

# 1<sup>st</sup> DestinE User eXchange 2023

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## DestinE's Core Service Platform

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DESP serves as the ***single access point*** to DestinE ecosystem.

DESP is designed as an open digital platform easy accessible by ***generic users, Registered Services, and Service Providers.***

DESP provides a ***comprehensive framework*** for the analysis and management of ***Earth system processes*** with state-of-the-art applications.

DESP enables the development and exploitation of ***applications and services targeting DestinE data.***

DESP provides an environment for ***evidence-based policy and decision-making*** supporting tools.

DESP is based on an ***open, flexible, federated, scalable and secure*** cloud-based architecture.

DESP is planned for a ***large user community*** and designed to be ***inclusive and fully operational***.

DESP will gradually allow users to ***customise the platform***, integrate their own data, and develop their own applications.

DESP provides ***free services*** for its users and is conceived to enable integration of complementary resources creating a seamless ***scalability framework***.

## DESP

Core Services

Advanced Services

External  
Services

Other DESP Registered Services (including Use Cases)

## DESP

### Core Services

#### Platform Management Services

Onboarding Support

Information Dissemination

Service Desk

Dashboard

IAM Service

Services Registry

...

#### Data Management Services

Data Workflow

Data Visualisation

User Workflow

Data Traceability

...

### Advanced Services

External Services

Other DESP Registered Services (including Use Cases)

## DESP

### Core Services

### Advanced Services

Earth System  
&  
Application  
Services

Application 1

Application 2

...

Collaborative  
Services

Application 1

Application 2

...

External  
Services

Other DESP Registered Services (including Use Cases)

## DTs Framework

- on-demand simulations, interactive visualization and analysis tools, integrated ecosystem for future DTs, policy assessment services, etc.

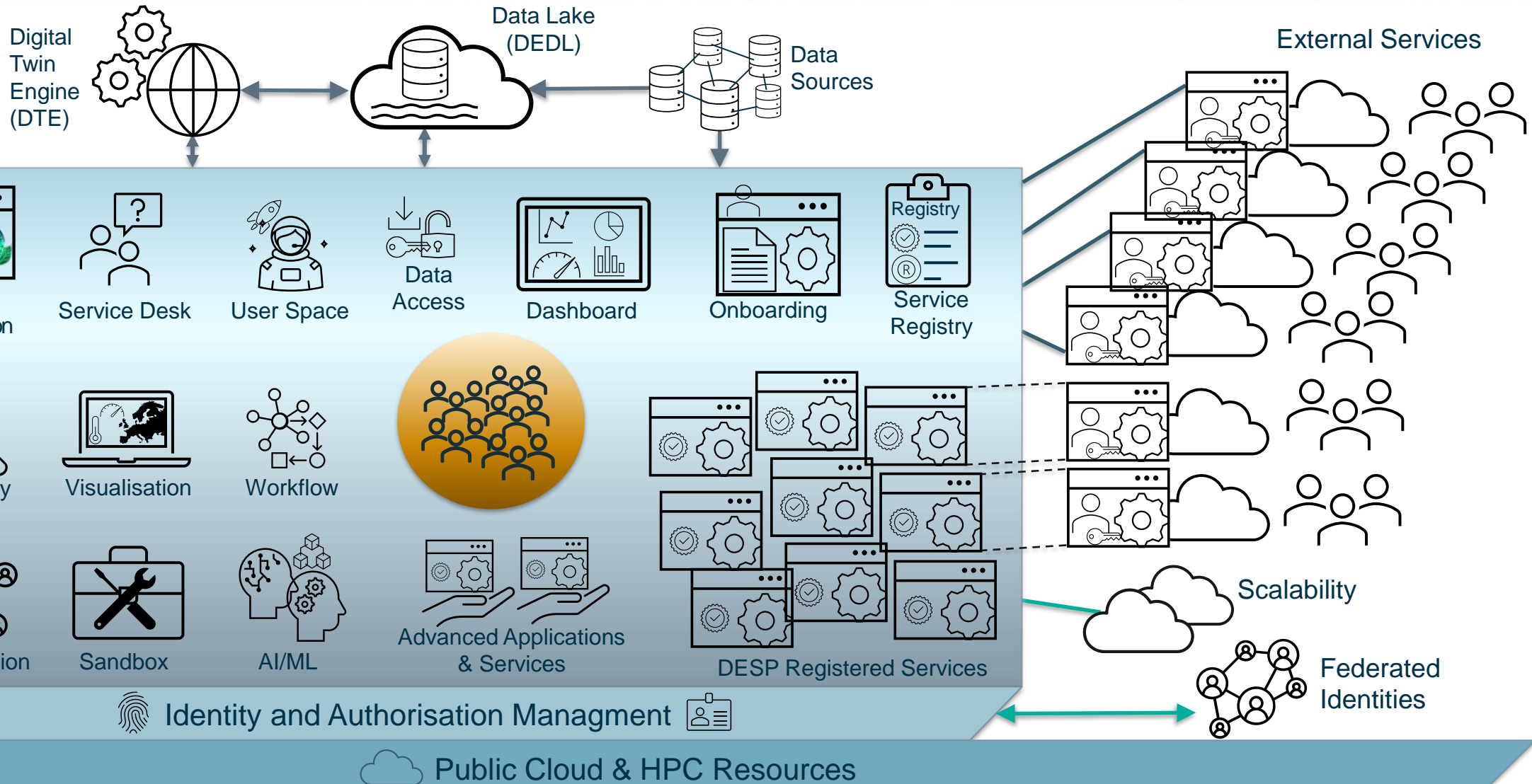
## AI-based Framework

- model development space (with specific AI libraries), Earth Observation AI database, training and labelling services, etc.

## Collaborative Services

- platform co-design, coding best practices and cooperative environment, continuous impact assessment and information dissemination, etc.

# DESP Overview





DESP favors a service approach that efficiently manages the allocation of resources to user needs, including the ***easy adaptation to different user scenarios***.

- DESP Services shall include scalability options.

DESP Services shall serve the ***objectives of Destination Earth Initiative***, e.g., contributing to the European digital development and to the Green New Deal.

DESP Services shall:

- provide an ***open and inclusive*** access to all DESP users, and
- commit to standards of ***quality and performance*** for operations.

## Registering a service at DESP

An open procedure is under preparation, in particular for the following cases:

- as part of an ESA-DestinE procurement, such as DESP Use Cases, DESP Core & Advanced Services, and potential future procurements, or
- through a standard application process.

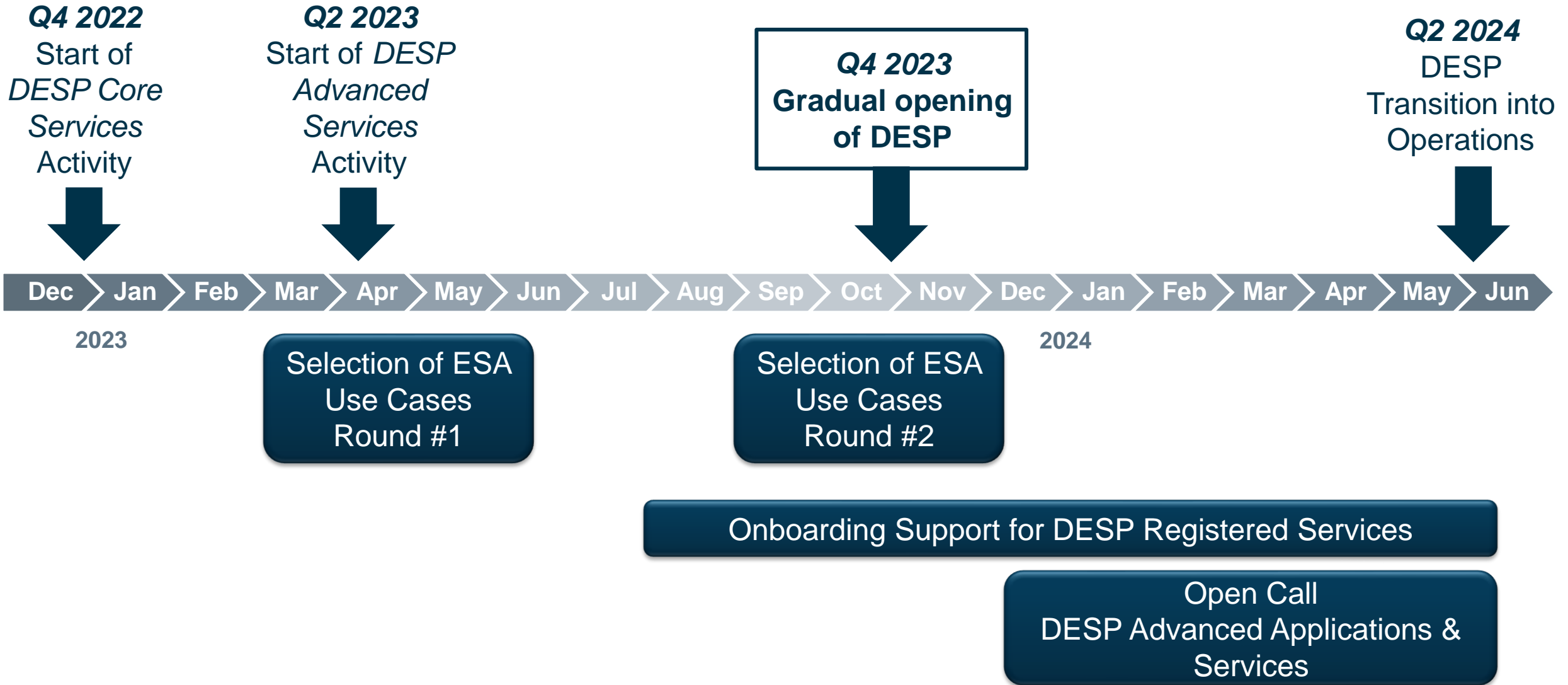
## Making use of DESP Services

- DESP Services can be accessed as a specific user part of ongoing implementations (e.g., DESP Use Cases) or as a generic user when DESP is broadly opened.
- Registering at DESP as a user or service provider guarantees access to all DESP Services along with limited free resources.

# DESP Implementation Schedule



Funded by  
the European Union





Funded by  
the European Union



EUMETSAT



# Extra Slides



**Platform Management:** users management, service desk, onboarding support, services registry, platform information dashboard, etc.

**Data Management:** data workflow (data discovery, catalogue, retrieval, ordering), user workflow (data extraction, compression, transformation, cache management, etc.), traceability (for models and data, in particular following user transformations), and visualisation.

- Including direct access to new CDAS (Copernicus Data Access Service)



## ESA Use Cases

Support the consolidation of the DESP user requirements & verification & validation

- **Open selection** of a series of use cases, addressing the demonstration of DestinE and DESP technical and functional capabilities.
- Service approach and cost model **not imposed**.
- Demonstrate the **scientific/technological added value** of the DestinE system from DESP usage.
- End-to end use cases addressing **real world needs** of DestinE priority end-users such as policy and decision makers, impact sector users, modellers etc.
- Support DESP platform **user requirements** consolidation

## ESA Advanced Services

Jump-start the DESP ecosystem of applications and services

- **Open selection** of a series of potential services or applications supported for integration and operation as part of the DESP framework.
- Services and cost models **imposed** to foster the availability of an initial set of services for DestinE users.
- Demonstrate DESP service **potential** and chaining **through** short implementation life-cycle **demonstrators**
- Independent verification & validation of DESP registry process.
- Support DESP Framework **ecosystem analysis**