https://platform.destine.eu

Destination Earth Initiative

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Destination Earth Funded by the European Union Implemented by ECMWF esa EUMETSAT

DESTINATION EARTH

A DIGITAL REPLICA OF OUR PLANET

Destination Earth (**DestinE**) aims to develop a highly accurate digital model of Earth to monitor the effects of natural and human activity on our planet, anticipate extreme events and adapt policies to climate-related challenges.

https://destination-earth.eu/
https://platform.destine.eu

European Union
ECMWF
esa
EUMETSAT

DestinE System

DestinE is implemented by three European Entities

ECMWF

EUMETSAT

esa

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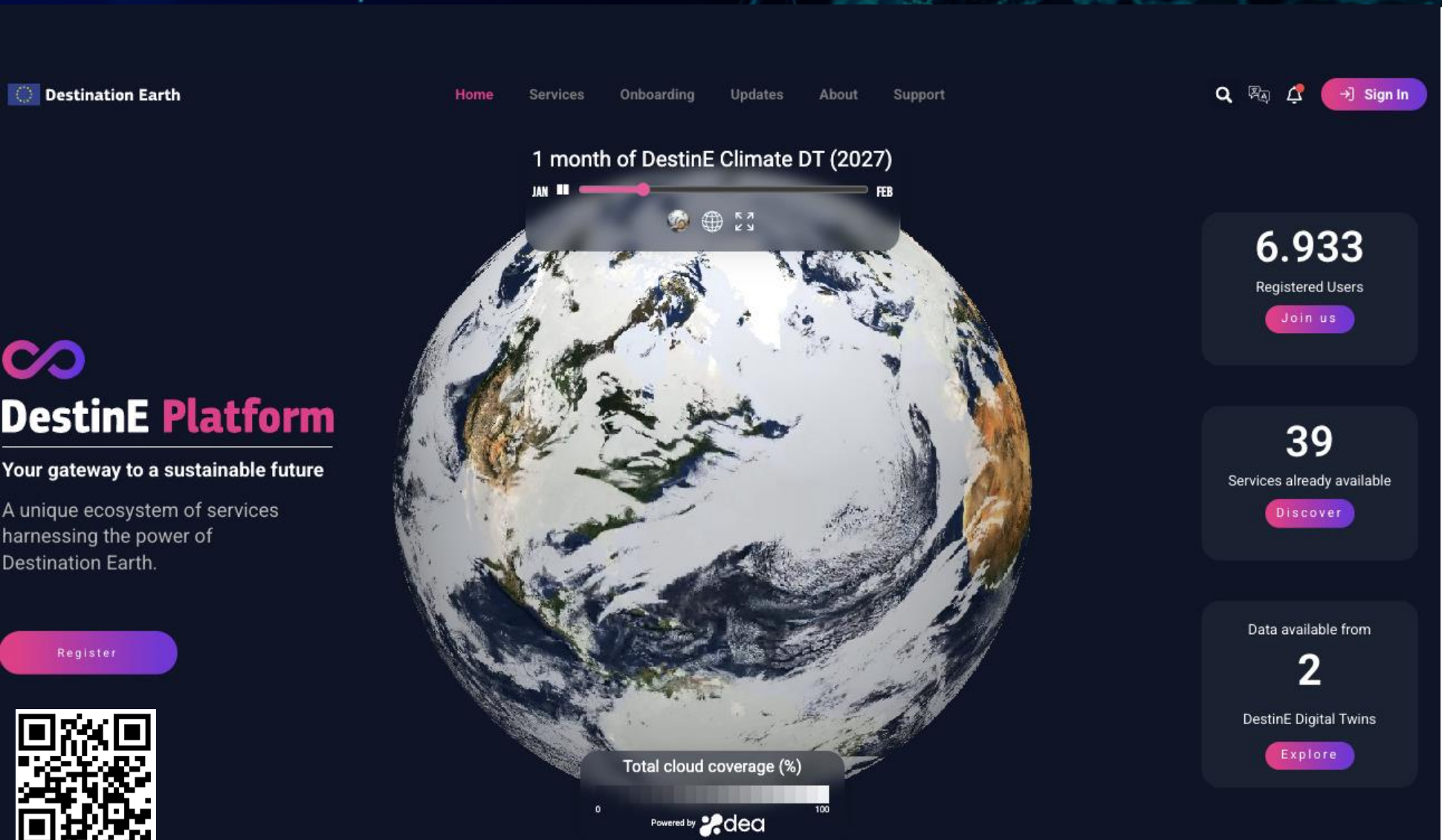
DestinE Platform



Flexible ecosystem of services - allowing to discover DestinE data and exploit them locally through:

- Can host **thousands of users** from a wide variety of backgrounds,
- Operates on a **European sovereign cloud solution** (OVHCloud is the first European Cloud provider present worldwide),
- A **rich catalogue** of applications to support **climate action**;
- Enables **climate critical services** by making DestinE Digital Twins and other data **easily accessible**,
- AI frameworks available as a Service
- Supports **new operational and scalable usages for European services**, and
- Stimulates industrial innovation and collaboration, **fostering the growth of European Industry**.
- A continuity with Copernicus, one of the largest existing EO system.

https://platform.destine.eu/

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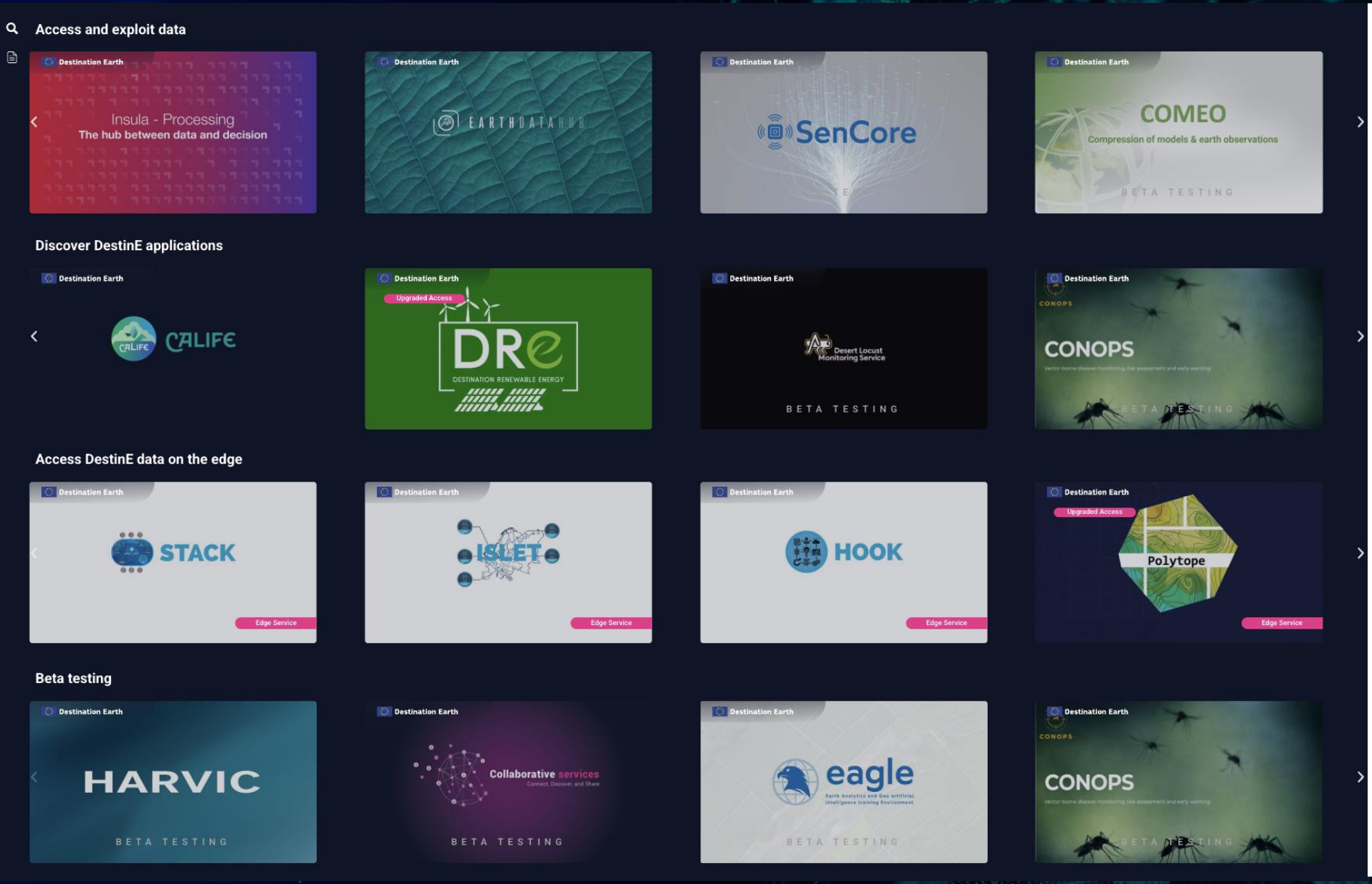
Current Service Offer



Services

Currently 39 services are in operations, those include:

- Data **access** services, for DestinE DTs data and more;
- Data **processing** services, for users to exploit and manipulate the data;
- **Visualization** services based on storytelling approach, for users to communicate the results of their activities;

All services are scalable and designed to adapt resources consumption to demand.
These services are **open and free**.

https://platform.destine.eu/services/

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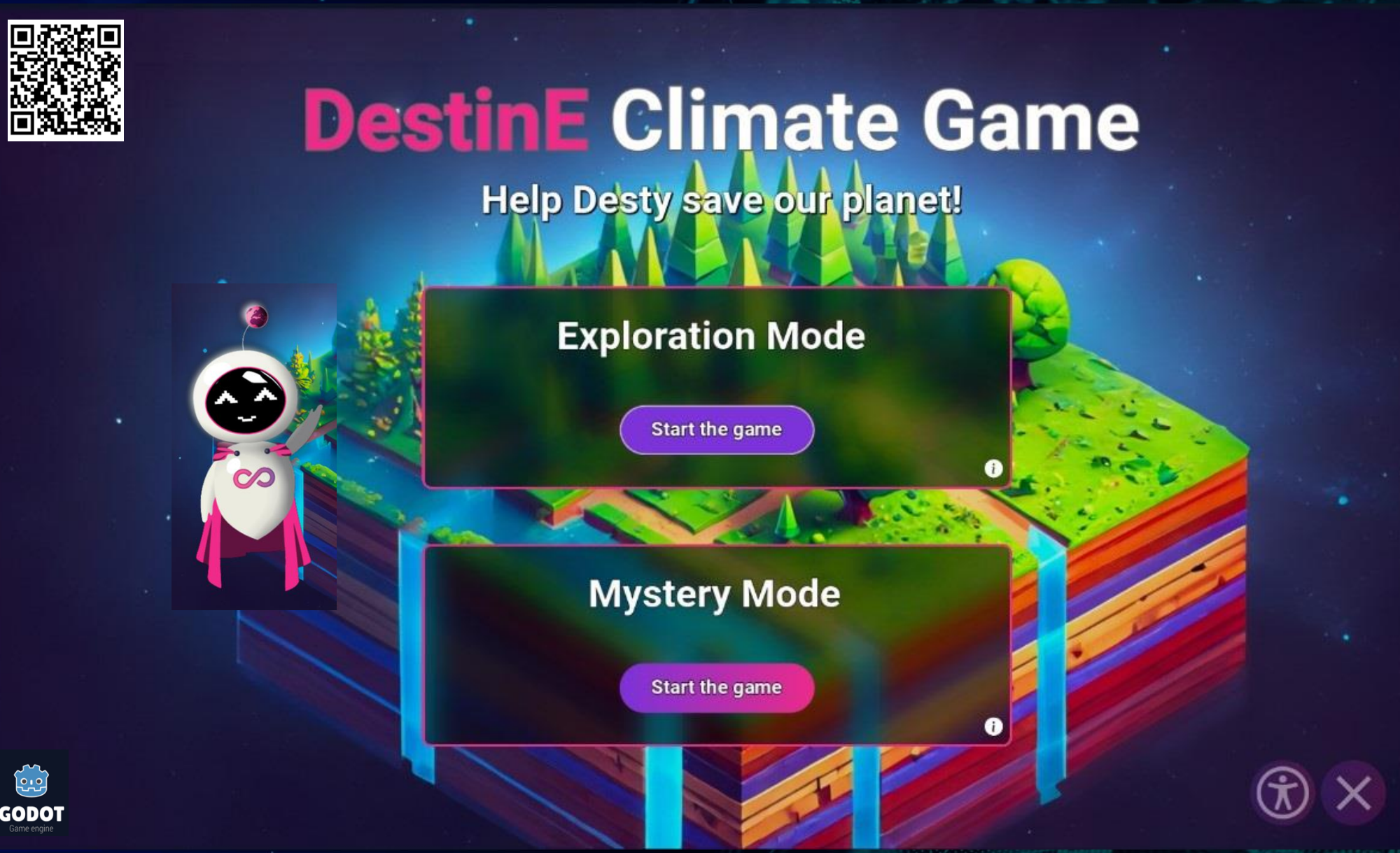
Climate Game Demonstrators



DestinE Climate Game is an interactive Demonstrator using the Godot Engine.

It engages users – especially students and educators – by simulating the effects of everyday choices on climate.

Propose a small game based on facts & scientifically observed or simulated data

Raise awareness about climate change & good practices

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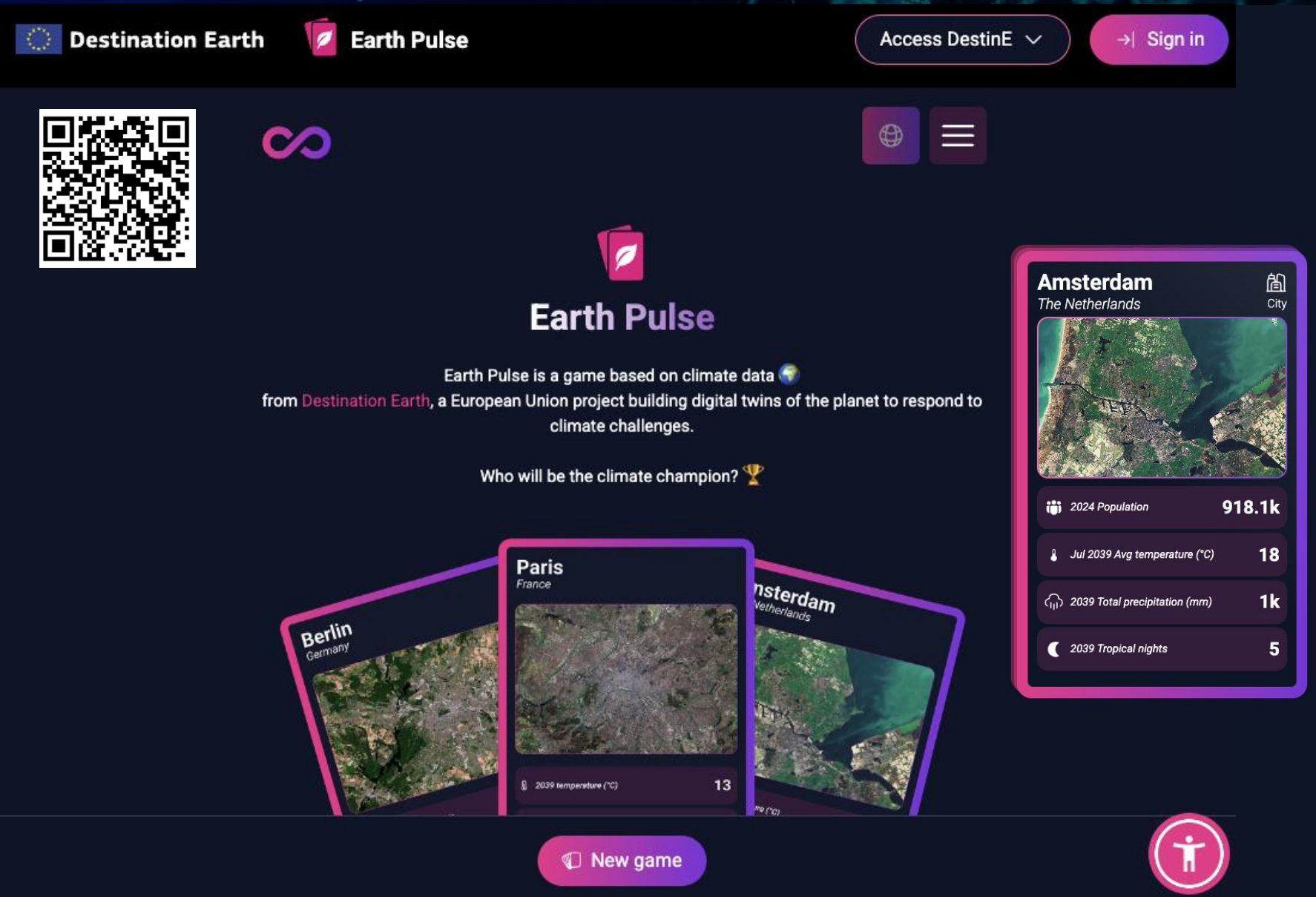
Earth Pulse Demonstrators



Earth Pulse showcases the DestinE Platform by turning advanced datasets into an accessible, mobile-friendly Top trumps game.

Players can browse, compare, and customise location cards to build their own decks.

Designed for non-experts, Earth Pulse demonstrates how DestinE services can power intuitive, shareable experiences that make climate information easier to understand.

The demonstrator aims to simplify access to climate and socio-economic data through an easy, game-based experience.

It highlights how DestinE Platform services support exploration of real datasets. Earth Pulse ultimately seeks to engage new audiences and foster a better understanding of climate insights through play.

Top trumps (card game)

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Enlarging and Diversifying the Service Ecosystem

Best Practices

Objective: Ensure the best solutions for **Data Management** Services (access, processing, visualization, etc.)

Context: organised by Serco within the DestinE Platform contract

Funding: Long-term ESA commitment

Note: stable Platform Management Services ensure a continuation of the basic capabilities during time

Open Calls

Objective: Enlarge the catalogue in **European strategic areas with end-user services**

Context: organised by Atos within the AAS (Advanced Applications & Services) contract

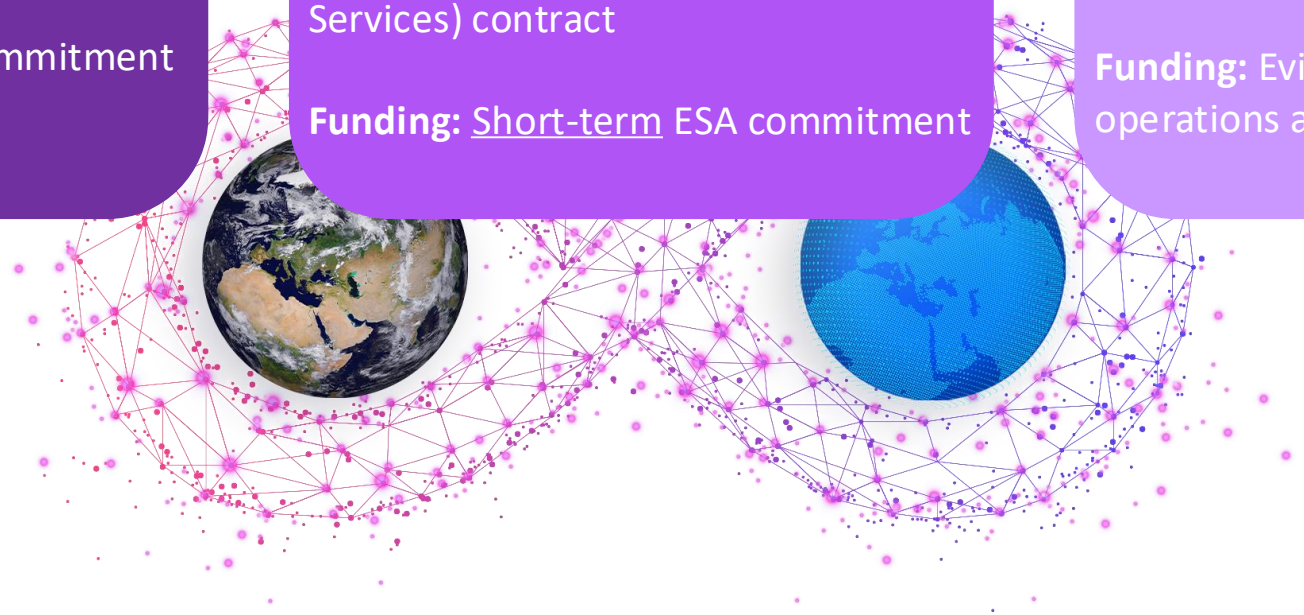
Funding: Short-term ESA commitment

Onboarding

Objective: Enhance the platform catalogue with end-user services addressing DestinE objectives

Context: **open to the public** through the platform

Funding: Evidences of sustainable operations are requested



Issued

selection with priority on
urban context / smart cities

DestinE Platform - Advanced Application & Services Onboarding

26.ATOS.001

Intended	Issued	Tender Opening in Progress	TOB Completed

Clarification Request Deadline	Closing Date Extension Request Deadline	Announcement Date	Last Update On	Update Reason
04/05/2026 18:00 CET	04/05/2026 18:00 CET	16/03/2026	19/03/2026 16:26 CET	Tender Action Issued

Destination Earth (DestinE) is a flagship initiative coordinated by the European Commission (EC) and jointly implemented by three entrusted entities: ESA, ECMWF, and EUMETSAT. DestinE's objective is to develop a highly accurate digital model of the Earth (a digital twin of the Earth) to model, monitor and simulate natural phenomena, hazards, and the related human activities. These groundbreaking features assist users in designing accurate and actionable adaptation strategies and mitigation measures. DestinE unlocks the potential of digital modelling of the Earth system at a level that represents a real breakthrough in terms of accuracy, local detail, access-to-information speed and interactivity. By pushing the limits of computing and climate sciences, DestinE is an essential pillar of the EC's efforts towards the Green Deal and Digital Strategy. ESA is responsible for operating the DestinE Platform providing a large number of users with access to observations, simulations and models, evidence-based policy and decision-making tools, applications and services. The current Open Competition (OC) is managed by Atos, on behalf of ESA, in order to promote the availability and attractiveness of an ecosystem of DestinE Advanced Applications and Services (AAS) supporting the exploitation of the Digital Twins. Primary objective of this OC is to select service providers as subcontractors to Atos, and subsequently onboard and operate as part of the DestinE platform AAS leveraging cutting-edge technologies across different applicable fields, sectors, functionalities and complexities. Funding of this OC is planned to solely cover activities for onboarding and initial operations of the AAS (for a defined period of time) on the DestinE platform. These activities will be the object of a contract between Atos and the service provider. By actively contributing to the DestinE ecosystem with innovative solutions and expertise, the Contractor will not only tap into new markets and attract fresh users but also enhance their visibility. Additionally, they will gain access to a wealth of cutting-edge technology and valuable data, enabling to expand and improve products and services.

https://esastar-publication-ext.sso.esa.int/nonEsaTenderActions/details/25260

LIVE WEBINAR

Wed, 26th March
10-11h am CET

REGISTER HERE

https://esastar-publication.sso.esa.int/news/details/11228

The ESA Digital Twin Earth Programme

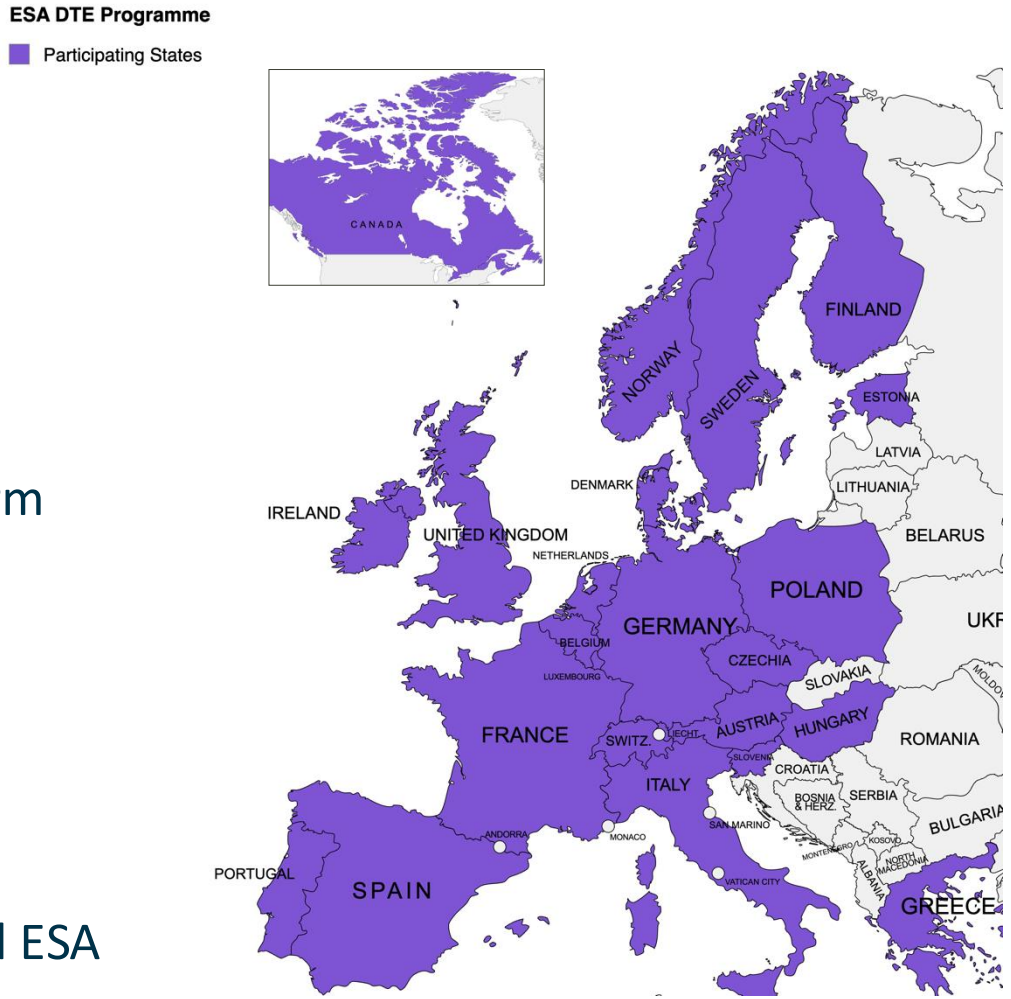
Leveraging Earth Observation for Destination Earth

What is (new in) the ESA Digital Twin Earth Programme?

- An optional ESA Programme
- Funded by ESA Member States,
- Continuation confirmed at CM25

- Complements Destination Earth with **Digital Twin Components** that leverage novel **EO** assets
- Develops **innovative services** for the DestinE Platform
- Supports **national Digital Twin** initiatives
- More information: https://eof.esa.int/dte/

- Close **coordination** with Destination Earth
- **One ESA team** responsible for Destination Earth and ESA Digital Twin Earth



Pillars of the programme

Digital Twin Earth Framework

Earth Observation Digital Twin Components

Interoperability with initiatives of ESA Member States

Pillars of the programme

Digital Twin Earth Framework

- Build ESA DTE framework (or DTE endpoint) to adopt an IT infrastructure terminology, that hosts EO DTCs activities within the context of the DestinE platform.
- Data Transformation & Harmonisation: develop key functions to enable EO DTCs implementation,
- Integration of mission data: bring ESA EO missions as a contribution to DestinE (e.g, Earth Explorers)
- Exploration & Access Services: verify the capability to operationally interface the ESA DTE with national initiatives to avoid any duplication while allowing services to benefit from ESA DTE activities

Earth Observation Digital Twin Components

- ESA DTE develops and demonstrates, up to a pre-operational level, a set of DTCs as EO-based replicas of a physical dynamic process in the real world.
- EO DTCs selection process associated to the corresponding implementation of a set of initial components.
- Open call 1: 13 DTCs were selected, each focused on a particular component of the Earth system:
  - **Lead EO DTCs (24M, 1.5m €):** medium-size projects to develop a pre-operational system with a sufficient level of technical and scientific maturity and strong community support.
  - **Early EO DTCs (12M, 500K €)**: smaller-scale projects focusing on less mature themes, communities, scientific components, and development elements.

Pillars of the programme

Interoperability with initiatives of ESA Member States

DestinE Platform

- Different from DestinE activities, **ESA DTE are not meant to become operational** within the context of the ESA DTE programme, but as part of other programmes (e.g. National initiatives, DestinE,…).
- Set up **institutional partnerships**: Special attention will be given to ensure the inclusion and integration of relevant national activities in Member States and the close coordination with the DestinE programme
- Showcasing the value of EO capabilities and the potential for future operational use in Digital Twin ecosystems, such as through DestinE
- Foster the reuse of DestinE Platform services and infrastructure with a dedicated ESA DTE end point.
- Make use of the data available from the DestinE Data Lake or from the Copernicus Data access (no storage duplication).
- Maximise the use of DestinE & Copernicus Application Programming Interfaces (APIs).
- Designed with a strong focus on users, emphasising practical applications rather than purely scientific research

Upcoming opportunities

Issued

ESA EO INFORMATION SYSTEM (EIS)

Tender Action Number: 1-13254 – Activity Number: 1000045600

Intended	Issued	Tender Opening in Progress	Evaluation 1 – Tender Evaluation Board	Evaluation 2 – Recommendation & Endorsement	Awarded

Clarification Request Deadline	Closing Date Extension Request Deadline	Announcement Date	Last Update On	Update Reason
03/04/2026 16:00 CET	03/04/2026 16:00 CET	05/02/2026	19/03/2026 11:11 CET	Tender Clarification has been published

ESA EO Information System (EIS) Invitation to TenderESA is preparing the release of the Invitation to Tender (ITT) for the ESA Earth Observation Information System (EIS), planned for Q1 2026.The procurement for EIS will cover the definition, implementation andoperation of a single, flexible, and programme-independent EO data information system, governed by ESA and its Member States. This environment shall offer an opportunity for multi-programme EO initiatives (in particular, ESA Copernicus Space Component CSC-4 and ESA Digital Twin Earth) and for European industry to access a robust foundation on which to develop, prototype and maintain competitive operational services and applications, maximising synergies and reducing time, risks and development costs.EIS will enable:Access to a unified data storage architecture and exploitation system, established on EU sovereign clouds and based on state-of-the-artsolutionsEO data management services and Digital Twin Components development, prototyping, evolution and maintenanceAccess to harmonised representations of heterogeneous datasets for processing, as well as for AI modelling and trainingEfficient hosting of services and applications allowing industrial partners to manage such services and applications under their own respective governanceThe EIS procurement will be released as one open competition divided into two lots:Lot 1 - ESA Information System backbone: development, operations, and evolution of an architecture of cloud-managed services integrated in a project-based data exploitation system, established on EU sovereign clouds and based on state-of-the-art solutions.Lot 2 - Unified Data Management: development, operations, and evolution of an innovative EO-related data architecture to streamline the representation of diverse datasets, including areference open source EO application demonstrator.Tenderers will be invited to submit a separate and self-standing tender per Lot. They will be allowed to submit tenders for both Lots. To ensure the selection of the best expertise of European industry, the Agency will award each Lot to separate legal entities, and no single entity may hold contracts for the two Lots.The EIS procurement isfunded under the Copernicus Space Component CSC 4 and EarthWatch ESA Digital Twin Earth programmes.
Read less

https://esastar-publication-ext.sso.esa.int/ESATenderActions/details/181863

Intended

DTE-B-01 AND 02 -LEAD AND EARLY DTCS DEVELOPMENT ACTIONS - FIXED CALL FOR PROPOSAL

Tender Action Number: 5-50175 – Activity Number: 1000045460

Intended	Issued	Tender Opening in Progress	Evaluation 1 – Tender Evaluation Board	Evaluation 2 – Recommendation & Endorsement	Awarded

Clarification Request Deadline	Closing Date Extension Request Deadline	Announcement Date	Last Update On	Update Reason
N/A	N/A	20/02/2026	20/02/2026 12:53 CET	New Tender Action

This Call is issued under the ESA Digital Twin Earth (DTE) programme element. ESA DTE aims at supporting ESA Member States (MSs) tocreate the conditions for a strong uptake of novel EO capabilities in the design and implementation of future operational digital twins ecosystems (through large European programme such as DestinE or other operational initiatives, including national efforts).With this CfP ESA intends to enlarge the thematic portfolio of the initial set of EO Digital Twin Components developments by addressingadditional Themes not selected under the first call as well as supporting interoperability and collaboration across existing Digital Twin developments,In particular, this CfP includes three distinct types of activities:a.Lead DTCs Development Actions: addressing new Themes (aimed at developing and demonstrating, in a pre-operational environment, a set of EO-based Digital Twin Components addressing a priority Theme e.g., Terrestrial carbon, Biodiversity, Ocean). Each project shall deliver an independent thematic pre-operational end-to-end system implementation, validation and demonstration.b.Early DTCs Development Actions: focused on secondary Themes aimed at implementing a feasibility study and early prototype and demonstration development for a future Digital twin Component advancing their maturity and readiness levels, engage stakeholders in the development process and preparing the grounds for a potential larger implementation. c.Collaborative actions and interoperability: fostering collaboration, coupling and interoperabilitybetween different Digital Twin Earth Components building on functionality/capabilities and data products of existing DTCs (both Early and Lead) and developing, validating and demonstrating novel joint capabilities (service cases) clearly enhancing and expanding the value for users and stakeholders. Read less

https://esastar-publication-ext.sso.esa.int/ESATenderActions/details/182554

Upcoming opportunities

Intended

TOWARDS A UNIFIED SPHERICAL AI STACK ECOSYSTEM FOR COPERNICUS DIGITAL TWIN EARTH EO HYPERSPHERE - FIXED CALL FOR PROPOSAL

Tender Action Number: 5-50176 — Activity Number: 1000045685

Intended	Issued	Tender Opening in Progress	Evaluation 1 – Tender Evaluation Board	Evaluation 2 – Recommendation & Endorsement	Awarded

Clarification Request Deadline	Closing Date Extension Request Deadline	Announcement Date	Last Update On	Update Reason
N/A	N/A	20/02/2026	20/02/2026 12:52 CET	New Tender Action

ESA is preparing the release of a Fixed Call for Proposals entitled "Towards a Unified Spherical AI Stack Ecosystem for Copernicus Digital Twin Earth - EO HyperSphere", planned for Q1 2026.The objective of the Call is to lay the foundations of a coherent and operational Earth Observation Artificial Intelligence (EO AI)stack supporting Copernicus and Digital Twin Earth developments. The activity addresses the need to move from fragmented and application-specific EO AI solutions towards an integrated, interoperable and reusable AI ecosystem, aligned with European objectives on AI deployment, trustworthiness and operational uptake.The Call will be structured around three complementary and interdependent Activities, covering key elements of the EO AI lifecycle. These Activities will form a logically connected chain, enabling consistency across planar and spherical representations, traceability of results, and system-level validation of the AI stack foundation.The EO HyperSphere activity will deliver machine-learning-ready EO datasets, reproducible benchmarking assets, validated reference EO AI models and pipelines, and reusable, open-source EO AI assets, including compression models. Assets will be exposed through well-defined interfaces to enable reuse and transfer towards operational Copernicus and Digital Twin Earth environments.EO HyperSphere is conceived as an AI-centric extension of the ESA Earth Observation Framework (EOF), in particular the Earth Observation Processing Framework (EOPF), establishing an AI-oriented extension referred to as EOF4AI. The Call will deliberately refrain from prescribing specific technical solutions, while placing emphasis on scalability, reproducibility, interoperability and compliance with the EU Artificial Intelligence Act Read less

a spherical-native AI stack unifying data, representations, embeddings, and benchmarking across Copernicus & DTE

https://esastar-publication-ext.sso.esa.int/ESATenderActions/details/182551

LIVE WEBINAR

Tue, 31st March
10-11h am CET

REGISTER HERE

https://esastar-publication.sso.esa.int/news/details/11227

Thank You!

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