



**FLUID-AI**



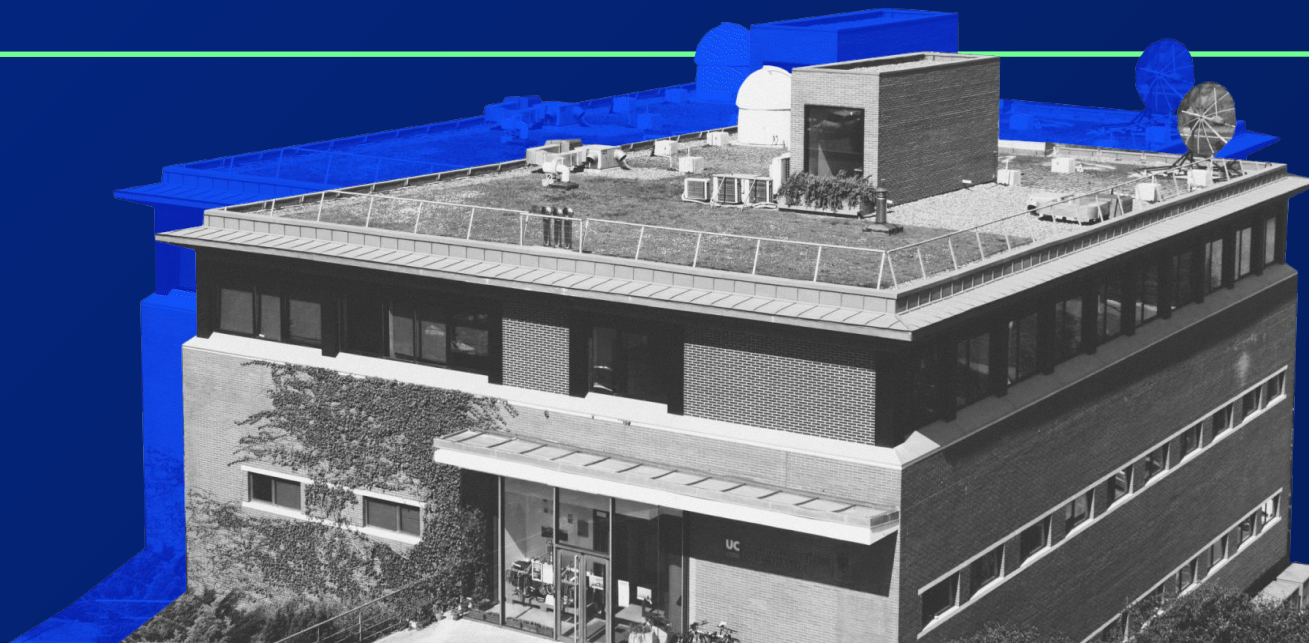
**eOSC**

Facilitating Liquidity and Usability of Data and  
AI models in EOSC

Álvaro López García

[aloga@ifca.es](mailto:aloga@ifca.es) | [alvaro.lopez@csic.es](mailto:alvaro.lopez@csic.es)

Advanced Computing and e-Science Group  
<https://advancedcomputing.ifca.es>



# FLUID-AI | Project Info

- INFRA-2025-01-EOSC-03 call – GA number: 101292610
- <https://fluid.ai4eosc.eu/>
- Dates: Oct 1st 2026 – Sep 30th 2029
- Coordinator: CSIC
- 28 partners
- Link with 4 EOSC nodes (DataTerra, Blue-Cloud 2026, Life Sciences, Italy), 7 RIs (Euro-BioImaging, SeaDataNet, eLTER, ARIADNE, EMBRC, EMODnet, EMPHASIS)

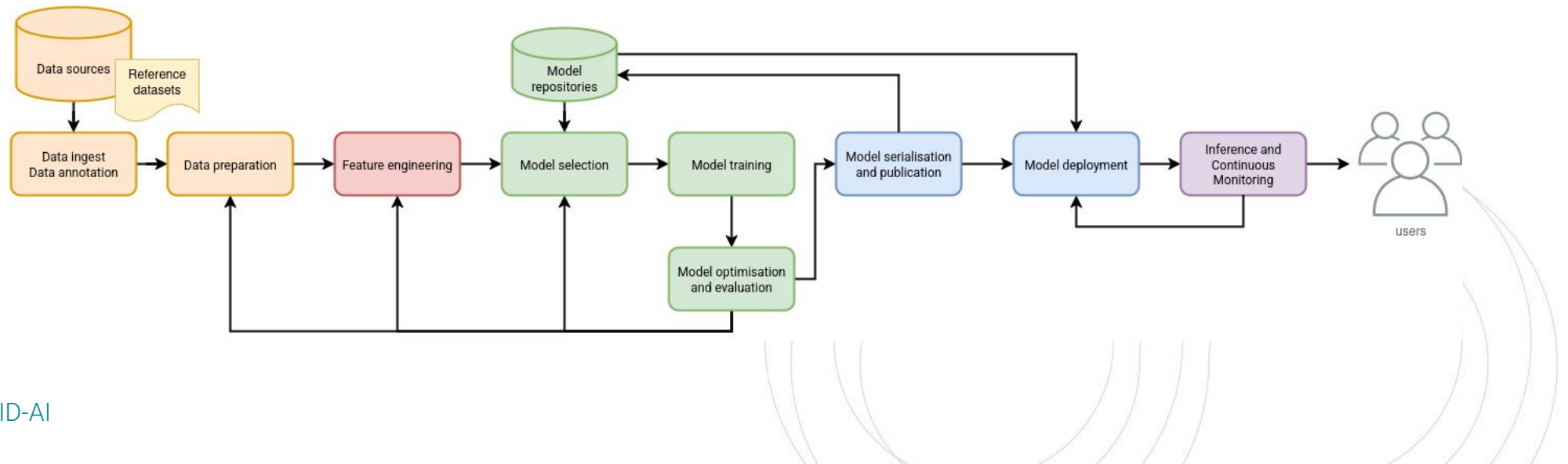


**Goal:** To significantly enhance the interoperability, machine-actionability, and AI readiness of data and models across European RIs and EOSC

- O1: Improve **data and AI models integration** (both semantic & technical)
- O2: Foster scientist **access to an advanced AI/ML research platform** within the EOSC (extending AI4EOSC)
- O3: Cultivate a **collaborative AI research community** in the EOSC and beyond (Competence center)
- O4: Enhance **Data and Models Liquidity** and integrity in the RI landscape

Core Concept: "Data and Models Liquidity"

We introduce the concept of "liquidity" to the EOSC, building upon and extending FAIR principles to ensure that data and AI/ML models are highly accessible, interoperable, and fully "AI-ready"



- **EOSC AI/ML Competence Centre & Community Support (Pillar 1)**
  - Pool expertise and cultivate a collaborative AI research community
  - Coordinated support, training curricula, and skills pathways
  - Focus on EOSC users, scientists, and research operators
- **AI Unified Semantic & Technical Interoperability (Pillar 2)**
  - Open protocols and standards, to break down RI silos.
  - Blueprint and guidelines for trustworthy, machine-actionable, and AI-ready repositories
  - Linked directly to the EOSC Nodes and RIs.
- **Advanced, User-Friendly AI/ML Platform (Pillar 3)**
  - Intuitive, cloud-based technological platform (hiding complex technical details)
  - Lowering the barrier to entry for researchers adopting AI
  - Integration with external model marketplaces
  - MLOps practices (data preparation, training, deployment, monitoring, and explainability)
  - Federated infrastructure services that span across the cloud compute continuum

## SRIA Objective 1: Open Science Practices and Skills (People)

*Open Science practices and skills are taught and become the 'new normal'.*

- EOSC AI/ML Competence Centre to pool expertise and cultivate a collaborative AI research community
- Coordinated support, training curricula, and skills pathways for EOSC users and research operators to effectively use AI/ML tools
- Early enagement with other INFRAEOSC projects (EOSC-ARENA, GenAI4Earth, AI4SOCIAL+, CDFI4EOSC)



## SRIA Objective 2: Standards, Tools, and Services for FAIR Data (Data)

*Enabling standards, tools, and services that allow researchers to find, access, reuse, and combine results.*

- "Data and Models Liquidity" concept, building upon and extending the FAIR principles to ensure data and models are easy to use, optimized and "AI-ready"
- Semantic and technical interoperability solutions to break down research infrastructure silos and enable seamless integration

## SRIA Objective 3: Federated Infrastructure for Scientific Sharing (Infrastructures)

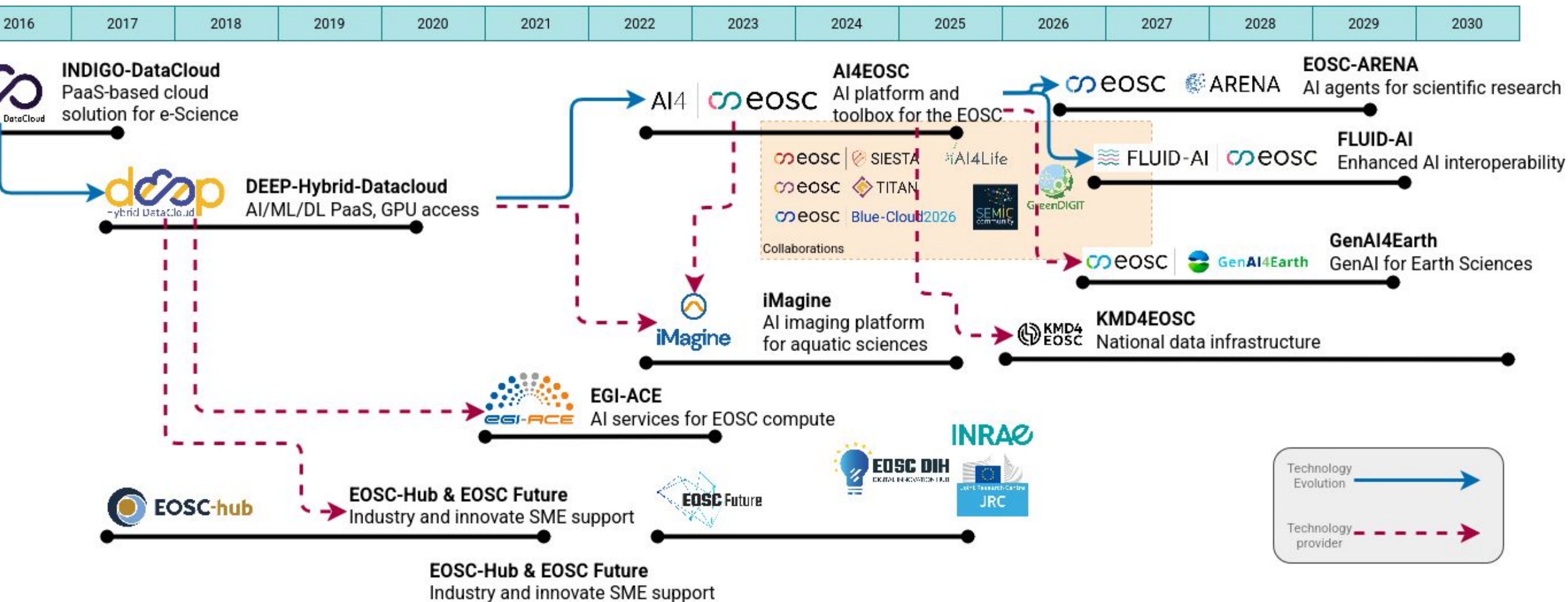
*Sustainable and federated infrastructure that enables the open sharing of scientific results.*

- Intuitive, federated AI/ML platform that hides complex technical details and integrates external model marketplaces, extending AI4EOSC project legacy
- Integration with external repositories/marketplaces beyond EOSC
- Blueprint and guidelines for establishing trustworthy, machine-actionable repositories that link seamlessly to the EOSC Nodes
- Links with AI Factories and relevant EOSC Nodes and Research Infrastructures



# FLUID-AI | EOSC Collaborations and dependencies

## FLUID-AI



- Evolving AI4EOSC from a project ([origin](#)) towards an open collaboration with key contributions and collaborations from other projects
- FLUID-AI aims to make data and models seamlessly interoperable and AI-ready
- Grounded and practical technical and semantic interoperability supporting the core EOSC vision of Web of FAIR Data and Related Services for Science
- Augmenting FAIR principles, ensuring that digital assets are
  - Structurally optimized for artificial intelligence and machine learning applications
  - Easier to access and reuse, with increased trust and reproducibility
  - Serving as a vehicle to accelerate scientific discovery, maximize resource utilization, and foster open collaboration across Europe
- **Nurturing an EOSC AI/ML community of practice**
  - Pooling expertise, upskilling researchers, and ensuring the community has the necessary competences and literacy to fully exploit AI

This project receives funding from the  
EU, under Grant Agreement 101292610



# Thanks for your attention

Álvaro López García

[aloga@ifca.es](mailto:aloga@ifca.es) | [alvaro.lopez@csic.es](mailto:alvaro.lopez@csic.es)

Advanced Computing and e-Science Group  
<https://advancedcomputing.ifca.es>

