters have already been published with additional four (4) under review. The rest of this phase will focus on the promotion of the DDAL, the ICAERUS platform, capacity building program as well as the Open Call sub-projects that are already being implemented.

Multiplier effect (M29-M48)

The final phase during the project's duration will focus on **results dissemination and exploitation**, using demonstration events. Planning is already underway for the first use case demo events, which will also feature onsite learning opportunities, and integrate the OC sub-projects where relevant and logistically feasible. This phase will also involve actively populating the platform and developing viable, actionable exploitation scenarios and IPR strategies.

The project entered the Multiplier phase several months after the submission of the DEC Plan V2, since its submission the following activities have taken place:

- **Utilize the demo events to disseminate the project activities and the platform**
 - The first round of demonstration events took place with the second round beginning November 2026. A common strategy for aligning the programs was developed collectively as a consortium during the 4th Project Management Board meeting in Milton Keynes (June 2024). The focus of the 1st round was on more technical aspects of the use case, whereas the second round is meant to focus on business aspects. The full elaboration on the demonstration event plans and outcomes falls under the scope of D3.8 Demonstration and end user evaluation A and B (D3.9) but in the context of dissemination, each demo



event took place in the local language, and invited relevant stakeholder groups that included government representatives, students, academics and industry leaders. Other relevant projects were also invited to present their work and interact with attendees. An extensive set of supporting documents was also created by RFF and AUA including templates (invites, agendas, consent forms) guidelines for photography, reporting and organizing the event as well. An ICAERUS demo event logo was also designed to differentiate posts and promotion related to the demo events and to ensure consistency across the 10 events. During the 1st round of demo events the ICAERUS platform was also presented and feedback for its future enhancement was gathered. AUA also created a set of demo event books showcasing each of the events as is available on the platform. In addition to the required demonstration events, UC2 has held four, UC3 six and UC4 three additional demonstration activities with diverse stakeholders. The ICAERUS Open Call Trials were encouraged to disseminate their outcomes with live demonstrations and direct stakeholder interactions, three of which have been reported already. A dedicated spreadsheet has been created to track all of the demonstration events, and includes the date, location, number and type of stakeholder, event focus, key outcomes).

ICAERUS Additional Demonstration Activities – Reporting Table											
UC/OCT Name	Demo Title	Date	Location	Organising Partner(s)	Main Contact Person	Stakeholders Engaged (Number & Type)	Demo Focus	Hardware Demonstrated	Software/Platforms Demonstrated	Key Results/Takeaways	Social Media Link
UCs: Forestry & Biodiversity Monitoring (Additional Activity)	Drone Utilisation in a Forestry Demo Event	17 April 2023	Lithuania	Chamber of Agriculture of the Republic of Lithuania	Linus Didžulevičius	~30 forestry stakeholders (wildlife experts, forest managers, public authorities)	Wildlife monitoring, drone readiness assessment	UAV with thermal camera for wild boar detection	N/A	Showcased current TRL of drone-based wildlife monitoring; tested new thermal camera setup in forest conditions. Media coverage available here .	GALUSIUM UOZBIRAIŠIŲ
UCs: Rural Logistics	UAV-enabled Delivery Demonstration	26 February 2025	K.E.D.E.A. Thessaloniki & Nea Mesimvria, Greece	Geosense IKE, Reframe.food	Konstantinos Grigoridis (kgrigor@geosense.gr)	48 stakeholders (researchers, civil protection, SMEs, students, media)	Drone delivery in rural areas (BVLOS)	Multrotor UAVs, VELOS UAV, DJI drone	DaeDalus platform, CVRP DSS, telemetry system, visual dashboard, ICAERUS platform, live streaming	Validated BVLOS delivery, stakeholder mapping, high interest in emergency use cases; identified regional maturity gaps, need for adoption support	
PUSH1 OCTs											
AGROTWIN	AgroTwin Demo Day	24 October 2024	Terzola di Cesa (Tuscany, Italy)	Agrobot	Simone Kartsiotis (s.kartsiotis@agrobot.ag)	60 (winemakers, agronomists, students, regional policy makers)	Showcase how AI and computer vision applied to drone technology can save resources and optimize pesticide treatments	Drone equipped with AI + computer vision modules	AgroTwin AI-based precision agriculture platform	Demonstrated efficient vineyard management through precision spraying; raised awareness on smart agriculture practices; also presented at EMA International to 30 participants	

- **Promote the adoption of the innovative business models**

An extensive study of different business model tools was the focus of D5.7 Inclusive business and governance models, also submitted in M24, and resulted in the selection of the Triple Layer Business Model Canvas. This unique canvas includes an economic, environmental and societal layer, all of which interact within their layer as well as vertically. A series of workshops took place with each of the ICAERUS Use Cases to populate their canvases and RFF developed a Drone as a Service version as a general case. The final business models will be delivered by M46 within D5.8 (V2). While it has not been possible to promote the models themselves, the canvas tools have been promoted outside of the consortium first through its inclusion in the final Market Report for the Open Call Trials, second through the Value Added Services (elaborated in D4.4 Onsite Learning and Value Added-Services), through dedicated workshops and through the development of a business model wizard on the ICAERUS platform, and finally through the second round of demonstration events, where it is an optional topic for the partners to present.

- **Actively engage with other projects and initiatives**

An extensive focus has been placed on engaging with other projects and initiatives. Cooperation has been ongoing with sister projects SPADE and CHAMELEON, but has extended beyond. The full extent of this engagement is detailed across D7.4-7.6 Report on cooperation with other projects, the final report submitted M40.

- **Develop viable exploitation strategies and IPR for project results**

An IP self assessment survey was shared with each of the partners to determine their level of knowledge on IP/IPR and needs. The outcomes were used to tailor the first IP webinar that took place to align the consortium with the basic knowledge including the full IP and exploitation cycle from IPR typology and protection routes to result characterisation via the **Key Exploitable Results (KER) template**. Exploitation is largely centered on the outcomes of the project's use cases and is being addressed by T5.6 Inclusive business and governance models.

Sustainability (Year 5-Year 12)

An additional phase that extends for eight (8) years beyond the project’s duration will focus on **long term exploitation** through the execution of the **sustainability plan**. Content will continue to be uploaded on to the platform as well as social media and the website. By further expanding the ecosystem, utilising synergies established during the project and maintaining communication channels, opportunities for use/reuse of results will be extended and positive progress for the drone landscape will be made.

The sustainability plan is being developed. The outcomes of **Deliverable 5.7 “Inclusive Business and Governance Models”** provide the methodological foundation for the exploitation phase. Based on the **Triple-Layered Business Model Canvas (TLBMC)**, ICAERUS has established a holistic framework linking the **economic, environmental and social** dimensions of drone-enabled services. Building on this, the **Value-Added Services (Deliverable 4.4)** have been launched to coach Open Call projects and stakeholders through a sequence of capacity-building actions, including workshops on **Market Analysis (TAM-SAM-SOM, Concentration Ratio, and Herfindahl–Hirschman Index)**, the **Triple-Layered BMC**, and **Intellectual Property & Asset Management**. These sessions use practical cases from the Use Cases and FSTP projects to accelerate learning and replication. Synergies are being established with projects starting now, with the ongoing exploitation of ICAERUS results in mind.

2.2 Target Groups and messages

Defining the project’s audience ([Figure 7](#)) is a critical step for **focusing objectives** and pursuing **meaningful impact**. Doing so early has allowed for targeted dissemination, communication, and exploitation actions to be planned and undertaken during the project implementation to maximise engagement and extend the reach of the project results. **Key messages** are also used to articulate in a simple straightforward manner the **unique benefit** of engaging with ICAERUS for each target group. **Six (6) target groups** have been defined: private sector, agri-rural communities, researchers, non-profits, public authorities, and the general public. This chapter will present the members of each group and why their engagement is important, as well as key messages that encapsulate the direct benefit ICAERUS offers each group as well as specific activities, tools channels direct towards them.



2.2.1 Private Sector

The private sector includes start-ups, SMEs and companies such as those shown in [Figure 8](#).

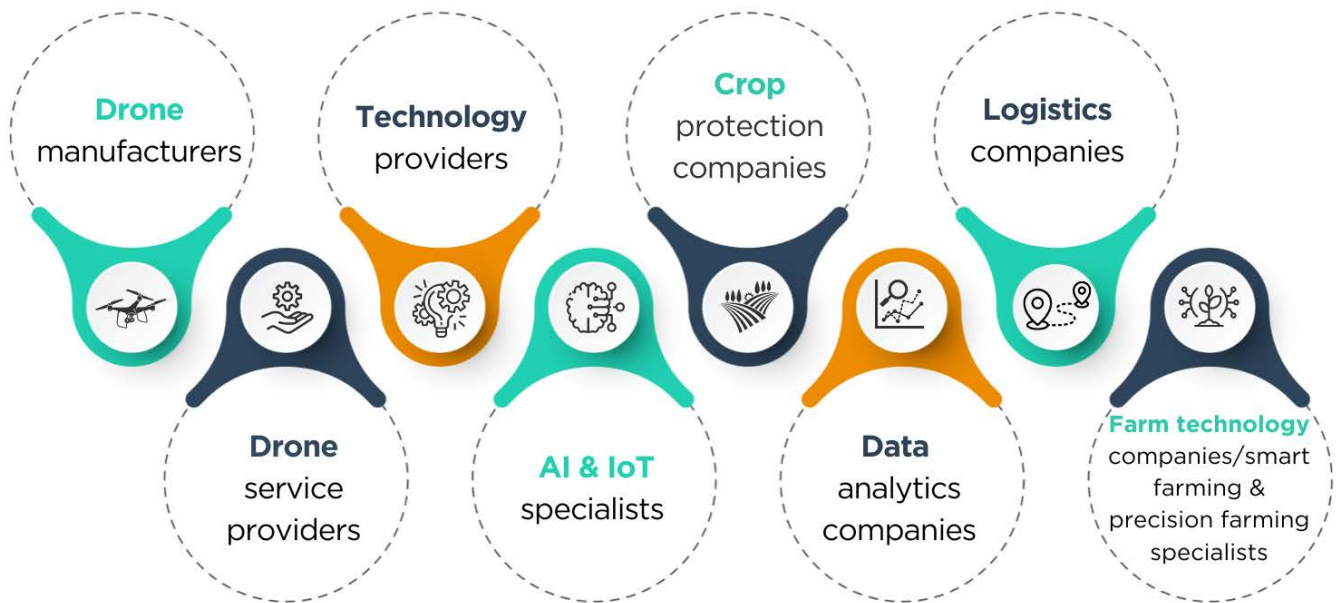


Figure 8: Examples from the Private Sector TG

It is important to engage these stakeholders because they shape the drone market and are at the forefront of developing drone products and services.

Key messages

- “Gain access to a comprehensive list of standards, regulations, and risks.”
- “Gain access to innovative business and governance models for drones.”
- “Connect and network with relevant stakeholders to do business and exchange ideas.”
- “Receive financial support to integrate drone technology and/or its practical applications for further development of services and/or products.”
- “Promote and scale-up drone business and/or service of practical applications.”

Key activities, tools, channels

Table 1: Activities, tools, and channels targeting the private sector

Key Activities	Tools & Channels	
Organise workshops and webinars	Website	Social media
Organise demo events	Blog posts	E-newsletters
Publish in industry magazines	Press releases	Flyers
Join alliances and working groups	TV/radio interviews	Video success stories
Participate in fairs and exhibitions	Podcasts	

2.2.2 Agri-rural Communities

This includes all primary sector communities, such as those shown in [Figure 9](#).



Figure 9: Examples from the Agri-rural Communities TG

It is critical to engage agri-rural communities because they are the end-users of drone products and services. It is their challenges that drones are trying to address, and they are also the group with the greatest potential to resist the adoption of new technologies.

Key messages

- “Reduce costs while increasing efficiency, productivity, and profitability with an eco-friendly scope through drone application.”
- “Strengthen capacities in drone application in agricultural production, forestry, and rural communities, as well as associated standards, risks and regulations.”

Key activities, tools, channels

Table 2: Activities, tools and channels targeting agri-rural communities

Key Activities	Tools & Channels	
Offer tailored workshops and webinars Organise demo events Participate in fairs and exhibitions	Website Flyers E-newsletters TV/radio interviews Podcasts	Social media Blog posts Press releases Video success stories and interviews Printed media (e.g., newspapers)

2.2.3 Researchers

EU scientific bodies, universities, research institutes and their individual scientists in fields such as those shown in [Figure 10](#).

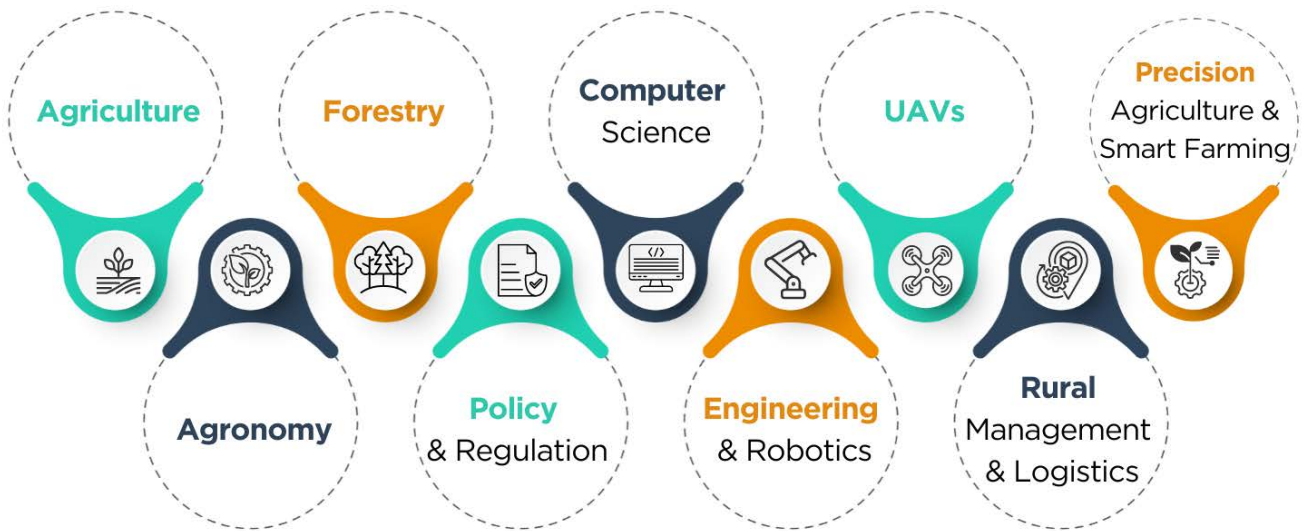


Figure 10: Examples from the Researchers TG

Researchers are at the forefront of innovation, scientific advancement, and testing. Their engagement is fundamental for providing evidence for the value and potential of drones which can be used to promote their uptake by users and foster support from policy makers and the general public.

Key messages

- “Foster collaborations between other knowledge institutes, end users, and industry stakeholders to address current problems in the agri-rural sector.”
- “Showcase benefits of EU funded research on society and contribute to EU sustainability goals.”
- “Acquire new knowledge to advance your research on drone practical and scientific exploitable potential.”

Key activities, tools, channels

Table 3: Activities, tool and channels targeting researchers

Key Activities	Tools & Channels	
Publish scientific papers Attend scientific conferences Participate in joint-EU initiatives and Join working groups and alliances	Website Social media Press releases Blog posts	E-newsletters Podcasts TV/radio Interviews

2.2.4 Nonprofits

Includes organisations with a vested interest in drones and agriculture at the local, regional, national and EU levels as shown in [Figure 11](#).



Figure 11: Examples from the Nonprofits TG

Nonprofits play an important role in networking and connecting with stakeholders making their engagement a key driver for ecosystem expansion.

Key messages

- “Expand your portfolio of knowledge and services.”
- “Be part of a space where DIHs and experts jointly help farmers/foresters, their advisors, and other Agricultural Knowledge and Innovation Systems (AKIS)/Research and development (R&D) actors grasp the power of drones.”
- “Take part in Interactive innovation and co-creation activities.”

Key activities, tools, channels

Table 4: Activities, tools, and channels targeting non-profits

Key Activities	Tools & Channels	
Offer workshops and webinars Organise demo events Participate in events Join alliances and working groups	Website Flyers Press releases	Social media E-newsletters Blog posts

2.2.5 Public Authorities

Regional and national government authorities, standardisation organisations, regulatory agencies such as those shown in [Figure 12](#).



Figure 12: Examples from the Public Authorities TG

Public authorities dictate the speed and ease with which new technologies can be accessed and funded and are responsible for their regulation and safety. Their engagement ensures drone development advances in alignment with policy goals, and evidence-based policies are created that best support user needs.

Key messages

- “Strengthen the EU wide ease of acceptance and safe, properly regulated adoption of drone technologies through the introduction of new regulations and guidelines.”
- “Use practical (both scientific and stakeholder driven) evidence to drive policy development and decision making for optimised monitoring of the new Common Agriculture Policy (CAP).”
- “Increased knowledge on risks and safety issues associated with drones for informed and accurate decision making.”
- “Achieve Green Deal objectives and targets through the effective regulation of drones.”

Key activities, tools, channels

Table 5: Activities, tools and channels targeting public authorities

Key Activities	Tools & Channels	
Organise demo events Participate in policy related or EU organised events Publish white papers	Website Press releases	Social media E-newsletters

2.2.6 General Public

Examples of the general public are shown in [Figure 13](#).

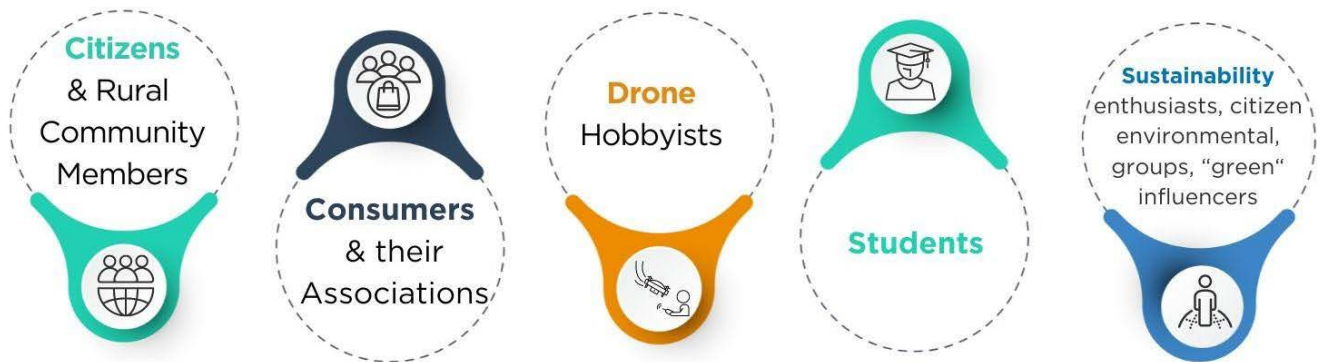


Figure 13: Examples from the General Public TG

Consumers drive demand, making them an important group to target and consider when developing drone products. They are also affected indirectly by drone use in their communities, so it is valuable for them to understand the purpose of drones, the benefits of their use, and the regulations in place to protect their privacy and safety.

Key messages

- “Increase awareness on drone potential and opportunities, the positive impact they have on the final price of goods and services, as well as their large-scale impact on society.”

Key activities, tools, channels

Table 6: Activities, tools and channels targeting the general public

Key Activities	Tools & Channels	
<i>Citizen centred workshops, webinars and demo events</i>	Website	Social media
<i>Join alliances</i>	Flyers	Press releases
<i>Participate in exhibitions open to the public</i>	Blog posts	Podcasts
	TV/radio interviews	Video success stories

2.3 ICAERUS DEC Objectives and KPIs

Dissemination, communication, and exploitation are connected elements that are fundamental for increasing the reach and impact of project results. A strong DEC plan is the starting point for tapping into the wider societal relevance of science, building support for future research and innovation funding while opening business opportunities and ensuring the uptake of results within the broader scientific community. Distinct activities and channels will bring attention to the latest research and its outcomes to non-scientific audiences, policymakers, potential business partners, and scientific peers. The distinctions between communication, dissemination, and exploitation are presented in Table 7.

Table 7: Distinctions between communication, dissemination, and exploitation

Communication ¹	Dissemination	Exploitation
<ul style="list-style-type: none"> • Share the impact and benefits of the project with society • Inform and promote the project and its results success 	<ul style="list-style-type: none"> • Transfer knowledge and describe results so they are available for use or re-use 	<ul style="list-style-type: none"> • Make concrete use/reuse of results through scientific, economic, political, or social routes

¹European Commission, European Innovation Council and SMEs Executive Agency, Scherer, J., Weber, S., Alveen, P., et al., *European IP Helpdesk : successful valorisation of knowledge and research results in Horizon Europe : boosting the impact of your project through effective communication, dissemination and exploitation*, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2826/437645>.

Target multiple audiences	Target stakeholders interested in potential use/re-use of results	Target stakeholders (incl. partners) and user groups that can make use/reuse of results
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2.3.1 Objectives

ICAERUS Specific Objectives

ICAERUS has established four specific project objectives, as shown in [Figure 14](#).

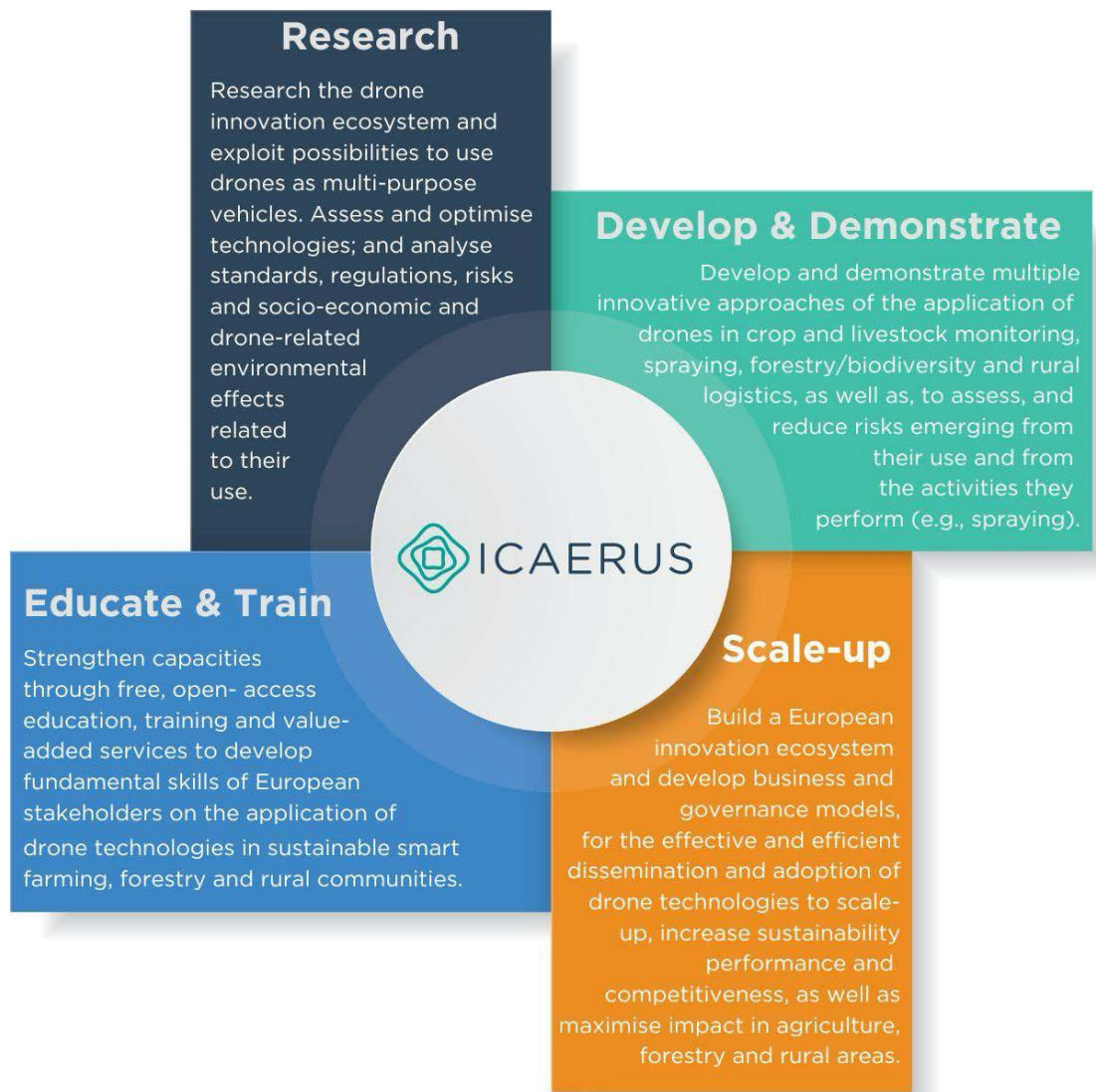


Figure 14: ICAERUS Specific Objectives

The specific objective of scaling up is directly related to the dissemination, exploitation and communication and will be achieved by:

- Building a European innovation ecosystem for effective and efficient dissemination and adoption of drone technologies.
- Maximising impact of project results and enlarging project ecosystem.
- Creating synergies and links amongst stakeholders and with other projects, networks, initiatives, as well as European Commission services.
- Planning and managing Open Calls.
- Developing business and governance models tailor-made to the reality of farming and rural communities.

A set of target outcomes and their verification means have also been identified to track the progress towards achieving the specific objective, as shown in Table 8

Table 8: Target outcomes

KPI	Target outcome and Verification Means (VM)	Target Value	Status M24
4.1	No. of stakeholders engaged through communication channels VM: Use tracking tools to capture unique visitors in a website, users engaged in social media channels.	10,000	> 7,000
4.2	No. of stakeholder synergies and links with EU/national programmes VM: Letter of Intent (LoI) or Memorandum of Understanding (MoU) signed. At least 35 stakeholder synergies and 10 links with EU/national programs.	45	14 signed LoI/MoUs 42 joint activities
4.3	No. of Open Call Trials launched (PUSH/PULL) VM: Launched Open Call Trials. PUSH for research and technology stakeholders and PULL for farming, forestry and rural challenges.	20	3 launches 11 sub-projects 5 from PUSH 1 6 From PULL 1
4.4	No. of validated inclusive business and governance models VM: Development and validation of 5 business and 5 governance models interacting with the Use Cases and Open Call Trials	10	N/A The 1 st iteration of D5.7 Inclusive business and governance models provides the strategy for developing the business models and was submitted M24 (June 2024). The final version is due M46 (April 2026).
4.5	No. of policy white papers VM: Report on guidelines and policy recommendations.	2	N/A Policy white papers are expected in the final year.

DEC objectives

Within the DEC strategy, unique objectives have been defined for dissemination, communication, and exploitation.

Dissemination Objectives

The main objective of the ICAERUS dissemination strategy is to ensure the project's outcomes, knowledge, and opportunities are effectively diffused to the appropriate target communities, making research results widely accessible. More specifically, the dissemination strategy's objectives are to:

- **Introduce** the ICAERUS platform to facilitate dissemination, **communicate** project results, and **increase visibility** among key stakeholders.
- **Capitalise** upon the UCs in-field demonstration activities and **raise awareness** of the socio-economic impacts and environment benefits of drones.
- **Promote synergies** with other research, policy, and communication initiatives, taking advantage of existing dissemination networks and channels.
- **Engage** targeted audiences to get feedback, validate and ensure broad applicability, replication, and scalability of the project's results.
- **Align** and **integrate** dissemination, communication, ecosystem building activities with exploitation and business modelling processes to allow scale up to the market.

- **Support** continual exploitation of project results in research, public policy, and other market driven initiatives.

Communication Objectives

ICAERUS aims to raise public awareness of the project through a range of strategically planned actions that are accessible to internal and external stakeholders, the media and the general public and will:

- **Communicate** impacts and benefits of the project and its results for the duration of the project and after, by integrating various activities, tools, and channels.
- **Customise** communication activities for different countries, regions, and subgroups of the population.

Exploitation Objectives

ICAERUS aims to capture the innovation potential and added value of project results, which will be valorised by:

- Promoting **scale-up and** replication for far-reaching adoption
- Create feasible paths to deliver project’s results to stakeholders interested in their **use/reuse**
- Elaborate upon and define new **Key Exploitable Results** (KERs) to expedite development and **commercialisation** when possible

2.3.1 Key Performance Indicators

Key performance indicators (KPIs) are measurable and monitorable targets used to evaluate progress and take correct measures when necessary, making them vital for the achievement of project’s objectives. ICAERUS KPIs have been distributed across three categories. **Dissemination KPIs** have been identified as those that track the transfer of knowledge and results, so they are available for re-use. **Communication KPIs** have been distinguished as those connected with informing, promoting and sharing the impact and benefits of the project with society. KPIs have been further clustered around similar objectives and activities to emphasise the balance of priorities across both types of activities and for ease of reporting. Additional **Audience KPIs** relate to specific target numbers of individuals a given activity or channel should reach. These KPIs will be presented in Sections 3 and 4.

2.4 Multi-actor Approach Methodology

ICAERUS uses the multi-actor approach, considering all relevant forms of experience and knowledge from a diverse set of partners and stakeholders to achieve the project aims and ensure broad communication from the start. It has also extended to the creation and implementation of the DEC plan.

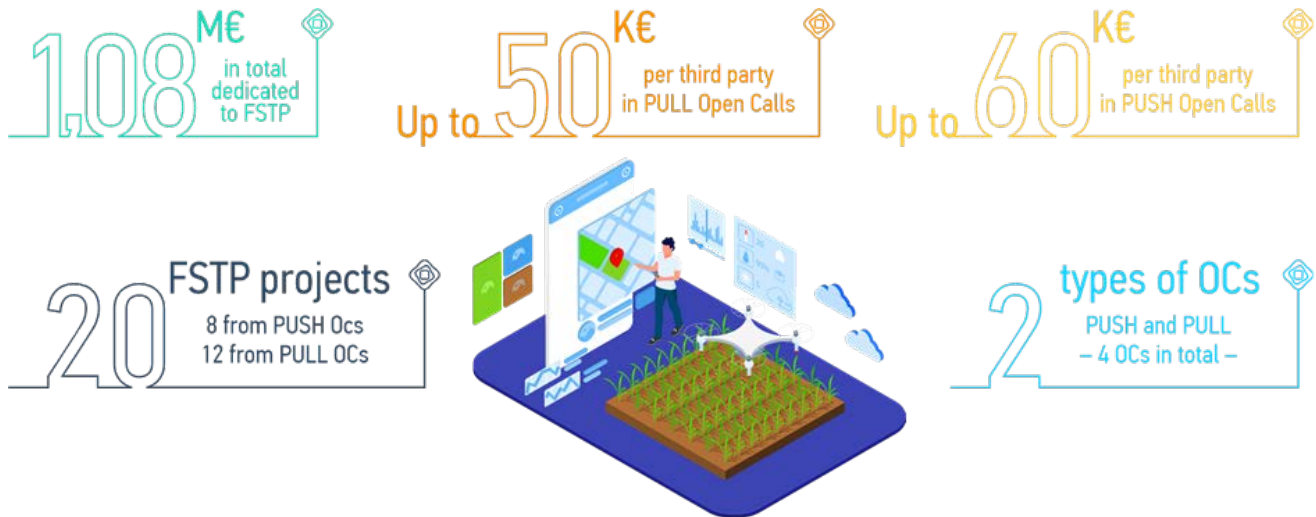
Table 9: Connection between the Multi-actor approach methodology and implementation

Method	In practice
Focusing on communicating information that matters to the end user	Distinct blog categories have been devised to ensure a balance of content is shared and can be searched for based on interest. <ul style="list-style-type: none"> ● <i>Hoverview</i> for example provides in depth look at drone related topics that would be of interest to stakeholders working with drones or using the DDAL.
Using language, vocabulary and communication channels that are appealing and audience appropriate	All materials are prepared with the target audience in mind. <ul style="list-style-type: none"> ● For example, the DDAL brochure provides the information necessary (including Quick Response (QR) codes) for potential users. ● The social media channels use simple language to target a broader audience, often including links where more in depth information can be provided. ● A diverse suite of publications and other channels,

	including videos (AUA took part in a documentary) have also ensured no stakeholder groups have been left out.
Translating materials into partner's and significant EU languages	Communication material has been translated to partner languages. and based on feedback from NMN, working on the Crop monitoring use case, Catalan has been added.
Capitalising on partners existing connections , networks, and events program	Partners have been seeking opportunities with other projects from their organisations. <ul style="list-style-type: none"> ● WU has been looking at which data and algorithms from the Flexigrowbots project can be incorporated into the DDAL. ● AUA has also organised cooperation meetings with the other projects they coordinate (BEATLES, Futural, SmartDroplets, STELLA, OPER 8) and have cooperated for a video with Quantifarm. ● Partners have also presented the project at KoM for relevant projects they have been attending. ● IDELE has been actively connecting with farmers through frequent workshops and demo events as well as local media through interviews and website articles.
Seeking synergies and collaboration opportunities with other projects, initiatives, networks, with and between academia, industry, society and government	Partners actively look for opportunities to cooperate with different stakeholders. <ul style="list-style-type: none"> ● To analyse the EU drone landscape an online survey was launched by NSW and promoted on the ICAERUS website and social media to connect with industry stakeholders and drone end users. Moving forward, feedback has also been obtained by the use cases and the OCTs. ● Opportunities to share the OCTs with a broader audience have been taken by conducted joint webinars and workshops with projects like SPADE, CHAMELEON, TITAN, INCiTIS-FOOD and through events hosted by Sploro and the Andalucía Agrotech DIH. ● AUA has also participated in meetings with EC policy officers and DGs together with sister projects. ● GS and AGFT have been actively working with the Civil Aviation Agency in North Macedonia. ● The OCT monitoring meeting offer a platform for enhanced cooperation between sub-projects.

2.5. Open Calls

The ICAERUS Open Calls provide significant opportunities to engage industry partners as well as end-users. Just over 1M€ is dedicated to providing Financial Support to Third Parties (FSTP), which will be distributed to 20 sub-projects within 2 distinct types of OCs (PUSH and PULL), each with 2 launches, as shown in [Figure 15](#).



The PUSH Ocs are looking for innovative drone-based ideas with market potential from research institutes and Small-medium enterprises (SMEs), while the PULL Ocs are looking for end users and communities that can use drones and their services to address agricultural or rural challenges. These differences are further described in Table 10. Each selected sub-project accepted has a twelve (12) month implementation period divided into three (3) phases: **Design, Development, and Market**.

Table 10: Description of ICAERUS PUSH and PULL Open Calls

PUSH Open Calls for Innovation Development	PULL Open Calls for Farming, Forestry & Rural Challenges
April 2023 (M10) & February 2024 (M20) Eight (8) total (1 st OC Five (5), 2 nd OC Three (3))	October 2023 (M15) & July 2024 (M25) Twelve (12) total (Six (6) per call)
Targeting: <ul style="list-style-type: none"> • Drone manufacturers • AI and IoT companies • Research institutes • Start-ups and SMEs exploiting (big) data 	Targeting End-users in: <ul style="list-style-type: none"> • Agriculture production • Environmental monitoring • Rural communities
Attract stakeholders to: <ul style="list-style-type: none"> • Deliver and exploit drone-related data sets to assess technical and non-technical hypotheses • Develop ideas, concepts, and prototypes that can be introduced to the market 	Stakeholders can utilise drones and services to address: <ul style="list-style-type: none"> • Individual commercial needs • E.g., crop production, early warning systems • Community-related issues • E.g., disaster risk reduction, forest/wildlife conservation

An extensive description of the Open Calls including all the Call documents fall within the scope of **D5.4 Open Call Planning and Monitoring Report**. In the context of the DEC plan, the Open Calls will require two distinctive priorities for allocating effort. First **promoting the open calls** and second **spreading the results** of the open calls.

Promoting the Open Calls

Posting the Call

The Open Calls must be approved by the Project Officer (PO) and follow the process outlined for cascade funding as required by the Horizon Europe Grant Agreement (GA), appearing on the “[Search funding & tenders](#)” of the **Funding and Tenders Portal** ([Figure 16](#)).

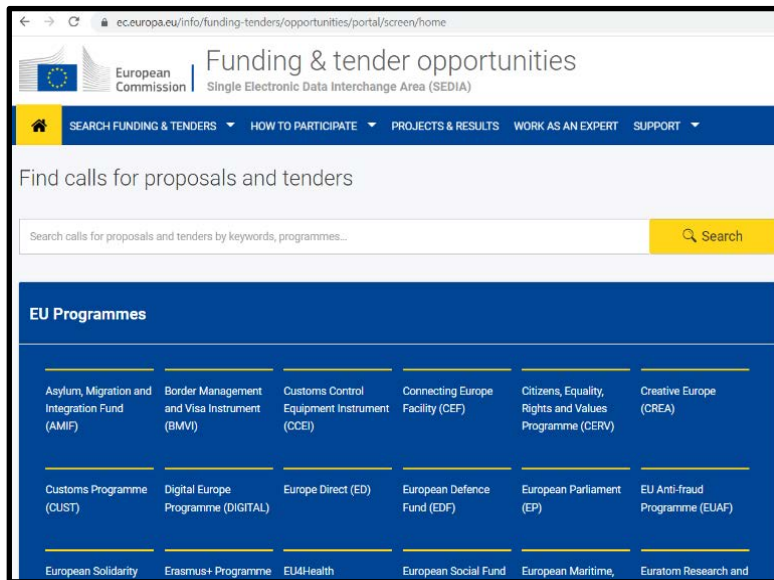


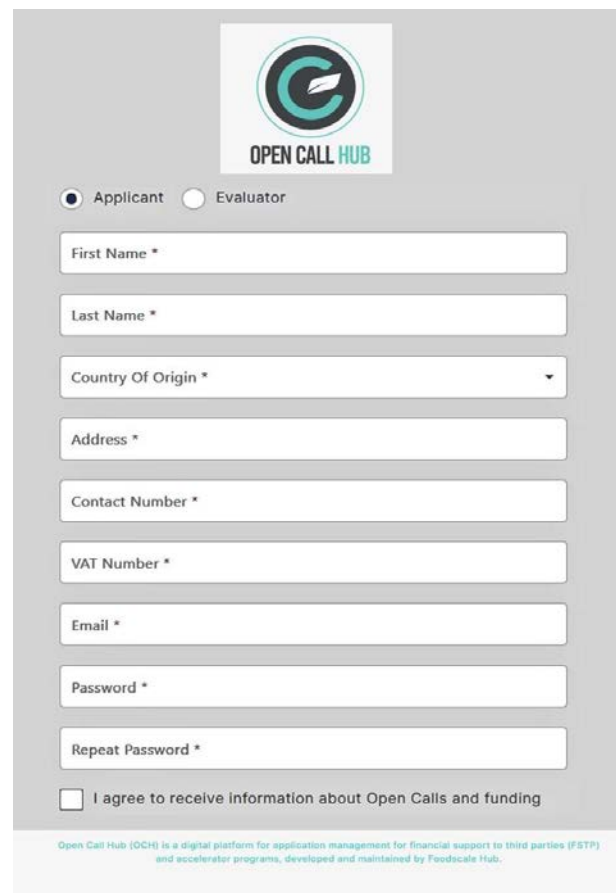
Figure 16: EC Funding and Tenders Portal

OpenCall Hub

RFF has developed the OpenCall Hub ([Figure 17](#)), which is a platform dedicated to the Open Calls and is used as a single transparent communication point for the Open Call application and evaluation process. Specifically, it is used as a tool to:

Select external evaluators.

- ✓ **Collect** the applications submitted by the Open Call participants.
- ✓ Have the applications **reviewed** and marked by the evaluators.
- ✓ **Create** the rank list that determines the applications to be funded within the Open Call.
- ✓ **Communicate** transparently with all applicants and reviewers.



Information on the Open Calls ([Figure 18](#)) can also be found on a dedicated tab of the ICAERUS website and includes:

- An overview of the PUSH and PULL Open Calls
- A description of the Open Call accepting applications (who can apply, timeline, key documents)
 - Open Call Text
 - Open Call Applicant's Guide
 - Proposal Template
 - Declarations of Honour and of Conducting Business
 - Bank Account Information Document
 - Model Sub-Grant Agreement.
- Link to the Open Call Hub
- Announcement regarding the closing of a call.

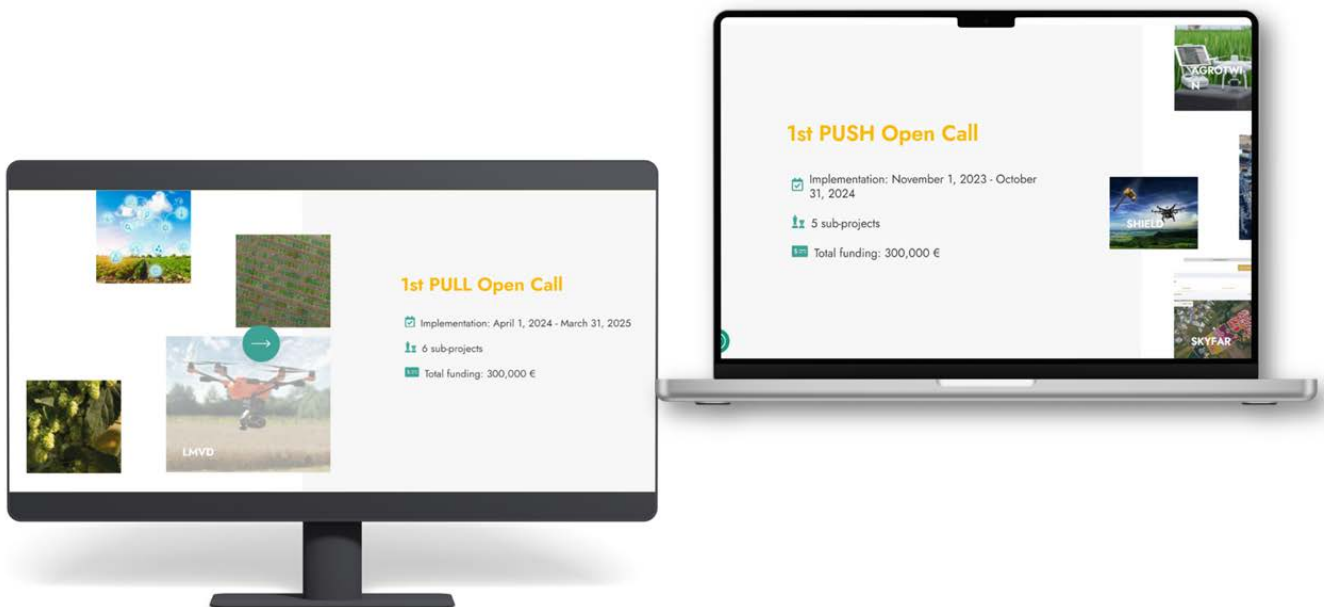


Figure 18: Examples from the PUSH and PULL Open Call tab of the ICAERUS Website

Blog posts

Blog posts are also created for the ICAERUS website ([Figure 19](#)) announcing the launch of the call, presenting the results once the call has closed, including the number of applicants, most popular countries, fields of expertise and type of applicants.

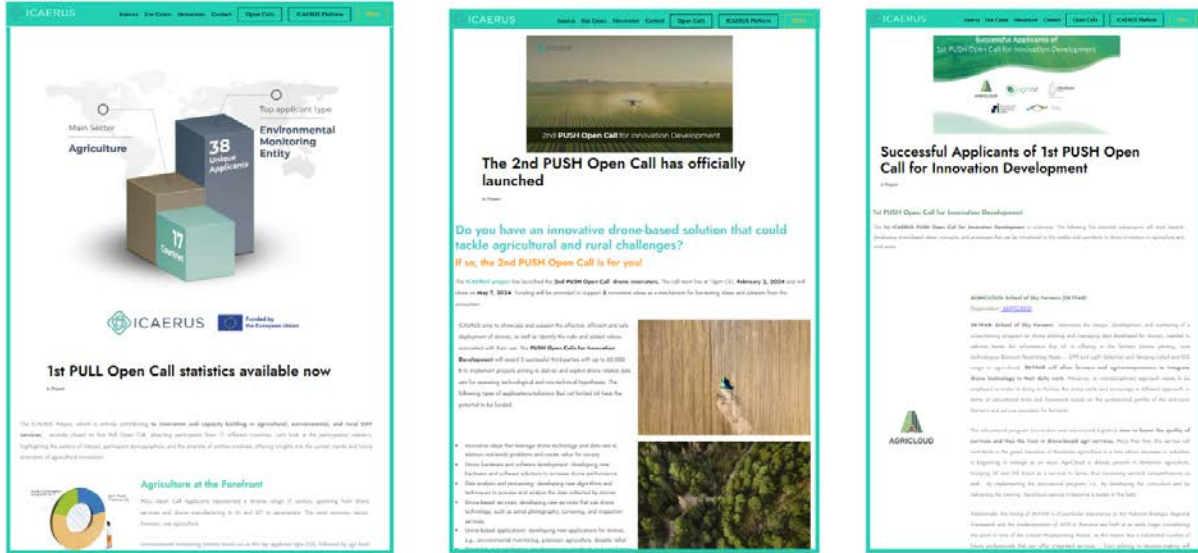


Figure SEQ Figure * ARABIC 19: Examples of Blog Posts related to the open calls

Press releases

Press releases (Figure 20) are prepared for the launch of each Open Call, translated by partners into Greek, Lithuanian, North Macedonian, Spanish, Catalan, and French, and shared with local and national media outlets.

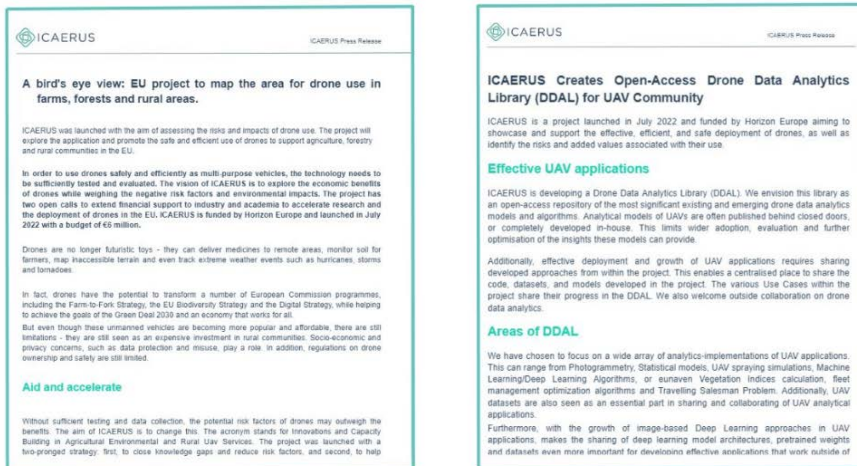


Figure 20 : Example of ICAERUS Press Releases

Posters and Banners

A set of printable material available in poster and roll-up banner dimensions was created for the 1st PUSH and PULL Open Calls to be used at events. The information was split over four (4) posters, two (2) for each, so that the general description could be reusable, while the specifics of each call could be adapted for subsequent open call launches.

Promotion in Action: The ICAERUS booth at Synergy Days

In October 2023, the 1st PUSH Open Call was under evaluation, and the 1st PULL Open Call was about to launch. General information banners/posters were created for each call, but for PUSH 1, the second poster indicated the call was closed and presented the key statistics, whereas the second PULL 1 poster featured a 'coming soon' message with a QR code for the website's Open Call page ([Figure 21](#)). Since the event, the 1st PULL has closed, and another poster has been made featuring statistics. This approach was meant to reduce the need to reprint material for each call or to use posters individually. As each call closes, a complete series will be made.

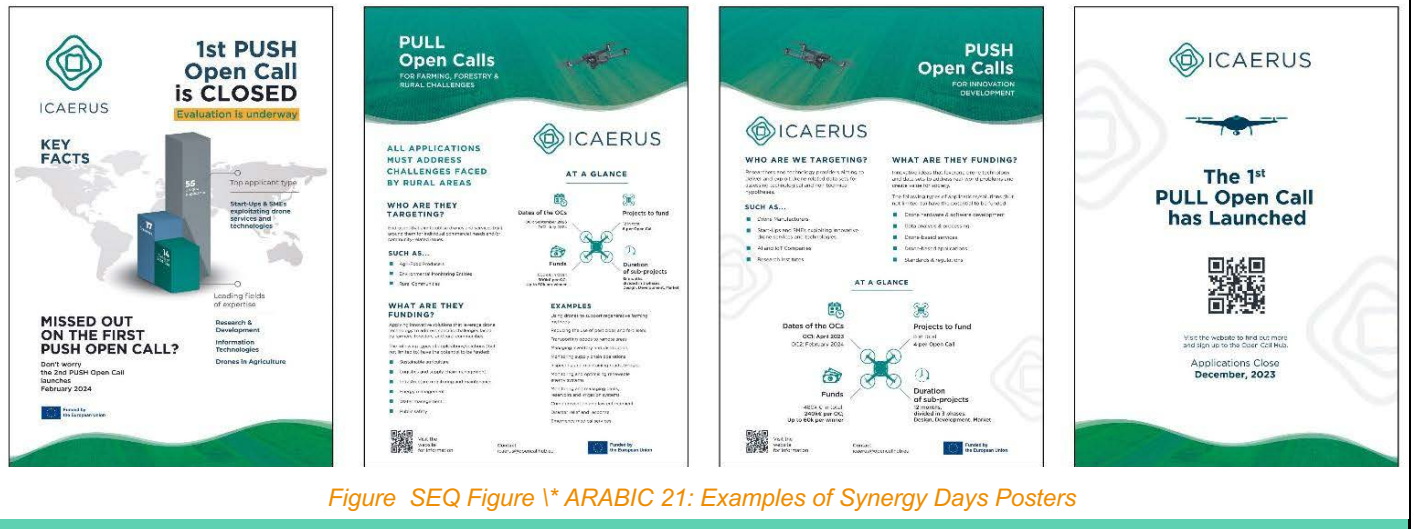


Figure SEQ Figure 1* ARABIC 21: Examples of Synergy Days Posters

Open Call Preparation Webinars

In order to further promote the Open Calls and provide support to potential applicants, RFF has organised Open Call preparation webinars for each Open Call. These informative sessions are open to the public and widely promoted **across** social media. The topics include:

- An overview of the ICAERUS project to provide the necessary context
- A description of the Open Calls (timelines, who can apply, basic eligibility criteria)
- The latest presentations also include a summary of the statistics as well as the successful sub-projects selected so far
- Detailed map of the application and evaluation process
- Breakdown of the application including the budget
- Additional practical information and relevant Frequently Asked Questions (FAQs).
- Time is also allocated for answering questions.

Spreading Open Call results

Open Calls Promotion an Opportunity for Synergy Building

ICAERUS has taken the opportunity to present the OC launches with other projects with Open Calls:



Figure SEQ Figure 1* ARABIC 22: Example from a joint open call webinar

- **Synergy Days workshop:** “Cascade funding calls” with CHAMELEON, SPADE, TITAN and INCiTiS Food.
- **Open Call Preparation Webinar:** “Discover funding opportunities available through the HE ICAERUS & TITAN projects Open Call”
- **Sploro Cascade Funding webinar:** “Unleashing Cascade Funding Opportunities - Session 6”
- **Funding Opportunities for the Agri-food Sector webinar:** *Oportunidades de financiación en cascada para el sector agroalimentario* (organised by CTA & CTAQUA in the framework of Andalucía Agrotech DIH).
- **Open Call Preparation Webinar – How to Write a Successful Proposal** (with CHAMELEON, SPADE).

A dedicated section of the website under the Open Call tab has been created for the Open Call trials to provide information on each organisation and their sub-project (examples shown in [Figure 23](#)) Once the sub-grant agreements are signed, a template (similar to the one shared with partners and use cases) is distributed to the sub-project leaders requesting basic information to be used for the website (shown in [Annex 1](#)). Once the sub-projects begin having results or updates to present, their website pages will be adjusted accordingly. In addition, a series of posts are organised to promote the Open Call sub-projects as soon as their implementation begins. The first is an introductory post with all the sub-projects presented together. Next, a series of posts introduces each individual sub-project with a brief description of their activities. Blog posts related to the Open Call sub-project themes and activities, as well as updates on social media, will take place as information becomes available. The demo events organised for the use cases will also provide opportunities to disseminate the OC sub-projects and their results.



Pitch event

At the start of each Open Call’s implementation a Pitch event is organised to bring together the open call advisory board, the sub-projects and any other interested work package leaders. The objective of these meetings is to acquaint the sub-projects with ICAERUS and to go over specific expectations and activities where their collaboration will be required. It also provides the sub-projects a chance to introduce their organisation and the sub-projects. All sub-projects are then aware of the following dissemination and communication (D&C) matters:

- In order for the sub-projects and their results to be promoted on the ICAERUS channels, RFF must be informed of activity updates, event participation, results or anything else they would like shared.

There was also a check box for partners to indicate if the activity was a “joint activity”, meaning it involved another project or organisation outside of the ICAERUS consortium, and a cell to indicate with who. Each month also had a link for photos and promotional material that led to a set of folders for each month for each partner to upload relevant material. In order to distinguish between months with no activities from partners failing to report, a check box “nothing to report ” was also provided for each month. This new approach was adopted so that partners could be aware of both the project’s and their own KPI targets and to facilitate more than one individual providing input. It also made it easier for partners to return to previous months in case an activity was missed. Furthermore, RFF could tag specific partners to request additional clarification.

To monitor progress RFF used a separate spreadsheet to summarise the status of each KPI at a given time.

Following the submission of the first technical report and completion of the review meeting, the reporting form has been further enhanced to include the following updates:

- Dates are selected from drop down menus, for both the month and the day, making it no longer necessary to add rows under each month or to manually input the date.
- When the KPI is selected from the drop-down menu, the cell next to it automatically differentiates between dissemination and communication, which eliminates the need for two separate reporting columns.
- New columns have been added for the target audience and number of stakeholders reached, both of which are required during the technical reporting conducted on the portal.
- The KPI breakdown per partners are consolidated on a sheet following the overall breakdown per year and reporting period.

The most significant improvement has been made to the monitoring process. Functions have been incorporated to automatically calculate the number of KPIs in each category for each partner and in total. These totals are also available per reporting period and per year. This means that partners can view their status regularly. When conducting reporting for project meetings, RFF will continue to cross-check and review both the KPI descriptions and the numbers to ensure accuracy and completeness. An example of the reporting form can be found in [Annex 2](#).

2.6.3 Planning procedures

To make the most out of the partner’s existing plans, an event planning form is distributed regularly, with results compiled biannually to provide an overview of upcoming events ([Annex 3](#)). A brief description including the date, location, target groups, and a preliminary suggestion as to the role/implication for ICAERUS (e.g., workshop, booth) is requested to support the decision-making process to attend. The event link is also requested, when possible, to provide access to more details and registration. This form can be returned to and referenced at any time, and while there is no binding commitment to attend, it is designed as a tool for planning promotional activities and coordinating event participation between partners attending the same event. It also reminds partners to keep the project in mind when considering their semi-annual and annual programming. An additional sheet for brainstorming ([Annex 3](#)) has also been added so that partners may include events that they are aware of that could be relevant to the project but are not necessarily planning on attending. The brainstorming form, consolidated with input from the partner sheets for the upcoming period, includes the following indicative list of events (Table 11).

Table 11: Indicative list of events relevant to ICAERUS

Name	Location	Date
IEEE Intelligent vehicle symposium	Jeju Island, South Korea	June 2-5, 2024
UNVEX- Total showcase of UAVs in Europe	Barcelona, Spain	June 4-5, 2024
International conference on unmanned aircraft systems	Crete, Greece	June 4-7, 2024
World's unmanned aerial vehicle conference	Jerusalem, Israel	June 30- July 2, 2024
AgEn2024 Conference	Athens, Greece	July 1-3, 2024
Global conference on agriculture and horticulture	Rome, Italy	September 16-18, 2024
INTERGEO	Stuttgart, Germany	September 24-26 2024
DroneX	London, UK	September 24-25, 2024
IoT Tech Expo Europe	Amsterdam, Netherlands	October 1-2, 2024
DronItaly	Bologna, Italy	October 9-11, 2024
Synergy Days	Barcelona, Spain	October 14-15. 2024
AIRBORNE ISR	London, UK	October 16-17, 2024
International Agricultural and Gardening Machinery Exhibition	Bologna, Italy	November 6-10, 2024
IoT Tech Expo Global	London, UK	February 5-6, 2025
European Drone Forum 2025	Dusseldorf, Germany	February 17-18, 2025
Amsterdam Drone Week	Amsterdam, Netherlands	April 8-10, 2025
EU Conference on precision agriculture	Barcelona, Spain	June 29- July 3, 2025

The planning form also includes sub-tables for synergies, where partners can include organisations or projects, they are part of, or are aware of that would be interested in collaborating with ICAERUS as well as a sub-table for planned publications. A list of indicative synergies is included in the table above.

For partners who are considering an event, the following guidelines are recommended (*Figure 25*) and include the actions that should take place and when they should occur in order to align event participation with the project's objectives and budget. These will need to be adapted to individual activities, since numerous factors can result in varying steps and deadlines.



Figure 25: Event participation planning procedure

3. Dissemination Activities

3.1 Dissemination KPIs

3.1.1 Annual KPI targets

The expected KPIs that will be achieved each year are presented in Table 12. The first column indicates the overall project target, followed by the targets for each year. The two (2) years of the project that have been completed are indicated by the lightest grey colour, while the third and fourth years are differentiated by a slightly darker shade of grey. Dark grey is used everywhere to indicate when no target exists. The final column indicates the status at the time of preparing the deliverable. Changes to this initial plan will be included in subsequent updates with a justification for their necessity.

Table 12: Disseminations KPIs

Dissemination (D) KPIs	Target	Year 1	Year 2	Year 3	Year 4	CURRENT STATUS
D1- Organisation & participation in events						
D1.1 - Organisation of workshops	>8		1	2	5	10
D1.2 - Organisation of webinars	>8	1	2	3	2	5
D1.3 - Organisation of demo events	>5			5	5	8
D1.4 - Participation in events (e.g. conferences)	>15	2	4	5	4	84
D2 - Scientific publications						
D2.1 - Scientific publications in peer-reviewed journals and conferences	>10	1	2	3	4	5
D2.2 - Articles in industry magazines	>15	1	3	5	6	5
D3 - Synergies						
D3.1 - Organisation of joint activities/data sharing with EU/national initiatives	>10	2	3	3	2	42
D3.2 - Representation in working groups	>4	1	1	2	1	2
D3.3 - Representation in alliances	>5	1	2	2		3
D3.4 - Stakeholder synergies with Lol or MoA signed (KPI from Obj. 4)	>35					14
D4 - Outreach to policy & decision makers						
D4.1 - White paper for EU DGs	>1				1	-
D4.2 - White paper for national/regional government officials	>1				1	-
D5 - ICAERUS Ecosystem						
D5.1 -Representation in fairs and exhibitions	>12	2	3	4	3	17

Action Points:

Many of the KPI targets have already not only been met but have exceeded both the annual target but also the overall target (e.g., event participation). For KPIs where targets have not been met, specific action points have been identified.

KPIs requiring additional attention:

D3.2 Representation in Working Groups

Deviation: The target for year two (2) has been reduced from two (2) to one (1) while the target for year four (4) has increased from zero (0) to one (1).

Justification: Partners have been actively taking part in working groups meetings, focus groups and disseminating the project, however it was determined that in the final year of the project, there will be stronger results and outcomes to share with working groups. Partners are also aware of the importance of representing the project in working groups and will actively seek opportunities.

D3.4 Signed Memorandum of Understanding (MoUs) and Letter of Interest (LoI)

Targets for each year were not allocated for this KPI. Partners have been actively seeking opportunities to work with other projects and initiatives, however in the next year emphasis will be placed on formalising cooperation through the signing of MoUs and Lols.

3.1.2 KPIs per partner

The responsibility to perform the dissemination and communication activities envisioned in this dissemination plan lies within the **whole consortium**. To support partner's planning and implantation and to ensure dissemination and communication are integrated into all project activities, each partner has agreed upon a set of KPIs and targets they will strive to achieve over the duration of the project. Tables 13-25 list the dissemination and communications contributions agreed upon by each partner prior to the kick-off meeting in M01.

Table 13: AUA's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.1- Organisation of workshops	1	2
D1.2- Organisation of webinars	1	3
D1.3- Organisation of demo events	1	2
D1.4- Participation in events	1	29
D2- Scientific publications		
D2.1-Scientific publications	4	2
D2.2- Articles in industry magazines	3	1
D3- Synergies		
D3.1- Organisation of joint activities with other initiatives	4	16
D3.2- Representation in working groups	1	1
D3.3- Representation in alliances	2	2
D3.4- Stakeholder synergies with signed LoI or MoA	3	6
D4- Outreach to policy & decision makers		
D4.1- White paper for EU DGs	0.5	
D5- ICAERUS ecosystem		
D5.1- Representation in fairs and exhibitions	2	7

Table 14: WU's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.1- Organisation of workshops	1	
D1.4- Participation in events	2	5
D2- Scientific publications		
D2.1- Scientific publications	2	1
D2.2- Articles in industry magazines	2	
D3- Synergies		
D3.1- Organisation of joint activities with other initiatives	1	
D3.2- Representation in working groups	1	
D3.3- Stakeholder synergies with signed LoI or MoA	2	
D5- ICAERUS ecosystem		
D5.1- Representation in fairs and exhibitions	1	

Table 15: RFF contribution to dissemination KPIs

KPI	Target	Achieved
-----	--------	----------

D1- Organisation and participation in events		
D1.1- Organisation of workshops	2	3
D1.2- Organisation of webinars	2	2
D1.4- Participation in events	6	10
D2- Scientific publications		
D2.1- Scientific publications	1	
D2.2- Articles in industry magazines	2	
D3- Synergies		
D3.1- Organisation of joint activities with other initiatives	2	7
D3.3- Representation in alliances	1	
D3.4- Stakeholder synergies with signed Lol or MoA	2	
D4- Outreach to policy & decision makers		
D4.1- White paper for EU DGs	0.5	
D5- ICAERUS ecosystem		
D5.1- Representation in fairs and exhibitions	2	3

Table 16: NSW's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.1- Organisation of workshops	1	1
D1.2- Organisation of webinars	1	
D1.4- Participation in events	1	4
D2- Scientific publications		
D2.1- Scientific publications	1	2
D2.2- Articles in industry magazines	1	1
D3- Synergies		
D3.1- Joint activities with other initiatives	1	
D3.3- Representation in alliances	1	
D3.4- Stakeholder synergies with signed Lol or MoA	2	
D5- ICAERUS Ecosystem		
D5.1- Representation in fairs/exhibitions	1	2

Table 17: GS contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.1- Organisation of workshops	1	
D1.4- Participation in events	1	5
D2- Scientific publications		
D2.2- Articles in industry magazines	1	
D3- Synergies		
D3.1- Joint activities with other initiatives	1	2
D3.3- Representation in alliances	1	
D3.4- Stakeholder synergies with signed Lol or MoA	3	
D5- ICAERUS ecosystem		
D5.1- Representation in fairs and exhibitions	1	2

Table 18: NMN's contribution to dissemination KPIs

KPI	Target	Achieved
-----	--------	----------

D1- Organisation and participation in events		
D1.2- Organisation of webinars	1	
D1.3- Organisation of demo events	1	
D1.4- Participation in events		3
D2- Scientific publications		
D2.2- Articles in industry magazines	1	
D3- Synergies		
D3.1- Joint activities with other initiatives		1
D3.2- Representation in working groups	1	
D3.4- Stakeholder synergies with signed Lol or MoA	2	
D5- ICAERUS ecosystem		
D5.1- Representation in fairs and exhibitions	1	

Table 19: IDELE's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.1- Organisation of workshops	1	2
D1.3- Organisation of demo events	1	3
D1.4- Participation in events	2	2
D2- Scientific Publications		
D2.2- Articles in industry magazines	1	3
D3- Synergies		
D3.1- Organisation of joint activities		4
D3.2- Representation in working groups	1	
D3.4- Stakeholder synergies with signed Lol or MoA	3	
D5- ICAERUS ecosystem		
D5.1- Representation in fairs and exhibitions	1	5

Table 20: BETA VIA's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.1- Organisation of workshops	1	
D1.3- Organisation of demo events	1	1
D1.4- Participation in events	3	5
D2- Scientific publications		
D2.2- Articles in industry magazines	1	
D3- Synergies		
D3.1- Organisation of joint activities		3
D3.4- Stakeholder synergies with signed Lol or MoA	3	1
D5- ICAERUS ecosystem		
D5.1- Representation in fairs and exhibitions	1	

Table 21: EI's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.4- Participation in events		2
D3- Synergies		
C3.4- Stakeholder synergies with signed Lol or MoA	3	3

Table 22: HCPA's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.1- Organisation of workshops		2
D1.3- Organisation of demo events		2
D1.4- Participation in events		10
D3- Synergies		
D3.1- Organisation of joint activities		2
D3.2- Representation in working groups		1
D3.3- Representation in alliances		1
D3.4- Stakeholder synergies with signed Lol or MoA	3	4

Table 23: AFL's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.4- Participation in events		3
D3- Synergies		
D3.4- Stakeholder synergies with signed Lol or MoA	3	1

Table 24: AGFT's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.3- Organisation of demo events	1	
D1.4- Participation in events		4
D3- Synergies		
D3.1- Organisation of joint activities		4
D3.4- Stakeholder synergies with signed Lol or MoA	3	

Table 25: OU's contribution to dissemination KPIs

KPI	Target	Achieved
D1- Organisation and participation in events		
D1.1- Organisation of workshops	1	
D1.2- Organisation of webinars	1	
D1.4- Participation in events	1	2
D2- Scientific publications		
D2.1- Scientific publications	2	1
D2.2- Articles in industry magazines	3	
D3- Synergies		
D3.1- Joint activities with other initiatives	1	
D3.3- Representation in alliances	1	
D3.4- Stakeholder synergies with signed Lol or MoA	3	
D4- Outreach to policy & decision makers		
D4.1- White paper for EU DGs	1	
D5- ICAERUS ecosystem		
D5.1- Representation in fairs and exhibitions	2	

3.1.3 Audience KPIs

The targets for several of the dissemination activities and their status are shown in Table 26.

Table 26: Audience KPIs

KPIs	Target	Achieved
No. of stakeholders engaged in the demonstration activities	1.500	N/A Official demo events are currently being organised.
VM: Event registrations		
No. of stakeholders enrolled in online training program	1.500	N/A The full online course is not available yet.
VM: Tracking tools to capture unique visitors in a website, users registered		
No. of stakeholders attending onsite learning workshops	250	N/A Onsite training is planned with demo events.
VM: Participant registrations		
No. stakeholders participating in Open Calls	>320	183 applicants (55 PUSH 1, 38 PULL1, 90 PUSH 2)
VM: Open Call applications, details provided by the successful applicants (targets, participants)		
NO. start-ups and SMEs informed about the business models No. of start-ups and SMEs adopting a business and governance models No. of farmers to benefit from business and governance models	>100 >20 >200	N/A The business models have not been delivered. The strategy has been prepared.
VM: Feedback from businesses, SME's and farmers		
No. of stakeholders across Europe enrolled in the ICAERUS Academy	>1500	N/A The final course is not online yet.
VM: User registrations		
No. of stakeholders influenced at fairs and exhibitions No. of interested rural communities	>300 >30	237 newsletter subscribers with 1012 interactions
VM: Estimates for event capacity/attendance, tracking numbers signing up for the e-newsletters, Contacts made with rural community leaders		

3.2 Dissemination Measures and Tools

3.2.1 Event Participation

D1.1 Organisation of Workshops

Table 27: Organisation of Workshops

What are they?	Workshops are considered a meeting at which a group of people engage in intensive discussion and activity on a particular subject. They can take place online or in person.
ICAERUS plan	In this context, ICAERUS will organise different workshops over the course of the project both online and in person, based upon partners' expertise. Five (5) workshops will also be organised in coordination with the Use Case demonstration events .

	<p>These face-to-face workshops will complement the demonstration activities by covering aspects related to standards and regulations (regional, national, European), risks and safety aspects, as well as socio-economic and environmental effects. Use Case partners will organise the workshops based upon their subject expertise with the help of the OC sub-project leaders. The content (e.g., presentations) of the onsite learning workshops will be recorded and made available online, through the ICAERUS Platform, to allow participation of wider audiences.</p>
Spotlight	<ul style="list-style-type: none"> ● Synergy days: ICAERUS took part in 3 workshops at Synergy Days <ul style="list-style-type: none"> ○ NSW led a workshop “Emerging drone opportunities in Europe” ○ AUA co-led “A synergy for unlocking the power of drones for sustainable agriculture, environmental monitoring and governance” with SPADE and CHAMELEON ○ RFF co-led “Cascade funding opportunities” with SPADE, CHAMELEON, TITAN and INCiTIS Food projects ● IDELE has organised “Echanges autour des drones en élevage” workshops in both Jalogny and Camejane. ● AUA organised a workshop called “Farmers and regional communities what is the role of digitisation”.

D1.2 Organisation of Webinars

Table 28: Organisation of Webinars

What are they?	Webinars are online events organised to provide specific information to a distinct target group. While questions are encouraged, the objective is to present information.
ICAERUS plan	Partners will organise webinars to discuss the project, their progress and relevant results.
Spotlight	<ul style="list-style-type: none"> ● Open Call preparation webinars have been organised by RFF for each new launch. ● AUA co-organised the webinar “Drones for rural development” with project’s SPADE and CHAMELEON as part of an MDPI- EO&GEO Series

D1.3 Organisation of demonstration events

Table 29: Organisation of demonstration events

What are they?	Demonstration events are dedicated to showcasing the UCs’ results, the innovative approaches in multi-purpose drone use, and successful drone related technologies.
ICAERUS plan	Demonstration activities will take place during the final two years of the project. Two on-site demonstrations (one per year) for the five UCs will be organised according to the Use Case Plan and managed by each UC leader. OCTs leaders will also be invited to attend the most relevant UCs demonstrations in relation to their activities and present their outcomes.
Spotlight	<ul style="list-style-type: none"> ● HCPA organised training at the Kir-Yianni Estate wine producers on the proper use of plant protection products: Calibration of spraying equipment and integration of new technologies. AUA also took part. ● IDELE has also organised demo events, “drones demo” and the “Journée

d'échanges et démonstrations sur les nouvelles technologies en élevage ovin
 The large scale demo events associated with the use cases are being planned.

D1.4 Participation in events

Table 30: Participation in events

What are they?	Events can include conferences, symposiums, trade fairs, exhibitions, summits, etc. that are relevant to the project. Participation can include presentations, panel discussion, a booth, having a banner, distributing flyers etc. NOTE: attending an event as a guest is not considered event participation.
ICAERUS plan	Partners will actively represent the project events to represent ICAERUS, showcase the project and results and connect with the community. Identification and selection of events will follow the process described in Section 2.6.3.
Spotlight	<ul style="list-style-type: none"> ● Conferences attended by partners include: <ul style="list-style-type: none"> ○ International Conference on Information and communication technology (ICT) in Agriculture, Food & Environment ○ Panhellenic Phytopathology Conference ○ International conference on intelligent robots and systems ○ Hungarian conference on precision agriculture ● Symposiums include: <ul style="list-style-type: none"> ○ Cultivating the AgriFuture Agricultural Unmanned Aerial Vehicle (UAV) Spraying ○ Dahlia Greidinger International symposium ○ How do drones connect technology, people and domains? ● Other events <ul style="list-style-type: none"> ○ EU Farm Book Day ○ AgriFood Forum Lithuania ○ Startup village

D5.1 Representation in fairs and exhibitions

Table 31: Representation in fairs and exhibitions

What are they?	Fairs and exhibitions are non-academic events targeting primarily industry stakeholders or the general public.
ICAERUS plan	To stimulate engagement from the broader community including rural stakeholders ICAERUS will also participate in fairs and exhibitions including: <ul style="list-style-type: none"> ● Commercial UAV Expo Europe, Drone Show Europe, Agromek, SIMA Paris, AGROmashEXPO, Foodtech, DMEXPO.
Spotlight	Partner have used expos to showcase the project with booths, presentations workshop or panel discussion participation such as during the following: <ul style="list-style-type: none"> ● Agrotica ● Inno panorama ● IROS 202 ● Sommet de l'élevage ● BEYOND ● International exposition of machinery for agriculture and gardening

- Automation and Robotics expo

3.2.2 Publishing academic, technical and policy papers

ICAERUS will contribute to the broader research and innovation (R&I) community by publishing papers targeting researchers, industry, and policy makers.

D2.1 Scientific publications

Table 32: Scientific publications

What are they?	Scientific publications in peer-reviewed journals and conference proceedings. Publication should be open access and comply with EU regulations on Open Access and Open Science.
ICAERUS plan	<p>At Least 10 articles will be published in Open Research Europe and/or open-access journals such as:</p> <ul style="list-style-type: none"> • Drones, Computers and Electronics in Agriculture, Agricultural Sciences, Journal of Unmanned Vehicles Systems, Precision Agriculture <p>As a minimum, all publications will be available via Green Open Access, e.g., through OpenAIRE, ResearchGate, Zenodo, and repositories supported by individual institutions. Any code developed in the project will also be made available to the community (while respecting IPR sensitivities) as open source in code repositories, such as Github. This Open availability will help achieve higher citation accounts and greater impact due to increased visibility and improve the likelihood that future research will be able to build upon or reuse results, which in turn improves research reproducibility and continuity.</p>
Spotlight	<ul style="list-style-type: none"> • J. Doornbos, K. E. Bennin, Ö. Babur and J. Valente, "Drone Technologies: A Tertiary Systematic Literature Review on a Decade of Improvements," in IEEE Access, vol. 12, pp. 23220-23239, 2024 • Kasimati, Aikaterini, Ari Lomis, Vasilis Psiroukis, Nikoleta Darra, Michael Gerasimos Koutsiaras, George Papadopoulos, and Spyros Fountas. "Chapter 5 - Unmanned Aerial Systems Applications in Orchards and Vineyards." In <i>Unmanned Aerial Systems in Agriculture</i>, edited by Dionysis Bochtis, Aristotelis C. Tagarakis, and Dimitrios Kateris, Academic Press, 2023, pp. 93-109. ISBN 9780323919401 • Psiroukis, Vasilis, George Papadopoulos, Nikoleta Darra, Michael Gerasimos Koutsiaras, Ari Lomis, Aikaterini Kasimati, and Spyros Fountas. "Chapter 4 - Unmanned Aerial Vehicles Applications in Vegetables and Arable Crops." In <i>Unmanned Aerial Systems in Agriculture</i>, edited by Dionysis Bochtis, Aristotelis C. Tagarakis, and Dimitrios Kateris, Academic Press, 2023, pp. 71-91. • Bojkova, V., Doornbos, J., Valente, J., Kasimati, A., Arampatzis, S., "Fostering UAS innovations in sustainable agriculture and rural development in Europe: assessing the role of diversified stakeholders in the network" in IEEE Conference Proceedings • <i>Filiou, Despoina; Lebreton, Adrien; Bojkova, Viara; Estelle, Nicolas; Reid, Kristen; Deng, Jie; Carli, Giacomo; Kasimati, Aikaterini and Arampatzis, Stratos (2024). UAV-Driven Ecosystems for Sustainable Livestock Management in Rural France: A Case Study. In: R&D Management Conference, 17-19 Jun, KTH Royal Institute of Technology, Stockholm, Sweden.</i>

- An additional 4 publications are under review or are about to be submitted.
- Sassu, A., Psiroukis, V., Bettucci, F., Ghiani, L., Fountas S., Gambella, F. “Unmanned Aerial System Plant Protection Products Spraying Performance Evaluation on a Vineyard” in Precision Agriculture
 - Doornbos, J., Helary, L., Babur, O., Valente, J. “Deliberate Image Chipping for Free Uncrewed Aerial Vehicles Image Deep Learning Generalization” Conference proceedings for AgEng202, 1-4 July 2024.
 - Bojkova, V., Doornbos, J., Kasimati, A., Valente, J., Arampatzis, S. “Diverse Stakeholder Value Flow Dynamics in Europe’s Emerging UAS Ecosystems ” Under review Journal: Technology in Society
 - Filiou, D., Lebreton, A., Bojkova, V., Kasimati, A., Reid, K., Carli, G., Deng, J., Estelle, N., Arampatzis, S. “UAV-Driven Ecosystems for Sustainable Livestock Management in Rural France: A Case Study” submitted for the R&D Management Conference, 'Transforming industries through technology', Stockholm, 17-19 June, 2024.

D2.2 Articles in industry magazines

Table 33: Articles in industry magazines

What are they?	Industry magazine contributions refer to publications that are not in peer-reviewed journals, but are of interest to rural, agricultural, industry or policy stakeholders.
ICAERUS plan	Technical articles will be published in industry magazines to draw interest from industry stakeholders. Some of the major drone magazines include, Drones, Drones Monthly, Dronelife.
Spotlight	<ul style="list-style-type: none"> • NSW contributed an article “Drone collaborations: Harvesting the Civilian benefits of UAVs” to The Global Policy Institute online publication series • IDELE wrote an article “Des drones pour surveiller les troupeaux” for La France Agricole magazine and contributed several articles to Inn’Ovin.

D4.1 White papers for EU DGs and D4.2 White paper for nation

Table 34: White papers for EU DGs

What are they?	White papers are reports that concisely inform readers about a complex issue, with the aim of helping them understand an issue, solve a problem, or make a decision.
ICAERUS plan	Two (2) white papers will be published, translating results into usable evidence for policy makers that draws from scientific data and stakeholder input. One (1) white paper will be directed at EU level DGs while one (1) will target national and regional government officials. These publications will inform policy makers about the results and impacts of governance model adoption in view of future policy design and help shape public policy and future regulations in the field of drones.

3.2.3 Build synergies and expand the ICAERUS ecosystem

Fostering collaborations between projects and initiatives with similar goals and mandates will strengthen the impact for all parties and benefit the broader community. A four-phase process will be implemented to ensure partnerships align with ICAERUS objectives and maximise impact.

Phase 1: Identification

Identification is an ongoing process to stay up to date with new projects starting. A form has been sent to partners ([Annex 3](#)) requesting information on ongoing projects, initiatives, and working groups they are currently part of or others they are aware of, and feel would be suitable for collaboration with ICAERUS. This information is consolidated in an online document that is updated every six (6) months when the questionnaire is distributed to partners. ICAERUS has been seeking collaboration with both projects nearing completion to build upon those projects' momentum, networks and knowledge, which in turn support the achievement of their post-project sustainability goals, as well as projects running at the same time. For these projects joint communication and dissemination (including links on websites/social media, joint events), research and publication collaborations will be pursued.

Phase 2: Evaluation

Each potential synergy is evaluated based upon the following criteria

- Relevance to ICAERUS (scope/objectives/target groups)
- Estimated impact (visibility, added value)
- Feasibility (timeline, resources, geographical coverage)
- Terms of collaboration

Once a decision has been reached it will be validated by the partners during a monthly consortium meeting. The potential synergies and their evaluation will be consolidated into a single document [Figure 26](#) for better record keeping.

ICAERUS Potential Synergies							Evaluation						
Project (abbr.)	Full name	Website	Duration	Consortium Leader	Focus/Scope	Potential joint activities	Relevance (Low/Med/High)	Visibility (Low/Med/High)	Added Value	Timeline	Ressources	Terms of collaboration	Main contact

Once a synergy has been agreed upon the approach for initiated contact will be determined on a case-by-case basis.

Phase 4: Implementation

ICAERUS has committed to organising activities to share knowledge and data with at least ten (>10) EU initiatives and foster collaboration between the other two (2) projects funded under the HORIZON-CL6-2021-GOVERNANCE-01 call (CHAMELEON, SPADE). An indicative list of the projects that ICAERUS has already cooperated with can be found in the following table.

D3.1 Organisation of joint activities/data sharing with EU/national initiatives

Table 35: Organisation of joint activities

What are they?	Joint activities are those organised with projects, initiatives, organisations outside of the consortium. It can include data sharing, presenting the project at each others events, organising joint workshops/webinars.
ICAERUS plan	Partners will actively seek opportunities to foster collaboration with projects beyond sister project's CHAMELEON and SPADE.
Spotlight	Some examples of the project's and initiatives that ICAERUS has actively engaged with include:

	<ul style="list-style-type: none"> ● SmartAgriHubs ● Quantifarm ● BEATLES ● STELLA ● SMart Rural21 ● AGROBO ● ECONUTRI ● TITAN ● D4AgEcol ● ScaleUP ● Cities2030 	<ul style="list-style-type: none"> ● Oenobotics ● Climate Farm Demo ● TALLHEDA ● TrustFOod ● Agriskills ● Drones for Green Industry ● Smart Elevage ● SmART ● TechCare ● Smart Forestry Monitoring ● Forestry 4.0
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D3.2 Representation in working groups

Table 36: Representation in working groups

What are they?	In the context of the project, working groups bring together people for discussion or activity around a specific subject area, with the aim of achieving shared goals.
ICAERUS plan	<p>Representation in working groups can include ongoing membership as well as contributing/presenting ICAERUS at a particular event/meeting.</p> <p>A preliminary list of potential working groups has already been identified:</p> <ul style="list-style-type: none"> - The Wildlife Society Drone Working Group - Mass Robotics Drone Working Group - WFP's Unmanned Aircraft Systems (UAS) Technical Working Group (TWG) - EU expert group on drones
Spotlight	<ul style="list-style-type: none"> ● HCPA established a working group of experts from the plant protection industry specialised in digital and precision agriculture.

D3.3 Representation in alliances

Table 37: Representation in alliances

What are they?	Alliances are considered the collection of organisations, business, projects ect that come together and collaborate for a common goal.
ICAERUS plan	<p>In the context of ICAERUS, representation in alliances can include full membership or presenting the project and its results at a meeting. A preliminary list of potential alliances to consider include:</p> <ul style="list-style-type: none"> - Drone alliance Europe (DAE) - Commercial drone alliance (USA) - Drone service providers alliance - Drones doing good alliance - Alliance on New Mobility Europe (AME) - Institute of Electrical and Electronics Engineers (IEEE) - European Aviation Safety Agency (EASA) - European UAS Standards Coordination Group (EUSCG) - European Alliance on Agricultural knowledge for development (Agrinatura)
Spotlight	<p>ICAERUS has presented the project to the following: \</p> <ul style="list-style-type: none"> - European Robotics Forum

- Agribusiness Forum
- Croplife Europe

D3.4 Stakeholder synergies with signed MoU or Lol

Table 38: Stakeholder synergies with signed MoU or Lol

What are they?	<p>A Letter of Interest (Lol) is a document that outlines the understanding between two or more parties (including other projects) and their intention to do a specific thing.</p> <p>A Memorandum of Understanding (MoU) is an understanding between at least two (2) parties to embrace a particular errand or venture. An MoU provides clear expectations and responsibilities in order to define how the parties will work together. The aim is ensuring a mutual understanding of the partnership.</p> <p>The goal of both the Lol and MoU are to communicate an agreement on a mutually beneficial goal and a desire to see it through to completion.</p>	
ICAERUS plan	<p>The aim of this KPI is to connect with and consider stakeholders who have a vested interest in the ICAERUS project and who can provide valuable input or resources. We would also like to identify stakeholders who have a good reputation and are respected within the relevant industry or community so as to help enhance the project's credibility and visibility, (while keeping in mind any potential limitations or conflicts that may arise with potential Open Call applicants). All partners are expected to contribute to this KPI.</p>	
Spotlight	<p>Lol have been signed with:</p> <ul style="list-style-type: none"> ● CHAMELEON ● SPADE ● Quantifarm ● XGain ● Syngenta ● Bayer ● SACI 	<ul style="list-style-type: none"> ● Oper8 ● FEROX ● Sony computer science lab ● Fab Lab Barcelona ● DAAC Tarragona ● BEATLES ● Dronea ● UPL

4. Communication Activities

4.1 Communication KPIs

4.1.1 Annual KPI targets

The expected KPIs that will be achieved each year are presented in Table 39. Changes to this initial plan will be included in subsequent updates with a justification for their necessity.

Table 39: Communication KPIs

Communication KPIs	Target	Year 1	Year 2	Year 3	Year 4	CURRENT STATUS
C1- Branding & material						
C1.1 - Website	1	1				1
C1.2 - Social media channels	5	5				5
C1.3 - Design of flyers	>3	1		1	1	2
C1.4 - Design of banners	>5	1	1	2	1	2 project 7 UC/OC

C1.5 - Translation of flyers and banners into partners' languages	>7					>7
C2 - Digital outreach						
C2.1 - Posts in the >5 social media channels	>90	20	25	25	20	535 336 ICAERUS 199 partners
C2.2 -Blog posts in the website	>50	8	14	14	14	46²
C2.3 -Printed/digital promotional materials distributed	>3 000	500	750	875	875	
C3 - Multiplier campaigns						
C3.1 -Quarterly E-newsletters	>12	2	3	4	4	5
C3.2 -Press releases	>8	2	3	2	2	6
C3.3 -TV/radio interviews	>5			2	2	4
C3.4 -Videos with success stories and interviews	>5			2	3	3
C3.5 -Podcast episodes (2 series of 5)	>10			5	5	

4.1.2 KPIS per partner

Table 40: AUTH's contribution to communication KPIS

KPI	Target	Achieved
C2- Digital outreach		
C2.1- Social media posts	14	19
C2.2- Blog posts on the website	8	1
C3- Multiplier campaign		
C3.2- Press releases	1	
C3.3- TV/radio interviews	1	
C3.4 -Videos with success stories and interviews		3

Table 41: WU's contribution to communication KPIS

KPI	Target	Achieved
C1- Branding & material		
C1.5- Translations of flyers and banners	>7	
C2- Digital outreach		
C2.1- Social media posts	6	4
C2.2- Blog posts on the website	4	4
C3- Multiplier campaign		
C3.2- Press releases	1	1
C3.3- TV/radio interviews	1	

Table 42: RFF contribution to communication KPIS

KPI	Target	Achieved
C1- Branding & material		
C1.1- Website	1	1
C1.2- Social media channels	5	5
C1.3- Design of flyers	3	2

² Discrepancies between the total and the partners are the result of partner contributing to the same post but reporting their contribution individually.

C1.4- Design of banners	5	7
C1.5- Translation of flyers and banners	>7	>7
C2- Digital outreach		
C2.1- Social media posts	30	330
C2.2- Blog posts on the website	10	38
C3- Multiplier campaign		
C3.1- Quarterly E-newsletter	12	5
C3.2- Press releases	1	5
C3.3- TV/radio interviews	1	1
C3.5- Podcast episodes (2 series of 5)	10	

Table 43: NSW's contribution to communication KPIs

KPI	Target	Achieved
C2- Digital Outreach		
C2.1- Social media posts	4	7
C2.2- Blog posts on the website	2	3
C3- Multiplier Campaign		
C3.3- TV/radio interviews	1	

Table 44: GS contribution to communication KPIs

KPI	Target	Achieved
C2- Digital outreach		
C2.1- Social media posts	6	7
C2.2- Blog posts on the website	4	2
C3- Multiplier campaign		
C3.2- Press releases	1	

Table 45: Table 15 NMN's contribution to communication KPIs

KPI	Target	Achieved
C1- Branding and Material		
C1.5- Translation of flyers and banners	7	
C2- Digital outreach		
C2.1- Social media posts	6	5
C2.2- Blog posts on the website	4	1
C3- Multiplier campaign		
C3.2- Press releases	1	

Table 46: IDELE's contribution to dissemination and communication KPIs

KPI	Target	Achieved
C1- Branding and Material		
C1.5- Translation of flyers and banners	7	
C2- Digital outreach		
C2.1- Social media posts	6	21
C2.2- Blog posts on the website	4	1
C2.3- Promotional materials distributed	600	
C3- Multiplier Campaign		
C3.2- Press releases	1	
C3.3- Videos with success stories and interviews	1	3

Table 47: BETA VIA's contribution to communication KPIs

KPI	Target	Achieved
C1- Branding and Material		
C1.5- Translation of flyers and banners	7	
C2- Digital outreach		
C2.1- Social media posts	6	15
C2.2- Blog posts in the website	4	
C3- Multiplier campaigns		
C3.2- Press releases	1	

Table 48: EI's contribution to communication KPIs

KPI	Target	Achieved
C2- Digital outreach		
C2.1- Social media posts	2	3
C2.2- Blog posts on the website	2	
C2.3- Promotional materials distributed	600	
C3- Multiplier campaign		
C3.4- Videos with success stories and interviews	1	

Table 49: HCPA's contribution to communication KPIs

KPI	Target	Achieved
D2- Digital outreach		
D2.1- Social media posts	2	79
D2.2- Blog posts on the website	2	1
D2.3- Promotional materials distributed	600	
D3- Multiplier campaign		
D3.4- Videos with success stories and interviews	1	

Table 50: AFL's contribution to communication KPIs

KPI	Target	Achieved
C2- Digital outreach		
C2.1- Social media posts	2	4
C2.2- Blog posts on the website	2	
C2.3- Promotional materials distributed	600	
C3- Multiplier campaign		
C3.4- Videos with success stories and interviews	1	

Table 51: AGFT's contribution to dissemination and communication KPIs

KPI	Target	Achieved
C1- Branding and Material		
C1.5- Translation of flyers and banners	7	
C2- Digital outreach		
C2.1- Social media posts	2	44
C2.2- Blog posts on the website	2	
C2.3- Promotional materials distributed	600	
C3- Multiplier campaign		
C3.4- Videos with success stories and interviews	1	

Table 52: OU's contribution to dissemination and communication KPIs

KPI	Target	Achieved
C2- Digital outreach		
C2.1- Social media posts	4	
C2.2- Blog posts on the website	4	
C3- Multiplier campaign		
C3.2- Press releases	1	
C3.3- TV/radio interviews	1	

4.1.3 Audience KPIs- Communication

Several specific KPIs have also been identified for communication activities, as shown in Table 53.

Table 53: Audience KPIs- Communication

KPIs	Target	Achieved
No. of stakeholders engaged through communication channels	10.000	7960
VM: Tracking tools to capture unique visitors in a website, users engaged in social media channels		
No. of unique visitors to website and social media interactions	>20.000 >15.00	6378
VM: Google analytics, social media insights		
No. of e-newsletter subscriptions	>1.00	237
VM: Mailing service insights		

4.2 Communication tools and media kit

This chapter will outline the communication tools and channels that will be used to connect with the ICAERUS target groups.

Brochures and press releases have been translated into the language spoken in each partner's country. The assignments are presented in Table 54. In the first iteration of the DEC, it was indicated that material would also be translated into German and Italian. At this stage in the project, it has not been deemed necessary given the location of events partners have attended, but at least one brochure and banner will be translated into those languages during year three.

Noumena, the partner responsible for Spanish translation, indicated early in the project that it would be valuable to have material available in Catalan because of the location of their use case (crop monitoring) and the large number of interested stakeholders. As such, Catalan has also been added as a partner language for translation.


Partner	Language
RFF	GREEK 
IDELE 	FRENCH 

Table 54:
responsible for

BETA VIA	LITHUANIAN 
WU 	DUTCH 
AGFT 	MACEDONIAN 
NMN 	SPANISH 
	CATALAN 

Partners
translations

4.2.1 Branding & material

To target the broadest possible audience, ICAERUS has created a strong, memorable brand that visually reflects the unique identity and objectives of the project. The visual identity uses images, colours, and shapes were used to create a powerful, memorable message for the viewer. It was developed considering the following:

- An appropriate aesthetic that can be identified with the project objectives.
- The message that needs to be conveyed.
- A logo and brand that can easily translate into the different communication channels online and printed.

ICAERUS will be present across multiple digital platforms to share updates and results and to spark ongoing dialogue with stakeholders. Posts, and other inputs will be curated to the target audiences at a frequency that demonstrates stability and accessibility without overwhelming the audience.



Figure SEQ Figure * ARABIC 27
ICAERUS Brand Book

Brandbook

The visual identity is the visible representation of the project ([Figure 27](#)) and is represented in the brand book. This document serves as a guide for promoting the project in a consistent manner. The brand book includes variations of the logo, fonts, colour palette, and examples of promotional material that could be printed ([Annex 4](#)).

Logo

The logo will be used in all internal and external communication and dissemination activities (project website, presentations, flyers, press releases etc.) to help enhance brand continuity and raise awareness. The logo used for communication and dissemination material is shown in the [Figure 28](#) below:



DDAL Logo

In addition to the project logo, a variation was made for the Drone Data Analytics Library, which is used on the GitHub, project website and the ICAERUS platform ([Figure 29](#)).



EU Emblem

All ICAERUS outputs will follow the requirements set out by the European Commission and will include the EU flag and the source of funding, as shown in [Figure 30](#).



The ready-to-use EU emblem, including the funding statement, can be downloaded in all EU languages³.

Disclaimer for publications

In addition to the EU Emblem, all dissemination and communication material must include the following disclaimer (translated into local languages where appropriate):

“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.”⁴

³Download Centre for Visual Elements. https://ec.europa.eu/regional_policy/en/information/logos_downloadcenter/

⁴Based on the Annotated Model Grant Agreement: V0.2 DRAFT– 30.11.2021. For any changes, the DEC plan will be updated accordingly.

Colour palette & Fonts.

The colour palette was selected to ensure consistent, coherent visualisation of project materials. The colours are optimised for use on both screen (RGB, HEX) and print (CMYK, PANTONE), and the contrast is high enough for black-and-white printing ([Figure 31](#)).

<div style="background-color: #00C090; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center;"> Caribbean Green </div> <div style="background-color: #1A3A5A; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center;"> Catalina Blue </div>	FONT	RGB: 33, 208, 178 HEX: #21D0B2 CMYK: 95, 0, 100, 100 PANTONE: 2400 C	COLORS
		RGB: 47, 69, 92 HEX: #2F455C CMYK: 100, 52, 22, 6 PANTONE: 2168 C	
		Gotham Rounded Book	

Motto

The following motto was created for the project as a short sentence to encapsulate the ideals of the project in a short but memorable way.

“Improving quality of life one drone at a time”

Templates

Templates have been created for partners to use for all written internal and external communication, presentations ([Annex 5](#)) and deliverables to maintain consistent, professional aesthetics.

Deliverable Template

The deliverable template ([Figure 32](#)) includes a cover page featuring the project’s logo and acronym, the deliverable information (number, full title, corresponding work package number and title), and the author’s name and organisation. The template also describes the document, provides the document history, and lists the partners, their logos, and contact information. The template also provides the colour schemes, fonts, and table formats ([Annex 5](#)).

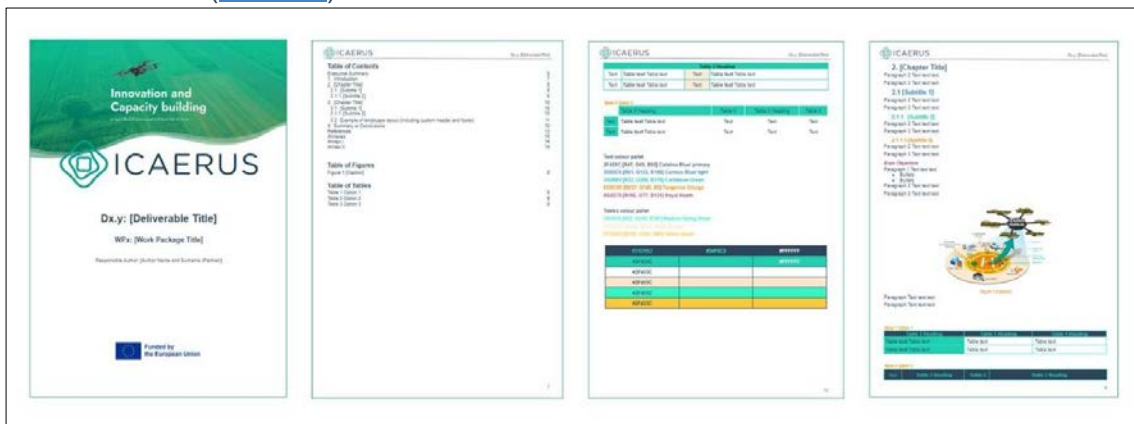


Figure 32: Sample from the deliverable template

Text templates

A plain letterhead has been created for printed correspondence related to the project. Templates for meeting minutes and agendas have also been developed ([Annex 5](#)).

MoUs and Lol

Templates have been made for the MoUs and Lols that partners are expected to have signed by relevant projects, companies or organisations. These templates are the starting point for which partners may add the necessary information based upon the stakeholder they are approaching. This is to ensure consistency and can be found in [Annex 6](#). Supporting text has also been developed to help partners initiative communication with potential parties in a consistent manner.

Meeting template

A background ([Figure 33](#)) has been created for partners to use when presenting in online meetings or webinars.



*Figure SEQ Figure * ARABIC 33: ICAERUS Digital background*

Presentation templates

The **ICAERUS power point (ppt) presentation template** has been designed in line with the project's visual identity to maintain consistency and professionalism and promote its recognition. Two (2) versions have been created and shared with partners:

- a) A set of blank PowerPoint slides has been made available to partners so that they can create their own presentations while maintaining the project's visual identity (the cover page is shown in [Figure 34](#)).
- b) In addition, a series of slides have also been created presenting the basic information of the project and can be used as a standalone presentation or as an introduction to the project within a partner's specific presentation ([Annex 7](#)).



Brochures

Brochures are designed to concisely share project information to target groups attending various events across Europe. Brochures are translated into partner's languages (see [Table 54](#)) and are also available for digital distribution as pdfs. A tri-fold brochure has been created to provide an overview of the entire project, and a second bi-fold brochure has been designed specifically for the DDAL. Additional brochures will be designed to showcase the different use cases. Current brochures can be found in [Annex 4](#).

Banners

Banners are used at physical events for eye-catching identification of the ICAERUS project. Two (2) banners have been created in order to facilitate different event requirements and dimensions available, the banners have also been adapted to poster sizing for those featuring the use cases and the open calls. In addition, the open call posters have been created in a 'mix and match' style, each with a general overview of the call and subsequent connecting posters about the upcoming launch or applicant statistics depending on the status of the open calls. This was done to avoid recreating and reprinting and allows the most relevant information to be presented during the events. Upcoming posters will provide more detail on the sub-projects of the open calls. The banners can be found in [Annex 4](#).

Posters

Posters were not defined as a specific KPI, however based on the circumstances and requirements of different events and from partner requests, eleven (11) posters have been created for the project. The first was a project summary that could be hung at the walls of WU campus, whereas the most recent was created to fill the requirements of the EO for Agriculture Under Pressure 2024 Workshops. The nine (9) banners prepared for Synergy Days are also printable as posters. The posters are found in [Annex 4](#).

Cartolino

In addition to the posters that were created, a cartolino was also made for the 2nd PUSH Open Call featuring the ICAERUS logo and a QR code to access the OC page of the ICAERUS website. The cartolino is a foam stand, 21cm X 29.7cm. This was the first version and was placed at the table during the Athens Robotics Expo to provide quick, direct access to OC information ([Annex 4](#)).

4.2.2 Digital presence

Maintaining a strong digital presence and utilising multiple digital tools will play a critical role in spreading results across geographical boundaries and accessing a greater diversity of stakeholders. They also offer easy-to-use evaluation metrics to assess the engagement level of audiences.

Website

The ICAERUS website [Figure 35](#) is the central hub for information retrieval and is the first access point for interested stakeholders. It is connected to the OpenCall Hub where Open Call applications are processed and is updated with information from partners regularly. Indicative screenshots of the website can be found in [Annex 10](#).



Figure 36 ICAERUS Website

Technical aspects

The website is mobile friendly to increase accessibility. Delivered in M2, the website is hosted at Icaerus.eu. And contains the following sections and features:

The home screen

The home screen includes the project logo, full name, and motto, as well as its alignment with key EU strategies. The main challenges for the widespread adoption of drones are presented, as well as the ICAERUS vision and the project at a glance. The partner's logos with clickable links are provided at the bottom of the page, as well as links to social media, an option to sign up for the newsletter, and the contact information for the Project Coordinator, Project Manager, and Communication Manager. To support NSWR and the survey being conducted for WP1, a dedicated link to the survey is also included.

ICAERUS

This section includes a drop-down menu with four (4) options:

- **About:** This page Includes the project identity (duration, budget, funding scheme), its European strategic alignment as well as the key results and activities.
- **Challenges:** This page flows from the EU strategic alignment to the challenges that are limiting the widespread use of drones to the aim of ICAERUS and how it will tackle these challenges. A series of interesting facts about agriculture, rural areas, the Farm2Fork strategy and the drone market are also incorporated.
- **Objectives:** This page includes the project's moto and vision as well as the specific objectives (Research, Develop and demonstrate, Educate and train, Scale-up along with key metrics and targets for each.
- **Our partners:** This sub-tab features an additional drop-down menu with the names of all the consortium members. Each partner has their own dedicated page that can be accessed by clicking on their name from the drop-down menu (or their logo on the home page). Partner pages include their logo, full name, country, website, contact information as well as their role in the project and a summary of their expertise. Clicking on the partner tab itself leads to a page that summarises the consortium, describes the value of an interdisciplinary approach and provides the partner logos with links to their pages.

Use Cases

The Use Case page features a map with the five (5) use cases with a summary in numbers below and a description of the rationale behind their inclusion. A summary of each use case is provided and includes a link to their dedicated page where more technical information is provided.

The individual use case pages can also be accessed through a drop-down menu from the Use Case tab.

Newsroom

The newsroom tab goes directly to the ICAERUS blog posts but also has a drop-down menu with four (4) options:

- **Blog:** the project's blogs are listed in chronological order, with the newest visible first.
- **Deliverables:** public deliverables will be made available here, when they have been accepted and approved by the PO.
- **Presentations:** the project's presentations are available to view.
- **Communication material:** digital access to the brand book, flyer and banner.

Contact

This page features a form for contacting the ICAERUS consortium as well as the contact information for the project coordinator, project manager and communication manager.

Open Calls

The Open Call page features a summary table of the open calls including indicative dates, who they are targeting and for what purpose. Details about an OC that is accepting applicants are placed at the top, to provide the basic details, who can apply, the timeline as well as all of the necessary documents and a link to the OpenCall Hub. Closed calls are indicated below and once sub-projects begin implementation a link to a feature page is added, such as for the 1st PUSH OC. At the bottom of the page, information on the ongoing call for evaluators is included as well as a link to the OpenCall Hub.

There is also a drop-down option on the Open Call tab:

- Open Call trials: this page has been added to provide information on the sub-projects for each open call. There is a summary of the OCs in numbers and an overview of the objectives and each Open Call. Each sub-project is featured there and by clicking on the name, takes visitors to an individual page that provides details like the organisation, its expertise and the objective of the sub-project. Updates will be made through the implementation.

ICAERUS Platform

The ICAERUS platform provides a description of the platform and how it connects to the rest of the project. There is also a link to visit the platform directly as well as a tour of the platform video (<https://icaerus.eu/icaerus-platform/>).

Drone Data Analytics Library (DDAL)

The drone data analytics library has its own dedicated tab of the website, featuring details about what it is for and why it is necessary and links to the GitHub and Zenodo.

Website Analytics

To monitor the performance of the ICAERUS website, the Google Analytics tool which tracks and reports website traffic is utilised. Performance can be evaluated for any time period (e.g., daily, weekly, monthly, custom) since the website's creation. The following analytics are used to monitor the ICAERUS website performance from the beginning of the project (**July 2022 - May 2024**):

- The number of users and their different analytics (e.g., average engagement time)
- The users' location when navigating the website
- The content with the highest engagement

- The channel via which they accessed the ICAERUS website.

Google Analytics ([Figure 36](#)) from **July 2022 to May 2024** shows positive website engagement. The ICAERUS website has attracted **6.5K users**, and active users are spending an average of **2 minutes and 37 seconds** on the site. This is significantly higher than the average time (54 seconds) spent on a single webpage⁵ which suggests users are finding our content valuable.

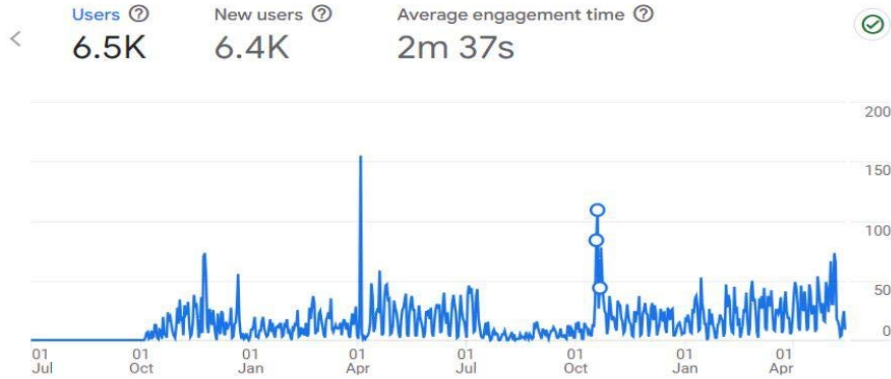


Figure 37: Google Analytics for the ICAERUS website

[Figure 37](#) shows the ranking of the **countries with the most users engaging** with the website since the beginning of the project. Greece has the most users, with **1.3K**, followed by Spain (**845**), Italy (**63**), France (**309**), United States (**264**), Turkey (**218**), and the United Kingdom (**213**). The users' distribution by country suggests that countries where project partners come from are most likely to be in the top positions of the website's users.

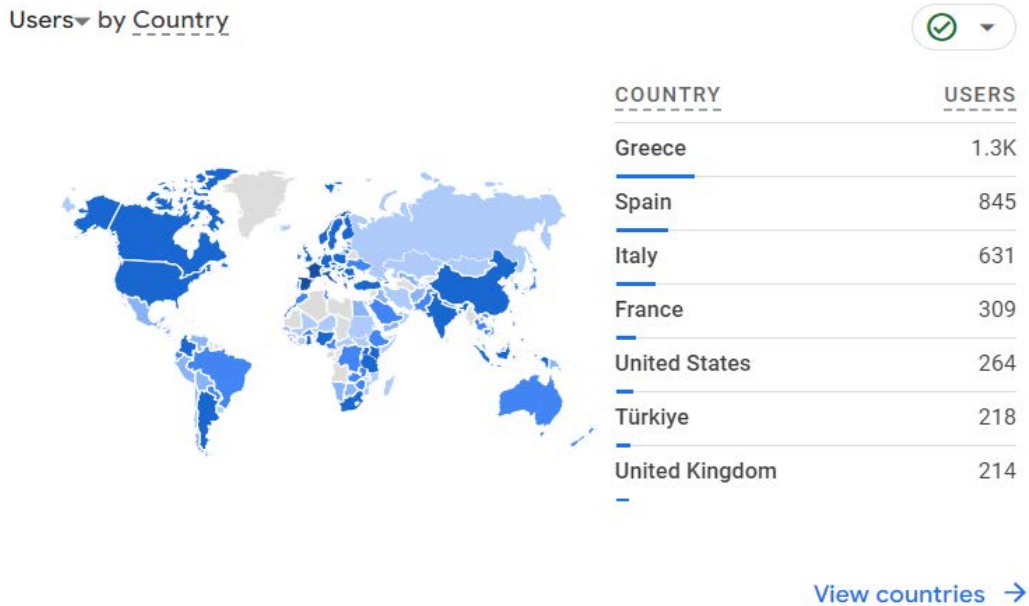
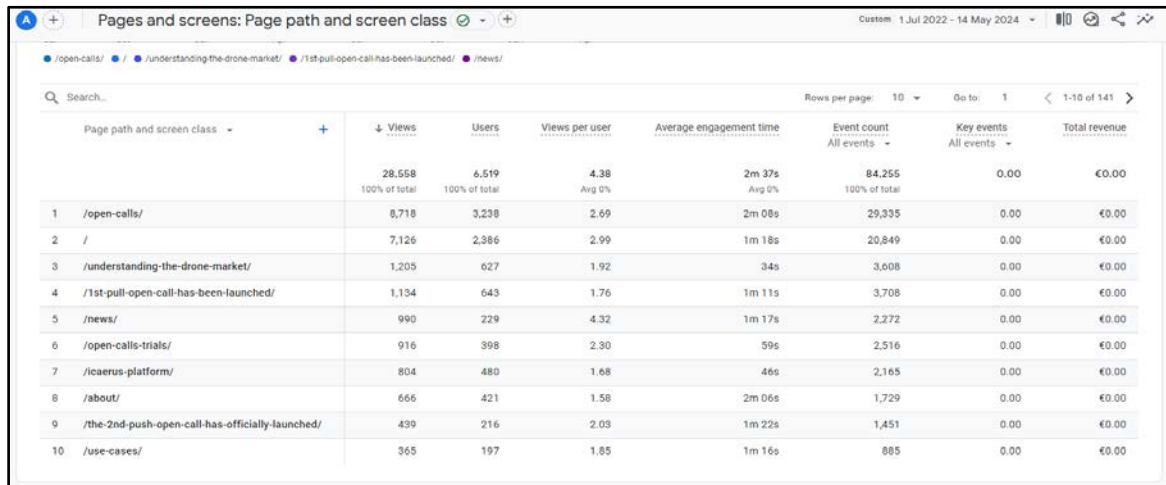


Figure 38: Google Analytics ICAERUS website users by country

⁵ Haan, K. "Top Website Statistics for 2024". Ed. Watts, R. *Forbes Advisor*. April 2, 2024. https://www.forbes.com/advisor/business/software/website-statistics/#sources_section

Figure 38 shows the **most visited pages** on the website **over its lifetime**. The Open Calls page is the most visited, followed by specific blog posts and then the use cases.



Page path and screen class	Views	Users	Views per user	Average engagement time	Event count	Key events	Total revenue
/open-calls/	28,558	6,519	4.38	2m 37s	84,255	0.00	€0.00
/	8,718	3,238	2.69	2m 08s	29,335	0.00	€0.00
/understanding-the-drone-market/	7,126	2,386	2.99	1m 18s	20,849	0.00	€0.00
/1st-pull-open-call-has-been-launched/	1,205	627	1.92	34s	3,608	0.00	€0.00
/1st-pull-open-call-has-been-launched/	1,134	643	1.76	1m 11s	3,708	0.00	€0.00
/news/	990	229	4.32	1m 17s	2,272	0.00	€0.00
/open-calls-trials/	916	398	2.30	59s	2,516	0.00	€0.00
/icaerus-platform/	804	480	1.68	46s	2,165	0.00	€0.00
/about/	666	421	1.58	2m 06s	1,729	0.00	€0.00
/the-2nd-push-open-call-has-officially-launched/	439	216	2.03	1m 22s	1,451	0.00	€0.00
/use-cases/	365	197	1.85	1m 16s	885	0.00	€0.00

Figure 40: Google Analytics – ICAERUS website's most visited pages

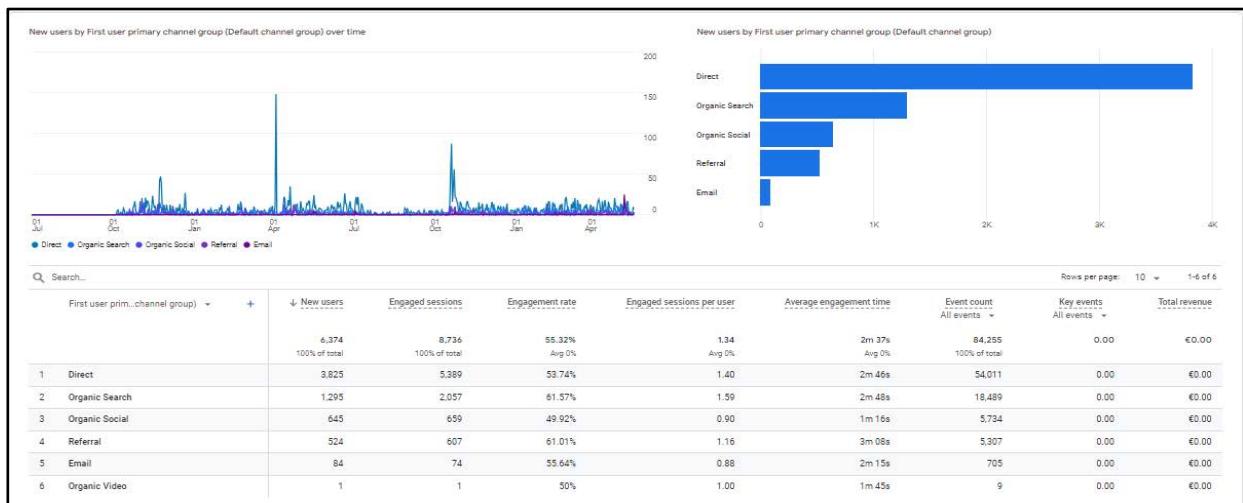


Figure 39 provides an overview of the **most common channels through which users accessed** the ICAERUS website. Direct access is the most common channel, accounting for **3825** out of **6400** of the users. A smaller number accessed the website through organic search (**1295**), referral (**524**), and lastly, email (**84**). Organic search stands for a search engine's method of finding and ranking website content naturally, without the influence of paid advertising, while organic social is the channel by which users arrive at the website via non-ad links.

Social Media

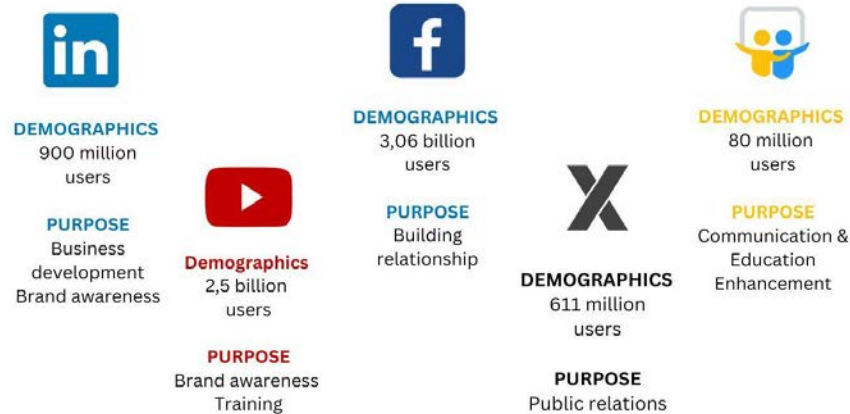
Five (5) social media channels have been selected to offer concise project updates, establish two-way communication channels, and better reach out and interact with target audiences, including the broader public (**Figure 40⁶**). The most popular social media platforms were chosen to ensure interaction with the

⁶ <https://www.slideshare.net/about>
<https://www.linkedin.com/pulse/important-linkedin-statistics-data-trends-oleksii-bondar-pqliie/>
<https://datareportal.com/social-media-users>

broadest range of stakeholders. Channel analytics are used to monitor performance and are used to adjust the social media strategy when needed.

Social Media Guidelines

To maximise visibility and impact of the project's events and outcomes, ICAERUS is utilising the consortium's pre-established social media networks. This means that partners are expected to share,



publish, and retweet content from the project's social media accounts and website. This is mutually beneficial, as it increases traction for project-related work but also increases traffic on partner's pages and social media. After selecting the most appropriate channels, there are several parameters that should be considered when creating social media content ([Figure 41](#))

- **Interactivity** means posts should be easily understood by non-specialists to facilitate interaction.
- **Eye-catching posts** will lead to higher conversions with prioritisation into visuals and graphics will make the piece unique.
- **Adaptability** of the social media formatting and functionality on different devices.
- **Consistency** of messaging and branding across all posts. This includes maintaining a tone of voice, style, and visual identity, which helps in building a recognisable and trustworthy brand.
- **Timeliness**: of posts, both in terms of regular frequency but also sharing information as close to the date of the event as possible.



Social Media DOs & DON'Ts

A set of social media recommendations has been compiled to support partners and facilitate their effective use of social media to boost the project's visibility, as shown in [Figure 42](#).



Figure 43: Social Media Dos & Don'ts

#Hashtags

Hashtags relevant to the project and its outcomes have been selected to help reach target audiences and make it easy to find ICAERUS-generated knowledge. They help categorise the project's main topics into easily digestible and engaging keyword phrases, helping increase visibility in the social media environment. The main hashtags used include: **#AgricultureInnovation**, **#Drones**, **#DroneTechnology**, **#OpenCall**, and **#FundingOpportunities**, as well as others specific to a given post's content. In addition, the hashtags **#HorizonEurope** and **#ResearchImpactEU** are used in all posts.

Social Media Strategy and Key Points

Objective:

The ICAERUS project's social media strategy aims to maintain audience engagement and communicate information on various project topics. Posts are published on LinkedIn, Facebook, and Twitter with a frequency of approximately two (2) posts each week, with intervals adjusted as needed depending on the available content, or varied frequency of key activities (e.g., event participation, open call updates, publication announcements).

Key Points:

- **Event Participation and Activities:**
Updates on ICAERUS partners' participation in conferences, webinars, workshops, exhibitions, and other relevant activities.
- **Open Call Promotion:**
Information on the launch, results, statistics, and details of sub-projects.
- **Use Case Progress and Activities:**
Regular updates on the progress and activities of ICAERUS use cases.
- **Internal Meetings:**
Highlights and updates from internal ICAERUS meetings.
- **Relevant Publications:**
Sharing publications published by partners and interesting publications related to the project's main topics.
- **Media Features:**
Information on ICAERUS being featured in media outlets.

- **Newsletter and Blog Updates:**
Notifications about new newsletters and blog posts.
- **International Days:**
Posts related to relevant International Days to increase awareness and engagement.

Engagement: Followers and subscribers are encouraged to engage with posts by reacting, commenting, sparking conversations, or reposting content, depending on the social media platform.

This strategy not only ensures a consistent and engaging online presence but also fosters a well-informed and interactive community, thereby enhancing the overall impact of the ICAERUS project.

LinkedIn

LinkedIn ([Figure 43](#)) stands out as a premier social media platform for connecting with and engaging professionals and offers a place for sharing information on current trends, innovations, and best practices across a wide range of fields. It also is a platform for connecting academia and industry. ICAERUS uses LinkedIn to provide project updates such as partner activities, results progress and publications. It is also used for promoting the open calls and their webinars. Connections are also built with other projects.



ICAERUS can be found at: [LinkedIn Page](#)

Figure 44: ICAERUS LinkedIn Page

LinkedIn Analytics

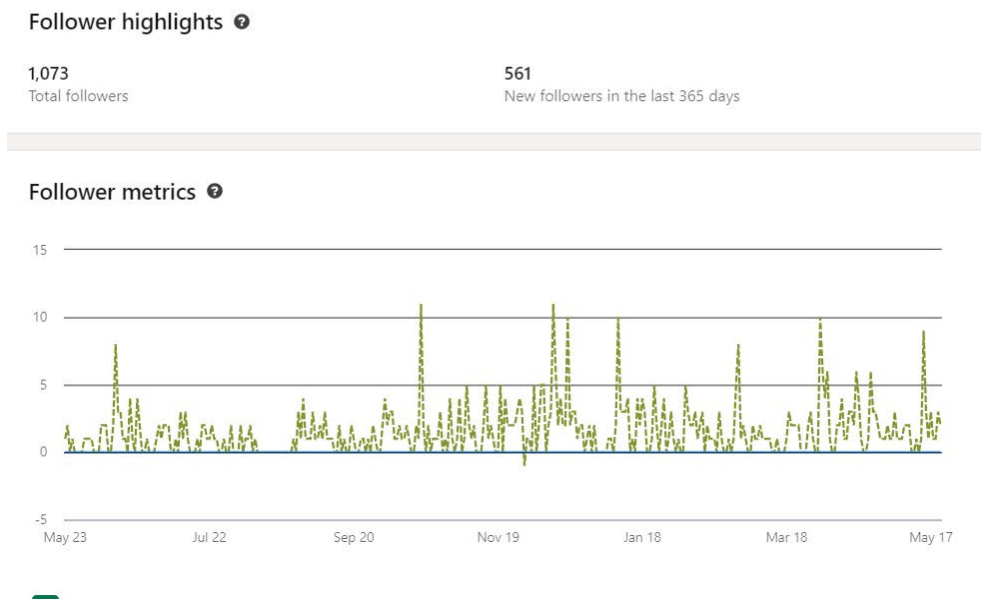
LinkedIn Analytics provides data about the professional network and content performance, including: **Followers**, which represent the total number of professionals who have chosen to follow a company's page and receive updates about activities and industry insights.

Impressions, which indicate the total number of times the content (e.g., each post, article) appears in LinkedIn feeds. This includes both organic (unpaid) and paid reach.

Engagement, which tracks all user interactions with the page's content, such as likes, comments, shares, saves, and reactions. High engagement indicates that the audience finds the content relevant and interesting.

Demographics provide information about the audience that follows the page, including job titles and seniority, company size and industry, and location.

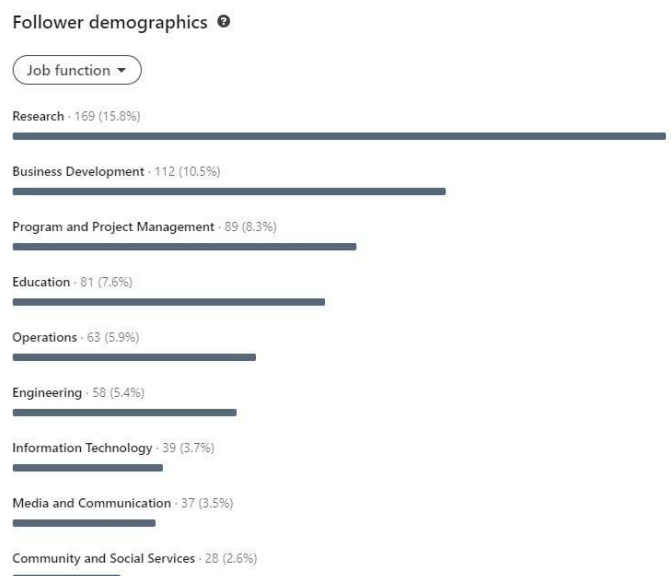
[Figure 44](#) indicates the number of followers on the ICAERUS page for the entire duration of the project (**July 2022 - May 2024**), which has reached **1,073**. The graph presents when the project gained followers and shows increasing interest in the project over the two-year period. The line graph illustrates the number of new followers in the past 365 days. Most of the spikes are related to the launches of the open calls and the implementation of their sub-projects.



[Figure 45](#) presents the **demographic profile** of ICAERUS page followers based on their job functions (**July 2022 - May 2024**). The five (5) largest shares are held by:

- Research 15.8%
- Business Development 10.5%
- Program & Project Management 8.3%
- Education 7.6%
- Operations 5.9%

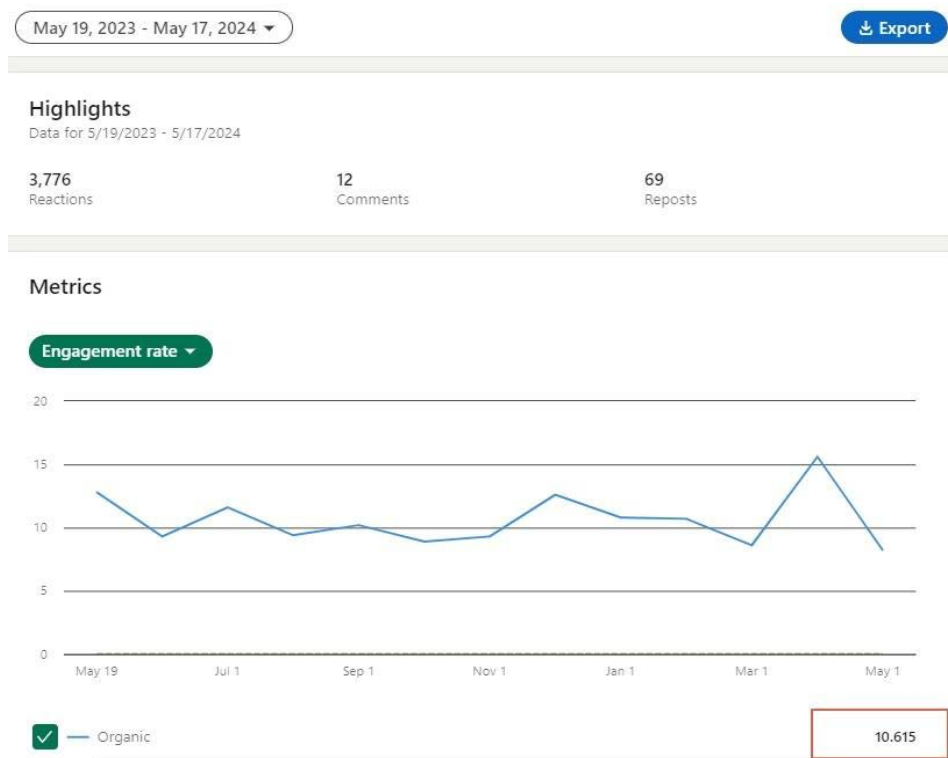
These numbers indicate a diverse audience with significant representation from key sectors relevant to the project's goals. This demographic diversity suggests a broad interest in and relevance to the ICAERUS project across multiple professional fields, enhancing the potential for interdisciplinary collaboration and impact.



[Figure 46](#) presents the total number of **interactions** on the ICAERUS LinkedIn page **over the past year which was 10,615**. Interactions cannot be retrieved more than a year prior. The line graph shows the engagement rate from May 2023 to May 2024. This high level of interaction indicates that the content being shared on the ICAERUS LinkedIn page is resonating well with followers, effectively sparking

conversations and interest. It also demonstrates the effectiveness of the project's communication strategies in maintaining an active and engaged community.

[Figure 47](#) illustrates that the number of **impressions** on the ICAERUS LinkedIn page **over the past year reached 71,730**. Interactions cannot be retrieved more than a year prior. This high number of impressions indicates that the posts frequently appear in users' feeds, suggesting effective dissemination and a strong presence of the ICAERUS LinkedIn page on the platform. The line graph represents the number of



impressions from May 23, 2023, to May 21, 2024. The last spike is related to the announcement of the workshop on Open Call opportunities, which garnered significant attention and engagement from the audience, thereby enhancing the overall visibility of the page.

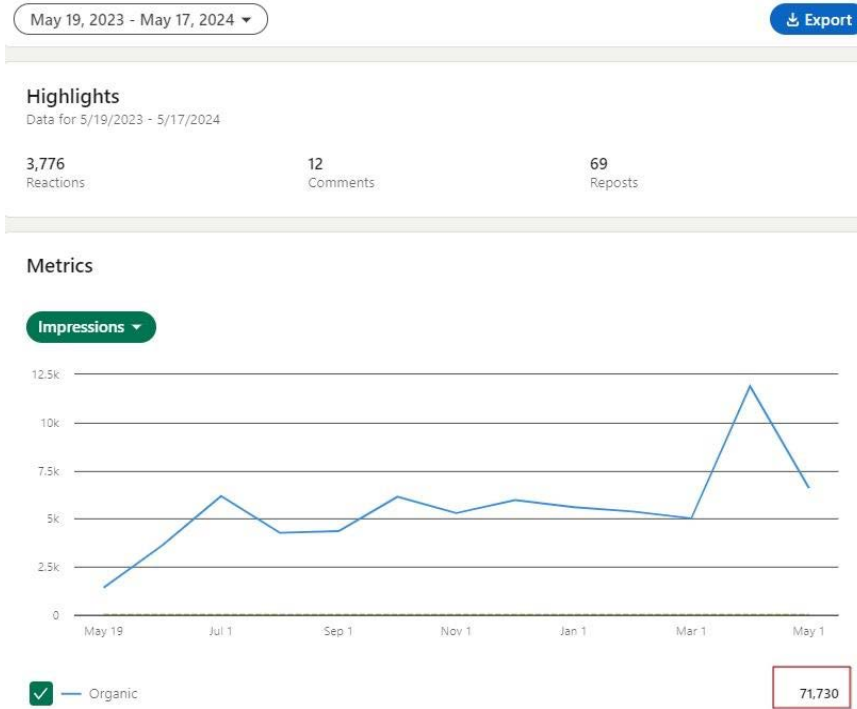


Figure 48: LinkedIn Impressions

Facebook

Facebook (Figure 48) is one of the world’s largest social media platforms with roughly 2.93 billion monthly active users as of the second quarter of 2022⁷. Facebook audiences have an even gender distribution and with the bulk of users falling with the ages of 18-44⁸, they are a dynamic and actively involved audience more likely to engage with the new technologies. **ICAERUS can be found at: [Facebook Page](#)**

⁷ Dixon, S. 2022. “Facebook: quarterly number of MAU (monthly active users) worldwide 2008-2022”. *Statista*. <https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>

⁸ Dixon, S. 2022. “Facebook: distribution of global audiences 2022, by age and gender”. *Statista*. <https://www.statista.com/statistics/376128/facebook-global-user-age-distribution/>



49: Facebook Page

Figure

Facebook Analytics

Meta Business Suite is a tool that provides page statistics about the project's audience. Statistics can be retrieved for any time range from the creation of the page until the present. Metrics include:

- **Reach** which is the estimated number of people who saw any content from the ICAERUS page (including reach from other sources like tags, check-ins, and Page or profile visits). Reach is only counted once if it occurs from both organic and paid distribution.
- **Content interactions** are the number of likes or reactions, saves, comments, shares, and replies on content, including ads.
- **Impressions** are the number of times any content from the ICAERUS page entered a person's screen.
- **Followers** are the number of people that have chosen to "follow" the ICAERUS page and receive your updates in their timeline. The total number of followers of a Facebook Page or profile is calculated as the number of follows minus the number of unfollows over the lifetime of the page or profile.

[Figure 49](#) presents the project's Facebook page performance metrics since the start of the project (**July 2022 to May 2024**). During this period, the page **reached 6.609** unique users who saw content from the page. The line graph tracks the reach since the launch of the page and shows the timing of posts that had particularly high reach, such as those related to the open calls. **2.300 interactions** were also recorded, encompassing likes, comments, shares, and other forms of engagement, demonstrating active user involvement with the posts. The page has gained **170 followers**, reflecting a growing and dedicated audience. Additionally, there have been **155 link clicks**, signifying user interest in further exploring the content and external links shared on the page.

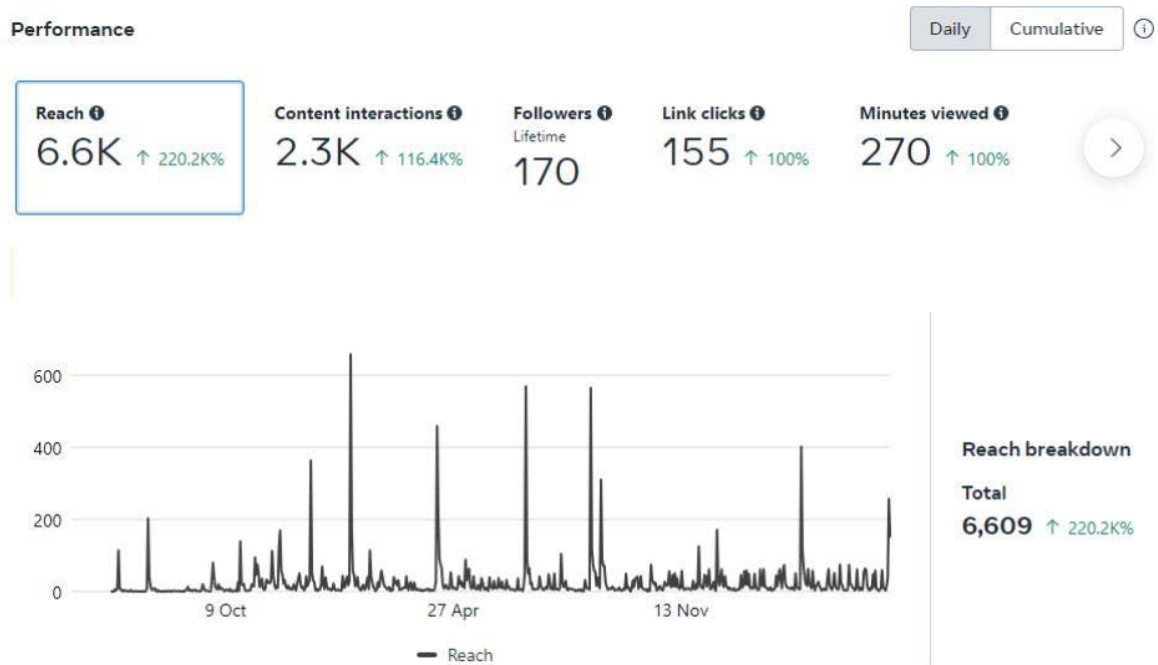


Figure 50: Facebook Insights

X (formerly known as Twitter)

X (Figure 50) is an optimal platform for sharing the latest news and trends on varied topics and starting online conversations with audiences around the world. Twitter’s 280-character limit makes news updates quick and easy to digest, and with an average of 330 million active monthly users⁹ It is a valuable social media channel to answer project questions with immediacy.

ICAERUS can be found at [X account](#).



Figure 51: ICAERUS X page (formerly Twitter)

X Analytics

Twitter Analytics provides data about social networks and content performance, including:

⁹Jay, Allen. 2022. "Number of Twitter Users 2022/2023: Demographics, Breakdowns & Predictions." *Finances Online*. <https://financesonline.com/number-of-twitter-users/>

- **Number of Followers:** This metric represents the total number of followers on the page or profile over the page's lifetime.
- **Impressions:** This metric measures the number of times posts have been viewed. Impressions indicate how often users have seen content, regardless of whether they interacted with it. This metric is essential for understanding the potential reach and visibility of the content, as a high number of impressions suggests that the posts are widely viewed and have substantial exposure.

[Figure 51](#) shows that since the start of the project, **131 users** have followed the page, and **135 posts** have been published. According to the Twitter analytics tool, impression metrics can only be retrieved over the last year, so the total number of **impressions from May 2023 May 2024 is 7.700**. The average monthly impression of **642** over the past year indicates consistent content visibility, suggesting that the X content appeals to followers and enhances visibility and awareness of the project's updates and activities.

MAY 2024 SUMMARY Post impressions 835	JAN 2024 SUMMARY Post impressions 428	NOV 2023 SUMMARY Post impressions 395	
APR 2024 SUMMARY Post impressions 704	DEC 2023 SUMMARY Post impressions 531	OCT 2023 SUMMARY Post impressions 617	JUN 2023 SUMMARY Post impressions 514
MAR 2024 SUMMARY Post impressions 751	NOV 2023 SUMMARY Post impressions 395	SEP 2023 SUMMARY Post impressions 471	MAY 2023 SUMMARY Post impressions 490
FEB 2024 SUMMARY Post impressions 445	OCT 2023 SUMMARY Post impressions 617	AUG 2023 SUMMARY Post impressions 868	

Figure 52: Twitter analytics

YouTube

YouTube ([Figure 52](#)) is the second largest search engine after Google, with over 2.6 billion people worldwide monthly users and accounting for around 25% of global mobile traffic¹⁰. YouTube generates billions of views each day, making it the top platform for uploading engaging video content. This can also help with search engine optimisation since content can also be found on YouTube.

ICAERUS can be found at [YouTube Channel](#).

¹⁰ GMI Blogger. 2022. "Youtube Statistics 2022." *Global Media Insight*. <https://www.globalmediainsight.com/blog/youtube-users-statistics/>

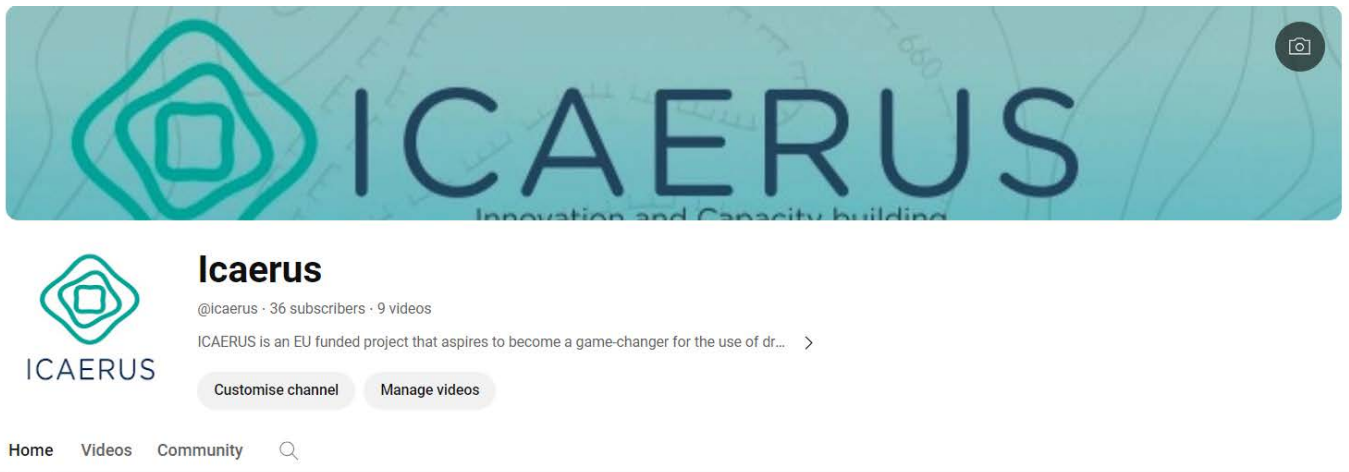


Figure 53: ICAERUS YouTube channel

YouTube Analytics

YouTube Analytics, accessible through the YouTube Studio dashboard, offers comprehensive insights into channel performance and audience engagement through the following metrics:

- **Subscribers:** This key metric represents the total number of users who have chosen to stay connected with the channel
- **Views:** This metric counts the total number of times videos are watched. It includes views from subscribers and non-subscribers, reflecting the overall reach of the content.
- **Watch Time:** This measure amounts to the total time viewers have spent watching the videos. This metric indicates how engaging and relevant the content is to the audience.

[Figure 53](#) illustrates the YouTube channel's performance between **July 2022 - May 2024**. The channel has **36** subscribers. The nine (**9**) videos published have received **915 views**, with a **total watch time of 38.9 hours**. The line graph provides a visual reference for when content was viewed during this period. These metrics reflect consistent engagement with the channel's content, indicating that the videos successfully capture and retain the audience's attention. This level of interaction enhances the channel's visibility and awareness of the project's updates and activities.

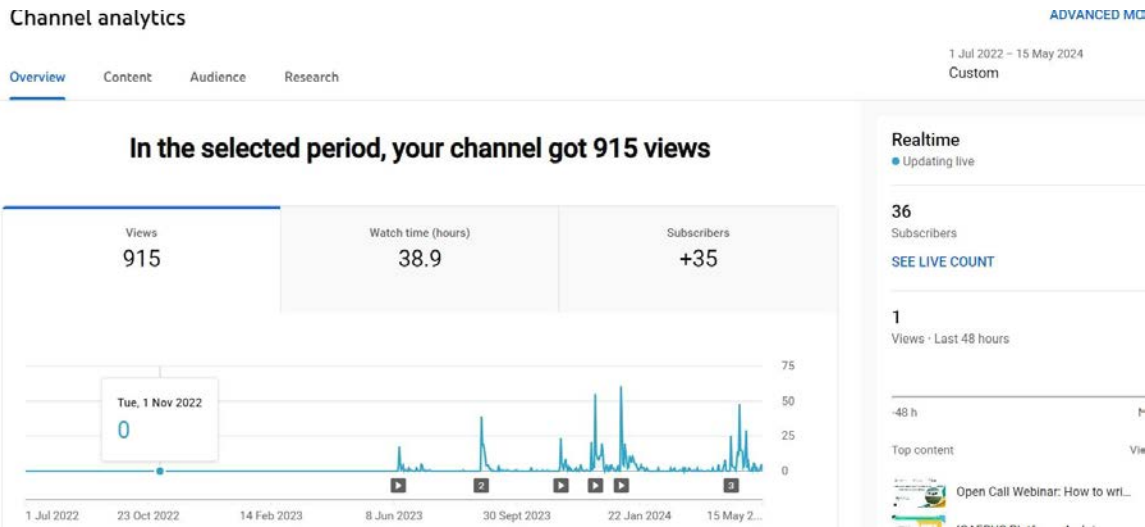


Figure 54: ICAERUS YouTube analytics

SlideShare

SlideShare (Figure 54) is an online presentation service for sharing professional content through presentations, infographics, documents, or videos. With forty (40) content categories, it provides a targeted platform for stakeholders to easily seek information about topics of interest and is suitable for disseminating research findings, industry insights, or educational materials to a global audience. SlideShare's user-friendly interface and advanced search capabilities ensure that content is easily accessible and discoverable, fostering a dynamic exchange of knowledge and ideas.

ICAERUS can be found on [SlideShare account](#).



Figure 55: SlideShare

SlideShare Analytics

SlideShare Analytics provides metrics on the number of views and interactions, including downloads and reactions. Figure 55 illustrates the SlideShare account's performance from **May 2023** to **May 2024**. The account has accumulated **194 views** and **15 interactions**. The line graph provides a visual reference for when content was viewed during this period. Also, showcases the top content based on views, providing insights into which presentations resonate most with the audience. The first project presentation was the most popular.

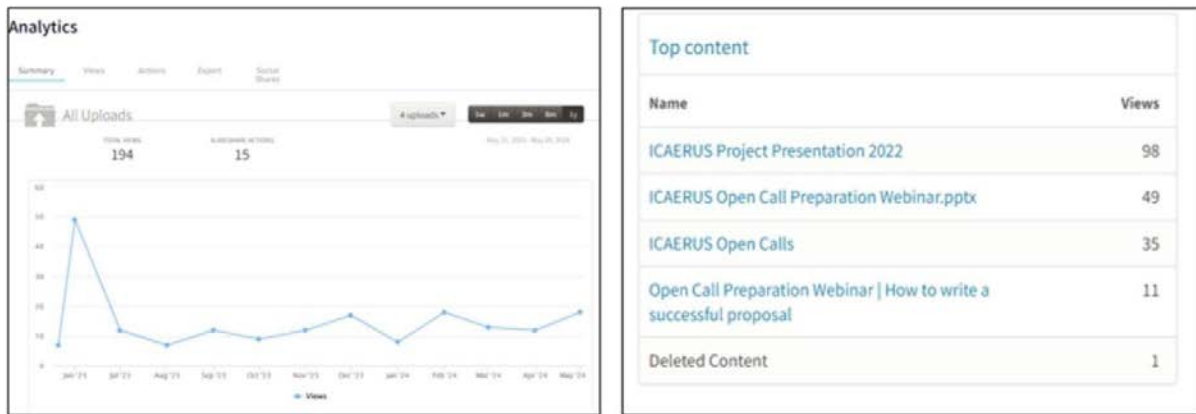


Figure 56: SlideShare analytics

Blog

Blogs use a conversational writing style with a easily digestible length of text, often combined with photos to be informative, entertaining, and accessible to a diverse audience. The ICAERUS blog uses four (4) identifiers to categorise posts.

- **Results watch:** These posts showcase project results or updates are work being done by different work packages.
- **Open Calls:** This includes all information about the open calls, launches, results statistics, successful sub-projects and updates.
- **Hoverview:** These are technical posts about topics of interest related to drones and written by WU and target stakeholders that want to dive deeper.
- **Partners:** These include general partner updates.
- **Use Cases:** These posts are focused on any aspect directly related to the use cases or their areas of study.

Blog posts contributions are a team effort. RFF often reaches out to partners regarding specific topics of interest. Partners then provide input that RFF uploads to the website. Partners are also encouraged to contact RFF any time they have an idea for a blog post. Already 50 blog posts have been published.

Podcasts

Podcasts are digital audio files presented in a series, typically with new instalments received automatically by subscribers. This on-demand technology is growing in popularity with listener penetration expected to reach or exceed **30%** across Europe by 2030⁶. ICAERUS will create **2 podcast series** to enrich and diversify the website and address auditory learning styles. Content created by partners will follow an overarching theme that will make for cohesive, entertaining series. One series will be dedicated to use cases and the sectoral challenges they are focused on.

E-newsletters

The quarterly newsletter provides succinct updates on the project activities and results, current and upcoming opportunities through the open calls. It is possible to sign up for the newsletter through the ICAERUS website. Brochures and posters also include QR codes for the website, so it is possible to sign up during live events as well. The four (4) month interval was carefully chosen to strike a balance between providing timely updates and avoiding information overload. This approach allows subscribers to stay abreast of project activities and initiatives while still having ample time to digest the information and plan their involvement accordingly. Five (5) newsletters have been released since the start of the project. Newsletter performance is monitored through MailChimp and includes the following metrics:

- **Subscribers:** The number of people that have signed up to receive the newsletter.
- **Total opens:** The number of times the newsletters have been opened by subscribers.

- **Total clicks:** The number of times links within the newsletters have been clicked.
- **Location:** Geographical location and most common location of the audience, based upon the number of opens.

Current status

The ICAERUS newsletter has **237** subscribers and collectively obtained **793** total opens and **219** total clicks. Below is a brief overview of the first five (5) newsletter issues published by the ICAERUS project, including the topics touched upon and the engagement analytics.

1st Newsletter



Newsletter #1 ([Figure 56](#)) was released on the 23rd of December 2022 and was focused on introducing the project and presenting the main actions taken by the project partners in the first 6 months since its kick-off meeting. The topics it included were:

- Use Cases blogposts
- EU Drone Landscape Survey
- Market Analysis blog post
- Meet the ICAERUS consortium
- 1st press release
- Partners events & activities

[Figure 57](#) presents an overview of the 1st newsletter's analytics, including the audience's location, successful deliveries, clicks per unique opens, total opens, and total clicks:

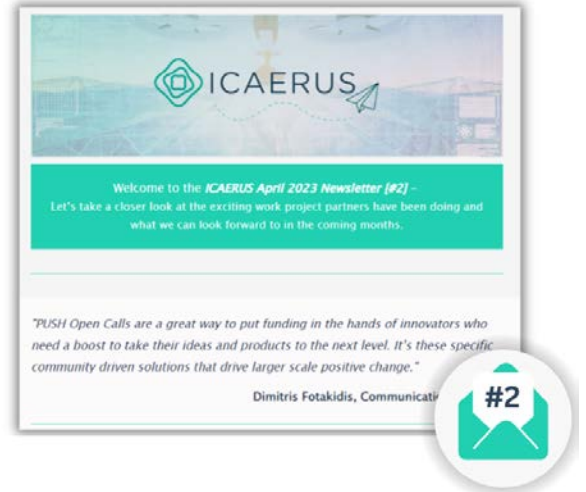
1st Newsletter Analytics



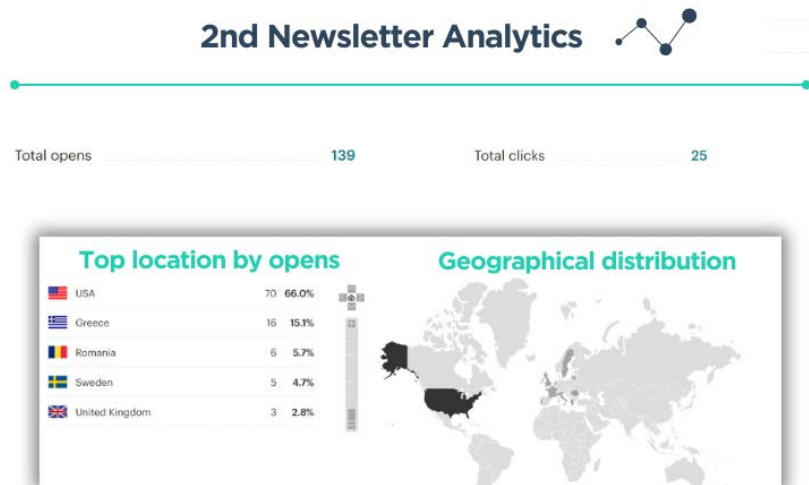
2nd Newsletter

Newsletter #2 ([Figure 58](#)) was released on April 28, 2023, and focused on the launch of the first ICAERUS Push Open Call, the start of the Hover-view series, risk assessments, the key areas of progress, and the International Day of Women and Girls in Science.

- The First ICAERUS PUSH Open Call
- Open-Source Alternatives in Drone Technology
- Drone Risk Assessment for Safe and Effective Deployment
- Women in science
- Drone Collaborations article



[Figure 59](#) presents an overview of the 2nd newsletter's analytics, including the audience's location, successful deliveries, clicks per unique opens, total opens, and total clicks:

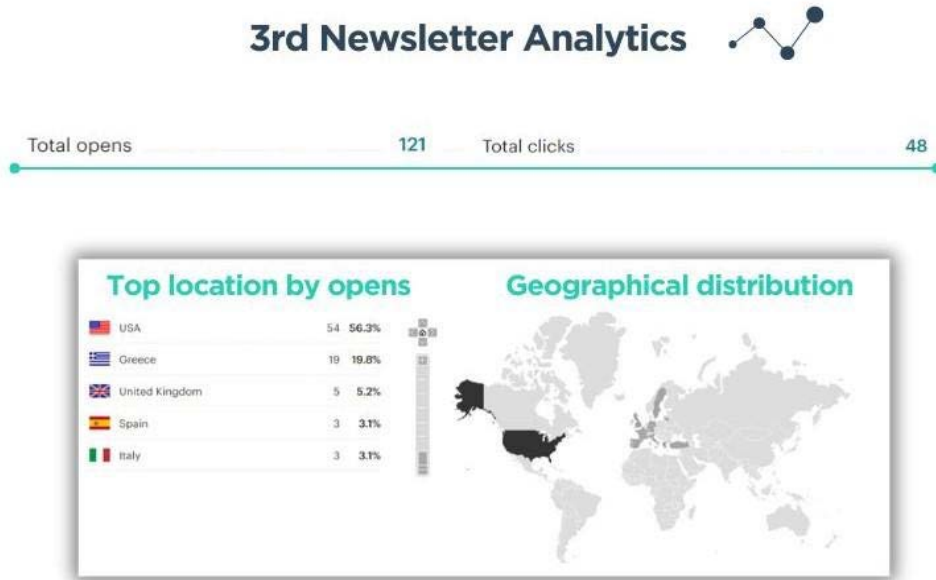


3rd Newsletter

Newsletter #3 ([Figure 60](#)) was released on August 31, 2023, and focused on the launch of the first ICAERUS Pull Open call, the latest actions taken by the partners, and the upcoming Synergy Days event.

- The First PULL Open Call for Farming
- ICAERUS behind the scenes
- Women our latest news
- ICAERUS at Synergy Days

[Figure 61](#) presents an overview of the 3rd newsletter’s analytics, including the audience’s location, successful deliveries, clicks per unique opens, total opens, and total clicks:



4th Newsletter

Newsletter #4 [Figure 62](#) was released on December 22, 2023, and focused on the first ICAERUS Pull Open call, the Webinar "Open Call Preparation Webinar," the presentation of the successful applicants of the 1st PUSH Open Call, and the latest actions taken by ICAERUS partners.

- 1st PULL Open Call
- OPEN CALL PREPARATION webinar
- Successful Applicants of the 1st PUSH Open Cal
- Our partners in action

[Figure 63](#) presents an overview of the 4th newsletter’s analytics, including the audience’s location, successful deliveries, clicks per unique opens, total opens, and total clicks:



4th Newsletter Analytics



5th Newsletter

Newsletter #5 [Figure 64](#) was released on April 30, 2024, and focused on the 2nd ICAERUS Push, the presentation of the successful applicants of the 1st PULL Open Call, the latest actions taken by ICAERUS partners, the latest blog post for Hover-view, the video tour of the ICAERUS platform, and a presentation of the latest publication by WU.

- 2nd ICAERUS PUSH Open Call
- The Open Call preparation webinar is available now
- The 1st PULL Open sub-projects have begun
- The latest Hover-view blog post
- Our partners in action
- Video for a tour on the ICAERUS platform
- The latest publication by WU

[Figure 65](#) presents an overview of the 4th newsletter's analytics, including the audience's location, successful deliveries, clicks per unique opens, total opens, and total clicks:

5th Newsletter Analytics



Newsletter subscriber's summary

[Figure 66](#) shows that the number of subscribers has been steadily increasing since the start of the project, reflecting the growing interest and engagement in our initiatives.



The increase in subscriber numbers over time is evidence of the relevance and value of the content we provide, as well as the effectiveness of our dissemination strategies. As we continue to monitor and refine our communication efforts, we anticipate further growth and engagement from our audience. The following (6th) Newsletter is planned to be released in August 2024.

4.2.3 Multiplier Campaign

A multiplier campaign combines several communication and dissemination strategies that reinforce a message to obtain a greater positive impact. To this end, ICAERUS will broaden the scope of communication tools and channels to include press releases, videos, and interviews. These additional channels will add credibility and visibility and connect with local and regional networks.

Press releases

Press releases will be used to provide detailed accounts of key activities or important updates that should be shared broadly through media outlets. Partners translate the press releases and are expected to share with local and national media outlets. Partners can also add additional details to better connect with the national audience. Press releases have been created

1. Launch of the project
2. Launch of the 1st PUSH Open Call
3. Launch of the 1st PULL Open Call
4. Launch of the 2nd PUSH Open Call
5. Official launch of the DDAL

The next press release is scheduled for the launch of the 2nd Pull Open Call in July.

TV/Radio interviews

Interviews with scientists, farmers and experts belonging to the public and private sectors will connect citizens with the project but also the local people behind it. Incorporating the human element, increases relatability which improves the likelihood of further engagement with ICAERUS and its results. Partners are aware of this KPI and are expected to take advantages of opportunities to speak with media.

Videos

Videos with success stories and interviews will provide concrete examples of how the project results can positively impact day-to-day farming activities. Partners have already created videos promoting the project, which are available on the ICAERUS YouTube channel. AUA was also featured in the Piraeus Bank documentary miniseries “Sustainable Agriculture, Sustainable Planet,” during episode 3 ([Figure 67](#)).

Piraeus Bank partnered with journalist Niki Lymberakis to create this miniseries. It explores not only the negative effects of climate change but also the most recent technologies, methodologies, and practices available to address these challenges. The series emphasises responsible, sustainable growth and profitability within the framework of Environmental, Social, and Governance (ESG) Criteria.









Figure 68: Filming of the Piraeus bank documentary

4.2.4 EU tools

ICAERUS will take advantage of several of the tools offered by the European Commission to support dissemination (D), exploitation (E), and communication (C) of the project's results (Table 24).

Table 24 EU DEC tools

Tool	Benefit
 Research and innovation success stories (DEC)	Will be an optimal place for showcasing success stories from the Use Cases and Open Calls. The site enables users to search for entries based on countries, themes, and specific project details.
 CORDIS(DEC)	ICAERUS will publish deliverables, results, and project information on this open repository for EU projects.
 Horizon Magazine (C)	ICAERUS will submit entries to the Horizon magazine to feature the project's work among other cutting edge innovative research projects.
 Horizon Results Platform (DE)	ICAERUS will create a page featuring project results on the Horizon results public platform to help bridge the gap between research results and both industry and the public
 Horizon Dashboard (DE)	ICAERUS will contribute relevant information to the Horizon Dashboard to support the collection and release of accurate statistics and data on EU R&I programmes and projects
 Innovation Radar (DE)	ICAERUS will submit all innovations to the innovation radar to promote the project's results.

5. Exploitation activities

The exploitation plan outlines the initial steps necessary to build upon the project's results and will be expanded upon as the project progresses. The ICAERUS exploitation plan will effectively:

- Ensure the **use, re-use** and extensive dissemination of knowledge created during the project
- Highlight the **added value** of the project to promote further scientific development
- Promote **sustainable growth** (e.g., industry competitiveness)

Exploitation may take multiple forms:

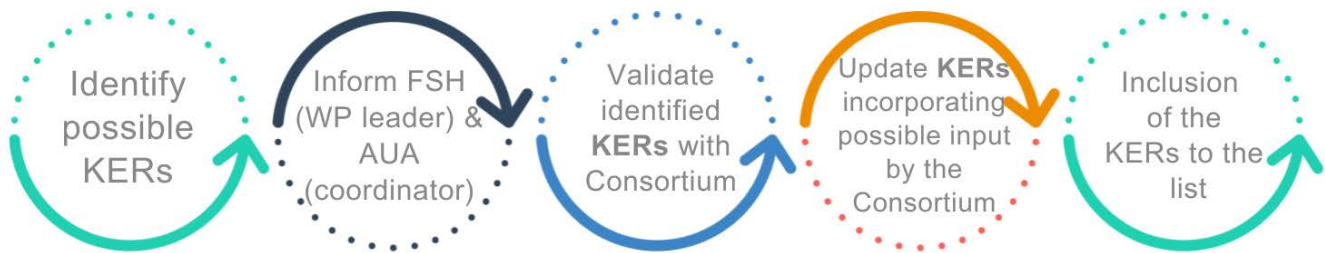
- **Financial/commercial exploitation:** building sellable products and/or monetised services
- **Research and development:** engaging new projects with experience drawn from the project
- **Education:** courses, training, and workshops
- **Community building:** raising awareness around the project's topics, problems, and solutions
- **Knowledge transfer:** through publications and collaborations among or between target groups
- **Policy contribution to policy:** encouraging broad adoption of solutions or frameworks for regulation, standardisation, or funding support for solution uptake

5.1 ICAERUS exploitation strategy and measures

To exploit the predetermined KERs ([Figure 66](#)) and additional results that may be developed, a characterisation table has been created for the partners to describe their results. Each result requires a unique exploitation approach based upon the type, whether it can be commercialised, and if Intellectual Property Rights (IPR) are required and who will exploit the result. A description of the KERs, their target groups and the unique value they offer are described in this section as well as potential exploitation pathways for commercial and non-commercial results and the template for describing existing KERs is included in [Annex 8](#).

5.1.1 Identification and Characterisation

As the project progresses, additional KERs might be identified by the partners. To this end, certain procedure and steps have been designed and presented in [Figure 68](#):



The first step towards the identification of a KER is for the partner responsible to inform RFF as the WP5 leader and AUA (the coordinator), briefly indicating what the new result is. Once informed, the KER template will be shared with the partner to provide a detailed explanation of the exploitability potential of the identified result by making sure it aligns with the project exploitation plan. Specific analysis needs to be made covering the following aspects:

- **Scope of exploitation (why)**
- **Target groups (to whom)**
- **Means of exploitation (how)**

Once the form has been accepted it will be shared with the rest of the consortium for validation. Comments and suggestions of the partners will be recorded and discussed at a monthly consortium meeting, while possible objections will be discussed thoroughly and addressed appropriately. Finally, after the new KER is validated, it will be included in the project's list of KERs.

As the results become more concrete, a more in depth characterisation table will be shared with the partners responsible and adapted depending on whether it was previously determined to be commercially exploitable or not. Table 55 is an indicative example of the detailed characterisation questions.

Table 55: Characterisation table for exploitable results

Characterisation of Exploitable Results	
Market	Who will the customer be and what benefits will they receive?
	What is the anticipated time to market?
	What is the size of the market in € and relevant trends?
	What is the approximate price range of this result and price of licences?
	Who are the competitors?
	How will this result rank against competing products/services in terms of price and/or performance?
Steps towards exploitation	When is the expected date of achievement?
	What are the foreseen barriers to successful implementation?
	What are the costs incurred after the project and before exploitation?
	Which partners will be involved in results development?
IPR status	Have you protected or will you protect this result? How? When?

Status update

Partners responsible for the KERs established during the proposal phase were asked to review the descriptions and provide the following additional information using the template ([Annex 5](#))

- Type of exploitation (commercial, non-commercial as scientific, policy making, education/training) or other
- Confirm the target groups
- Provide a clear indication of how the target group(s) will exploit the result. This is an expansion from the description of the KER provided in the first version of the DEC plan.
- Indicate whether IP and IPR are relevant.
- Select the partners involved.

5.1.2 Exploitation pathways

A distinct exploitation plan will be established for each result, however broad pathways may be defined for commercial results and others for non-commercial results. Examples are included below.

Commercial Results

For commercial results the business model canvas and a market analysis can be used.

Business model canvas

The business model canvas ([Annex 9](#)) offers a single page visualisation of the path to commercialisation and defines several key components including:

- **Key partners** who will be responsible for the creation and exploitation of the result
- **Key activities** required by the value proposition
- **Key resources** needed including human, physical, intellectual, financial
- **Value proposition** describing
 - The value of the result
 - The problem that is being addressed
 - The specifics of the product/service being offered
 - Which customer needs are being met?
- **Customer relationships** expected to be established, delivered, and maintained with end users, which ones already exist and at what associated costs
- **Distribution channels** that work best, are preferred by customers and are cost-efficient
- **Customer segments** the results are targeting, who are the most important customers
- **Cost structure**, including the most important costs, the most expensive resource, and activities and whether the outcome is cost-driven or value-driven
- **Revenue streams**, what values customers are willing to pay, what do they currently pay, what are the possible streams (e.g., product, subscription fee, usage fee)

A market analysis

A market analysis will strategically identify the position and market potential of a result. Result specific analyses will expand the business model canvas and build upon the market analyses conducted by WP1 and will:

- **Determine/confirm the market** to be reached and gather as much information as possible (including customer demographics, political and societal situation)
- **Articulate the problem** faced by the market and how the result will solve it
- **Determine** all competitors, or similar products/services that try to solve the problem as well as their strengths and shortcomings
- **Find out the customer expectation** for the results, including appealing features
- **SWOT analysis:** strengths, weaknesses, opportunities, and threats based on the key issues the result is addressing.

Non-commercial results

For results that will not be exploited for financial gains, different approaches will be required but could include:

Modified Business Model Canvas

The single page visual offered by the business model canvas ([Annex10](#)) is a tool that can be modified to plan alternative exploitation pathways for certain results. Where suitable specific alterations will be made but may include:

In this case the customers have been changed to **users** and revenue streams have been replaced with:

- **Sustainability:** how the result can be maintained beyond the duration of the project

Sustainability plan

A sustainability plan will be created for the long-term exploitation of non-commercial results to ensure their use/reuse continues after the project is no longer funded by Horizon EU and will consider:

- Responsible partners
- Resources required (including person hours, technology)
- The value of results and what needs to remain exploitable
- Specific tasks/ activities required for the result to remain valuable
- Partnerships or joint actions that could better support long term exploitation than only the partners themselves
- Alternative funding sources

5.2 ICAERUS Key Exploitable results

Table 56 presents an updated description of the Key Exploitable Results defined during the proposal phase, as well as several expected results from the use cases. The type of exploitation, responsible partners, target groups and how those target groups will exploit the result are included as well as a Unique Value Propositions (UVP) to briefly summarise what makes the result stand out.

Table 56 ICAERUS KERs

KER ICAERUS Platform	
<i>A one-stop web-based platform for drone related information.</i>	
Type of exploitation	Non-commercial: Scientific, Policy making, training and education
Responsible partners	AUA
Target groups	All target groups
How the target groups will exploit the KER	The platform can be used to gather insights, knowledge, and resources related to drone applications and technologies. As a comprehensive hub, information is provided on various aspects of drone technology including actors, needs, innovations, standards, regulations, risks, drone data analytics models, advancements, outcomes, socio-economic and environmental impact assessment results, inclusive business and governance models, and a free, open-access capacity-building program
Steps taken towards exploitation	The platform has been designed, developed and tested in collaboration with ICAERUS partners. Surveys and interactive discussions were used to gather feedback and shape the platform's elements and functionalities. The development

	involved integration with relevant Application Programming Interfaces (APIs), such as the AW-Drones API, to ensure real-time standards information retrieval. The launch of the platform in December 2023 marked a significant step toward exploitation.		
Market maturity	The ICAERUS Platform is now operational, providing a solid foundation in the drone technology domain. As it continues to be utilised and refined based on user feedback, the platform's maturity in the market will grow, making it an increasingly valuable resource for stakeholders in the drone community.		
KER Drone Market Landscape			
<i>A three-part investigation of the drone market landscape, offering methodology, comparative analysis and collection of technical standards.</i>			
	a) Methodology	b) Comparative analysis	c) Standards and regulations
Type of exploitation	Non-commercial: Methodology	Non-commercial: Scientific, policy making	Non-commercial: Policy making, technical standards/regulations
Responsible partners	NSWR	AUA, WU, RFF , NSWR, OU	AUA, WU, RFF , NSWR, OU
Target groups	Private sector, public authorities, researchers, non profits	Private sector, public authorities, researchers, non profits	Private sector, public authorities, researchers, agri-rural communities
How the target groups will exploit the KER	The proposed methodology can be exploited by stakeholders involved in the establishment of a technology ecosystem or the strengthening of local networks. It involves selecting network entities, surveying them to understand stakeholders' needs, and mapping out all interactions, relations, and exchanges. This comprehensive mapping showcases where value is generated within each network.	The analysis can be used to support decision making at different levels, including the creation of training opportunities, network cooperation, research focus, direction of product/service development direction, and policy area needs.	The knowledge base can be used by policy makers to identify policy gaps, private industry and end users can use the information to inform decisions about drone adoption or product development and to better understand the current technical standards and regulations
Steps undertaken towards	Promotion of the methodology by presenting at conferences.	Currently, the comparative analysis serves a research-	Promotion will play a central role, so that stakeholders become

exploitation		oriented purpose, providing stakeholders with a wealth of exploratory information that can inform ongoing and future development projects.	aware of these resources.
Market maturity	The methodology is designed to adapt to the growing drone market, catering to both established sectors and areas where drone technology is burgeoning. As such, it is positioned to evolve alongside the market, maintaining relevance as drone technologies and their applications continue to develop	The analysis addresses market segments that are expected to experience increased drone services demand and technological developments up to 2040. These segments include urban mobility, ecommerce, transportation of dangerous goods, government services, sustainable and smart ports, infrastructure and construction, mining and resources, defence, and recreational usage. As the drone market matures, this analysis will support stakeholders in navigating these evolving sectors, positioning them to capitalise on emerging opportunities.	The collection and dissemination of standards and regulations information play a significant role in a maturing drone market. This information will support stakeholders in adapting to the evolving regulatory environment, ensuring that innovation and market expansion are not hindered by compliance issue
KER Drone Data Analytics Library			
<i>Open access to a convenient, application-oriented repository with constantly updated emerging data analytics models.</i>			
Type of exploitation	Non-commercial: Scientific, training and educational		
Responsible partners	WU, NMN, AUA, GS, IDELE, ART, EI, HCPA, AFL, AGFT		
Target groups	Private sector, researchers, non-profits, agri-rural communities, general public (drone hobbyists)		

How the target groups will exploit the KER	The library is accessible through GitHub where stakeholders can find algorithms, models and datasets that can be used, optimised for enhanced performance or adapted to specific needs.	
Steps undertaken towards exploitation	The library is being actively utilised and shared within the research community, facilitating ongoing research and application development. Specific models and datasets from the library are being implemented in research projects, with findings and improvements shared back to the library, fostering a cycle of continuous enhancement and expansion.	
Market maturity	Currently, there is no similar centralised library available online that matches the comprehensive nature of the Drone Data Analytics Library. While there are drone-data processing packages available, they often lack the analytical depth, optimisation capabilities, and broad applicability offered by this library. This unique positioning suggests a pioneering step towards filling a significant gap in the drone analytics market, with potential for growth as awareness and adoption increase.	
KER Use Cases and Open Call Trials		
<i>Real life examples of drones and their services in practice also offering an extensive assessment of environmental and socio-economic impact, and a methodology for funding agencies planning to launch open calls.</i>		
	Impact Assessment	Open Call Methodology
Type of exploitation	Non-commercial: Scientific, Policy, Framework	Non-commercial: Knowledge and procedures
Responsible partners	GS	RFF , AUA
Target groups	Public authorities, Private sectors, Researchers,	Public authorities, non-profits, agricultural communities
How the target groups will exploit the KER	The socio-economic and environmental impact assessment combines Life Cycle Costing (LCC) and Life Cycle Analysis (LCA) methodologies alongside Technology Acceptance Model (TAM), offering an extensive evaluation of the impacts of integrating drone technologies into the use case sectors. The information can be used by policymakers to craft regulations that foster drone technology's responsible use, while researchers can build on the findings to deepen the understanding of its sustainability impacts. Industry stakeholders may optimise operations for efficiency and environmental stewardship, and developers can align products with societal and market	The methodology and call documents are open access and can be used by other projects or funding agencies to support the launch of their own financial support to third parties.

	expectations	
Steps undertaken towards exploitation	Efforts to exploit the Socioeconomic and Environmental Impact Assessment include disseminating findings through academic publications, reports, and presentations, alongside stakeholder workshops to discuss implications. Collaboration with governmental agencies aims to integrate findings into technology adoption strategies. Continuous improvement through stakeholder feedback refines assessment methodologies for future technology evaluation	All of the call documents are publicly available on the project website and through the OpenCall Hub.
Market maturity	Socio-economic and environmental impact assessment provides critical data and insights that can accelerate market maturity by addressing potential barriers to adoption, enhancing sustainability practices, and improving stakeholder engagement. This approach ensures that drone technologies are developed and deployed in a manner that is economically beneficial, environmentally sustainable, and socially acceptable.	Not market applicable.
	Results are also anticipated from each of the five use cases. <ul style="list-style-type: none"> - Crop Monitoring (NMN, EI) - Drone Spraying (HCPA, AUA) - Livestock Monitoring (IDELE) - Forestry and Biodiversity Monitoring (ART, AFL) - Rural Logistics (GS, AGFT) 	Additionally, results are expected to be produced by each individual open call sub-project.
KER ICAERUS Academy		
<i>Free, open access online training course covering eight (8) distinct subjects related to drone applications, technologies, operational strategies and developing business ideas.</i>		
Type of exploitation	Non-commercial: Training and education	
Responsible partners	OU with all partners	

Target groups	All target groups
How the target groups will exploit the KER	Stakeholders in agriculture, forestry, and rural communities can leverage the course to enhance operational efficiency through drone applications. Researchers and industry professionals can deepen their academic and practical understanding of drone innovations, while policymakers can utilise the insights provided to support the development of informed policies and regulatory frameworks. Moreover, the general public can access the course for educational purposes, increasing awareness about drone technologies. By participating in the course, all these groups can learn about specific drone tasks like spraying, crop and livestock monitoring, and logistics, alongside important aspects of risk management and safety in drone operations, facilitating a comprehensive learning experience.
Steps undertaken towards exploitation	The first step was to identify stakeholders' learning needs, which was carried out through a series of focus groups and workshops. The outcomes led to the design of the first week's content "Developing business ideas for drone technologies". Extensive collaboration with partners, particularly the use cases is enriching course content with industry insights and practical examples and ensuring relevance and applicability.
Market maturity	The course's first week is already operational online, with the development of the remaining weeks underway. Expected to be fully launched by January 2025, this educational resource will significantly contribute to the ICAERUS Academy's offerings, supporting widespread knowledge dissemination and capacity building in the use of drones across various sectors.
KER Business and governance models	
<i>A three-tiered model combining economic, sustainability and governance, adapted to the use cases to present opportunities to enhance services or develop new ones.</i>	
Type of exploitation	Non-commercial: methodology, report
Responsible partners	RFF , GS, AUA, HCPA, NMN, EI, ART, AFL, AGFT
Target groups	Private sector
How the target groups will exploit the KER	Stakeholders can leverage the identified value propositions. The analysis to date suggests these propositions predominantly manifest as services aimed at a defined customer base. This enables entities to directly apply these innovative models to offer new or enhanced services , potentially leading to competitive advantages in their respective markets.
Steps undertaken towards exploitation	D5.7: Inclusive Business & Governance Models Report, is going to be submitted M24 (June 2024). This first iteration will present the strategy for developing the project's business and governance models in order to tailor them to the evolving drone market and specific use case. Preliminary research is presented on existing business models, tools, and governance frameworks, considering insights from other work packages (WP1 and WP3) to ensure a thorough understanding of the

	drone market landscape. The business model canvas and the sustainable business model canvas were selected as the most appropriate tool analysing and developing business models for the ICAERUS UCs, providing a structured framework to capture the value proposition, infrastructure, customers, and finances of a business.
Market maturity	Preliminary analysis of the market landscape indicates a robust, competitive environment across Europe and globally, yet without signs of saturation. This suggests ample space for new entrants and innovations, especially within the diverse sectors addressed by ICAERUS's UCs. The current market analysis, focusing on the degree of competition, market size, and the presence of proprietary technologies, will continue to refine the development of the BMTs, ensuring they are well-suited to navigate and capitalise on the market's dynamics.
KER Policy recommendations	
<i>White papers with the latest application tested stakeholder driven recommendations to create meaningful drone policies for safety regulations.</i>	
Type of exploitation	Non-commercial: policymaking
Responsible partners	AUA, RFF , OU
Target groups	Public authorities
How the target groups will exploit the KER	Data-driven, evidence-based policy recommendations derived from the project's activities and results can be used by policymakers to develop policy and understand the potential impact of incorporating the recommended guidelines. Both European DGs as well as national, regional authorities will be able to use the guidelines and analyses that will be presented in separate white papers targeted to their scope and scale of policymaking.
Steps undertaken towards exploitation	AUA took part in a joint meeting with EC project officers, DGs and sister project's CHAMELEON and SPADE to discuss the policy alignment potential.
Market maturity	Policy including regulations and standards set the pace of which drones can be adopted for different purposes. There is a strong need for clear safety regulations and guidelines and alignment across the EU.

5.3 IPR strategy

Intellectual Property Rights (IPR) are the ownership rights for creations of the mind, such as inventions, names, images, or designs and can enable owners to obtain financial benefit from their ideas. Striking the right balance between creator and public interests can foster creativity and innovation.

ICAERUS will examine the protection of any results that could potentially be commercially or industrially exploited, and if possible, reasonable, and justified, protect them.

5.3.1 Types of IPR¹¹

The standard forms of IPR protection include:

- **Patent:** an exclusive right granted for an invention. It allows the owner to decide how and whether the invention can be used by others
- **Trademark:** a sign that distinguishes goods and services of one enterprise from those of another
- **Industrial design:** includes the aesthetic aspect of an object. 2D features can include patterns, lines and colours, whereas 3D features extend to shape and surface
- **Copyright:** is the legal term to describe the rights over literary and artistic work but can also extend to databases, advertisement, maps and technical drawings
- **Trade-secret:** commercially valuable confidential information which may be sold or licensed. This can include technical or nontechnical data, formulas, patterns, methods, lists of customers
- **Confidentiality:** information that is not publicly known and warrants protection
- **Geographical indication:** indicate the specific geographical location of origin or a product and its characteristics that are uniquely attributed to that area.

The choice of the most suitable form will be based upon the specifications of the activity and its results.

5.3.2 Partner obligations

ICAERUS will follow all IPR management requirements described in the Grant Agreement.

Access rights

The beneficiaries must identify in a **written agreement** the background needed for implementing the action or for exploiting its results and must give each other and the other participants access to the necessary background identified.

Background refers to any **data, know-how or information** (tangible and intangible) and rights that are:

- a) held by the beneficiaries before they acceded to the Agreement and
- b) needed to implement the action or exploit the results.

If background is subject to rights of a third party, the beneficiary concerned must ensure that it is able to **comply with its obligations** under the Grant Agreement.

At the time of signing the consortium agreement, **no data, know-how or information (background) of any partner was needed** by another partner for the implementation of the project.

Results and ownership

Results are the tangible or intangible **effect of an action** (e.g., data, know-how or information) as well as the **rights attached to** it and are **owned by the beneficiaries that generate them**. It is also possible for two or more beneficiaries to **jointly share** results if:

- The results have been **generated jointly**
- It is not possible to establish the respective contribution of each beneficiary
- It is not possible to separate them for the purpose of obtaining/maintaining their protection.

In this case, the joint owners must present a **written joint ownership agreement** regarding the allocation and terms of ownership, to ensure compliance with their obligations under the Grant Agreement, with the following additions.

- Unless otherwise agreed:
 - Each of the joint owners shall be entitled to use their jointly owned Results for non-commercial research and teaching activities on a royalty-free basis, and without requiring the prior consent of the other joint owner(s).
 - Each of the joint owners shall be entitled to otherwise Exploit the jointly owned Results and to grant non-exclusive licences to third parties (without any right to sub-license) if the other joint owners are given: (a) at least 45 calendar days advance notice; and (b) fair and reasonable compensation. The joint owners shall agree on all protection measures and the division of related cost in advance.

¹¹ World Intellectual Property Organization. "What is Intellectual Property?" <https://www.wipo.int/about-ip/en/>.

Third parties may also claim rights to the results if the beneficiary ensures those rights can be exercised in a way that is compatible with its obligations under the Grant Agreement.

Granting authority

The **granting authority does not obtain ownership of results**; however, it has the **right to use non-sensitive information** relating to the action and materials or documents **received from the beneficiaries** for policy, information, communication, dissemination, and publicity purposes during the action or afterwards.

The right to use the beneficiaries' materials, documents and information is granted for the **whole duration** of the industrial or IPR concerned, in the form of a royalty-free, non-exclusive, and irrevocable licence, and includes the following rights:

- a) **Use for its own purposes**: copying/reproducing them in whole or in part in unlimited numbers; and communication through press information services and making them available to employees of the granting authority, EU services, EU Member State institution or body.
- b) **Distribution to the public**: as hard copies, digital publications, downloadable or non-downloadable files, broadcasting by any channel, public display, or presentation, communicating through press information services, or inclusion in widely accessible databases or indexes.
- c) **Editing or redrafting**: including shortening, summarising, inserting other elements, extracting or dividing parts, use in a compilation.
- d) **Translation**.
- e) **Storage**: in paper, electronic or other forms.
- f) **Archiving**: following applicable document-management rules.
- g) The right to **authorise third parties** to act on its behalf or sub-license to third parties (for modes in points (b), (c), (d) and (f), if needed for the information, communication, and publicity activity of the granting authority.
- h) **Processing**: analysing, aggregating the materials, documents and information received and producing derivative works.

If materials are subject to moral rights or third-party rights (e.g., IPR, rights of natural persons on their image and voice), the beneficiaries must ensure that they comply with their obligations under the Grant Agreement and obtain necessary licences and authorisations from the rights holders concerned.

The final DEC plan will include a Results ownership list as per the periodic reporting requirements of the Grant Agreement.

Transfer of results

According to the Consortium Agreement, **ownership of a party's own results may be transferred**, including its share of jointly owned Results, following the procedures outlined in the Grant Agreement.

In the case of ownership transfer to the third party, the third party must be identified in Attachment (3) of the Consortium Agreement and the other Parties must waive their rights to prior notice and to object to such a transfer to listed third parties according to the Grant Agreement. The transferring Party must inform the other Parties at the time of transfer and will **ensure the rights of other Parties are not affected** by such a transfer. Any addition to Attachment (3) after signing the Consortium Agreement requires a decision of the General Assembly.

Obligations to ensure open access to results

ICAERUS will provide **open access** to peer-reviewed scientific publications relating to the project results and will ensure:

- A **digital copy** of the published version of final peer-reviewed manuscripts are deposited in a trusted **repository** for scientific publications
- Publications deposited in the repository will be **immediately and openly accessible** under the latest available version of the Creative Commons Attribution International Public Licence (CC BY)
- Information regarding research outputs and tools needed to **validate** the conclusions of the scientific publication will also be deposited in the repository.

- Authors must retain sufficient IPR to comply with the open access requirements.

Metadata of deposited publications will be open under a Creative Common Public Domain Dedication (CC 0) or equivalent, in line with the FAIR principles and provide information at least about the following:

- Publication (author(s), title, date of publication, publication venue)
- Horizon Europe funding
- Grant project name, acronym and number
- Licensing terms
- Persistent identifiers for the publication, the authors and if possible, for their organisations, the grant and for research outputs and tools
- Persistent identifiers (when applicable) for research outputs/tools needed to validate the publication's conclusions.

Dissemination of Results

During the Project and for a period of **1 year after the end of the Project**, the dissemination of partner's own results such as publications and presentations, shall be governed by the Grant Agreement. This includes:

- **Prior notice of any planned publication** should be given to the other Parties at least **45 calendar** days before the publication.
- Any objection to the planned publication should include a **precise request** for necessary **modifications** and be made in accordance with the Grant Agreement by written notice to the Coordinator and to the Party or Parties proposing the dissemination **within 30 calendar** days after receipt of the notice.
- If no objection is made within the time limit stated above, the publication is permitted.

An objection is **justified**, and measures will be taken to overcome the objection if:

- The **protection** of the objecting Party's Results or Background would be **negatively affected**, or
- The objecting Party's **legitimate interests** in relation to its Results or Background would be **significantly harmed**, or
- The proposed publication includes **Confidential Information** of the objecting Party.

In addition the **unpublished results or background of any partner will not be used** for dissemination purposes without obtaining the owning Party's **prior written approval**.

Access rights for software adhere to the same rules as described above. Access rights do not include source or object code ported to a certain hardware platform or software documentation beyond what is available from the party granting the access rights. The **ICAERUS Platform** and its **software components** that will be available as individual software components (microservices), will **be available for reuse** under the adequate licensing scheme (e.g., EUPL-1.2-or-later).

Consequence of non-compliance

If a beneficiary **breaches any of the obligations** of the Grant Agreement, the **grant may be reduced**.

Non-disclosure of information¹²

Non-disclosure agreements (NDAs) are private contracts that are meant to **keep information safe**. It is a legally binding document that describes the conditions under which confidential information may be passed from one party to another, in a one or two-way exchange. All types of information considered valuable for the disclosing party and needs to be kept secret, can be transmitted in these agreements (e.g., ideas, know-how, descriptions, chemical formulas, research or business information and negotiations).

ICAERUS will have all actors involved in the project sign NDAs and the consortium will ensure that **no unauthorised third party will have access** to such information, applying information security policies

¹² European Commission, Executive Agency for Small and Medium-sized Enterprises. 2021. "Non-disclosure agreement: a business tool", Publications Office, <https://data.europa.eu/doi/10.2826/547286>

and standards. An NDA template¹³ has been created (see Annex 8) and will be validated by the consortium before being shared with all partners.

5.3.3 ICAERUS IP strategy and procedures

Effectively managing and protecting knowledge generated through the project is critical for:

- The safe, fair disclosure of knowledge and ideas
- Proving ownership
- Effective commercial exploitation
- Discouraging and preventing
- unauthorised use and reuse of results by others.

A two-stage approach will be used to ensure the IP related to ICAERUS results are properly handled, and an encouraging environment for future results and knowledge exploitation is fostered.

Stage 1: During the project:

Newly generated knowledge and IP (*Figure 67*) will be recorded, recognised, and assessed through appropriate mechanisms and tools, in order to identify all relevant IP and clarify ownership, screening and managing any new IP that arises. All involved actors in the various steps of the project will be asked to sign Nondisclosure Agreements (NDAs) and the consortium shall ensure that no unauthorised third party will have access to such information, applying information security policies and standards. The specific procedure for identifying new IP is summarised in *Figure 67* it closely follows the procedure for identifying new KERs described above.



Figure 70: Steps for the inclusion of newly identified IP

The consortium will publish the overall project results in the project website, publications, and seminars, without charging intellectual property rights. All partners will deposit scientific peer reviewed publications in a centralised repository (Open Research Europe) as mandated by the Horizon Europe “Open science policy.”

Stage 2: Post-Project

Systematic management of IP risks and the contractual environment is one of the building blocks of post-project sustainability. To this end, RFF will offer services for the whole lifecycle to ICAERUS partners concerning appropriate protection of results, provided that protecting them is possible, reasonable, and justified (given the circumstances). Post-project sustainability requires concrete, constant consideration from the beginning of the project, which take the form of four pillars:

Pillar 1: Project Findings

The needs to be addressed have been identified at the proposal stage and are constantly being re-evaluated and expanded upon, through stakeholder engagement. WP1 has conducted a European survey of drone stakeholders including drone innovators and drone end users, and is validating results using the use cases. The 5 use cases provide concrete sectoral examples of the potential for drones and are being

¹³ The template included in the annex will be revised in the data management plan

used to work closely with end users and to test and validate different drone based solutions. The ICAERUS open calls extend stakeholder engagement beyond the use case and consortium countries, as they are open to all HE eligible countries, and are targeting both drone innovators as well as rural communities. Maintaining a strong focus on the needs of both end users and drone developers or service providers will strengthen the project positioning and steer its trajectory after the project is completed.

Pillar 2: Project consortium and network

The consortium is highly engaged and invested in developing and achieving the project goals and extending its impact. The OCTs are also highly proactive in seeking opportunities for collaboration and cooperation between themselves and with the ICAERUS consortium. The extended project network will play a central role in the long term sustainability.

Pillar 3: Stakeholders

Involving stakeholders from the beginning of the project is crucial for expanding the network and ensuring interest in the project after its completion. Distinct target groups, key messages to summarise the project's benefit to each group as well as specific dissemination and communication tools have been identified and opportunities for building synergies are ongoing.

Pillar 4: Project legacy

The identification and characterisation of KERs as early as possible and evaluating their progress will ensure the timely and effective exploitation after the project.

5.3.4 Next steps

To ensure IP are considered as results become available, RFF will follow up with the partners responsible for the identified KERs as well as the rest of the consortium to determine the current status.

Identified IP

At this stage, the ICAERUS platform, Data Analytics Library, and ICAERUS Academy were identified as results subject to IP (Table 56). As their development progresses, a thorough assessment will be undertaken to apply the most appropriate IPR. All newly generated knowledge and results will be recorded and assessed to clearly determine ownership and steps will be recommended for seeking proper protection. RFF will offer partners IP support over the course of the project through workshops that will provide information on the basics of IP, rules to consider, and the process to seek protection. Detailed consultation services will not be provided, as IPR protection requires legal expertise.

Table 57: KERs with relevant IPRs

KERs		Linked IPRs to the KERs
1	ICAERUS platform	Copyleft
2	Data Analytics library	no IPR identified
3	ICAERUS Academy	Copyright, Creative commons

IP workshop

Over the course of the project RFF will ensure partners understand the basics of IP, and the exploitation of their results. At least one IP workshop will be offered to the consortium and adapted for the value-added services. The goal is to provide an overview of the means of protection, the status of results and IP, and to answer any questions that partners may have. RFF is not able to provide protection of results but may suggest seeking legal support for certain IP.

Goal and scope

The goal of the first IP workshop is to introduce partners to IP by introducing the key terms and different forms of protection.

Content outline

The proposed agenda for the first hour and a half IP and exploitation workshop is as follows.

- 1. Intellectual Property (IP) and Intellectual Property Rights (IPR) (10min)**
 - Explain the difference between intellectual property and intellectual property rights.
 - Distinguish unregistrable and registrable IPR.
 - Why it is important to protect intellectual property.

- 2. IP protection measures (25min)**
 - The general principles IP measures including territoriality, rights conferred, duration of protection.
 - Describe in detail the distinct types of IPR measures with examples of the most common examples of IP that use each measure.

- 3. IP in EU funded projects (30 min)**
 - Outline the requirements and expectations regarding IP management at the scale of EU projects.
 - Explanations of the key exploitation and IP related terms used in Horizon Europe ICAUER Exploitation and IP catalogue.
 - Present the KERs that were identified in the proposal stage and confirm the information is still accurate or if any updates need to be made.

- 4. Next Steps and expectations (15min)**
 - Explain the KER and IP templates and procedure of identification procedures.
 - Outline the next steps (e.g., completing the templates)

- 5. Q&A (10min)**
 - Answer and questions the consortium may have. Questions will be recorded and included in the following iteration under a most frequently asked question section.

6. Conclusion

This document is the second iteration of the plan for dissemination and exploitation, including communication activities for the ICAERUS project and its results. Ongoing reporting and monitoring of dissemination and communication KPIs demonstrate that all targets have been achieved or exceeded. Partners have actively promoted the project at diverse events and through different channels. Moving into the next phase of the DEC strategy (Multiplier effect) will involve further focus on results dissemination and exploitation, with emphasis on the use case demo events and the open call sub-projects as they also begin producing results. The exploitation strategy will also be expanded upon, and the IP of the identified results will be revisited. The report specifically covers the following topics:

Section 1 provides a succinct summary of the project, its aims and the key outcomes and explains the purpose, objectives, and approach of the DEC plan.

Section 2 explains the DEC methodology and approach including the timeline, the open call priorities and explains the 5 distinct target groups, the key members of each group, why they need to be engaged and the key messages, activities and channels that will be used with each group. The specific dissemination and communication objectives are also defined and how the project has implemented the multifactor approach is provided.

Section 3 focuses on the dissemination activities, starting with the KPI breakdown per year and the distribution per partner. The target and the current status is provided along with action points for the coming period. Audience KPIs are also provided for the duration of the project with the current status. Each KPI is also defined in detail with examples from partner activities.

Section 4 examines the communication activities, following a similar structure of the KPI breakdown per year and per partner. Detail is provided on each social media channel including relevant performance analytics such as followers, or subscribers.

Section 5 presents the roadmap for exploiting ICAERUS results. The project's seven (7) identified KERs are summarised and include the responsible partner, target groups, how it will be exploited, measures taken towards exploitation and market maturity are provided. This section also provides potential options including the business model canvas and market analysis for commercial results and a modified business model canvas and sustainability planning for non-commercial results. A preliminary IPR strategy, including clear definitions of the different types of IPR, and re-iterating the partner's obligations as described in the Grant Agreement is included and will be elaborated upon in the final iteration.

The final version of the **dissemination and exploitation, including communication activities** will be delivered in April 2026 (M46) and provide the final update on the KPIs achieved and evaluate the overall DEC strategy.

Next steps

Multiplier effect

- **Utilize demonstration events...**

The 2nd round of demonstration events are scheduled for November 2026 and will focus on business aspects. Presentations have been prepared to support use case leaders to provide methodological training with direct application of the strategy tools developed within the project, namely the Concentration Index and Herfindahl–Hirschman Index calculators, Six Forces Analysis, SWOT Analysis, and the Triple-Layered Business Model Canvas (TLBMC). The demo books on the platform will feature updates from this round as well. The final ICAERUS event will also include live demonstrations and involve other projects. The final open call trials are encouraged to organize similar events.

- **Promote the adoption of the innovative business models**

Meetings are scheduled with WP1 for the Drone Market Landscape and WP3 for the LCA, to see where complementarities exist and what information can be used to enhance the business and governance models. A 2nd round of workshops with the UCs will be organized to validate a complete set of canvases before finalizing the business and governance models. The business models will be available on the platform, a podcast on the topic is planned and opportunities at other events are being investigated.

- **Actively engage with other projects and initiatives**

The next steps for the ongoing engagement with other projects are presented in D7.6, however the emphasis will shift to how projects that are continuing to run after ICAERUS ends can use/reuse project results. The EU Farmbook, for example, has already been identified as a means of preserving results.

- **Develop viable exploitation scenarios and IPR for project results**

Valorization and exploitation of project results are the key focus of the final months of the project. The KER templates will be shared again and individual meetings with responsible partners will be organized. The outcomes of this feedback, as well as the IP workshop will feed directly into the elaboration of the exploitation scenarios and sustainability pathways, so that each result has a dedicated plan.

Sustainability Phase

The sustainability plan is being developed as it falls under the scope of the final iteration of the DEC plan. It is at the core of all activities and interactions with other projects as we enter the final months of the project. It will build upon the business and governance models and the TLBMC for non-commercial results, the continuous updates of the ICAERUS platform, continuation of the Value-Added Services working groups as an extension of the ICAERUS ecosystem.

Upcoming achievements

- **White papers:** A big emphasis will be on the policy white papers. These were intentionally planned for the final year of the project to ensure the most up to date research and results are translated into meaningful material for policy makers.
- **Publications:** partners are still working on open access scientific publications.
- **Drone landscape insights:** the outcomes of the literature reviews from WP1 are going to be delivered into bitesized pieces to present the most interesting trends and findings
- **Enhanced academy:** efforts are underway to present and link the education and training materials of other projects on the ICAERUS academy
- **Platform updates:** the platform will continue to be updated with projects results, including additional calculators, the business models, open call trial details
- **Podcasts:** the second podcast will feature more in depth technical discussion around drones and open science, Life Cycle Assessments, the regulatory environment, drones as a service and other innovative business models
- **Value added services:** the working groups will continue to meet, with another technical session with WP2 scheduled for January as well as a series on the triple layer canvas and IP

- **Business and governance models:** for the use cases will be finalized

7. Annexes

Annex 1: Open Call website template

Annex 2: Reporting and monitoring forms

Annex 3: Planning forms

Annex 4: Communication Materials

Annex 5: Templates

Annex 6: MoU and Lol

Annex 7: Presentation

Annex 8: Key Exploitable Results Table

Annex 9: Business model canvases

Annex 10: Website screenshots

Annex 11: Non-Disclosure Agreement table

Annex 1 Open Call website template

Project name (1st PUSH OC) description for the website	
Name of the sub-project	
Location of the sub-project	
Responsible organisation	
Description of organisation	
Contact person	
Sub-project objectives	
Challenges and how they will be addressed	
Tech components and data	
Expected outcomes	
Website	
Social media (include links for all that apply)	
Organisation logo	
Sub-project logo (if available)	

Annex 2 Reporting and monitoring forms

Reporting Form

Reporting form		1.AUA									
Project Month	Event/Action Date (double click on cells)	KPI (choose from the list)	i	Title / Description	Link	Promo material uploaded	Report status	Target audience (hover for help)	No. of Stakeholder	Joint Action?	If yes, with whom?

Monitoring Form

KPIs monitoring per Period	Reporting Years													
	Target	Year 1			Year 2			Year 3			Year 4			Ongoing Total
Dissemination Measures	Target	Target	Achieved	Completion	Target	Achieved	Completion	Target	Achieved	Completion	Target	Achieved	Completion	Ongoing Total
D1.1 - Organization of workshops	>8	9	4	44%	9	5	56%	9	0	0%	9	0	0%	9
D1.2 - Organization of webinars	>8	9	2	22%	9	2	22%	9	0	0%	9	0	0%	4
D1.3 - Organization of demo events	>5	6	7	117%	6	0	0%	6	0	0%	6	0	0%	7
D1.4 - Participation in events	>15	16	59	369%	16	19	119%	16	0	0%	16	0	0%	78
D2.1 - Scientific publications in peer-reviewed journals and conferences	>10	11	0	0%	11	5	45%	11	0	0%	11	0	0%	5
D2.2 - Articles in industry magazines	>15	16	4	25%	16	0	0%	16	0	0%	16	0	0%	4
D3.1 - Organization of joint activities/data sharing with EU/national initiatives	>10	11	15	136%	11	11	100%	11	0	0%	11	0	0%	26
D3.2 - Representation in working groups	>4	5	2	40%	5	0	0%	5	0	0%	5	0	0%	2
D3.3 - Representation in alliances	>5	6	2	33%	6	1	17%	6	0	0%	6	0	0%	3
D3.4 - Stakeholder synergies with LoI or MoA signed	>35	36	3	8%	36	5	14%	36	0	0%	36	0	0%	8
D4.1 - White paper for EU DGs	>1	2	0	0%	2	0	0%	2	0	0%	2	0	0%	0
D4.2 - White paper for national/regional government officials	>1	2	0	0%	2	0	0%	2	0	0%	2	0	0%	0
D5.1 - Representation in fairs and exhibitions	>12	13	9	69%	13	5	38%	13	0	0%	13	0	0%	14
Communication Measures	Target	Target	Achieved	Completion	Target	Achieved	Completion	Target	Achieved	Completion	Target	Achieved	Completion	Total
C1.1 - Website [FSH only]	1	1	1	100%	1	0	0%	1	0	0%	1	0	0%	1
C1.2 - Create social media channels [FSH only]	>5	6	5	83%	6	0	0%	6	0	0%	6	0	0%	5
C1.3 - Design of flyers	>3	4	0	0%	4	0	0%	4	0	0%	4	0	0%	0
C1.4 - Design of banners	>5	6	0	0%	6	0	0%	6	0	0%	6	0	0%	0
C1.5 - Translation of flyers and banners into partners' languages	>7	8	0	0%	8	0	0%	8	0	0%	8	0	0%	0
C2.1 - Posts in the >5 social media channels	>90	91	256	281%	91	226	248%	91	1	1%	91	0	0%	483
C2.2 - Blog posts in the website	>50	51	26	51%	51	31	61%	51	0	0%	51	0	0%	57
C2.3 - Printed/digital promotional materials distributed	>3 000	3,001	0	0%	3,001	0	0%	3,001	0	0%	3,001	0	0%	0
C3.1 - Quarterly E-newsletters	>12	13	2	15%	13	3	23%	13	0	0%	13	0	0%	5
C3.2 - Press releases	>8	9	1	11%	9	1	11%	9	0	0%	9	0	0%	2
C3.3 - TV/radio interviews	>5	6	1	17%	6	1	17%	6	0	0%	6	0	0%	4
C3.4 - Videos with success stories and interviews	>5	6	2	33%	6	1	17%	6	0	0%	6	0	0%	3
C3.5 - Podcast episodes (2 series of 5)	>10	11	0	0%	11	0	0%	11	0	0%	11	0	0%	0

Annex 3 Planning forms

Partner Event, Synergy, and Publication Planning Form

1. ICAERUS Event Planning

#	Name and Type of event	Event link (if applicable)	Date(s) / Location(s)	Scale	Target groups	Potential ICAERUS involvement

2. ICAERUS Synergy & Liaison mapping

#	Type of Initiative	Full name	Website	Initiative Leader	Focus area	Potential joint activities

3. ICAERUS Publication Planning

#	Type of publication	Publication website	Estimated submission date

Event brainstorming Form

This page is for events that you may be aware of, or have come to your attention but that your organization has not made a commitment to attend. This may include annual events that we missed this year but should be considered for the following years

Name	Link	Location	Date

Annex 4 Communication Materials

Brand Book



Brochures

DRONES AND ICAERUS
Drones are an efficient, flexible, digital technology that can perform increasingly complex tasks without damaging the environment, but their widespread adoption across the agricultural sector has been limited by:

- Costs
- Knowledge gaps
- Regulatory and safety restrictions

ICAERUS aims to tackle these challenges by supporting and showcasing the effective, efficient, and safe deployment of drones in applicable settings and to identify risks and added values associated with their use.

DID YOU KNOW?
The EU Farm to Fork strategy targets a 50% reduction in the use and risk of chemical pesticides by 2030.
The market value of the Agricultural Drone market is expected to reach >5.7 billion USD by 2025.

Do you want to get in touch with us?
info@icaerus.eu
Follow us!
<https://icaerus.eu>

ICAERUS
Coordinator
INTERNATIONAL UNIVERSITY OF APPLIED SCIENCES

Partners
WAGeningen, INRAE, HZPC, GeoSense, noumena, HART21, HCPA, AgriFood@Lifonova, AgPartners, The Open University

Innovation and Capacity building in Agricultural Environmental and Rural UAV Services

WHY ICAERUS?
ICAERUS' vision is to explore opportunities for drones and provide a complete, interconnected account of their potential and impact as multi-purpose vehicles in EU agriculture, forestry, and rural areas.

PROJECT OUTCOMES
ICAERUS Platform, Drone Market Landscape, Drone Data Analytics Library, ICAERUS Academy, Policy Recommendations, Business & Governance Models.

WHO WILL BENEFIT?
EU citizens, Local Authorities, Individual business, Digital Innovation Hubs, General Public, Public Authorities, Technology Providers, Private Sector, Civil Services, Regulatory Agencies, Stakeholders, Small and Medium Enterprises, Start-ups, Government agencies, Agricultural Communities, Cooperatives, Primary Sector Communities Trade Unions.

USE CASES & OPEN CALL TRIALS

USE CASES

- Crop Monitoring**
Use drones for plant stress identification, weed detection and 3D canopy reconstruction. Develop decision support system. Tomarosa, Spain
- Drone Spraying**
Test and assess drone spraying conditions, compare efficiency and environmental impact between drone and conventional spraying. Attica and Vitoria Regions, Greece
- Livestock Monitoring**
Assess the labour-reduction capabilities of drone-based herd monitoring for different grazing cattle and sheep systems. Alsace-Haute-Provence, Sabreval-Lorain, France
- Rural Logistics**
Design and develop an innovative drone-delivery fleet management system and integrate state-of-the-art technologies to automate drone navigation operations. Ohrid and Strumica, N. Macedonia
- Forestry and Biodiversity**
Use drones to monitor forest health, ecosystems, assess biodiversity and identify and inspect high fire risk areas. Šćit, Pine Forest, Lithuania

OPEN CALL TRIALS

- 2 Push Open Calls for Research & Innovation, targeting SMEs that will deliver and exploit drone related data sets, ideas, concepts and prototypes.
- 2 Pull Open Calls aimed at agricultural production and users, environmental monitoring and rural communities that will utilize drones and related services to tackle commercial or community issues.

<https://icaerus.eu>

ICAERUS
Drone Data Analytics Library (DDAL)

COORDINATOR
INTERNATIONAL UNIVERSITY OF APPLIED SCIENCES

PARTNERS
WAGeningen, INRAE, HZPC, GeoSense, noumena, HART21, HCPA, AgriFood@Lifonova, AgPartners, The Open University

JOIN THE COMMUNITY

MODELS ON GITHUB

DATASETS ON ENDSODO

ICAERUS.EU

DRONE DATA ANALYTICS LIBRARY

An open access repository of models and algorithms catering to diverse UAV based needs
icaerus.eu

GET IN TOUCH
info@icaerus.eu
in X YouTube f

Funded by the European Union

WHAT IS THE DDAL?
The Drone Data Analytics Library, an Open Access repository of drone models and algorithms.

WHY DO WE NEED DDAL?
Analytical models of UAV are often published behind closed doors, or completely developed in-house. This limits their adoption, evaluation and potential for further optimization.

WHAT IS THE FOCUS OF THE DDAL?
There is a broad variety of models that can be found in the UAV domain, which is why ICAERUS focuses on a wide array of analysis/implementation of UAV applications, including:

- Photogrammetry
- Statistical models
- UAV spraying simulations
- Machine learning/Deep learning models
- Vegetation indices calculations
- Fleet management algorithms
- Datasets

WHERE DOES OUR DATA COME FROM?
The Library is being populated by the 5 ICAERUS use cases which cover significant drone application across Europe and include:

- Crop monitoring
- Drone Spraying
- Livestock Monitoring
- Forestry and Biodiversity Monitoring
- Rural Logistics

We Want You!

More is on the way from our RUSM Open Call which will include a total of 8 sub-projects with innovative drone based-ideas for addressing agricultural and rural challenges.

USE THE LIBRARY

- Explore the library and the various models and implementations
- Re-use datasets
- Adapt code implementations for different applications.

CONTRIBUTE TO THE LIBRARY

- Share your data, models and algorithms
- Contribute to the growing knowledge pool

The Icaerus Platform
The DDAL is connected to the ICAERUS platform, providing a user-friendly interface for accessing models and datasets and algorithm analytics. It is also the information hub for all of the project results including the ICAERUS academy, drone market analysis, socio-economic and Environmental Impact Assessment Results, inclusiveness business and governance models and more information on the use cases and open calls.

Banners

ICAERUS
Innovation and Capacity Building
in Agricultural Environmental and Rural UAV Services

Improving quality of life in rural areas one drone at a time!

ICAERUS Platform

Drone Data Analytics Library
Drone Market Landscapes
ICAERUS Use Cases and Open Call Trials
Business and Governance Models
ICAERUS Academy

1. RESEARCH
2. DEVELOP & DEMONSTRATE
3. EDUCATION & TRAINING
4. SCALE UP

Research, AgriTech, UAV, Agriculture, Rural Areas, Forests, Livestock, Crop Monitoring, Drone Spraying, Drone Monitoring, Drone Analytics, Drone Data, Drone Services, Drone Solutions, Drone Applications, Drone Innovations, Drone Startups, Drone Ecosystem, Drone Community, Drone Network, Drone Hub, Drone Center, Drone Base, Drone Station, Drone Terminal, Drone Gateway, Drone Controller, Drone Operator, Drone Pilot, Drone Engineer, Drone Designer, Drone Manufacturer, Drone Distributor, Drone Retailer, Drone Service Provider, Drone Consultant, Drone Trainer, Drone Educator, Drone Researcher, Drone Innovator, Drone Entrepreneur, Drone Investor, Drone Partner, Drone Collaborator, Drone Competitor, Drone Supplier, Drone Customer, Drone User, Drone Beneficiary, Drone Stakeholder, Drone Ecosystem, Drone Community, Drone Network, Drone Hub, Drone Center, Drone Base, Drone Station, Drone Terminal, Drone Gateway, Drone Controller, Drone Operator, Drone Pilot, Drone Engineer, Drone Designer, Drone Manufacturer, Drone Distributor, Drone Retailer, Drone Service Provider, Drone Consultant, Drone Trainer, Drone Educator, Drone Researcher, Drone Innovator, Drone Entrepreneur, Drone Investor, Drone Partner, Drone Collaborator, Drone Competitor, Drone Supplier, Drone Customer, Drone User, Drone Beneficiary, Drone Stakeholder.

Partners:

ICAERUS The ecosystem

ICAERUS Use Cases & Open Call Trials (PUSH/PULL)

Funded by the European Union (View Agreement No. 10104663)

<https://icaerus.eu>

ICAERUS
Innovation and Capacity Building
in Agricultural Environmental and Rural UAV Services

ICAERUS aims to apply, showcase and support the effective, efficient and safe deployment of drones as well as identify the risks and added values associated with their use.

FORESTRY AND BIODIVERSITY (LITHUANIA)

- Establish methodologies for UAV based monitoring and assessment of:
 - Tree health
 - Fire risk
 - Wildlife (bird) breeding populations

LIVESTOCK MONITORING (FRANCE)

- Develop drone and sensor enabled for livestock monitoring
- Create an inventory of available and shared drone technologies and environmental impact of using drones

RURAL LOGISTICS (ROSTO IFAECOMIA/ GREECE)

- Design, develop and deploy and production drone delivery fleet management systems for remote rural areas

CROP MONITORING (SPAIN)

- Integrate advanced solutions for drone utilization on farms and corridors
- Locate and map damaged plants

DRONE SPRAYING (GREECE)

- Test and assess the optimal spraying method/conditions
- Compare efficiency and impact of drone vs conventional spraying
- Identify risks and mitigation strategies

PUSH Open Calls FOR INNOVATION DEVELOPMENT

- Seeking innovative ideas that leverage drone technology and data sets to address real world problems in agriculture and rural areas
- 8 sub-projects funded
- €20k per sub-project

PULL Open Calls FOR FARMING, FORESTRY & RURAL CHALLENGES

- Seeking entrepreneurs that can utilize drone and their services to address commercial and community needs in rural areas
- 10 sub-projects funded
- €50k per sub-projects

Drone Data Analytics Library

An open access repository of models and algorithms catering to drone drone related needs

ICAERUS Platform

A web based platform for access all of the project results, including 6 elements:

- The Drone Market Landscapes
- The Drone Data Analytics Library
- ICAERUS Use Cases and Open Call Trials
- Socio-economic and Environmental Impact Assessment Results
- Inclusive Business and Governance Models
- The ICAERUS Academy

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Posters

Synergy Days
(9 Posters)

PUSH Open Calls

FOR INNOVATION DEVELOPMENT

WHO ARE WE TARGETING?
Researchers and technology providers aiming to deliver and exploit drone-related data sets for economic, technological and socio-technological applications.

WHAT ARE THEY FUNDING?
Innovative ideas that leverage drone technology and data sets to address real-world problems and create value for society.

SUCH AS...

- Drone manufacturing
- Start-ups and SMEs exploiting innovative drone services and technologies
- All and IoT Convergence
- Research institutes

AT A GLANCE

- Dates of the OCs:** OC1: April 2023, OC2: February 2024
- Projects to fund:** 4 in total, 2 per Open Call
- Funds:** 200k to 1.5M, 200k per OC, up to 50k per winner
- Duration of sub-projects:** 12 months, 6 months, 3 phases: Design, Development, Market

Contact: opencalls@icaerus.eu

Partnered by:

1st PUSH Open Call is CLOSED

Evaluation is underway

KEY FACTS

- Top applicant type: Start-Ups & SMEs exploiting drone services and technologies
- Leading fields of expertise: Research & Development, Information Technologies, Drones in Agriculture

MISSED OUT ON THE FIRST PUSH OPEN CALL?
Don't worry the 2nd PUSH Open Call launches February 2024

Partnered by:

The 1st PULL Open Call has Launched

Applications Close December, 2023

Visit the website to find out more and sign up to the Open Call Hub.

PULL Open Calls

FOR FARMING, FORESTRY & RURAL CHALLENGES

ALL APPLICATIONS MUST ADDRESS CHALLENGES FACED BY RURAL AREAS

AT A GLANCE

- Dates of the OCs:** OC1: April 2023, OC2: February 2024
- Projects to fund:** 4 in total, 2 per Open Call
- Funds:** 200k to 1.5M, 200k per OC, up to 50k per winner
- Duration of sub-projects:** 12 months, 6 months, 3 phases: Design, Development, Market

WHO ARE THEY TARGETING?
Researchers and technology providers aiming to deliver and exploit drone-related data sets for economic, technological and socio-technological applications.

SUCH AS...

- Agri-Food Products
- Agri-Environment Technology Solutions
- Rural Communities
- Agri-Food Products
- Agri-Environment Technology Solutions
- Rural Communities

WHAT ARE THEY FUNDING?
Innovative ideas that leverage drone technology and data sets to address real-world problems and create value for society.

EXAMPLES

- Monitoring the use of pesticides and herbicides for crop protection and pest control
- Monitoring crop health and soil moisture
- Monitoring water levels and quality in rivers and streams
- Monitoring and managing forests
- Monitoring and managing energy systems
- Monitoring and managing water resources
- Monitoring and managing infrastructure
- Monitoring and managing urban planning and development
- Monitoring and managing disaster relief and response
- Monitoring and managing environmental protection

Contact: opencalls@icaerus.eu

Partnered by:

DRONE SPRAYING

EXPERIMENTAL DESIGN

FINAL AIM

- Provide evidence for the advantage of drone-based plant protection and need for new regulations
- Achieve precise and safe applications
- Develop and promote best practice guidelines and risk mitigation strategies

KEY PARAMETERS

- SPRAYING ALTITUDE
- FLOW RATES PER NOZZLES
- CRUISING SPEED
- SPRAYING POSITION

MAIN OBJECTIVES

- Test and assess spraying configurations for optimal drone spraying applications in field conditions
- Compare efficiency and environmental impact of conventional vs drone spraying practices
- Identify risks and develop mitigation strategies related to drone-based plant protection applications

Partnered by:

RURAL LOGISTICS

EXPERIMENTAL DESIGN

- Identification:** Risks, barriers (topography, obstacles, regulations), Drone requirements (payloads, specifications)
- Preparation:** Hardware and software supply and assembly, Simulation, Drone fleet management and customer service infrastructure
- Testing and implementation**

FINAL AIM

- Delivery of small parcels of importance (ag. documentation, medical supplies) in remote, inaccessible and rural areas
- Implementation of a cloud-based software for the efficient operation of the delivery services.
- Modification of existing multi-modal fleet - using and hetero-drone to fulfil the requirements of the delivery services in the areas of interest

IMPLEMENTED MODULES IN THE DRONE DELIVERY FLEET MANAGEMENT SYSTEM

- User authentication & registration
- Route based access control
- Elevation profile
- Weather
- Automatic dependent surveillance broadcast
- Analytical hierarchy process decision support system
- Traveling salesman problem
- Shortest path algorithm

Partnered by:

LIVESTOCK MONITORING

EXPERIMENTAL DESIGN

- 2 years of data collection with 2 or 3 periods per year
- Each monthly period with 4 alternating weeks of reference and drone monitoring
- Data measured: Quantitative (monitoring time, LCA/EC data), Qualitative (physical workload, mental workload, human-animal relations, skills, work flexibility etc.)

FINAL AIM

A practical guidebook for end users called: "Drones in grassland based livestock farming: opportunities, risks and best practices"

WHY A GUIDEBOOK?

- According to a fresh national survey of 2022 livestock farmers an emission tool adoption:
 - 8% are equipped with drones BUT they need a clear framework to evaluate the safety and legitimacy of their uses
 - 5% are thinking about buying one in the next 2 years BUT they need a framework to protect themselves and decided if the tool suits their systems

MAIN OBJECTIVES

- Assess drone and camera models adapted to different grassland based cattle and sheep systems.
- Create an inventory of different realities and drone use according to the systems and technologies.
- Assess the impact of using drones for livestock monitoring, such as time-saving, labour decrease, decision planning and other socio-economic and environmental impacts.

Partnered by:

FORESTRY & BIODIVERSITY MONITORING

EXPERIMENTAL DESIGN

- Use satellite data Forest Tree health using satellite data
- Data and situation assessment from national, regional, local perspectives
- Extract Normalized Difference Vegetation Index (NDVI) from satellite data to identify healthy and affected areas
- Collaborate with forest engineers to mark affected trees and collect information for CAESAC
- Work on individual tree segmentation and clustering models
- Perform drone flight over affected areas 2x/month to track differences

SOLUTIONS

- Establish methodologies for UAV based
- Tree health monitoring and risk assessment
- Fire risk assessment
- Wildlife (wild boar) population assessment and monitoring

MAIN OBJECTIVES

- Monitor forest tree health through the use of drones, satellites (Sentinel-2) and data science
- Identify and inspect areas of potentially high fire risk and assess fire fuel types
- Monitor ecosystems and assess biodiversity and wildlife (wildboar) populations

ICAERUS logo, HORT21, AgriFood Lithuania, EU logo

CROP MONITORING

EXPERIMENTAL DESIGN

- Data Gathering
- Data Pre-Processing
- Disease Detection
- Decision Platform

FINAL AIM

Utilize a platform visualization mechanism with a comprehensive 3D model to help comprehend the overall condition of the plots and facilitate the identification and localization of diseases Location

MAIN OBJECTIVES

- Integrate automated solutions for disease detection on maize and cornfields of agricultural crop plants → to improve health monitoring and reduce chemical pesticide use
- Locate and map diseased plants → to reduce the amount of time and effort for farmers to inspect and manage crops

ICAERUS logo, noumena, EU logo

2 General Posters

ICAERUS

Innovation and Capacity building in Agricultural Environmental and Rural UAV Services

— WHY ICAERUS? —

ICAERUS' vision is to explore opportunities for drones and provide a complete, interconnected account of their potential and impact as multi-purpose vehicles in EU agriculture, forestry, and rural areas.

— PROJECT OUTCOMES —

- ICAERUS Platform:** an open web-based platform for drone related information.
- Drone Market Landscape:** an inventory of current drone market intelligence.
- Drone Data Analytics Library:** a repository with emerging data analytics models.
- ICAERUS Academy:** free online training on 8 drone related subjects, and on-site workshops.
- Business & Governance Models:** with support towards to build drone-related firms.
- Policy Recommendations:** stakeholder driven guidelines for drone safety regulations.

— USE CASES —

- Crop Monitoring:** Use drones to detect stress, identification, weed detection and 3D canopy model creation. Deep learning algorithm. *AgriFood Lithuania, AgriFood, Sadoon, Cofe, France*
- Livestock Monitoring:** Assess the labour reduction capabilities of drone-based herd monitoring for: Forest grazing, cattle and sheep systems. *AgriFood Lithuania, AgriFood, Sadoon, Cofe, France*
- Forestry and Biodiversity:** Use drones to monitor forest health, ecosystems, assess biodiversity and identify and inspect high risk areas. *Coast, Pine Forest, Lithuania*
- Rural Logistics:** Design and develop an innovative drone delivery fleet management system and integrate it with local technologies. *Ony and Strouma, N. Macedonia*
- Drone Spraying:** Test and assess drone spraying conditions, compare efficiency and environmental impact between drone and conventional spraying. *Greece*

— OPEN CALL TRIALS —

- 2 Push Open Calls for Research & Innovation targeting SMEs that will deliver and exploit drone related tools, ideas, concepts and prototypes.
- 2 Pull Open Calls aimed at agricultural production and users, environmental monitoring and user communities that will use drone and related services to tackle commercial or community issues.

ICAERUS logo, HORT21, noumena, AgriFood Lithuania, AgriFood, Sadoon, Cofe, France, The Open University, EU logo

Innovation and Capacity Building in Agricultural Environmental and Rural UAV Services

CROP MONITORING AND DRONE SPRAYING USE CASES

PROJECT OUTCOMES

- ICAERUS Platform:** an open web-based platform for drone related information.
- Drone Market Landscape:** an inventory of current drone market intelligence.
- Drone Data Analytics Library:** a repository with emerging data analytics models.
- ICAERUS Academy:** free online training on 8 drone related subjects and on-site workshops.
- Business & Governance Models:** with support towards to build drone-related firms.
- Policy Recommendations:** stakeholder driven guidelines for drone safety regulations.

DRONE SPRAYING

MAIN OBJECTIVES

- Test and assess drone spraying conditions, compare efficiency and environmental impact between drone and conventional spraying.
- Identify data on drone spraying conditions, based on drone and user related variables.

EXPERIMENTAL DESIGN

KEY PARAMETERS

COMPARISON WITH CONVENTIONAL SPRAYING

FINAL AIM

Utilize a platform visualization mechanism with a comprehensive 3D model to help comprehend the overall condition of the plots and facilitate the identification and localization of diseases Location

FINAL AIM

- Integrate automated solutions for disease detection on maize and cornfields of agricultural crop plants → to improve health monitoring and reduce chemical pesticide use
- Locate and map diseased plants → to reduce the amount of time and effort for farmers to inspect and manage crops

PROJECT PARTNERS

ICAERUS logo, HORT21, noumena, AgriFood Lithuania, AgriFood, Sadoon, Cofe, France, The Open University, EU logo

1 Cartolino



ICAERUS



**The 2nd PUSH Open Call
for Innovation Development is still open!**

**Submit your proposals
by May 7, 2024 (17:00 CET)**

 **Funded by the European Union**

icaerus.eu     



MUNICIPALITY (FRANCE)

- Assess drone and camera models for livestock monitoring
- Create an inventory of routes and drones
- Assess socio-economic and environmental impact of using drones

RURAL LOGISTICS (NORTH MACEDONIA / GREECE)

Design, develop and deploy an innovated drone delivery fleet management system for remote rural areas.

CROP MONITORING (SPAIN)

- Integrate automated solutions for disease detection on leaves and canopies
- Locate and map diseased plants

DRONE SPRAYING (GREECE)

- Test and assess for optimal spraying configurations
- Compare efficiency and impact of drone vs conventional spraying
- Identify risks and mitigation strategies

PUSH Open Calls FOR INNOVATION DEVELOPMENT

Funding innovative ideas that leverage drone technology and data sets to address

PULL Open Calls FOR FARMING, FORESTRY & RURAL CHALLENGES

Funding end-users that can utilize drones and their services to address commercial and community needs in rural areas

12 sub-projects funded
50k per sub-projects

ICAERUS

ΑΠΟΘΕΤΙΚΟ ΔΡΟΝΕ DATA ANALYTICS

Annex 5 Templates

Text template and deliverable template

[Document Title]

Document Title

Paragraph 1 Text text text

Paragraph 2 Text text text

Paragraph 3 Text text text

Funded by the European Union
Grant agreement No: 101000043

Innovation and Capacity building

ICAERUS

Dx.y: [Deliverable Title]

WPx: [Work Package Title]

Responsible Author: [Author Name and Surname (Partner)]

Funded by the European Union
Grant agreement No: 101000043

ICAERUS Dx.y [Deliverable Title]

Document Information

Grant Agreement No: 101000043

Project Acronym: ICAERUS

Project Title: Innovation and Capacity building in Agricultural Environmental and Rural Livelihood Services

Type of action: RIA - Research & Innovation Action

Horizon Europe Call Title: HORIZON-CL5-2021-GOVERNANCE-01-21: Potential of drones as multi-purpose vehicle - risks and added values

Project Duration: 01 Jul 2022 - 31 Jun 2023 / 48 months

Project Website: ICAERUS.eu

EU Project Advocate: Alexandra Sasso

Project Coordinator: Spyros Fountas

Address: 17 Jan Daley, 1155 Athens, GR | Agricultural University of Athens

Reply to: sfountas@aua.gr

Work Package: WPx (Work Package Title)

EU Lead Beneficiary: [Beneficiary Name (Short Name)]

Relevant Task(s): Txy (Task Title), Txz (Task Title)

Deliverable: Dx.y (Deliverable Title)

Deliverable Lead: [Beneficiary Name (Short Name)]

Responsible Author: [Author Name and Surname (Partner)]

Reply to: [Author's e-mail]

Deliverable Type: XXXX | XXXX

Deliverable Asset:

Due Date of Deliverable: DD Month 20YY

Actual Submission Date: DD Month 20YY

Version: [A, B, C] | Draft/Final

Contributor: [Contributor Name and Surname (Partner)]

Reviewer(s): [Reviewer's Name and Surname (Partner)]

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ICAERUS Dx.y [Deliverable Title]

2. [Chapter Title]

Paragraph 2 Text text text

Paragraph 3 Text text text

2.1 [SubTitle 1]

Paragraph 2 Text text text

Paragraph 3 Text text text

2.1.1 [SubTitle 2]

Paragraph 2 Text text text

Paragraph 3 Text text text

2.1.1.1 [SubTitle 3]

Paragraph 2 Text text text

Paragraph 3 Text text text

When objectives

Paragraph 1 Text text text

- Bullet

Paragraph 2 Text text text

Paragraph 3 Text text text

Figure 1: Diagram

Paragraph Text text text

Paragraph Text text text

Table 1: Header

Table 1: Header	Table 1: Header	Table 1: Header
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Table 2: Header

Table 2: Header	Table 2: Header	Table 2: Header
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ICAERUS Dx.y [Deliverable Title]

Table 2: Header

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Table 3: Header

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Text colour palette

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#000000 (R01, G153, B198) Curious Blue light

#108080 (R153, G206, B178) Caribbean Green

#000000 (R255, G168, B0) Tongue Orange

#A52A2A (R165, G71, B131) Royal Health

Tables colour palette

#4F81BD (R52, G106, B197) Midway Spring Green

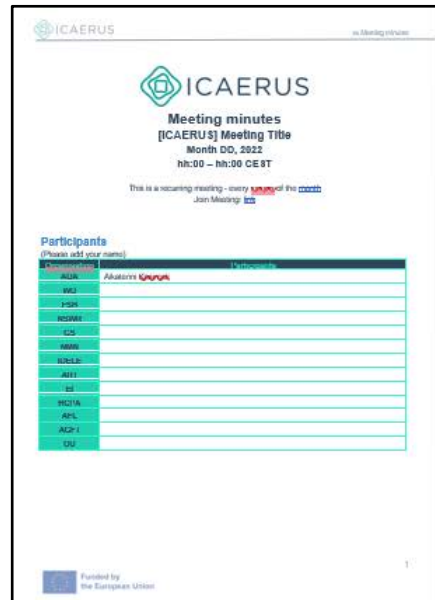
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109

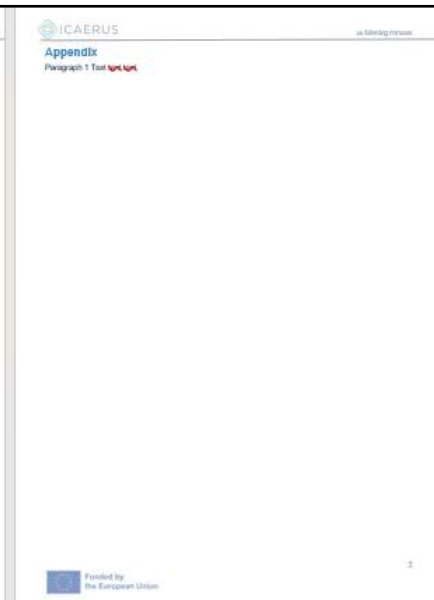
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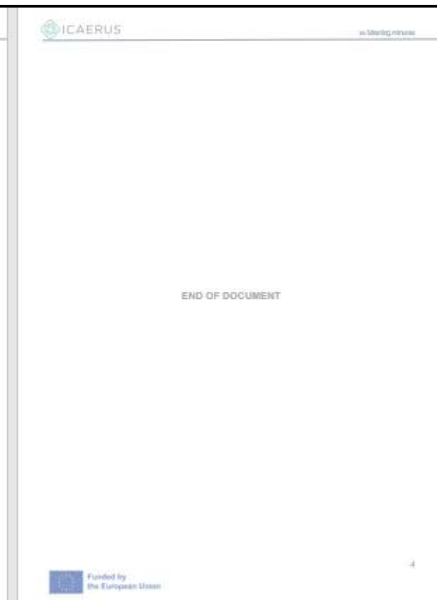
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ICAERUS Meeting agenda template slide 2. Table with columns: Time, Session, Location/Partners. Includes a 'Progress per Task' section with sub-sections for Current status, Next Steps, Difficulties/blocking issues, and Upcoming Deliverable(s).



ICAERUS Meeting agenda template slide 3. Title: Appendix. Content: Paragraph 1 Text. Includes a footer: Funded by the European Union.



ICAERUS Meeting agenda template slide 4. Content: END OF DOCUMENT. Includes a footer: Funded by the European Union.

Annex 6 Lol, MoU

Letter of Interest

To:

**Agricultural University of Athens
(ICAERUS Coordinator)**

Iera Odos 75, 118 55

Athens, Greece

CONFIRMATION OF INTEREST

In Participating in the Horizon Europe ICAERUS Project “Innovation and Capacity building in Agricultural Environmental and Rural Uav Services”

[Barcelona, 29/05/2023]

To whom it may concern,

I am writing this letter on behalf of [name of organisation]. I am pleased to confirm that [name of organisation] has expressed interest in participating in the ICAERUS project on [insert intent].

I understand that the main objective of ICAERUS is to explore the possibilities of using drones and to provide a more comprehensive and interconnected representation of their potential and impact as multi-purpose vehicles in agriculture, forestry and rural areas of the EU.

I am aware of ICAERUS' aim to apply, showcase, and support the effective, efficient and safe deployment of drones as well as identify the risks and added values associated with their use. I also support ICAERUS plans to scale up through research, technology optimisation, demonstration and education about drones to create an efficient, trusted and safe enabling environment for the EU drone services market to achieve the EU's decarbonisation, digitalisation and resilience ambitions.

I agree that [insert intended action and outcome] and I confirm that I am interested in:

- [specific action/contribution 1]
- [specific action/contribution 2]
- [specific action/contribution 3]

I understand that my time spent on these activities will not be charged to the project, but that [insert any other stipulations if applicable].

Yours sincerely,

[Name of the legal representative]

[Position in the organisation]

[Contact e-mail]

[Signature and stamp (if applicable)]

Memorandum of Understanding

INSERT LOGO OF
PROJECT/ORGANIZATION



Partnership agreement between

[Insert project/organisation]
&
ICAERUS

This Agreement is made between [INSERT] and ICAERUS.

1. Purpose

The purpose of this Memorandum of Understanding is to create the framework for cooperation that will enable each partner to benefit from the common activities in their respective strategies. The present agreement is intended to serve as a guideline for both ICAERUS and [INSERT] to enhance the relationship for the benefit of both partners, establishing the points and areas where both partners can meet interest developing a close coordination between the parties. This agreement will help both partners to pursue their respective goals and will help avoid any unnecessary duplication or inconsistency of work and publications.

Therefore, the partners agree that it is in their mutual interest to collaborate on specific activities aimed at facilitating and supporting mutual cooperation, the exchange of knowledge and good practices as well as to partner up in the organisation of future events (online or in-person). The collaboration of both partners should enable each one to better achieve its respective objectives. Thus, ICAERUS and [INSERT] agree to have a program of cooperation, which will include agreed actions and initiatives described in the following points.

2. Achievement of common goals

2.1. Meetings, events, and conferences

ICAERUS agrees to invite [INSERT] to its meetings, events, and conferences, and [INSERT] agrees to invite ICAERUS members to its meetings, events, and conferences. Both parties can provide collaboration in the organisation of national or international meetings, events, and conferences, collaborating with [INSERT] and ICAERUS.

2.2. Projects, development, and support

[INSERT] and ICAERUS agree to collaborate in the creation and implementation of projects for their mutual benefit. This is aimed to enhance their respective impact on issues and topics where both partners have common interest.

2.3. Communication and renown

[INSERT] and ICAERUS agree to display their logos, description texts and related links in their respective websites. Additionally, [INSERT] and ICAERUS shall provide bilaterally free dissemination of projects, events, information, and news from both parties through their websites, newsletters and social media.

3. Funding

The parties may jointly or independently mobilise resources for any activity, project, or program under this agreement. Prior to engaging in a collaborative activity, the parties shall stipulate the terms and conditions for the work to be performed as well as the financial arrangements of any such collaborative work through a separate written agreement. This agreement may also detail ownership of intellectual property rights and shall be signed and authorised by representatives of each party. The parties fully acknowledge that this agreement does not entail any funding obligation.

4. Monitoring and evaluation

The parties shall convene whenever necessary for consultation and further strategic collaboration. The consultation meetings shall serve to agree on and prepare an action plan for the successful implementation of activities necessary to meet the objectives of this agreement.

5. Intellectual property rights and publications

Both parties are responsible for providing the necessary technical elements for which they are the legal owner of graphic/image rights. For the activities that [INSERT] and ICAERUS agree to organise together, both parties have the right to include each other's logos and promote them in their network. Any publication resulting from this collaboration shall reflect the joint efforts of both institutions. The employees or volunteers of [INSERT] and ICAERUS shall not be entitled to any remuneration or other benefits respectively from [INSERT] and ICAERUS.

6. Relationship

The parties shall always remain separate and independent entities. This non-binding and a non-exclusive agreement will in no way hinder the ability of either party to work with any other person, organisation, in whatever scope. Given the separate relationship, neither party shall hold itself as an agent of the other party, enter into any arrangement or transaction with third parties on behalf of the other nor in any way pledge or bind the credit of the other party.

7. Duration

This agreement shall become effective upon signature by the authorised officials from both parties and will remain in effect until modified or terminated by mutual consent. In the absence of mutual agreement by the authorised officials from both parties to extend the terms of this agreement, this agreement shall end on [INSERT DATE].

On behalf of [INSERT]

Address, Town, Country
Name, Position
Email

Name, Place, Date

On behalf of ICAERUS

Address, Town, Country
Name, Position
Email

Name, Place, Date

Annex 7 Presentation

ICAERUS
Innovations and Capacity Building in Agricultural Environmental and Rural UAV Services

Presentation Title
Subtitle

Event | Place | DD Month YYYY
Funded by the European Union
Grant agreement ID: 101088043

Presenter's Name
Presenter Role | Affiliation | Other

Who we are?
ICAERUS Consortium

- 3 European research institutes and universities
- 6 industry stakeholders and technology SMEs
- 4 NPOs

ICAERUS

ICAERUS Conception & Vision
A game-changer for the use of drones in rural areas

RESEARCH: Drone market intelligence, 500 commission orders and their needs, 200+ surveys and open air use impact interviews, 100 drone related technologies, 200 drone data analysis models, 10 standards and regulations reviewed & 4 titles.

DEVELOP & DEMONSTRATE: The 3 ICAERUS Use Cases, 10 demonstration activities, 1000 targeted stakeholders in dissemination activities, 50 drone technologies and data analysis models to be demonstrated.

EDUCATE & TRAIN: Technical support, Coaching, Mentoring, 11 hours of online, live, open access education & training, 1500 stakeholders enrolled in the training, 20 drone related business and governance models.

SCALE-UP: Build a business, commercial arrangements, 10000 stakeholders reached through communication activities, 10 stakeholder groups, 10 pilots with demonstrator equipment, 20 Open Call trials launched (proof of life), 10 new business and governance models.

Main Objective

The ICAERUS vision is to **explore opportunities** and provide a more complete and interconnected account of the **potential and impact of drones as multi-purpose vehicles** in EU agriculture, forestry and rural areas.

The aim of ICAERUS is to **showcase and support**, through application, the effective, efficient and safe deployment of drones as well as, **identify the risks and added values** associated with their use.

ICAERUS

What are we going to develop?

- The ICAERUS Platform
- Drone Market Landscape
- Drone Data Analytics Library
- ICAERUS Use Cases and Open Call Trials
- Socio-economic and Environmental Impact Assessment (SEIA) Results
- Inclusive Business and Governance Models
- ICAERUS Academy

ICAERUS

ICAERUS Use Cases & Open Call Trials

ICAERUS

Annex 8 Key Exploitable Results table

KEY EXPLOITABLE RESULTS (KERs)		SCOPE OF EXPLOITATION				TARGET GROUPS	EXPLOITATION MEANS	IP/IPR		Partners involved										
KER No	Title	Commercial	Non-Commercial			Private sector, Public authorities, Researchers, Non-profits, Agri-rural communities, General public, ALL	Provide an explanation of how the target group will exploit the result	IP	IPR	AUA	WU	FSH	NSWR	GS	MMN	IDEE/E	ART	EI	HCPA	OU
			Scientific	Policy making	Training and Education					other (please specify)										
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	▼	▼	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	▼	▼	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	▼	▼	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Annex 9 Business Model Canvases

Commercial Result- Business Model Canvas

Designed by:

Designed for:

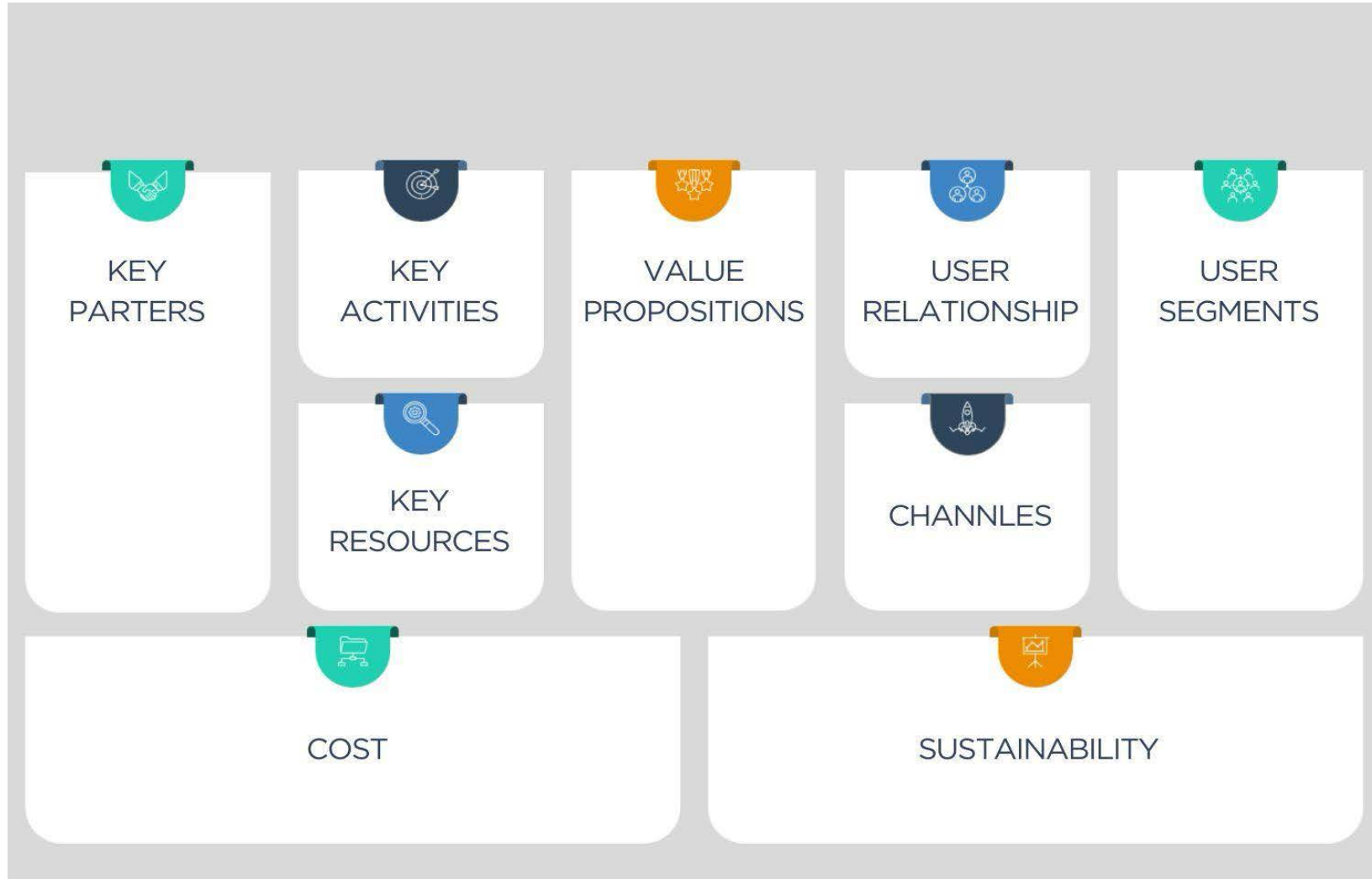
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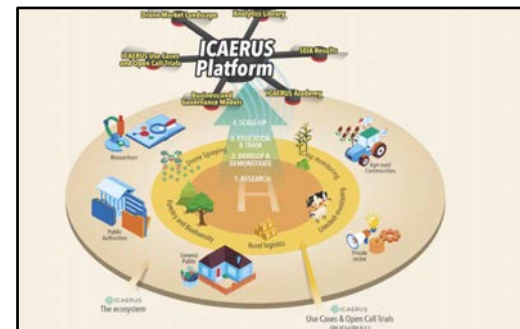
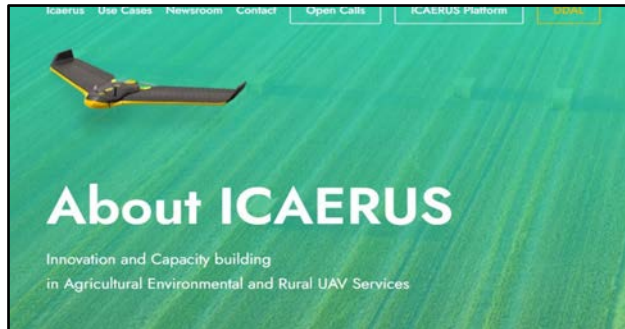


Non-Commercial Result: Modified Business Model Canvas

Designed by: Designed for: Date: Version:



Annex 10 Website Screenshots



Challenges

Challenges

limiting the widespread use of drones

European strategic alignment

Drones as multipurpose vehicles can make an important contribution to a number of the European Commission's strategies that ensure food security, address climate and environmental challenges and reverse biodiversity loss including:

- Farm to fork
- Shaping Europe's Digital Future
- EU biodiversity strategy
- European Green Deal

Did you know?

- AGRICULTURE**
is responsible for 14% of EU gross value added, 37% of EU annual energy consumption
- RURAL AREAS**
account for 85% of EU territory and 30% of the population
- EU FARM TO FORK**
first target a 10% to 50% for use of risk of chemical pesticides by 2030
- DRONE MARKET**
is projected to be worth 1.7 billion by 2027

That's why

...but!

The multi-purpose application of drones brings socio-economic, environmental and regulatory challenges that limit their impact on various European. These include:

- COSTLY INVESTMENT
- KNOWLEDGE GAPS
- DATA PROTECTION
- TECHNOLOGY RISKS
- ENVIRONMENTAL CONDITIONS
- REGULATORY RESTRICTIONS
- SAFETY REGULATIONS

Objectives

<p>Specific Objective</p> <h4>RESEARCH</h4> <p>Drone market intelligence: 500 innovation actors and their needs. 300+ surveys and one-on-one expert interviews. 100 drone-related technologies. 200 drone data analytics models. 10 standards and regulations assessed & 6 risks.</p>	<p>Specific Objective</p> <h4>DEVELOP & DEMONSTRATE</h4> <p>5 ICAERUS Use Cases. 10 demonstration activities. 1500 engaged stakeholders in demonstration activities. 50 drone technologies and data analytics models to be showcased.</p>
<p>Specific Objective</p> <h4>EDUCATE & TRAIN</h4> <p>Guidance – Support – Coaching – Mentoring 24 hours of online, free, open-access education & training. 1500 stakeholders enrolled in the training. 20 Value-added services on business and governance modeling.</p>	<p>Specific Objective</p> <h4>SCALE-UP</h4> <p>Build a European innovation ecosystem. 10000 stakeholders reached. 35 stakeholder synergies. 10 links with relevant initiatives. 20 Open Call Trials launched (PUSH/PULL). 10 new business and governance models.</p>

Use Cases

Crop Monitoring UC

DEMONSTRATE -

Demonstrate the capacity of drones in disease and plant stress identification, and weed detection in vineyards, building on existing and implemented solutions and avoiding duplication of effort.


ASSESS DRONES +


DEVELOP +

📍 Place: Tarragona, Spain

👤 Key Partners: NMN & EI

Details of the UC >





Drone Spraying UC

TEST AND ASSESS -

Test and assess spraying configurations for optimal drone spraying applications in field conditions.

COMPARE +

IDENTIFY RISKS +

📍 Place: Attica and Viotia Regions, Greece

👤 Key Partners: AUA & HCFA

Details of the UC >

Livestock Monitoring UC

EVALUATE -

Evaluate drone solutions for monitoring different grazing cattle and sheep systems, building on existing and implemented solutions and avoiding duplication of effort.


ASSESS +

EXAMINE +

📍 Place: Alpes de Haute-Provence and Saône-et-Loire, France

👤 Key Partners: IDELE

Details of the UC >



Forestry and Biodiversity UC

- MONITOR FORESTS** -
Monitor forest tree health through the use of drones, satellites and data science
- IDENTIFY & INSPECT** +
- MONITOR ECOSYSTEMS** +
- EVALUATE** +

Place: Scots pine forest, Lithuania

Key Partners: ART21 & AFL

[Details of the UC >](#)

Rural Logistics UC

- DESIGN & DEVELOP** -
Design and develop an innovative drone-delivery fleet management system
- AUTOMATE** +
- ASSESS** +
- IMPLEMENT** +

Place: Ohrid and Strumica, N. Macedonia

Key Partners: GS & AGFT

[Details of the UC >](#)

Our partners








Deliverables

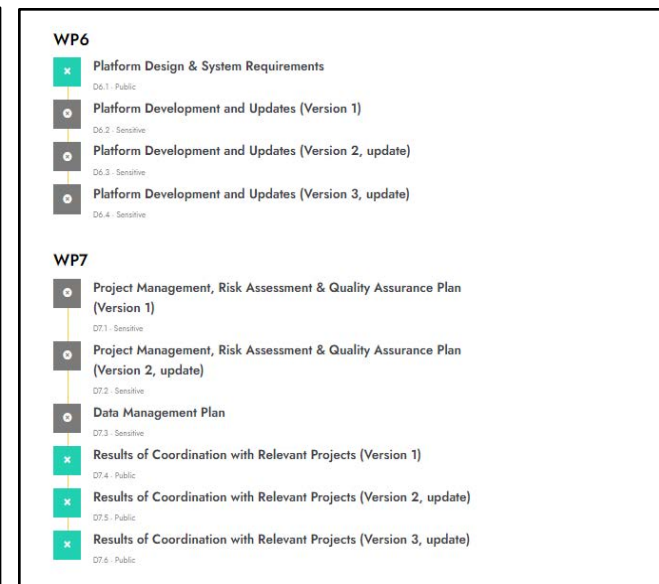
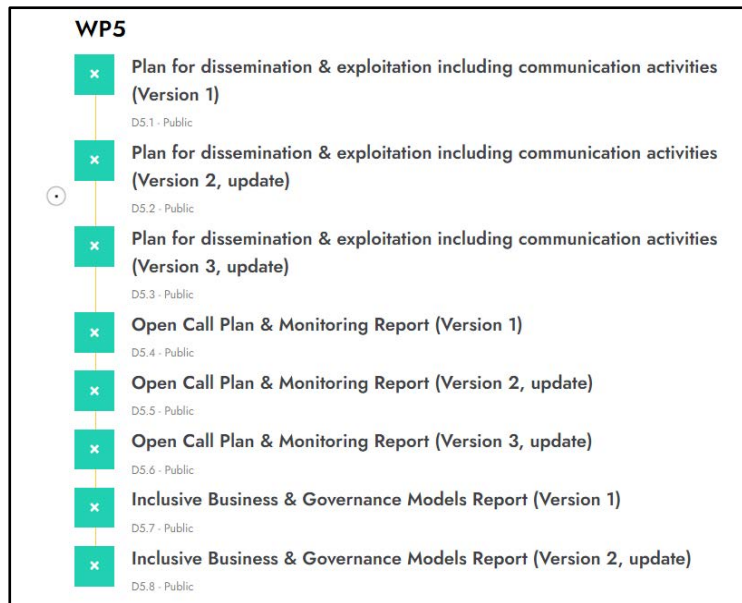
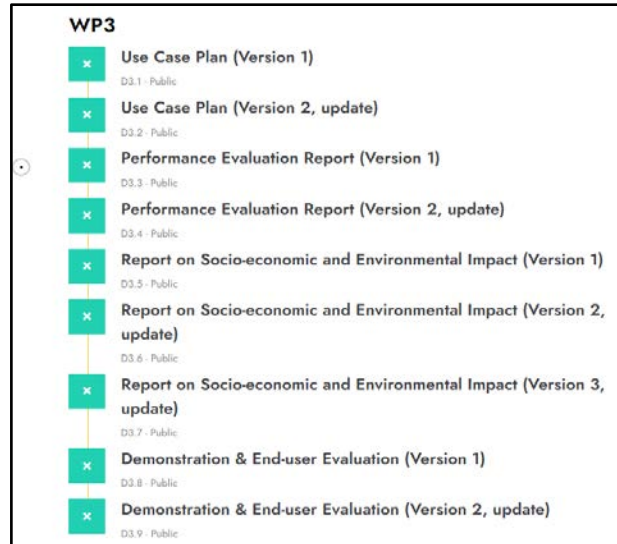
WP1

Presentations
Communication Material

-  **European Landscape of Drone Innovations and Technologies (Version 1)**
D1.1 - Public
-  **European Landscape of Drone Innovations and Technologies (Version 2, update)**
D1.2 - Public
-  **Comparative Analysis and Needs Report (Version 1)**
D1.3 - Public
-  **Comparative Analysis and Needs Report (Version 2, update)**
D1.4 - Public
-  **Drone Standards, Regulations and Risks (Version 1)**
D1.5 - Public
-  **Drone Standards, Regulations and Risks (Version 2, update)**
D1.6 - Public

WP2

-  **ICAERUS Drone Data Analytics Library (Version 1)**
D2.1 - Public
-  **ICAERUS Drone Data Analytics Library (Version 2, update)**
D2.2 - Public
-  **ICAERUS Drone Data Analytics Library (Version 3, update)**
D2.3 - Public
-  **Data Analytics Optimisation, Expansion & Scale-up Report (Version 1)**
D2.4 - Public
-  **Data Analytics Optimisation, Expansion & Scale-up Report (Version 2, update)**
D2.5 - Public



Presentations



ICAERUS first presentation

Our first presentation is now online and you can also find it at

[Read More >](#)

Communication Material


Communication Material



Icaerus Brand Book

View the Icaerus Brand Book!


[Read More >](#)



Icaerus Flyer

View the Icaerus Flyer!

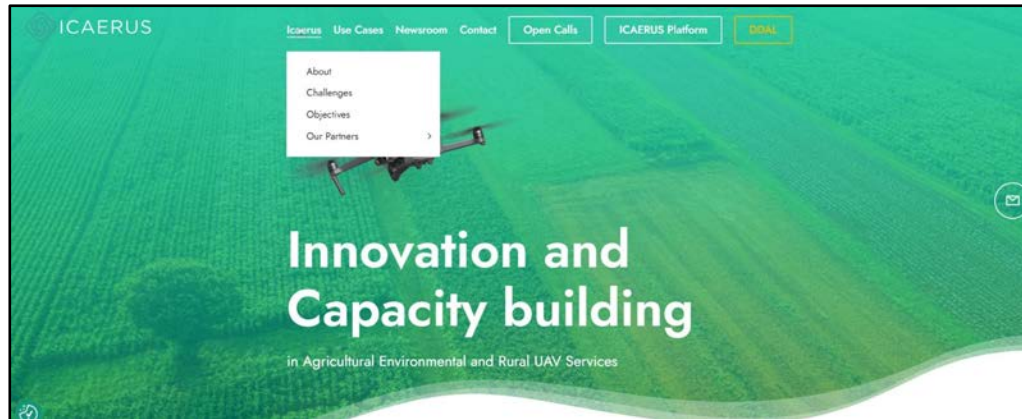
[Read More >](#)



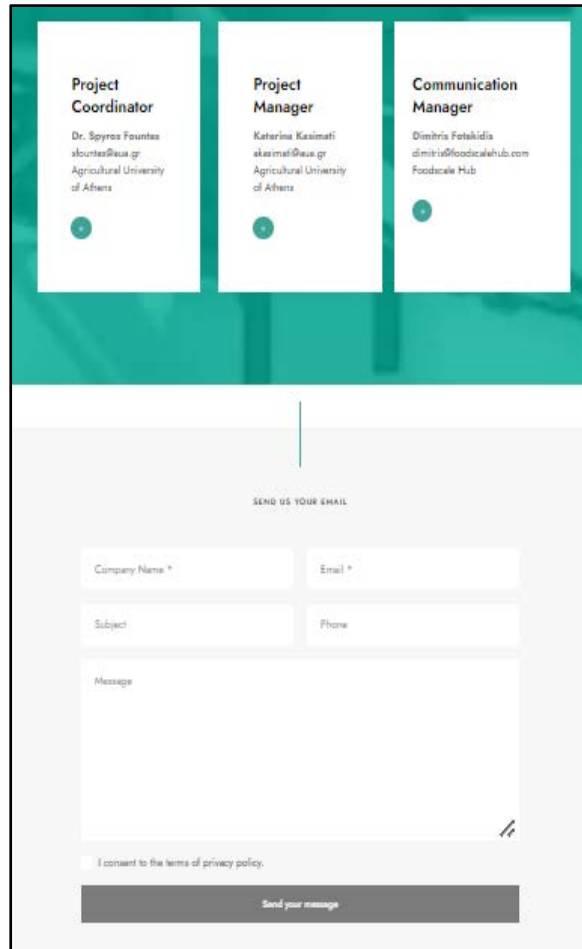
Icaerus Roll Up banner

Download Icaerus first Roll Up banner to use at your presentations!

[Read More >](#)



Contact



The contact form is divided into two main sections. The top section features three white cards with a teal background, each containing contact information for a specific role. The bottom section is a light gray form for sending an email, including fields for company name, email, subject, phone, and a message text area, along with a consent checkbox and a 'Send your message' button.

Project Coordinator	Project Manager	Communication Manager
Dr. Spyros Fountas sfountas@icaer.gr Agricultural University of Athens	Katerina Kasimati kkasimati@icaer.gr Agricultural University of Athens	Dimitris Fotakidis dimitris@foodscalehub.com Foodscale Hub

SEND US YOUR EMAIL

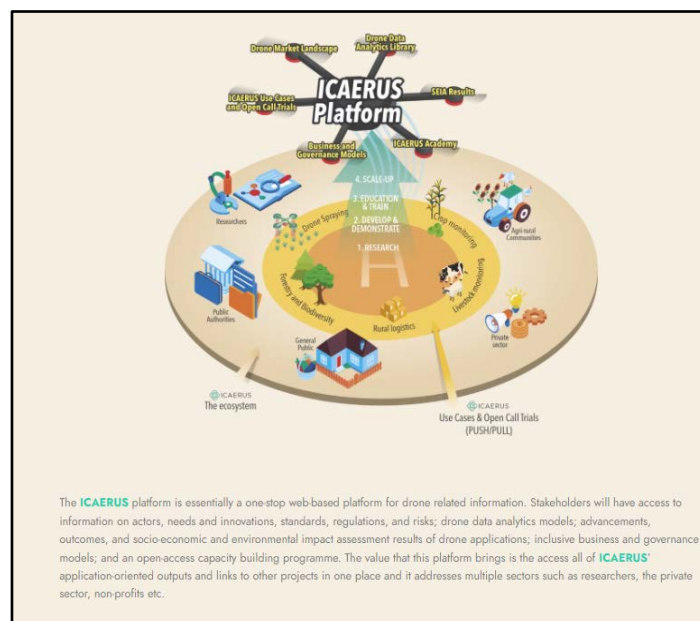
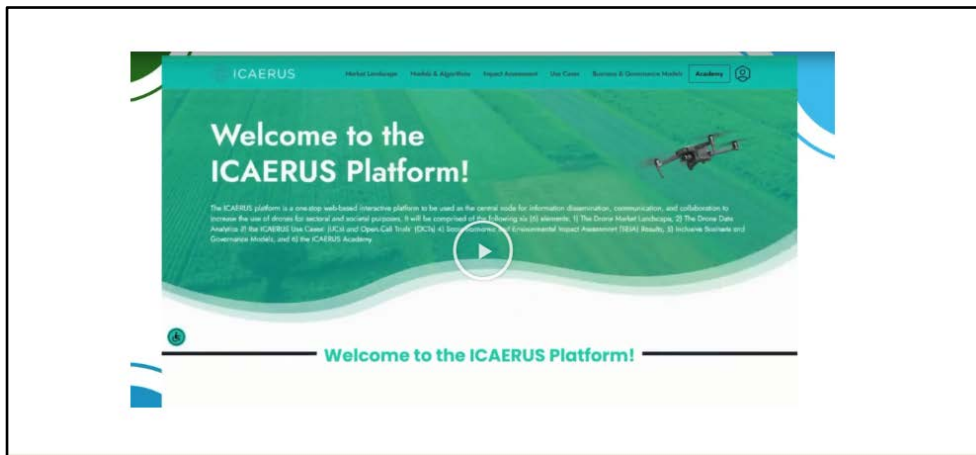
Company Name * Email *

Subject Phone

Message

I consent to the terms of privacy policy.

Send your message

ICAREUS platform


DDAL





An open-access repository

In the European Project ICAERUS we are working on a Drone Data Analytics Library (DDAL). We envision this library as an open-access repository of the most significant existing and emerging drone data analytics models and algorithms. Analytical models of UAVs are often published behind closed doors, or completely developed in-house. This limits wider adoption, evaluation and further optimisation of the insights these models can provide.

As the UAV domain can be quite broad when it comes to models. We have chosen to focus on a wide array of analytics-implementations of UAV applications. This can range from Photogrammetry, Statistical models, UAV spraying simulations, Machine Learning/Deep Learning Algorithms, or even Vegetation Indices calculation, fleet management optimisation algorithms and Travelling Salesman Problem. Additionally datasets are also seen as an essential part in sharing and collaborating of UAV analytical applications.

Available now at github and Zenodo

The beginning of this library is available at the following location: <https://github.com/icaeruseu>

Furthermore, there are already a few openly available datasets at the ICAERUS zenodo: <https://zenodo.org/communities/icaeruseu>

These datasets are also tracked in the following GitHub repository: https://github.com/ICAERUSEU/Zenodo_Datasets.

We invite anyone to explore the library, and the various models and implementations. From re-using datasets, adapting code-implementations or copying analytics implementations for a different application. It is code and data, and it is openly available, so use it!

The library is currently being populated from existing work from the five Use Cases that are part of ICAERUS. However, we also welcome outside contributions to this library. Through GitHub anyone can become a member of the ICAERUS organisation and contribute to this library, first steps can be found at the github homepage.



Annex 11: Non-Disclosure Agreement

NON-DISCLOSURE AGREEMENT

THIS AGREEMENT [the Agreement] is entered into on this [insert number of day] day of [insert Month and year] by and between:

1. [Insert official name of the potential partner or participant], having its registered office or based in [insert the Legal Address of the Entity] hereinafter referred to as [the Discloser] and
2. [Insert official name of the potential partner or participant], having its registered office or based in [insert the Legal Address of the Entity] hereinafter referred to as [the Recipient]

WHEREAS:

The Discloser and Recipient hereto desire [to insert details of intended participation] or [to submit a proposal for a collaborative project in response to the call (identify the call) under (Call identifier)] or [to evaluate entering into partnership or business collaboration for the purpose of (identify the undertaking intended to perform)].

Throughout the aforementioned discussions, the Discloser may share proprietary information or Confidential Information with the Recipient subject to the terms and covenants set forth below.

NOW IT IS AGREED AS FOLLOWS:

1. Confidential Information

1.1 For the purposes of this Agreement, Confidential Information means any data or proprietary information of the Discloser that is not generally known to the public or has not yet been revealed, whether in tangible or intangible form, whenever and however disclosed, including, but not limited to:

- (i) any scientific or technical information, invention, design, process, procedure, formula, improvement, technology or method;
- (ii) any concepts, samples, reports, data, know-how, works-in-progress, designs, drawings, photographs, development tools, specifications, software programs, source code, object code, flow charts, and databases;
- (iii) any marketing strategies, plans, financial information, or projections, operations, sales estimates, business plans and performance results relating to the Discloser's past, present or future business activities, or those of its affiliates, subsidiaries and affiliated companies;
- (iv) trade secrets; plans for products or services, and customer or supplier lists;
- (v) any other information that should reasonably be recognised as Confidential Information by the Discloser.

1.2 The Discloser and the Recipient agree hereby that Confidential Information needs not to be novel, unique, patentable, copyrightable or constitutes a trade secret in order to be designated Confidential Information and therefore protected.

1.3 Confidential Information shall be identified either by marking it, in the case of written materials, or, in the case of information that is disclosed orally or written materials that are not marked, by notifying the Recipient of the confidential nature of the information. Such notification shall be done orally, by e-mail or written correspondence, or via other appropriate means of communication.

1.4 The Recipient hereby acknowledges that the Confidential Information proprietary of the Discloser has been developed and obtained through great efforts and shall be regarded and kept as Confidential Information.

1.5 Notwithstanding the aforementioned Confidential Information shall exclude information that:

- (i) is already in the public domain at the time of disclosure by the Discloser to the Recipient or thereafter enters the public domain without any breach of the terms of this Agreement;
- (ii) was already known by the Recipient before the moment of disclosure (under evidence of reasonable proof or written record of such disclosure);
- (iii) is subsequently communicated to the Recipient without any obligation of confidence from a third party who is in lawful possession thereof and under no obligation of confidence to the Discloser;
- (iv) becomes publicly available by other means than a breach of the confidentiality obligations by the Recipient (not through fault or failure to act by the Recipient);
- (iv) is or has been developed independently by employees, consultants or agents of the Recipient (proved by reasonable means) without violation of the terms of this Agreement or reference or access to any Confidential Information pertaining to the Discloser.

2. Purpose of the Disclosure of Confidential Information

The Discloser and Recipient will enter on discussions regarding future collaboration toward [insert description in the field of [...]] or [will submit a proposal for a collaborative project in response to the call (identify the call) under (identify funding)] or [will enter into or evaluate alternatives for partnership or collaboration with [name of the Recipient] for the purpose of [identify the intended undertaking].

3. Undertakings of the Recipient

3.1 In the context of discussions, preparations or negotiations, the Discloser may disclose Confidential Information to the Recipient. The Recipient agrees to use the Confidential Information solely in connection with purposes contemplated in this Agreement and not to use it for any other purpose or without the prior written consent of the Discloser.

3.2 The Recipient will not disclose and will keep confidential the information received, except to its employees, representatives or agents who need to have access to the Confidential Information for the purpose of carrying out their duties in connection with the permitted purposes specified in clause 2. The Recipient will inform them about the confidential quality of the information provided and will ensure that their agreement is obtained to keep it confidential on the same terms as set forth in this Agreement. Hence the Recipient will be responsible for ensuring that the obligations of confidentiality and non-use contained herein will be strictly observed and will assume full liability for the acts or omissions made for its personnel representatives or agents.

3.3 The Recipient will use the Confidential Information exclusively for the permitted purpose stated in clause 2 and not use the information for its own purposes or benefit.

3.4 The Recipient will not disclose any Confidential Information received to any third parties, except as otherwise provided for herein.

3.5 The Recipient shall treat all Confidential Information with the same degree of care as it accords to its own Confidential Information.

3.6 All Confidential Information disclosed under this Agreement shall be and remain under the property of the Discloser and nothing contained in this Agreement shall be construed as granting or conferring any rights to such Confidential Information on the Recipient. Principally, nothing in this Agreement shall be deemed to grant to the Recipient a licence expressly or by implication under any patent, copyright or other intellectual property right. The Recipient hereby acknowledges and confirms that all the existing and future intellectual property rights related to the Confidential Information are exclusive titles of the Discloser. For the sake of clarity based in good faith, the Recipient will not apply for or obtain any intellectual property protection in respect of the Confidential Information received. Likewise, any modifications and improvements thereof by the Recipient shall be the sole property of the Discloser.

3.7 The Recipient shall promptly return or destroy all copies (in whatever form reproduced or stored), including all notes and derivatives of the Confidential Information disclosed under this Agreement, upon the earlier of (i) the completion or termination of the dealings contemplated in this Agreement; (ii) or the termination of this Agreement; (iii) or at the time the Discloser may request it to the Recipient.

3.8 Notwithstanding the foregoing, the Recipient may retain such of its documents as required to comply with mandatory law, provided that such Confidentiality Information or copies thereof shall be subject to an indefinite confidentiality obligation.

3.9 In the event that the Recipient is asked to communicate the Confidential Information to any judicial, administrative, regulatory authority or similar or obliged to reveal such information by mandatory law, it shall notify promptly the Discloser of the terms of such disclosure and will collaborate to the extent practicable with the Discloser in order to comply with the order and preserve the confidentiality of the Confidential Information.

3.10 The Recipient agrees that the Discloser will suffer irreparable damage if its Confidential Information is made public, released to a third party, or otherwise disclosed in breach of this Agreement and that the Discloser shall be entitled to obtain injunctive relief against a threatened breach or continuation of any such a breach and, in the event of such breach, an award of actual and exemplary damages from any court of competent jurisdiction.

3.11 The Recipient shall immediately notify upon becoming aware of any breach of confidence by anybody to whom it has disclosed the Confidential Information and give all necessary assistance in connection with any steps which the Discloser may wish to take prevent, stop or obtain compensation for such a breach or threatened breach.

3.12 The Confidential Information subject to this Agreement is made available "as such" and no warranties of any kind are granted or implied with respect to the quality of such information including but not limited to, its applicability for any purpose, noninfringement of third-party rights, accuracy, completeness or correctness. Further, the Discloser shall not have any liability to the Recipient resulting from any use of the Confidential Information.

3.13 The Discloser is not under any obligation under this Agreement to disclose any Confidential Information it chooses not to disclose.

3.14 Nothing in this Agreement shall be construed to constitute an agency, partnership, joint venture, or other similar relationship between the Discloser and Recipient.

4. Miscellaneous

4.1 Duration and Termination

4.1.1 This Agreement shall remain in effect for a term of [number of months or years] term. Notwithstanding the foregoing, the Recipient's duty to hold in confidence Confidential Information that was disclosed during the term shall remain in effect indefinitely, save otherwise agreed.

4.1.2 If the Discloser and Recipient succeed in the call for proposal referred to in clause 2 and sign the corresponding Grant Agreement (GA) and Consortium Agreement (CA), or entered into partnership under any other kind of collaborative agreement (COA) or association agreement (AA), the non-disclosure provisions of the CA, COA and AA shall [supplement or supersede] this Agreement. In the event that non-disclosure provisions are not provided for the said private agreements in equal terms as stated herein, this Agreement shall remain in force until the end of the collaboration undertaken or after [months or years] of its termination.

4.2 Applicable Law and Jurisdiction

This Agreement shall be construed and interpreted by the laws of [choose the applicable law]. The court of [choose the jurisdiction to settle disputes] shall have jurisdiction.

4.3 Validity

If any provisions of this Agreement are invalid or unenforceable, the validity of the remaining provisions shall not be affected. The invalid or unenforceable provision shall be replaced by a valid and enforceable provision that will meet the purpose of the invalid or unenforceable provision as closely as possible.

4.4 Subsequent Agreements

Ancillary agreements, amendments or additions hereto shall be made in writing.

4.5 Communications

Any notices or communications required may be delivered by hand or e-mail, mailed by registered mail to the address of the Recipient/Discloser as indicated above. Any subsequent modification of addresses should be reasonably communicated in advance to the effect of this Agreement.

IN WITNESS WHEREOF, the Parties hereto have caused this Non-Disclosure Agreement to be executed as of the date stated above.

FOR [insert name of participant or potential or current partner]

[insert name of representative]

[insert title]

Done at [place] on [date]

END OF DOCUMENT