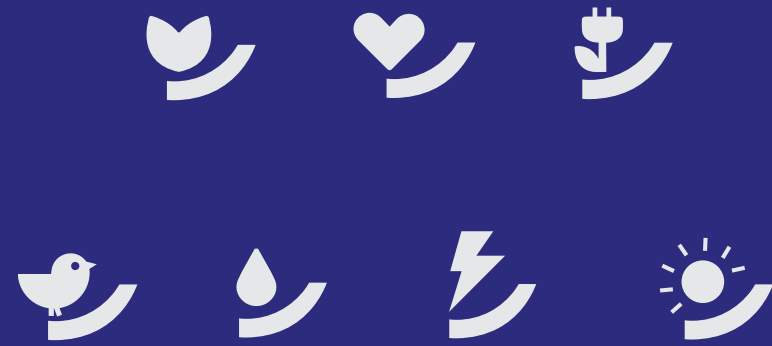


# Delve into e-shape showcases



**e-shape** is a unique project that brings together decades of public investment in Earth Observation and in cloud capabilities. Empowering services for decision-makers, citizens, industry and researchers.

**27 cloud-based pilot** applications under 7 thematic areas address societal challenges, foster entrepreneurship and support sustainable development.

## The myEcosystem showcase



The showcase myECOSYSTEM will serve focal user groups such as research, environmental assessment, reporting and management by offering seamless access to consistently scaled environmental information from remote sensing, in-situ data and derived information, such as Essential Biodiversity Variables (EBV) at permanently operated European observation and research sites that serve as benchmark sites (eLTER).

### Our challenges

To assess the state of the ecosystems, to understand ecosystem changes, their drivers and to forecast future scenarios across European environmental gradients. Building on previous co-design experiences the myECOSYSTEM pilots will iteratively co-develop services provided and visualized by a myECOSYSTEM aggregator.

### Our pilots

- mySITE
- mySPACE
- myVARIABLE

### Partners

UFZ, BSI, CERTH, CNR, CREA, DELTARES, EAA, MLU, SYKE, UBT, UT, WENR, and BGU as associated partner

Showcase Leader: UFZ, Michael Mirtl

## The Water Resources Management showcase



The Water Resources Management showcase reflects this multidisciplinary by presenting five pilot activities that focus on its different elements, going from inland waters to coastal areas and the ocean, providing a link to most of the different European Directives and Policies and the SDGs.

### Our challenges

- High data storage and computational resources requirements for pilot implementation
- Operationalise the different pilots in a remote architecture that is able to take advantage of the cloud environment
- Guarantee the continuous access to relevant data sources
- On-board new user that assure the application sustainability

### Our pilots

- Improved historical water availability and quality information service
- Satellite Earth Observation-derived water bodies and floodwater record over Europe
- Dive - Diver Information on Visibility in Europe
- Sargassum detection for seasonal planning
- Monitoring fishing activity (IPMA)

### Partners

SMHI, LIST, PML, CLS, IPMA, DEIMOS

Showcase Leader: DEIMOS, Nuno Catarino

## The Disasters Resilience showcase



The Disasters Resilience showcase develops a portfolio of innovative and mature services for the protection of citizens, economies and ecosystems against natural and human induced disasters (geo-hazards, extreme weather, fires, floods, etc.), leveraging European EO resources.

### Our challenges

To support the implementation of the Sendai Framework on Disaster Risk Reduction, SDGs # 2, 11, 13, the Urban Agenda for the EU, and relevant GEO Flagships, Initiatives, and Community Activities.

### Our pilots

- E04D\_ASH - EO Data for Detection, Discrimination and Distribution (4D) of Volcanic Ash
- GEOSS for Disasters in Urban Environment
- Assessing Geo-hazard vulnerability of Cities and Critical Infrastructures
- Resilient and Sustainable Ecosystems including Agriculture and Food

### Partners

CNR, CIMA, IGME, NOAA, NP

Showcase Leader: NOAA, Haris Kontoes

## The Climate showcase



The Climate showcase, through its pilots, exhibits services to public, private and academia users having a variety of cases from local city scale to global focus. The factor uniting most of these efforts will be seasonal forecast information from the Copernicus Climate Change Services. C3S.

### Our challenges

Is seasonal forecast information as a probability distribution for certain conditions useful enough.

### Our pilots

- Global Carbon and Greenhouse Gas Emissions
- Urban resilience to extreme weather - climate service
- Forestry conditions - climate service
- Hydropower in snow reservoir - climate service
- Seasonal preparedness

### Partners

ICOS ERIC with MPI-BGC, Germany, University of Bergen, Norway, University of Exeter, UK, UHEL, FMI, CMCC, DWD, ZAMG, UHEL, AA and University of East Anglia, UK as linked third parties

Showcase Leader: FMI, Mikko Strahlendorf

## The Food Security & Sustainable Agriculture showcase



The showcase on Food Security and Sustainable Agriculture largely contributes to SDG 2. It consists of four pilots, which all showcase that Copernicus data sets combined with the necessary in-situ data, weather and soil data can deliver improved information at global, national and local scale, exploiting the processing infrastructures offered by Copernicus DIAS.

### Our challenges

Develop and expand operational EO services with and for the end-users  
Promote the uptake of these services and applications in other networks  
Ensure sustainability of the services

### Our pilots

- GEOLAM
- EU-CAP Support
- VICI - Vegetation-Index Crop-Insurance in Ethiopia Agro industry

### Partners

VITO, ALTERRA, IIASA, I-BEC, TAU, DWD, NOAA, NP, UT, MEKELLE

Showcase Leader: VITO, Sven Gilliams

## The Health Surveillance showcase



The Health Surveillance showcase demonstrates through selected pilots the potential of EO and geospatial information to advance the Agenda 2030 & support Minamata and Stockholm Conventions implementation assessment.

### Our challenges

To support implementation of GEO Flagship (Global Observation System for Mercury - GOS4M) and Initiative (Global Observation System for Persistent Organic Pollutants - GOS4POPs)

### Our pilots

- EO-based surveillance of mercury pollution
- EO-based surveillance of POPs pollution
- EO-based pollution-health risks profiling in the urban environment

### Partners

VITO, IIASA, I-BEC, TAU, DWD, MU, CNR-IIA and BRS Secretariat, WHO as associate partners, NOAA, DLR, FMI, IIASA, DRAXIS Environmental S.A.

Showcase Leader: CNR, Nicola Pirrone

## The Renewable Energy showcase



The Renewable Energy showcase provides innovative and mature products and services for renewable energy development and management, leveraging European EO resources and enabling collaborations between research centers and private sector. It Contributions to: GEO Initiative GEO-VENER (GEO Vision for Energy), UN Sustainable Development Goal 7.

### Our challenges

Use co-design methodology and European cloud-based computing following open and interoperable standards to provide EO-based market ready and sustainable services for renewable energy stakeholders.

### Our pilots

- Solar Energy nowcasting and short-term forecasting system (nextSENSE)
- High PV penetration in urban area
- MERSA - Merging offshore wind products

### Partners

NOA, PMOD WRC, CEDARE, ARMINES, DLR-DFD, DLR-VE, TSV, DTU

Showcase Leader: ARMINES, Philippe Blanc

Facebook: Horizon2020-e-shape | Twitter: @eshape\_eu | LinkedIn: e-shape project



# e-shape

EuroGEO Showcases:  
Applications Powered by Europe

www.e-shape.eu

Starting date → 1.05.2019

Project information → 48 months | 54 partners | EU contribution 14 998 976.27 €

Call (part) identifier → H2020-SC5-2018-2

Coordinator → Professor Thierry Ranchin | ARMINES



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We  
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