



Open Call #2

Guide for Experts



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CHAMELEON

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

The Members of the CHAMELEON Consortium:



Contact:

Project Coordinator: *Pantelis Velanas*
Accelience Ltd.

pvelanas@accelience.tech

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DEFINITIONS

Term	Definition
EC	The European Commission.
ESR	Each applicant will receive the evaluation result in the form of an Evaluation Summary Report.
HE	Horizon Europe framework programme.
Lump Sum	<p>The lump sum is a simplified method of settling expenses in projects financed from Horizon Europe funds. It means that you as a beneficiary are not required to present strictly defined accounting documents to prove the cost incurred (e.g. invoices). However, you are obliged to demonstrate the implementation of the project in line with the deliverables set for it. It means that we will carefully assess your progress and the quality of your work during Interim Reviews, not your accountancy. The deliverables will be fixed in the implementation plan elaborated at the beginning of the programme. The lump sum does not release you from the obligation to collect documentation to confirm the costs under fiscal regulation.</p> <p>https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/horizon/lump-sum).</p>
Open Call	<p>Financial support for third parties in the framework of an EU funded project</p> <p>https://webgate.ec.europa.eu/funding-tenders-opportunities/pages/viewpage.action?pageId=25559615).</p>
OCMB	<p>The Open Call Management Board (OCMB) consisting of UNPARALLEL Innovation (UNP), Universidad de Salamanca (USAL) and Acceligence Ltd (ACCELI), who are responsible for the good and timely execution of the sub-projects.</p>
Sub-grant agreement	<p>A legal document to be executed by the successful applicants of the Open Call which will establish all the terms and conditions for the sub-project's execution and financing.</p>
SMEs	<p>Entities having up less than 250 employees and up to an annual turnover of 50 million € or up to a balance sheet total of 43 million €. Small and medium-sized enterprises (SMEs) are defined in the EU recommendation 2003/361</p> <p>https://single-market-economy.ec.europa.eu/smes/sme-definition_en).</p>

Third Parties	<p><i>Legal entities that participate in Horizon Europe by carrying out some tasks in an action, but which do not sign the Grant Agreement (including entities linked to the beneficiaries). They are not bound by the terms and conditions of the Grant Agreement and consequently, the European Union (represented by the Commission or another funding body) has no obligation vis-à-vis third parties. If necessary to implement the action, beneficiaries may use contracts and sub-contracting for the purchase of goods, works or services, in-kind contributions provided by third parties and also linked third parties carrying out tasks under an action.</i></p>
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INTRODUCTION

This document provides a guide for the experts interested in the CHAMELEON Open Call programme. It provides a comprehensive guide on the goals, expectations and requirements for the third parties interested in participating in this open call programme. All the information is available at <https://chameleon-heu.eu>.

THE CHAMELEON PROJECT

“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) is an EU-funded project under the Horizon Europe programme.

BACKGROUND AND MOTIVATION

Climate change is having a major impact on food security. More than 815 million people are chronically hungry. The world needs to increase food production by almost 50 percent by 2050 to feed a population of nine billion, yet resources such as land and water are becoming scarcer. Farming communities and others involved in agriculture have to adapt agriculture to climate change and other challenges.

In this context, ICT-driven tools and technologies needed to enhance decision making through accurate, reliable and timely information have an important role to play. Agriculture, Forestry, and Livestock ecosystems must look towards emerging technologies for solutions to overcome some of the challenges they face.

OBJECTIVES AND AMBITION

The objective of the CHAMELEON project is to build a novel reconfigurable and multipurpose drone platform ecosystem featuring heterogeneous UAV agent networks operating in the air with its supporting communication protocols, navigation and control strategies and monitoring station, capable of autonomously operating on any area efficiently and cost-effectively, while interfacing with existing systems. The key concept of the proposed platform ecosystem will be a hierarchical approach to the problem, utilizing fully autonomous and reconfigurable agents for continuous operation while less autonomous agents will be engaged on a “need-to” basis.

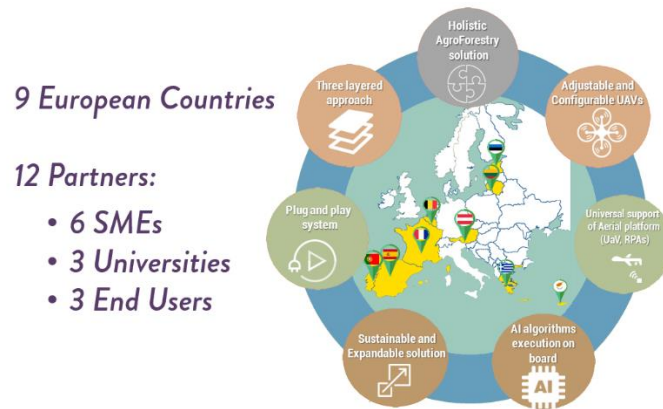


Figure 1 - CHAMELEON project overview.

With the development of this platform, CHAMELEON proposes to achieve the following goals:

- Introduce a new business model and ecosystem-oriented AI development and Big Data Platform, allowing the innovation of agriculture, forestry and livestock services and enabling new forms of communication and transactions between actors within the agriculture, forestry and livestock's business process
- Address the needs of the most complex agricultural, forest and livestock ecosystems and rural environments, through UAV hardware and software system that is on demand and multipurpose
- Introduce an advanced large-scale agriculture and forestry surveying, mapping and assessment framework including different platforms (UAV, RPAS) for a hierarchy of observation scales
- Provide a suite of novel UAV - enabled AI applications and tools for sustainable agriculture, forestry, livestock ecosystems and rural area services

APPROACH

CHAMELEON has three well defined areas of action, those being **Agriculture, Forestry and Livestock**. The consortium consists of 12 partner organizations distributed in 9 European Countries, with a high participation of innovative SMEs (6 in total), 3 universities and 3 end users. CHAMELEON advances will be validated in three pilot use cases in **Spain, Greece and Austria**.

PILOT 1: FOREST FIRE DEFENSE PLANS FOR RURAL AREAS

Location: Tietar Valley (Avila, Spain).

Objectives: Automate the generation of forest fire defence plans for rural areas, especially in those areas with high risk in their urban-forest interface.

The pilot will be focused on supporting the analysis of forest fires impact in urbanized areas, with AI-based prediction of the state, evolution, risk and maintenance analysis of the interface area between urbanized and forest areas.



More info: <https://chameleon-heu.eu/pilots/pilot-1/>

PILOT 2: LIVESTOCK MONITORING AND MANAGEMENT

Location: Crete, Greece (Western Crete area, incl. Chania and Rethimno).

Objectives: Validate the capacity of the CHAMELEON platform for tracking and health assessment of individual animals and assess its operational feasibility for a range of breeders, according to the size of their animal capital. Specifically, piloting activities will validate the platform in:



- Monitoring the activities and the position of the herd
- Monitoring the health status of certain members of the herd
- Providing fast and accurate monitoring of sudden unforeseen events

More info: <https://chameleon-heu.eu/pilots/pilot-2/>

PILOT 3: FOREST MONITOR FOR POTENTIAL DANGERS & VINEYARDS MONITORING

Location: Austria

Objectives: Validate the capacity of the CHAMELEON platform ecosystem for tracking water status, health of plants, health assessment of vineyards, the potential to generate a range of ecosystem services at multiple scales including mitigation of greenhouse gas emissions through long-term carbon storage and intervention strategies. Specifically, piloting activities will validate the platform in:



- Monitoring the status of water
- Monitoring the health status of plants (trees, vineyards etc.)
- Providing fast and accurate monitoring of potential dangers and reduce the stress for the owners to check by themselves in a dangerous area
- Field-based estimate of woody biomass in vineyards
- UAV-based selective spraying

More info: <https://chameleon-heu.eu/pilots/pilot-3/>

BUNDLES

CHAMELEON proposes the development of an on-demand UAV platform populated with bundles optimized per mode of information, and operational scenarios. These bundles consist of a set of tools (algorithms, techniques...) associated to a specific agriculture, forestry, or livestock problem. A bundle is always associated with a location where the pilot took place, but it would benefit from being validated in

multiple geographical places. A bundle may also be restricted to a limited number of UAV models, however, broad compatibility will always be valued.

Either to gather use case validations for the developed tools or to expand the list of solutions available, the CHAMELEON consortium will resort to external partners to expand not only the set of bundles but also the area of action to more countries. This way, CHAMELEON may result in a Pan-European network of UAV and agriculture/forestry/livestock practitioners.

CHAMELEON OPEN CALLS

The main objective of the open calls in CHAMELEON is selecting the top practitioners, stakeholders and service providers 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 are not on-board thus achieving a Pan-European network of UAVs and agriculture/forestry/livestock practitioners.

OPEN CALL #1

The first open call is focused on the **development of new bundles** to be added to the CHAMELEON platform.

Open Call #1 was open for proposals from the 1st of July 2023 until the November 1st, 2023. Sub-projects are now in the development phase and will run until the end of July 2024.

For more info on the CHAMELEON Open Call #1, refer to the CHAMELEON website (https://chameleon-heu.eu/open-calls/first_open_call_funded_subprojects/).

OPEN CALL #2

The second open call is focused on the **implementation of small-scale pilots** that will validate the developed bundles and demonstrate the impact and potential of the CHAMELEON approach. In their applications, participants in the second Open Call should present a detailed use case pilot scenario, with a primary focus on validating specific bundles developed within the CHAMELEON Project.

Applicants will be responsible for defining the area where the bundle will be validated, as well as acquiring the necessary data for the bundle using their own infrastructure and equipment. This includes procuring a UAV and the corresponding sensor if deemed necessary by the bundle and in case the applicants do not already have one. Furthermore, the proposed pilot scenario from applicants must include various detailed information such as flight parameters (e.g., flight altitude, drone type, and sensor details), what will be measured (e.g., crops, vineyards), and the type and amount of data required for validation. Once all this data is collected, applicants will use the CHAMELEON Platform to upload the data for processing to evaluate the bundle through the results.

For bundles that require near real-time processing (e.g., livestock monitoring), applicants should either have an on-board processor in their UAVs, or they could be granted access to a remote on-board processor provided by the Chameleon Consortium.

Open call #2 will be open for proposals from the 1st of April until the 30th of June. Sub-projects will run for up to 6 months, with three deliverable submission stages corresponding to the 3 main milestones (planning, implementation and dissemination/exploitation). Proposals must have a maximum of 10 pages of content (excluding cover, tables and definitions).

For more info on the CHAMELEON Open Call #2, refer to the Guide for Applicants available on the CHAMELEON website (<https://chameleon-heu.eu>)

GUIDE FOR EXPERTS

EVALUATOR'S ROLE

CHAMELEON is looking for experts with proven experience in evaluating EU funded projects and expertise both in the technical and business areas covered by the CHAMELEON project. Experts will be assigned open call proposals and will be the main contributors to the evaluation and selection of the best sub-projects on UAV and Artificial Intelligence (AI) applications for agriculture, forestry and livestock optimization and problem solving. In addition to the individual evaluation, experts will also take part in the meetings required for the uniformization of the proposal ranking.

TIMELINE

The call for experts will close on the 30th of June, 2024. All the main evaluation activities will take place during the month of July. Selected evaluators should be contacted approximately a week after the call closes.

TERMS & CONDITIONS

REQUIREMENTS

Each evaluator is required to agree and sign a contract stating all the terms and conditions, including the expert's code of conduct¹ and declaring the absence of conflicts of interest.

Experts should not work for an organisation that is part of the CHAMELEON consortium or aims to participate in the open call program.

PAYMENT

Each evaluator will be rewarded in line with the European Commission's expert financing system².

APPLICATION

¹ https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/code-of-conduct_en.pdf

² <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/work-as-an-expert>

To apply, experts must submit their CV and fill an application form available in the CHAMELEON website (<https://chameleon-heu.eu>)

EXPERT SELECTION

Right after closing the submission window, the CHAMELEON OCMB will choose the necessary number of experts for the evaluation of all proposals. Experts who applied for Open Call #1 will also be considered for Open Call #2 (if their interest is expressed). However, the selection criteria and number of required evaluators may differ between calls, which means that the selection for one OC doesn't imply the selection for both. Experts will be ranked and selected by the OCMB based on their profile's suitability for the work at hand.

ELIGIBILITY

Interested experts must comply with the following criteria:

- Having an EU tax residence
- Having relevant expertise in the required topics

INFORMATION

After selection, experts will be provided with the appropriate instructions for the evaluation process as well as the contract to be signed between the expert and the CHAMELEON coordinator.

For any questions, first refer to the CHAMELEON website (<https://chameleon-heu.eu>) where all the information is available and, for anything not mentioned there, please refer to the provided contact point.