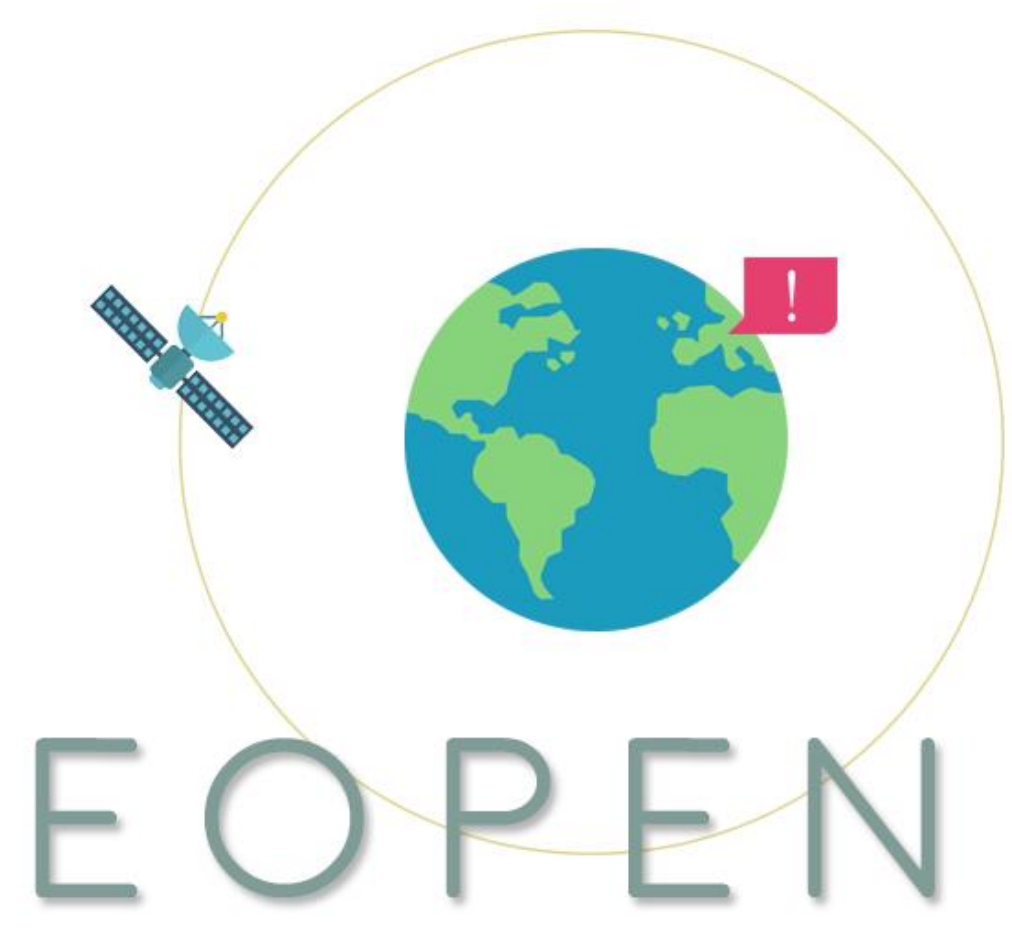


The H2020-EO EOPEN project



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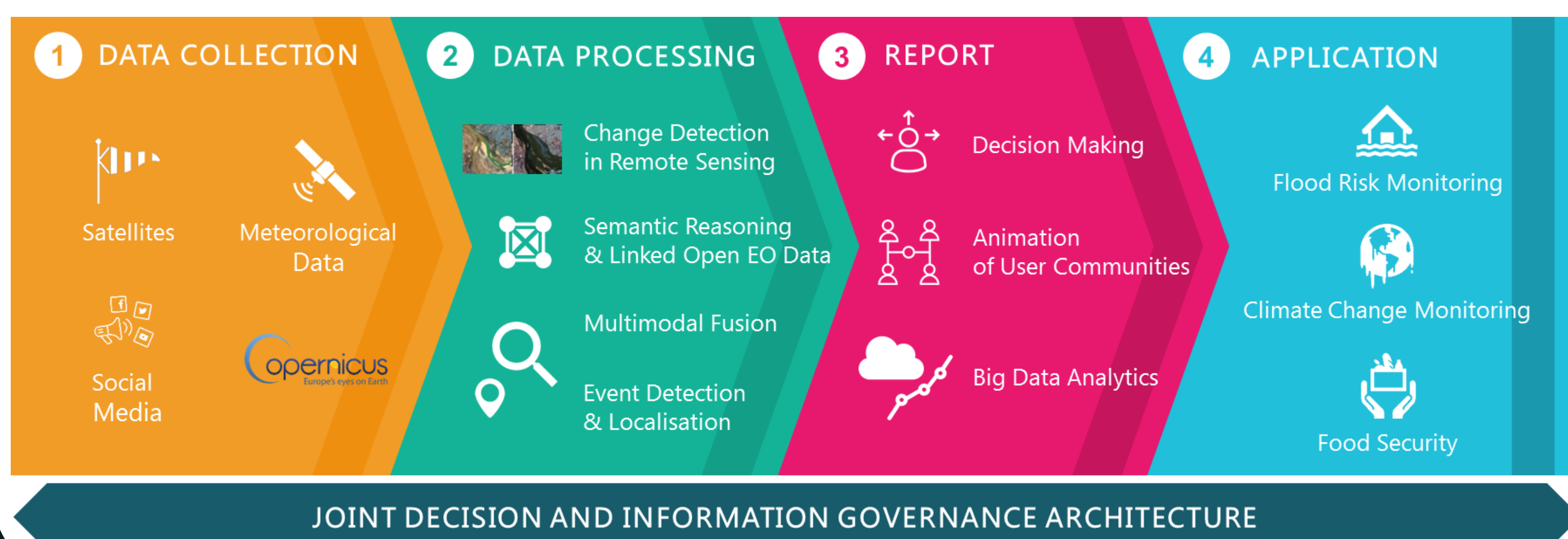
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Challenge

- Data and services derived from space systems, including satellite images, geo-positioning information and satellite communications, contribute to a number of public policies and economic sectors (e.g. environmental protection, transport safety, precision farming, urban and regional planning, etc.)
- Copernicus data has already paved the way to monitor changes on Earth, using Sentinel data, aiming at efficient land, atmosphere, marine and climate change monitoring and emergency management
- Big Data technologies for Copernicus user scenarios are needed to tackle the technical barriers arising from the massive streams of EO data
- Ensure scalability of the data standardisation, fusion and exchange methods, combining also non-EO data and metadata annotation
- Combine mature ICT solutions and scalable processing techniques building on top of European HPC infrastructure
- Ensure DIAS portability
- Field demonstrations in real use case scenarios supported by user representatives

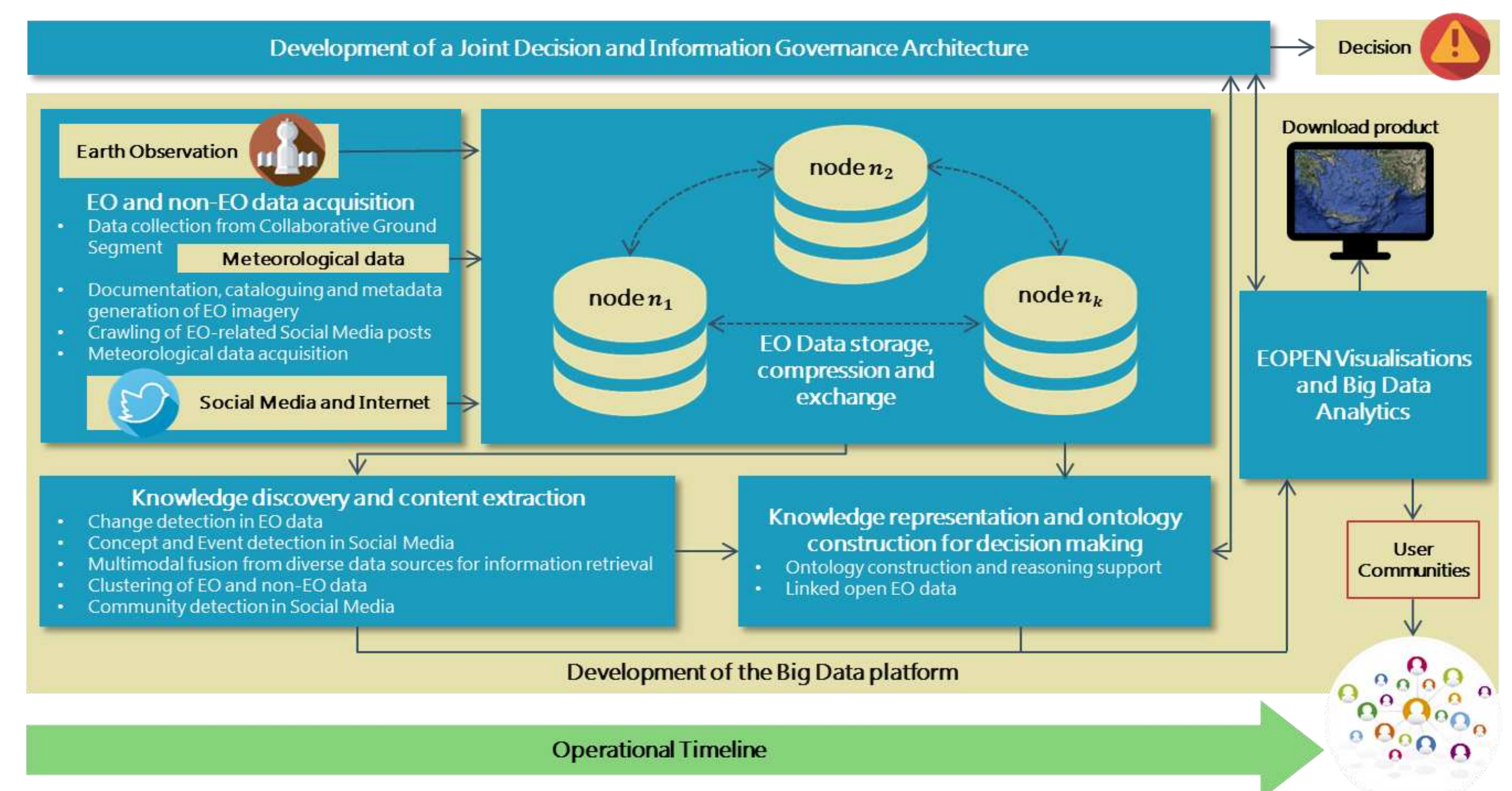
Objective

The **overall objective of EOPEN** is to provide a platform targeting non-expert EO data users (non-traditional user communities), experts and the SME community that reveals and makes Copernicus data and services easy to use for Big Data applications by providing EO data analytics services, decision making and infrastructure to support the Big Data processing life-cycle allowing the chaining of value adding activities across multiple platforms.



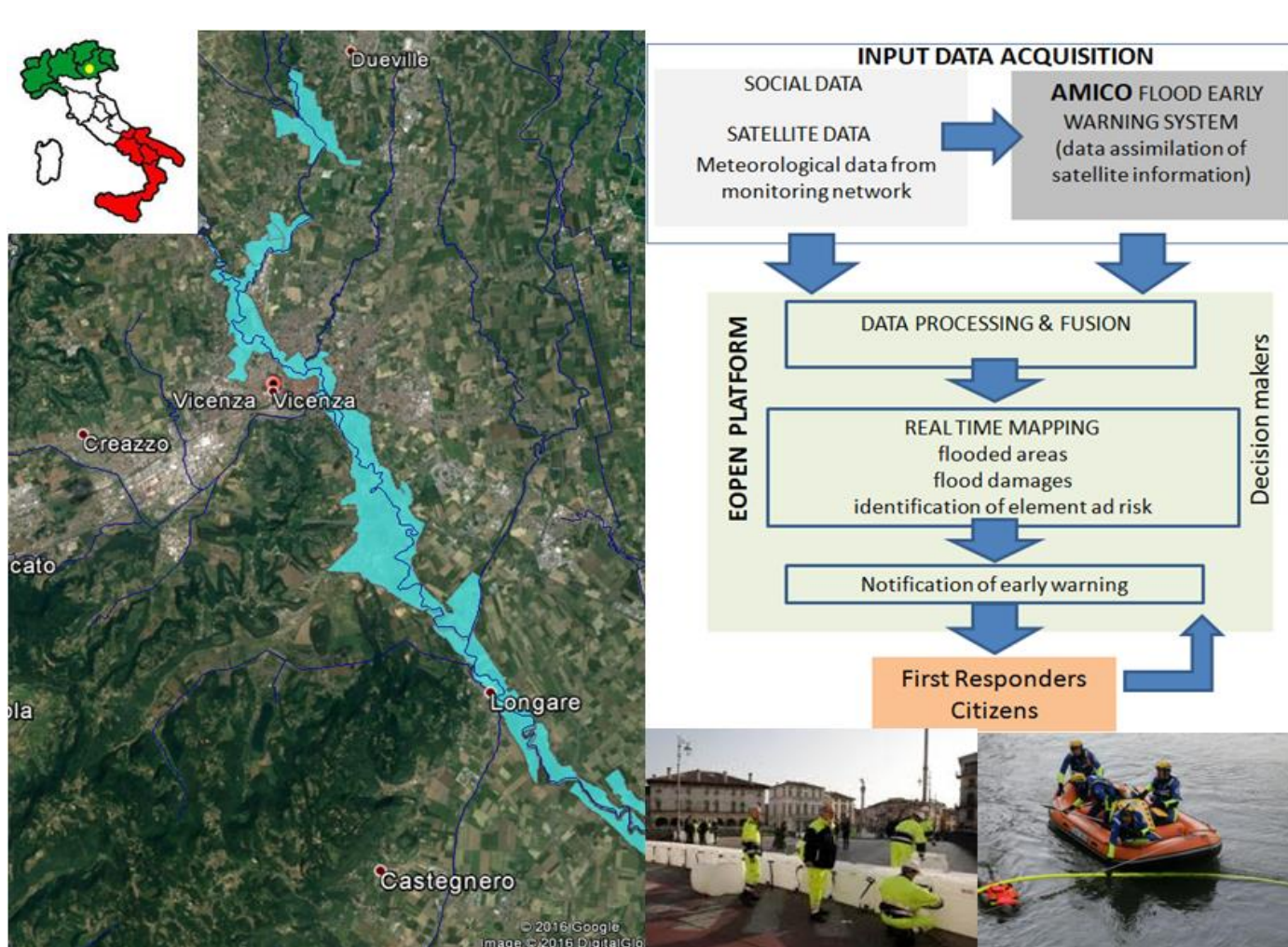
Concept

- Data collection from multiple and heterogeneous sources
- Knowledge discovery and content extraction
- Semantic representation and linking of data for decision making
- Report generation and analytics at the EO product and the user level
- Joint Decision and Information Governance (JDIG) architecture

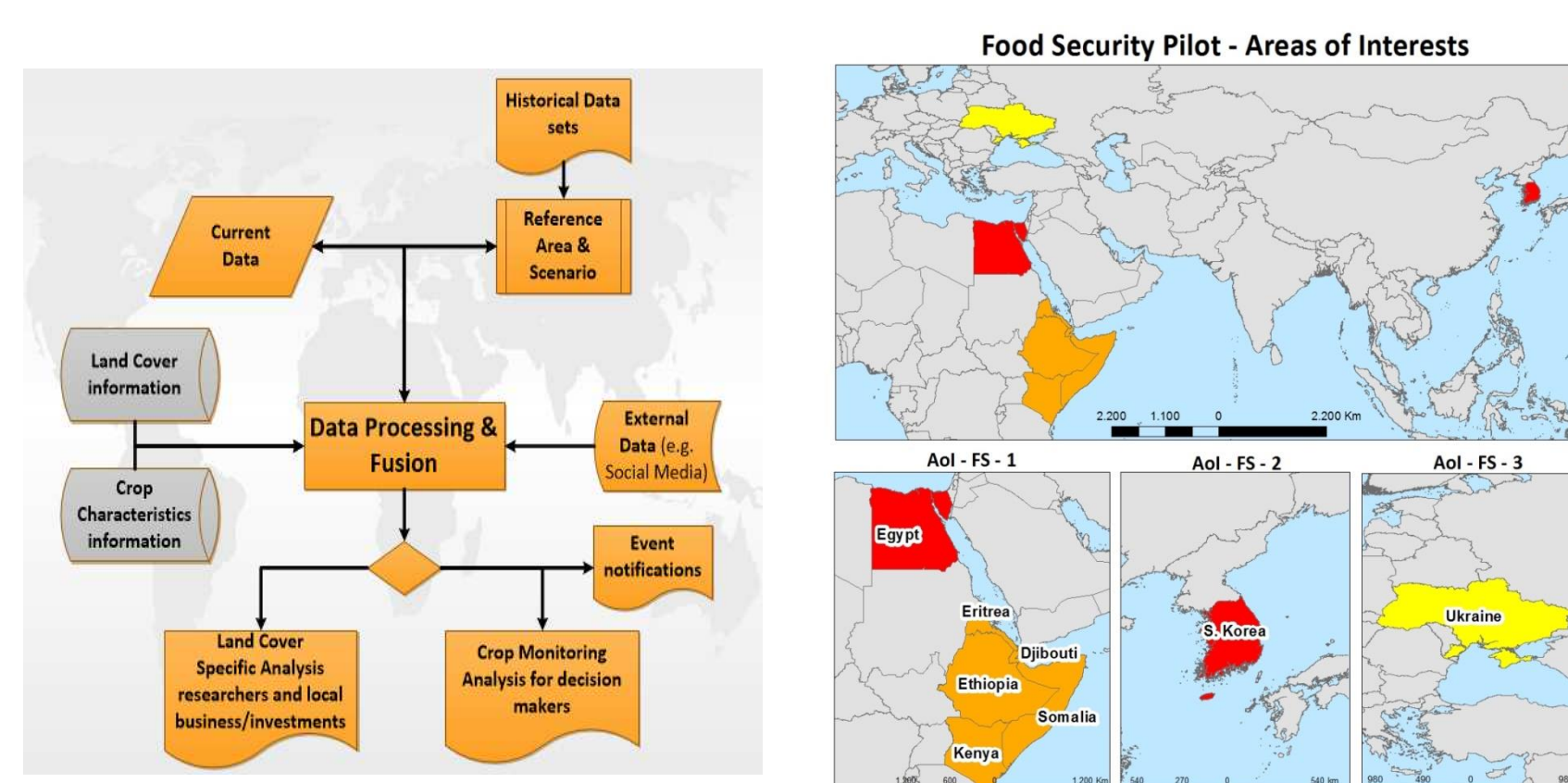


Demonstration

Flood risk assessment and prevention



Food Security through EO datasets



Monitoring climate change through EO datasets

- User-friendly, online visualization and analysis tools to investigate regional climate change trends
- Special emphasis on the Arctic change (target area is Finland)
- Satellite and ground-based data on atmospheric temperature and snow cover
- Use of social media possible at least for snow cover observations (e.g., photos)

Impact

- Optimise the use of EO imagery by non-traditional user communities to meet societal challenges.
- Make access to the EO imagery easy and user friendly through scalable dissemination and exploitation software based on international standards.
- Establish interoperable access to facilities to all EU Member States linking and networking data and processing capabilities.
- Allow public and commercial users to interact with and serve their user base without deploying their own storage and processing facilities.
- Assist preparedness, prevention and response in natural disasters and consequences of climate change, using EO imagery, meteo data, text, image and social media posts.

