



DATA  
TERRA



ODATIS

# ODATIS : cluster for French marine data management

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on behalf of the ODATIS executive team



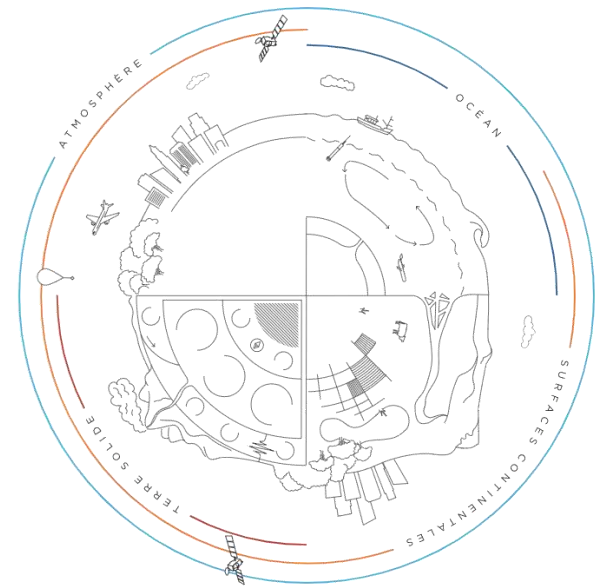
IMDIS 2021 – 14 Apr.

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# Historic and motivation



- 2012-2014 : Working Group « Thematic Clusters for Earth Observation »
- **End of 2013:** Several French Research Institutes (CEA, CNES, CNRS-INSU, Ifremer, IGN, IRD, IRSTEA, Météo-France, SHOM) agree to create **4 “data clusters”** dedicated to **Atmosphere, Continental Surfaces, Solid Earth, Ocean.**
- **2016 :** endorsement by the French Ministry of Research and inclusion in the roadmap of French Research Infrastructures. The clusters must meet the following requirements:
  - **Implement the Open Science / Open Data / FAIR Principles**
  - **Be linked with European initiatives :** EOSC, Research Infrastructures, Copernicus Services, ESA satellite missions,...
- **2017 :** integrating the 4 clusters into one single Research Infrastructure **Data Terra**



# General objectives of Data Terra



Provide **easy open access** to georeferenced data, products and services produced by the French scientific community



for a deeper **understanding, monitoring and forecasting** of the Earth's system in the context of global changes.

- **Facilitate** data access on the 4 Earth compartments, collected from either satellite, airborne, ground, marine or submarine observation systems and from multiple data sources
- **Improve** the quality, the interoperability and the use of available data and products
- **Promote** inter and multi-disciplinary approaches and studies at disciplinary boundaries (ocean/atmosphere, shoreline...)
- **Serve** the scientific community and also public decision makers and innovation actors

# Missions as Data Terra cluster



## Preserve and provide access to data

- Long term preservation
- Facilitate the use of available data sets
  - Harmonisation of metadata and data
  - Technical and semantic interoperability
  - Data portal (Discovery, Visualisation, Access and subsetting, Analyse)

## Routine data processing and promotion of the elaboration of new algorithms

- Production of qualified long term series according to international standards (level 2 and above)
- Promote the common use of data from different sources (satellites, in situ, campaigns)
- Elaborate products at the disciplinary interfaces (e.g. : shoreline, ocean/atmosphere...)

## Information and training

- Support for user expertise
- Contribution to “data science”

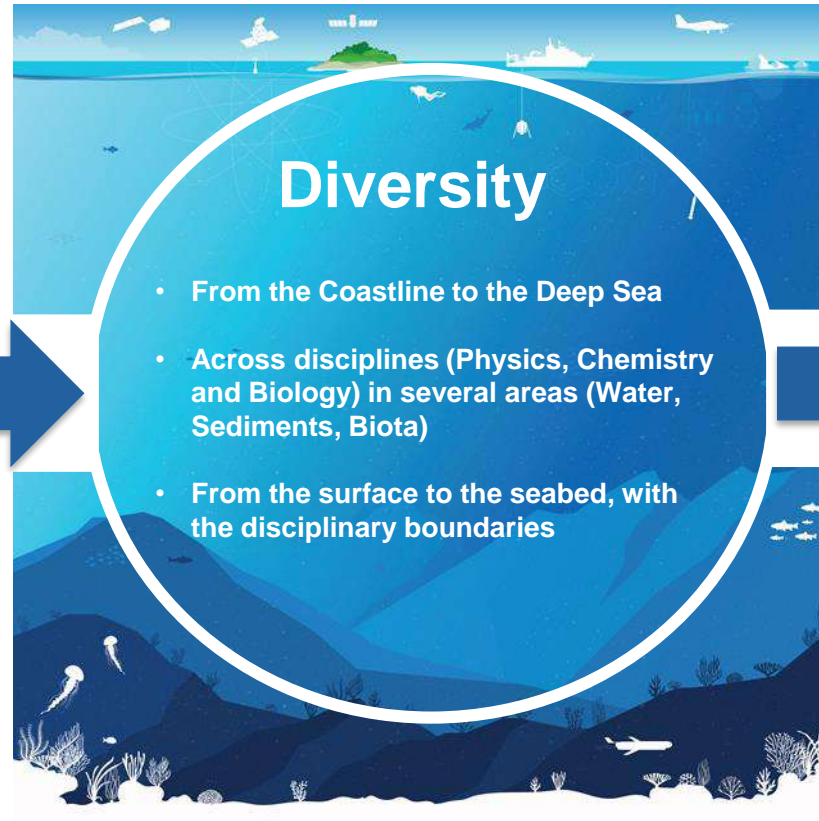
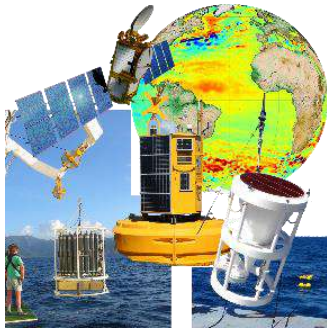


# Marine data : challenges



**In Situ  
& satellite**

- ❑ “Individual” observations from scientific experiments
- ❑ “Structured” observations from operational networks/programs



**Users**



- ❑ Scientific community
- ❑ General public
- ❑ Decision making
- ❑ ...

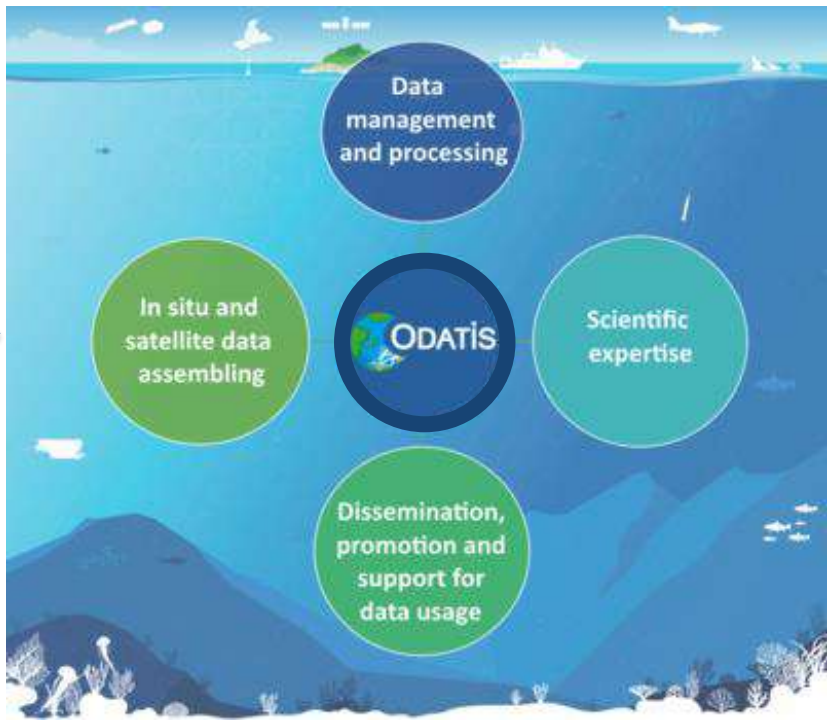
# Marine data : objectives



Data producers



## Federate at the national level

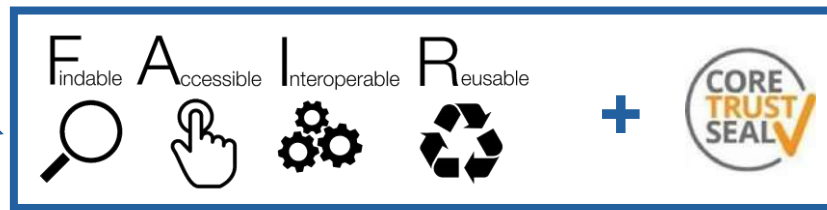


Users



- In which data repositories ?
- Can I trust them?
- What about citation ?
- What feedback on data usage ?

- What data, where and how to access them ?
- Can I trust the data repositories ?
- Are the data interoperable and reusable ?



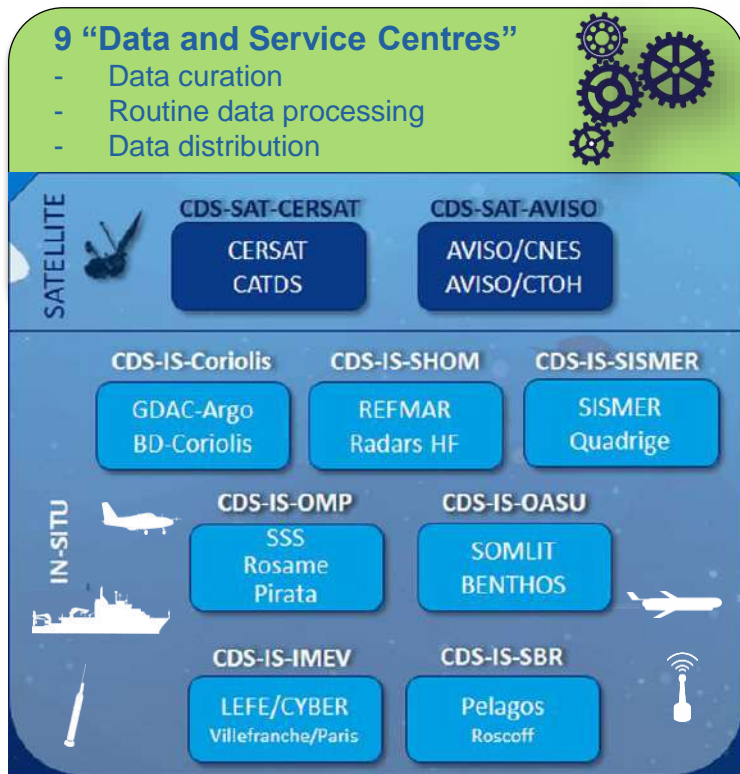
# ODATIS Roadmap



- Ensure
  - the **long-time preservation** of all data sets
  - the **interoperability** of data sets across space, time and disciplines
- Facilitate access to **fully described and qualified data** in agreement with the recommended standards
- Establish **FAIRness** and **TRUST** in data repositories
- Provide
  - a single **entry point** to access all the French open ocean and coastal data
  - the possibility to **explore, extract and analyse** data by offering **tools**, and **IT resources**.
  - a **global view** on in-situ and satellite observations and their products
- Promote **combined uses** of data of different nature (in-situ/satellite) or origin (operational networks/scientific experiments)



# Data and Service Centres



- ✓ Good thematic expertise for one or several data types
- ✓ Maintained by the partner organisations (funds and staffs)
- ✓ In the framework of a mandate (data types to manage,...)

+



## ODATIS specification

- tasks to be performed
- organisational & technical interfaces with the cluster

## A network strengthening the link between “marine-oriented” satellite missions

- Altimetry, Radiometer, Scatterometer, Optical images, ...

## & *in situ* observations

- Marine observation Research Infrastructures
- other accredited Observation Systems





# Supporting activities



- **Scientific Expertise Consortiums**

*(e.g. dissolved oxygen” launched in Spring 2019)*

- Working groups of scientists
  - Projects with a limited duration (typically 2 years)
  - Including French (and eventually European) experts (open participation : not restricted to ODATIS partners)
- Two types
  - To more accurately define a new activity or to upgrade existing ones
  - To develop data management and/or processing prototypes for specific data types

- **Technical Workshops**

- Gathering partners
- Instructing and proposing technical options (interoperability, services, ...)
- Training on data visualisation, analysis and processing software packages

# Data services



**Data producers**



« Individual » observations

Data associated to a publication

“Structured” Observation

## Data Publication



- DOI minting (Landing page)
- Long term archiving



Ingestion in « data collection »  
Control that data are relevant for Odatis

## Data and Service Centres

- Data curation
- Routine data processing
- Data distribution



## Web Portal



Discovery & access of Data & services

**Users**



- Discover
- Download
- Visualise

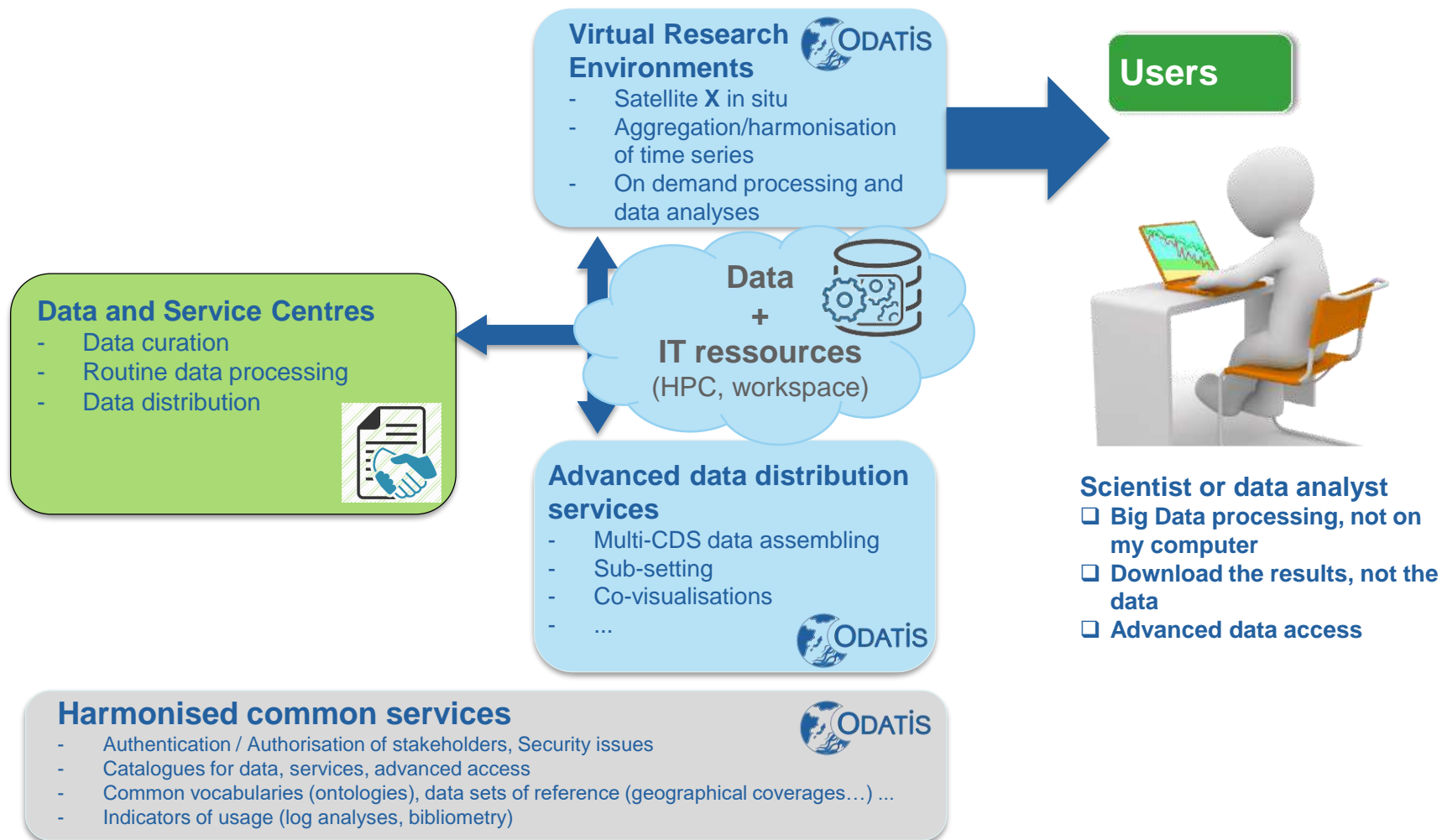


Catalogue of data collections



Sextant

# Towards “science cloud” services



# ODATIS in the European landscape



## ENVRI Community

Data Terra has a comparable scope in France as does the ENVRI community, except it does not include the Observation Research Infrastructures



## SeaDataNet (AISBL)

for Marine in-situ data, ODATIS is the French counterpart of SeaDataNet in Europe



## Involved in « European Open Science Cloud » projects

- Blue Cloud « Ocean »
- EOSC Hub « Marine Competence Centre »
- EOSC-Pillar « Infrastructures from West Europe »
- Phidias « Cloud technologies »



**Links with Copernicus Marine services** (products & IT infrastructures)



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Thank you  
for your kind attention !

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