

# openEO Platform

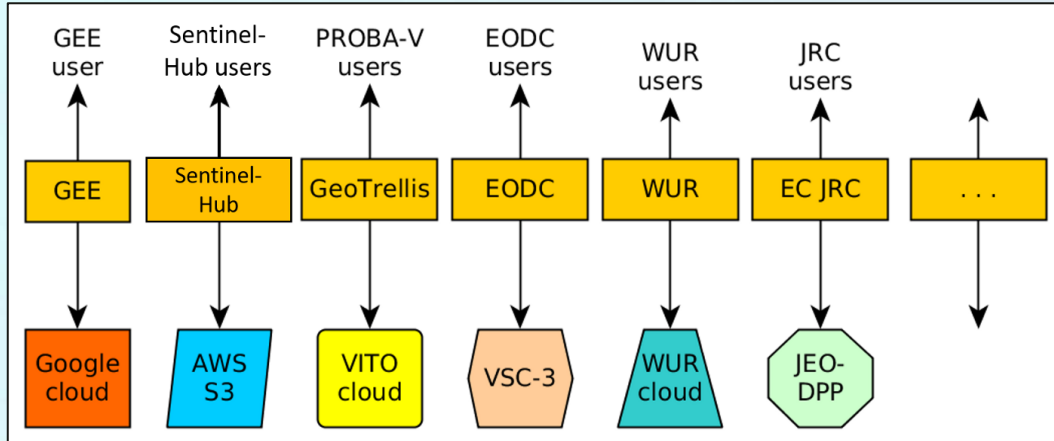


B. Schumacher  
09<sup>th</sup> of May 2023, EODC Forum Vienna, Austria

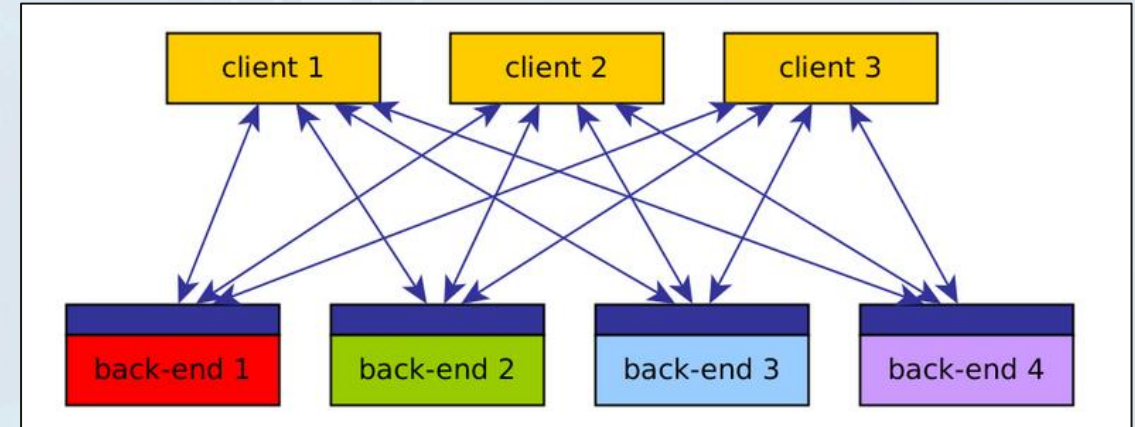
# RECAP: How does it work?



## Situation before openEO:



## openEO API:





# RECAP: What is openEO Platform?

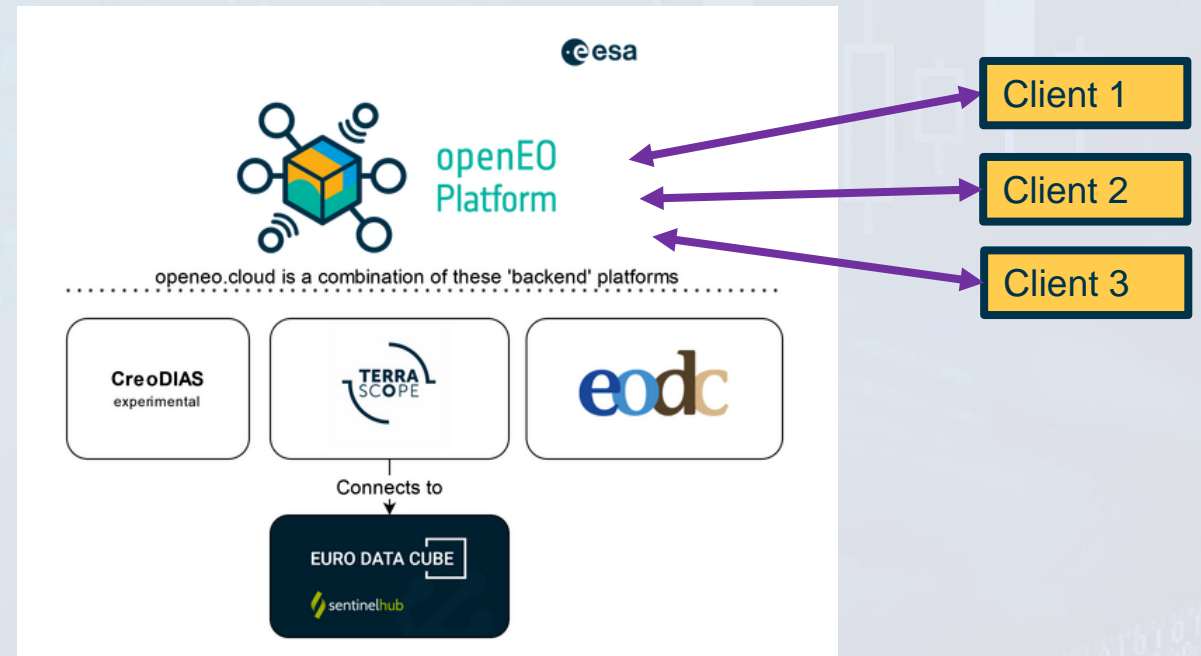
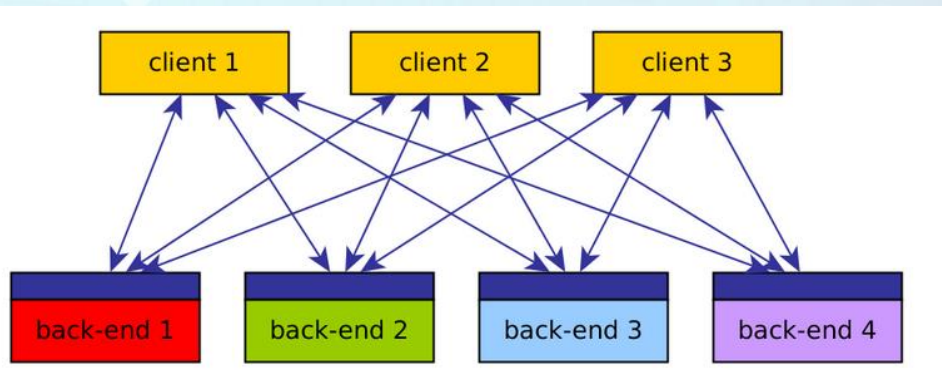


openEO platform provides intuitive programming libraries to process a wide variety of earth observation datasets.

openEO API:  
H2020 Project



openEO Platform:



# RECAP: How does it work?



OpenEO Platform

openEO Platform Editor: openi

https://editor.openeo.cloud

openEO Platform Editor 0.11.0-rc.4

Help Server benjamin.schumacher@eod...

Search

Collections (76)

AGERA5  
ECMWF AGERAS meteo dataset - experimental

boa\_landsat\_8  
Landsat-8 bottom of atmosphere at 30m resolution, limited area

boa\_sentinel\_2  
Sentinel-2 bottom of atmosphere at 10m resolution, limited area

CGLS\_FAPAR\_V2\_GLOBAL  
Copernicus Global Land FAPAR product V2, 1km resolution, 10-daily

CGLS\_LAI\_V2\_GLOBAL  
Copernicus Global Land LAI product V2, 1km resolution, 10-daily

CGLS\_LAI300\_V1\_GLOBAL  
Copernicus Global Land LAI product V2, 300m resolution, 10-daily

CGLS\_NDVI\_V2\_GLOBAL  
Copernicus Global Land NDVI product V2, 1km resolution, 10-daily

CGLS\_NDVI\_V3\_GLOBAL  
Copernicus Global Land NDVI product V3, 1km resolution, 10-daily

CGLS\_NDVI300\_V1\_GLOBAL  
Copernicus Global Land NDVI product V1, 300m resolution, 10-daily

CGLS\_SSM\_1KM  
Copernicus Global Land Surface Soil Moisture

CGLS\_SSM\_V1\_GLOBAL  
Copernicus Global Land Surface Soil Moisture product V1, 1km resolution, daily

COPERNICUS\_30  
Copernicus Global 30 meter Digital Elevation Model dataset.

COPERNICUS\_90  
Copernicus Global 90 meter Digital Elevation Model dataset.

CORINE\_LAND\_COVER  
CORINE Land Cover

corine\_land\_cover  
CORINE Land Cover

CORINE\_LAND\_COVER\_ACCOUNTING\_LAYERS  
CORINE Land Cover Accounting Layers

ESA\_WORLDCOVER\_10M\_2020\_V1  
ESA WorldCover products 10 meter COG format

boa\_sentinel\_2 #1

spatial\_extent: Bounding Box

temporal\_extent: 2019-07-01..., 2019-07-...

bands: B04, B08

properties: None

Result

Visual Model

Code

Data Processing

Create Batch Job Run / Preview

Search

Batch Job	Status	Submitted	Last update	Actions
BOA_S2_MEAN	finished		13.5.2022, 13:23:47 UTC	n/a
#vito-...457b6	finished		2.5.2022, 15:14:42 UTC	2.5.2022, 15:15:59 UTC



```
{
  "process_graph": {
    "1": {
      "process_id": "load_collection",
      "arguments": {
        "id": "boa_sentinel_2",
        "spatial_extent": {
          "west": 1.4211922929976784,
          "east": 19.38022689396854,
          "south": 41.388795496730424,
          "north": 52.43260595832486
        },
        "temporal_extent": [
          "2019-07-01T12:00:00Z",
          "2019-07-31T12:00:00Z"
        ],
        "bands": [
          "B04",
          "B08"
        ],
        "properties": {}
      },
    },
    "2": {
      "process_id": "ndvi",
      "arguments": {
        "data": {
          "from_node": "1"
        },
        "nir": "B08",
        "red": "B04"
      },
    },
    "3": {
      "process_id": "save_result",
      "arguments": {
        "data": {
          "from_node": "2"
        },
        "format": "GTIFF"
      },
      "result": true
    },
  },
  "parameters": []
}
```

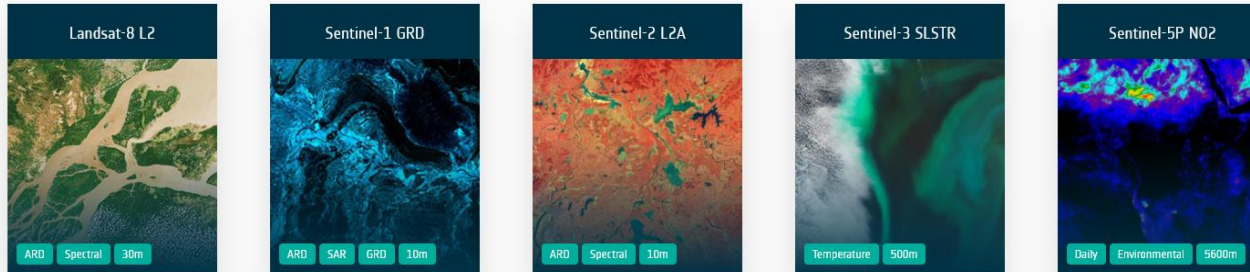


# RECAP: What is openEO Platform?

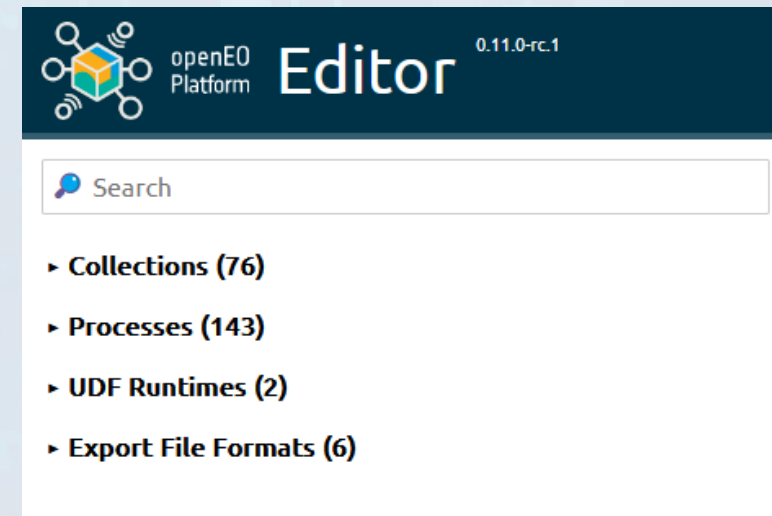


## DATA COLLECTIONS

Below you can find a selection of our major data collections. You can also browse through [all available data collections](#).



-> openEO Platform provides intuitive programming libraries to process a wide variety of Earth Observation datasets.



-> Run your earth observation analysis on our federated infrastructure!

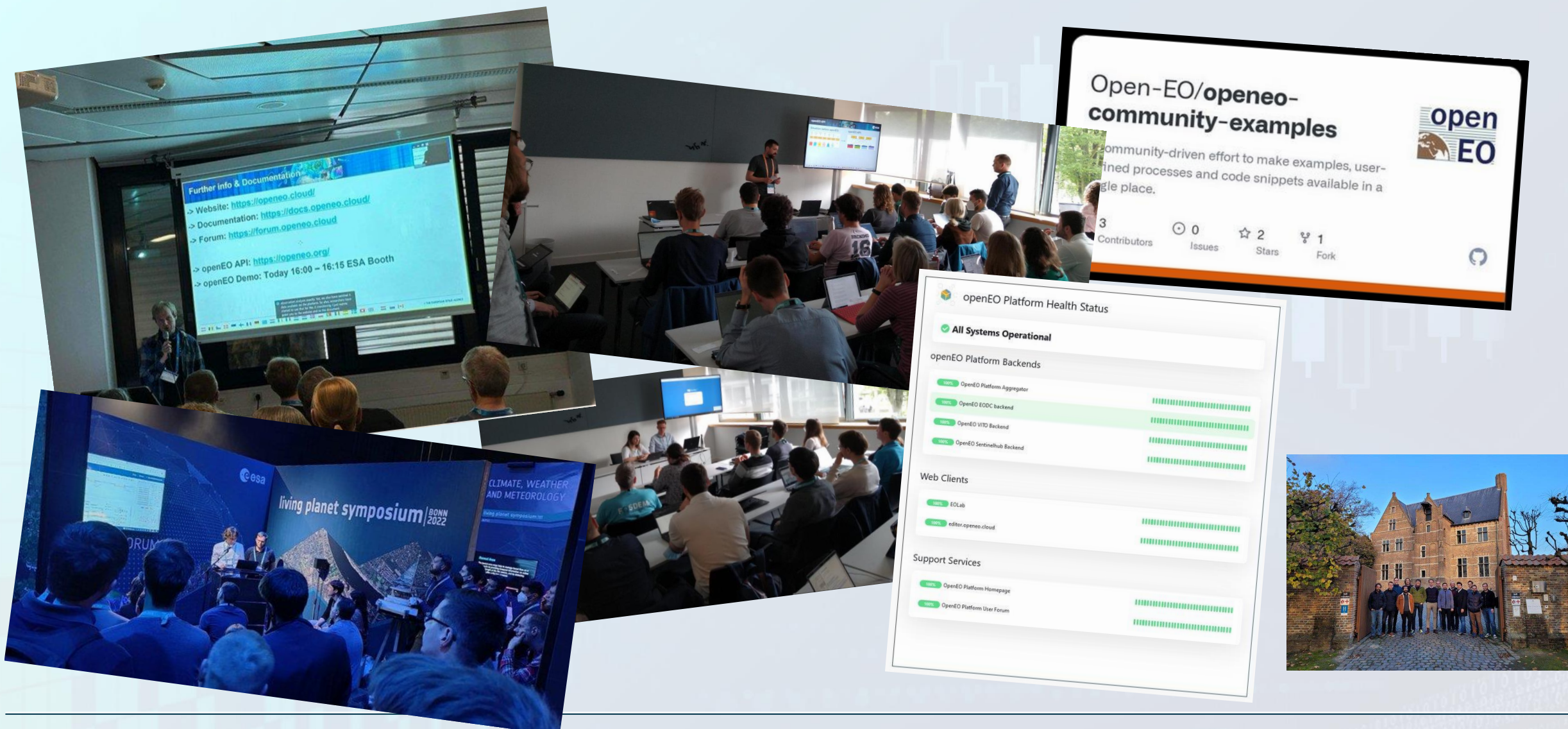


# What progressed in 2022 -> 2023 - Overview



- Community building + User experience improvements
- Updates on Service offering & Federation
- Sustainability & business model setup
- EODC specific backend improvements

# Community building + User experience

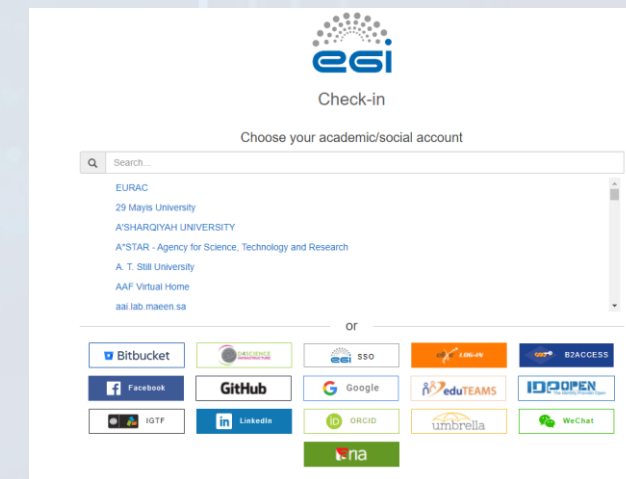




# Updates on Service offering & Federation



- openEO retired the ESA Early Adopter Access
- ESA NoR & EOPlaza & EOSC Marketplace
- EGI check-in as common setup:
  - Linked to several identity providers
  - Operated as Virtual organisation
  - Supported by all federated backends
  - Automated sign-up flow

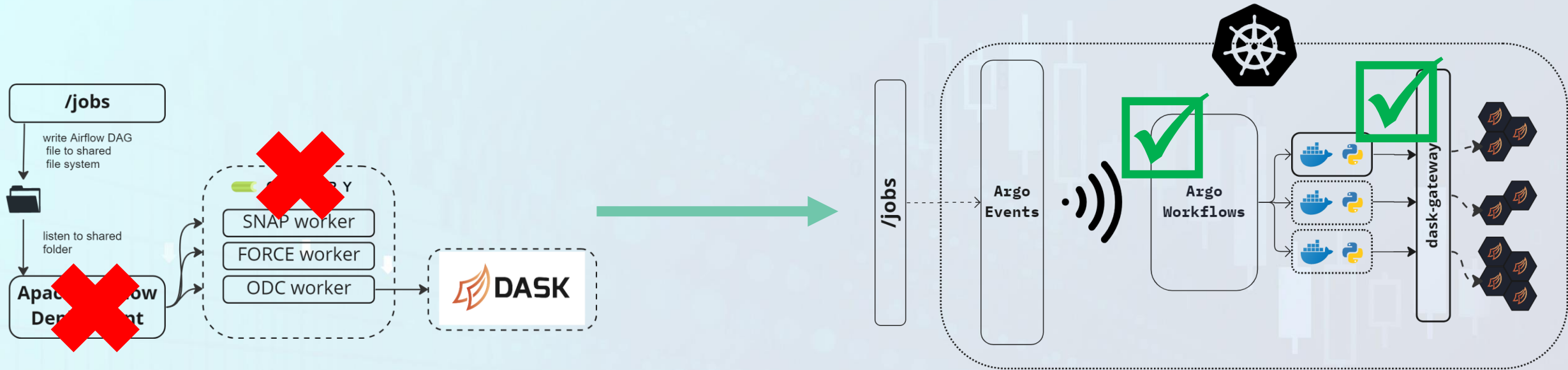




- Organizational setup:
  - openeo.org as an open source software API development
    - Project Steering Committee
  - openeo.cloud as federated service provider
    - openeo Platform Board



# EODC specific backend improvements



- Components have been refactored
  - New deployment with scalable Pangeo components
  - Sen2Like integration



# Questions? Comments? – Get in touch!



## Thank you for your attention!

- > Website: <https://openeo.cloud/>
- > Documentation: <https://docs.openeo.cloud/>
- > Forum: <https://forum.openeo.cloud>
  
- > openEO API: <https://openeo.org/>