



# WEKEO

## THE COPERNICUS DIAS SERVICE

Implemented by EUMETSAT, ECMWF, and MERCATOR OCEAN INTERNATIONAL

Presentation to EuroSDR



The graphic features a light blue background with several overlapping circles. A large, semi-transparent medium blue circle is on the left. A smaller, semi-transparent dark blue circle overlaps its right side. A white circle overlaps the top and right of the dark blue circle. The text 'WEkEO' is in white and 'Presentation' is in yellow, both centered within the medium blue circle.

WEkEO  
Presentation





<https://wekeo.eu>

Layers: 4 Jobs

**Sea water velocity m/s**

02/06/2020 | 12:00 | -0.5 m

**Global 10-daily Leaf Area Index**

333m

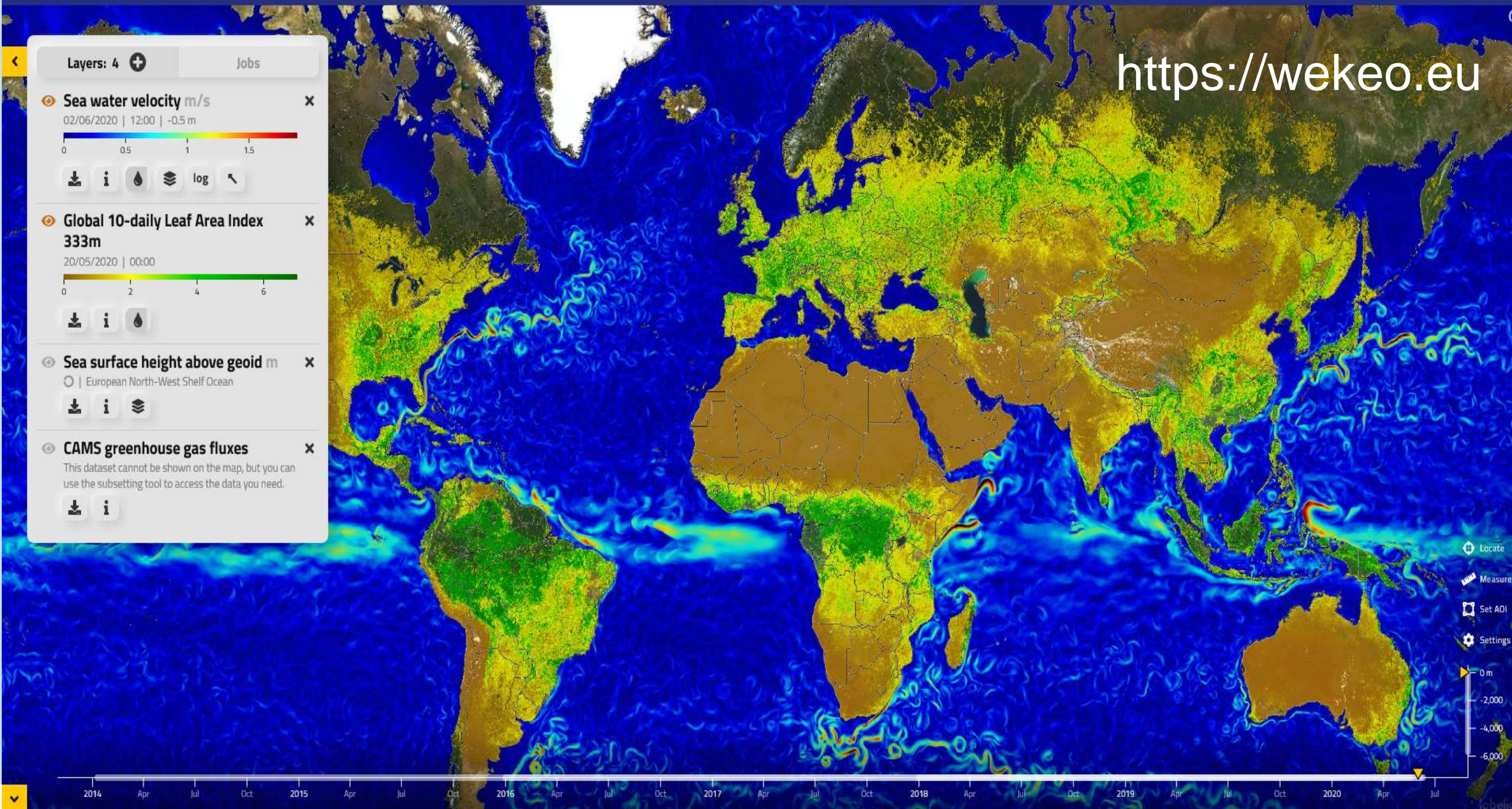
20/05/2020 | 00:00

**Sea surface height above geoid m**

| European North-West Shelf Ocean

**CAMS greenhouse gas fluxes**

This dataset cannot be shown on the map, but you can use the subsetting tool to access the data you need.

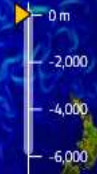


Locate

Measure

Set AOI

Settings







1

**WEKEO:**  
**MOTIVATION**

1A

# DEVELOPING FURTHER THE COPERNICUS PARADIGM



(Space)

**Infrastructures**



**Services**



(Digital)

**Infrastructures**



**Services**



# 1B

## A CLEAR DEFINITION OF ROLES AND ACTIVITIES

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### The **WEkEO federation = The WEkEO Core**

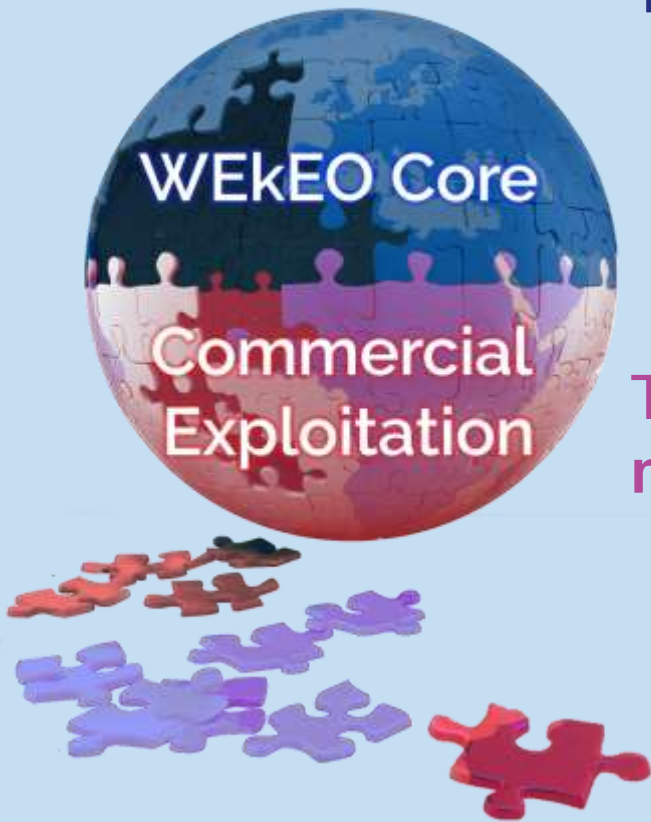
- Open and free data access + DPI cloud
- Performed by the industry via public procurement

**=> the Continuity of Copernicus**

### The **Commercial Exploitation** of the **Elasticity Cloud** managed by the industry

- Not funded by EU: users pay for services, without risk of double funding
- Initially, this exploitation is granted to a unique partner, but could be open to competition in the future

**=> Open for Commercial competition**



# WEkEO MOTIVATION: IMPROVE THE SERVICE

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TOOLS



- **New functionalities: the Digital Transformation Concept**
  - ✓ Processing close to the data
  - ✓ Unified access
  - ✓ Free notebooks to limit download
- **Continuity in the quality of service: from data production to user support**
- **Inspire compliant and optimised CO2 footprint (re-use existing data and infra)**



1D

# WEkEO MOTIVATION: ATTRACT NEW USERS

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- Address new groups of users (e.g. developers)



- Offer a new service to National Entities for their national data & processing needs



- Offer a new service to International Organization, interested in the variety and quality of the Copernicus Services and Sentinel data

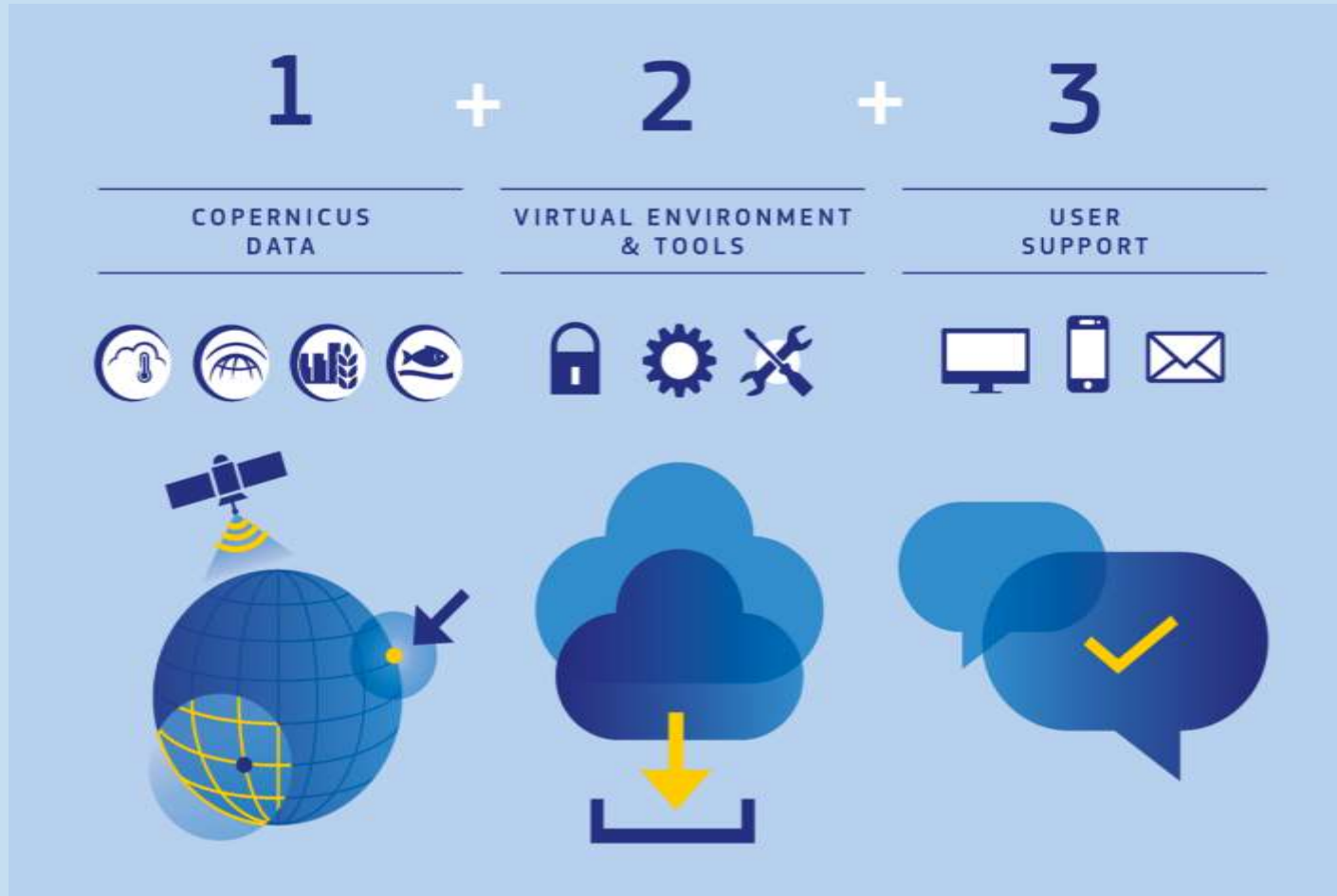




2

# WEkEO: SCOPE

# WEkEO: A 3-FOLD SERVICE



# THE WEKEO SERVICE



INTERACT WITH  
USER SUPPORT



## USER SUPPORT

Benefit from skilled technical and  
customer support



Service Desk's email:  
support@wekeo.eu



REGISTER



REGISTER



SEARCH FOR DATA



SEARCH  
DATA



DOWNLOAD



Download  
Copernicus data

DOWNLOAD  
DATA



COMPUTE



Transform  
Copernicus Data

COMPUTE  
AND  
TRANSFORM  
DATA



PROMOTE




PROMOTE FOR YOUR  
BUSINESS AND  
SERVICE ON WEKEO  
MARKETPLACE



TRAINING



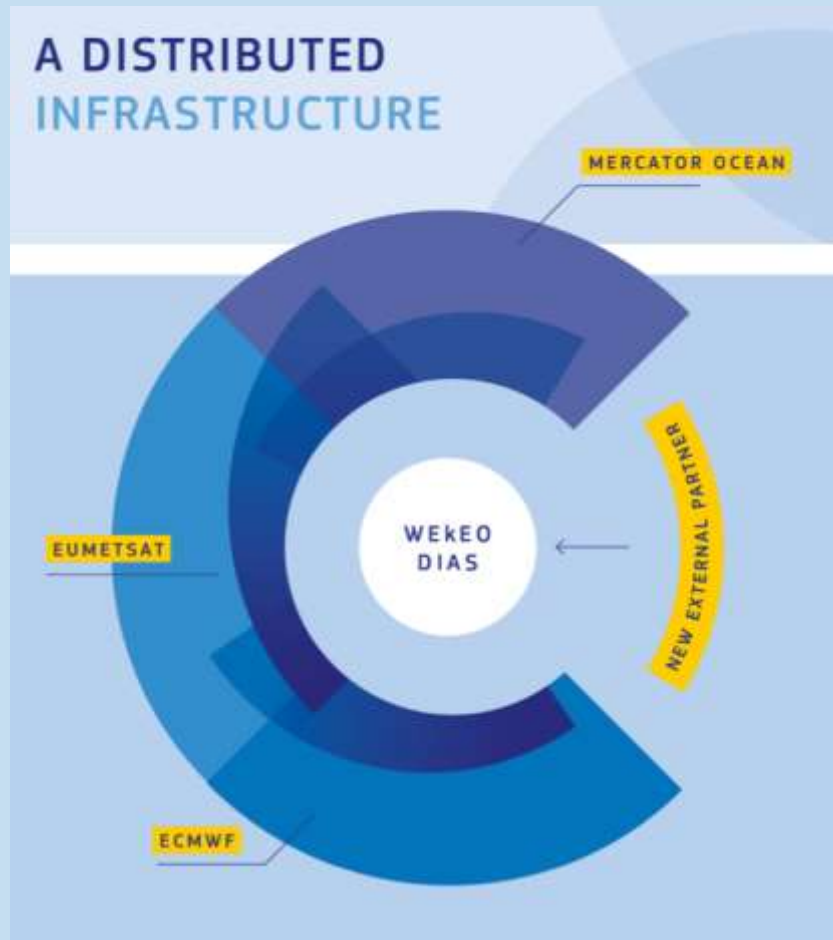
TRAINING  
HACKATHON



3 WEkEO:  
INFRASTRUCTURE



## THE WEKEO ELEMENTS – DISTRIBUTED ARCHITECTURE



- **Original Copernicus Data** connected by **high speed fiber** offering a unified and **seamless access**
- **Timeliness:** No delay to download data
- **Reliability:** No corrupted nor outdated data and metadata
- **Transaction Accounting:** Seamless monitoring of data usage

# 3

## THE WEkEO ELEMENTS – AN OPEN FEDERATION

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- Relies on the WEkEO partners core infrastructure
- Each new federated partners, such as National (e.g. EODC, PEPS, CODE DE) or commercial entities (e.g. TPZ, Maxar) will take benefit from WEkEO services
- Each new federated partner will also bring benefit for all WEkEO users in general

## THE WEkEO ELEMENTS – AN OPEN FEDERATION

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### Benefits for Federated Entities:

- Fast and efficient access to the Copernicus data (Sentinel) and Environment services.
- Get more visibility for their products or and services by being present in WEkEO market place.

### Benefits for WEkEO users:

- Additional data (free Landsat, Modis, Envisat...)
- Access to commercial data (CSK, WorldView...)
- Additional Services (HPC, additional processing capabilities...)

# 3B

## STRONG INVOLVEMENT OF THE INDUSTRY



### ITT#1 Infrastructure Operations and Commercial exploitation

*Recognized integrator, long term vision in cloud based ground segment*

*Pioneer in the use of EO Cloud, focused on commercial exploitation*



### ITT#2 Data Access and Tools

*Specialized in critical software*



### ITT#4 User Support

*Long experience of Copernicus exploitation and support in the RUS project*



### ITT#5 Webportal

*Specialized in applications*



3B

# STRONG INVOLVEMENT OF THE INDUSTRY





**European  
Environment  
Agency**



Land Monitoring



**MERCATOR  
OCEAN**  
INTERNATIONAL



Marine  
Monitoring



Climate  
Change



Atmosphere  
Monitoring



**EUMETSAT**



Upstream  
satellite data

1. **WEkEO as a Service supplier:** New services (snow) are being produced on WEkEO
2. **Data Access – SLA:** Access to CLMS data is now made without duplication. VITO, EEA are connected to WEkEO. Agreement to connect EEA user support to WEkEO user support
3. **Next step – Integration to the Federation:** Participation to the governance – in negotiation



4 THE WEkEO VISION  
FOR THE FUTURE

# WEkEO VISION FOR THE FUTURE



- A fundamental element for mutualized and centralized access to Copernicus Services and Sentinel data



- A pre-packaged offer for cloud processing and common access for the Copernicus Service. WEkEO will be part of the infrastructures used by ECMWF, MOI, and EUMETSAT for implementing Copernicus 2.0 for the next 7 years



- A backbone for interaction between national entities and Copernicus services - The national entities can connect to WEkEO to provide access to Copernicus services and Sentinel data.

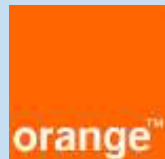




# WEkEO VISION FOR THE FUTURE



OVH.com



- A backbone infrastructure providing access to Copernicus data and services for commercial processing provider like today CloudFerro.
- For new providers (like OTC, Orange, OVH...) connection via a high performance link to the WEkEO federation will provide them and their users access to Copernicus without need of data duplication.



WEkEO  
THANK YOU  
Visit [www.wekeo.eu](http://www.wekeo.eu)