



D R A X I S

WHERE TECHNOLOGY
MEETS THE
ENVIRONMENT



PROJECT PORTFOLIO

MILESTONES

- 33 R&D EU funded ongoing projects
- 29 R&D EU funded completed projects
- 80+ Professionals on board
- 18 Proposals written by our team achieved funding
- 16 Projects on Life Cycle Sustainability Assessment (LCSA: LCA, LCC, sLCA)

ABOUT



DRAXIS

Founded in 2000 in Thessaloniki, DRAXIS Environmental SA is a dynamic company that develops real life environmental ICT solutions and provides specialized environmental consultation services.

DRAXIS leverages AI and Remote Sensing Technologies, compound algorithms, GIS, and diverse datasets to design and deliver high-impact multi-functional digital solutions – from web-based information systems and mobile applications to crowdsourcing platforms, workflow-based services and software solutions – that tackle complex environmental and societal challenges.

The company operates across a wide range of fields, including circular economy, climate resilience and sustainability, environmental governance and policy, public safety and security, earth observation, smart and sustainable manufacturing, air quality monitoring, and food sustainability.

With more than 60 successful projects under FP7, Horizon 2020, and Horizon Europe, alongside a strong portfolio of environmental studies for the European Commission and numerous public and private organizations, DRAXIS is recognized as a trusted partner in designing, executing, and managing impactful environmental and sustainability projects in Europe and beyond.



DReVen

After 20+ years as a dynamic and innovative environmental ICT solution provider, DRAXIS made a strategic decision to further amplify its focus on research. This led to the creation of DReVen, a non-profit organization established in 2021 as a spin-out company.

DReVen's mission is to advance environmental research and innovation that support the transition to a circular, climate-resilient, and sustainable economy. DReVen also specializes in applying Life Cycle Thinking in advanced sustainability assessment methodologies, with core expertise in Life Cycle Assessment (LCA), Life Cycle Costing (LCC), Social Life Cycle Assessment (s-LCA), Integrated Life Cycle Sustainability Assessment (LCSA), and Safe and Sustainable by Design (SSbD) frameworks.

DReVen contributes to European research, innovation and policy development across key sectors, including circular economy, bioeconomy and resource valorisation, climate resilience, sustainable manufacturing and advanced materials, renewable energy and circular bioenergy, and sustainable food systems.

DRAXIS & DReVen - Our common journey

Together, DRAXIS and DReVen form a powerful mixture in advancing environmental technologies innovation and research.

With DRAXIS's expertise in environmental ICT solutions, combined with DReVen's strong research focus, the two companies are uniquely positioned to deliver impactful solutions for a sustainable future and to address today's pressing environmental challenges.

CATEGORIES

BIOECONOMY

CO₂ CAPTURE & UTILIZATION

CIRCULAR & RENEWABLE BIOENERGY

BIOWASTE MANAGEMENT & VALORISATION

CIRCULAR MATERIALS

CIRCULAR FERTILIZERS & SOIL IMPROVERS

SMART & SUSTAINABLE MANUFACTURING

CLIMATE RESILIENCE

PUBLIC SAFETY & SECURITY

ENVIRONMENTAL GOVERNANCE & POLICY

EARTH OBSERVATION & SPACE DATA

BIODIVERSITY & ECOSYSTEM SERVICES MONITORING

AIR QUALITY MONITORING

FOOD SUSTAINABILITY & AGRICULTURE

TECHNOLOGY & NETWORKS

PROJECTS THAT DRIVE CHANGE

BIOECONOMY





BIOECONOMY



MAINSTREAMing small-scale BIO-based solutions across rural Europe via regional Multi-actor Innovation Platforms and tailored innovation support

MainstreamBIO develops small-scale bio-based solutions into mainstream practice across rural Europe, stimulating the participation of a wider range of rural actors in the development of the bioeconomy.



HE



CSA



2022-2025



3M

Our Role:

- Develop, upgrade and integrate digital tools in the MainstreamBIO digital toolkit.



Diversifying revenue in rural Africa through circular, sustainable and replicable bio-based solutions and business models.

Bio4Africa focuses on supporting the development of the bioeconomy in rural Africa through bio-based solutions and value chains with a circular approach to promote the scalable use of local resources and diversify farmers' income.



H2020



RIA



2021-2025



9M

Our Role:

- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA).
- Map local agri-food systems in rural Africa.
- Assess potential for replication using sustainable agricultural practices.
- Design guidelines for circular business practices in new areas in rural Africa.



BIOECONOMY



European cluster-led accelerator for digitisation of the circular economy across key emerging sectors

DIGICIRC empowered SMEs to leverage digital technology as a key enabler for innovative circular products/services, processes, and business models. The project created and coordinated the DIGICIRC innovation network to bring together a wide spectrum of stakeholders.

✓ H2020 IA 2020-2023 €5M

Our Role:

- Develop a Circular Economy Data Hub that provides SMEs with access to current and historical waste-stream data through a user interface featuring layered maps, charts, and tables, visualizing both spatial dimensions and material type-and-quantity information.
- Develop a DIGICIRC InfoPortal that provides information on the investment landscape, regulatory-compliance watch, market-trends observatory, and technology watch within the circular-economy domain.
- Develop the project website and design the graphic elements of the project.
- Prepared a Policy Brief on Circular Economy.



emPOWERing regional stakeholders for realising the full potential of european BIOeconomy

POWER4BIO aimed at aiding public authorities in navigating the complexities of the bio-based economy by providing tools and resources. It engaged stakeholders to promote regional bioeconomy practices, offering online tools with real biorefinery cases and a Bioeconomy Accelerator Toolkit. The initiative empowered 10 regions to update or develop bioeconomy strategies, fostering societal participation and awareness.

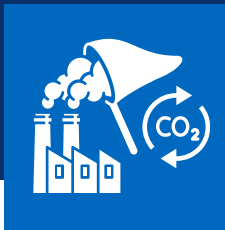
✓ H2020 CSA 2018-2021 €3M

Our Role:

- Design a web-based database for bioeconomy solutions.
- Develop the Bioregional Strategy Accelerator Toolkit (BSAT).

CO₂ CAPTURE & UTILIZATION





CO₂ CAPTURE & UTILIZATION



biogeniC gasEsous caRbon conversion into high added value chemicals and ingredients through a bio-based NETwork

CERNET aims to showcase four renewable-powered bio-based value chains that capture CO₂ and CH₄ from winery, waste management and bioethanol industries to make six high-value chemicals for cleaning, cosmetics, packaging and food.

✓ HE IA 2025-2029 €10M

Our Role:

- Identify and compile key performance indicators (KPIs) to monitor and assess technical, environmental, and socio-economic performance.
- Coordinate CERNET value-chain sustainability assessment, integrating Life Cycle Sustainability Assessment (LCSA) to evaluate environmental and socio-economic impacts and carbon removal potential across the full life cycle.



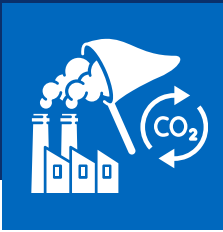
Direct CO₂ ELECTROcatalysis for renewable METHane production

ELECTROMET aims to demonstrate sustainable, safe, and cost-effective pathways to produce renewable methane (RCH₄) through direct CO₂ valorisation and its integration as renewable fuel into the gas market. To this end, an innovative solution involving CO₂ electroreduction technology to produce RCH₄ is being developed and implemented using real gas streams (from biogas plants), together with a detailed consideration of safety, environmental, societal, and business aspects.

✓ CETP 2024-2027 €1M

Our Role:

- Assess the impact of the ELECTROMET solution (e-LCA, LCC).
- Conduct the final assessment of business case scenarios.



CO₂ CAPTURE & UTILIZATION



Demonstrating energy intensive industry-integrated solutions to produce liquid renewable energy carriers from CAPTured carbon emissionS

CAPTUS focuses on transforming CO₂ into an exploitable resource through industrial demonstration of three promising carbon capture and utilization (CCU) technologies, where the CO₂ captured from cement, steel, and chemical plants will be valorised into different renewable energy carriers.



2023-2027

€10M

Our Role:

- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA).

CIRCULAR & RENEWABLE BIOENERGY





CIRCULAR & RENEWABLE BIOENERGY



Accelerating the sustainable production of advanced biofuels and RFNBOs - from feedstock to end-use

FUELPHORIA aims to establish nine sustainable, safe, and integrated value chains for advanced biofuels and renewable fuels of non-biological origin-RFNBOs from feedstock to end-use, under real-world conditions, involving all key stakeholders.



HE



IA



2023-2027



€10M

Our Role:

- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA).
- Design the policy framework and analyze potential barriers for accelerating the sustainable production of advanced biofuels and RFNBOs.



Natural and Synthetic Microbial Communities for Sustainable Production of Optimised Biogas

MICRO4BIOGAS focuses on boosting the biogas sector in Europe by developing highly efficient microbial consortia based on strains that naturally inhabit anaerobic digesters (bioaugmentation strategies).



H2020



RIA



2021-2025



€6M

Our Role:

- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA) of the proposed bioaugmentation processes.

BIOWASTE MANAGEMENT & VALORISATION





BIOWASTE MANAGEMENT & VALORISATION



Reducing food waste due to marketing standards through alternative market access

Reducing food waste due to marketing standards through alternative market access

ROSETTA aims to conduct transdisciplinary research by engaging multiple stakeholders in its use cases. This includes estimating food waste generated along the whole value chain due to the application of marketing standards, co-defining and validating sustainable solutions for waste valorisation, and assessing associated trade-offs.



HE



RIA



2023-2026



5M

Our Role:

- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA).
- Develop the ROSETTA digital toolkit (Open Innovation Platform/Online Repository & Catalogue).



Hub of circular cities boosting platform to foster investments for the valorisation of urban biowaste and wastewater

HOOP aims to empower 8 lighthouse cities in implementing innovative circular processes, by fostering the development of technical, financial, and legal expertise. This initiative seeks to unlock significant investments and enhance the local bioeconomy.



H2020



CSA



2020-2025



9M

Our Role:

- Provide project development assistance to circular economy investments.
- Develop multi-stakeholder circular business models.
- Co-develop the HOOP Urban Circular Bioeconomy Hub.
- Conduct environmental Life Cycle Assessment of circular economy investments.



BIOWASTE MANAGEMENT & VALORISATION



Value chains for disruptive transformation of urban biowaste into biobased products in the city context

WaysTUP! demonstrated new value chains for the conversion of municipal bio-waste into new bio-based products, employing innovative waste treatment methods, through 7 pilot initiatives.

✓ H2020

IA

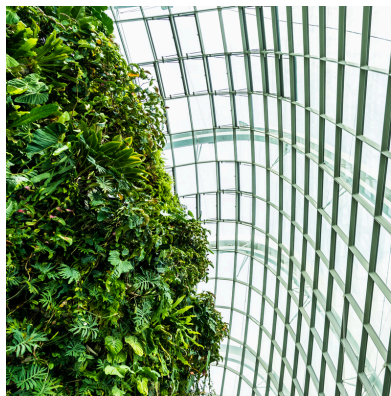
2019-2023

€12M

Our Role:

- Perform Life Cycle Sustainability Assessment including Environmental Life Cycle Assessment, Life Cycle Costing and social Life Cycle Assessment (LCSA: LCA, LCC, s-LCA).
- Map barriers related to urban biowaste valorisation.
- Plan, deploy and monitor pilots.

CIRCULAR MATERIALS





CIRCULAR MATERIALS



Re-designing the construction sector: Sustainable and functional bio-based construction products and building elements

BIOSMATER focuses on developing and testing innovative bio-based construction products that are sustainable, safe, and high-performing. Its approach is built around innovation in bio-based materials, expanding the Safe and Sustainable by Design (SSbD) framework, integrating circular economy principles for scalability, and driving market adoption through transparency and stakeholder engagement.

✓ HE IA 2025-2029 €7M

Our Role:

- Develop the methodology and KPIs for environmental performance assessment and monitoring.
- Assess sustainability, safety, and circularity of BIOSMATER solutions following SSbD principles.
- Develop the SSbD assessment methodology and recommending further advances to the SSbD framework.
- Implement environmental Life Cycle Impact Assessment (LCA, s-LCA, LCC).
- Develop the integrated assessment based on the SSbD framework for bio-based construction products.



Boosting the uptake of circular integrated solutions in construction value chains

CircBoost aims to test and upscale circular solutions, both digital and technical, in buildings and the construction sector in general promoting selective demolition and decontamination techniques as well as the reuse and recycling of construction materials.

✓ HE IA 2023-2027 €9M

Our Role:

- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA).
- Develop the 3D web Circular Economy map application.

CIRCULAR FERTILIZERS & SOIL IMPROVERS





CIRCULAR FERTILIZERS & SOIL IMPROVERS



New governance models to enhance nutrient pollution handling and nutrients recycling

NENUPHAR focuses on recovering Nitrogen and Phosphorus from waste streams and valorising these nutrients, to produce new fertilizers. The project introduces innovations, including a methodology for estimating N/P emissions from fertiliser application on soil, new governance models based on a network governance approach, innovative economic and financial incentives for public and private entities and enabling technologies to treat manure, sludges, and dairy wastewaters to recover the nutrient loads.



HE



IA



2023-2027



6M

Our Role:

- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA).
- Develop the NENUPHAR GIS online platform for waste mapping and N/P flows.



Enabling underused bio-waste feedstocks into safe and effective market-ready soil improvers

bioSOILUTIONS focuses on optimizing four distinct bio-waste valorisation routes (blood hydrolysate, frass, N-struvite and K-struvite) to create advanced bio-waste soil improvers.



HE



IA



2023-2026



3M

Our Role:

- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA) of alternative fertilizers.
- Develop guidelines for fertilizers promotion.



CIRCULAR FERTILIZERS & SOIL IMPROVERS



Multi-assessment of alternative fertilizers for promoting local sustainable value chains and clean ecosystems

FER-PLAY leverages a comprehensive approach to promote the wide-scale production and application of alternative fertilizers. These fertilizers are expected to stand out for their superior environmental, social, and economic performance as well as for their technical and regulatory viability.



HE



CSA



2022-2025

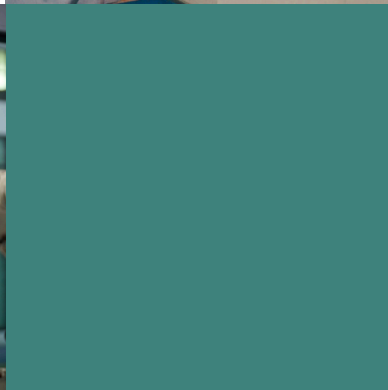


€2M

Our Role:

- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA) of alternative fertilizers.
- Develop guidelines for fertilizer promotion.

SMART & SUSTAINABLE MANUFACTURING





SMART & SUSTAINABLE MANUFACTURING



DATAWiSE

Unleashing the power of data-driven innovation in building management

DATAWiSE aims to develop and test innovative building portfolio management tools, including a Data-driven Building Performance Management toolkit and an AI-enhanced Lifecycle Data-driven Decision Support toolkit. These tools leverage Building information modeling data and advanced AI-based analytics to optimize energy efficiency and sustainability, reduce operational costs, and increase occupant comfort, while ensuring data quality, privacy, and interoperability through a scalable data architecture. The data centric approach facilitates proactive decision-making, supporting sustainable and optimized building management practices.



HE



IA



2024-2027

€5M

Our Role:

- Develop the LD2S framework.
- Develop the user-friendly and interactive web interface for DBPM and LD2S.
- Implement a Data-Sharing Platform for secure and interoperable exchange of data.
- Assess buildings' risk and resilience.
- Develop the Data Management Plan.



Wood2Wood

A Wood-to-Wood Cascade Upcycling Valorisation Approach

Wood2Wood aims to demonstrate efficient and sustainable value chains in 3 Use Cases to produce wood without pollutants, biocomposite building materials, biopolymers, polyols, chemical detergents, and the recovery of nutrients. The project employs innovative technologies and tools to enable the selection of optimal cascade paths for further uses of wood products and their materials.



HE



RIA



2024-2027

€10M

Our Role:

- Develop an LCA computation tool.
- Perform Life Cycle Sustainability Assessment (LCSA: LCA, LCC, s-LCA).
- Map key actors and stakeholder interactions.



SMART & SUSTAINABLE MANUFACTURING



Agile Manufacturing as a Service through AI Autonomous Agents

MaaSai leverages Explainable Artificial Intelligence (xAI) to develop a comprehensive Manufacturing-as-a-Service (MaaS) digital system that automates and facilitates interactions between suppliers of manufacturing systems and manufacturing companies. The MaaSai System aims to reduce heavy investments by enabling on-demand sustainable manufacturing, optimising resource utilisation, facilitating the transition towards circular facilities, and promoting better integration of the value chain.



HE



RIA



2024-2027



€7M

Our Role:

- Develop the MaaS Collaboration Hub, a platform connecting manufacturers with distributed manufacturing service providers and other resource providers to streamline the manufacturing process, decision-making, communication, and decentralized manufacturing.
- Assess the sustainability impact of MaaSai Solutions using a life-cycle approach.
- Conduct market analysis and define use-case scenarios.
- Define and validate key performance indicators (KPIs) for the evaluation of MaaSai use cases.
- Develop the Data Management Plan.



Digital Modelling and Simulation for Design, Processing and Manufacturing of Advanced Materials

DiMAT focuses on developing open digital tools for European SMEs and mid-cap companies to affordably model, simulate, and optimize materials at each stage of the value chain, from design to processing and manufacturing. The effectiveness of the three integrated DiMAT tool suites are demonstrated in four pilots covering textiles, composites, glass, and graphite.



HE



IA



2023-2025



€6M

Our Role:

- Develop an LCA and LCC toolkit featuring high-level visualization tools.
- Conduct LCA/LCC environmental and economic impact assessments.



SMART & SUSTAINABLE MANUFACTURING

MENIoR

Monitoring environmental conditions in industrial operations with IoT, Digital Twin and Augmented Reality techniques

MENIoR aimed to enable better environmental monitoring (indoor air quality and thermal comfort conditions) in industrial operations by leveraging the potential of IoT with the application of AR techniques and Digital Twins.

✓ H2020

🔧 HUBCAP project - IA

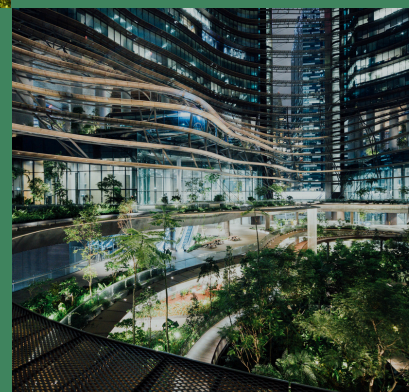
📅 2021-2022

€200.000

Our Role:

- Coordinate and manage the project.
- Develop the MENIoR Digital Twin platform to enable indoor environmental monitoring in industrial operations.
- Develop the MENIoR Augmented Reality mobile app that offers meaningful environmental information and alerts to industrial workers.

CLIMATE RESILIENCE





CLIMATE RESILIENCE



Rural Empowerment HUBS for climate resilience

REHUBS aims to empower rural and small/medium local communities to enhance their climate resilience, promote their twin green and digital transition and contribute to the broader goals of climate adaptation in Europe. By combining digital technologies, Nature-Based Solutions, and Circular Economy principles, REHUBS provides rural communities with a deeper understanding of the regional climate dynamics and local vulnerabilities, and introduces a portfolio of cost-effective, scalable, and innovative adaptation solutions tailored to their needs.



HE



IA



2025-2029



7M

Our Role:

- Coordinate project management activities.
- Downscale climate regional projections and assess risks.
- Perform advanced weather modelling to provide accurate short-term atmospheric data.
- Contribute to the development of a climate-related early warning system.



Nexus Living Labs for Multi-Level Innovation in Mediterranean Irrigated Agriculture

NexusLabs aims to enhance the efficiency and sustainability of water, energy, and food use in Mediterranean irrigated agriculture by providing stakeholders with a comprehensive package of innovative solutions. These solutions are tested and demonstrated in real-world Living Labs and integrated into novel, holistic tools for scenario analysis and impact assessment, fully addressing the Water-Energy-Food-Ecosystems (WEFE) Nexus. In parallel, the project implements targeted training and market preparation strategies to enable scaling across broader regions and user communities.



PRIMA



2025-2028



4M

Our Role:

- Deploy an advanced weather forecasting system to improve agricultural decision-making.
- Develop the NexusLabs Observatory – an enhanced Decision Support System (DSS) with interactive components (Dashboards, web-GIS maps).
- Implement the NexusLabs Serious Game.
- Implement the LCA of the whole food chain and participating in the LCC and the multi-criteria assessment.
- Contribute to the exploitation strategy and plan.



CLIMATE RESILIENCE



Green Resilience through Economic Empowerment, Environmental Knowledge, and Future-Proof Digital Infrastructure

GreenFit aims to drive sustainable change in agriculture through the development of practical, innovative solutions that make use of climate-fit, cutting-edge technologies. GreenFit provides tailored solutions that enhance decision-making, improve resource use, and boost resilience to climate change. Through value-chain partnerships, infrastructure upgrades, and knowledge-sharing mechanisms, the project empowers farmers to transition toward sustainable practices, while supporting long-term economic and environmental sustainability in rural regions across Europe.



HE



2025-2028

€4M

Our Role:

- Coordinate and manage the project.
- Develop the GreenFit Training and Pilot plan.
- Develop the GreenFit Knowledge Sharing Platform.
- Collect and analyze feedback from pilot sites to improve the deployment of green technologies.
- Develop the project's impact assessment, scalability roadmap and recommendations.



Sustainable Public spaces through Inclusive Community Engagement

SPICE provides a new model of participatory co-creation in (re)shaping neighborhoods. The project develops, tests, and validates innovative community engagement approaches to establish an evidence-based framework for the co-design, co-creation, and maintenance of public spaces in four European neighborhoods. By fostering interdisciplinary synergies and inclusive participation, leveraging advanced digital tools, and promoting circular and regenerative construction practices, SPICE addresses critical societal challenges, enhances social cohesion, and highlights core EU values.



HE



2025-2028

€4M

Our Role:

- Serve as WP6 leader, designing and implementing the project's impact evaluation framework with qualitative and quantitative indicators to measure environmental sustainability.
- Coordinate activities related to social sustainability assessment and policy recommendations.
- Develop data collection protocols, analyze results, and deliver key assessment reports.
- Integrate AI-powered 3D modelling and chatbot tools into the public-facing platform.
- Provide an intuitive, accessible digital interface that empowers community co-creation and real-time feedback.



CLIMATE RESILIENCE



Equitable RESilience solutions to strengthen the link between CULTural landscapEs and coMMunitiEs

RescueME demonstrates how an innovative data-driven, community-based, heritage-centric actionable landscape approach to resilience enhancement can protect our cultural heritage and landscapes while supporting the transition toward a green society and economy that sustains resilient, cohesive, nature-connected communities.

✓HE RIA 2023-2026 €4M

Our Role:

- Develop a geospatial data intelligent platform for heterogeneous data aggregation, processing, and visualization, including satellite and in-situ data integration and AI mapping for hazard delineation.
- Define the technical specifications of data management and digital solutions.



Urban Planning and design ready for 2030

UP2030 aims to empower cities in driving the socio-technical transitions required to meet their climate neutrality targets. By leveraging urban planning and design, UP2030 supports city stakeholders and local authorities put neutrality on the map of their communities in day-to-day actions and strategic decisions.

✓HE IA 2023-2025 €12M

Our Role:

- Manage the financial and technical aspects of the project.
- Produce a Data Management Plan.
- Develop the IT infrastructure (Geospatial Intelligence Platform) needed to integrate all project data and solutions and enable integration of models and decision support systems already used by cities.



CLIMATE RESILIENCE



Improving ClimAte Resilience of critical Assets

ICARIA aims to promote the use of asset level modelling to achieve a better understanding on climate-related tangible direct and indirect impacts produced by complex, cascading and compound disasters, and the related risk reduction provided by suitable, sustainable and cost-effective adaptation solutions.



HE



RIA



2023-2025

€2M

Our Role:

- Develop a Decision Support System that allows users to compare several adaptation solutions to improve climate planning for strategic assets.
- Plan the exploitation, ensuring sustainability, and exploring the potential for replication of ICARIA's results.
- Develop and continuously maintain the data management plan (DMP) for the project's outputs.



Managing REsilient neXUs Systems through Participatory Systems Dynamics Modelling

REXUS developed and validated knowledge and tools to facilitate the transition from WEFC (Water-Energy-Food-Climate) NEXUS theory to practice, taking into account climate impacts. Resilience in REXUS stands for the capacity of systems to adapt quickly to changes and disruptions.



H2020



RIA



2021-2024

€5M

Our Role:

- Develop a data repository that holds all data collected within the REXUS pilot cases.
- Develop climate projections for Nexus.
- Assess climate risk in pilots.
- Plan the exploitation, sustainability, and potential for adaptation of the pilots, results, procedures, tools, and practice codes to achieve the expected impacts.



CLIMATE RESILIENCE



Learning and action allianceS for NexuS EnvironmentS

LENSES created a Water-Energy-Food (WEF) Nexus narrative and Call to Action. The core message of this narrative was the paradigm shift from Nexus Thinking to Resilient Nexus Doing for strengthening resilience.

✓ PRIMA

📅 2021-2024

€ 3M

Our Role:

- Develop a data repository that held all data collected within the LENSES pilot cases.
- Develop climate projections for Nexus.
- Assess climate risk in pilots.
- Develop an exploitation and sustainability plan.
- Develop the individual methodological approaches and criteria for the final comprehensive LENSES Nature-based Solutions Selection Framework.

PUBLIC SAFETY & SECURITY





PUBLIC SAFETY & SECURITY



Intelligent & Digital Roadway Infrastructure for Vehicles

iDriving aims to deliver a prototype to improve the safety of urban and secondary rural roads through the integration of innovative sensors, real-time data exchange, AI-driven analytics, and proactive monitoring. The project's goal is to enhance infrastructure safety, road maintenance and weather condition analysis to provide better protection for road users.



HE



2024-2027



Our Role:

- Lead the weather data integration and real-time environmental condition analysis.
- Select appropriate weather stations, evaluate historical weather data, and support the development of reliable forecasting systems for road safety improvement.



GeO and weather multi-risk impact Based Early warning and response systems supporting rapid deployment of first responders in EU and beyond

GOBEYOND develops and tests Multi-Risk Impact-based Early Warning System (MR-IEWS) platforms for geohazards and weather/climate events adapted to support Civil Protection Authorities and first responders in their situational awareness and rapid deployment in Europe, countries of the Union for Mediterranean, and beyond.



HE



2023-2027



Our Role:

- Lead the evaluation and benchmarking of innovative technologies and tools related to Impact-Based Early Warning and rapid response systems.
- Develop a decision support system for multi-hazard visualization and analysis to enhance coordination across all levels of emergency management.
- Contribute to the operational demonstration of the GOBEYOND Early Warning System in the Attica Region and the city of Piraeus.
- Orchestrate a living lab in Athens to identify the needs and challenges of civil protection professionals and map them to technical solutions.
- Organize and manage an open call to identify cutting-edge solutions for enhancing the GOBEYOND platform.
- Lead the overall dissemination and communication activities of the project.



PUBLIC SAFETY & SECURITY



Autonomous Swarm of Heterogenous resource in infrastructure protection via threat prediction and prevention

TESTUDO, aligned with the need of a holistic and autonomous security approach in Critical Infrastructure (CI) protection domain and with the European Commission's objectives, utilizes advanced unmanned vehicles along with existing equipment to deliver a platform for continuous monitoring even at harsh environments and remote territories.



HE



IA



2023-2026

€5M

Our Role:

- Establish a framework for evaluating the project's use cases.
- Develop a protocol to define, monitor, and coordinate the legal and privacy aspects of each pilot.



Enhancing Standardisation strategies to integrate innovative technologies for Safety and Security in existing water networks

AQUA3S combined novel technologies in water safety and security, that aimed to standardize existing sensor technologies complemented by state-of-the-art detection mechanisms.



H2020



IA



2019-2022

€7M

Our Role:

- Apply a User-Centered Design (UCD) approach for the design and development of an interactive user interface integrating multiple technical components and existing systems.
- Model crisis management in existing water networks using a three-step approach dividing a crisis into precrisis, crisis, and postcrisis macro-stages.
- Develop a tool to visualize new scenarios for other crises in existing infrastructures and crisis management approaches in similar systems.
- Conduct market analysis, formulate an exploitation plan, and implement intellectual property protection.

ENVIRONMENTAL GOVERNANCE & POLICY





ENVIRONMENTAL GOVERNANCE & POLICY

PERIVALLON 

Protecting the European territory from organised
environmental crime through intelligent threat detection tools

PERIVALLON aims to provide an improved and comprehensive intelligence picture of organised environmental crime and develop effective and efficient tools and solutions for detecting and preventing types of criminal activities, leveraging geospatial intelligence, remote sensing, online monitoring and AI.



HE



IA



2022-2025

€5M

Our Role:

- Support tasks concerning the acquisition of user and technical requirements for the tools and methods delivered to address the project's pilot use cases.
- Lead the development of an online tool for collecting, monitoring, and updating open data from various sources using programmed harvesters and a development kit for extensibility.
- Deliver a waste crime data monitoring tool as an extension of the Circular Economy Data Hub.
- Support exploitation activities, including online marketplace monitoring, multilingual text analysis, and concept extraction.
- Lead the dissemination and communication work package.



Coastal urban development through the lenses of resiliency

CUTLER harvested the rich basis of data offered by the existing infrastructures for sensing the environment, the society and the economic activity, to build the data mining and visualization tools for extracting actionable knowledge out of these data, and to use these tools for supporting a platform on policy design, implementation and evaluation, filtered through the lens of urban resilience.



H2020



RIA



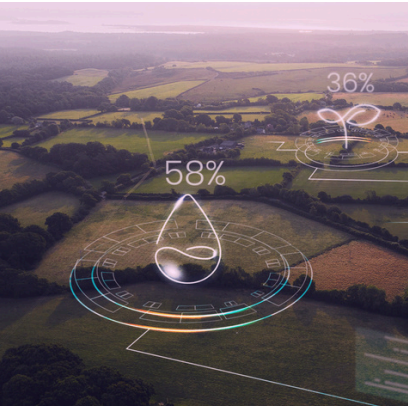
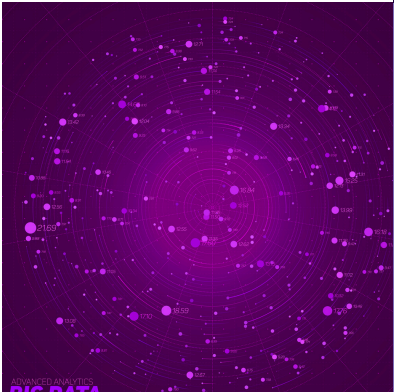
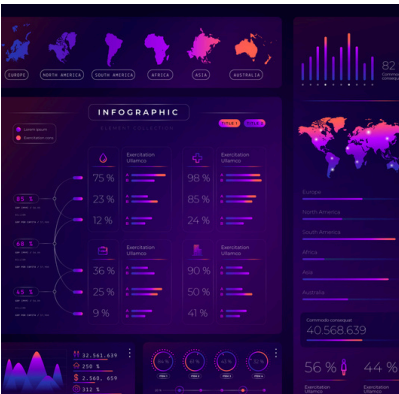
2018-2020

€5M

Our Role:

- Identify the data source and develop crawling mechanisms for data collection.
- Establish a unified communication protocol for accessing and analyzing the environmental readings.
- Define indicators measuring environmental impact on the different parts of the ecosystem.
- Develop the visualization widget for insights on environmental impact.
- Conduct market analysis and develop an exploitation plan.

EARTH OBSERVATION & SPACE DATA





EARTH OBSERVATION & SPACE DATA



Financing and Innovation Ecosystems for SMEs to innovate for Raw materials and Circular Economy solutions and using downstream space technologies

FIERCE aims to address the limited uptake and technological capacity of SMEs by mobilising 140 SMEs, start-ups and scale-ups with specialised technical and business advisory to design business solutions and engage in process innovation using downstream space data in areas such as circularity, raw materials, environmental monitoring and corporate sustainability.



HE



CSA



2024-2027

€5M

Our Role:

- Research and develop case studies on the state of play, success factors, and perceptions of using downstream space for circularity and sustainability.
- Engage stakeholders by leading collaborative processes with co-creation and design thinking methodologies.
- Build capacity for SMEs in downstream space data applications by designing and implementing the educational programme.



Earth Observation applications for climate change adaptation & mitigation

EIFFEL leveraged existing Earth Observation data to develop innovative applications for climate change adaptation and mitigation. By employing AI-powered tools, EIFFEL aimed to enhance the value of GEOSS data, improve data accessibility, and provide actionable insights to decision-makers in various sectors.

✓ H2020



RIA

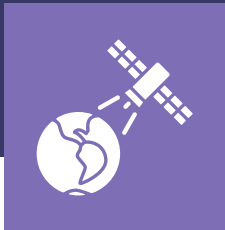


2021-2024

€5M

Our Role:

- Coordinate and oversee the entire functional, technical, and architectural design as Technical Coordinator.
- Implement a pilot application for the Attica region developed throughout the EIFFEL Project.
- Provide UI/UX consulting services to the Greek pilot.



EARTH OBSERVATION & SPACE DATA



Copernicus Artificial Intelligence Services and data fusion with other distributed data sources and processing at the edge to support DIAS and HPC infrastructures

CALLISTO aimed to bridge the gap between Copernicus Data and Information Access Services (DIAS) providers and application end users through dedicated Artificial Intelligence solutions. It provided an interoperable Big Data platform integrating Earth Observation data with crowdsourced and geo-referenced data and observations from UAVs.

✓ H2020

RIA

2021-2023

€4M

Our Role:

- Develop an air pollution forecasting methodology based on artificial intelligence techniques.
- Deliver a business intelligence tool for air quality assessment to journalists at Deutsche Welle.
- Develop a mobile application for assessment of farmers' compliance with the Common Agricultural Policy.
- Lead the overall dissemination and communication activities of the project.



Monitoring of Environmental Practices for Sustainable Agriculture Supported by Earth Observation

ENVISION developed a ready-to-market commercial platform of services that couples cutting edge Earth Observation technology with state-of-the-art methodologies along with heterogeneous types of open data, providing Paying Agencies and Certification Bodies with timely cost-efficient and actionable insights for the compliance monitoring procedure of the Common Agricultural Policy agri-environmental standards.

✓ H2020

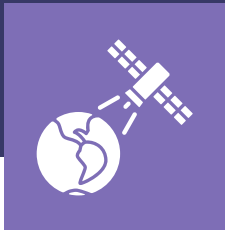
IA

2020-2023

€3M

Our Role:

- Coordinate the project.
- Collect auxiliary data to assist service providers in calibrating, validating, and feeding the processing algorithms.
- Develop the business model validation.
- Develop and customize the ENVISION solution, consisting of a web-based interface for Paying Agencies and Certification Bodies, a mobile application for farmers, and an Add-On Development Tool for developers.



EARTH OBSERVATION & SPACE DATA



EuroGEO Showcases: Applications Powered by Europe

E-SHAPE implemented a coordinated and comprehensive Earth Observation data exploitation initiative through collaboration among European GEO Members and participating organizations. The aim was to accelerate the uptake of open Earth Observation data and information in key societal sectors.

✓ H2020

IA

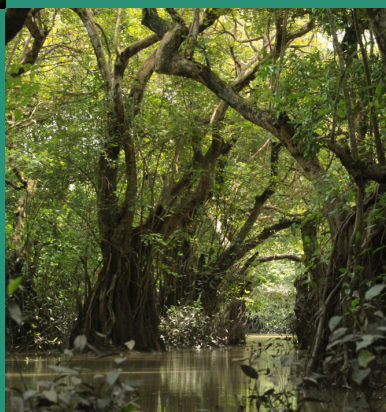
2019-2023

€15M

Our Role:

- Contribute to the implementation of the Public Health Surveillance Showcase.
- Engage and coordinate pilot users.

BIODIVERSITY & ECOSYSTEM SERVICES MONITORING





BIODIVERSITY & ECOSYSTEM SERVICES MONITORING

BIOTRAILS

Nexus framework for biodiversity-relevant transformative change

BIOTRAILS aims to generate knowledge and develop tools that will inspire and accelerate biodiversity-relevant transformative change in our society. The project uses Participatory Systems Dynamics Modelling to take into account the complex interrelations between the indirect drivers of change in four value chains of traded products.



HE



RIA



2022-2025



€3M

Our Role:

- Design and monitor procedures and protocols necessary for handling legal and ethical issues during the project's lifetime.
- Utilize outputs from widely used climate-model projection databases for assessment and further processing to provide insights into future climatic conditions.
- Develop a toolkit for incorporating biodiversity into ESG policies.
- Develop a sustainable consumption game.



GUARDEN

Safeguarding Biodiversity and Critical Ecosystem Services
across Sectors and Scales

GUARDEN's main mission is to safeguard biodiversity and its contributions to people by bringing them at the forefront of policy and decision-making. This will be achieved through the development of user-oriented Decision Support Applications and leveraging on Multi-Stakeholder Partnerships.



HE



RIA



2022-2025

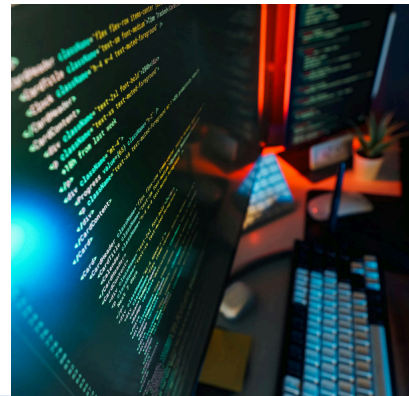


€5M

Our Role:

- Establish multi-stakeholder partnerships and participative engagement methods for collecting end-user needs.
- Co-design case studies.
- Map and assess landscape dynamics through Earth Observation.
- Provide high-resolution future climate change information.
- Conduct market analysis and plan exploitation.

AIR QUALITY MONITORING





AIR QUALITY MONITORING



Enhancing Citizen Observatories for healthy, sustainable, resilient and inclusive cities

CitiObs seeks to consolidate tools alongside practice-based knowledge to co-create data, insights and local action through Citizen Observatories (COs). These resources will strengthen both existing and emerging COs by engaging citizens—including marginalised communities—to expand and validate observations of the urban environment.



HE



IA



2023-2026



€6M

Our Role:

- Develop a web-based platform for integrating and visualizing sensor data, primarily related to air pollutants, with an emphasis on validated, interoperable, and open data standards.
- Coordinate efforts at the Athens pilot site by organizing workshops and engaging with COs.

EXHAUSTION

Exposure to heat and air pollution in Europe – cardiopulmonary impacts and benefits of mitigation and adaptation

EXHAUSTION aimed to quantify the impact of extreme heat and air pollution on health - including air pollution from wildfires-, provide adaptation mechanisms, and calculate the associated socio-economic costs. The project has established exposure projections for extreme heat and air pollution, caused by climate change, based on the most advanced climate modelling efforts.



H2020



RIA



2019-2024



€7M

Our Role:

- Apply data fusion techniques to combine observational data, model outputs, and satellite data to provide comprehensive information in areas with limited measurement capabilities.
- Utilize the WRF-ARW regional numerical weather prediction model and Earth Observation data from METEOSAT SEVIRI to forecast extreme heat episodes in Greece and Portugal.



AIR QUALITY MONITORING

AirQast.

A commercial platform providing operational Air Quality services using EO data

AirQast established a one-stop portal platform that provides air quality services based on Earth Observation data. These services include updated emission inventories, an advanced forecasting system, street-level monitoring in near-real time and 48h forecasts for urban areas, and decision-making tools to manage air quality events.

✓ H2020

IA

📅 2017-2020

€2M

Our Role:

- Analyze user requirements and market potential for air quality solutions.
- Explore the market potential for business cases in mobile apps, real estate, smart home, and insurance companies.



Collective awareness platform for outdoor air pollution

hackAIR aimed to contribute to the movement to improve air quality data in Europe through participatory sensing technology and citizen engagement. hackAIR has developed an open technology platform for citizens and interested parties to access, collect and improve air quality information in Europe, leveraging the power of citizen science, online social networks, mobile and open hardware technologies, and engagement strategies.

✓ H2020

RIA

📅 2016-2018

€2M

Our Role:

- Coordinate the project.
- Develop the hackAIR platform and participate in the pilot implementation.
- Create guidelines for assembling low-cost, easy-to-use open sensor devices, enabling citizens to monitor PM concentrations.
- Contribute to the development of data fusion tools, as well as the semantic integration and reasoning of environmental and user-specific data.
- Contribute to the development of engagement strategies aimed at encouraging citizens to participate actively in air quality monitoring.

FOOD SUSTAINABILITY & AGRICULTURE





FOOD SUSTAINABILITY & AGRICULTURE



Food System Hubs Innovating towards Fast Transition by 2030

FoodSHIFT2030 launched an ambitious citizen-driven transition of the European food system towards a low carbon circular future, including a shift to less meat and more plant-based diets.

✓ H2020 IA 2020-2023 €8M

Our Role:

- Work as a Lab Assistant in one of the FoodSHIFT Accelerator Labs (FAL), specifically in the Greater Athens Lab (ATH).
- Identify and classify indicators for assessing benefits of food system innovations.
- Serve as IP Leader on Sustainability.
- Co-develop the FoodSHIFT Sustainability Scoring System.



Business-Oriented Support to the European Robotics and Agri-food Sector, towards a network of Digital Innovation Hubs in Robotics

AgROBOfood's aim was to build a European ecosystem for the effective adoption of robotic technologies in the agri food sector. The heart of the project was formed by Innovation Experiments, organized and monitored by Digital Innovation Hubs.

✓ H2020 IA 2019-2024 €17M

Our Role:

- Develop and implement an effective multi-dimensional communication strategy, including creating synergies with other projects and initiatives.
- Promote open calls for Innovation Experiments to end users.
- Ensure proper know-how exchange within the consortium.



FOOD SUSTAINABILITY & AGRICULTURE



SiEUGreen

Sino-European Innovative Green and Smart Cities

SiEUGreen aimed to enhance the EU-China cooperation in promoting urban agriculture for food security, resource efficiency and smart, resilient cities. Building on the model of zero-waste and circular economy, it demonstrated how technological and societal innovation in urban agriculture can have a positive impact on society and economy.

✓ H2020

IA

2018-2022

€8M

Our Role:

- Develop and implement the COMMURBAN mobile application.
- Develop a sustainable business model through thorough market research and exploitation strategies.



**Enhancing Food Security in AFRIcan AgriCULTUral Systems with
the Support of REMote Sensing**

AfriCultuReS aimed to design, implement and demonstrate an integrated agricultural monitoring and early warning system that supports decision making in the field of food security. The project delivered a broad range of climatic, production, biophysical and economic information, for various regions in Africa.

✓ H2020

RIA

2017-2022

€9M

Our Role:

- Collect, store, and integrate diverse data sources, including Earth Observation data, non-EO data, and in-situ observations.
- Develop the AfriCultuReS platform, comprising a web application, mobile app, and GIS dashboard, to enable data visualization, analysis, and user interaction.
- Design and implement the IT infrastructure.
- Identify, select, and integrate suitable open-source software tools to support the project's objectives.

TECHNOLOGY & NETWORKS





TECHNOLOGY & NETWORKS



An Artificial Intelligent Aided Unified Network for Secure Beyond 5G Long Term Evolution

NANCY aims to introduce a secure and intelligent architecture for the beyond the fifth generation (B5G) wireless network, leveraging AI and blockchain, enabling secure and intelligent resource management, flexible networking and orchestration.



HE



RIA



2023-2025



€6M

Our Role:

- Contribute to the development of secure blockchain-based mechanisms by implementing a Digital Agreement Creator component.
- Contribute to GDPR-compliant data management, standardisation, and clustering activities, as well as to business planning and market analysis.

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PROGRAMME 2021 – 2027
COMPETITIVENESS