



**EOSC Future**



**EOSC DIH**  
DIGITAL INNOVATION HUB

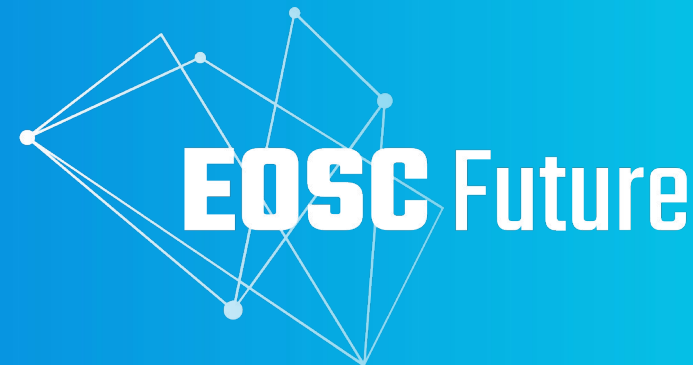
# EOSC DIH Expression of Interest for Business Pilots: 3rd Round

Deadline  
14th October

Join the  
EOSC DIH  
community

Join the Webinar  
7th October 2022  
10am CEST





# **EOSC Digital Innovation Hub**

Expression of Interest for Business Pilot

Elisa Cauhe, Marcin Plociennik

WEBINAR- 7th October 2022

The EOSC Future project is co-funded by the  
European Union Horizon Programme call  
INFRAEOSC-03-2020, Grant Agreement 101017536

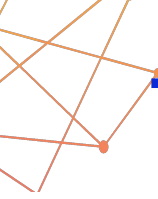




# Agenda



- EOSC DIH presentation
- Eol for Business Pilots
- Q&A: ask your question in Q&A box at the bottom of Zoom window - we are collecting them and will answer your question during or at the end of the webinar



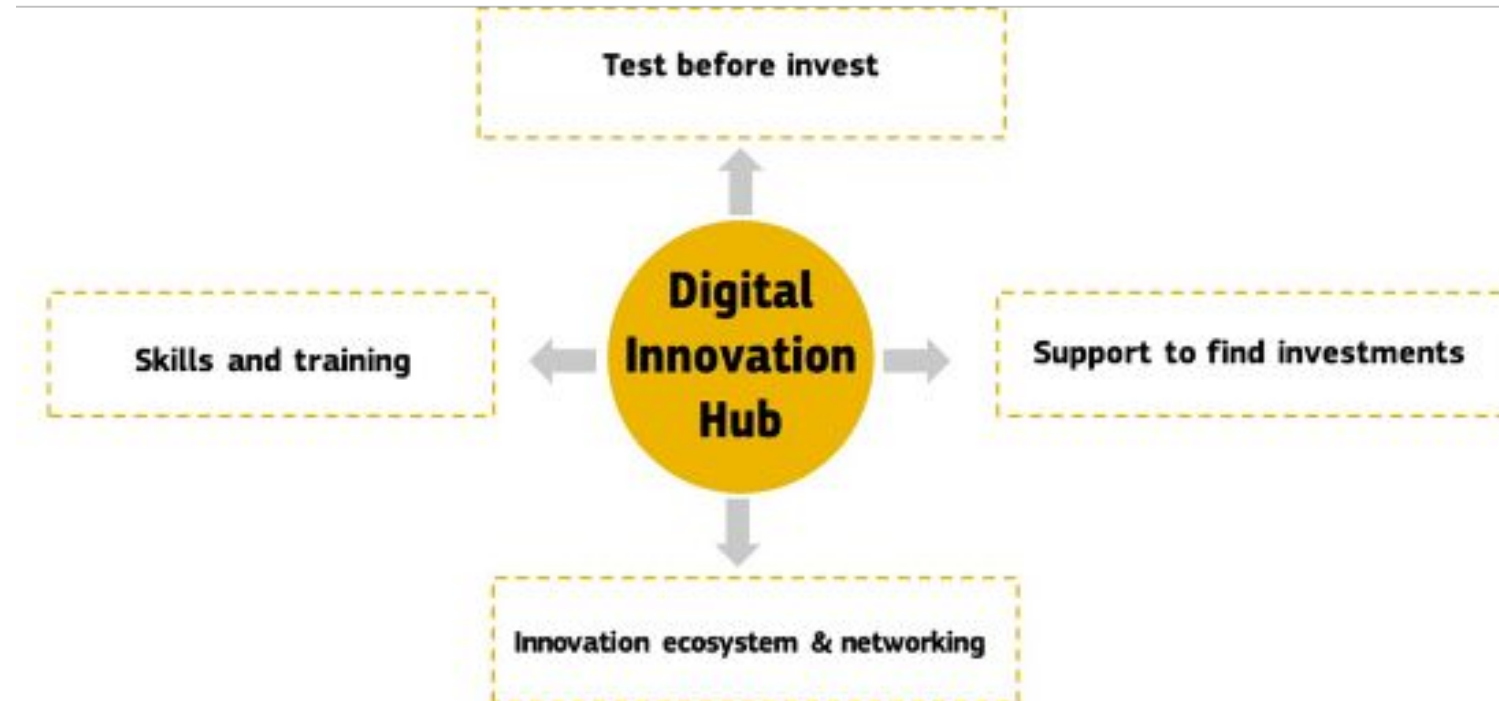
# The EOSC DIH

## What is a Digital Innovation Hub DIH?

EC Definition: *"One-stop shops that help companies dynamically respond to the digital challenges and become more competitive"*

## What is the EOSC DIH?

A DIH that aims to stimulate joint innovation with private enterprises by leveraging **EOSC services, data and expertise**



# EOSC DIH – Mission and Objectives



## Vision

“Enabling the private sector to make use of EOSC resources greatly increases the potential for innovation and economic impact of EOSC”

## Main Objective

Serve as an industrial engagement channel for other EC projects and initiatives for engaging with the EOSC

## Target Groups

- Spin-offs; Start-ups; SMEs
- EOSC support/regional projects
- Multiplier networks
- Other DIHs/EDIHs





# EOSC DIH – Creation to Expansion



Creation  
2018-2021



Expansion  
2021-2023



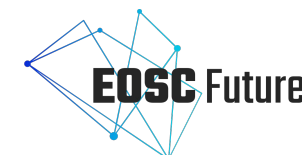
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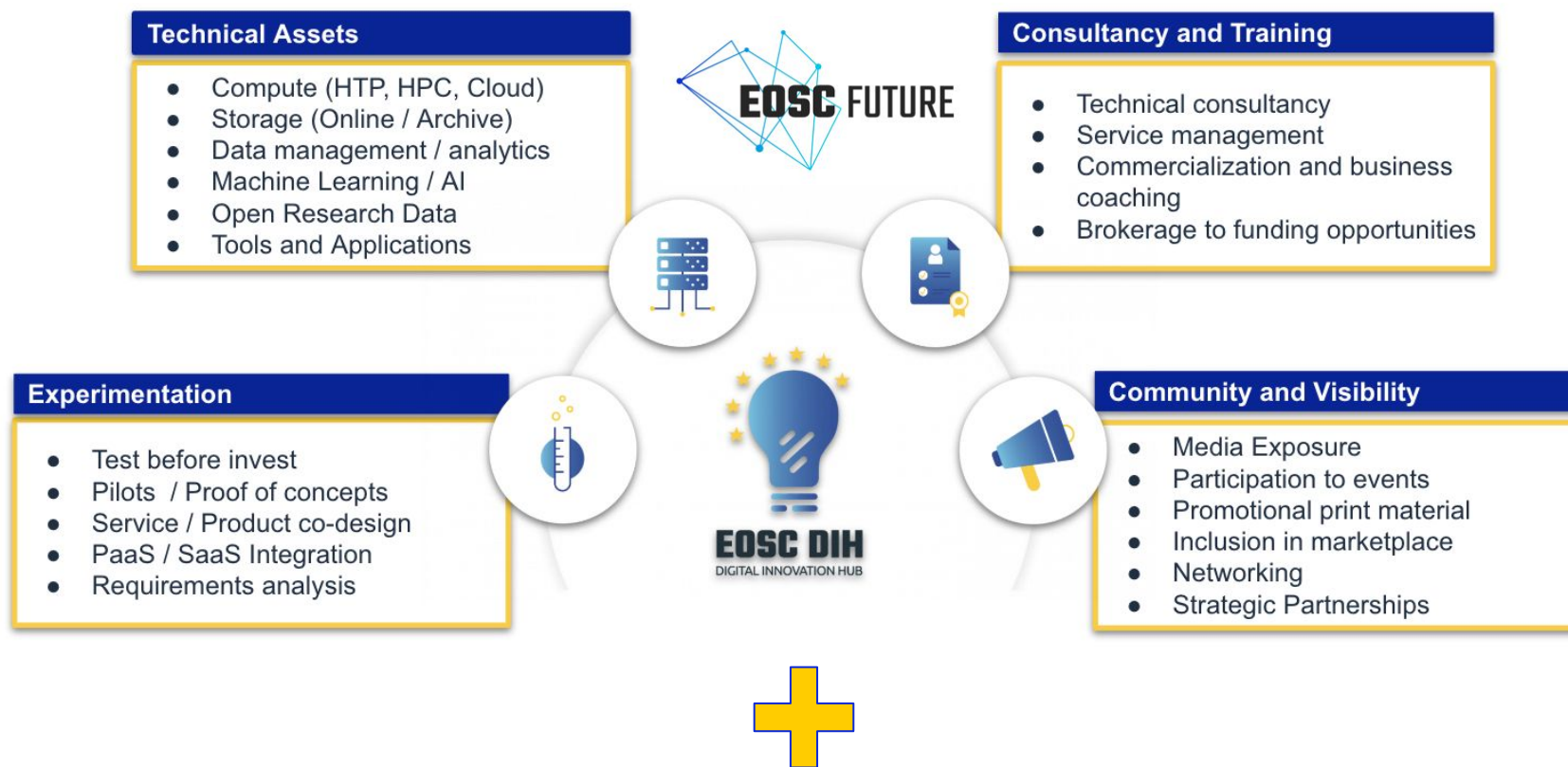
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# EOSC DIH Services + EOSC project services



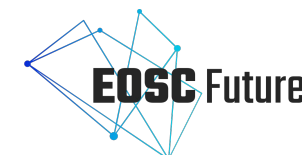
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# EOSC DIH - previous pilots (EOSC-hub) - sectors



Finance



Video



AI



Trucking



Furniture



Environment



Compute Credits



FAIR data



Space



Accommodation



Security



Agriculture



Health



Collaboration



Manufacturing



Blockchain



Seaport



Sports



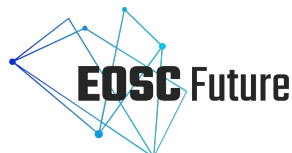
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# EOSC DIH - previous pilots (EOSC-hub) - sectors



Finance



Video



AI



Trucking



ONBOARDED

Furniture



Environment



Compute Credits



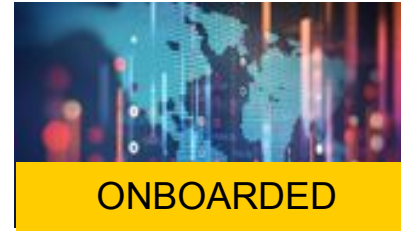
FAIR data



Space



Accommodation



ONBOARDED

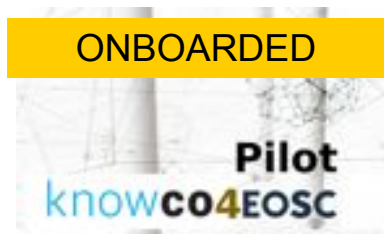
Security



Agriculture



Health



Collaboration



Manufacturing



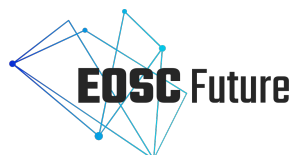
Blockchain



Seaport



Sports



# Business Pilots Running - 2021 (x4)



TO BE ONBOARDED

Channel: Intro from partner contact  
Sector: Agriculture  
Business Partner:



EOSC Service Provider:



Developing and modeling  
a training deep neural  
network model using GPU  
infrastructure

DigiFarm

Detecting agricultural field boundaries  
using deep neural network models and  
super-resolution Sentinel-2 EO-data



Trango. Trip and go.

Best Location for Car Sharing

Channel: EGI-ACE  
Sector: Automotive/Transportation  
Business Partner:



EOSC Service Provider:



Technical services and support to  
scale an AI-driven mobile app that  
mixes car sharing and carpooling  
models



BIGcoldTRUCK: Big data  
analytics for cold chain logistics  
optimization in refrigerated  
trucks.

Data analysis to predict the demand of  
goods, optimise the routes in real-time  
and provide visualizations and  
descriptions.

Channel: Evolution from EOSC-hub pilot  
Sector: Logistics/Transportation  
Business Partner:



EOSC Service Provider:



Eliminate intermediate steps in  
the machine learning process  
Adapt the system for streaming  
data



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MiCADO – Cloud and Container  
Orchestrator

Orchestration Framework for Cloud  
Resources and Application Container

Channel: EOSC DIH partnership to pilot  
Sector: Cloud  
Business Partner:



EOSC Service Provider:



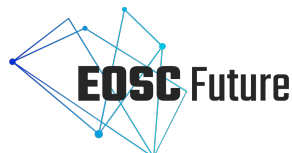
Development and integration of a  
cloud resource adapter for  
EGI/EOSC resources into MiCADO



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# Business Pilots - 1st campaign - 2022 (x 6)



Channel: 1st Eol  
Sector: Open Science  
EOSC Service Provider:



Access infrastructure for high profile, visibility, traffic data repositories. Strengthen integration with OpenAIRE research graph API and data model. Extend its OSL product and validate the performance profile



Channel: 1st Eol  
Sector: Energy (Green)  
EOSC Service Provider:



Scaling a novel self-learning and self-adjusting wireless integrated intelligent thermostat system (BEMS) based on cutting-edge technologies for efficient energy management in any size of buildings



Channel: 1st Eol  
Sector: ML/AI  
EOSC Service Provider:



Integration of Data Correction Services and Publication suggested



Channel: 1st Eol  
Sector: Agriculture (Green)  
EOSC Service Provider:



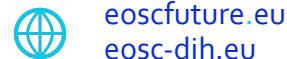
Create a service for the assessment of carbon footprint of agricultural products in the process of growing.



Channel: 1st Eol  
Sector: Open Science  
EOSC Service Provider:



OiPub's MVP design, focusing on the core aspects that will bring the most value to its users.



Channel: Contacts  
Sector: IT  
EOSC Service Provider:



A web annotation tool for researchers to empower note taking





# Business Pilots - 2nd campaign - 2022



PILOT	TYPE	SECTOR	COUNTRY	DESCRIPTION	COMPANY
GTO HPC	Startup	Energy	NL	Validation of energy saving tool in data centers	Blockheating
IRAZ	Startup	FAIR- Open Science	UK	streamline research workflows and enhance FAIRification experimental data.	Research Space
Long Term Data	SME	Open Science	FI	data management and long term storage for large data sets used in developing AI / ML	Top Data Science Oy
PreMa Cool	SME	Energy	EL	AI model that will serve as predictive maintenance tool for Refrigeration Condensing Units,	Klima Michaniki SA
Regreen	SME	Energy	IT	identify the most promising sites for an efficient co-generation of renewable energy ( solar, wind and hydro.)	Deep Blue SRL
SOFIA	SME	financial	EL	Innovation Scoring Models and Scorecards, to automate the Innovation Scoring process in the financial sector,	RENVIS
YDMS	SME	Energy	IT	organize data collected from various surveys through a YDMS-based data lake .	Yuppies
UDOS	Startup	Real estate	AT	validate ubicube's urban dynamics monitoring service, which generates actionable insights for companies in the real estate sector.	Ubicube geospatial solutions
TWC SCUP	SME	Forestry	DE	Extending the Tama World Cursor provides integrated management tools for forestry operations and owners	Tamas Group GmbH



# Characteristics of the Business Pilots so far



- **Initial pilots helped to define the DIH, and its operation**

- Focus of new pilots was diversifying from IaaS

- **Further pilots - a mix between**

- Resources: Computing/storage support
  - e.g. DataFurn, Muon, BBC R&D, DigiFarm, Inteligg
- Providing technological expertise
  - e.g. Knowco4EOSC, IBISA, Erasmus Play
- Co-design using EOSC services
  - e.g. Cyberhab, DCP, Cite
- Support and co-development with other projects
  - e.g. BI Insight, BIGcoldTRUCK, DEIPDASFD
- Evaluation of usability of EOSC services
  - e.g. BI Insight, BIGcoldTRUCK, DigiFarm

- **Requested Expertise**

- ML/DL/AI
- Security
- AAI
- BigData technologies
- Domain services e.g. Geospatial, Agriculture

# Express your interest and apply for a pilot



## **EOSC DIH Expression of Interest for Business Pilots: 3rd Round**

**Deadline**  
~~14th October~~  
**21st October**

**Join the Webinar**  
**7th October 2022**  
**10am CEST**



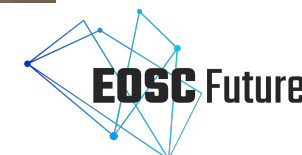
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# Expression of Interest (Eoi) for Business Pilots



## What we are looking for

Onboarded pilots are expected to benefit from using EOSC services and develop/innovate solutions in key (but not limited to) areas such as:

- Industry 4.0
- Green Deal
- Mobility
- Health
- Energy
- Agriculture
- Public Administration
- Earth observation
- Environmental monitoring

## Some examples:

- Reuse of research data (i.e. earth observation) to create or improve the products and services
- Usage of machine learning and artificial intelligence for recognition, prediction or optimization
- Optimise time process, reduce waste or minimise defects in manufacturing
- Data analytics, image recognition or simulations (i.e. healthcare)
- Tools to improve sustainability and energy efficiency
- Services to create safer and cleaner transport systems
- Applications to reduce the costs of public services

# Expression of Interest (Eol) for Business Pilots



## What will selected pilots receive?

- Access to e-infrastructure resources and additional technical services
- Ability to prototype, scale up, design, performance verification and testing
- Build partnerships with other SMEs and industry stakeholders, innovation clusters and accelerators
- Receive business coaching and training for increased market uptake
- Boost visibility at a European and international level

**Not cash funding**

Through this Eol, we will also support industry applicants wishing to become service and content providers for the EOSC community (via the EOSC marketplace).



# What are SME's obligations?



Reminder: The main interest of applying to this Expression of Interest is to get benefit of the EOSC services, data and community for the growth of the company. We are here to help, support companies in the process.

What is expected from the SME side?

- Provide technical requirements, text for website \*
- Participation in community meetings
- Participation in dissemination events
- Progress on the pilot \*
- Maintain the needed regular calls to check the progress of the pilot
- Success story\*
- Satisfaction questionnaire and impact assessment\*

# Eol for Business Pilots: Applicants



## Who can apply:

- Start-ups
- Spin-offs
- SMEs
- Large enterprises

## Eligibility criteria

- Run one of the following use cases:
  - Pilots/proofs of concepts
  - Service/product design
  - PaaS/SaaS integration
  - Performance verification and/or testing
- Develop solutions using different EOSC DIH services:
  - Technical access (e.g. HTC, HPC, Cloud computing, Data, ML/AI)
  - Training and support (e.g. technical consultancy, business coaching)



# Eol: Providers of technical services for this Eol



Collaboration with prestigious ongoing projects that offer their services to pilots:

- **DICE** (Data Infrastructure Capacity for EOSC), <https://www.dice-eosc.eu/>
- **EGI-ACE** (EGI Advanced computing for EOSC), <https://www.egi.eu/projects/egi-ace/>
- **OpenAIRE Nexus** (The nexus of scholarly communication services for the European Open Science Cloud), <https://www.openaire.eu/openaire-nexus-project>
- **C-SCALE** (Copernicus - eoSC AnaLytics Engine), <https://c-scale.eu/>
- **RELIANCE** (REsearch Lifecycle mAnagement for Earth Science Communities and CopErnicus users in EOSC), <https://www.reliance-project.eu/>

# EGI-ACE: EGI Advanced computing for EOSC



## EGI-ACE services:

- EGI Dynamic DNS service
- EGI Cloud Compute
- EGI Cloud Container Compute
- EGI Data Transfer
- EGI DataHub
- EGI High-Throughput Compute
- EGI Notebook
- EGI Online storage
- EMSO ERIC Data Portal
- DEEP training facility
- Elastic Cloud Compute Cluster (EC<sub>3</sub>)

<https://www.egi.eu/project/egi-ace>

## Ideal for: Companies with:

- Large amounts of files and data
- High demand of computing resources for running applications / models
- Needs to access computational resources in a secure and isolated environment with standard API access, without the overhead of managing physical servers
- Needs of training tools for AI /ML models





# DICE: Data Infrastructure Capacity for EOSC



## DICE services:

- B2SAFE
- B2HANDLE
- B2DROP
- B2ACCESS

	Total capacity offered
Data discovery	75 prefixes > 50 organisations
Data repository	7'900 TB
Policy based Data Archive	17'450 TB
Data archive	25'350 TB
Personal/project workspace	5'150 TB

<https://www.dice-eosc.eu/>

## Ideal for: Companies with

- Needs of storage and management of **large** amounts of files and data
- Data **exchange** and **synchronization** needs
- Interest on **long term persistence**
- Cross-infrastructure authorisation and authentication framework for **user identification**



# OpenAIRE-Nexus: Scholarly communication services for EOSC



## OpenAIRE-Nexus services:

- CONNECT
- EXPLORE
- PROVIDE (Broker, Validator)
- ARGOS
- Amnesia
- Episciences
- Zenodo services
- MONITOR
- OpenAPC
- OpenCitations
- Open Science Observatory
- ScholExplorer
- UsageCounts
- OpenAIRE Research Graph

## Ideal for: Companies that

- Need access to **metadata** of **millions** of **scholarly works**
- Manage repositories and seek metadata **enrichment**
- Run commercial services to merge with scientific **validation**
- Use **statistics** of Open Science in Europe
- Need to **anonymise** data to be GDPR compliant
- Want to apply for Horizon Europe **funds**
- **Test** their services on scholarly works
- **Enhance** their solutions and calibrate them for EOSC
- Seek to achieve **interoperability** with **EOSC**
- Want to reach domain specific research **communities**
- Need information on **Open Access APC costs**
- Want to connect their services to powerful **intelligent linking** and **community** driven services

<https://www.openaire.eu/openaire-nexus-project>



# C-Scale: Copernicus - eoSC AnaLytics Engine



## C-SCALE services:

- Compute and Data Federation
- Metadata Query Service
- openEO Platform
- Workflow solutions

## C-SCALE offering:

- 12 PB months of **storage**
- 18 million **Cloud** CPU hours
- 3.1 million **HPC/HTC** CPU hours
- 6,000 **GPU** hours

<https://c-scale.eu/>

## Ideal for companies:

- C-SCALE harmonizes access to a broad range of compute and data resources, providing Copernicus and EO downstream application developers with workflow solutions for big data analytics in support of (amongst others):
  - Environmental monitoring and resource management
  - Hydrological and hydrodynamic modelling and forecasting in support of warning



# Reliance: REsearch Lifecycle mAnagement technologies for Earth Science Communities and CopErnicus users in EOSC



## Reliance list of services

- ROHub
- ADAM Platform
- Enrichment API
- Recommendation API
- Search API

<https://www.reliance-project.eu/adapters/>



## Ideal for: Companies that

- Need **access** to hundreds of **reusable research** results in **Earth Science**
- Need to **manage & preserve** research & operational resources in line with **FAIR & Open Science**
- Seek a **single access point** to related resources for efficient **sharing & exchange**
- Need **faster and scalable** access to **EO data**
- Want access to EO data from **heterogeneous sources** via a single interface
- Want to **enhance the discovery** of their resources in **EOSC**
- Seek automatic **metadata enrichment** of resources
- Want **recommendations** of related resources & people





# Full description of EOSC DIH services



<https://eosc-dih.eu/list-of-all-services/>



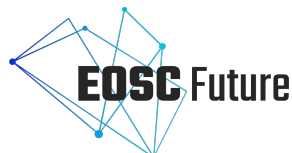
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# Eol for Business Pilots: Timeline



## Onboarding programme timeline:

Phase	Description	Time
Eol	The EOSC DIH is open to receive Eol from applicants.	Deadline: <del>14/10/2022, EOB</del> 21st/10/2022 <b>NEW!</b>
Evaluation	Eligible applicants will be evaluated by members of the EOSC DIH. Highest score evaluation will be invited to sign a Service Level Agreement (SLA) before implementing their pilot.	14/10/2022 to 31/10/2022
Execution	Execution of pilots developing solutions using EOSC DIH services.	Starting 10/11/2022 for a duration of 3-8 months
Report	Report pilot activities, the extent to which the services were used in their pilot, and its socio-economic impact. An additional survey will be provided. Promotional activities will be explored and agreed with each pilot.	After execution of pilot

# Eol for Business Pilots: Application



## Submit application:

Online form via EOSC Future website

<https://eoscfuture.eu/newsfuture/eoi-for-dih-business-pilots-3rd-round/>

Content to fill:

- Basic information about the company (applicant)
- Concept of the pilot: Description, novelty and objectives
- Services to use (multiple choice)
- Sector: Preliminary requirements, Experience working with technologies
- Impact: TRL, socio economic impact, market potential, exploitation steps
- Work Plan

**Form**

**Pilot title** *(Required)*

**Acronym** *(Required)*

**Executive summary** (max. 200 characters) *(Required)*

0 of 200 max characters

**APPLICANTS**

**Name of entity** *(Required)*

**Type of entity** *(Required)*

☐ Start-up  
☐ Spin-off  
☐ SME  
☐ Larger enterprises  
☐ Other

**Country** *(Required)*

**CONCEPT OF THE PILOT**

**Description of the pilot.** Describe the overall pilot, and what makes it novel. (max. 5000 characters) *(Required)*



# Evaluation and Publication of results



## Evaluation

- Evaluation will be conducted by the EOSC DIH partners
- Each application will be evaluated by a min. of 3 different reviewers
- Applicants will be selected based on the quality of the overall application with specific focus on how the EOSC services would be used and of benefit/value as well as the clarity of expected results.
- All applications will be shortlisted. A maximum of 10 applicants will be invited to participate.

## Communication of results

All candidates will be notified by email with the result of the evaluation by early November 2022

Dedicated meetings for planning and pilot kick off in November 2022

# Partners and Contact



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Contact us: [business@eosc-dih.eu](mailto:business@eosc-dih.eu)

<https://eoscfuture.eu/eoi-for-dih-business-pilots>



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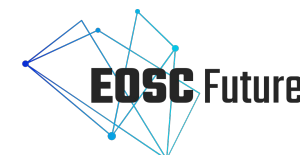
# Companies in the ecosystem



R&D



math&sport

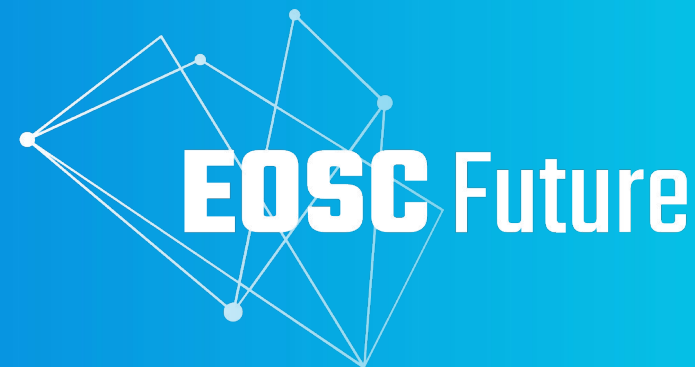




# Q&A



- Q&A: ask your question in Q&A box at the bottom of Zoom window



# Thank you for your attention

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