

Third Destination Earth User eXchange

15-16 October, 2024
Darmstadt, Germany

Registration deadline: 30 September



Funded by
the European Union

Destination Earth

IMPLEMENTED BY



EDEN service in the platform
Interacting with DestinE Data Portfolio

Simone Mantovani on behalf of the EDEN team

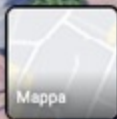
MEEO, Italy



MEEO is here



- *Funded in 2004 as a garage company*
- *Moved in "The most beautiful road in the world.»*
- *SISTEMA branch company in Vienna*
- *ESA added value partner*
- *Climate-KIC Affiliated partner*
- *Big Data / Data Cube*
- *e-Collaboration Environment*
- *ADAM platform*





Skills and Experience



Data access (r)evolution

- Big Data & Challenges
- User communities
- Core technologies
- Services



MEEEO role in Destination Earth

DESP

Digital Twin Engine

Data Lake

Data Sources

External Services



Code of conduct



Identity and Authorisation Management



Public Cloud & HPC Resources



Federated Identities

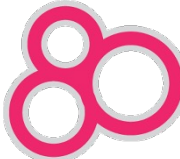
Enabling Seamless Data and Processing Access within the Digital Twin Earth Framework

- The HIGHWAY service serves as a pivotal conduit for integrating ESA Earth Observation Data into the Digital Twin Earth program through the DestiNE (Destination Earth) initiative. It provides a streamlined, seamless environment for the exploration and utilization of data from key Earth observation missions, including:
 - crEOSat
 - swarm
 - smos
 - aeolus
 - proba-v
 - earthcare
- The service is equipped with state-of-the-art tools designed to optimize data access and utilization. These include comprehensive data catalogues such as **API Open Search**, **WMTS**, **WMS**, and **STAC**, enabling efficient and targeted data discovery.
- In addition, the service provides robust capabilities for data access, advanced data visualization, and sophisticated data processing tools. These tools support the generation of data pipelines and the development of artificial intelligence (AI) models, facilitating advanced analytical approaches.
- Furthermore, the HIGHWAY service offers scalable processing capacities, supporting both cloud and high-performance computing (HPC) infrastructures. This ensures that users can efficiently manage a wide range of data processing tasks, from routine operations to complex, large-scale analyses. In doing so, the service significantly enhances the capacity to leverage Earth observation data within the Digital Twin Earth program, fostering innovation and driving insights across various domains.

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Destination Earth Funded by the European Union | Implemented by ECWMF | ESA | EUMETSAT

Interacting with DestinE Data Portfolio



this is honest
but ruthless
presentation

Does it
work?



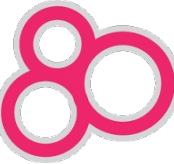
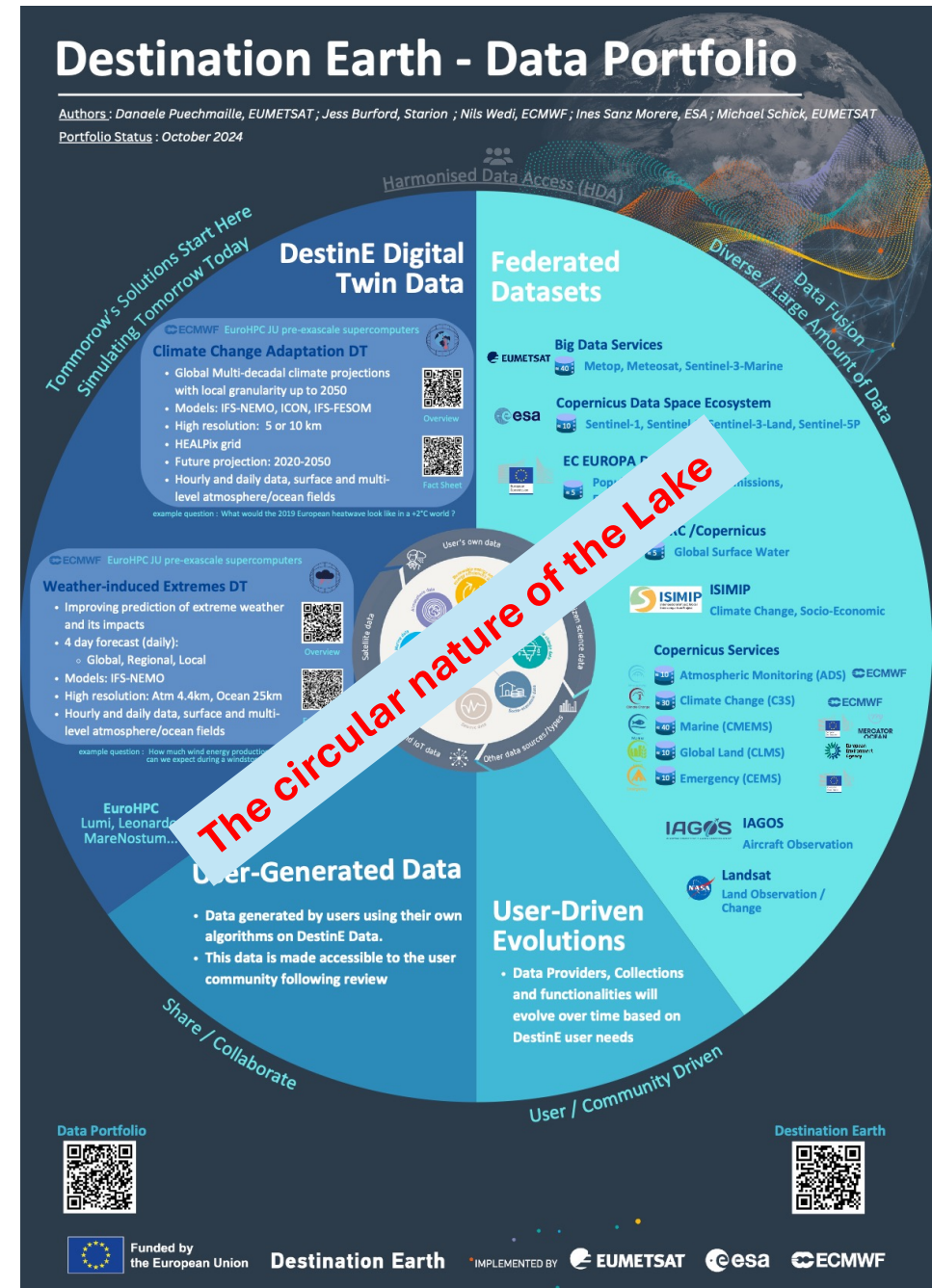
I'm (not)
sure it
works

DestinE Data Portfolio

How it is presented

DestinE Data Lake provides users with a seamless access to the datasets, regardless of data type and location

- DestinE Digital Twin Data
- Federated Datasets
 - EUMETSAT Big Data Services
 - ESA Copernicus Data Space Ecosystem
 - Copernicus Services (Atmosphere Monitoring, Climate Change, Marine, Land, Emergency)
 - ISIMIP
 - IAGOS
 - USGS – NASA
 -
- ...

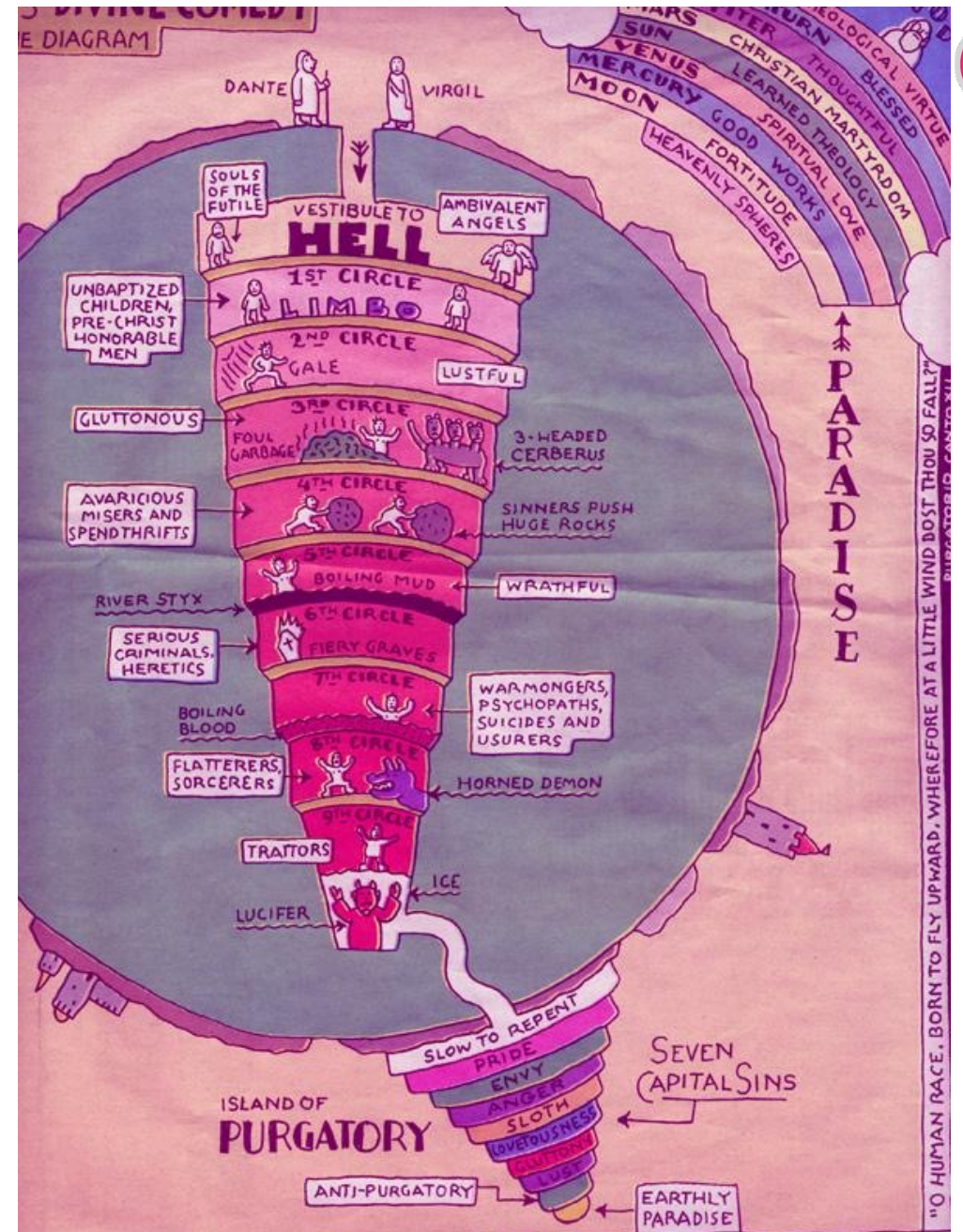


DestinE Data Portfolio

How it is perceived

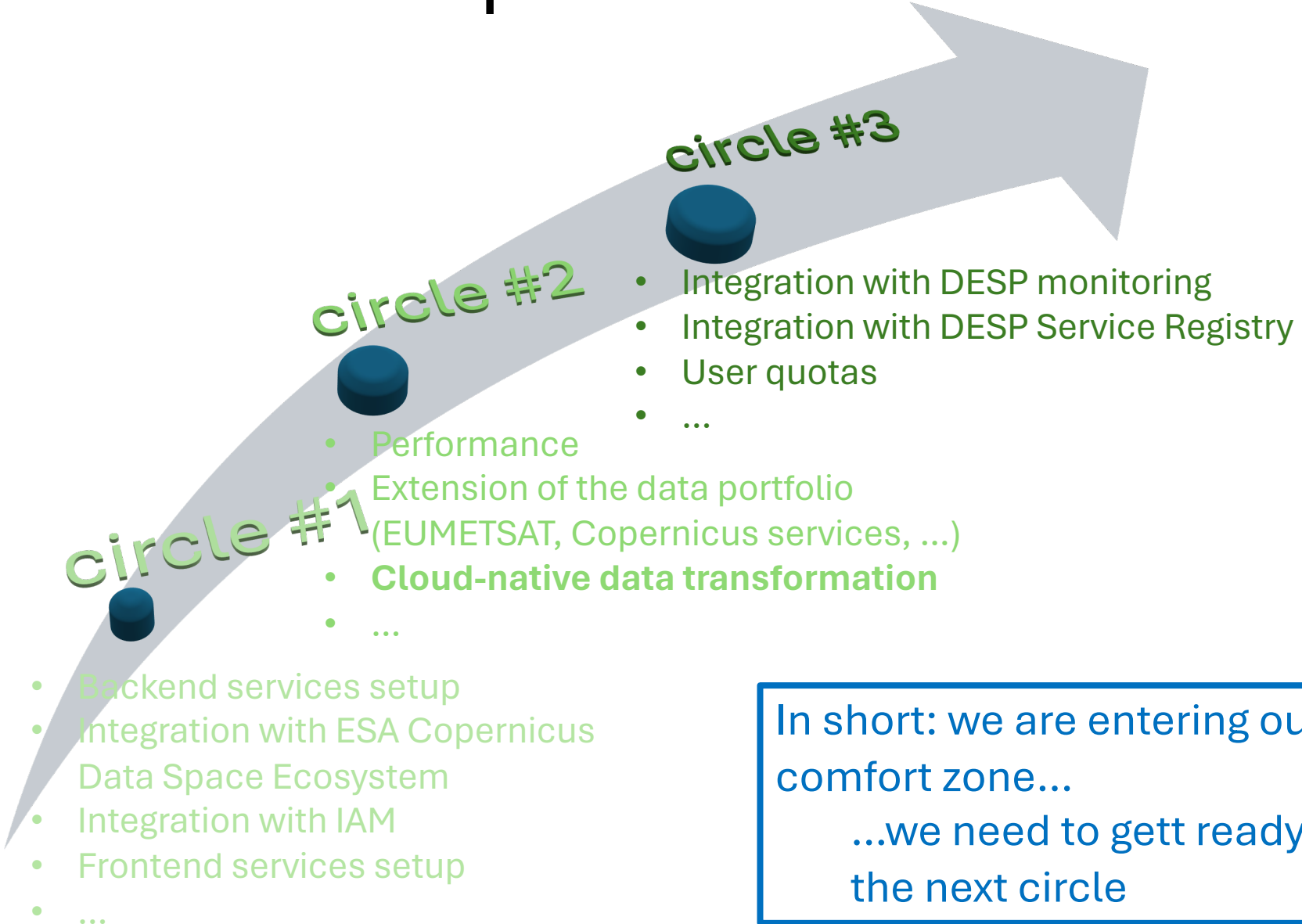
DestinE Data Lake provides users with a seamless access to the datasets, regardless of data type and location

- DestinE Digital Twin Data
- Federated Datasets
 - EUMETSAT Big Data Services
 - ESA Copernicus Data Space Ecosystem
 - Copernicus Services (Atmosphere Monitoring, Climate Change, Marine, Land, Emergency)
 - ISIMIP
 - IAGOS
 - USGS – NASA
 -
- ...





EDEN: Implementation Plan



How do we feel after few circles of DestinE Data Portfolio?

- Data of interest always comes from the next circles...
 - ...as well as metadata, constraints, exit codes and error messages
- To improve user life
 - we added yet another circle...the cache circle
 - we extended the data portfolio with yet additional datasets...the cloud-native datasets

In short: we are entering our comfort zone...
...we need to get ready for the next circle

dataaccess

GET	/api/v1/dataaccess/queryable/{dataset_id}	Get Queryable	🔒	⌵
POST	/api/v1/dataaccess/search	Search	🔒	⌵
POST	/api/v1/dataaccess/download	Post Download	🔒	⌵
GET	/api/v1/dataaccess/download/{download_id}	Get Download	🔒	⌵
PUT	/api/v1/dataaccess/download/{download_id}	Put Download		⌵
DELETE	/api/v1/dataaccess/download/{download_id}	Delete Download	🔒	⌵
HEAD	/api/v1/dataaccess/download/{download_id}	Head Download	🔒	⌵
GET	/api/v1/dataaccess/downloads	Get Downloads	🔒	⌵

*EDEN for developers
Insula service, (Cesare Rossi, CGI)
Training session 1,2 or 3*



please seat in your comfort zone

Datasets

Find datasets

Free text

Enter text

Browse catalogue

10 / 26

ERA5-Land hourly data in cloud-native d...

Sign in

ERA5-Land is a reanalysis dataset providing a consistent view of the evolution of land variables over several decades at an enhanced resolution compared to ERA5. ERA5-Land has been produced by...



Browse

ERA5 hourly data on single levels in clou...

Sign in

ERA5 is the fifth generation ECMWF reanalysis for the global climate and weather for the past 8 decades. Data converted in cloud-native data format is available from 2024 onwards. This dataset includes a...



Browse

ERA5-land monthly averaged data on sin...

Sign in

ERA5-Land is a reanalysis dataset providing a consistent view of the evolution of land variables over several decades at an enhanced

CESIUM ion Base layer attribution



Destination Earth

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EDEN for humans
finder.eden.destine.eu

please seat in your comfort zone

**OPEN
FOR BUSINESS**

cit. Liina Munari
Deputy Head of Unit, DG CNECT.C1

EDEN



<https://platform.destine.eu/services/service/eden/>
<https://finder.eden.destine.eu>

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