# DestinE Platform

## ONBOARD THE PLATFORM

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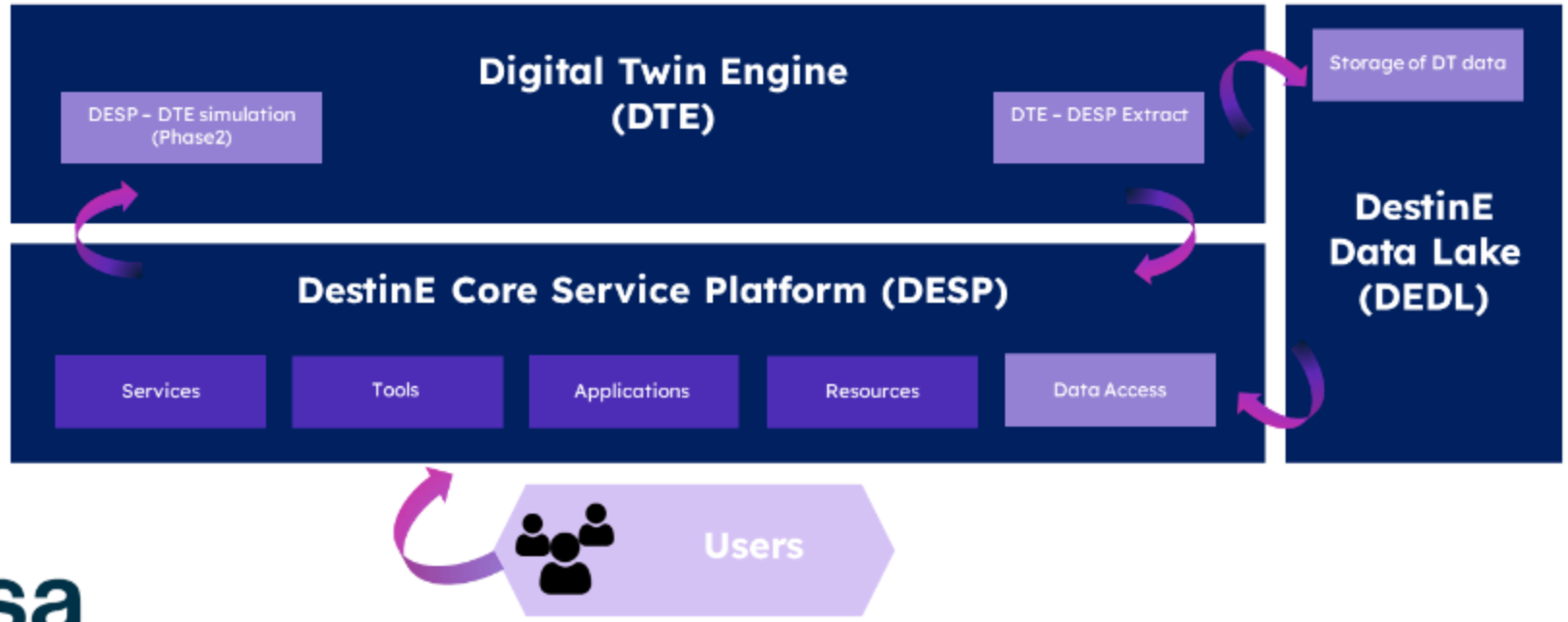
Serco

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

ECMWF




EUMETSAT

esa

# DESTINE PLATFORM

## FOUNDATION

Destination Earth

### 01 SECURITY, PRIVACY

- Based on a European Cloud infrastructure, ensuring compliance with EU regulations
- Embedded security features and dedicated cybersecurity requirements

### 02 SCALABILITY & FLEXIBILITY

- Scale resources up or down automatically based on demand for cost-efficiency and sustainability
- Handle increased user demand by distributing workloads and automatically provisioning additional computing power

### 03 BUILD AN OPEN ECOSYSTEM

- Open-source and EU technologies & initiatives
- Seamless Service Providers onboarding for efficient uptake and increased attractiveness
- Public evolution roadmap & user community involvement

# OPEN ECOSYSTEM

## OBJECTIVES

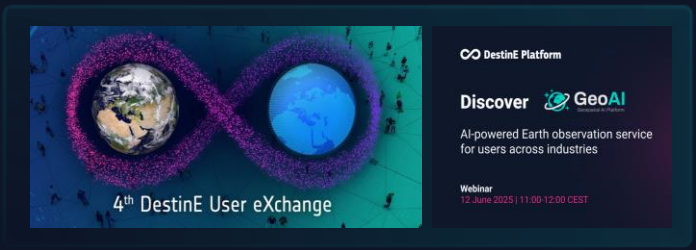
Destination Earth

### SERVICE PROVIDERS

- Attract innovative services, leveraging DestinE data & resources
- Stimulate the ecosystem (industry, research, etc.) and facilitate onboarding
- Organization of open calls, Invitation to Tenders, challenges

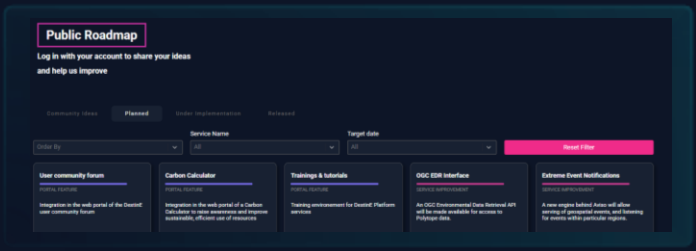
### USER UPTAKE

- Support the user uptake through dedicated initiatives, workshops & events
- Gather feedback and evolve the system accordng to user needs




### BRIDGE THE GAP

- Co-design services based on user needs/requirements
- Connect User Needs to Service Providers capabilities




DestinE Platform

# DESTINE PLATFORM

Destination Earth

## PLATFORM MANAGEMENT SERVICES

**Identity Access management**
- Access authorization
- User admin, federation

**Data management**
- Data privacy
- GDPR Compliance

**Orchestration platform**
- Resource scalability
- Embedded security features

**Monitoring dashboard**
- Manage resources
- Track performance

**Onboarding**
- Documentation & resources
- Dedicated support

**User support**
- Service Desk
- Support, FAQ, Forum

## DATA MANAGEMENT SERVICES

**Data access**
- Access to DestinE data
- Open standards/APIs

**Development environment**
- Ready-to-use coding environments
- Customized notebooks

**Data processing**
- Advanced processing via UI/API
- Batch & real-time processing chains

**Visualization**
- 2D/3D/4D data visualization
- Collaborative & export features

**Data streaming**
- Real-time interaction with data
- Advanced compression

**Digital Twin toolbox**
- Build & share DT Components
- Collaborative workflows

## ADVANCED SERVICES

| | | |
|---|---|---|
| Interactive Training Environment | Collaborative services | DestinE Forum |
| Ground stability & deformation | Urban quality of life | Crop monitoring |
| Water quality monitoring | Land temperature monitoring | Mosquito disease alerts |
| EO data compression | Locust outbreak alerts | Sustainable mobility |

## ONBOARDED SERVICES

| | | |
|---|---|---|
| Enabling services | End-user services | Local Digital Twins |
| | | |

EUROPEAN CLOUD INFRASTRUCTURE

DestinE Platform

# DESTINE PLATFORM

## BENEFITS FOR USERS

Destination Earth

### UNIQUE ACCESS TO UNPRECEDENTED DATA

- Seamless access to **Destination Earth Data** through API (format e.g. STAC xarray, zarr)
- Access to all **federated data** (ERA5, CDSE, Landsat, Eurostat)

### FLEXIBILITY

- Leverage ready-to-use operational services and resources (free tier)
- Co-design tailored service
- Build your own service

### RELIABILITY & AVAILABILITY

- **Operational system**: strong operational requirements and performance
- Service-Level Agreement with all Service Providers

FOCUS ON

# USER JOURNEY

# USER JOURNEY
## OVERVIEW

Destination Earth

### REGISTRATION

- Create user profile
- Provide requested information
- Accept platform policies (T&Cs, Privacy)
- Verify your email

**REGISTERED USER ACCESS**

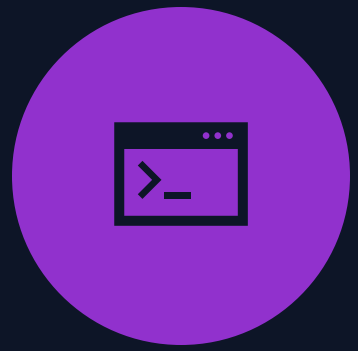
- Selected Services

### UPGRADED ACCESS

- Request access
- Provide requested information
- Accept dedicated T&Cs
- Application is reviewed

**UPGRADED USER ACCESS**

- Selected Services
- DestinE Data Services



### SERVICES DISCOVERY

- Access service catalog
  - Discover DestinE applications
  - Access DestinE data on the edge
  - Identify relevant services
- Provide feedback
  - Impact public roadmap

### SUPPORT

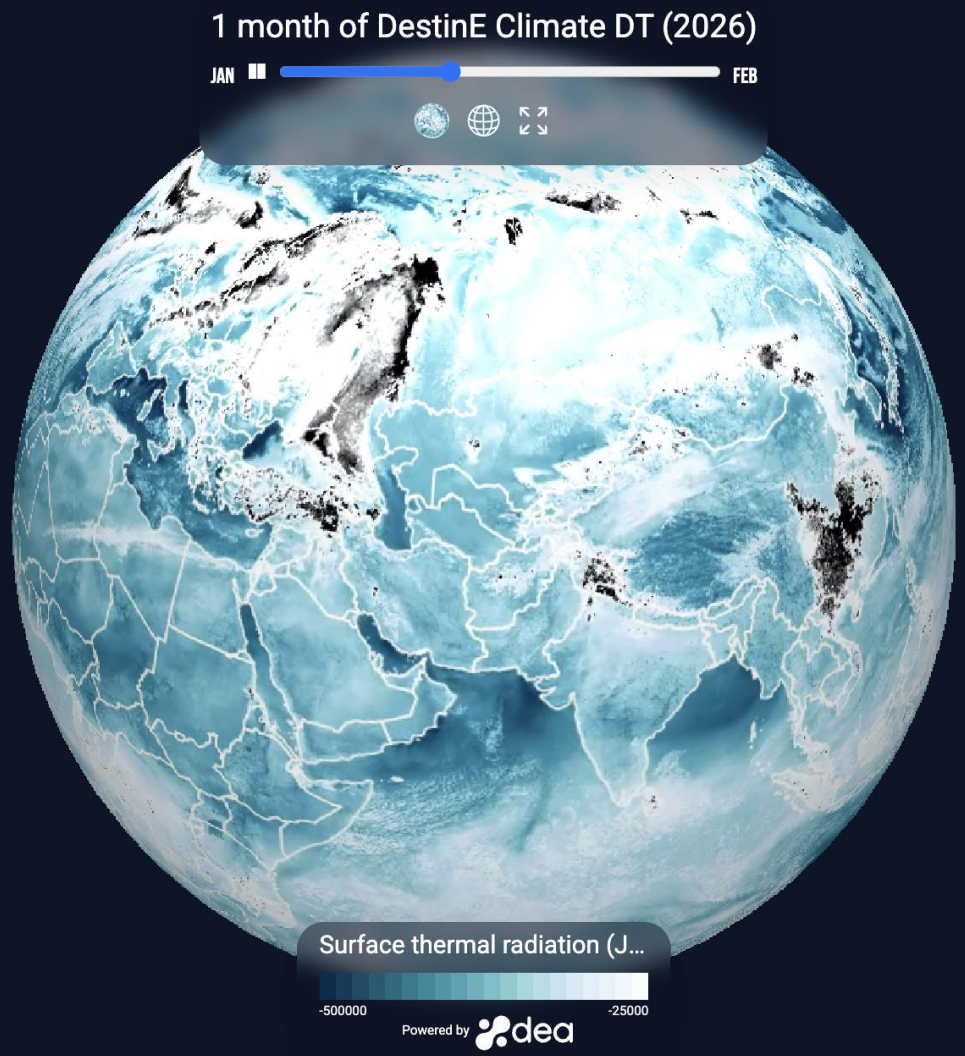
- FAQ
- Service Documentation
- Service Desk
  - Technical issues
  - Account-related queries
  - Service-specific support
  - Security aspects

DestinE Platform

# DestinE Platform

**Your gateway to a sustainable future**

A unique ecosystem of services harnessing the power of Destination Earth.

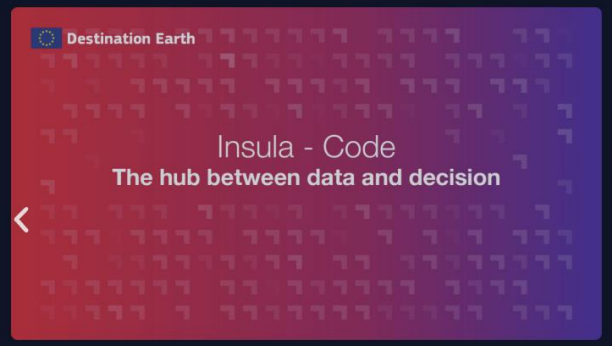


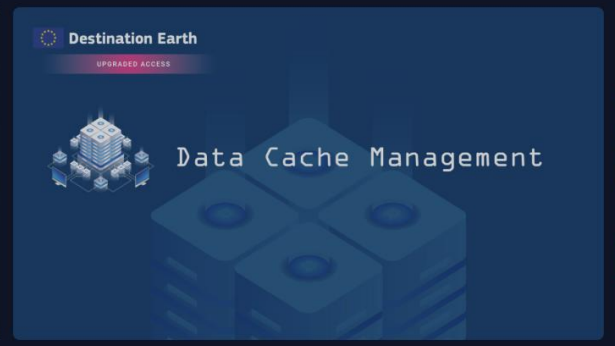

**2.989**
Users

**23**
Services already available
Discover

Data available from
**2**
DestinE Digital Twins
Explore

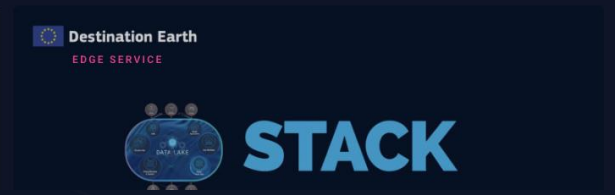
## Access and exploit data





## Discover DestinE applications

## Access DestinE data on the edge



# Insula - Code

## The hub between data and decision

### Insula Code

USER WORKFLOW

2D Graphics | Analytics | API | Catalogue | Data Cube | Data Lake | Decision-Making | Digital Twins | Earth Observation | Harmonized Data Access | IDE | Julia | Jupyter Notebook | Plots | Processing | Python | R | S3 | Workflows | zarr | CLI

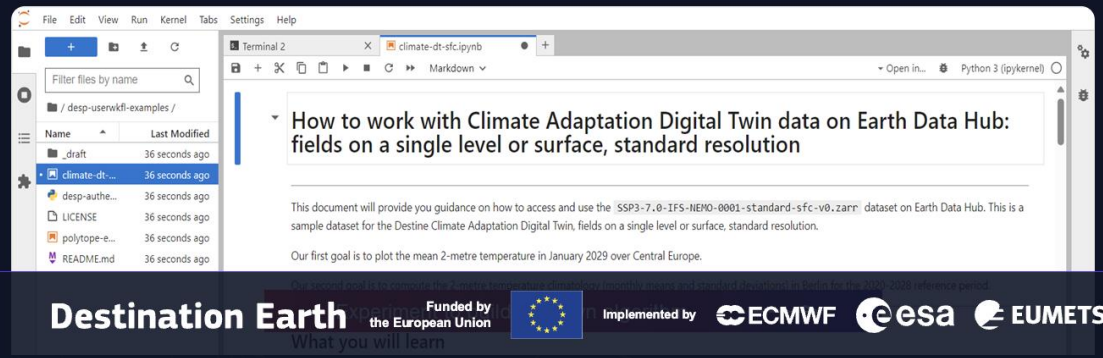
Insula, the Hub between Data and Decisions. Effortlessly process complex information and generate clear visualizations, transforming raw numbers into insightful maps and graphs.

Documentation

Go to service

Website: Insula Code

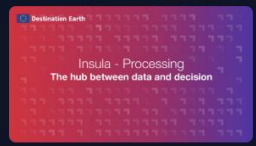
Operated By: CGI




Other services that might interest you

STACK

SesamEO




Insula Processing

insula
Search docs
All Services Docs

CONTENTS:
Getting Started
Insula
Insula Code Lab
FAQs
Known Issues

# Insula Documentation

With its powerful big data analytics capabilities, Insula allows users to perform complex analyses on this integrated and harmonized dataset. This includes trend analysis, anomaly detection, predictive modeling, and much more, providing users with deep insights into Earth-related phenomena.

Insula is designed for everyone, regardless of your background in Earth Observation. Thanks to its user-friendly interface it ensures a seamless user experience. Moreover at CGI we leverage cutting-edge technology to provide the most accurate and up-to-date information. You can tailor Insula to your specific needs, from selecting the data sources that matter most to creating customized reports and dashboards.

Insula excels in providing a comprehensive set of functionalities designed to maximize the value of EO data:

- Combine Data and Services for Information Generation: Insula seamlessly combines data and services to transform raw information into actionable insights, empowering informed decision-making. Its standard interface enables to integrate new dataset driven by user needs.
- Integrate New Services: Insula's adaptable platform allows users to effortlessly integrate new services, ensuring access to cutting-edge technologies without constraints.
- Run processing campaigns with autoscaling: Insula's autoscaling feature optimizes large-scale processing for efficiency and cost-effectiveness.
- Monitor Processing Execution: Insula's robust monitoring system offers real-time oversight, enabling users to track progress, identify issues, and make quick adjustments for enhanced efficiency and accuracy.

The following pages provide a guidance to the Insula's services and capabilities.

You may also find it useful to refer to:

- The list of FAQs.
- The list of Known Issues.

If none of these pages answer your question, then please contact us at https://platform.destine.eu/support.

## Contents:

- Getting Started
  - Accessing Insula

# Insula - Code

## The hub between data and decision

### Insula Code

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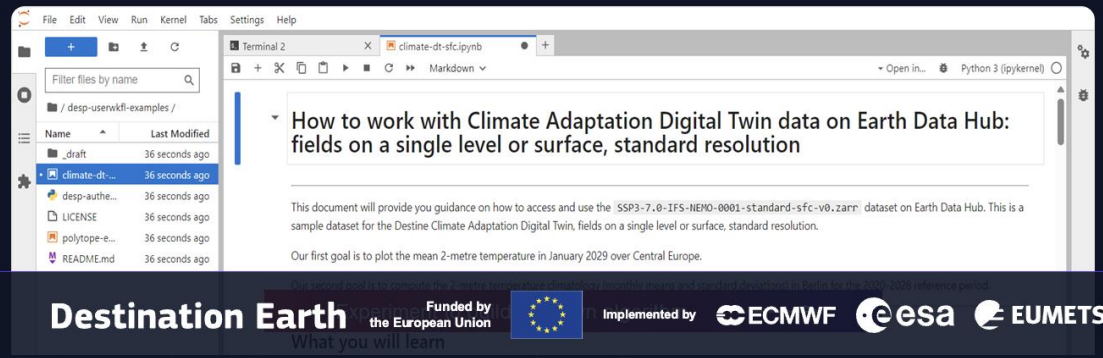
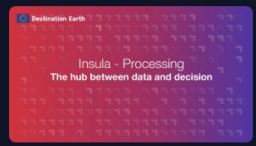


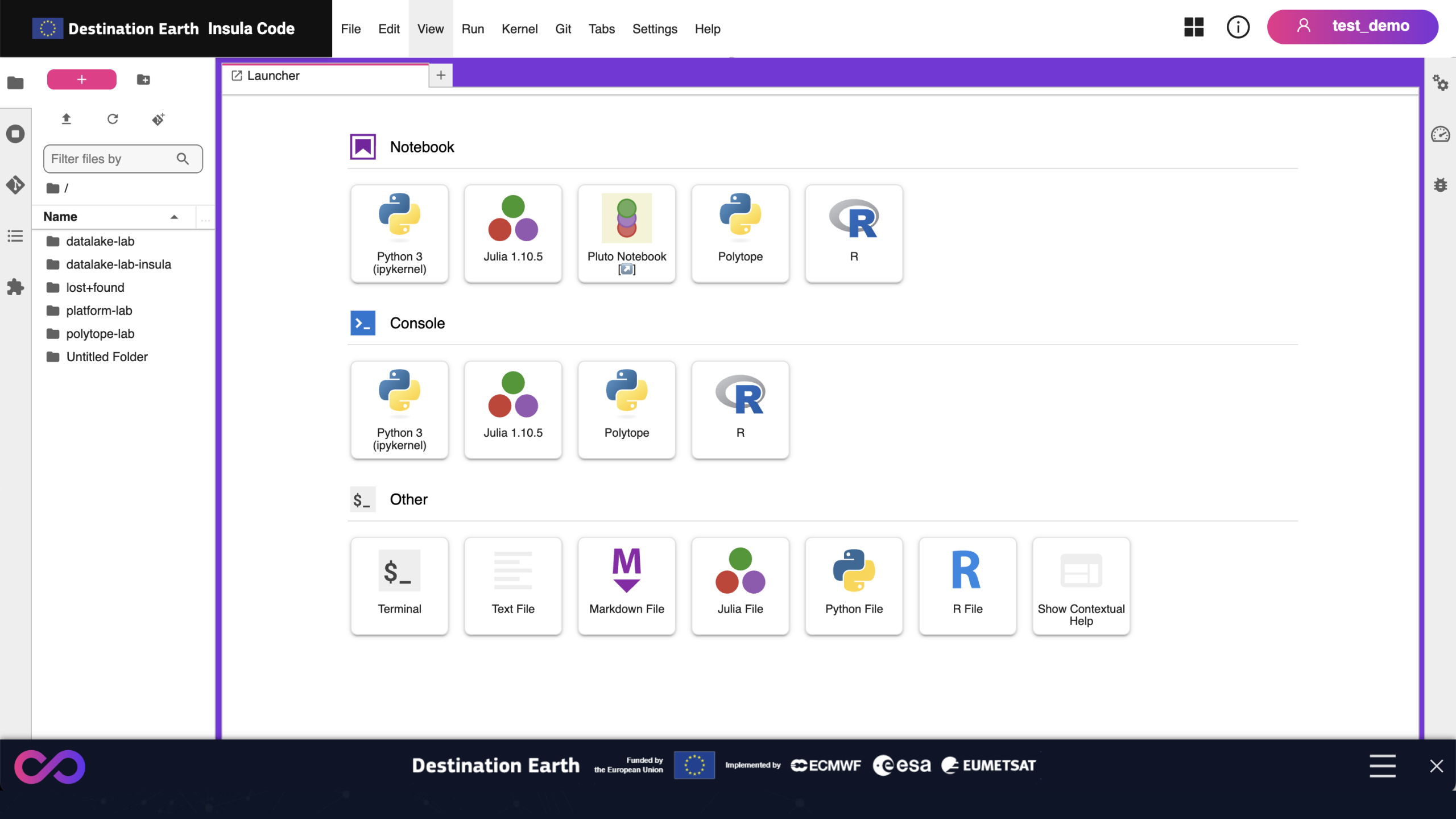

Other services that might interest you

STACK

SesamEO




Insula Processing


Destination Earth Insula Code
File Edit View Run Kernel Git Tabs Settings Help
test_demo
Launcher
Filter files by
/
Name
datalake-lab
datalake-lab-insula
lost+found
platform-lab
polytope-lab
Untitled Folder
Notebook
Python 3 (ipykernel)
Julia 1.10.5
Pluto Notebook [↗]
Polytope
R
Console
Python 3 (ipykernel)
Julia 1.10.5
Polytope
R
Other
Terminal
Text File
Markdown File
Julia File
Python File
R File
Show Contextual Help
Destination Earth
Funded by the European Union
Implemented by
ECMWF
esa
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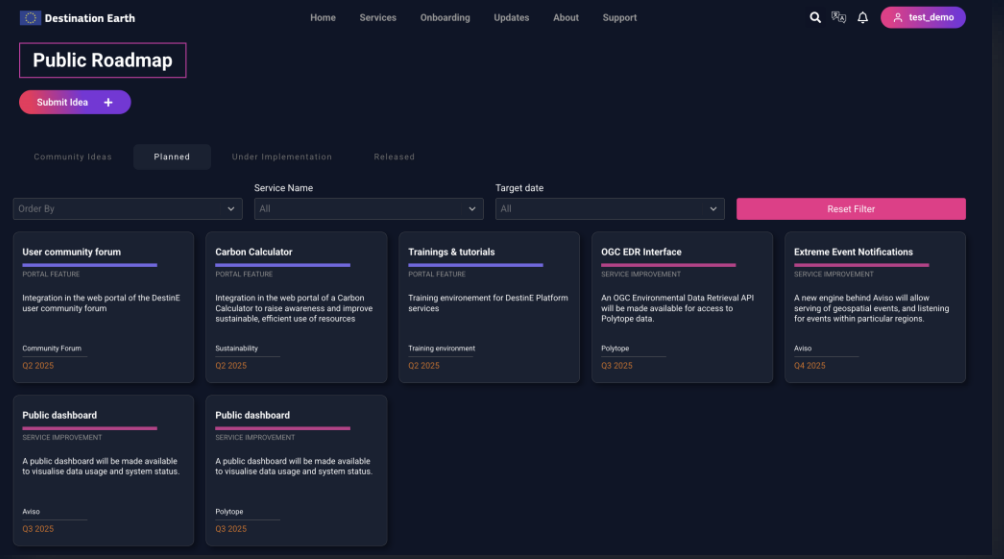
FOCUS ON

# ROADMAP

# DESTINE PLATFORM
## EVOLUTIONS ROADMAP

Destination Earth

### Tenancy
- Brings organizations to DestinE Platform
- Collaboration environment
- Advanded features & dedicated quotas




### Learning Hub
- Tailored content: tutorials, webinars, trainings
- Demonstrators showcasing DestinE capabilities

### Carbon calculator
- Increase awareness on Digital Responsibility
- Share best practices

FOCUS ON

# ONBOARDING

# ONBOARDING
## PROCESS

Destination Earth

### 01 REQUEST

**DIRECTLY ON THE PLATFORM, FILLING A DEDICATED FORM**

- Provide all information and documentation about the service
- Acceptance T&Cs and Code of Conduct
- Compliance with security requirements

### 02 EVALUATION

**GOVERNANCE BOARD EVALUATES SERVICES BASED ON DEFINED CRITERION**

- Alignment with DestinE
- Innovation, market need
- Long-term sustainability

### 03 INTEGRATION

**SELECTION AND IMPLEMENTATION OF INTEGRATION SCENARIO**

- Integration with IAM
- Deployment solution
- Optional integrations

**PUBLICATION ON SERVICE REGISTRY**

SUPPORT BY DESTINE PLATFORM ONBOARDING TEAM

platform.destine.eu/onboarding

DestinE Platform

# FOCUS ON
## ONBOARDING REQUEST

Destination Earth

**01**

### Service Description & Resources

- Provide Service description
- Provide Service documentation
- Provide required information

**02**

### Communication setup

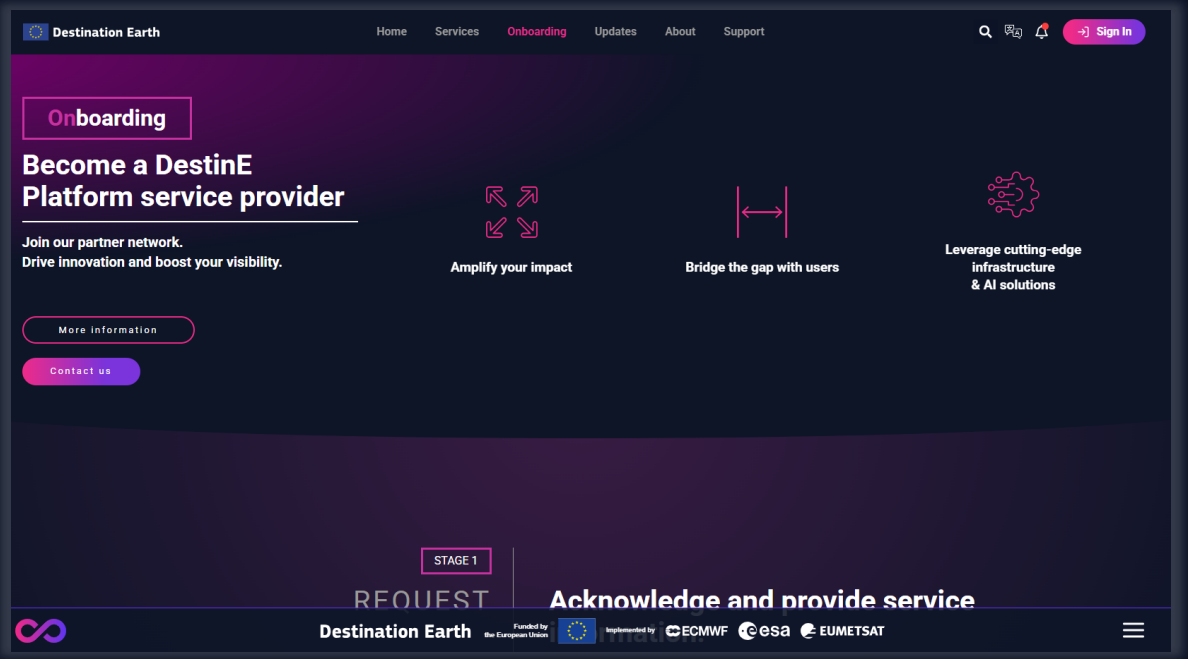
- Define operational Point of Contact for operation & integration activities
- DestinE Platform Service Desk

**03**

### Compliance acknowledgement

- Acceptance of Platform T&Cs
- Code of Conduct
- Security requirements (privacy policy)

platform.destine.eu/onboarding

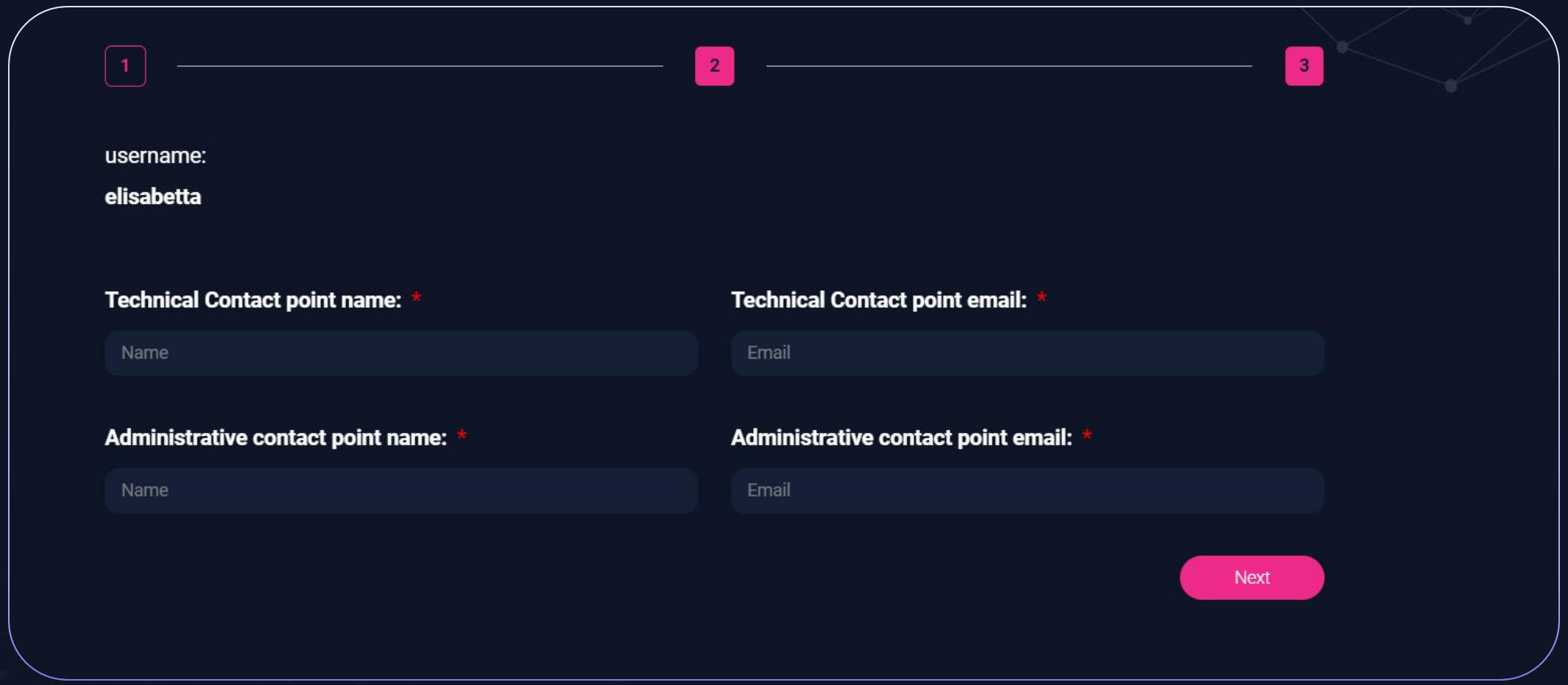



DestinE Platform

# SERVICE ONBOARDING REQUEST

PLATFORM.DESTINE.EU/ONBOARDING

Destination Earth

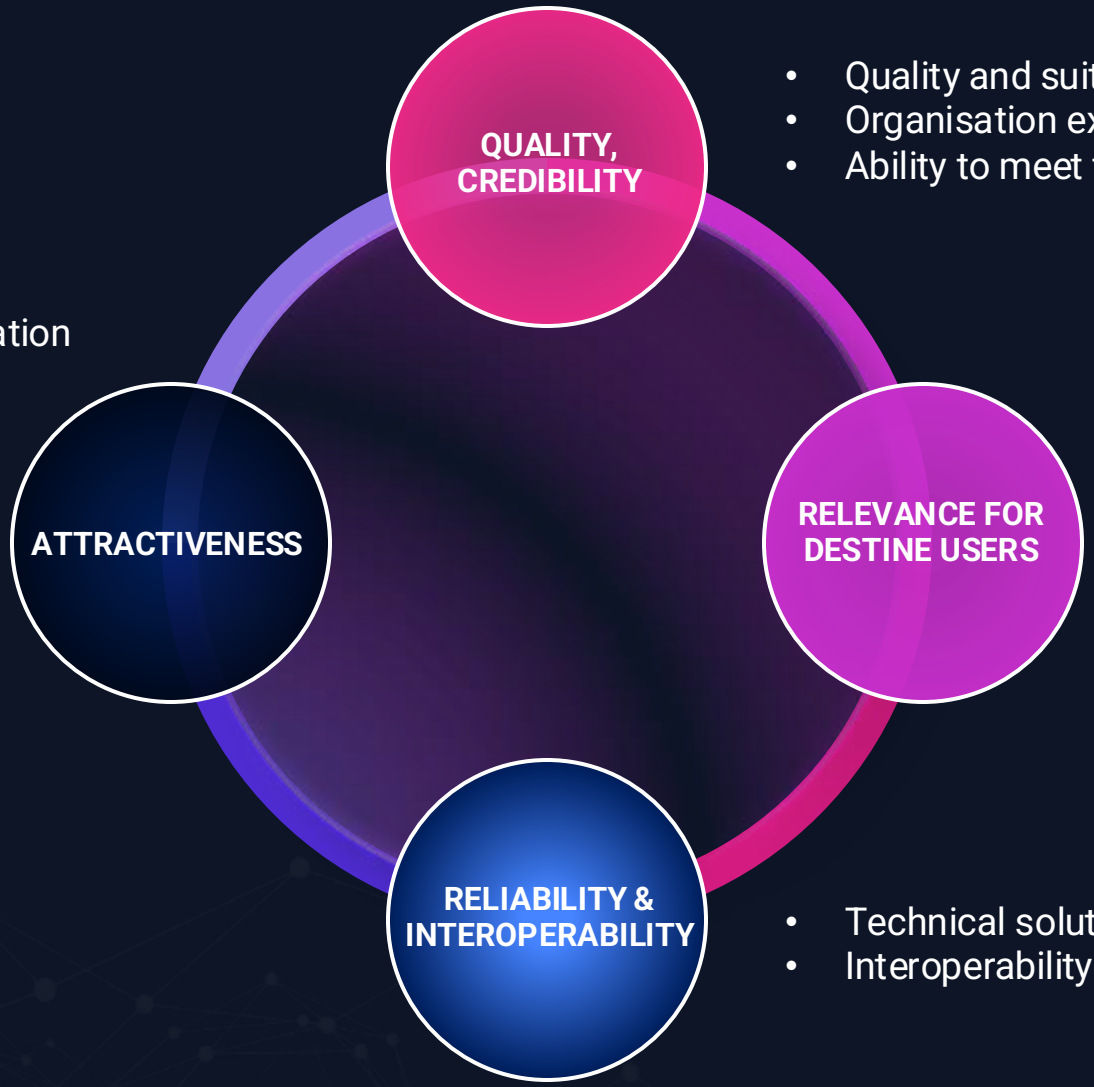



The applicant must be registered on the platform and logged in

# SERVICE EVALUATION

## MAIN CRITERION

Destination Earth




- Quality and suitability of proposed solution
- Organisation experience & capacity in providing operational service
- Ability to meet the DestinE Platform SLA

- In line with EU Green Deal and EU Digital Strategy objectives
- In line with T&Cs and CoC

- Technical solution maturity, scalability
- Interoperability to ensure high performance level

- Technological innovation
- Market demand

# SERVICE INTEGRATION
## OVERVIEW

Destination Earth

LIVE COMMUNICATION | ASYNCHRONOUS COMMUNICATION

TECHNICAL ENGAGEMENT → PLANNING → MANDATORY/ OPTIONAL INTEGRATIONS → SERVICE VERIFICATION → SECURITY ASSESSMENT → PUBLICATION ON SERVICE REGISTRY

**Starter Kit**

Jira setup

**JIRA Kanban Board:**

- Dedicated JIRA Project (named DOSI)
- Integration Tasks created by Serco
- Tasks assigned to technical contact point
- Users can update tasks statuses / insert comments / attach files
- Notifications sent for any action
- JIRA Epic for each new Service
- Unique Board (filter possible via Epic)

Regularly review the tasks board for insights/feedback provisioning

Email communication channel for questions/requests

# TAILORED INTEGRATION

## MAIN CHOICES

Destination Earth

### Identity Access management

- Integration with DestinE Platform IAM
- Federation

### Service Registry

- Integration with DestinE Platform service registry

### Deployment

- Integration on Runtime Platform
- Usage OVH tentant DESP
- Your own infrastructure / EU cloud provider

### Data Management Services

- Data Cache
- Data access
- Data Processing
- Workflow orchestration
- Visualization

### Additional integrations

- Monitoring System
- Tenancy

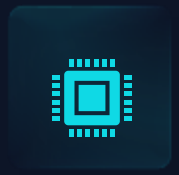
FOCUS ON

# RUNTIME PLATFORM

# FOCUS ON
## RUNTIME PLATFORM BENEFITS

### Embedded Security
- Secure Architecture
- DevSecOps pipeline to undergo automated Security Checks

### High-Availability
- Microservices orchestration to build flexible and modular Applications
- Kubernetes management of multiple replicas to boost availability



### Resource optimization
- Node scalability allows to consume only what is needed
- Non-operational platforms leverage shared resources

### Infrastructure operations
- Centralized infrastructural management and monitoring
- Backup and Recovery management

# FOCUS ON
## DEVSECOPS PIPELINE

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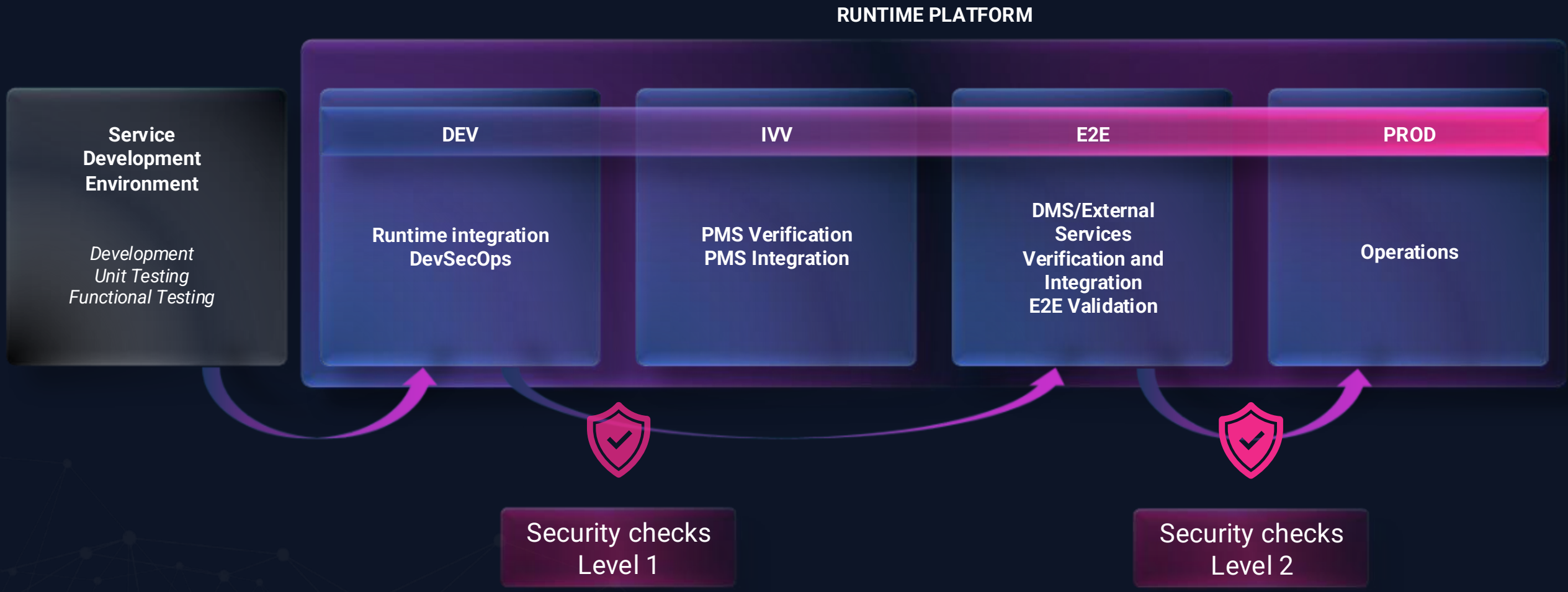


**Four environments to run security checks, integration and E2E tests and finally move to Operations**

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