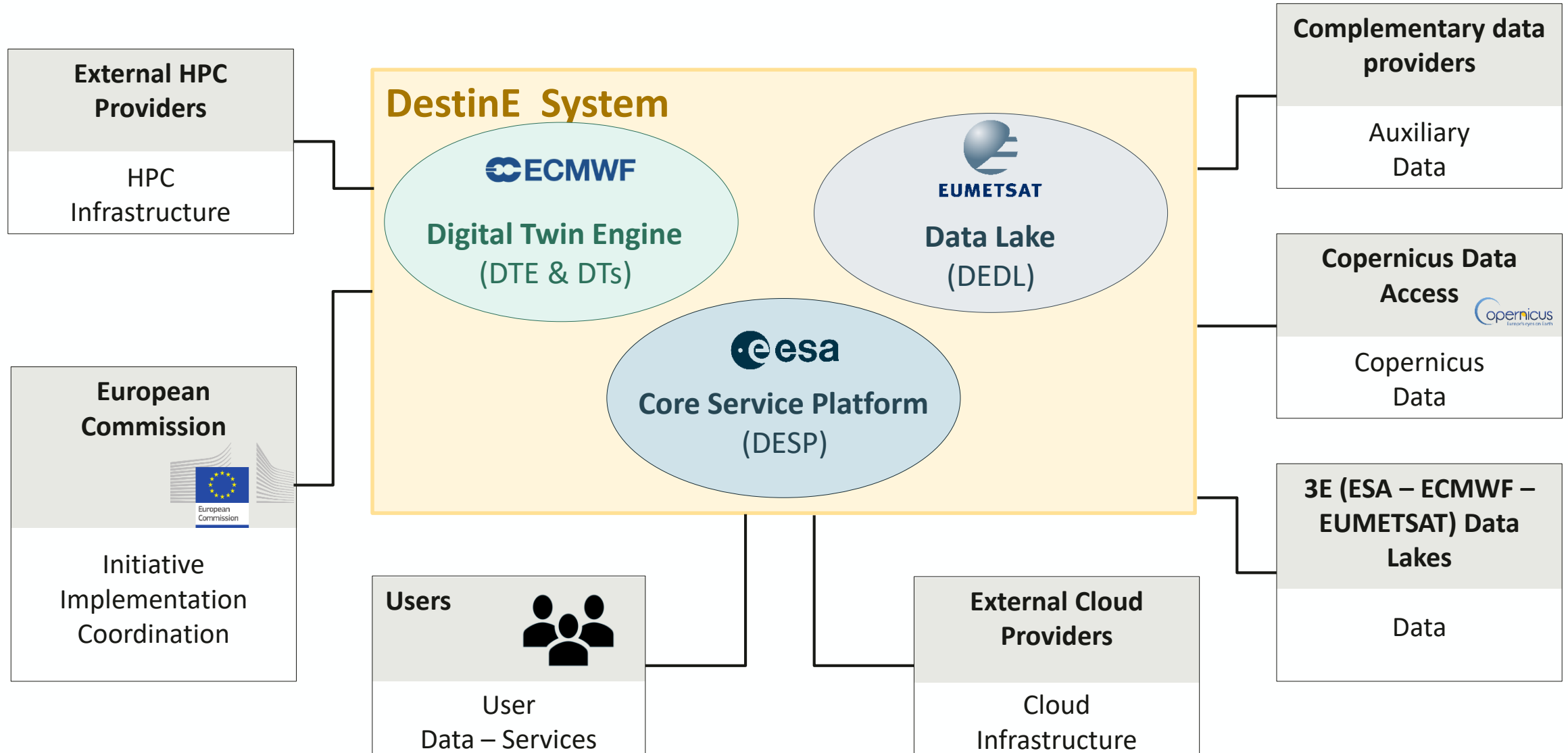


DestinE Core Platform Information day



DestinE System Context



The platform *interacts with the other elements* of the DestinE system:

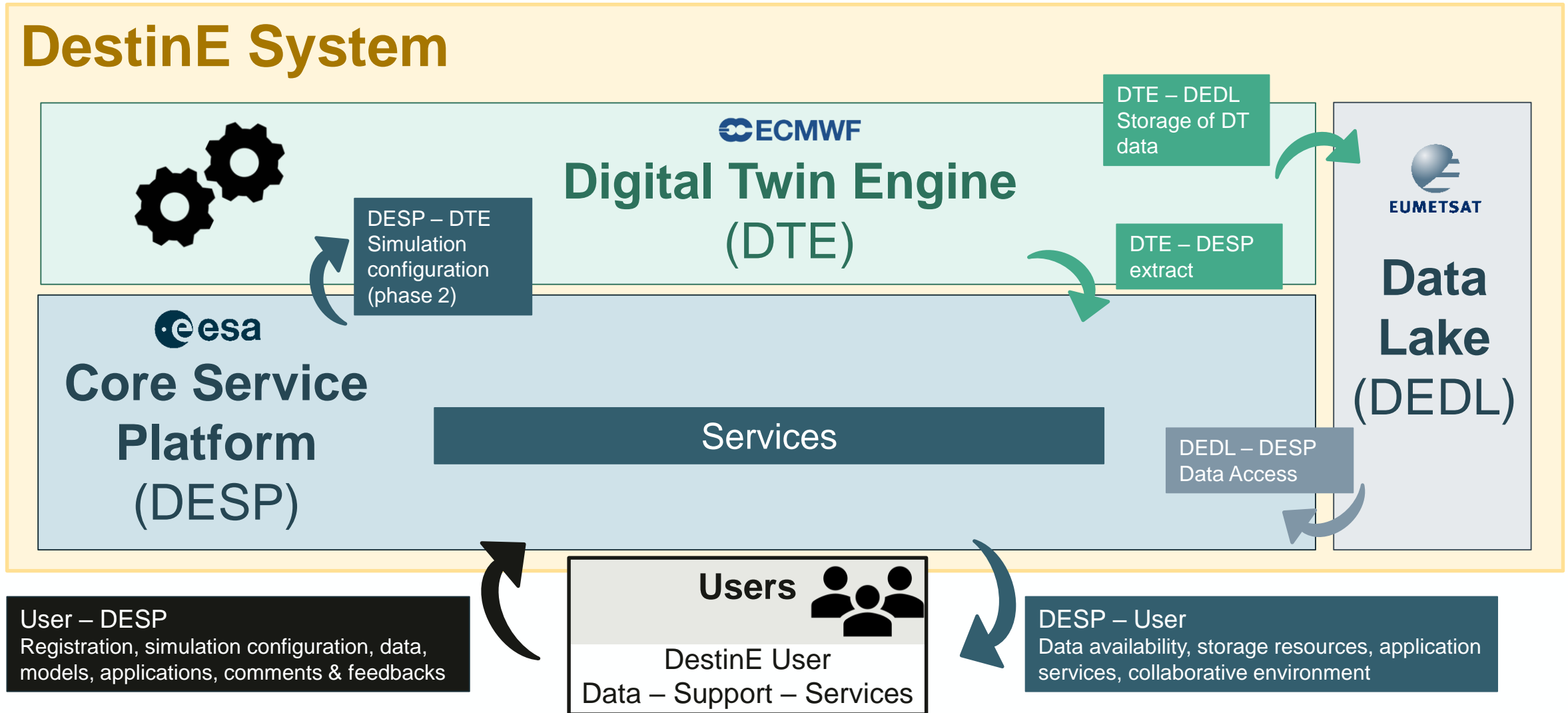
- DESP – DEDL interface: DEDL provides access to multiple sources of data, data generated by the digital twins and potentially, data generated by users

- DESP – DTE interface: the Digital Twin Engine provides access to on-demand simulations through user configuration (Phase 2) , as well as DTE production status and progress visualisation

DESP provides users with *tools, applications and services* for *evidence-based policy and decision-making*.

based on an open, flexible, scalable, secure and evolvable *cloud-based architecture to be extended with HPC access* in future

DestinE System



DESP address several type of users offering an integrated ecosystem of services (i.e., policy & decision makers, scientists & non-technical users, etc.)

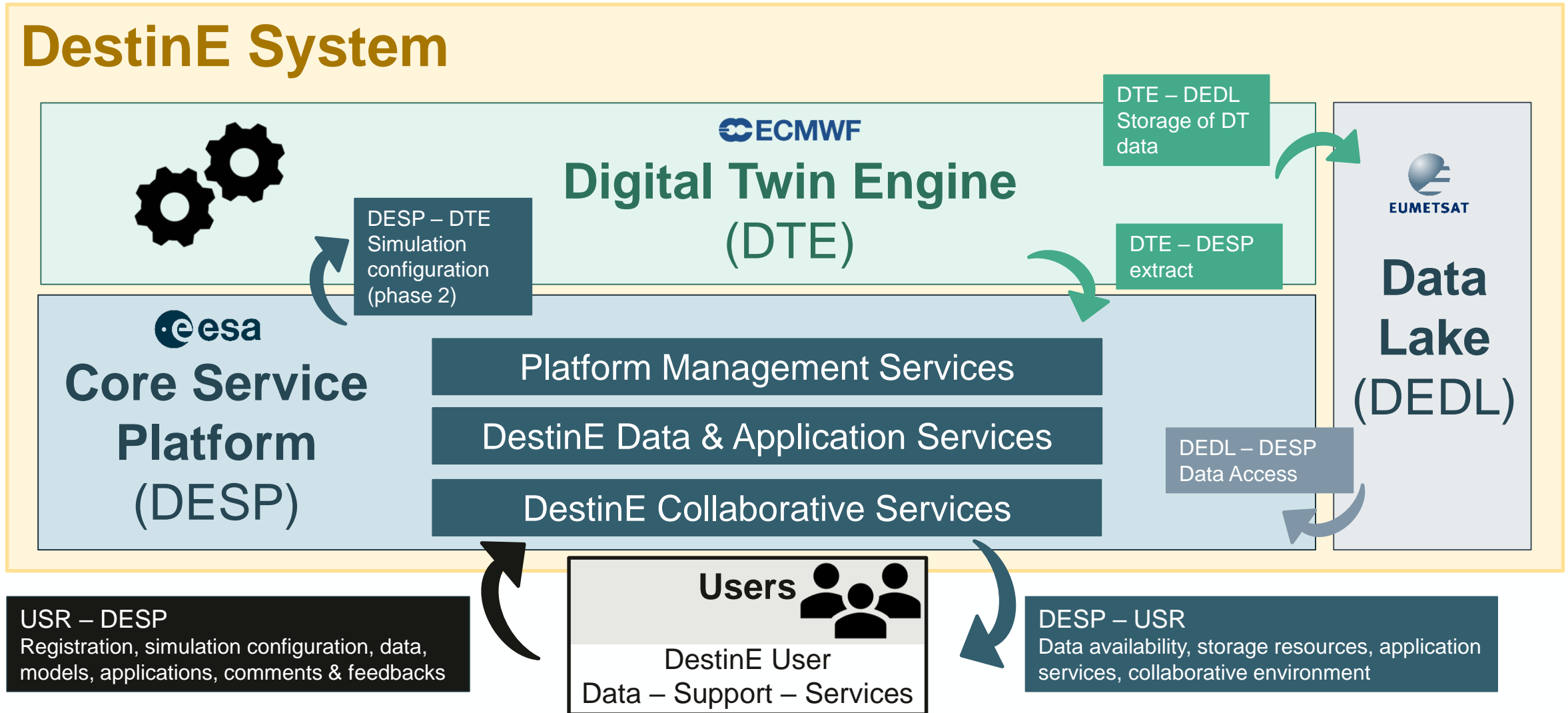
- **DESP is a Collaborative environment**
 - Data sharing, library of models, fostering exchange and feedbacks from users
- **Resources management**
 - Resources allocation services, Transparent cache services (data & processors or models)
- **Data applications**
 - An open environment based on PaaS, SaaS and libraries for AI, Machine Learning, System Dynamic Modeling, data interpretation and representation
 - DestinE demonstration services (e.g. maintained APIs for generic services, workflows support...)

Operations regulated through **Service Level Agreements**

3 key types of services:

- DESP management services (e.g., usage analytics, operational dashboard, helpdesk, support and training for users, etc.)
- DESP Data & application services (e.g., data catalogue, software suite repository, web access, toolboxes, etc.)
- DESP Collaborative services (e.g., collaborative development environment, storage resources, applications, etc.)

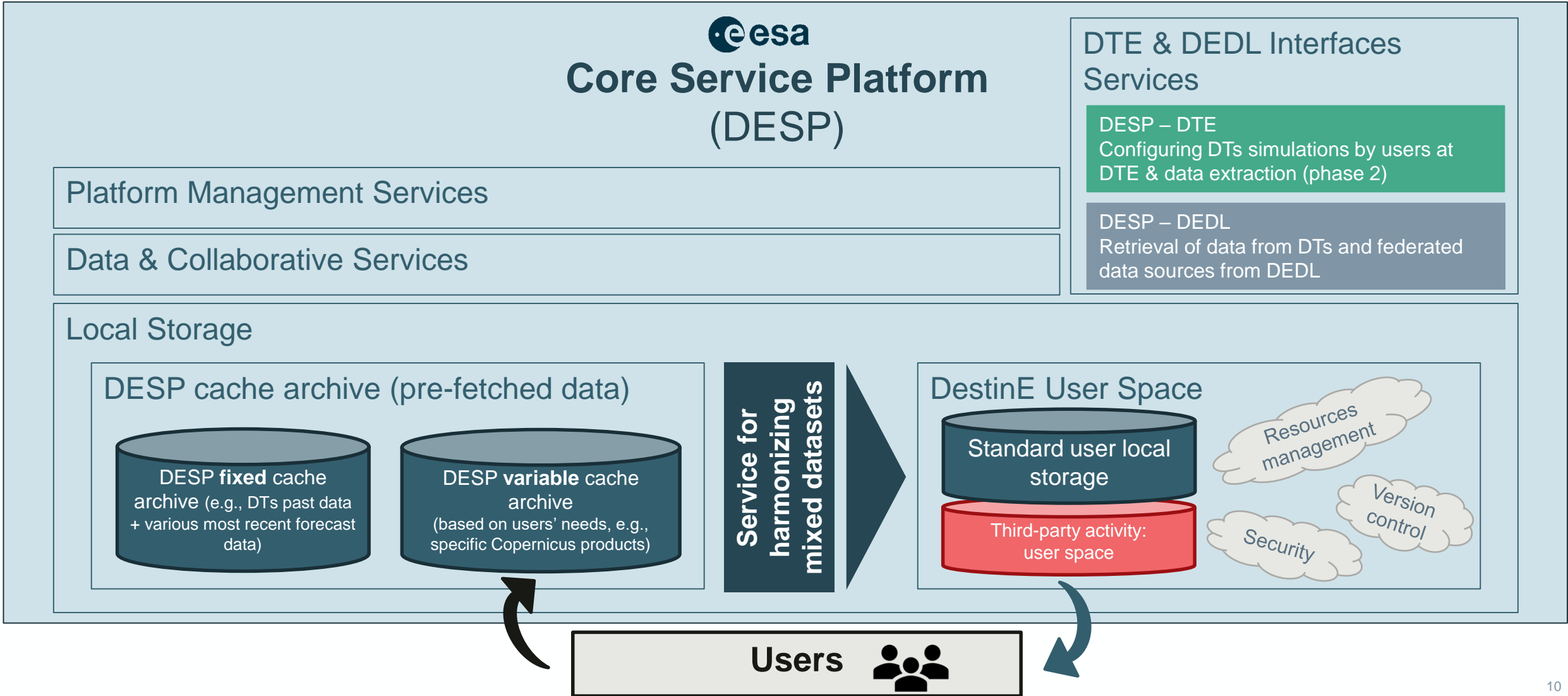
DestinE System



Definition of services is progressing:

The details of the Core Platform end-to-end system operations are defined in the associated Core Service Platform - Operations Concept (under preparation) and the Core Service Platform – Operations Procedures (under preparation)

DESP documentation will be made available before ITT issue

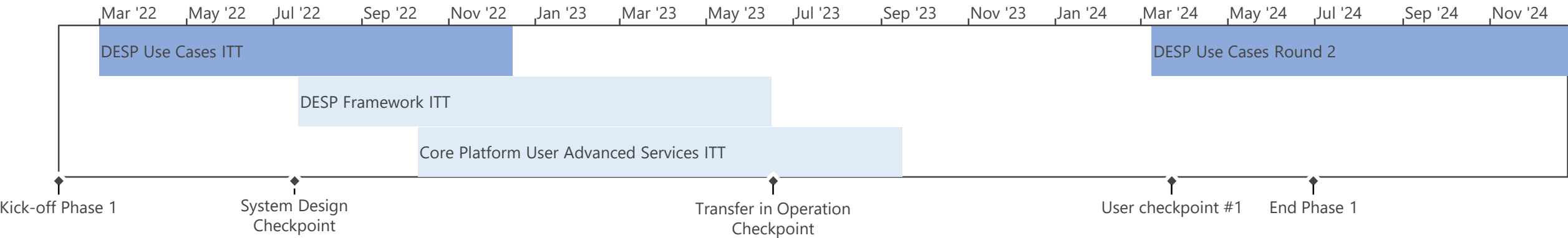


DESP platform is built and operated by industry, key aspects to consider:

- Design, Implementation and Operations shall be conceived avoiding any kind of industrial lock-in
- Operations are based on services with open APIs
- Any specific development of new functions shall favor an open-source approach
- EU regulations apply e.g., Digital Europe Programme Regulation
- Scalability of services shall be designed for an open system even if aperture will be gradual

A yearly milestones to collect user feedbacks and recommendations is planned

The following timeline shows the preparation of ITTs during Phase 1:



The platform is decomposed in two procurements:

- DESP framework focusing on DESP management services
- DESP advanced services focusing on user environment for data exploitation

DESP Use cases for validation will support overall platform verification and validation

Title	Description	Procurement Milestones
DESP use cases	Selection of a prime + short project selection – including infrastructure Prime: extension foreseen	KO: 15/12/2022 Duration: 18 months
DESP framework	Core platform management services, framework and component (e.g. local storage, inventory...) Operations and maintenance included; Foreseen extension in successive phases	KO: 15/06/2023
Core platform user advanced services	Advanced environment for user project integration (e.g. AI environment, integrated 3D, labelling, ...) Foreseen extension in successive phases	KO: 15/09/2023

The overall budget for the ITTs is >20 MEuro for phase 1, options for continuity in phase 2 will be required

ESA procurement rules amended according to EU agreement will apply

A dedicated ESA information day is planned around the summer prior competition is initiated