

A Holistic Approach to Sustainable, Digital EU Agriculture, Forestry, Livestock and Rural Development based on Reconfigurable Aerial Enablers and Edge Artificial Intelligence-on-Demand Systems

CHAMELEON D7.2. Outreach, Dissemination, Standardisation and Communication Activities v1

Work package	WP7: Market shaping, scale-up business models and socio- economic impact & Chameleon outreach and awareness generation
	Task 7.3: CHAMELEON Standardization and empowering UAV and RPAS systems.
Task	Task 7.4: CHAMELEON Awareness campaigns workshops and clustering events.
	Task 7.5: CHAMELEON Dissemination and Communication plan
Authors	USAL, UNP
Dissemination level	Public (PU)
Status	Final
Due Date	30/06/2023
Document date	07/07/2023
Version number	1.0
* * * * * * * Funded by the European Union	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 the European Research Executive Agency. Neither the European Union nor the European Research Executive Agency can be held responsible for them.

Revision and history chart					
Version	Date	Main author	Summary of changes		
0.1	17/04/2023	USAL	Draft for review of structure, Table of Contents preparation		
0.2	10/06/2023	USAL	First draft version		
0.3	12/06/2023	USAL	Second draft version		
0.4	16/06/2023	UNP	Contribution from T7.3		
0.4	22/06/2023	USAL	Final version for Quality Review		
0.5	06/07/2023	LAMMC	First Quality Review		
0.6	06/07/2023	MAICh	Second Quality Review		
1.0	07/07/2023	USAL	Final submitted version		



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GLOSSARY OF TERMS

Term	Description
Agency	European Research Executive Agency (REA)
Consortium	A consortium is a group made up of two or more individuals, companies, or governments that work together to achieve a common objective.
Dissemination procedures	Agreed procedures among CHAMELEON partners for dissemination, to ensure high quality publications and presentations, avoid overlaps and possible disclosure of confidential information, and to assist in monitoring project dissemination activities. They involve the partner instigating a dissemination action to provide an advance draft for comments/approval by the relevant dissemination task leaders and the Executive Board. The procedures are available to CHAMELEON partners on the SharePoint.
Google Analytics	Google Analytics is a web analytics service that offers basic analytical tools and statistics used for search engine optimization (SEO) and marketing.
LinkedIn	LinkedIn is a social networking site designed specifically for the business community.
MailChimp	MailChimp is a platform that offers email marketing service, with several options for designing and sending email newsletters and marketing messages to a mailing list.
SharePoint	Internal project management and file sharing platform at <u>https://acceligence.sharepoint.com/sites/CHAMELEON</u> (accessible by Chameleon partners only).
Twitter	Twitter is a free social networking site where users broadcast short posts (text, videos, photos, or links) known as tweets.
Unique visitor	A unique visitor is a term employed in marketing analytics that refers to an individual who has accessed the website at least once and is counted solely once within the reporting time frame. Consequently, if a user visits the website multiple times, they are only considered as one visitor.
YouTube	Online video sharing and social media platform



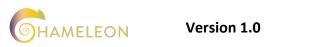
Viral Video	A viral video is a video that becomes popular through a viral process
	of Internet sharing, typically through video sharing websites such as YouTube as well as social media and email.
	Tourube as well as social media and email.



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LIST OF ABBREVIATIONS AND ACRONYMS

Abbreviation	Meaning
AI	Artificial Intelligence
ARD	Analysis Ready Data
D&C	Dissemination and Communication
DoA	Description of Action
EASA	European Union Aviation Safety Agency
EC	European Commission
EU	European Union
GIS	Geographic Information System
HEU	Horizon Europe
нттрѕ	Hyper Transfer Protocol Secure
KML	Keyhole Markup Language
KPIs	Key Performance Indicators
ML	Machine Learning
ODC	Open Data Cube
SEO	Search Engine Optimization
SMEs	Small and Medium-sized Enterprises
UAV	Unmanned Aerial Vehicle
UGV	Unmanned Ground Vehicle
URL	Uniform Resource Locator
WP	Work Package



1 EXECUTIVE SUMMARY

The present Deliverable D7.2 of the CHAMELEON project is part of the work conducted within the framework of WP7 "*Market shaping, scale-up business models and socio-economic impact* & CHAMELEON outreach and awareness generation".

The purpose of this document is to present and compile the Dissemination and Communication (D&C) activities carried out during each phase of the project, as well as to evaluate their performance to dynamically adapt the strategy, reinforcing weaker aspects and enhancing stronger ones.

This Deliverable is closely related and complementary to D7.1 *"Communication and Dissemination Strategy and Plan"*. It is highly recommended to read them in conjunction. The general approach aspects have been extensively elaborated in D7.1, and therefore, in this Deliverable, they have been referenced to avoid redundancy.

Three versions of this Deliverable will be published at M12, M24 and M36, respectively. The final version will encompass all the D&C activities carried out throughout the project.

CHAMELEON's strategic approach is designed in accordance with the guidelines of Horizon Europe.



2 INTRODUCTION

2.1 AIM OF THE DOCUMENT

The objective of this Deliverable "D7.2 – CHAMELEON Outreach, Dissemination, Standardisation and Communication Activities v1" is to serve as a report analysing the progress related to CHAMELEON Dissemination and Communication (D&C) activities.

This document will be periodically updated in M24 with "D7.4 - CHAMELEON Outreach, Dissemination, Standardisation and Communication Activities v2" and in M36 with "D7.6 - CHAMELEON Outreach, Dissemination, Standardisation and Communication Activities v3", monitoring progress to date.

2.2 TARGET READERSHIP

This Deliverable D7.2 is intended for both internal communication within the project Consortium and external distribution to interested parties beyond the project's scope.

Its primary audience consists of CHAMELEON Consortium members and the European Commission (EC, CHAMELEON Project Officer). It provides a detailed roadmap for CHAMELEON partners with the performed D&C actions, and how they can actively contribute to the planned D&C actions during the upcoming months, in order to promote the CHAMELEON insights and results.

Since this deliverable is public, it will be made accessible to external stakeholders through the project website (<u>https://chameleon-heu.eu/</u>) once it is officially accepted by the European Commission.

2.3 LIAISON WITH OTHER CHAMELEON DELIVERABLES

This Deliverable is closely interconnected to the following deliverables:

Deliverable	WP	Lead partner	Туре	Dissemination level	Due date
D7.1. CHAMELEON Communication and Dissemination Strategy and Plan	7	USAL	DEC – Websites, patent filings, videos, etc	PU – Public	M3
D7.4. CHAMELEON Outreach, Dissemination, Standardisation	7	USAL	R – Document, report	PU – Public	M24

Table 1: CHAMELEON Deliverables related to D7.2



and Communication Activities v2					
D7.6. CHAMELEON Outreach, Dissemination, Standardisation and Communication Activities v3	7	USAL	R – Document, report	PU – Public	M36

3 OBJECTIVES AND ROADMAP

The primary objective of the CHAMELEON Consortium's D&C strategy is to share the project advances and outcomes within a variety of audiences, in order to ensure the continuity of knowledge and maximize the project's impact. To establish a strong global presence, efficient internal communication channels and processes are necessary and have been developed to support the leader of WP7 in receiving all necessary information promptly, enabling the effective communication of project news and advances.

Therefore, the D&C strategy has a twofold objective: (i) internal, within the Consortium partners; and (ii) external, towards all involved and interested stakeholders. Regular progress reports have been consistently distributed to all CHAMELEON partners, and will continue with the aim of maximizing the project's impact at engaging external parties and ensuring a broad reach to relevant stakeholders. The project's objective is to attain the widest possible reach to pertinent stakeholders and create a satisfactory steady flow of information and publicity regarding its outcomes. Furthermore, the project will highlight its contribution to the advancement of European knowledge and scientific excellence, emphasise the significance of collaboration at a Europe-wide level, and, most importantly, showcase the benefits it brings to the citizens of the European Union (EU)).

The CHAMELEON key dissemination objectives are:

Dissemination stakeholders' analysis according to influence and interest at European and local levels with targeted actions and desired 'monitor, inform, satisfy, manage' relationship statuses attributed:

- To build awareness and trust in project ambitions with high quality content and credible performance results across multiple channels.
- To develop targeted messages for professional stakeholder segments at European and local levels.
- To profile skills, knowledge and experiences generated by CHAMELEON and support them with transparency and detail.
- To create a favourable environment for industrialisation, replication and exploitation in target markets and technologies.
- To support CHAMELEON open innovation methodologies to aid dissemination.
- To embody the EC Open Access Strategy to better build on previous research results, achieve greater efficiency, avoid duplication, and accelerate innovation particularly towards (Small and Medium-sized Enterprises) SMEs.



To accomplish these objectives, a practical roadmap is established that consists of three distinct phases: initial, intermediate, and final. This roadmap serves as a guide to ensure a systematic and structured approach towards achieving our goals. During the initial phase (M1-M12), the goals are to raise awareness and to communicate the project's objectives, its core idea, and the overall approach. In the intermediate phase (M13-M24), the goals are to establish a community of stakeholders and interested parties and to disseminate the project's findings. Lastly, in the final phase (M25-M36), the focus will be on presenting the project's results in a wider audience, promoting CHAMELEON's final solution, and exploring potential commercialization opportunities.

4 REGULATIONS AND STANDARDS

This chapter covers the most relevant regulations and standards within the scope of the CHAMELEON project. Each of them will match with at least one of the following domains:

- Drones Unmanned Aerial Vehicles (UAVs) are the core of the CHAMELEON project since they will be used to retrieve terrain images to feed Artificial Intelligence (AI) algorithms with.
- Agriculture Agricultural production is one of the areas where the CHAMELEON technology will be applied for validation purposes.
- Livestock Livestock production is another area where the solutions developed in the project will be used.
- Forestry This is the last of the three areas where CHAMELEON will prove its usefulness.
- Artificial Intelligence The guidelines for the end-users will be generated based on the outcomes of feeding AI algorithms with the images collected by the UAVs.
- Cartography The terrain images taken by the drones will necessarily comply with a set of cartography rules.
- Satellite Imagery Satellites may be another source of images to feed the AI models with.

4.1 **REGULATIONS**

The fact that drones share the airspace with other vehicles makes it vital to have clear rules on how to operate them safely. With that in mind, the following regulations were created.

Name	Easy Access Rules for Unmanned Aircraft Systems			
Description	Regulate the operation of UAVs with regards to airspace rules, mass of the vehicle, flight speed and altitude, etc.			
Domain(s)	Drones.			

Table 2: Regulations 2019/947 and 2019/945



Relevance for CHAMELEON	CHAMELEON's UAVs, which will be essential to obtain ground images and thermal videos for the established AI algorithms, must comply with the rules from the European Union Aviation Safety Agency (EASA) for this type of vehicles when being operated.
Stakeholders	Drone operators.
Link	https://www.easa.europa.eu/en/document-library/easy-access- rules/easy-access-rules-unmanned-aircraft-systems-regulations-eu

In its turn, the unremitting growth of the world population is making it increasingly important to find ways of feeding all human beings and, at the same time, looking after the planet. In other words, carrying out efficient and environmental-friendly agriculture and livestock production has become essential. In this regard, the European Union (EU) enforces the following set of laws to ensure the products quality.

Table 3: Regulation (EU) 2018/848

Name	Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic production and labelling of organic products and repealing Council Regulation (EC) No 834/2007
Description	Rules designed to promote environmental protection, preserving biodiversity, and building consumer trust in this type of products.
Domain(s)	Agriculture and livestock.
Relevance for CHAMELEON	It is important to ensure that all agricultural productions follow the key principles described in this regulation.
Stakeholders	Producers and agriculture experts.
Link	https://eur-lex.europa.eu/legal- content/EN/TXT/?uri=CELEX:32018R0848

Moreover, when generating guidelines for end-users, it is crucial to consider the currently implemented measures for protecting the environment. Therefore, specific forestry regulations have been developed to align with these objectives. These regulations ensure that the guidelines and practices provided to end-users promote environmental preservation and sustainability.

Table 4: Update to Regulation (EU) No 995/2010.



Name	Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010
Description	Laws designed to tackle deforestation.
Domain(s)	Forestry.
Relevance for CHAMELEON	It is important to take the measures that are being followed to prevent deforestation into account, when suggesting guidelines to users on this domain.
Stakeholders	Technical users that will generate guidelines for the end-user.
Link	https://eur-lex.europa.eu/legal- content/EN/TXT/?uri=CELEX%3A52021PC0706

On top of that, CHAMELEON's established systems rely their operation and performance on AI, which also has its own regulations, as shown below.

Table 5: Artificial Intelligence regulation proposal

Name	Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL LAYING DOWN HARMONISED RULES ON ARTIFICIAL INTELLIGENCE (ARTIFICIAL INTELLIGENCE ACT) AND AMENDING CERTAIN UNION LEGISLATIVE ACTS
Description	Rules designed to make sure that AI systems do not violate existing law on fundamental rights and Union values.
Domain(s)	Artificial Intelligence.
Relevance for CHAMELEON	The usage of AI within the project must comply with all the guidelines established for this domain.
Stakeholders	Al developers.
Link	https://eur-lex.europa.eu/legal- content/EN/TXT/?uri=celex%3A52021PC0206



4.2 STANDARDS

The Drone Standards Information Portal¹ stands out for its comprehensive catalog of UAV standards. The platform contains more than two hundred standards, organised into twenty-five categories, covering topics that range from the operational perspective of UAVs all the way to design, engineering and maintenance aspects. Due to the great number of standards and the fact that the portal is concise and easy to navigate, it was decided not to list them in this deliverable.

Standards play a crucial role for the domains of agriculture, livestock, and forestry as they establish a shared framework (common language) that, when adhered by all experts within these fields, promotes sustainability and cost-effectiveness in production while concurrently minimising the environmental impact. Furthermore, the CHAMELEON system makes use of technologies such as AI and relies on terrain data to provide input for the algorithms. Hence, the following standards related with these areas were identified. It is worth mentioning that, for the sake of simplicity, only the highest-level standard is included when it encompasses multiple components.

¹ <u>https://standards.aw-drones.eu/requirements/SORA</u>



Table 6: ISO 11783

Name	ISO 11783 Tractors and machinery for agriculture and forestry
Description	Enables devices from different agricultural equipment manufacturers to communicate with each other.
Domain(s)	Agriculture and forestry.
Link	https://www.iso.org/search.html?q=11783&hPP=10&idx=all_en&p=0&hFR% 5Bcategory%5D%5B0%5D=standard

Table 7: ISO 21384

Name	ISO 21384 Unmanned aircraft systems
Description	Establishes a common way to map farming areas using drones.
Domain(s)	Agriculture.
Link	https://www.iso.org/search.html?q=21384&hPP=10&idx=all_en&p=0&hFR% 5Bcategory%5D%5B0%5D=standard

Table 8: ISO 17532:2007

Name	ISO 17532:2007 Stationary equipment for agriculture – Data communications network for livestock farming
Description	Specifies a protocol for the control of and communication between computer systems, used in livestock production, as well as across the Internet.
Domain(s)	Livestock.
Link	https://www.iso.org/standard/38404.html

Table 9: ISO/IEC DIS 5392

Name	ISO/IEC DIS 5392
Description	Provides guidelines for designing the architecture of AI systems.
Domain(s)	Artificial Intelligence.
Link	https://www.iso.org/standard/81228.html?browse=tc



Table 10: Keyhole Markup Language

Name	Keyhole Markup Language (KML)
Description	XML notation for expressing geographic annotation and visualisation within 2D maps and 3D Earth browsers.
Domain(s)	Cartography.
Link	https://www.ogc.org/standard/kml

Table 11: ISO 19115

Name	ISO 19115
Description	Metadata standard which defines how to describe geographical information and associated services, including contents, spatial-temporal purchases, data quality, access, and rights to use.
Domain(s)	Cartography.
Link	https://www.iso.org/search.html?q=19115&hPP=10&idx=all_en&p=0&hFR% 5Bcategory%5D%5B0%5D=standard

Table 12: Open Data Cube

Name	Open Data Cube (ODC)
Description	Open-source solution for accessing, managing, and analysing large quantities of Geographic Information System (GIS) data.
Domain(s)	Cartography.
Link	https://www.opendatacube.org

Table 13: Analysis Ready Data

Name	Analysis Ready Data (ARD)
Description	Defining and preparing ARD products is crucial to expanding the utility and adoption of Earth observation data, particularly by non-experts in remote sensing.



Domain(s)	Satellite Imagery.
Link	https://earth.esa.int/eogateway/documents/20142/37627/Analysis+Ready+ Data.pdf/f19baa0e-ef74-4037-c507-8b800ebb888d

5 DISSEMINATION AND COMMUNICATION KPIS

The WP7 leader periodically reviews the performance of the D&C objectives, the KPIs and the validation measures for the results' acceptance. USAL regularly monitors the progress against KPIs as set out in the Description of Action (DoA) throughout the whole project lifetime. The KPIs assess the efficacy of the CHAMELEON D&C activities. This is reported to project partners at project meetings. Exact measurements are provided in periodic reports. The specific KPIs for WP7 are presented in Table 14 below.

Table 14: CHAMELEON Dissemination and Communication KPIs (M1-M12)

Activity	Target (M12)	Status (M12)
Communication Strategy and Plan: Annual project review	Positive	Positive
Website: number of visitors (unique, returning)	250/month	63/month
Social media: total number of followers	250	189
Social media: total number of posts	200	93
Social Media Campaigns: total number	1	1
No of project videos: total number	>=0	4
Video views on YouTube	-	174
Communications kit: brochures and posters	>=2	2
Printed material distributed	300	400
No. of e-Newsletter: total number	>=1	2
Quantity of media coverage achieved	>=10	8
No. of peer reviewed publications	>=3	3
Readership results	150	2651



No. of CHAMELEON Workshops	1	2
No. of End Users attending CHAMELEON Workshops	40	39
No. of project events in conferences/congresses	>=1	1
No. of presentations	>=10	8
No. of demonstrations/exhibitions	-	-
No. of Awareness Campaigns	>=2	2
No. of final event attendees	-	-
No. of public and Media attending Final event	-	-
No. of End Users Engaged	>=50	55
No. of industry representatives involved	>=25	21
No. of associations and organisations involved	>=3	3
No. of projects contacted	>=8	6
No. of liaison activities performed	>=5	4
No. of discussions in fora, committees and organisations	>=5	4
No. of Standardisation bodies reached	>=2	2

6 BRAND IDENTITY AND CHANNELS

6.1 BRAND IDENTITY

The CHAMELEON project has successfully established a resilient brand identity since its inception.

This is crucial, as it enables the communication of the project's various purposes and values, and associates them with a visual identity that allows for easy recognition and differentiation from others. As the project progresses and more end-users become involved and benefit from it, positive emotions are generated, building loyalty towards the brand. Therefore, maintaining consistency with a carefully planned brand identity is essential for any project.

Furthermore, it is essential to have a roadmap and a wide target audience identification aligned with the project's purpose, allowing for actions to be directed in the appropriate direction.



In Deliverable D7.1 "Communication and Dissemination Strategy and Plan", a detailed overview is provided regarding the created material for the establishment of this brand identity. This includes communication material, project templates, and internal procedures for carrying out dissemination activities within the project framework. The objectives for each project phase are also defined based on the maturity achieved over time and the target audience to whom the advances should be directed.

In this section, some of these aspects are briefly summarised to provide context for the starting point from which to showcase the activities that have led to progress in recent months.

6.1.1 COMMUNICATION MATERIAL

CHAMELEON's communication material is publicly available on the official project's website. Some information about it is shown in <u>Table 15</u>.

A professional designer created the CHAMELEON Logo to meet the project's D&C needs. Alongside it, the CHAMELEON Brand Book was produced, establishing style guidelines to ensure the quality and consistency of the disseminated material.

In addition, a brochure and a roll-up banner were created to present and advertise the project at various events.

Materi al	Link	Image
Logo pack	https://chameleon-heu.eu/wp- content/uploads/2022/09/LOGO PAC KAGE.zip	Image: Constraint of the second se

Table 15: CHAMELEON Communication Material



Brand book	https://chameleon-heu.eu/wp- content/uploads/2022/09/CHAMELE ON-BRAND-BOOK.pdf	<section-header> LOGO OVERVIEW Format Portat We day wold of the structuring opposite wold wold wold wold wold wold wold wold</section-header>
Leaflet	https://chameleon-heu.eu/wp- content/uploads/2022/09/Brochure_ v1.pdf	<image/> <section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>



Roll-up banner	https://chameleon-heu.eu/wp- content/uploads/2022/09/CHAMELE ON-ROLLUP_STAGE-2.pdf	<image/>

6.1.2 PROJECT TEMPLATES

Standard templates based on the brand identity have also been created, and are now accessible on the CHAMELEON SharePoint (<u>here</u>), for both internal and external activities to ensure the consistency of the presented material. These templates are listed below:

- Dissemination templates:
 - PowerPoint Presentation (available <u>here</u>)



- Press Release (available here)
- Dissemination activity report (available <u>here</u>)
- Non-European Travel Report (available <u>here</u>)
- Project templates:
 - Deliverable Template (available <u>here</u>)
 - Peer Review Template (available <u>here</u>)
 - Meeting Agenda Template (available <u>here</u>)
 - Meeting Minutes Template (available here)

Partners must use these templates during the lifetime of the project.

6.2 **PROJECT WEBSITE**

The website was launched in M3, and is accessible through the URL address <u>https://chameleon-heu.eu/</u>, emphasizing its association with the EU and the Horizon Europe funding programme. The visual design conforms to the established brand identity of the project, ensuring consistency. Its content was described in detail in "D7.1. CHAMELEON Communication and Dissemination Strategy and Plan".

However, continuous efforts are being made to enhance the website, while the present Deliverable D7.2. showcases the improvements since the previous version. The webpage structure is presented in Table 16, with the modified elements in bold type.

Section	Subsection
Home	
Project	About
	Objectives
	Expected Impact
	Consortium
	Synergies
Approach	
Pilots	
Newsroom	News

Table 16: CHAMELEON Website structure: Sections and subsections



	Newsletters
	Press
	Videos
Publications	Scientific Papers
	Presentations
	Deliverables
	Communication Material
Open Calls	
Contact	

The "*Synergies*" subsection has been included, which features other European projects that the CHAMELEON Consortium has begun collaborating with (Figure 1). Additionally, the "*Videos*" subsection has been added within the "*Newsroom*" section, where audio-visual project content is published (Figure 2). Finally, the "*Open Calls*" section has been included, which will serve as an information point for updates related to this topic (Figure 3).



Figure 1: CHAMELEON Website section: "Synergies"



Version 1.0

07/07/2023

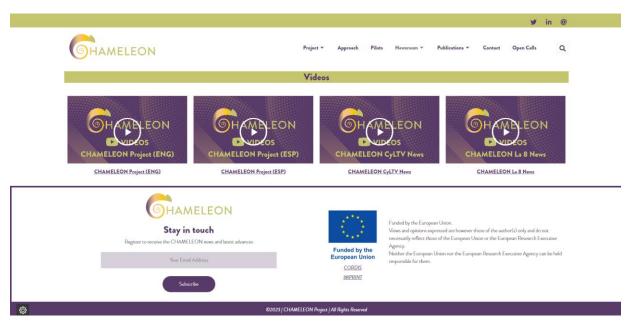
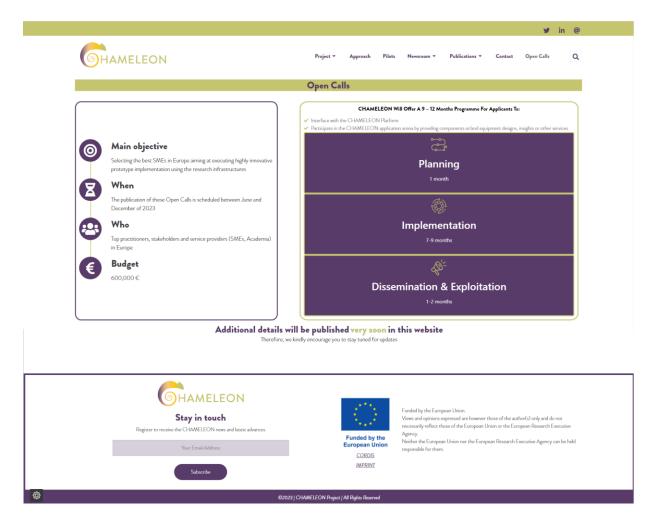


Figure 2: CHAMELEON Website section: "Videos"





Version 1.0





Figure 3: CHAMELEON Website section: "Open Calls"

The CHAMELEON website will be updated and sustained beyond the project's conclusion. Its purpose is to disseminate information about the project's publishable outcomes and provide contact details for individuals interested in obtaining further information. The website will serve as a reliable resource for accessing project-related information beyond the project's completion.

6.2.1 STATISTICS

Monitoring website access statistics is crucial in understanding users' behaviour. The CHAMELEON website is utilizing Google Analytics, a service provided by Google for this purpose. Google Analytics enables the monitoring of various statistics, including the total number of users, their geographical origin, their interactions with the website, the specific pages they visit, and the devices they use to access the website (as depicted in Figure 4). This information can be used to improve website performance, enhance the user experience, and ultimately drive more traffic to the website.

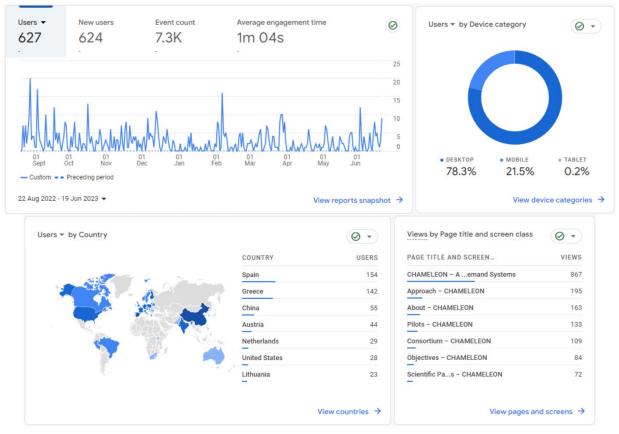


Figure 4: CHAMELEON Website statistics with Google Analytics (M1-M12)



6.3 SOCIAL MEDIA

In this section, the role of social media in CHAMELEON project will be explored and its benefits and implications will be discussed. Social media platforms such as Twitter, LinkedIn, and YouTube have transformed the way European projects engage with stakeholders, disseminate project information, and foster collaboration across borders.

6.3.1 TWITTER

Twitter's fast-paced and real-time nature makes it an ideal platform for CHAMELEON project to share project updates, news, and insights with stakeholders. With its vast user base, including policymakers, experts, and the general public, Twitter allows CHAMELEON to reach a diverse audience and increase visibility, especially in those pillars related with agriculture, forestry and livestock. By crafting concise and impactful messages, projects can convey their mission, achievements, and ongoing activities to a wide range of stakeholders.

Current Twitter statistics, as at 21/06/2023 are:

- Number of followers: 49
- Number of accounts followed by CHAMELEON: 82
- Total number of tweets and retweets: 45



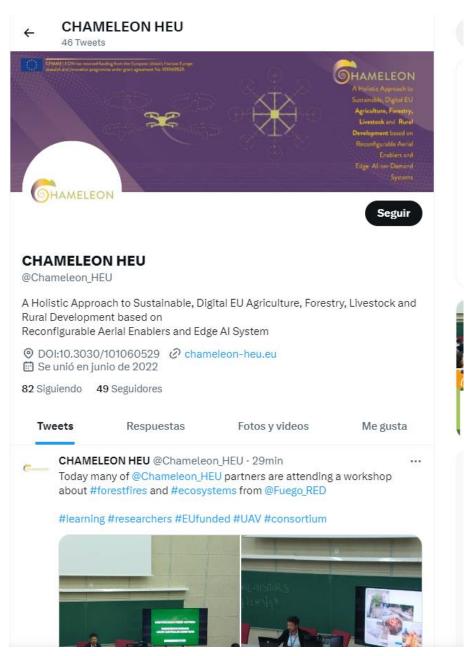


Figure 5: CHAMELEON Twitter account



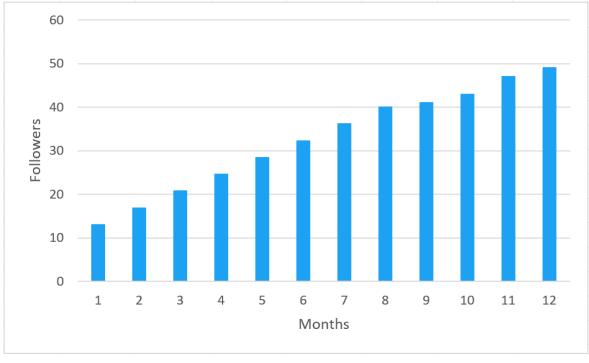


Figure 6: CHAMELEON Twitter statistics (M1-M12)

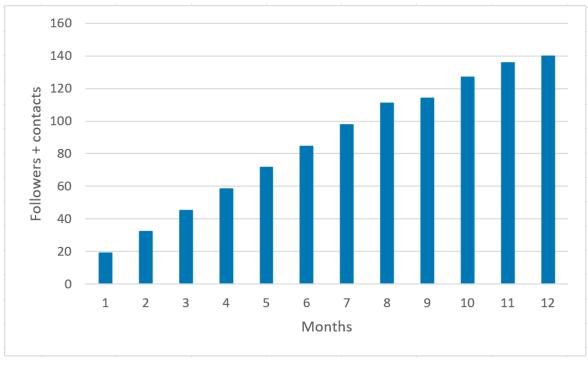
6.3.2 LINKEDIN

LinkedIn's professional-oriented features enable CHAMELEON project to establish a credible and reputable online presence. This serves as a digital portfolio, allowing stakeholders, potential partners, and policymakers to gain a comprehensive understanding of the CHAMELEON's mission and accomplishments.



Figure 7: CHAMELEON LinkedIn account





CHAMELEON D7.2. Outreach, Dissemination, Standardisation and Communication Activities v1

Figure 8: CHAMELEON LinkedIn statistics (M1-M12)

6.3.3 YOUTUBE

YouTube's wide user base and search functionality make it an ideal platform for CHAMELEON project to increase their visibility and reach. By creating and optimizing project-specific YouTube channels, projects can attract subscribers, build a dedicated community, and expand their audience beyond geographical limitations. This enables projects to share their achievements, research findings, and innovative solutions with a global network of stakeholders, including policymakers, experts, and the general public.

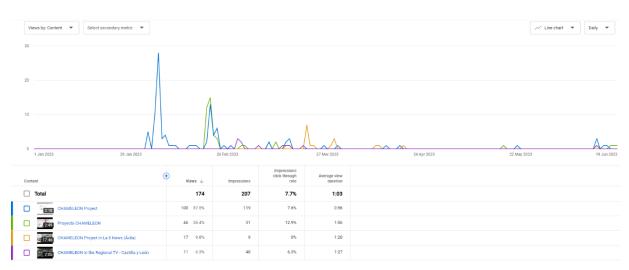


Figure 9: CHAMELEON YouTube statistics (M1-M12)



7 EVENTS AND SYNERGIES

7.1 EVENTS

In European projects, the organization and promotion of events play a crucial role in creating awareness, fostering collaboration, and disseminating project outcomes. Events serve as platforms for knowledge exchange, networking, and showcasing the achievements of the project. They bring together stakeholders, experts, policymakers, and the general public to fostering meaningful discussions and facilitating collaborations. Up to now CHAMELEON has organized different events for disseminating the first outcomes of the project and for generating synergies with the end-users.

7.1.1 WORKSHOPS

Two workshops were held in Ávila (Figure 10) and Chania (Figure 11), where multiple stakeholders were invited. These workshops had a twofold objective: to raise awareness about CHAMELEON project and provide information on its overall aim, while also to receive feedback on the specific needs of the local end-users in agriculture, forestry and livestock.

A total of 39 attendees participated, and tools were used to encourage active involvement and fruitful dialogue between CHAMELEON partners and end-users. Elements of interest, such as specific needs, barriers, risks and potential solutions, were identified during these workshops.



Figure 10: CHAMELEON Workshop in Ávila





Figure 11: CHAMELEON Workshop in Chania

7.1.2 CONFERENCES

CHAMELEON participated in the International Symposium on Applied Geoinformatics (ISAG2022), which took place from 12 to 14 October 2022 in Chania, Greece (Figure 12).

During the international conference, which attracted an audience of 200 people, the CHAMELEON project was presented to approximately 40-50 attendees. The presentation focused on showcasing the project's main objectives, characteristics, and approach.



Figure 12: Participation of CHAMELEON in the International Symposium on Applied Geoinformatics (ISAG2022)



In addition, the CHAMELEON partners participated in a three-day innovation conference: *Innodays 2022*, which took place in Heraklion, Crete, from 25 to 27 November 2022. In this event, every participant presented its innovative work in its kiosk (Figure 13).



Figure 13: Participation of CHAMELEON in InnoDays 2022

CHAMELEON was also present in Expo Biomasa, held in Valladolid, Spain, from 9 to 11 May 2023. This exhibition served as an exceptional platform, facilitating the discovery of synergistic relationships amidst various initiatives rooted in innovation (Figure 14).





Figure 14: Participation of CHAMELEON in Expo Biomasa 2023

Furthermore, CHAMELEON was also presented at the webinar held in April, entitled "*New Milestones in Drones – from New Drones Designs to Real-Time and Artificial Intelligence Applications*", with MDPI editorial (Figure 15).



Figure 15: Participation of CHAMELEON in the webinar EO&GEO Series: New Milestones in Drones – from New Drones Designs to Real-Time and Artificial Intelligence Applications, with MDPI editorial



Besides, CHAMELEON project's insights were also presented in the 2023 International Conference on Unmanned Aircraft Systems ICUAS 2023, which took place in Lazarski University, Warsaw, Poland. Prof. George Arampatzis presented the "Unmanned Aerial Vehicles and Livestock Management: An Application in Western Crete".

7.1.3 DISCUSSIONS WITH ORGANISATIONS AND ASSOCIATIONS

The CHAMELEON project has been presented at various meetings and discussions with relevant associations and organisations within the sector. Some examples of such meetings took place in Ávila. In the first one (Figure 16), the CHAMELEON partners met with stakeholders from the vineyard industry and engaged in the exchange of opinions, concerns and solutions. In the second one (Figure 17), relevant project issues were discussed with authorities related to the emergency plan of Ávila.



Figure 16: Participation of CHAMELEON in a discussion with AvilAgro



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Figure 17: Participation of CHAMELEON in a discussion with authorities related to the emergency plan of Ávila

7.1.4 CHAMELEON OPEN CALLS

The main objective of the open calls in CHAMELEON is selecting the top practitioners, stakeholders and service providers (SMEs, Academia) in Europe aiming at executing highly innovative prototype implementation using the research infrastructures. Secondly, to enable the expansion of the CHAMELEON innovation platform in regions and countries that currently not on-board thus achieving Pan-European network of UAV are а and agriculture/forestry/livestock practitioners.

Two open calls will be organized to attract and select the best SMEs from across the continent. The publication of these Open Calls is scheduled for the next six months of the project (M12-M18), and they will have a duration of nine to twelve months. Some of the potential topics of these Open Calls include: development of specific bundles that add value to the project, dockerization of the established modules, and cloud storage management. CHAMELEON will ensure community awareness of the open calls through:

- Organization of 5 specialized events in Lithuania, Austria, Portugal and Greece.
- Email communication in CHAMELEON database of associated users, researchers, developers' communities and market experts.



- Publication on the CHAMELEON website, and on the website of industrial partners, associations, incubators and infrastructures involved in the project.
- Posting on CHAMELEON's social media channels and specialized blogs that are read by a large number of users.
- Announcement of the call at relevant events and communication to groups.
- Promotion of the open calls at forums where the targeted applicants are normally present.

7.2 SYNERGIES

CHAMELEON has initiated collaboration with other European projects to form a cluster with the common theme of rural development through the use of drones. Some of the sister projects with this thematic focus are:

• ICAERUS:

Project overview: ICAERUS project will explore the multi-purpose application potential of drones in agricultural production, forestry and rural communities through five specific drone applications. The selected drone applications represent the most important sectoral and societal uses of drones in Europe and cover multiple applications that are interconnected within Europe's complex rural landscape. The project will identify the associated risks and added values and provide a more complete and interconnected account of the potential and impact of drones as multi-purpose vehicles. ICAERUS will further develop existing software technology, platform components and knowledge about drones either as positioning systems for visual observation and recording or as instruments for spraying and delivering goods.

Project website: https://icaerus.eu/

• SPADE:

Project overview: The strategic objective of SPADE project is to develop an intelligent ecosystem to address the multiple purposes concept in the light of deploying unmanned aerial vehicles (UAVs alias drones) to promote sustainable digital services for the benefit of a large scope of end users in sectors of crop production, forestry, and livestock. This includes individual UAV usability, UAV type applicability (e.g., swarm, collaborative, autonomous, tethered), UAV governance models availability and UAV-generated data trustworthiness. Multi-purposes will be further determined in the sensing dataspace reusability based on trained Artificial Intelligence (AI)/Machine Learning (ML) models. These models will enable sustainability and resilience of the overall life cycle of developing, setting up, offering, providing, testing, validating, refining as well as enhancing digital transformations and "innovation building" services in agriculture. Pilot prototypes will contribute toward greater goals, such as the reduction of deforestation, precision farming and animal welfare.

Project website: https://spade-horizon.eu/

CHAMELEON is promoting joint activities with these projects, such as the 1st Webinar on Rural Development, with MDPI editorial, for the end of September-October 2023. Also, the participation in the SAH Synergy Days, a physical event, is planned for October 2023, in



Thessaloniki. Furthermore, a common dissemination strategy is being developed with these projects, which will include content such as e-newsletters and/or videos.

8 PUBLICATIONS

8.1 SCIENTIFIC PAPERS

As of the publication date of this Deliverable, three scientific papers have been published, and another scientific paper is currently under review.

The first two scientific papers (Table 17) were published in MDPI journals: Agronomy and Drones. These are international, peer-reviewed, open access journals published monthly online. Moreover, they are available on the CHAMELEON website. Besides, the third scientific article was published in IEEE Xplore.

Title	Partners involved	Journal	Editorial	DOI Link
MachineLearning-BasedProcessing of Multispectral andRGBUAVImageryforMultitemporalMonitoringVineyardWater Status	UCLM	Agronomy	MDPI	https://doi.org/10. 3390/agronomy12 092122
Structural Component Phenotypic Traits from Individual Maize Skeletonization by UAS-Based Structure-from-Motion Photogrammetry	USAL	Drones	MDPI	https://doi.org/10. 3390/drones7020 108
Unmanned Aerial Vehicles and Livestock Management: An Application in Western Crete	MAICh	2023 Internatio nal Conferenc e on Unmanne d Aircraft Systems (ICUAS)	IEEE Xplore	https://ieeexplore. ieee.org/documen t/10155900

Table 17: CHAMELEON Scientific Papers.

A topic was also created in MDPI journal, within the project approach. Its title is "Unmanned Ground and Aerial Vehicles (UGVs – UAVs) for Digital Farming". This topic aims to stay abreast



of advancements in the latest applications stemming from the utilization of UGVs and UAVs within the digital farming framework. This includes the evolution of integrating precision crop management systems and smart operations, as well as highlighting the challenges that remain to be addressed.

The target established in the KPIs was 3 scientific papers. The reason for not reaching this target was that no specific results were obtained in the first 12 months of the project from which publications could be derived. Nonetheless, we are confident that we will achieve the established goal by the end of the project.

8.2 PRESS RELEASES

The first press release was issued by the T7.5 leader in September 2022 aiming to announce the project start, its main objectives and expected impacts. The press release, which is available in the CHAMELEON website, was distributed to the consortium with the request to translate if needed and inform their media contacts.

Some of the press releases in the local language that were published after this first press release are shown in <u>Figure 18</u>.



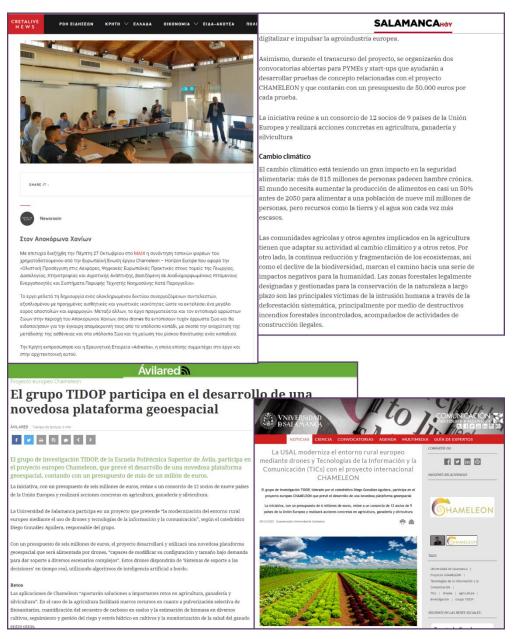


Figure 18: CHAMELEON Press releases in local language

8.3 E-NEWSLETTER

Two issues of the electronic newsletter were published in M5 and M12, presenting the project's progress, status and next steps to an audience of 67 users who registered on the CHAMELEON Stakeholder Community.

The marketing platform utilized was MailChimp. MailChimp enables to effectively manage and execute targeted email marketing campaigns, and to monitor their statistics.

For the first e-newsletter, the open rate was 50%, and the clicks per unique opens were 45.2%. For the second e-newsletter, reliable calculations for the open rate and clicks per unique open have not been feasible, due to its recent publication.



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These e-newsletters can be found in Annexes $\underline{1}$ and $\underline{2}$.

8.4 PROJECT VIDEOS

A total of 4 videos related to the CHAMELEON project have been published in both English and Spanish. These videos are openly available on the website and the YouTube channel.

The objective of these videos is to disseminate the project's content in a visually appealing manner.

9 CONCLUSIONS AND PLANNED ACTIONS

In this Deliverable, the results of the D&C activities for the CHAMELEON project carried out during the first year are thoroughly presented, as well as an objective evaluation of these activities, by comparing them with the anticipated KPIs set before the project's start.

The overall assessment is positive. Although some KPIs were not met, such as the monthly website visits or the number of social media followers, the vast majority of the other objectives were surpassed, including the production of promotional project videos, organization of workshops, and impact on the scientific community.

In the forthcoming months, we will adjust and improve some of the proposed D&C strategies to optimize the performance of the activities in the areas where lower scores were achieved. For example, as the project progresses and more bundles are developed, a greater amount of high-quality content will be published and showcased on CHAMELEON's official platforms, which will naturally attract a larger audience. Moreover, synergies with other projects will be increased by conducting more joint activities.

The update of this Deliverable with the new D&C activities will be carried out in Deliverable D7.4 "CHAMELEON Outreach, Dissemination, Standardisation and Communication Activities v2".



ANNEX 1: CHAMELEON 1ST E-NEWSLETTER

OHAMELEON

A Holistic Approach to Sustainable, Digital EU Agriculture, Forestry, Livestock and Rural Development based on Reconfigurable Aerial Enablers and Edge Artificial Intelligence-on-Demand Systems



November 2022 | Vol. 1

Welcome to the first issue of the CHAMELEON Newsletter

This newsletter will be published twice per year, bringing the latest news and advances of the CHAMELEON project.

You can subscribe to receive this newsletter in your email by registering:

Here

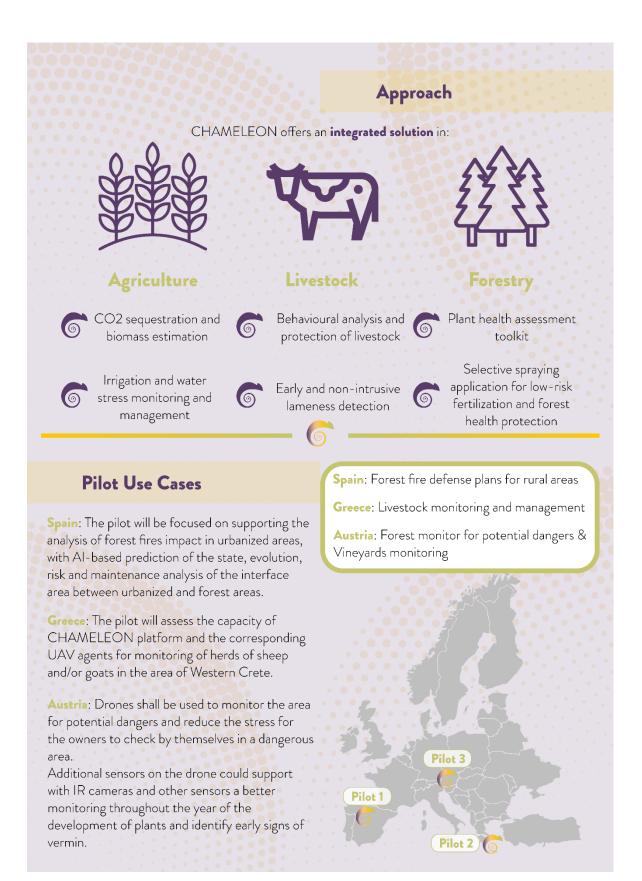
Get to know the project

CHAMELEON is a Horizon Europe Project that aims to optimise production and identify potential problems in agriculture, livestock, forestry and rural areas.

To achieve this, the CHAMELEON Project will use a novel reconfigurable drone, able to modify its configuration and sizing upon demand, which can be deployed in homogeneous or heterogeneous groups to support complex scenarios, as well as a set of existing heterogeneous, modular, interoperable, networked unmanned vehicles systems.



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The inaugural event of the CHAMELEON project was held on 12-13 July in Athens, Greece. More than 30 experts from 9 European countries participated in this face-toface kick-off meeting, which was also streamed online for all partners. Over the next 3 years, the 12 project partners will work together to optimise production and identify potential problems in agriculture, livestock and forestry, using drones with on-board Al decision-making packages.

Read more

The 1st CHAMELEON Scientific Paper "Machine Learning-Based Processing of Multispectral and RGB UAV Imagery for the Multitemporal Monitoring of Vineyard Water Status" was published in September 7, 2022 by Universidad de Castilla - La Mancha partner in "Agronomy": an international, scientific, peer-reviewed, open-access journal published by MDPI.

Read more

1st Scientific Paper and Press Release

The 1st CHAMELEON Press Release was published on September 30, 2022, to announce the launch of the Project, and inform about its goals and technologies to be developed.

Read more



A new topic for the publication in MDPI journals has been created by our partner **Grupo de investigación TIDOP from Universidad de Salamanca** and the CHAMELEON Dissemination Manager Diego González-Aguilera, within the project approach: **Unmanned Ground and Aerial Vehicles (UGVs – UAVs) for Digital Farming**.

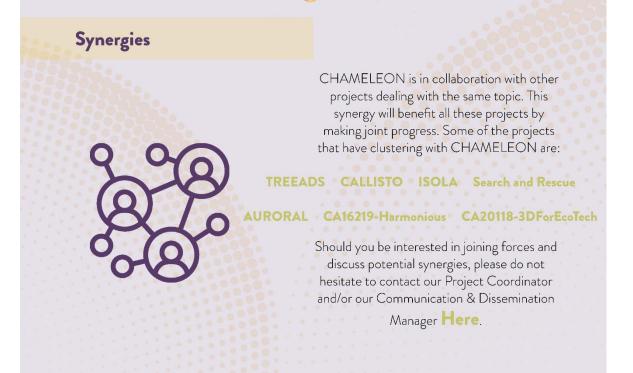
This Topic aims to keep up with progress on the latest applications derived from the use of unmanned ground and aerial vehicles (UGVs-UAVs) within the digital farming framework, including the evolution of integrating precision crop management systems and smart operations, as well as pointing out the challenges still ahead.

New Topic in MDPI





Read More





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ANNEX 2: CHAMELEON 2ND E-NEWSLETTER



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OHAMELEON

A Holistic Approach to Sustainable, Digital EU Agriculture, Forestry, Livestock and Rural Development based on Reconfigurable Aerial Enablers and Edge Artificial Intelligence-on-Demand Systems

Newsletter

We are thrilled to announce the second issue of the CHAMELEON e-newsletter

This platform offers you an intimate glimpse into the forefront of our ongoing research activities and key project updates.

In this issue, we delve into a comprehensive review of the events and milestones that have shaped the CHAMELEON project over the past few months. It is an exciting showcase of the strides we are making in

the research landscape, from groundbreaking discoveries to significant collaborations and public engagements.

June 2023 | Vol. 2

Follow us for updates

For those eager to stay updated on the CHAMELEON project's evolution, we encourage you to subscribe to our e-newsletter. Click **here to sign up** and never miss an issue. Our promise is to deliver insights straight to your inbox, presenting comprehensive updates that are both engaging and enlightening.

You can also follow us on our various social media platforms to stay connected with our daily activities. Be a part of our online community and join the conversations that are helping to shape the future of research. Together, we are pushing the boundaries of knowledge and setting new standards in research. Stay tuned for more updates.







A total of 39 attendees participated, and tools were used to encourage active involvement and fruitful dialogue between CHAMELEON partners and end-users. Elements of interest, such as specific needs, barriers, risks and potential solutions, were identified during these workshops.

Chania (Greece)





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Conferences & Events

CHAMELEON participated in the International Symposium on Applied Geoinformatics (ISAG2022), which took place from 12 to 14 October 2022 in Chania, Greece



In this international conference with an audience size of 200 people, the CHAMELEON project was presented to 40-50 attendees, and its main objectives, characteristics and approach were shown.

Read more

In addition, the CHAMELEON partners participated in a three-day innovation conference: **Innodays 2022**, which took place in Heraklion, Greece, from November 25th to November 27th. In this event, every participant presented its innovative work in its kiosk.







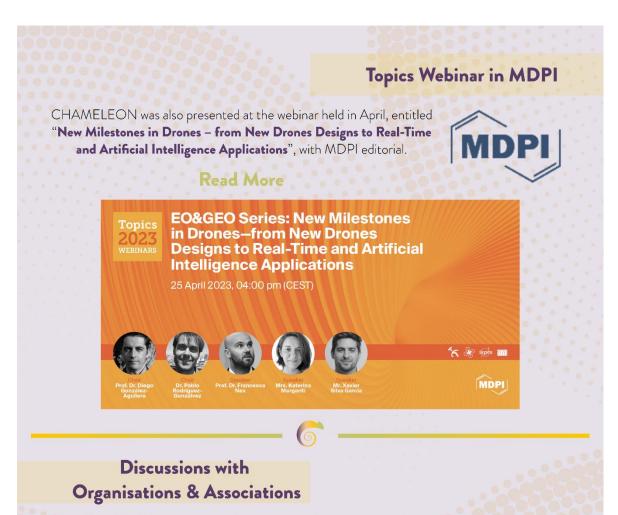
Read more

CHAMELEON was also present in Expo Biomasa, held in Valladolid, Spain from 9 to 11 May 2023. It was a great opportunity to find sinergies between innovation actions.

Read more



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The CHAMELEON project has been presented at various meetings and discussions with relevant associations and organisations within the sector. Some examples of such meetings took place in Ávila. In the first one (left) the CHAMELEON partners met with stakeholders from the **vineyard industry** and engaged in the exchange of opinions, concerns and solutions. In the second one (right), relevant project issues were discussed with authorities related to the **emergency plan of Ávila**.

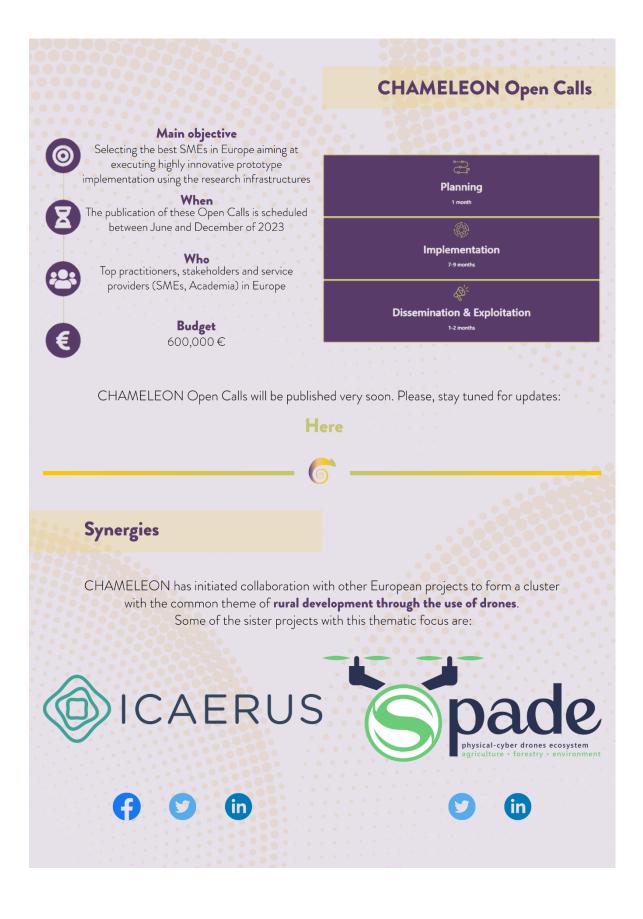




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A Holistic Approach to Sustainable, Digital EU Agriculture, Forestry, Livestock and Rural Development based on Reconfigurable Aerial Enablers and Edge Artificial Intelligence-on-Demand Systems

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