

DestinationE, WEkEO, European Weather Cloud

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Introduction

Destination Earth

WEkEO

European Weather Cloud



- EUMETSAT is currently participating in a number of different cloud-based initiatives such as DestinE, WEkEO and EWC
- Whilst all three have in common:
 - Implementation via cooperations with other Organisations,
 - Based on comparable current technologies and modern agile-type development methods,
 - Constant application of lessons learned, user interaction and technological advances.
- They however serve their specific purpose, community and provide their distinct data offerings

Destination Earth

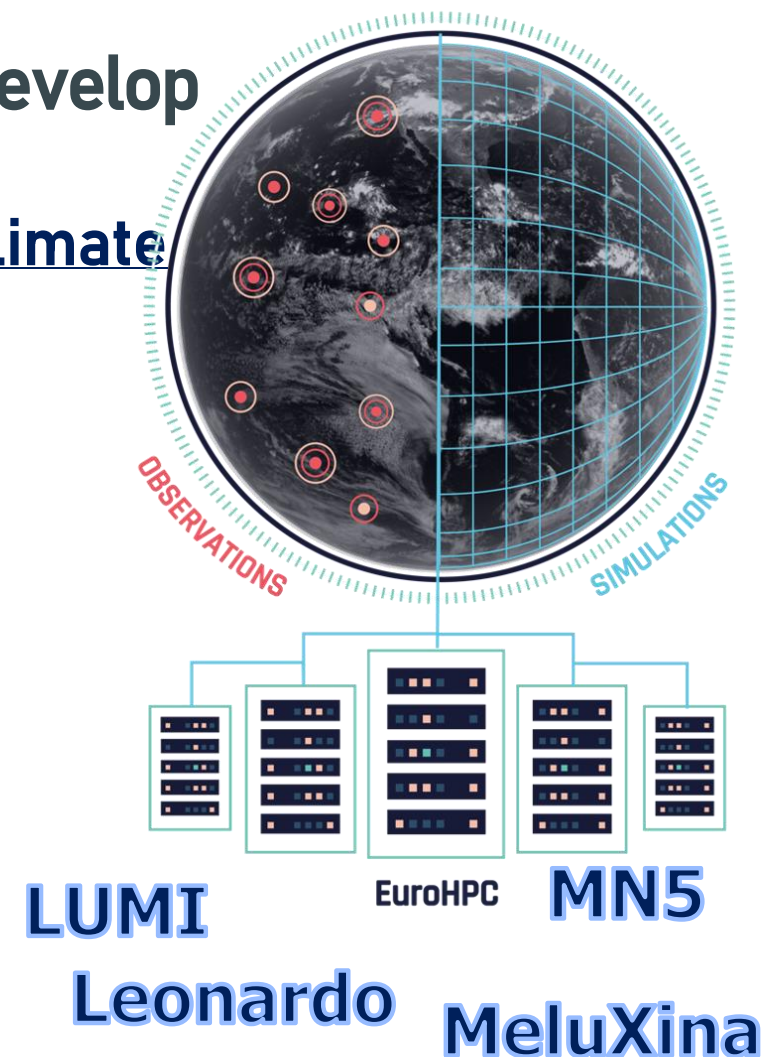




Flagship initiative of the European Commission to develop a digital replica of our planet to respond and adapt to climate change and extreme events

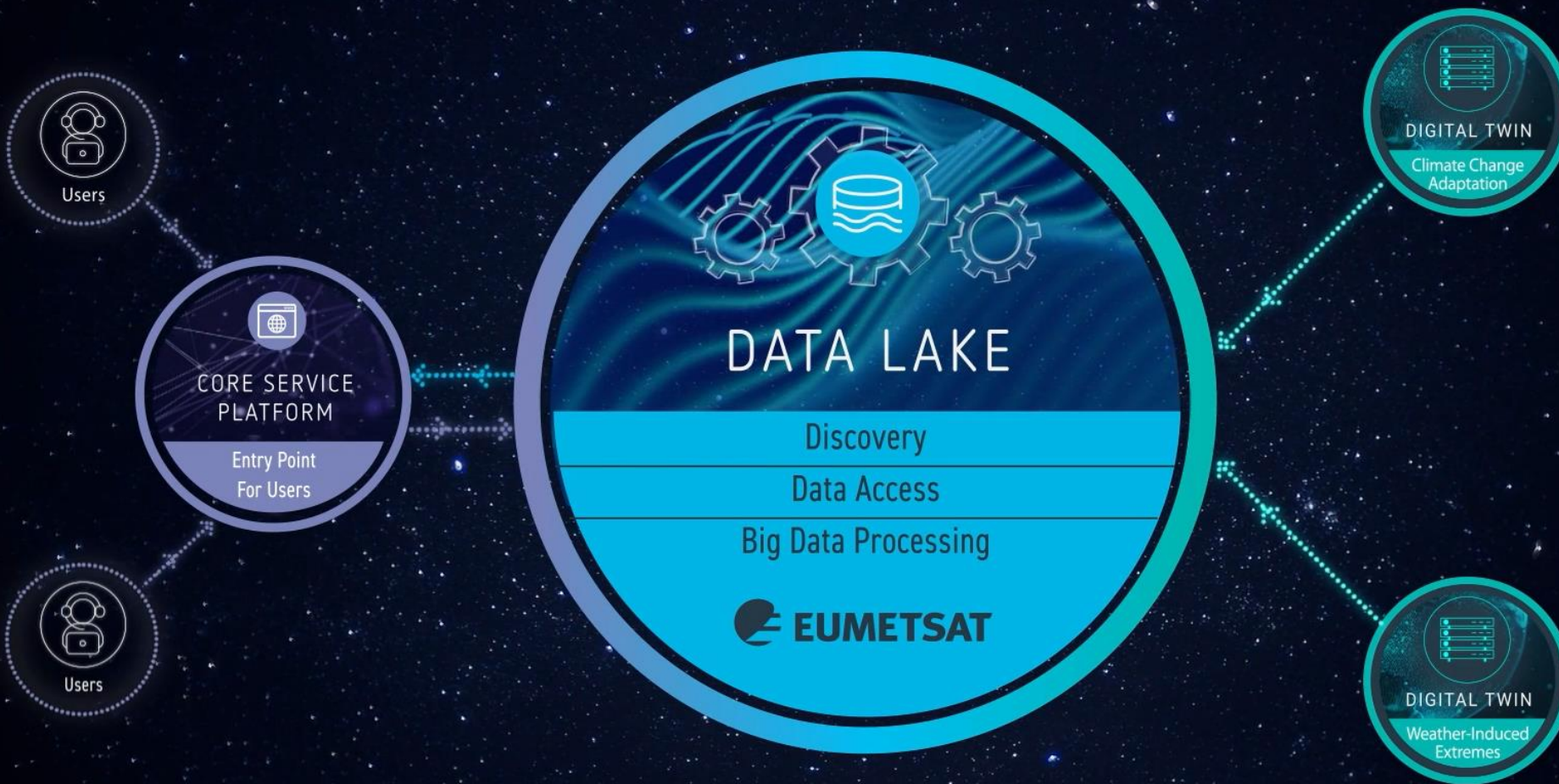
DestinE is a joint undertaking in strategic partnership with EuroHPC

- Establishes bespoke cutting-edge simulation capabilities
- Provides Earth-system information at scales where the impacts of extreme events and climate change are felt
- Fosters an innovative and thriving AI-enabled digital ecosystem
- DestinE Data Space is part of European Green Deal Data Spaces





Destination Earth System





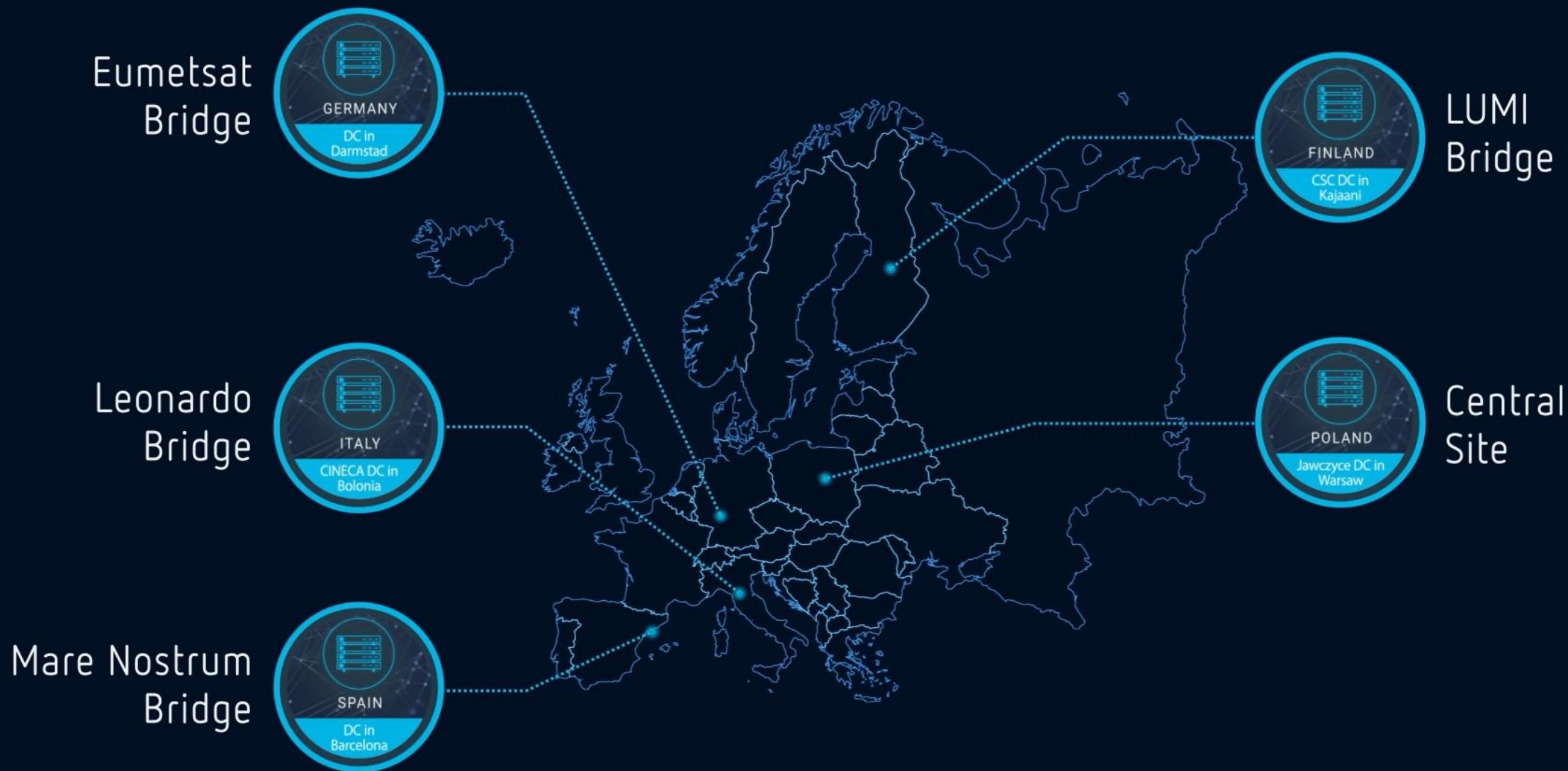
Data Lake Services

umetsat.int





Data Lake Distributed Infrastructure

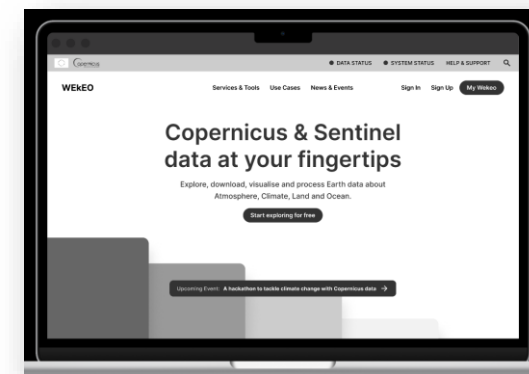
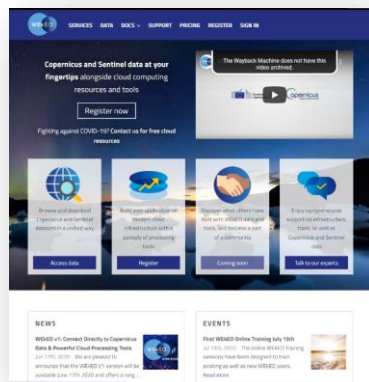
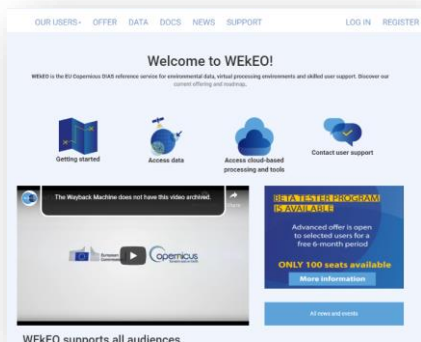


WEKEO





- WEkEO is part of the Entrusted Tasks of the Copernicus contribution agreements with EUMETSAT, EEA, MOI and ECWMF → “requirement of the Commission”
- WEkEO is unique because:
 - Partnership with the Copernicus monitoring services
 - Federation of all Copernicus data
 - Federation with other entities providing additional data and / or additional services
- WEkEO supported by Member States, federation with CNES and EODC
- WEkEO is constantly evolving, WEkEO 2.0 has been made operational



Demonstrator (WEkEO v0)

WEkEO v1 operational

EEA joined WEkEO

Transition to WEkEO 2.0

2018-2020

2020

2021

2022

2023

2024

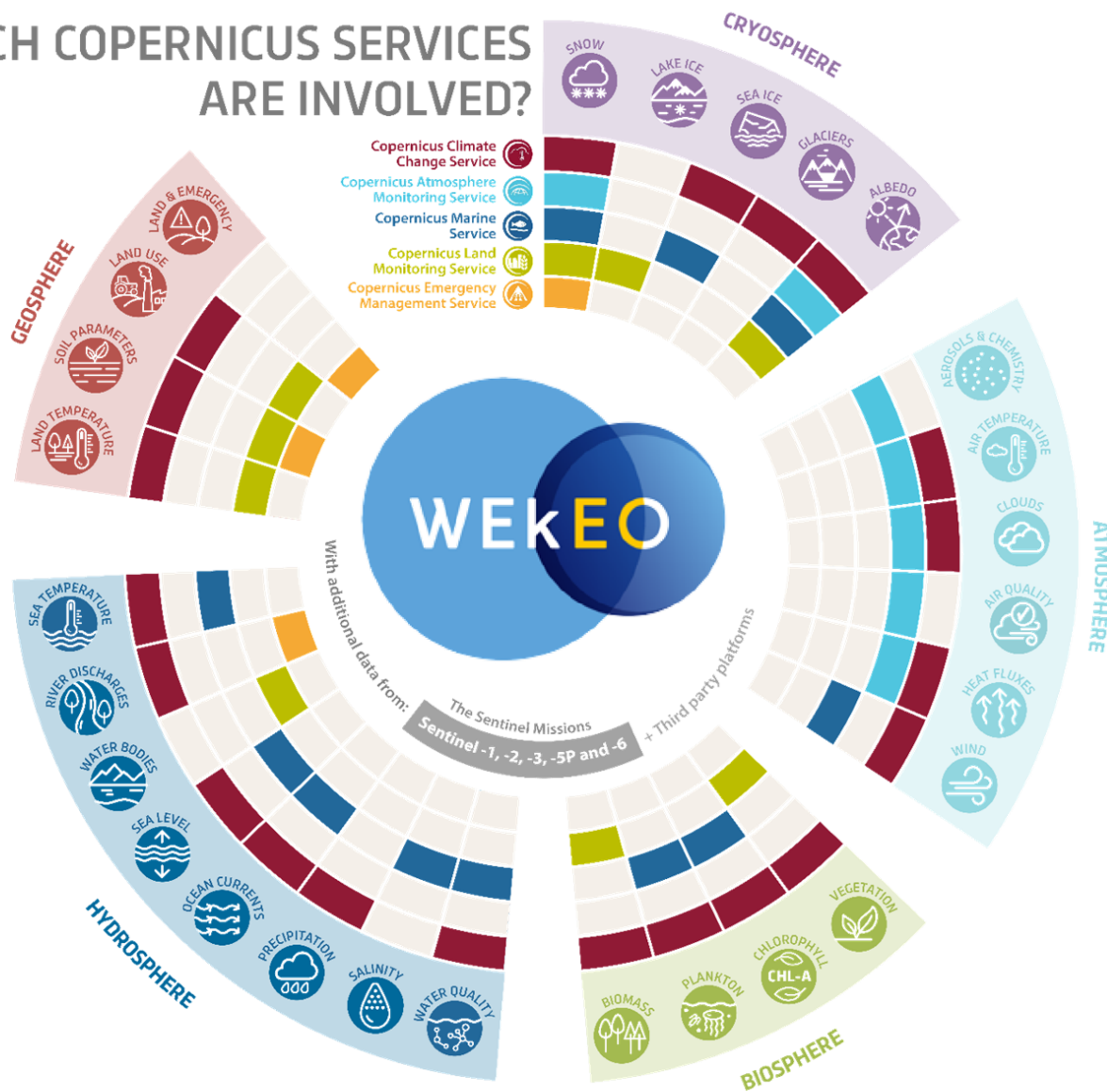
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- Discover and View
- Data access
- Downstream services
- Cloud processing
- Use cases



WHICH COPERNICUS SERVICES ARE INVOLVED?



WEkEO is the only Copernicus platform providing an integrated catalogue of available data from **all Sentinels and the Copernicus monitoring services.**

The catalogue is enriched by **EUMETSAT** essential data, **CNES SPOT** World Heritage data, and the Copernicus 30m **DEM**.

A key concept is that the data in WEkEO is not duplicated, but always provided from the original source.

European Weather Cloud





EWC is a cloud-based collaboration platform for meteorological application development and operations in Europe and enable the digital transformation of the European Meteorological Infrastructure. The European Weather Cloud is dedicated to support the National Hydro-meteorological Services of the Member States of both ECMWF and EUMETSAT in fulfilling their official duties to protect life and property from impending meteorological hazards.”



Member and Cooperating States

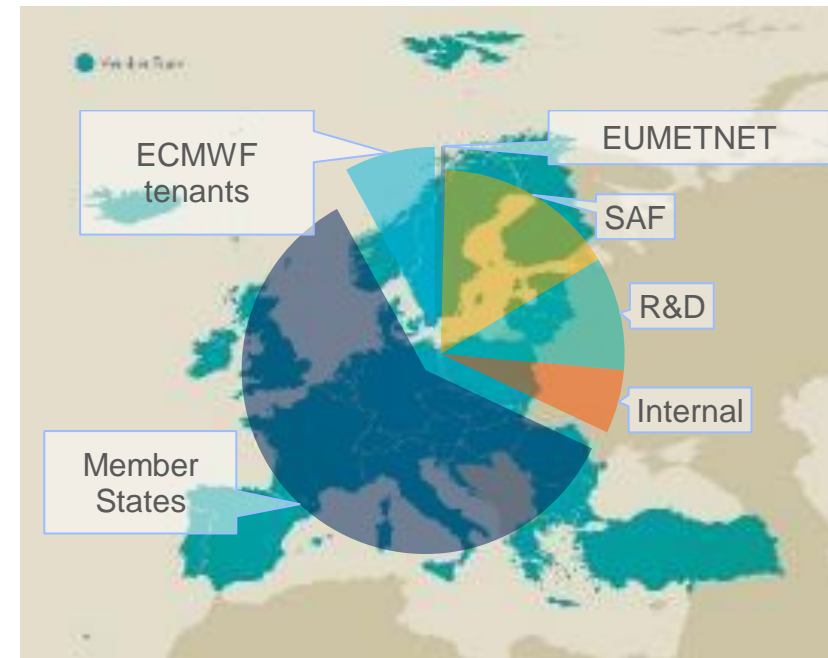
Research & Development

ECMWF Special projects
EUMETSAT thematic annual R&D calls

EMI Partners (e.g. EUMETNET)

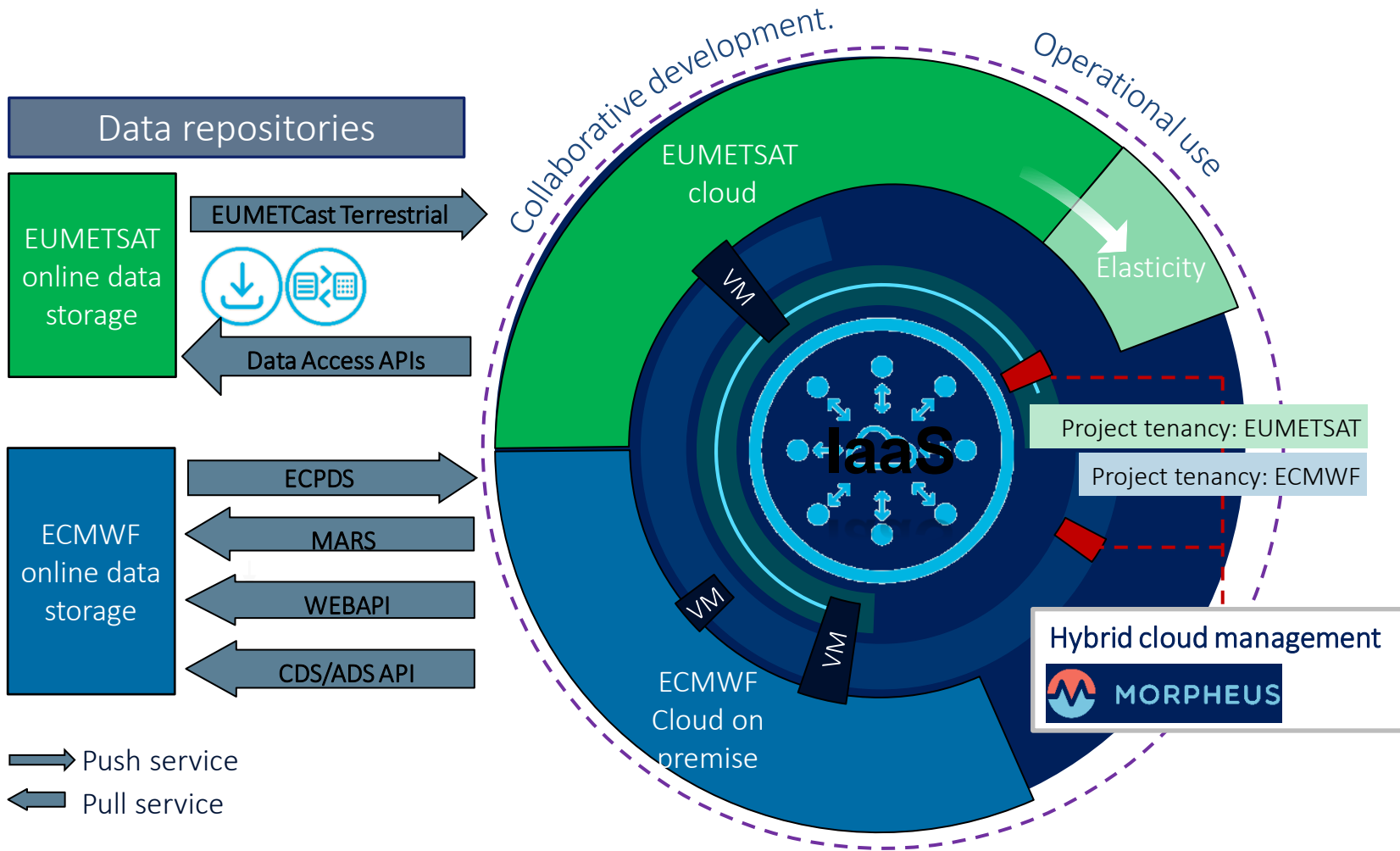
Internal use

Support training, hackathons
Partners
Contractor interaction / projects





Current Offering Infrastructure as a Service



Tenants can provision VMs and host their own applications

- Also basic level service, such as user management, maintained by the tenants
- Current advantages are data proximity and community. Users developing and operating operational services would benefit also Platform as a Service (PaaS)



Thank you!

Questions are welcome.