Earth Observation solutions for smart cities, urban planning, and maritime: hands-on e-shape pilots

17 Maggio 2022 15:00 – 17:00 CET
Palazzo Rasponi dalle Teste Piazza Kennedy
Accesso da via Luca Longhi

With the support of

Background

The satellite applications sector delivers a wide range of social, environmental as well as economic benefits to citizens of Europe and the world.

Despite the many successful examples of use of satellite-based services at the regional and local levels, and despite the programmes implemented at local and European scales to make available funds to develop commercial services increasingly sophisticated, satellite-based services are still considered as “innovation” rather than “practice”.

Satellites offer reliable and objective information on soil, air, water, vegetation, and assets, which can be compared over time. This increases the amount and quality of data that decision-makers need to take informed decisions as well as to implement sustainable development strategies.

In the maritime domain, as example, markets trends show an increasing demand from both public and private entities of satellite-based solutions to ensure a sustainable management of oceans and seas. Spanning from the monitoring of water bodies, fishing activities, and seasonal planning, among others, this tendency has evolved in parallel with European policies, showing an increasing relevant role of such solutions, an example being the Marine Strategy Framework Directive (MSFD).

About e-shape

e-shape, is a 48-month project under the framework of Horizon 2020 and constituted by a pan-European team of academic, industrial, institutional and user communities. It is a unique initiative that brings together decades of public investment in Earth Observation and in cloud capabilities into services for the decision-makers, the citizens, the industry, and the researchers. It allows Europe to position itself as a global force in Earth observation through by leveraging Copernicus, making use of existing European capacities, and improving user uptake of the data from GEO assets, opening new opportunities and expand its use, through the existing European capacities, as well as developing research to business activities.

Objectives

The e-shape workshop will:

- Introduce EO-based applications developed through the project within the selected e-shape 7 thematic showcases among Agriculture, Health, Energy, Ecosystem, Water resources, Disaster Resilience, Climate;
- Integration of the EO-based applications into users' daily workflows;
- bring together research, end users and civil society that want to benefit from the understanding and entering the EuroGEO initiative;
- inform the participants about what the pilot's service will grant access to in terms of Copernicus data and user's benefit;
- foster discussions and exchange about opportunities and challenges with new potential users of EO-based applications;
- injects knowledge exchanges on co-design methodologies to develop the operational uptake of mature EO-based services.

The workshop

The workshop is an e-shape labeled event and will present some of the project's pilots related to maritime activities.

The structure of the workshop is flexible and completely customisable according to the needs of the co-organisers.

The first part of the workshop will set the stage by introducing the audience to EO markets trends and the potential of satellite applications for the use and benefit of specific users categories with a particular focus on the policy development and funding opportunities.

The second part is dedicated to the presentation of pilots projects, involved in a co-design process with users, industry and policy makers to deliver sustainable EO solutions and to maximise the value for users. The presenters will provide hands-on training and users' benefit.

The format foresees a Q&A and it is meant to be interactive engaging with the through live pools and request for feedback useful to inject in the co-design methodology of the service development.

Draft programme

15:00 – 15:05 Welcome remarks Annalisa Donati, Eurisy Secretary General

15:05 – 15:15 Introductory Remarks: Annagiulia Randi, City of Ravenna Councilor for economic development, trade, industry and port authorities, European policies and international cooperation (TBC)

15:10 – 15:30 Francesca Piatto, Project Officer, EARSC; EO benefits for end users communities markets trends and future projections

15:30 – 15:45 Annalisa Donati, Secretary General Eurisy, Space4Maritime and e-shape overview

15:45 – 16:30 Hands-on pilot presentation

- Alessandra Belve, Business Development Officer, Planetek, Rheticus®: Aquafarmers faces new challenges due to the impact of extreme events mostly related to climate change, leading to changes in the sea temperature and phytoplankton, affecting growth rates and mortality of shellfishes and, therefore, the productivity of farms and the quality of products. As a consequence, aquafarmers can't rely totally on well-known and established farming practices. Using satellite data and derived measurements of water parameters and a model for shellfish growth, Planetek is delivering Rheticus® Aquaculture service, providing information to aquafarmers about mussels' growth rates, consisting of weekly bulletins with indicators calculated by the algorithms.

- Marco Folegani, Founder and Project Manager, MEEO, FRIEND: This pilot aims at assessing the flood risk in selected areas, its impact on urban areas and the associated risk for population. It will use Sentinel-1 and Sentinel-2 data and relevant processing chains to generate time-series of imagery and automatically detect changes within a given period. The output will be exposed through the MEEO (pilot coordinator) platform whose data cube technology will be enriched with additional relevant datasets to provide both citizens and experts with a Flood Risk & Impact Assessment dashboard based on indicators, time-series charts or forecasting maps. The objective is to have a smart organization of the heterogeneous relevant datasets that facilitates the analysis of the data available and, therefore, the monitoring activities over an AoI. The current application (running in the SatCen GEO-DAMP platform) will be extended by incorporating Sentinel-2 change detection, enhancing its interoperability, expanding its functionality to cover other areas and periods.

16:30 – 16:45 Emanuela Medeghini, Responsabile Ufficio Politiche Europee, Comune di Ravenna

16:45 – 17:00 Concluding remarks