



EOSC Compute Platform

Status and Way Forward

Smitesh Jain, Innovation Management Specialist, EGI Foundation

Giuseppe La Rocca, Community Support Lead at the EGI Foundation

Christian Pagé, Research Engineer and Project Management, CERFACS

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Hakan Bayındır, Senior Researcher, TUBITAK ULAKBIM

EOSC Symposium - 14-17 November 2022, Prague



EGI-ACE receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 101017567.

Outline of this session



- **Project overview**
 - Smitesh Jain, Innovation Management Specialist, EGI Foundation
- **User engagement and impact**
 - Giuseppe La Rocca, Community Support Lead, EGI Foundation
- **User experience stories:**
 - *Building a Climate indices dataset for climate change impacts assessment*
 - Chrisitan Pagé Research Engineer and Project Management, CERFACS
 - *Bring-your-own-resources: How the NEANIAS project became compatible with EGI computing services and introduced a new resource utilization approach*
 - Jozsef Kovacs, Senior Research Fellow, SZTAKI
- **HPC services in the EOSC Compute Platform**
 - Hakan Bayındır, Senior Researcher, TUBITAK ULAKBIM



The EGI-ACE Project

Overview

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Innovation Management Specialist, EGI Foundation

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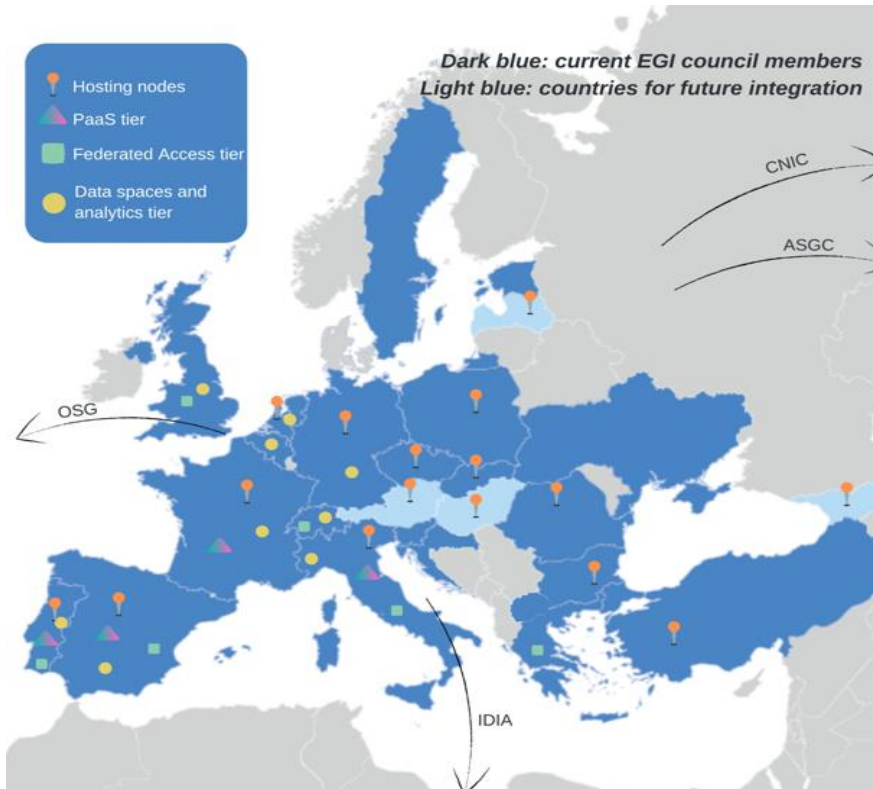
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EGI-ACE Mission



Implement the **Compute Platform of the EOSC** and contribute to the **EOSC Data Commons** by delivering integrated computing, platforms, data spaces and tools as an integrated solution that is **aligned with** major European cloud federation projects and HPC initiatives.

Project Overview



EGI Advanced Computing for EOSC Grant agreement ID: 101017567

Budget

- Total budget: € 12,009,988
- EC budget: € 8,000,000

Consortium

- Coordinator - Stichting EGI
- 33 Partners, 23 third parties

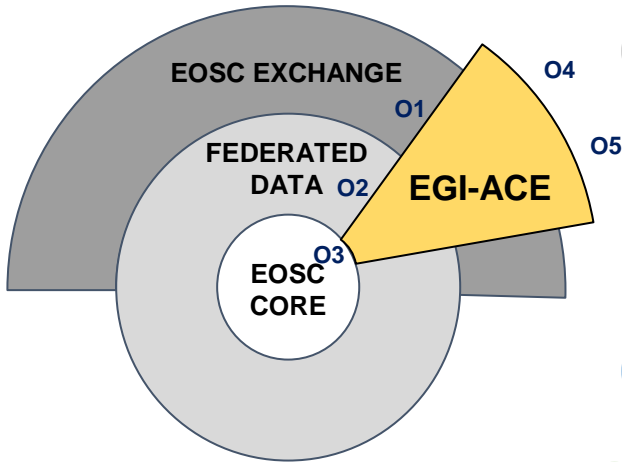
Effort

- 1472 PMs, 48 FTEs
- **49% Virtual Access** (35 services, 38 providers)

Duration

- Jan 2021 - June 2023 (30 months)

Project Objectives



EOSC Architecture:
[Solutions for a sustainable EOSC](#)
 (report from the EOSC Sustainability WG)

- O1
Deliver the European Open Science Cloud Compute Platform and expand the supply-side
- O2
Contribute to the implementation of the EU Data Strategy and the EOSC Data Commons to support the Green Deal, Health and Fundamental Research
- O3
Integrate the EOSC Compute Platform with the EOSC Portal and the EOSC Core
- O4
Contribute to the realization of a global Open Science Cloud
- O5
Expand the demand-side of EOSC across sectors and disciplines

Empowered by EGI

European e-infrastructure for scientific computing since 2010.



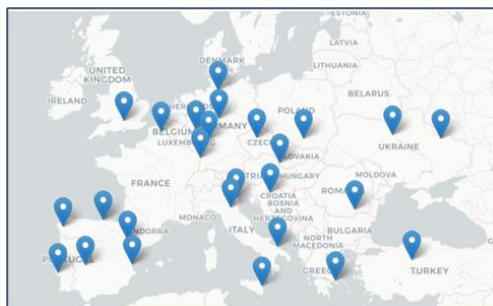
High-Throughput Compute

High-Throughput Compute sites



Cloud Compute

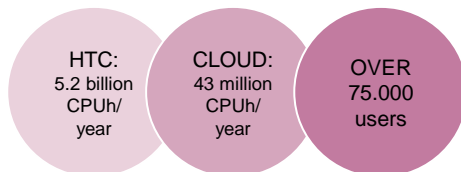
Cloud Compute sites



HPC sites



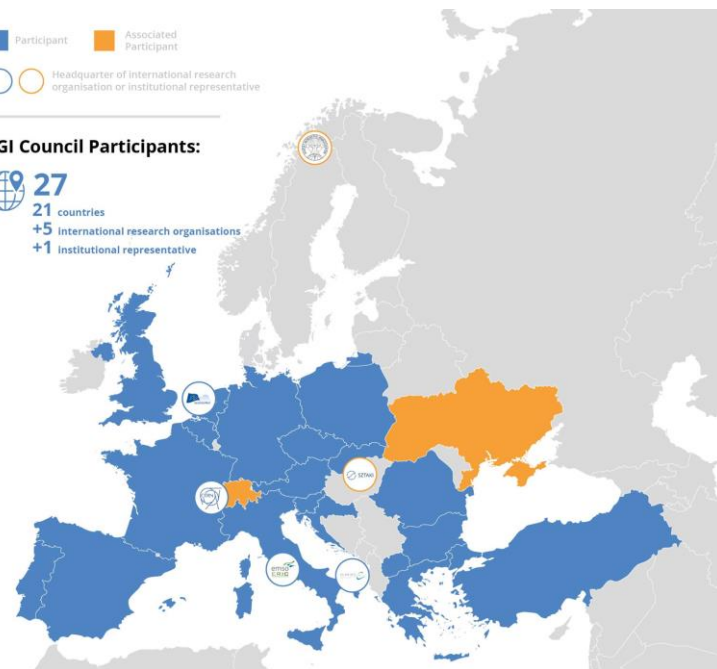
HPC Integration handbook:
<https://zenodo.org/record/6396471>



- Participant
- Associated Participant
- Headquarter of international research organisation or institutional representative

EGI Council Participants:

- 27**
- 21** countries
- +5** international research organisations
- +1** institutional representative



Federated Infrastructure Services

Distributed compute and storage facilities deliver CPU, GPU and Storage

- 27 Cloud providers: **15** funded with Virtual Access, 23 support EGI-ACE use cases
- 200+ HTC providers: **1** funded with Virtual Access, 58 support EGI-ACE use cases
- 4 pilot level HPC centres (BG, TR, PT, ES)



Cloud Compute



High-Throughput Compute

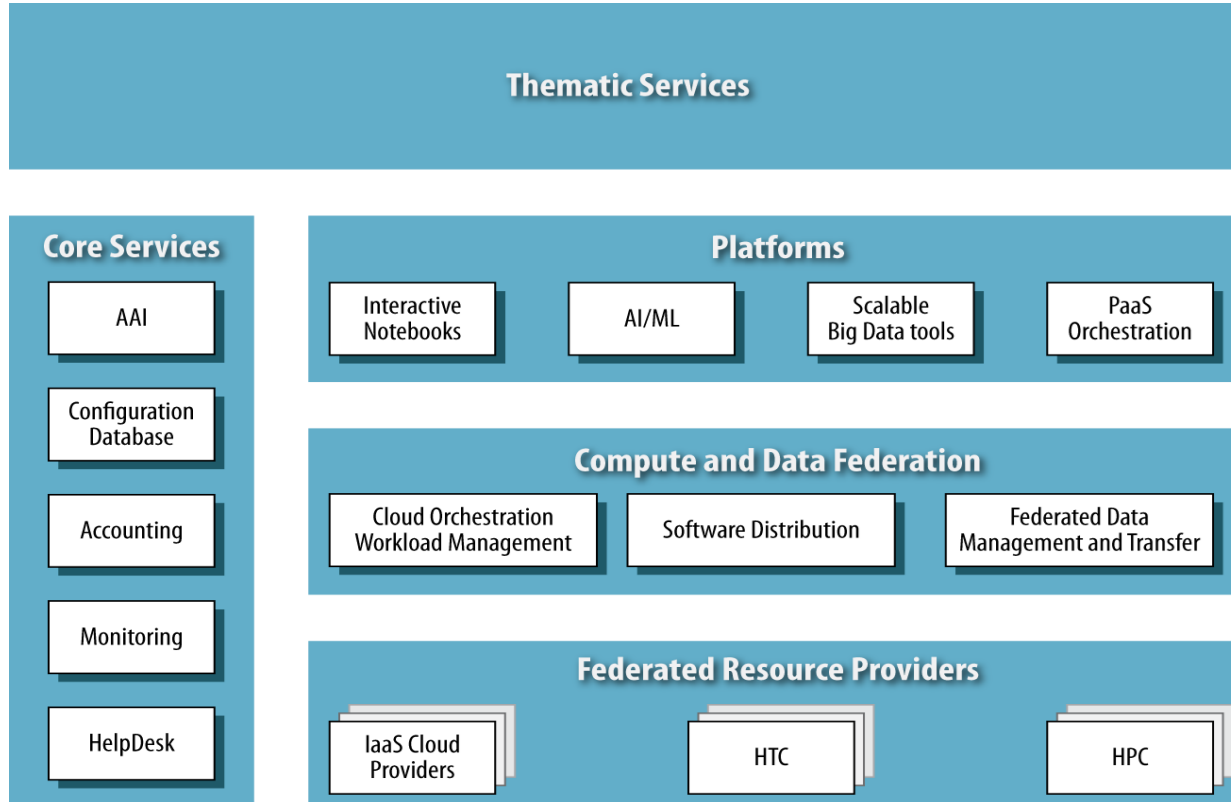


HPC



HPC Integration handbook:
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EOSC Compute Platform Architecture



Sustainable Open Science Environments



Single users, small groups (Long tail)
Experimental users

International projects
Multi-national communities
Research Infrastructures

EOSC USERS

Business-to-User

Business-to-Business

EOSC Portal

- Ready-to-use resources/services
- Self-service configuration
- Short term engagement

<https://marketplace.eosc-portal.eu/>

EGI-ACE Open Call

- High capacity demand
- Custom configurations
- Long term engagement

<https://www.egi.eu/egi-ace-open-call/>

Continuously open, Cut-off dates every 2 months

Serving with the use of...

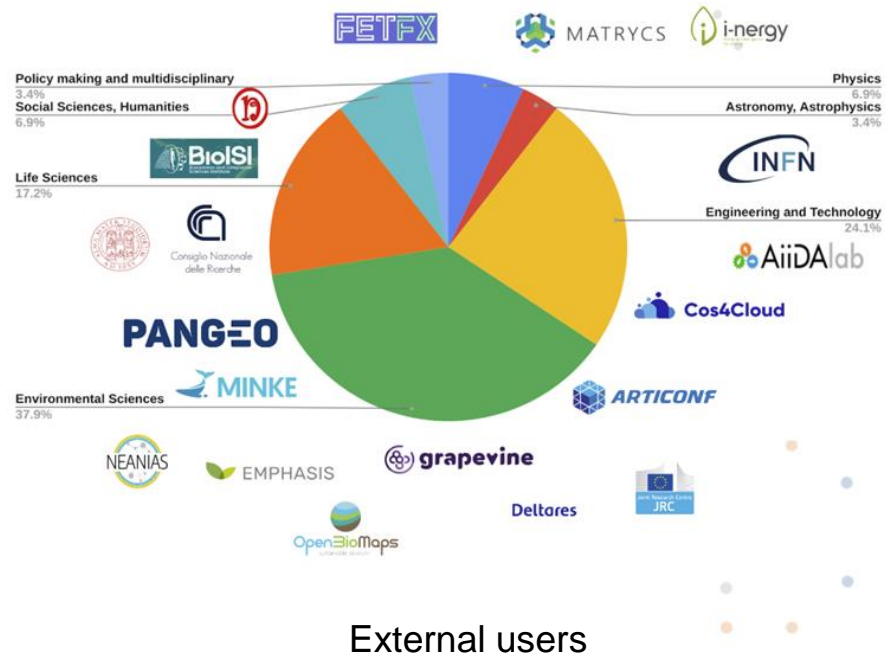
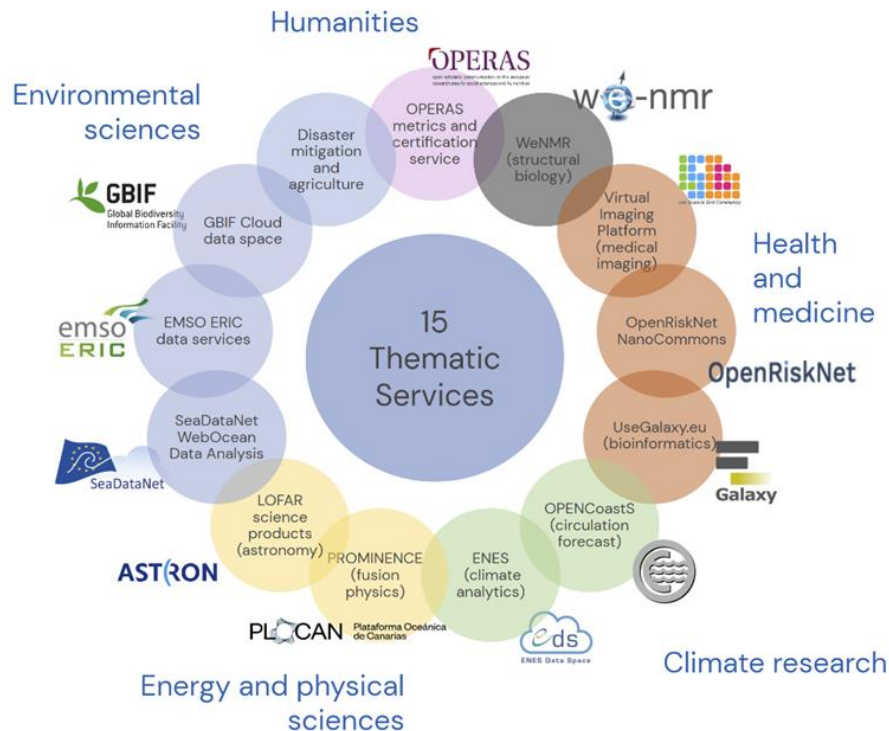
Local funds
(institutional/national investments)

EC Virtual Access funds

Customer 'pay-for-use'

35 services
80 million CPUh
250,000 GPUh
20 PB storage

Thematic applications and application services



In the consortium

External users

EGI-ACE: Main Activities and Achievements

- **Service delivery in EOSC:**
 - **35** services from the consortium
 - **8** services from external providers – empowered by our services
- **Integration of Thematic Services:**
 - **15 Thematic Services** (VREs, Data Spaces)
- **Number of users of EGI-ACE services:**
 - **76,000** on Thematic Services
 - **1,300** on the Platform and Infrastructure services



Experiences and the Future of the EOSC Compute Platform

Smitesh Jain, Innovation Management Specialist, EGI Foundation

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Thank you!

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