Reliance

Research Lifecycle Management technologies for Earth Science Communities and Copernicus users in EOSC

Project Overview

Extending the research-enabling capabilities of the European Open Science Cloud

This project has received funding from the European research infrastructures (including e-Infrastructures) *under the European Union's Horizon 2020 research and innovation programme* under grant agreement No 101017501

Reliance at a Glance

REsearch LIfecycle mAnagemeNt technologies for Earth Science Communities and CopErnicus users in EOSC

- RELIANCE seeks to ***extend the EOSC's capabilities*** with an enhanced support for ***research activities*** through a set of industry-strong, innovative, ***interconnected services***, and in alignment with the ***EOSC Interoperability Framework***.
- Adopting a holistic research mgmt. approach, it will ***enhance the discovery*** of and access to research data/results (incl. ***Copernicus*** data), improve the ***extraction*** of relevant information, ***managing the research lifecycle*** while promoting ***FAIR and open science*** principles.
- It will pilot and demonstrate its services' value via ***3 Earth Science communities*** and others engaged via an ***Open Call,*** fostering the use of ***Copernicus data***, with the final aim to enhance EOSC support for ***multidisciplinary*** research and to improve EU science as a whole

INFRAESOC-07-2020 call
2 Million Euro (EC Grant)
24 Months
Officially started January 2021

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Reliance Service portfolio

Research Lifecycle Management Ecosystem Pillars

- ***Research Objects*** as the overarching mechanism to manage scientific research activities and connect associated resources

ROHUB

- ***Data Cubes*** for efficient and scalable structured data access and discovery

ADAMM

- ***Text mining*** services to extract machine-readable metadata from RO resources enabling researchers to discover scientific information at scale and to structure their own research.

COGITO®

http://www.researchobject.org

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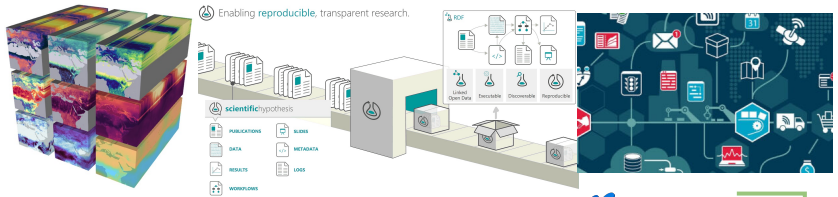
Reliance Objectives

Provision of suite of services for Research Lifecycle Mgmt.



ROHUB

Findable Accessible Interoperable Reusable

COGITO®

EOSC integration and extension

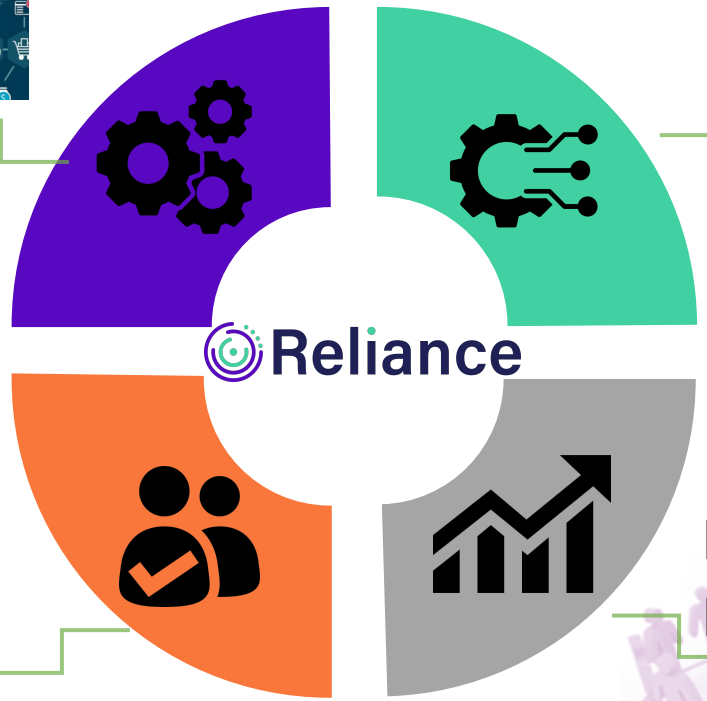
Integration and onboarding of Reliance services in EOSC, leveraging and connecting with other complementary EOSC services

zenodo

EOSC-hub

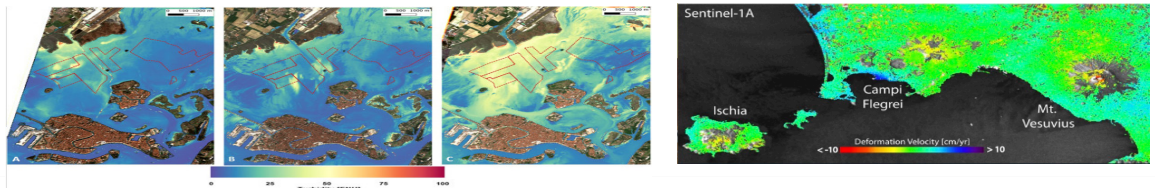
B2SHARE

egi



Demonstration & community engagement

Demonstrate the services and value proposition



Increase Copernicus and EOSC impact

Foster the adoption of Copernicus data and EOSC services in such scientific communities

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Project Partners

Consoritum at a glance

- 9 partners from 5 European countries
- 3 research communities
- 5 technical partners: 3 RO, 2 TM, 2 EO
- 4 industry partners

UiO : Universitetet i Oslo

https://www.mn.uio.no/geo/

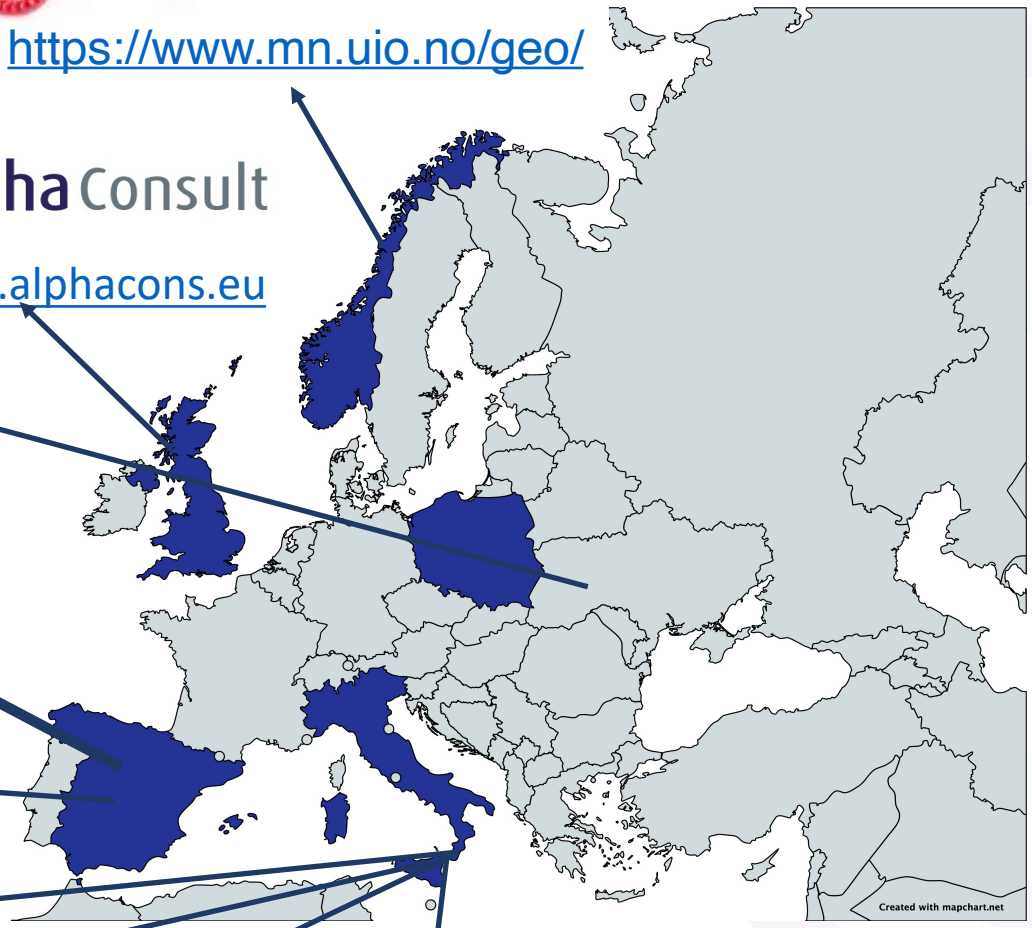
PSNC

https://www.psnc.pl/

coordinator

Alpha Consult

https://www.alphacons.eu



POLITÉCNICA | UNIVERSIDAD POLITÉCNICA DE MADRID

www.oeg-upm.net

EXPERT SYSTEM
SEMANTIC INTELLIGENCE

https://www.expert.ai/

ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA

http://www.ingv.it/

http://www.ismar.cnr.it/

https://www.meeo.it/

TERRADUE

https://www.terradue.com/

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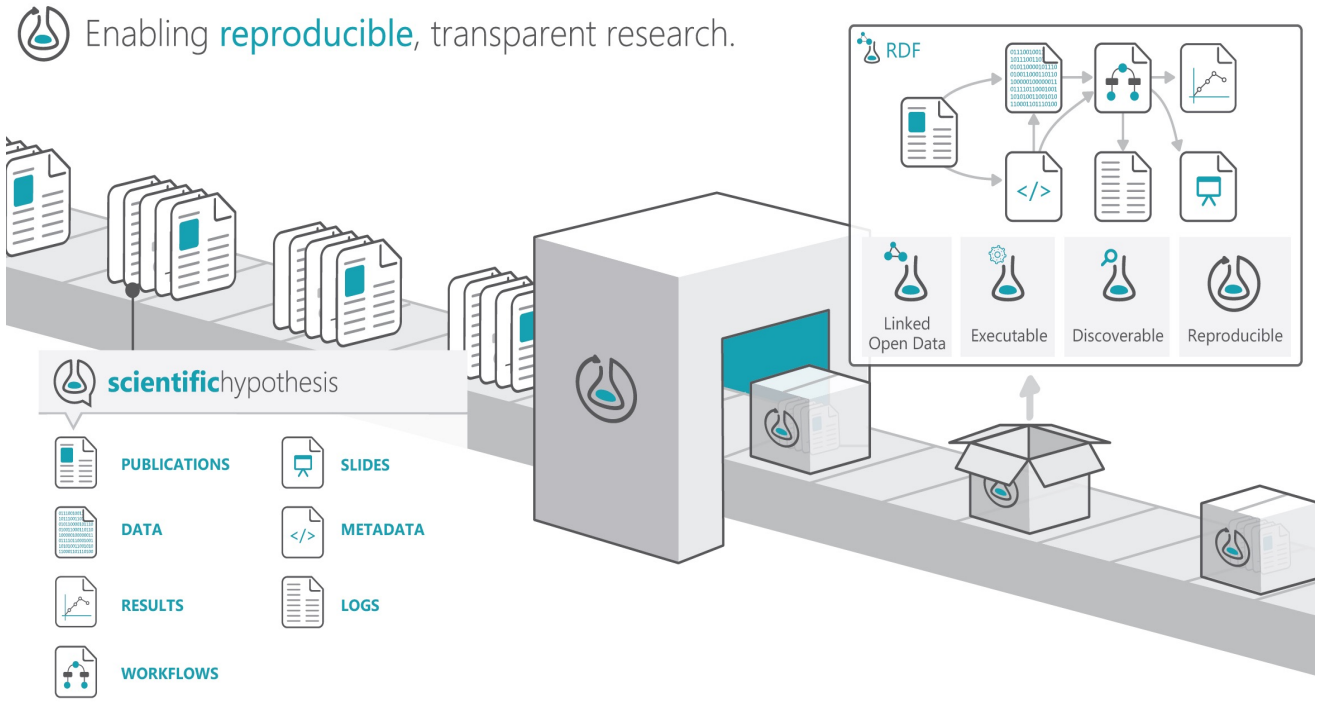
Research Objects - overview

Goal: Account, describe and share *everything* about your research, including how those things are related



http://www.researchobject.org

- **Unique identifier**, e.g. DOI
- **Hypotheses**
- **Data** used and results produced
- **Methods** employed to produce and analyse data
- **Scientific workflows** implementing such methods
- **Provenance** of their executions
- **Versioning** information
- **People** involved in the investigation
- **Annotations** about these resources

RO-Crate
Workflow 4Ever
ROHUB
everest
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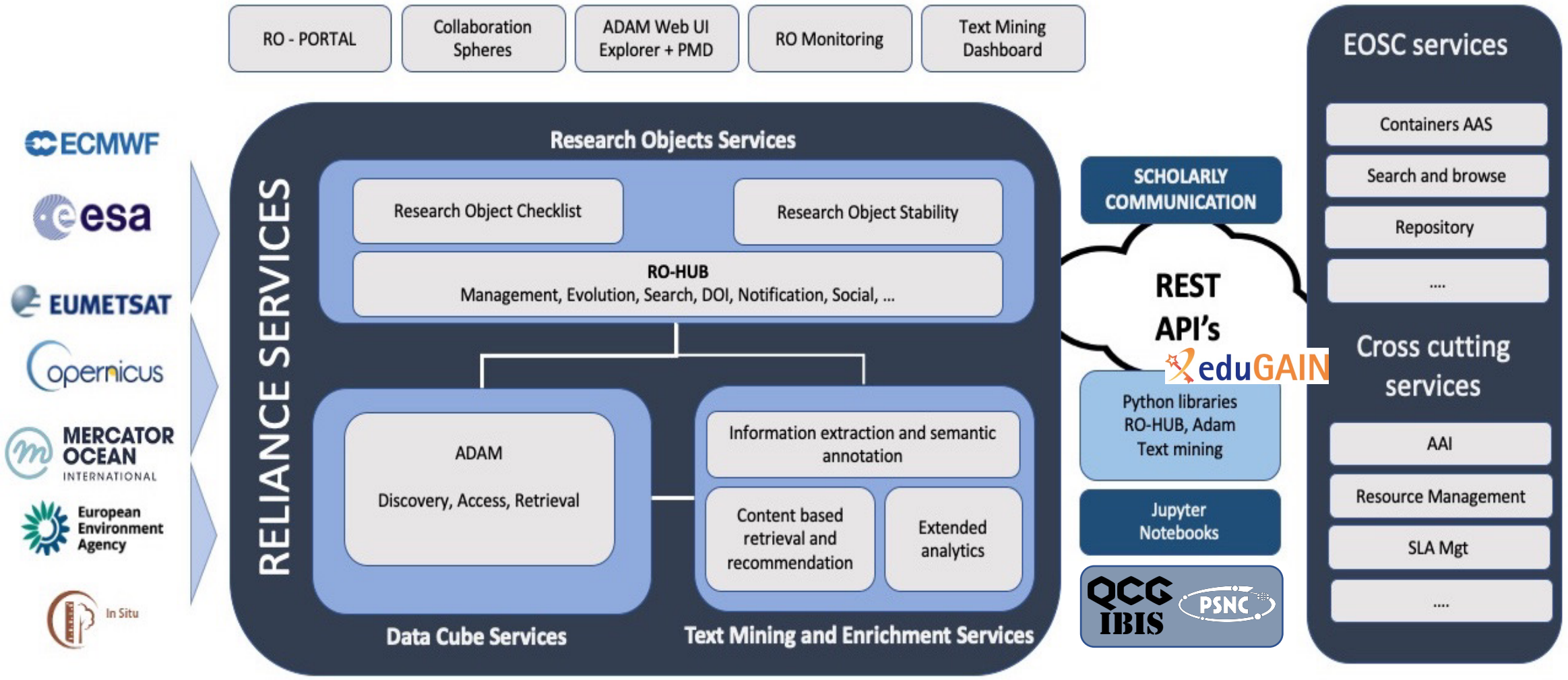
Service logic interconnection



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EOSC complementarity

Reliance services would act as a bridge between various EOSC services, acting at a higher level and connecting e.g.,

- Data used by researchers, e.g., DC for Copernicus data and other datasets available from EOSC (e.g., B2Share , EGI DataHub),
- Methods used to process such data (e.g., via EGI Jupyter notebooks)
- Research Infrastructures (RI) used for research (to monitor their impact)
- Results published via scholarly communication services (e.g., Zenodo/OpenAire).
- RO snapshot/releases also published to EOSC repositories or scholarly communication platforms (e.g., B2Share, Zenodo)

Source: https://www.the-waves.org/2020/09/29/technology-transfer-for-development-myth/

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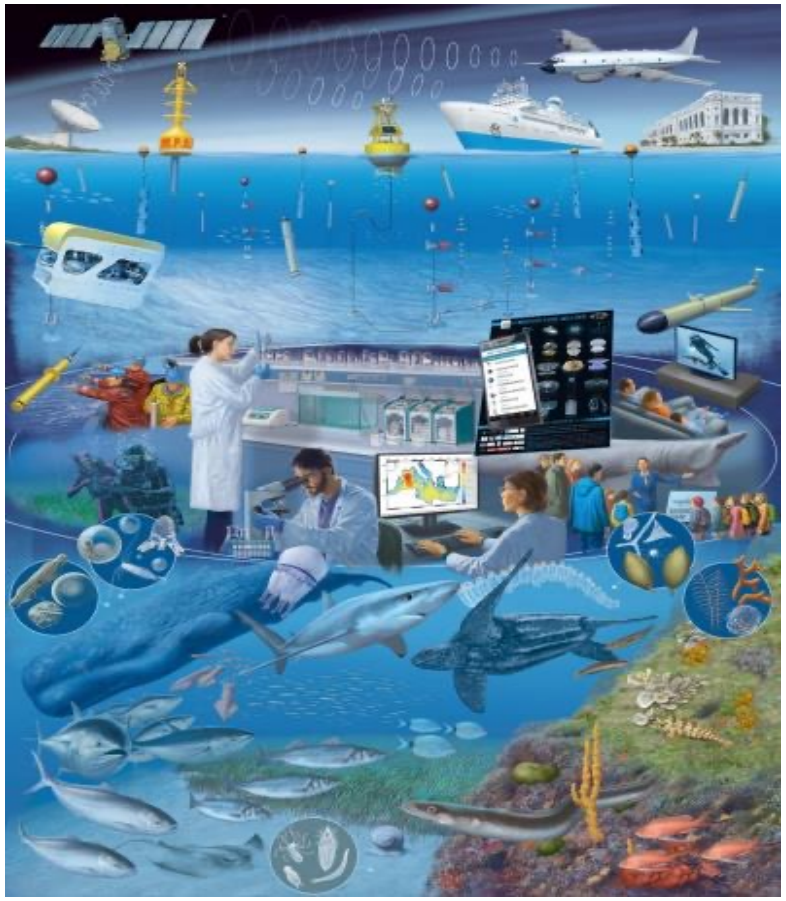
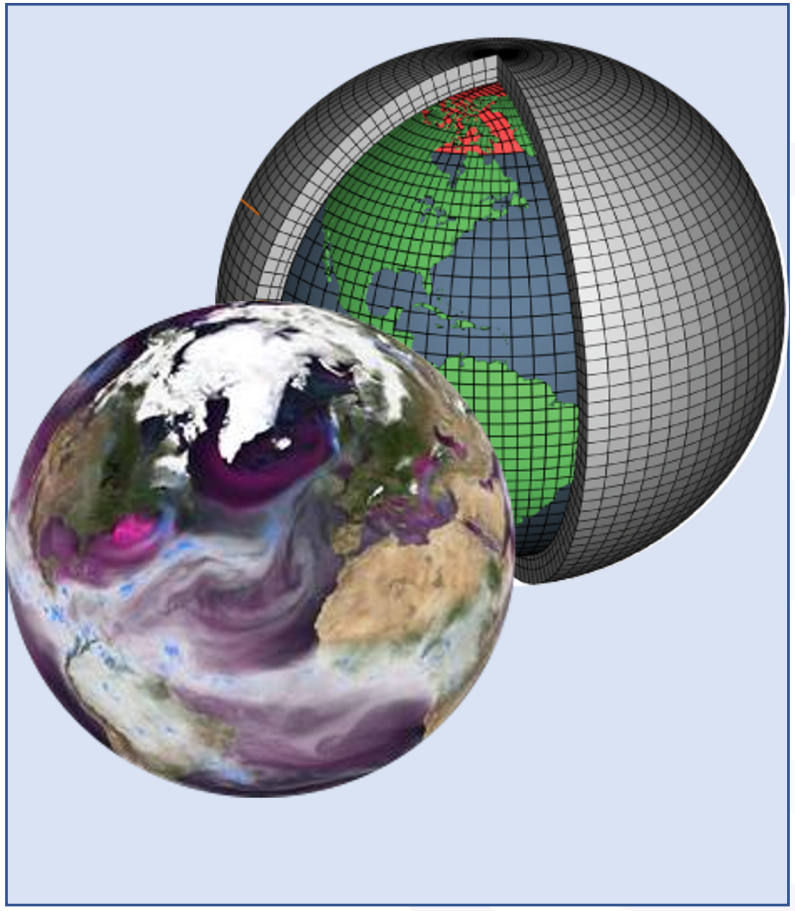
Sea Monitoring



Geohazard

Atmospheric and climate modelling



The multi & inter disciplinary use cases will showcase how RELIANCE services can support researchers & promote the cooperation among scientists in Earth Science, but the services may be adapted to any other research domain!

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Thank you!

Visit us: https://www.reliance-project.eu/

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