



Climate Change

# Climate Change Service **Python** in the ECMWF Copernicus landscape

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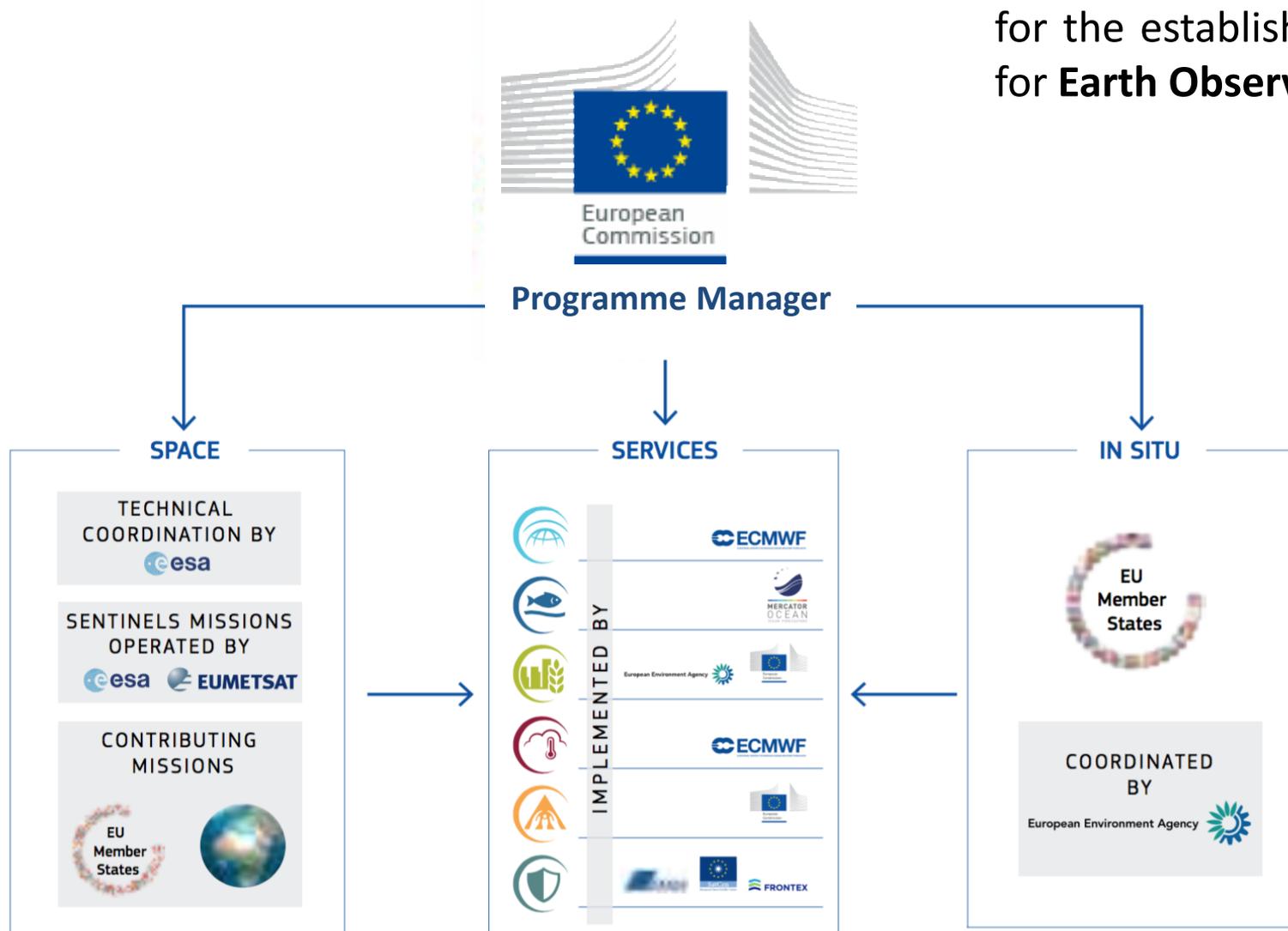




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# C O P E R N I C U S

**Copernicus** is the **European Programme** for the establishment of a European capacity for **Earth Observation**





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# C O P E R N I C U S Climate Change service - C3S

- The European Commission has **entrusted** ECMWF with the implementation of the **Copernicus Climate Change Service – C3S**
- The Copernicus Climate Change service will provide **information** to increase the **knowledge** base to support **adaptation** and **mitigation** policies.





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# C3S in a nutshell

International expert panel

from European Commission  
e.g., FP7 Space call, H2020

from EU Member States, ESA,  
EUMETSAT, EEA, WMO..

Evaluation & Qc Function

Quality assurance  
Integrity of Service  
User requirements

CLIMATE DATA STORE  
Toolbox

SECTORAL INFORMATION SYSTEM



Outreach & Dissemination

Stakeholders & Users



## CDS - concept

- The **Climate Data Store** is at the heart of the C3S infrastructure and provides information about **past, present** and **future** climate in terms of **Essential Climate Variables** and **derived climate indicators**
- The CDS is designed as a **distributed system**, providing improved access to **existing datasets** through a **unified web interface**
- The CDS contains **observations**, global and regional **climate reanalyses**, global and regional **climate projections** and **seasonal forecasts**
- The CDS provides an **authoritative set of software (toolbox)** that will allow the users to **develop applications** that will make use of the content of the CDS





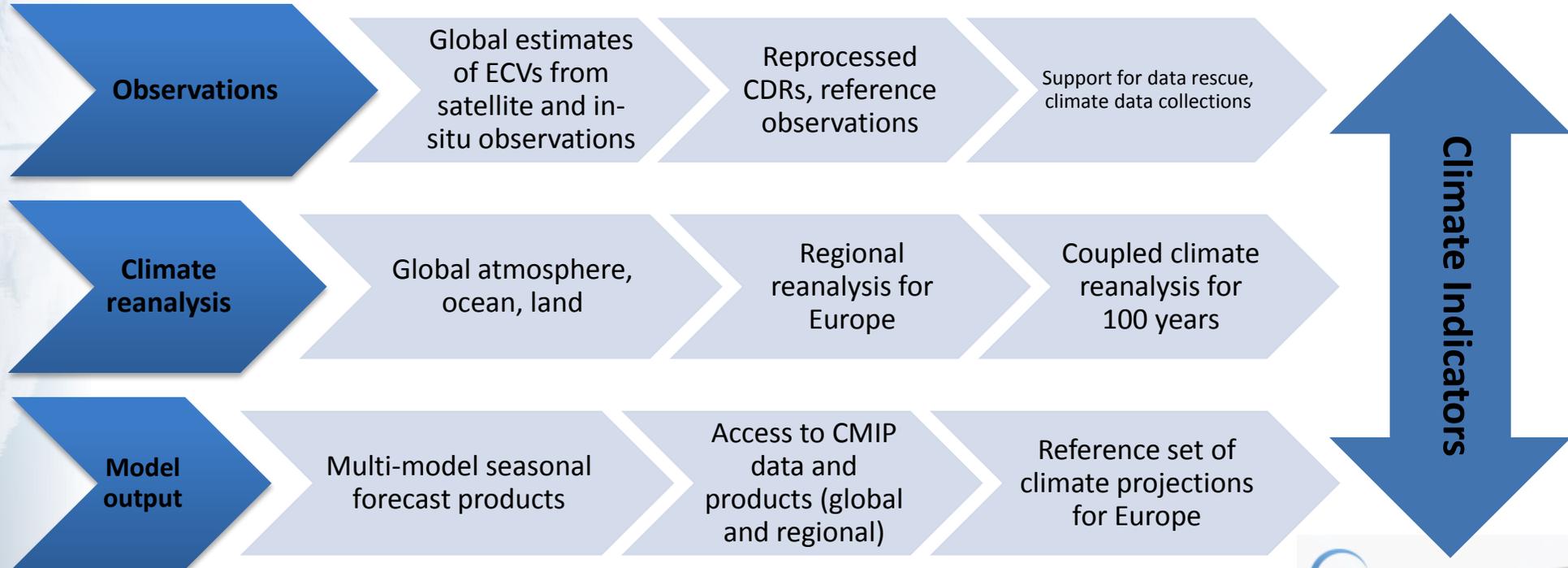
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# CDS - content



## Scientific basis:

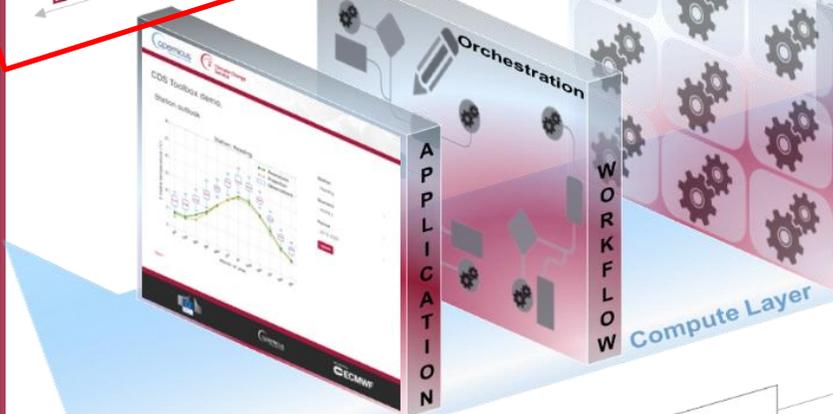
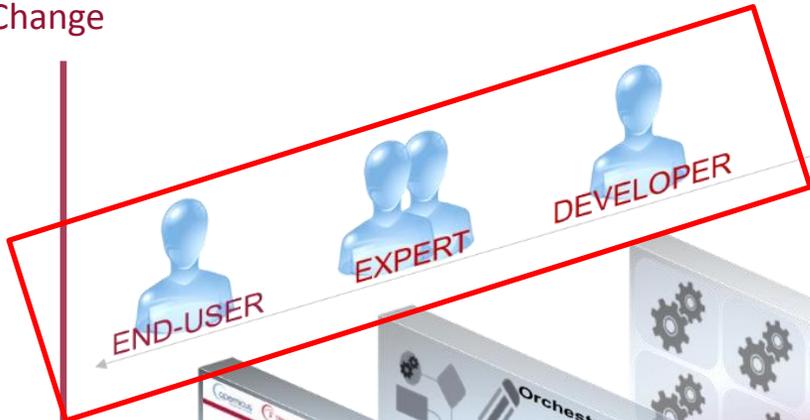
- Essential Climate Variables as defined by GCOS
- GCOS Status Report and Implementation Plan
- IPCC, CMIP





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# CDS Toolbox - concept



INFORMATION  
Kilobytes



INTEROPERABILITY  
DATA  
Petabytes



Opemnicus  
Climate Change Service

Title

What an application could be??

Station outlook

Station: Reading

Scenario: RCP8.5

Chart

Widgets

Text

Back

Opemnicus  
ECMWF



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# CDS Toolbox - Open-Source TECHNOLOGIES

