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## EGI Federation for EOSC

*Horizontal services, EOSC-hub and EGI-ACE*

*Tiziana Ferrari, Director/EGI Foundation*

*PaNOSC & ExPaNDS Annual Meeting, 09 Nov 2020*



The work of the EGI Foundation  
is partly funded by the European Commission  
under H2020 Framework Programme

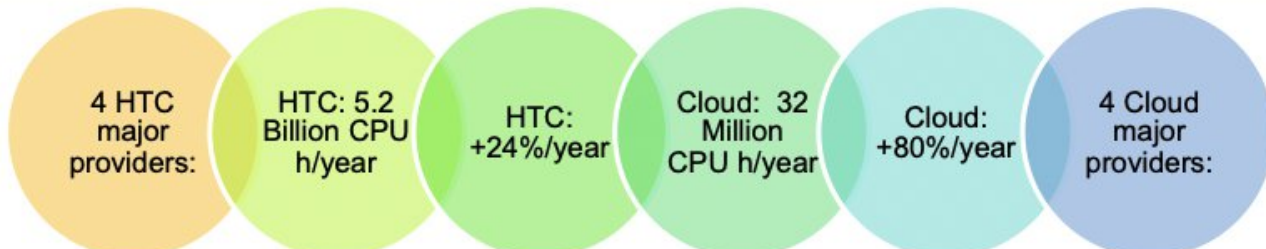
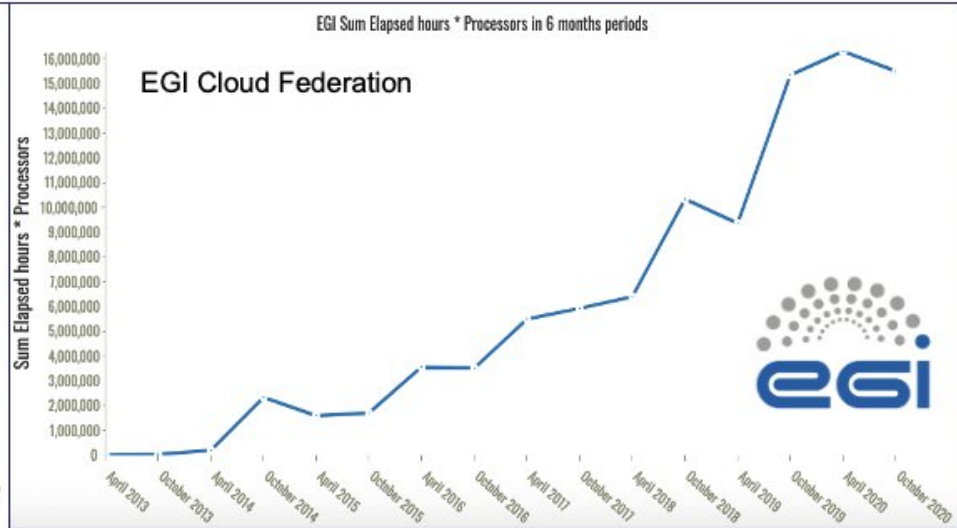
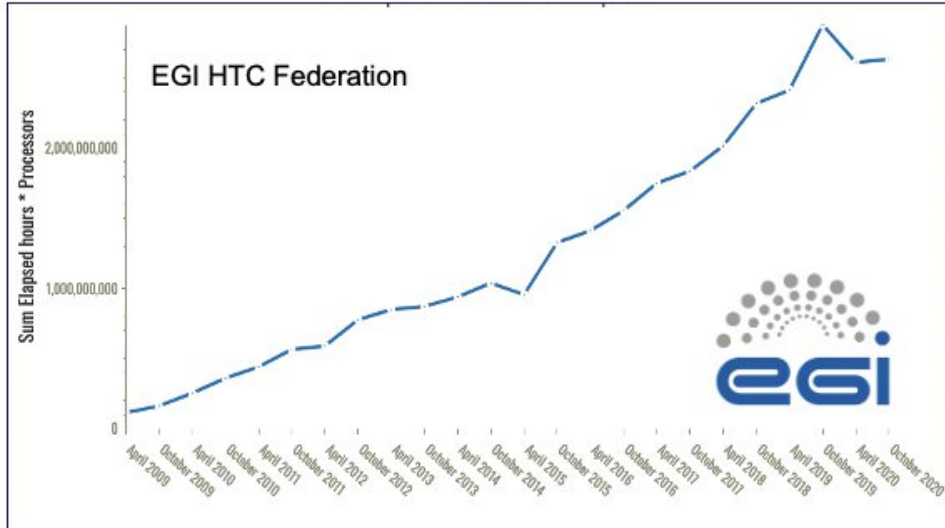
# EOSC-hub support to science use cases

## HTC and Cloud pledged resources

- **Co-design, expert support, testing**
  - Competence Centres
  - Early adopter programme
- **Thematic integration and provisioning**
  - Portfolio of thematic services  
(9 consortia co-funded with VA)

## HTC and Cloud on-demand provisioning (via EOSC Portal)

- **Orderable services:** 57
- **Others:** 2
- 331 access requests
- 142 unique users
- Orders from > 25 countries



# EGI-ACE (2021-2023)

## *Advanced Computing for EOSC*

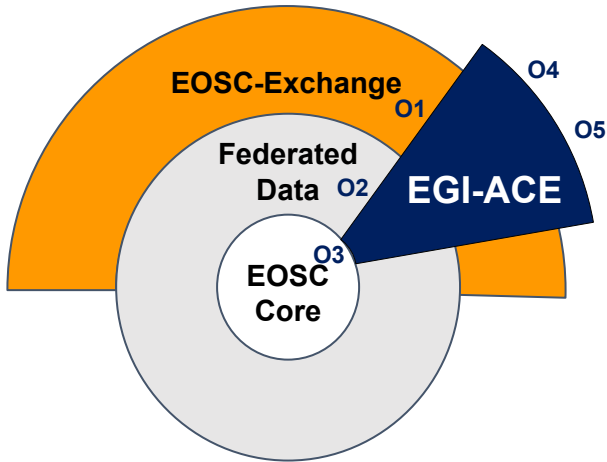
Implement the **Compute Platform of the European Open Science Cloud** and contribute to the **EOSC Data Commons** by delivering integrated computing, platforms, data spaces and tools as an integrated solution that is **aligned with** major European **cloud federation projects** and **HPC initiatives**.

INFRAEOSC-07 A1 H2020 call

8 Million Euro (EC Grant) + 2.4 Million Euro (EGI.eu contribution)

30 months, expected start in Jan 2021

# EGI-ACE specific objectives



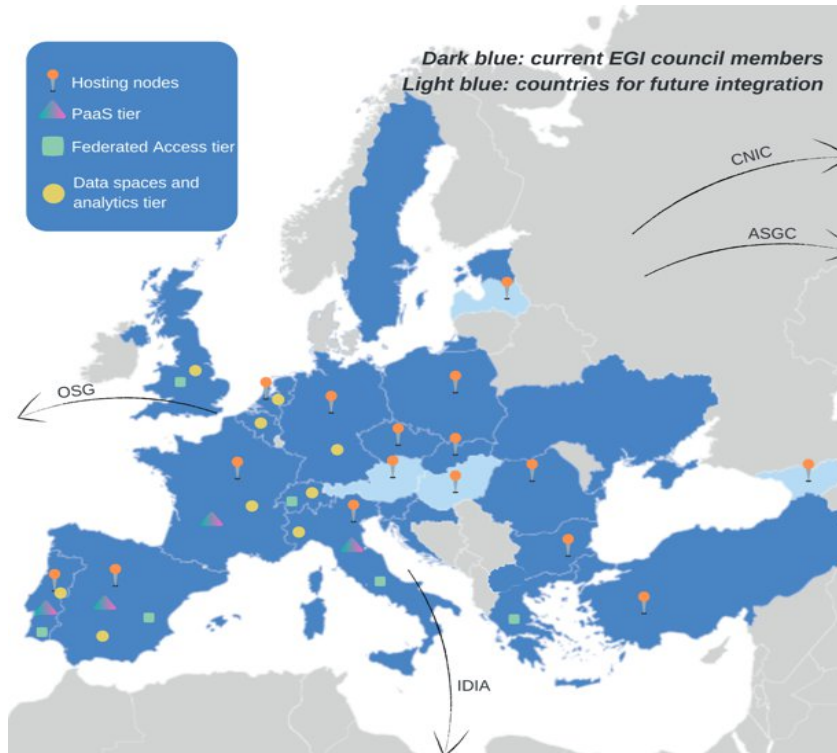
**Objective 1: Deliver the European Open Science Cloud Compute Platform and expand the supply-side**

**Objective 2: Contribute to the implementation of the EU Data Strategy and the **EOSC Data Commons** to support the Green Deal, Health and Fundamental Research**

**Objective 3: Integrate the **EOSC Compute Platform with the EOSC Portal** and the EOSC Core**

**Objective 4: Contribute to the realization of a **global** Open Science Cloud**

**Objective 5: Expand the demand-side of EOSC **across sectors and disciplines****



- 33 participating partners, 23 third-parties
- Consortium at a glance
  - 16 partners to deliver HTC, HPC and cloud resources
  - 12 user access and platform solution providers
  - 21 providers from 13 communities to deliver data spaces
  - 12 federation service providers

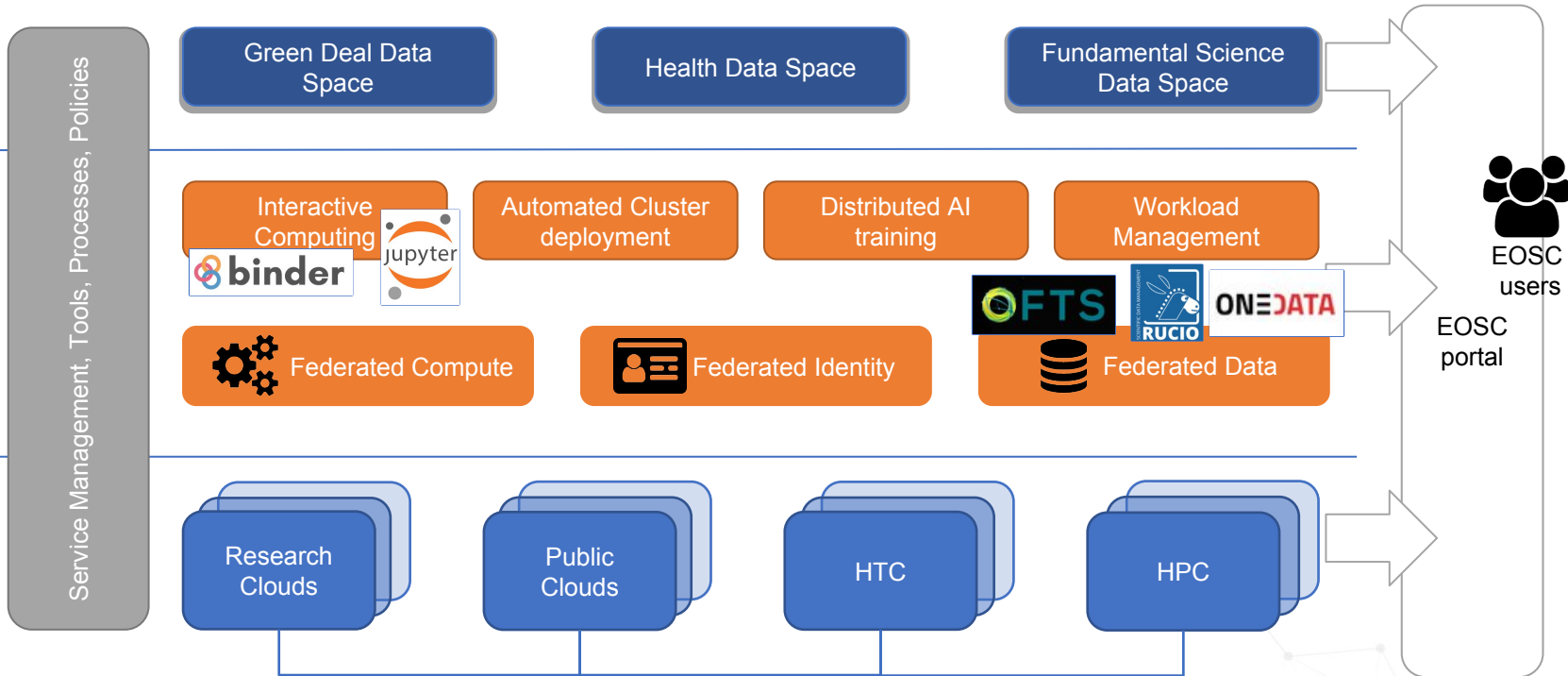
# Tier service architecture

**Data Spaces and Analytics**  
Data and thematic data analytics and processing tools

**Platforms**  
generic added-value platform level services

**Federated Access**  
Federation-wide management of data and computing

**Federated Resources**  
Compute and storage facilities









- **Phase 1 (month 1-10)**
  - 13.8 Million CPU hours
  - 41,300 GPU hours
  - 7.5 PB/month
- **Phase 2 (month 11-20)**
  - 27.6 Million CPU hours
  - 83,000 GPU hours
  - 15 PB/month
- **Phase 3 (month 21-30)**
  - 41.4 Million CPU hours
  - 124,000 GPU hours
  - 23 PB/month





# HTC-HPC-Cloud Hybrid infrastructure

- **Objective:** Interoperability guidelines for HPC systems with the EOSC Cloud Compute platform
  - Hybrid HTC-HPC-Cloud workload management
  - Federated AAI, accounting, helpdesk
  - Organising HTC-HPC-Cloud user support in EOSC
- **Activities:**
  - Pilot sites:
  - Scientific validation:
    - Extreme Light Infrastructure (Nuclear Physics) 
    - High Energy Physics 
    - Earth System Modelling (Climate research) 
    - PROMINENCE Fusion physics 
  - Coordination with broader HPC landscape:  



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Questions?



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