



European Open Science Cloud

EOSC: a vision of the future

Amsterdam, 18 January, IT4RIs 18

Yannick Legré – EGI Managing Director



EOSC-hub receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 777536.

EOSC: The Policy Context



EOSC-hub receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 777536.

EU Open Science Policy: 5 Priority Areas

1. Foster open science
2. Remove barriers to open science
3. Develop research & infrastructure for open science
4. Mainstream open science access to research results
5. Embed open science in society

European Open Science Cloud

Federated, globally accessible, multidisciplinary environment where researchers, innovators, companies and citizens can publish, find, use and reuse each other's data, tools, publications and other outputs for research, innovation and educational purposes.

From OSPP EOSC WG report, adapted from HLEG on EOSC definition

COM 2016/178 - European Cloud Initiative: 3 pillars (19 April 2016)

- European Open Science Cloud (EOSC)
 - Integration and consolidation of e-infrastructures
 - Federation of existing research infrastructures and scientific clouds
 - Development of cloud-based services for Open Science
 - Connection of ESFRIs to the EOSC
- European Data Infrastructure (EDI)
 - Development and deployment of large-scale European HPC, data and network infrastructure
- Widening access and building trust
 - Government, SMEs, industry, citizens

The European Cloud Initiative

Slide courtesy of EC DG RTD A.6



EOSC-hub

Integrating and managing services for the
European Open Science Cloud



EOSC-hub receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 777536.

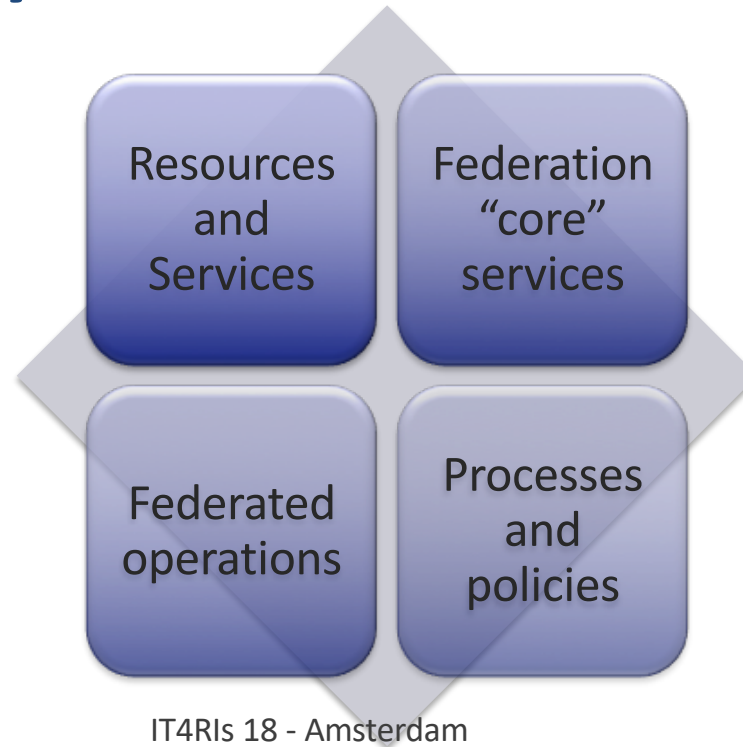
EOSC-hub mobilises providers from **20** major digital infrastructures, EGI, EUDAT CDI and INDIGO-DataCloud **jointly** offering **services, software and data** for advanced data-driven research and innovation.

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
- 36 months: Jan 2018 – Dec 2020 (18 month reporting period)

Mission

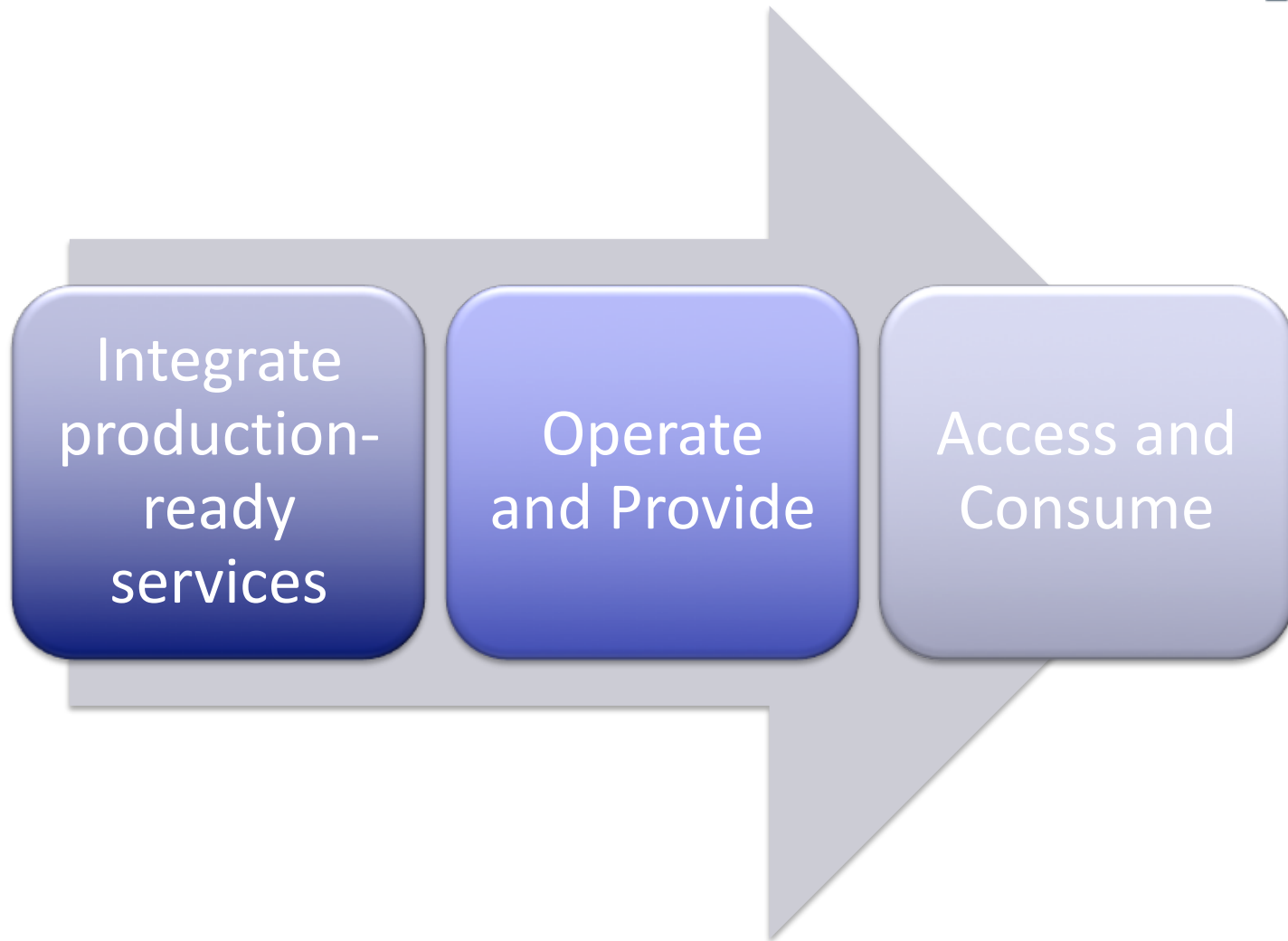
The project will create the **Hub:**
a **federated integration and management system** for the future EOSC



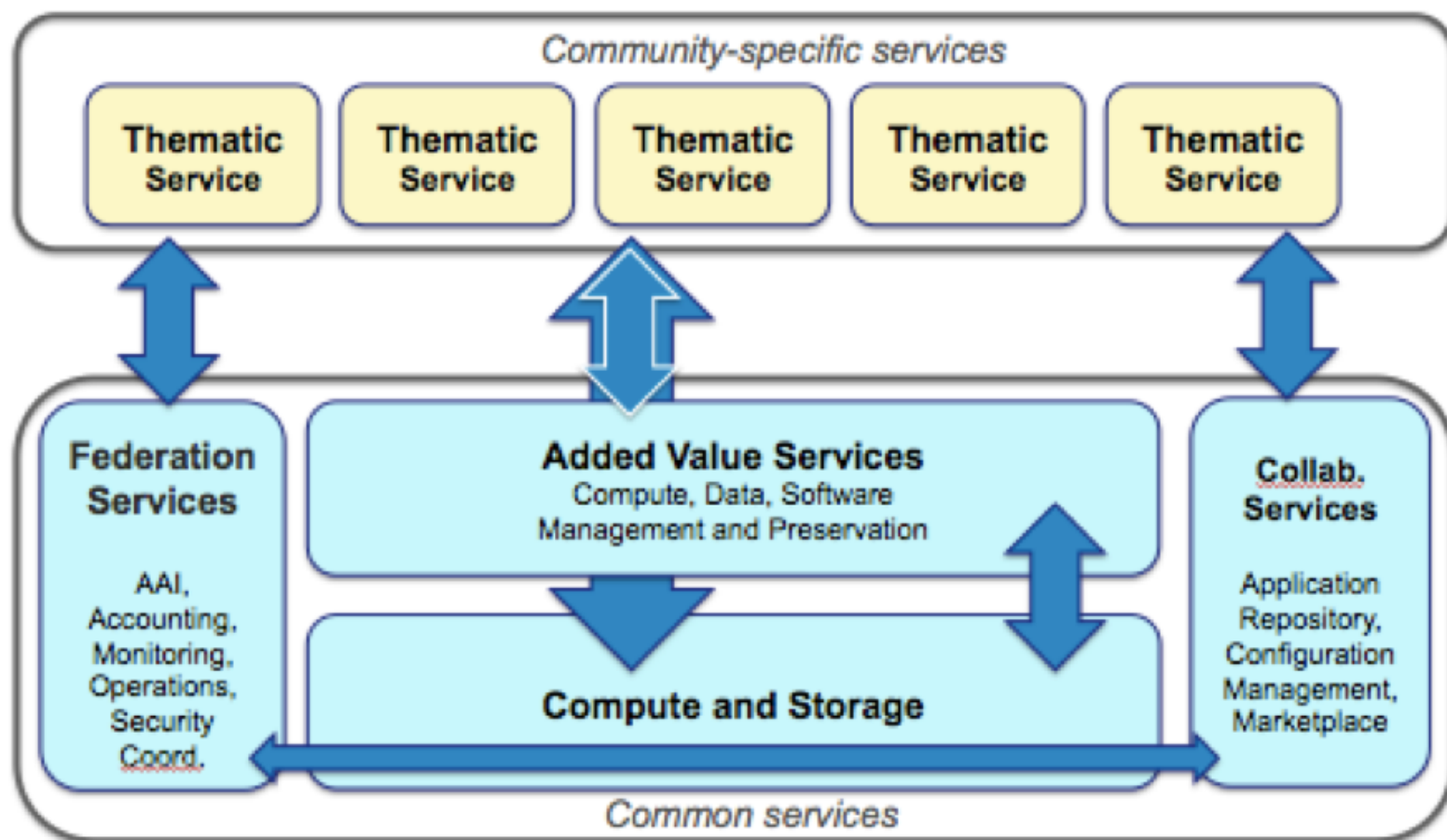
What does the Hub provide?

- **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

From service integration to utilization



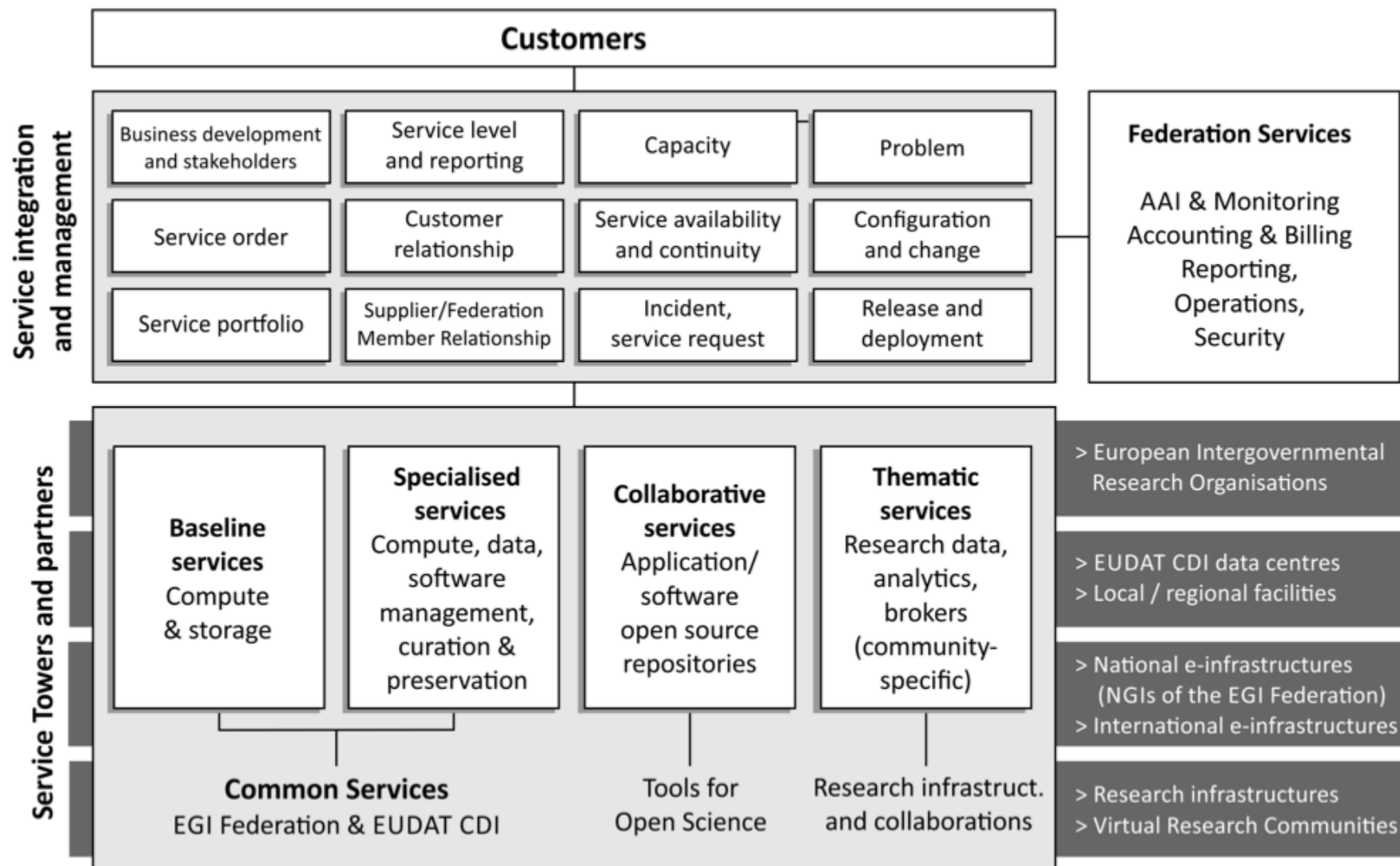
Architecture





EOSC-hub

Service Integration and Access Management





Service Providers 1/2

e-Infra

EGI Federation

EUDAT CDI

Humanities

Language and
literature
(CLARIN)

Arts (DARIAH)

Engineering

Environmental
engineering
(sea vessels,
LNEC)

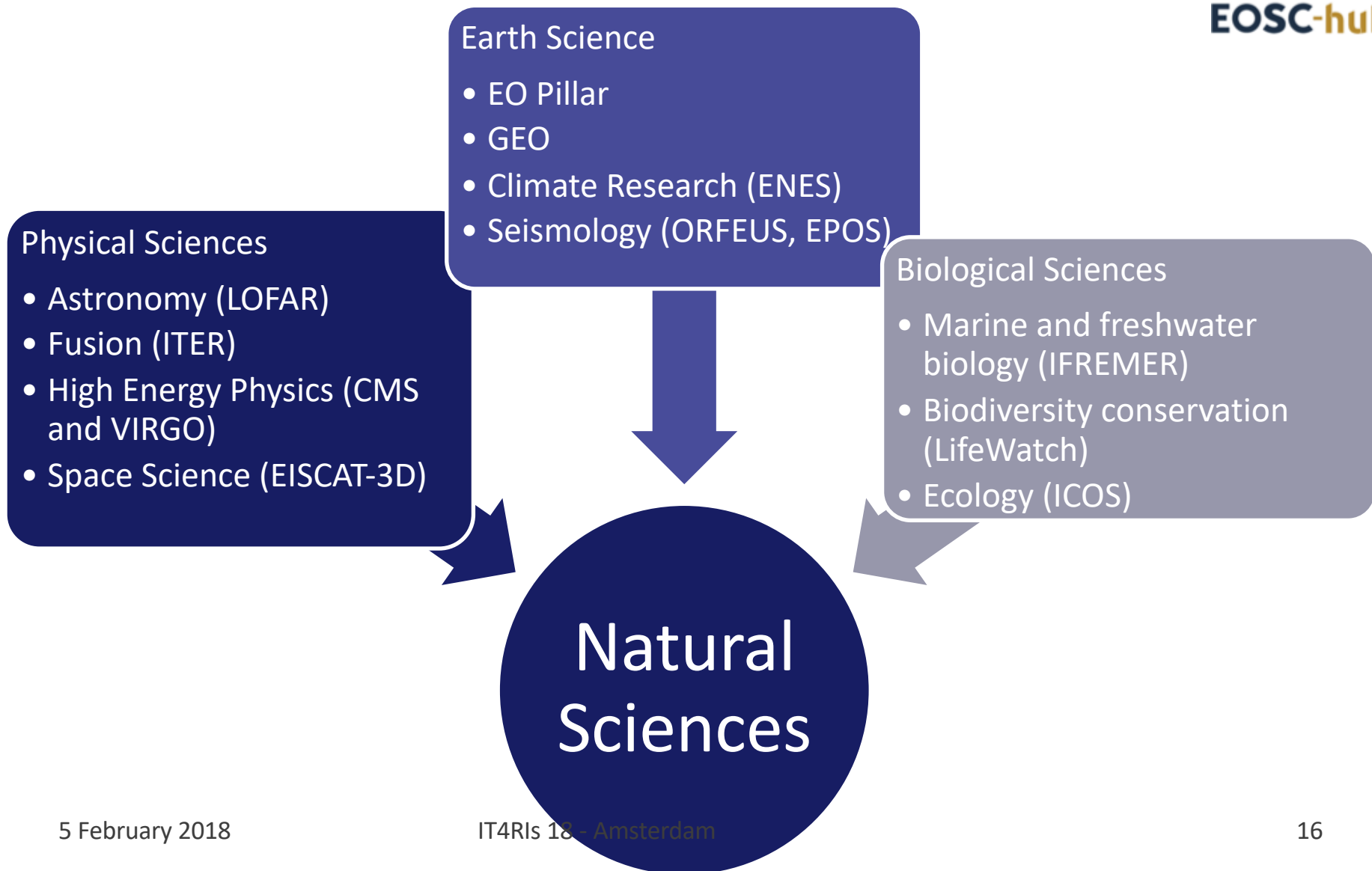
Civil
Engineering
(Disaster
Mitigation)

Medical and Health Sciences

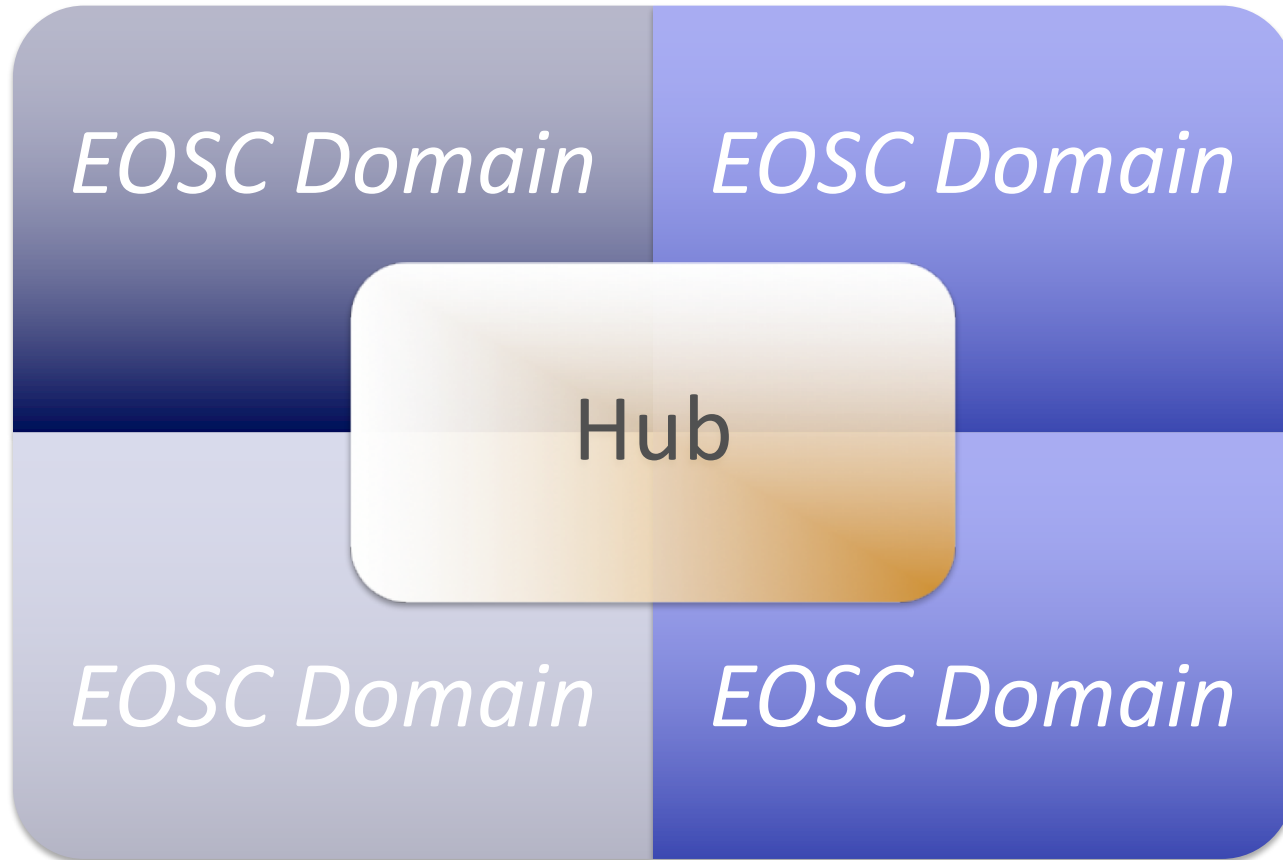
Biological
Sciences
(ELIXIR)

Structural
biology
(WeNMR)

Service Providers 2/2



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**

EOSC-hub Contribution to the Declaration: Architecture, Governance, Funding

- A rich catalogue of services and resources from major digital infrastructures of European/international dimension (next slide)
- **The Hub** as a delivery channel of resources and services to customers
- An EOSC service integration and federation system → realizes EOSC as a system of domains
- **Prototype procurement and purchasing framework and related knowhow** to acquire digital services from publicly funded infrastructures and commercial providers
- Competence Centres and a Digital Innovation Hub

Service catalogue at a glance



EOSC-hub



**+ Commercial
Cloud providers**



Research communities, ESFRI RIs, National infrastructures

Service access policies

- Open to every researcher → virtual access
 - Services could require authentication and authorization
- Federation and collaborative services provided as a Service, e.g.
 - Marketplace → OpenAIRE-Advance could use it as additional service delivery channel
 - AAI → operations of federated AAI components delegated to EOSC-hub
 - Software and application repository for sharing with research communities

EOSC-hub and OpenAIRE-Advance

- EOSC-hub and OpenAIRE-Advance are complementary grants in EINFRA-12
 - Cross-project governance to be established
 - Joint activity plan
 - EOSC-hub / OpenAIRE-Advance policy and service integration
 - Coordinated training, technical support, outreach, communications
 - Strategy
- ➔ EOSC-hub / OpenAIRE-Advance joint contribution to the EOSC implementation roadmap

Joint public launch of the project

- On Commission premises on 21 February 2018 in Brussels
- ‘Ceremonial’ event by invitation, 15:00-17.30
- Waiting for the confirmation of the Commissioner **Mariya Gabriel** (Digital Economy and Society) and other high level speakers



Summary

EOSC-hub will:

- Create and provide the **Hub** as **federated** integration and management system for the future EOSC + *integrated service & resource* catalogue
- Implement the **Hub** as **open community-lead framework**
- **Provide a wide range of services** from many major digital infrastructures and research communities



Thank you!

yannick.legre@egi.eu

www.eosc-hub.eu

<https://wiki.eosc-hub.eu>



EOSC-hub receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 777536.