EOSC-hub

Integrating and managing services for the European Open Science Cloud

09 January, EOSC-hub Kickoff

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European Commission

EOSC-hub mobilises providers from 20 major digital infrastructures, EGI, EUDAT CDI and INDIGO-DataCloud jointly offering services, software and data for advanced data-driven research and innovation.
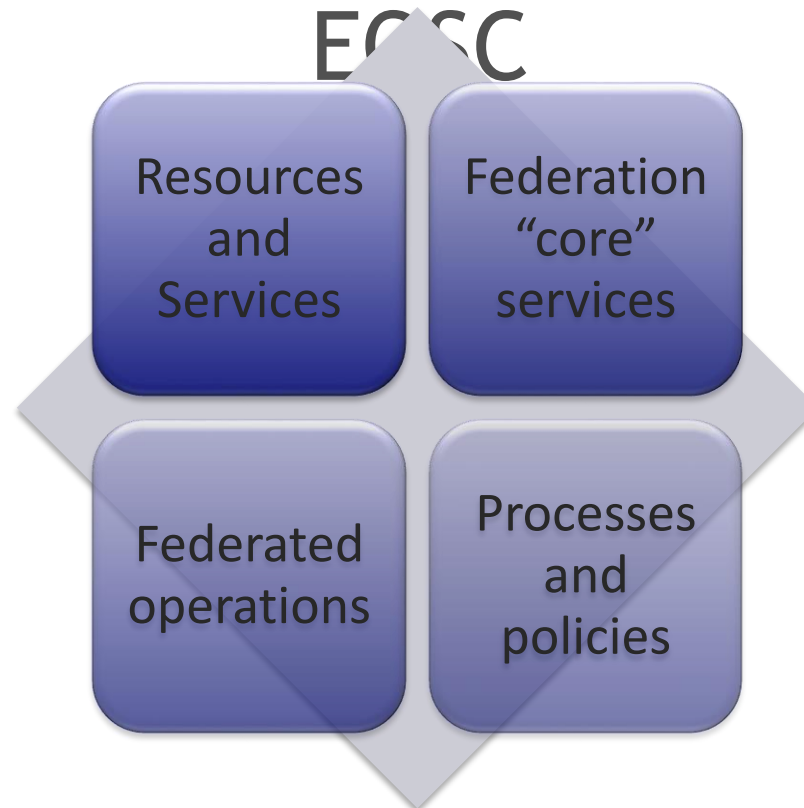
Project figures

- 100 Partners, 76 beneficiaries (75 funded)
- 3874 PMs, 108 FTEs, more than 150 technical and scientific staff involved
  - €33,331,18 of which the European Commission funds €30,000,000
  - €2,155,540 (~8 FTEs) are co-funded by the EGI Foundation and its participants + €1,221,094 (~5 FTEs) from EGI participants
- 36 months: Jan 2018 – Dec 2020 (18 month reporting period)

Mission

The project will create the Hub a federated integration and management system for the future EOSC

Resources and Services

Federation "core" services

Federated operations

Processes and policies

What does the Hub provide?

- Contact point for researchers and innovators to discover, access, use and reuse a broad spectrum of resources for advanced data-driven research
  - ➢ Catalogue of resources and services
  - ➢ Humanities, Engineering, Medical and Health Sciences, Natural Sciences
- Corpus of policies, processes and federation services (community-defined)
  - ➢ Principles of engagement and EOSC "core" services
- Quality assurance reviews
  - ➢ Manage end-to-end service level management performance
- Competence Centres and a Joint Digital Innovation Hub
 - ➢ Specialized Technical support, training

The Hub and the Three Os

- ## Open Science
  - Resources and services for sharing, discovery access, use and reuse
    - Collaboration with OpenAIRE-Advance

- ## Open Innovation
  - A open collaborative effort of service providers and user communities
    - Co-design of process with Competence Centres and a Joint Digital Innovation hub

- ## Open to the world
  - Aggregates services from local, regional and national e-Infrastructures in Europe and other regions of the world

From integration to utilization

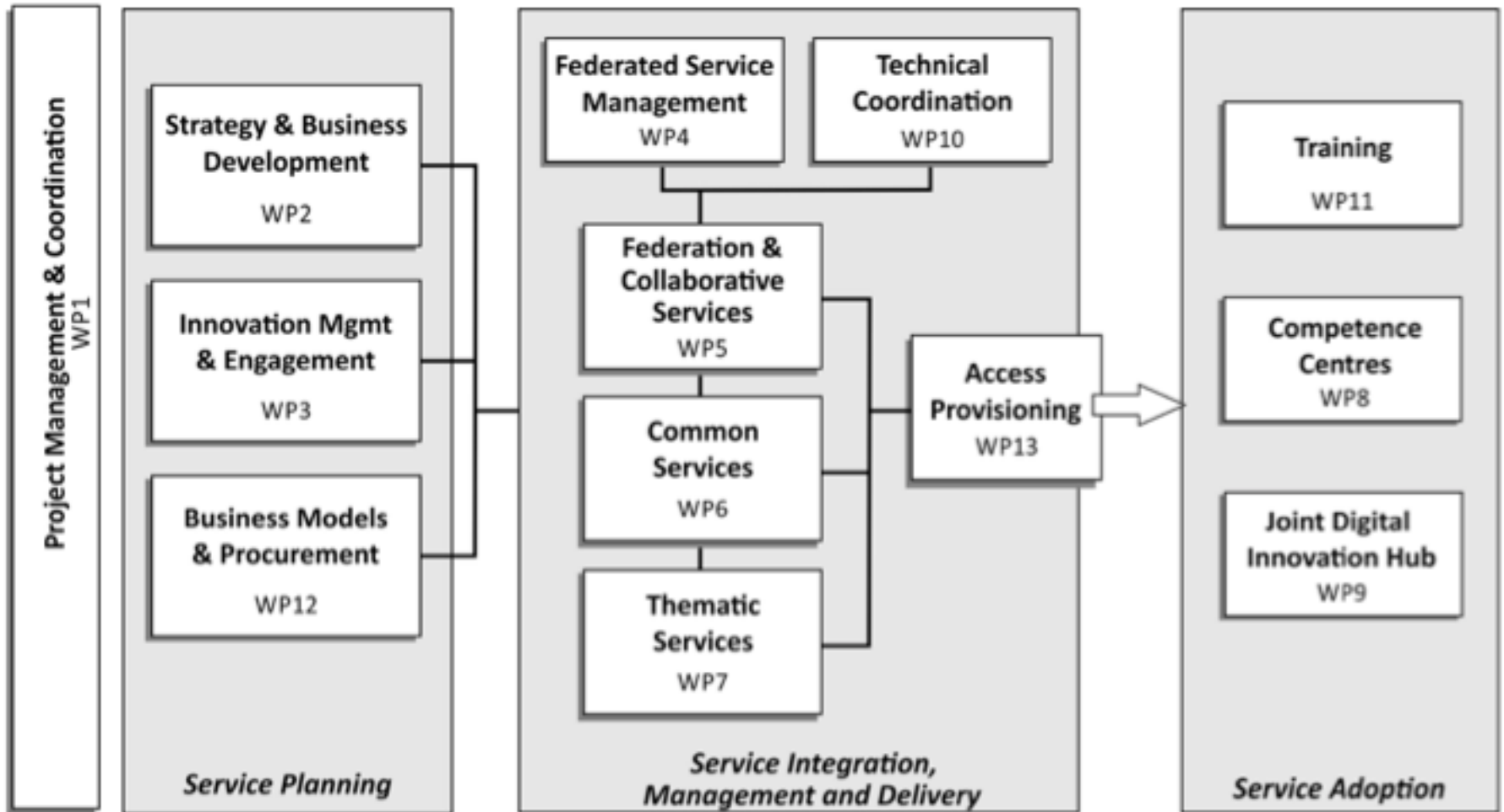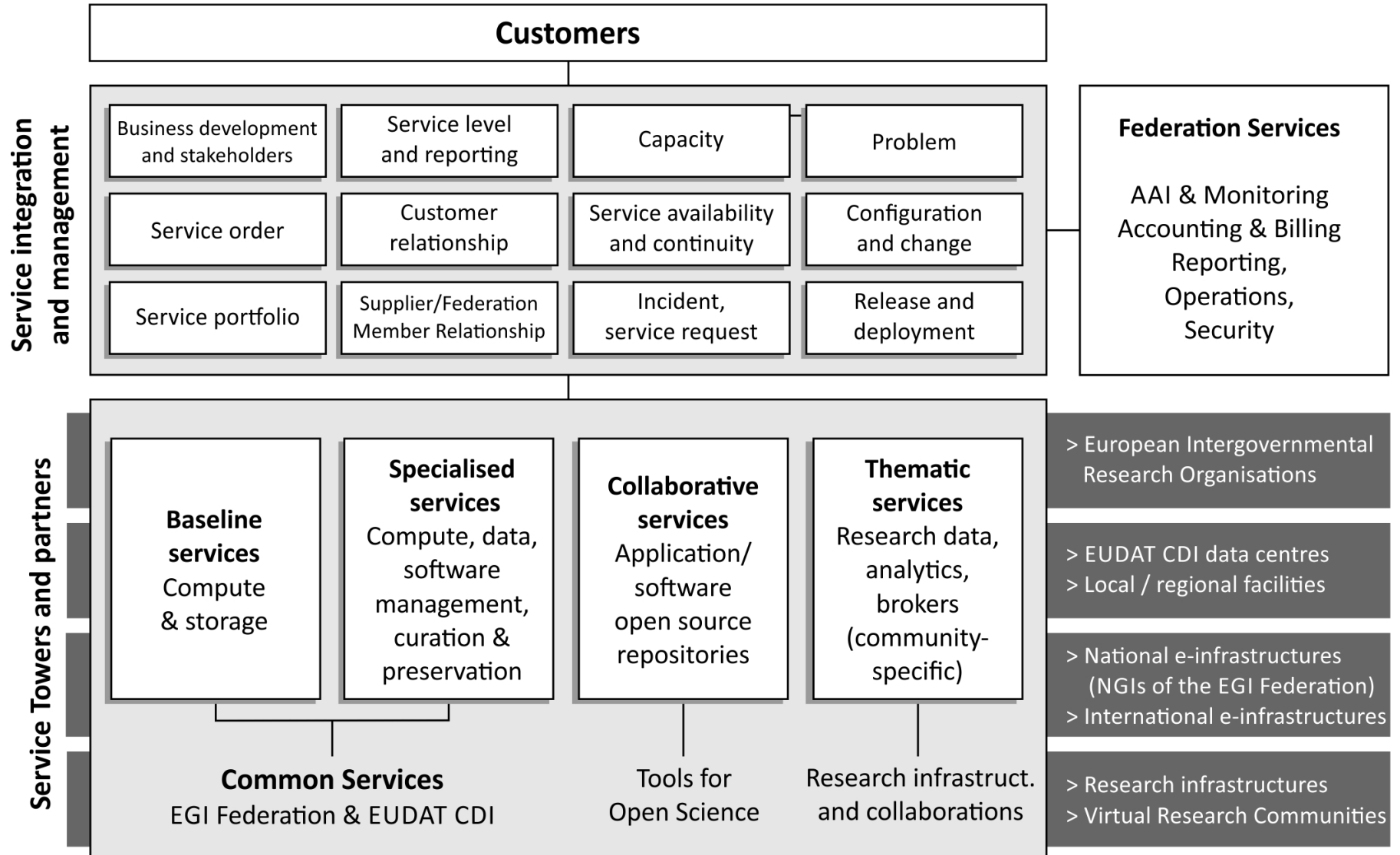Integrate production-ready services

Operate and Provide

Access and Consume
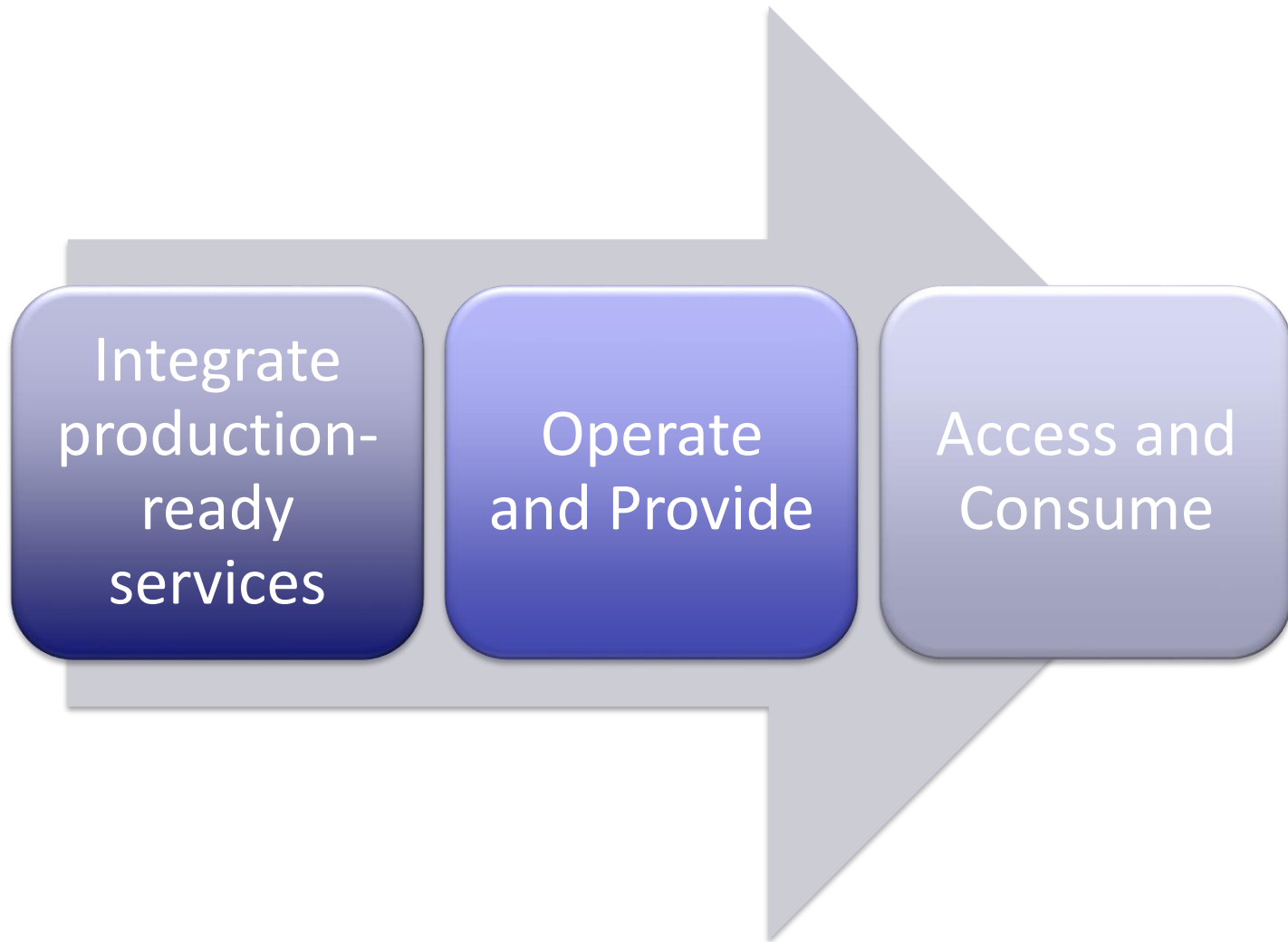
Architecture
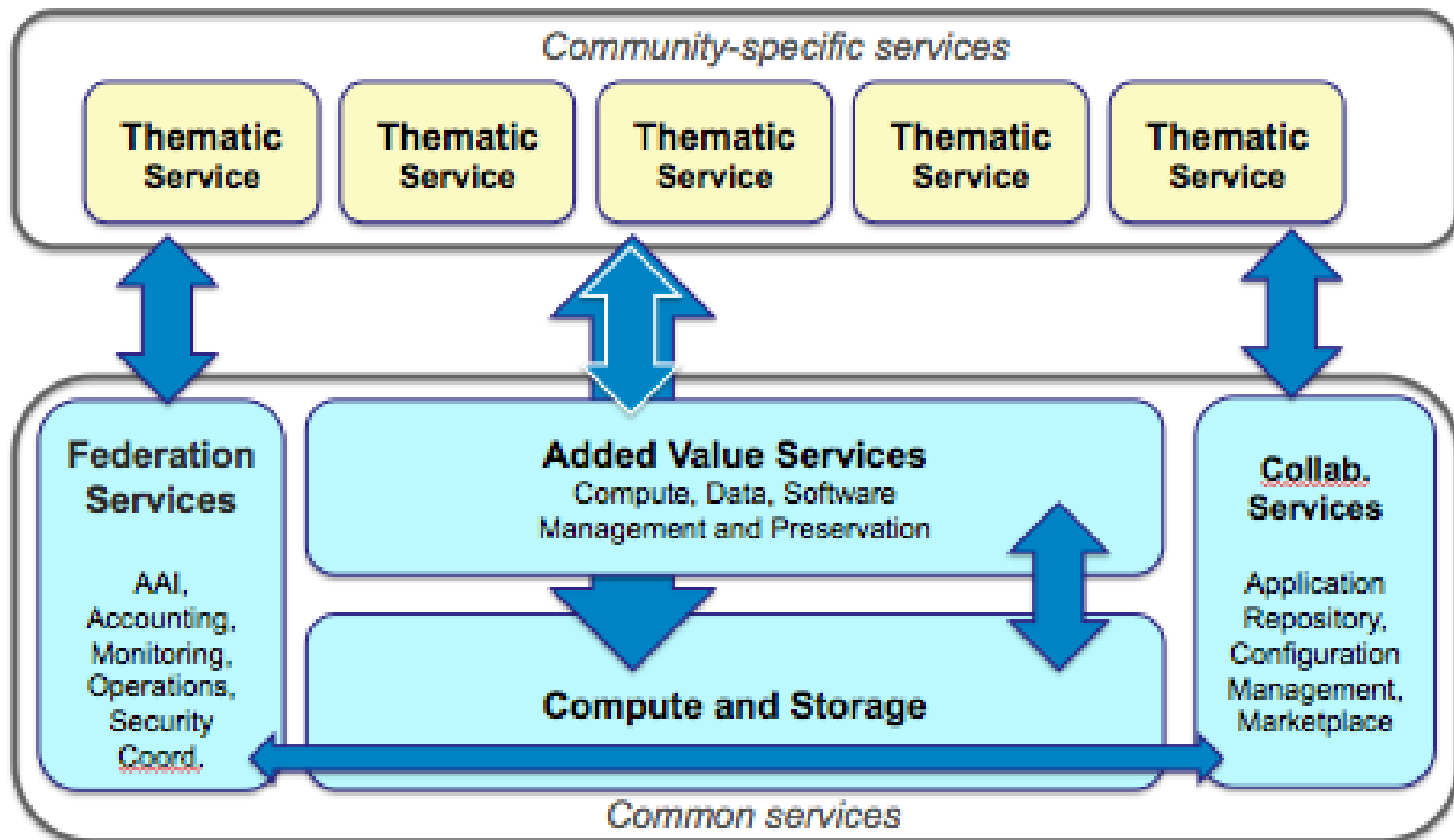
Work packages

Service Integration and Access Management

Service Providers 1/2

e-Infra	Humanities	Engineering	Medical and Health Sciences
EGI Federation	Language and literature (CLARIN)	Environmental engineering (sea vessels, LNEC)	Biological Sciences (ELIXIR)
EUDAT CDI	Arts (DARIAH)	Civil Engineering (Disaster Mitigation)	Structural biology (WeNMR)

Service Providers 2/2

Earth Science
- EO Pillar
- GEO
- Climate Research (ENES)
- Seismology (ORFEUS, EPOS)

Physical Sciences
- Astronomy (LOFAR)
- Fusion (ITER)
- High Energy Physics (CMS and VIRGO)
- Space Science (EISCAT-3D)

Biological Sciences
- Marine and freshwater biology (IFREMER)
- Biodiversity conservation (LifeWatch)
- Ecology (ICOS)

Natural Sciences
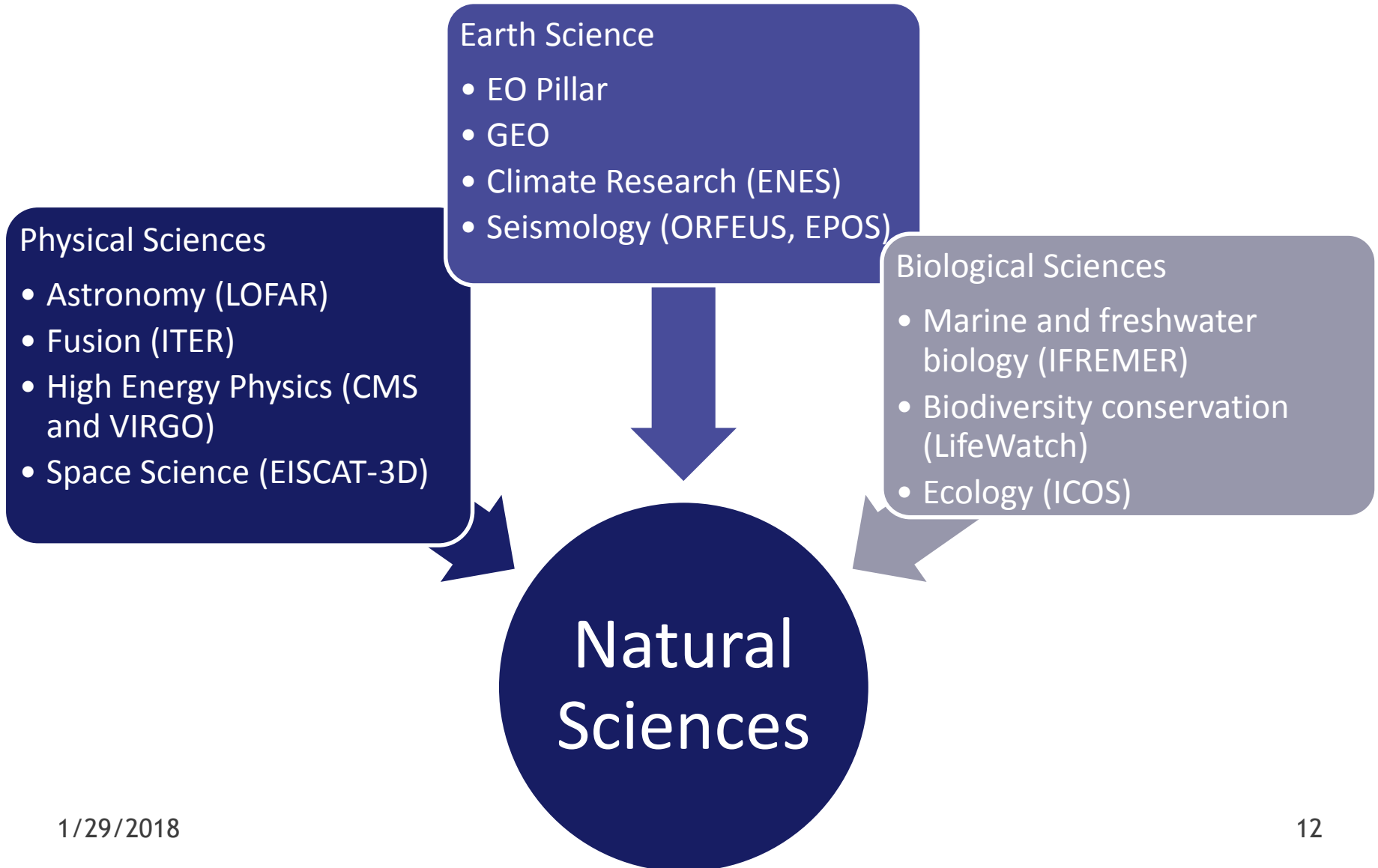
EOSC Domains and the Hub: what model?

EOSC-hub Domain

- Manages
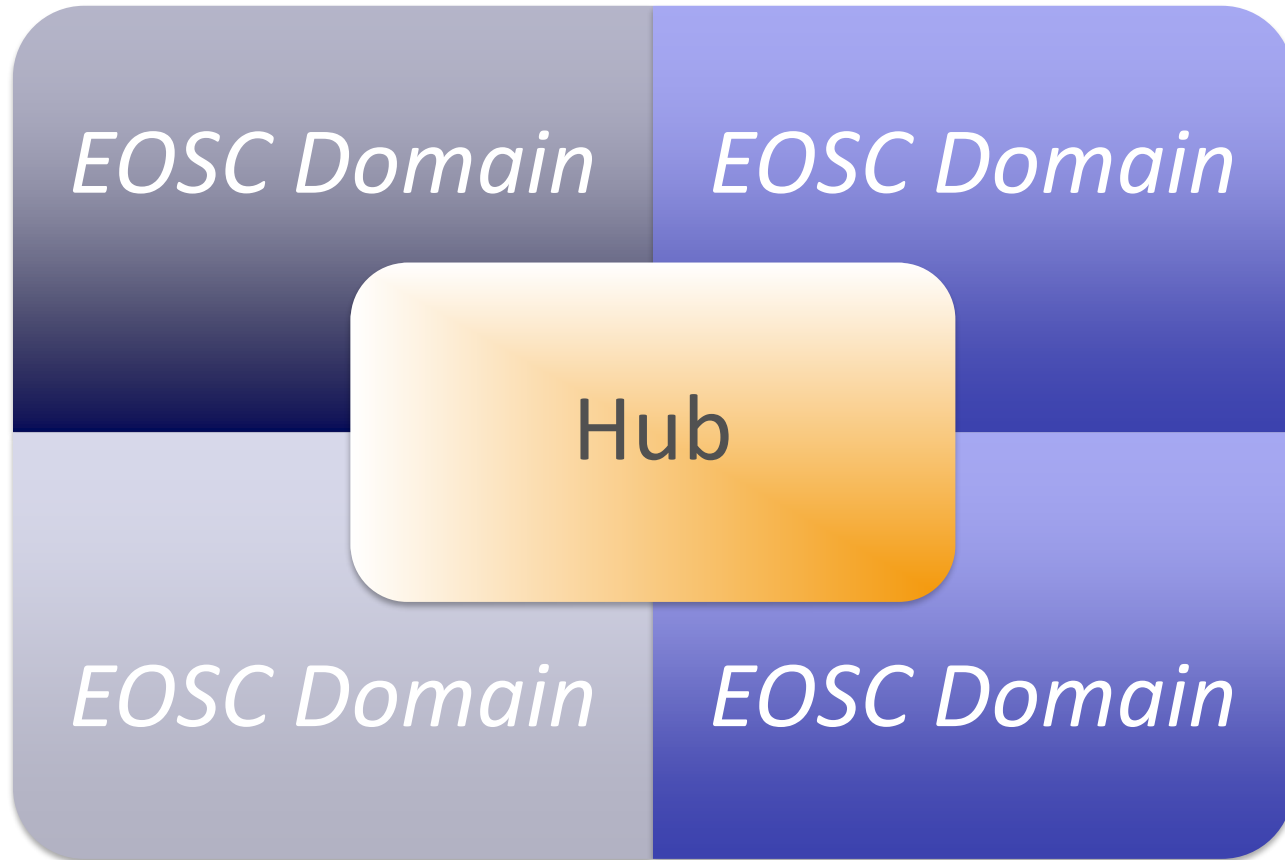 - The internal governance, strategy and funding
  - The internal portfolio, policies and processes
- Participates in the Hub with
  - Resources and services as needed
    - Internally certified to comply to the Hub policies
  - Input to the EOSC standards roadmap and policies
  - Domain-specific FAIR implementation guidelines etc.
- The Hub is governed as a Commons

Support to the Declaration: Governance and Funding

EOSC-hub

- Provides an EOSC service integrator and federator.
- Develops the know-how and the prototype procurement and purchasing framework to acquire digital services from publicly funded infrastructures and commercial providers.

Support to the Declaration:
Data Culture and FAIR

EOSC-hub

- Provides production-quality FAIR data and services through the participating Domains

- Ensures data can be used as widely as possible across scientific disciplines and between the private and public sector by

  - Making core data resources discoverable and accessible

  - Federating existing data infrastructures

Support to the Declaration:
Research Data Services and Architecture

EOSC-hub

- Realizes a system of EOSC domains

- Delivers the Hub as a delivery channel of resources and services

- Improves skills and knowledge among researchers and service operators by delivering specialised trainings and co-design

Impact 1/4

- *The operation of a federated European data and distributed computing infrastructure for research and education communities will optimise the access to IT equipment and services*

  - Creation of an EOSC-hub service portfolio, initially integrating EGI, EUDAT and INDIGO products

- *Establishing partnerships with industrial and private partners*

  - Joint Digital Innovation Hub

Impact 2/4

- *Train people in research and academic organisations*
  - Training programme benefiting 20 research collaborations and external user groups
  - Common and other federated services, data management planning, federated services management, domain-specific trainings (bioinformatics, marine, radio astronomy, seismology, language, earth observation, structural biology, coastal analysis, climate, high-energy physics, arts and humanities

Impact 3/4

- *Avoid the locking-in to particular hardware or software platforms*
  - Increase service interoperability by exposing well-defined interfaces based on open specifications that improve reusability
  - Develop technical and service roadmaps to ensure a coherent evolution of the technical solutions and service offering

Impact 4/4

- *More scientific communities will use storage and computing infrastructures with state-of-the-art services*

    - Expand the access to services outside the traditional user base through the virtual access mechanism

    - Stimulate engagement via Competence Centres in the following areas: life science, fusion, marine, radio astronomy, seismology, climate change, disaster mitigation

Some Key Exploitable results

- Integration of common software and services for storage, compute and data
- Thematic services and Research Data
- Federation and collaboration service and tools (Marketplace, Accounting, Security, Helpdesk, Monitoring)
- Procedures and policies for federated service management
- Purchasing and procurement framework
- Training platform and materials
- Technical standards roadmap
- Strategy roadmap

EOSC-hub and OpenAIRE-Advance

- EOSC-hub and OpenAIRE-Advance are complementary grants in EINFRA-12
  - Collaboration ag
  - External review panel in charge of monitoring the progress of the joint work plan and usage of services funded through virtual access/transnational access

Public launch

- On Commission premises on 21 February 2018 in Brussels
- 'ceremonial' event by invitation, 15:00-17.30 with a networking cocktail afterwards
  - Joint event with OpenAIRE-Advance
- Waiting for the confirmation of the Commissioner **Mariya Gabriel** (Digital Economy and Society) and other high level speakers

Events - 2018

- EOSC-hub week, Spring 2018 (April or May)
  - Internal project meetings with co-located public events and sessions
- Support to Digital Infrastructures 4 Research 2018
  - Conference-style event with call for participation, for promotion of project activities and results

Useful links

- [http://go.egi.eu/**EOSC-hub-doa**](http://go.egi.eu/EOSC-hub-doa)
- http://go.egi.eu/EOSC-hub-budget
- https://confluence.egi.eu/display/EOSC/Home
- Links are temporary, work space and collaborating tools hosted by a project-dedicated domain are being set-up

Summary

EOSC-hub will

- – Create and providing the Hub as federated integration and management system for the future EOSC

- – Implement the Hub as open community-lead framework

- – Provide a wide range of services from many major digital infrastructures and research communities