



# openEO Platform

## A Federated Open Earth Observation Platform



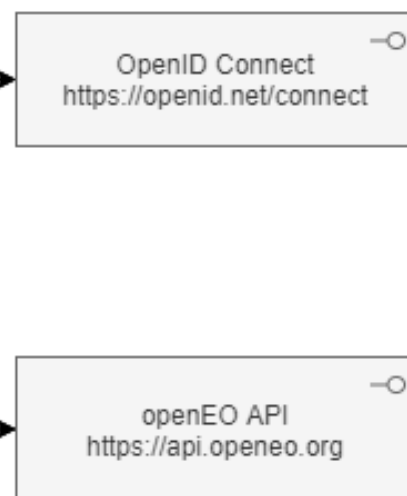
openEO  
Platform

# High level architecture

## Programming API's and UI's

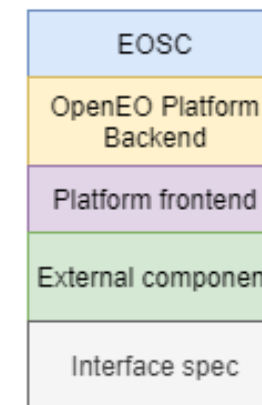
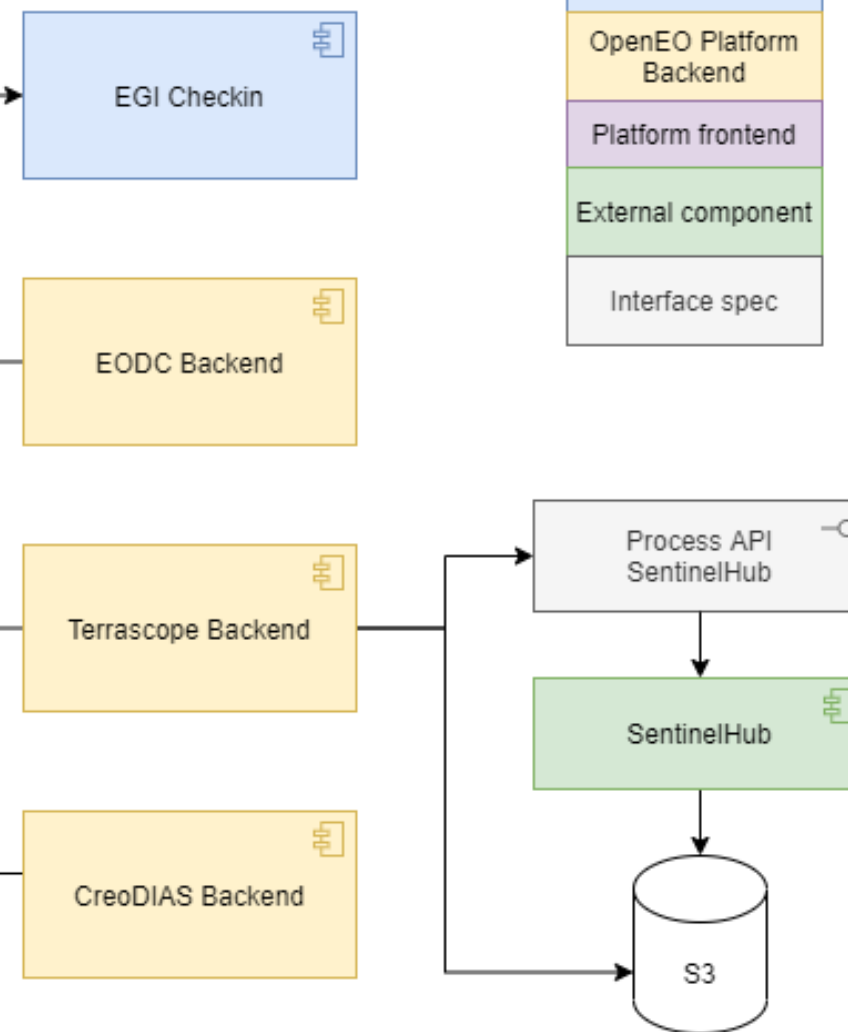


## Web API's



Default protocol is HTTPS

## Components





kubernetes

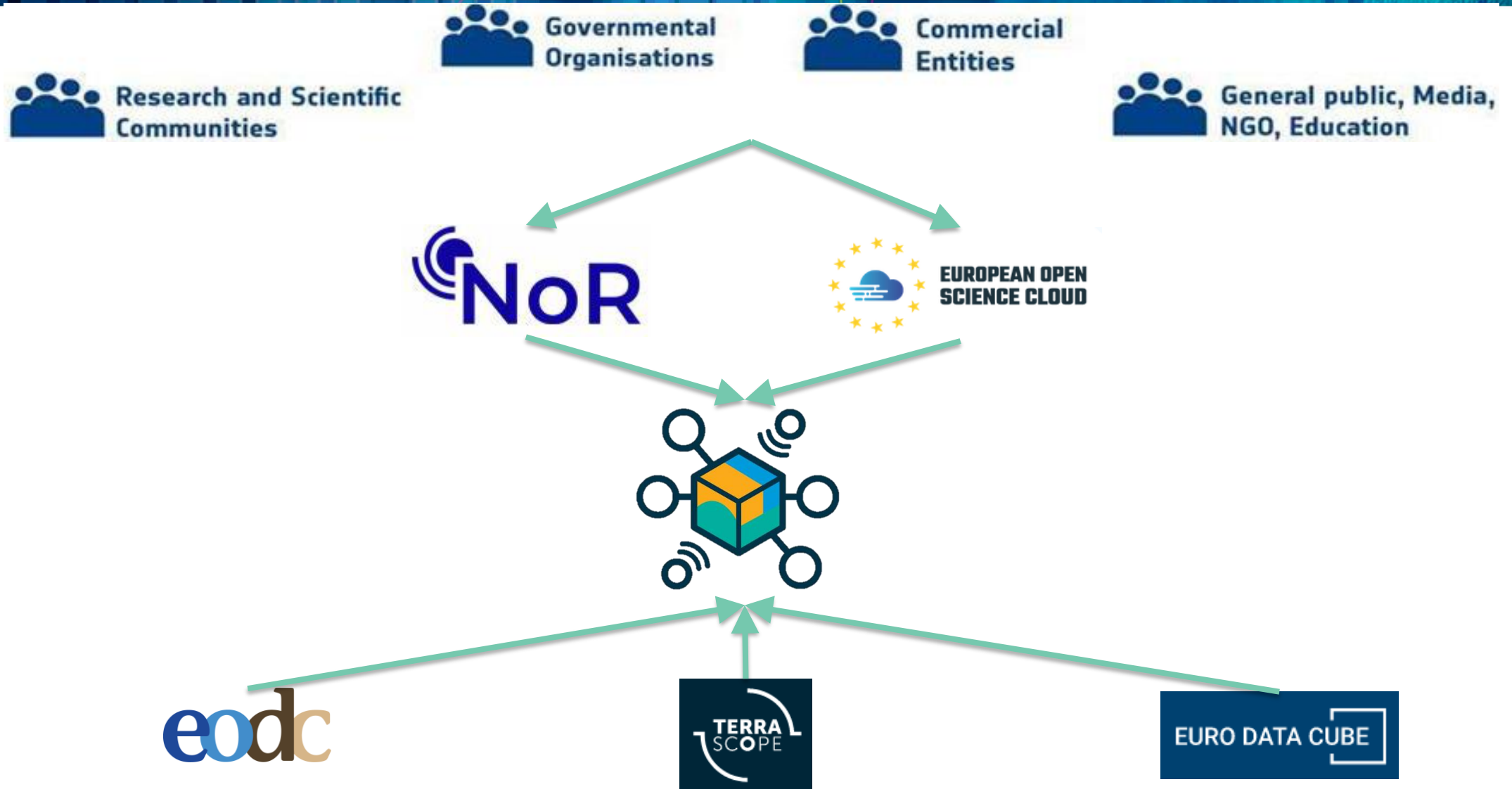




- Multiple precomputed ARD collections available
  - SAR backscatter on demand
  - Atmospheric correction on demand
  - Implemented with FORCE/SNAP/iCor/SMAC/Orfeo
- 
- Goal: Provide solid data preprocessing pipelines for any project!

- Scale out processing jobs
- Streaming data pipelines, avoid slow disk IO
- Selective data processing
  - Masking (clouds, land/water, ...)
  - Sub-product
- Requires lots of benchmarking & testing!

# European embedding and federated resources

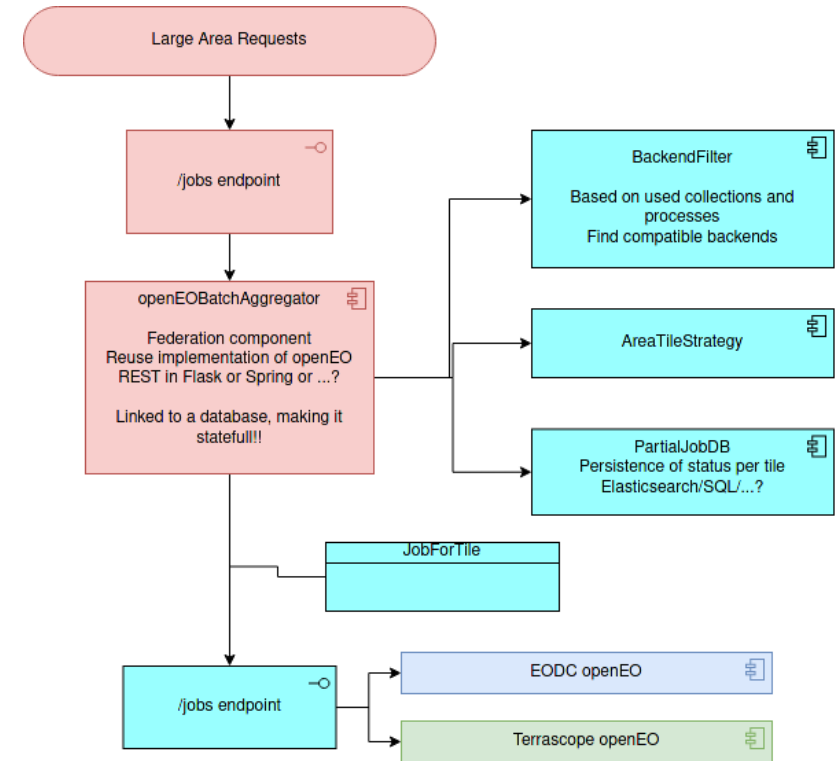


Scaling up is a challenge for every continental/global project

Docker/Kubernetes/Object storage works, but requires lots of experience

Provide central component to track processing status

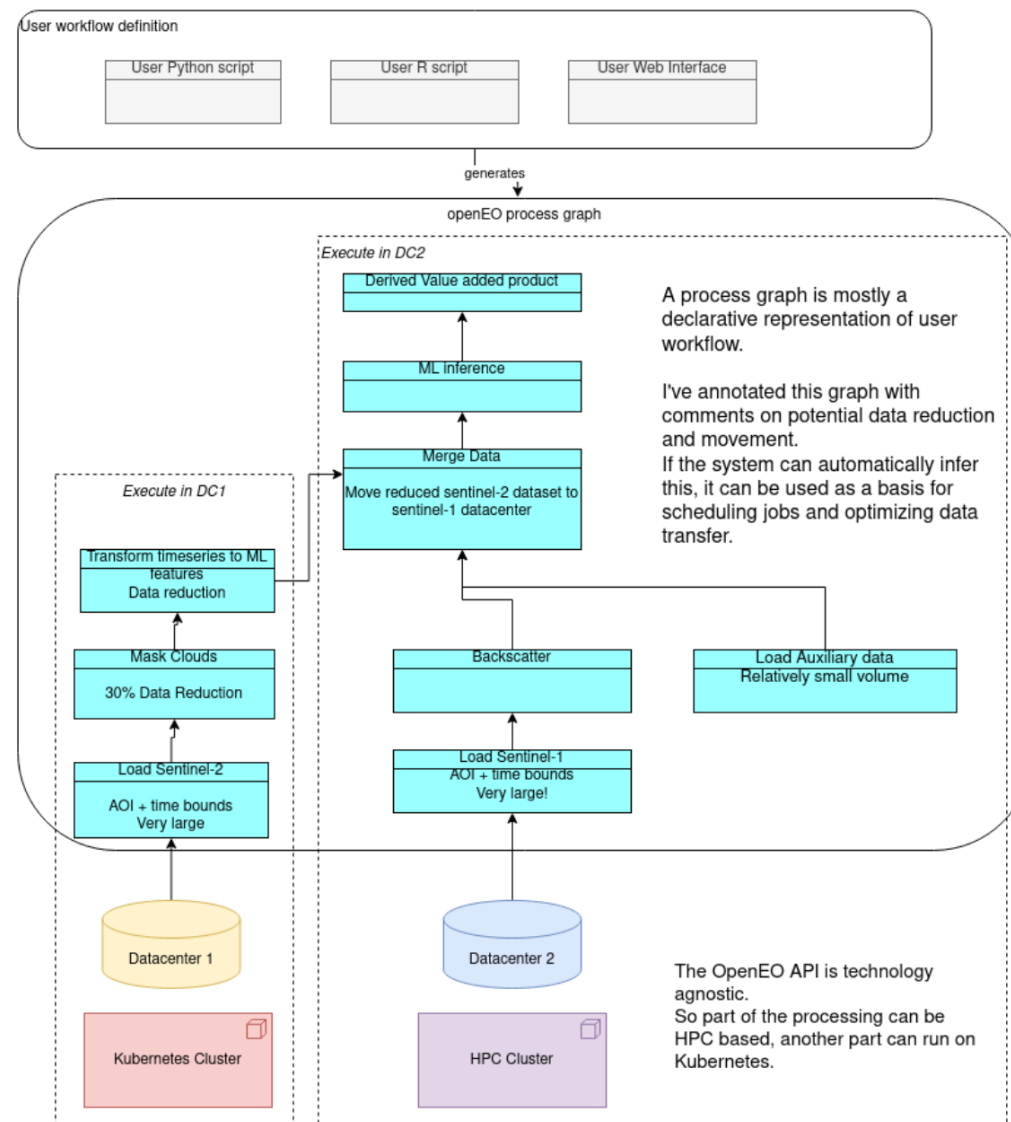
Federate processing



Can openEO API solve the fragmentation of data and infrastructure in Europe?

OpenEO 'knows' which processes need to run on which datasets, and where the combinations happen.

-> Derive an optimized 'federated execution plan' from that!





- Designing and sharing higher level processes
- Interactive viewer for inputs & outputs
- Integrated Jupyterlab



openEO  
Platform

May 2021

Thank you for the attention