

The successful conclusion of the CALLISTO H2020 project

Request for Publication

After three years of successful collaboration, CALLISTO, an EU-funded project has come to an end. CALLISTO's primary objective was to bridge the gap between Copernicus Data and Information Access Services (DIAS) providers and application end users through Artificial Intelligence (AI) solutions.

With 17 partners from 7 EU countries and South Korea, representing various industry, SMEs and academia, as well as an EU grant of €3,999,954, CALLISTO has made significant progress towards enhancing access to Earth Observation (EO) data and developing innovative geolocation-based services.

In the framework of the project, CALLISTO partners developed an interoperable Big Data platform that combines EO data with crowdsourced and geo-referenced information from Unmanned Aerial Vehicles. The CALLISTO platform was tested in real-world environments, offering geolocation-based services for a variety of sectors, including agricultural policymaking, water management, journalism, and border security.

Artificial Intelligence, Distributed Computing, Unmanned Aerial Vehicles, Data Fusion, Semantic Image Segmentation, and Ontologies are among the cutting-edge technologies leveraged by CALLISTO. The project introduces 10 tools, which were evaluated in real world scenarios across four pilot use cases:

- **CAP Monitoring:** Virtual monitoring of the implementation of the Common Agricultural Policy (CAP) obligations, with the support of [National Observatory of Athens](#)
- **Water Quality Assessment:** Virtual presence in water resources for water quality assessment using EO and in-situ data, with the support of [SMAT Group](#) and [De Watergroep](#)
- **Satellite Journalism:** Expanding the use of satellite imagery and sensor data for journalistic research and verification, with the support of [Deutsche Welle](#)
- **Land Border Change Detection:** Improving existing approaches and increasing the value of current Border Surveillance Services, with the support of [European Union Satellite Centre](#)

Through cutting-edge Virtual, Augmented, and Mixed Reality solutions, CALLISTO promotes virtual presence and enhances situational awareness, empowering users to make well-informed and strategic decisions. Using machine learning and data fusion technologies, the project enriched its solutions by combining data from several sources, including Copernicus DIAS and in-situ sensors. CALLISTO has established a lasting legacy that remains valuable for all stakeholders seeking to explore the emerging landscape of Earth Observation, geospatial applications and data-driven decision-making.

Project Partners

- [Serco Italia S.p.A. \(SERCO\)](#), Italy
- [Ethniko Kentro Erevnas kai Technologikis Anaptyxis \(CERTH\)](#), Greece
- [Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. \(Fraunhofer\)](#), Germany
- [CS GROUP \(CS\)](#), France
- [Barcelona Supercomputing Center - Centro Nacional de Supercomputacion \(BSC\)](#), Spain
- [Institut für Angewandte Informatik \(InfAI\) e.V.](#), Germany
- [ACCELIGENCE LTD \(ACCELI\)](#), Cyprus
- [Ethniko Asteroskopeio Athinon \(NOA\)](#), Greece
- [Deutsche Welle \(DW\)](#), Germany
- [De Watergroep](#), Belgium
- [Institut royal des Sciences naturelles de Belgique \(RBINS\)](#), Belgium
- [Società Metropolitana Acque Torino S.p.A \(SMAT S.p.A\)](#), Italy
- [Nurogames GmbH \(NURO\)](#), Germany
- [European Union Satellite Centre \(SATCHEN\)](#), Spain
- [DRAXIS Environmental S.A. \(DRAXIS\)](#), Greece
- [DreVen SRL](#), Belgium
- [Korea University \(KU\)](#), South Korea

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