SnapEarth

innovative platform

www.snapearth.eu

- Earth Observation
- Artificial Intelligence
- Machine lerning

Today, Earth Observation (EO) data are freely available in large quantities. However, the main obstacle to their use by the general public is that these data are sometimes hard to access, and a precise image can be hard to find from the large amount of data available.

SnapEarth is to initiate the creation of a virtuous circle of innovation by providing to **EO data** users an innovative platform with leading edge EO segmented datasets, **Neural Networks** models and **Cloud computing** ecosystem.

From a user perspective, SnapEarth will alleviate the burden of building and configuring an EO processing environment linked to a DIAS platform. Beyond the DIAS platforms, SnapEarth will have the capacity to be connected with any EO data or processing service providers.

SnapEarth aims to facilitate also access to EO data from the general public thanks to EO data labelling and indexation innovations and access from the Qwant search engine.

The result of the project will be a **portal for natural language queries on images**. The use of language processing as an interface between the user and the system for extracting information from images is one of the keys to the broad adoption of the system. This will allow users even without knowledge of EO to perform complex semantic searches.

The SnapEarth components:

PLATFORMS:

SafeScale - an open source Infrastructure and Platform as a Code tool. It offers an APIs and a CLI tools to deploy versatile computing clusters that span multiple Clouds;

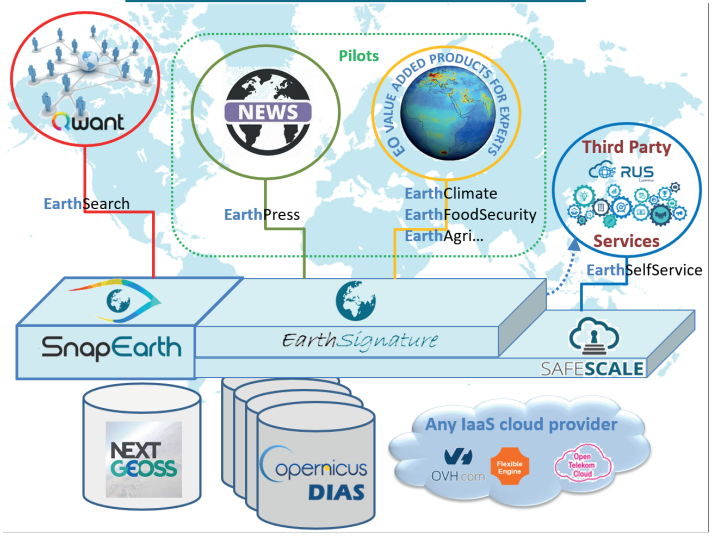
EarthSignature - is based on artificial intelligence designed to extract biophysical land cover semantic information from satellite imagery.

SERVICES:

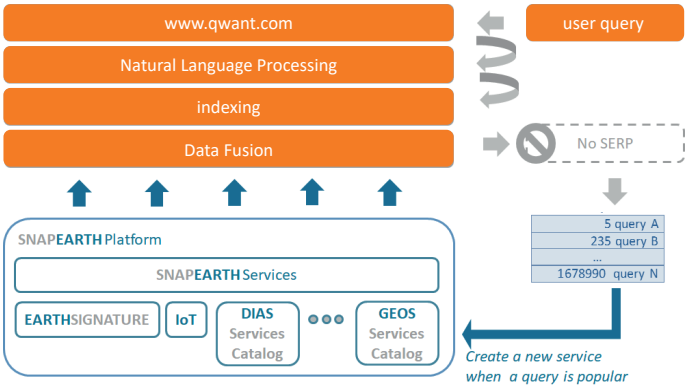
EarthSelf - technological component enables any business or user to take advantage of highly scalable cloud environments for analysis, visualization and production of Earth observation value-added services;

EarthSearch - a portal for natural language queries on images. User will be able to express questions in natural language on images and get either a text response or an imagery response.

SnapEarth supply chains



Architecture for EO data search



PILOTS:

EarthPress - aims to deliver value-added products to editors and journalists. Such contents tailored to specific user needs will be notably based on EO data and aggregated information from social media, websites, etc. on a given topic;

EarthClimate - services to support climate monitoring activities: (1) air quality and carbon dioxide emissions monitoring and (2) urban heat islands monitoring. EarthClimate services will be combined with other Copernicus data and local data coming from sensors and monitoring programs;

EarthFoodSecurity - service is built on top of in-situ information of crop conditions, and runs with Copernicus Climate Change Service projections of climate change;

EarthAgriculture - support agriculture monitoring activities. It will improve the performance and the accuracy of the Sen2-Agri processing chains.

EarthSelf

EarthSearch

EarthPress

EarthClimate

EarthFoodSecurity

EarthAgriculture

SnapEarth

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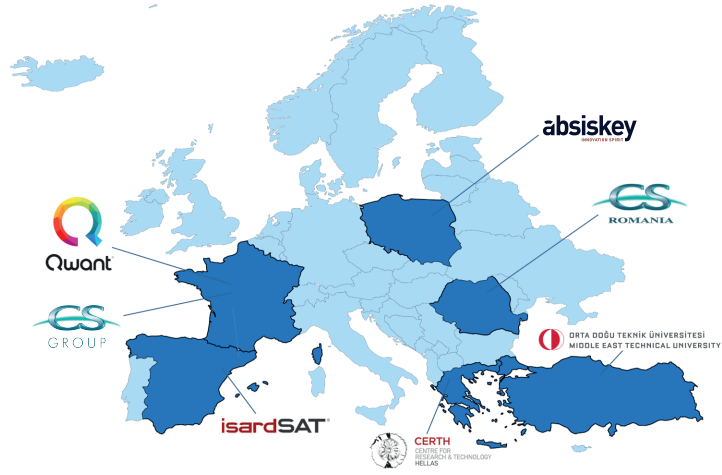
Dimension of the SnapEarth Consortium



CONSORTIUM

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