

EGI-Engage

Engaging the EGI Community towards an Open Science Commons

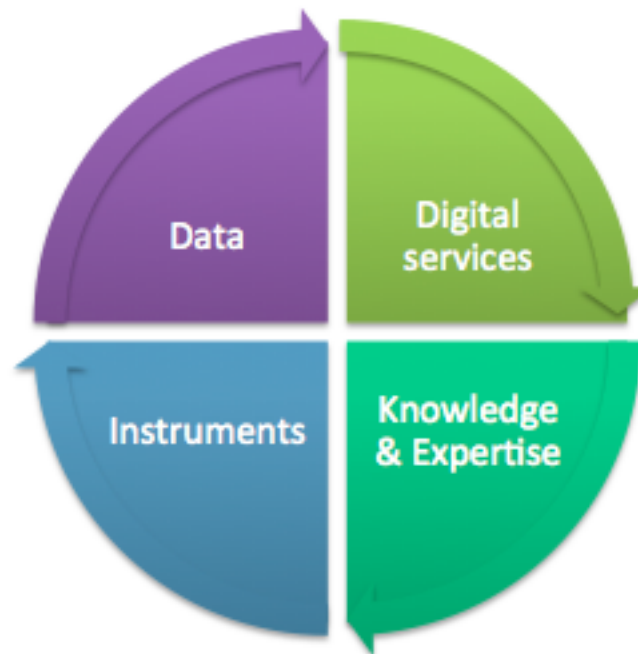
Project Overview



*Provide solutions for
open science, research and innovation
by federating
Digital Capabilities
People
Knowledge*



*Researchers from **all disciplines** have easy, integrated and open access to the advanced **digital services**, scientific instruments, data, knowledge and expertise they need to collaborate to achieve excellence in science, research and innovation*



www.opensciencecommons.org

30 Months
8 MEuro
1169 PMs
42 Beneficiaries

- User-centric approach, **39%** of project effort for user-driven developments and integration, community engagement
 - User-driven co-development of federated HTC and cloud infrastructure with the support of 7 RIs on the ESFRI roadmap
 - Multiple user groups
 - long tail ad hoc services and policies
 - Research Infrastructures
 - Industry/SMEs
 - Data as a service
 - On-demand VREs (data products for information as a service)
 - Scientific software as a service

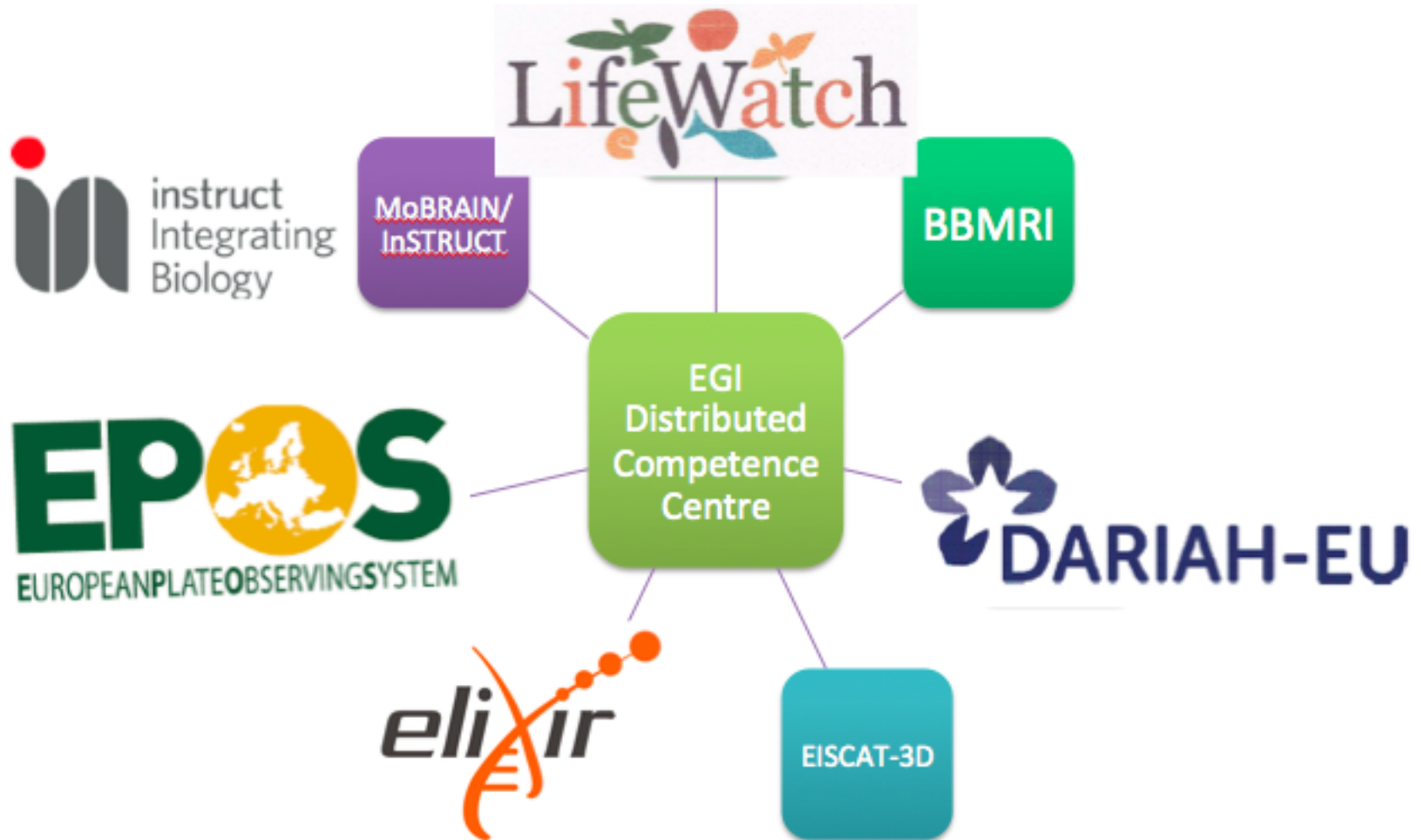
- Evolution of the AAI infrastructure and security operations infrastructure
- Technical evolution of the tools for federation (including accounting, monitoring, resource allocation, operations tools)
- Integration with infrastructure for PID registration and resolution
- Development of the cloud solution
 - From IaaS to community-managed and/or EGI-managed PaaS
 - Federated secure cloud storage
 - Data as a service
 - Scalable access to “active” archives, no more separation between data and computing

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- Federated services for education (supported by the federated cloud)
- Infrastructure for citizen science
- Federated GPGPU infrastructure
- Virtual appliance library
- On-demand VREs

- From federation of community services to
 - Pay for use
 - Free at point of use
 - SLAs in a federated environment
 - Cross-border procurement of public services
 - Big data exploitation in various selected sectors

The shifts of EGI-Engage: Distributed Competence Centre

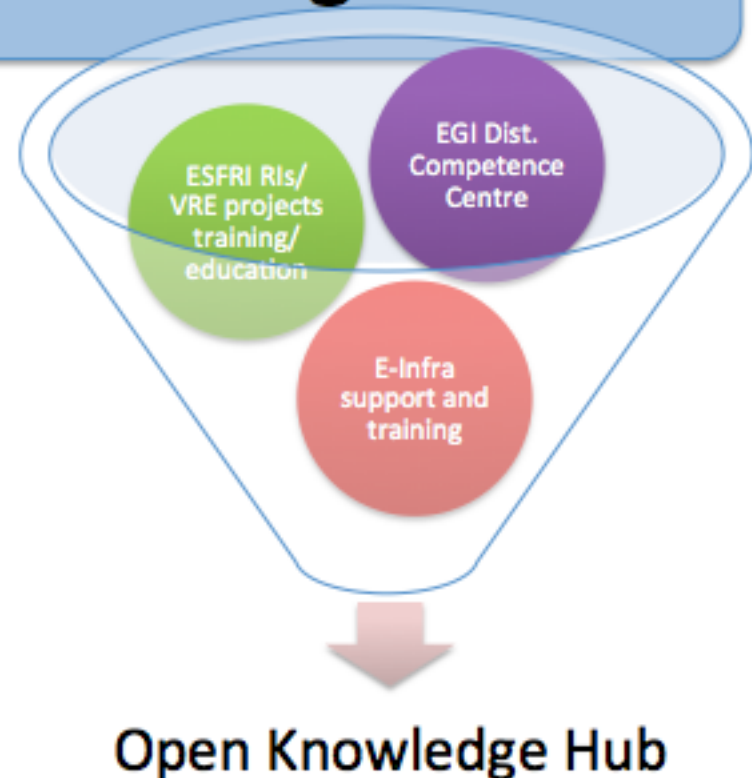


- Support the integration of ESFRI RI VREs with EGI solutions
- Evolve the EGI technical services with RI requirements
→ co-development
- Promote RI technical services
 - Scientific applications
 - Joint training programme
 - Technical user support
- Promote reuse of solutions of common interest across research communities
- Open participation of unfunded partners that are willing to contribute effort, technology, infrastructure, knowhow

European Open Knowledge Hub

A *coordinated network of competence centres* sustained by multiple stakeholders: e-Infrastructures, RIs, Data Providers

- For multiple different disciplinary areas
- For different technologies and capabilities



- Objective 1: Ensure the continued coordination of the EGI Community in strategy and policy development, engagement, technical user support and operations of the federated infrastructure in Europe and worldwide.
 - Strategy, policy and business development, to continue and expand activities including the evolution of the EGI governance
 - Continuity of operations, user support and technology coordination

- Objective 2: Evolve the EGI Solutions, related business models and access policies for different target groups aiming at an increased sustainability of these outside of project funding. The solutions will be offered to large and medium size RIs, small research communities, the long-tail of science, education, industry and SMEs.
 - Bring new solutions to full maturity and tailor the solutions to the need of specific user groups
 - Engagement with commercial service providers and consumers for the development and adoption of a common service marketplace

- Objective 3: Offer and expand an e-Infrastructure Commons solution
 - Security operations and AAI infrastructure, accounting, monitoring...
 - Discoverability of services through a European federated marketplace
 - Cross e-Infrastructure access policies and business models
 - Cross-border service procurement with e-Infrastructures and Research Infrastructures

- Objective 4: Prototype an open data platform and contribute to the implementation of the European Big Data Value → Data as a service
 - Federated storage and data solution providing sharing capabilities integrated with a federated cloud IaaS
 - Storage space and file sharing a la drop-box
 - Registration, publication, discovery and use of open data
 - Scalable access and processing of data on cloud
 - Management of registered data (PID)

- Objective 5: Promote the adoption of the current EGI services and extend them with new capabilities through user co-development
 - Distributed Competence Centre with BBMRI, DARIAH, EISCAT-3D, ELIXIR, EPOS, INSTRUCT, LifeWatch, environmental science
 - Collaboration with OSG and Asia Pacific partners
 - The EGI technical platforms will be evolved according to the needs of the user community and will be integrated with the services of other e-Infrastructures in Europe and world wide
 - Open access to training, education material, coordinated user support effort
 - Open access to scientific codes and datasets through virtual appliances for repeatability of science on cloud

- Full EGI Service portfolio will provide a detailed cost model, the solutions will be improved and adapted to specific target groups according to new requirements (e.g. long-tail, SMEs). A service marketplace prototype will be provided for billing and on-demand pay-for-use provisioning

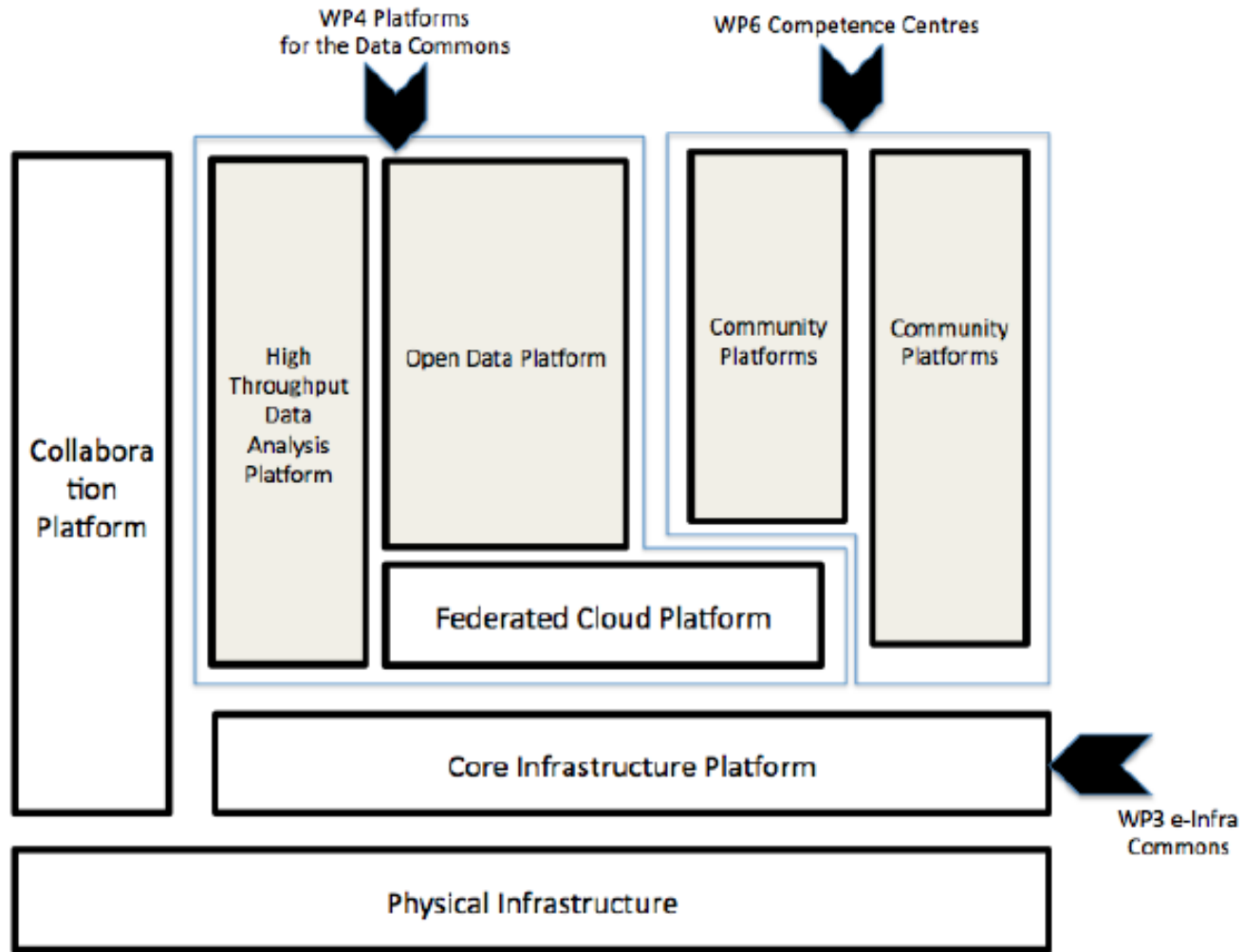
- A market of service providers and consumers will be established, the pay-for-use business model and its supporting tools for accounting and billing will be in place, the SLA and contract framework will be implemented and the service providers with the right legal conditions will successfully adopt it;
- there will be a better understanding of the opportunities and barriers for cross-border procurements of e-Infrastructure services by Ris
- A new EGI governance framework suitable to support new business models will be identified and evaluated by the EGI Council for adoption

- Federated services supporting the whole data-cycle will be prototyped to provide a solution for open data publishing, use and reuse of data. The solution will integrate data and computing services into one offer

- Tight collaboration with the AARC project
- Dedicated effort in EGI-Engage to implement the AAI infrastructure designed in AARC
- The target is enable distributed collaboration over diverse AuthN/Z technologies
 - Distributed authentication: IdP Federations integration
 - Distributed authorization: Attribute Authorities federation
 - Technology interoperability: token translations

- A unified user interface will allow users to migrate their virtual machines among different cloud providers.
- The EGI tools will operate IaaS, PaaS and SaaS federated services
- Enabling services for 7 European RIs on the ESFRI roadmap

New EGI technical architecture



- EUDAT2020 → 4 pilot activities for the interoperability of technical services
 - BBMRI
 - EISCAT-3D
 - ELIXIR
 - ICOS
- Indigo Datacloud → technology provisioning, user and service provider requirements gathering
- AARC → federated IdM adoption (policies, services, requirements)