



# OSCAR

Open Science Clusters' Action  
for Research & Society

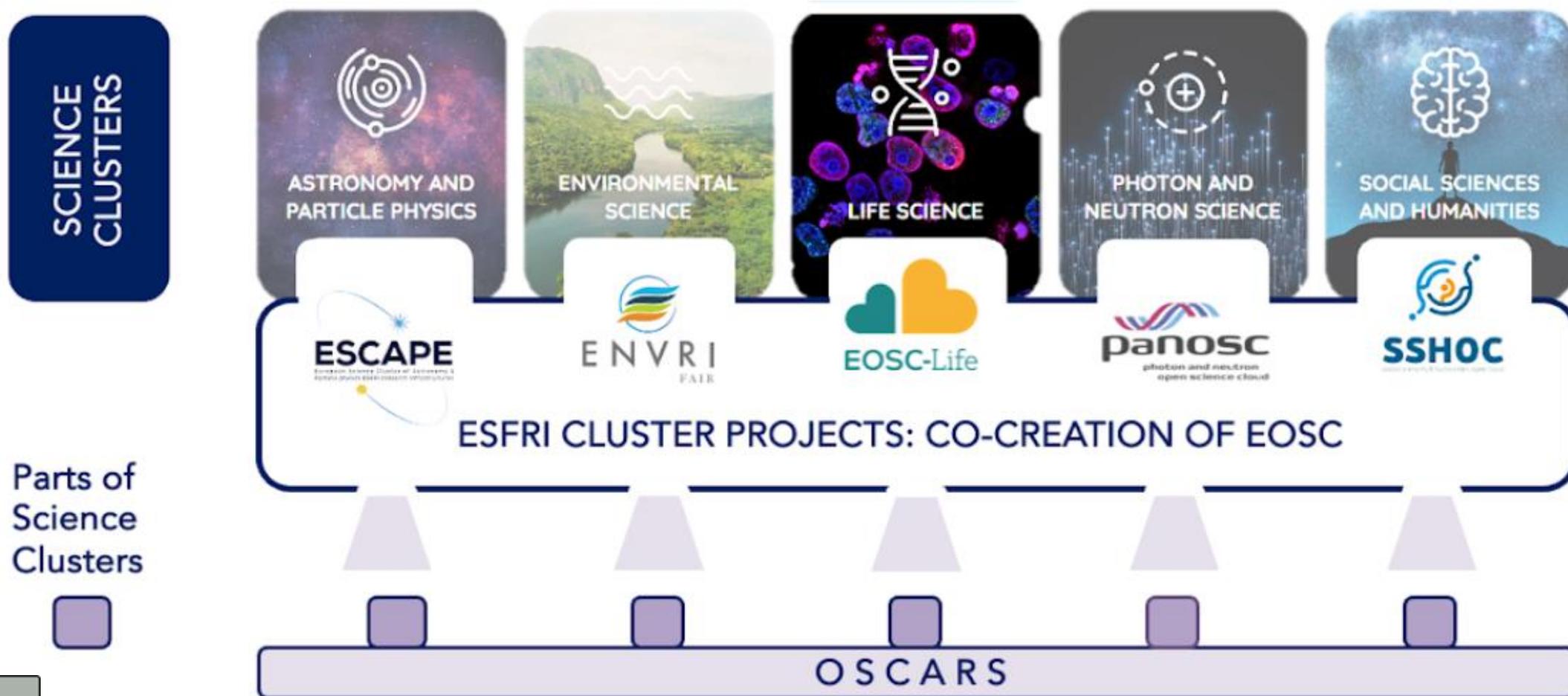
## LS-RI CLUSTER Life Science Connect - BBMRI nodes

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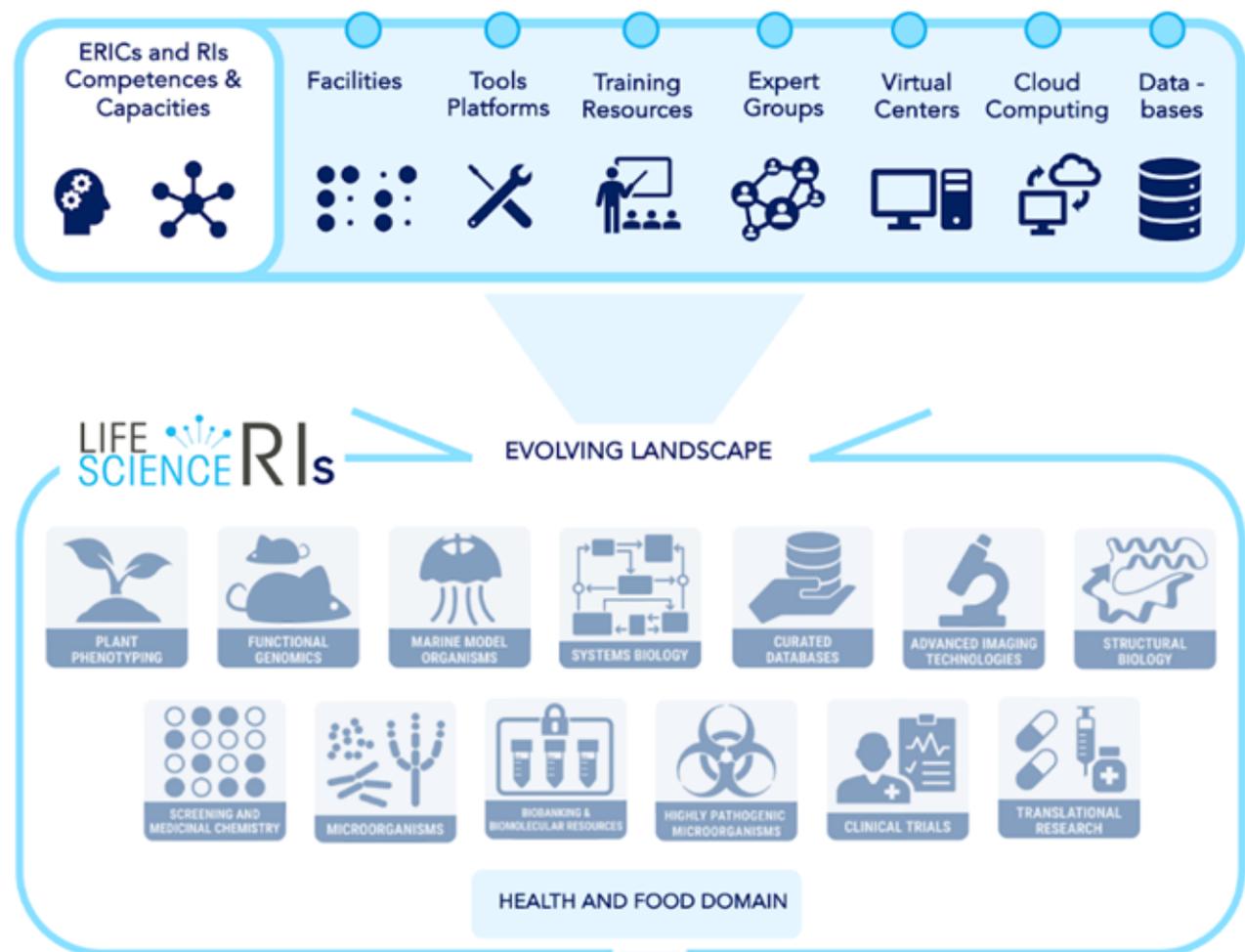
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## Life Science Research Infrastructures in EOSC: from Services to Sustainable Impact



## Life Science Research Infrastructures in EOSC: from Services to Sustainable Impact



- ❖ 15 ESFRI Life Science RIs covering the full **Health & Food domain**
- ❖ Consolidated cross-RI operational collaboration (e.g. EOSC-Life, BY-COVID, ISIDORe...)



- ❖ Active contributors to EOSC (interoperability & FAIR data)
- ❖ In OSCARS: moving from funded projects → to sustainable service uptake



## Key objective:

To strengthen EOSC with **Life Science data expertise**, to

- enable FAIR-compliant integration of e.g. omics and imaging data.
- deliver Virtual Research Environments, workflows and secured access frameworks.
- support cutting-edge research and innovation.

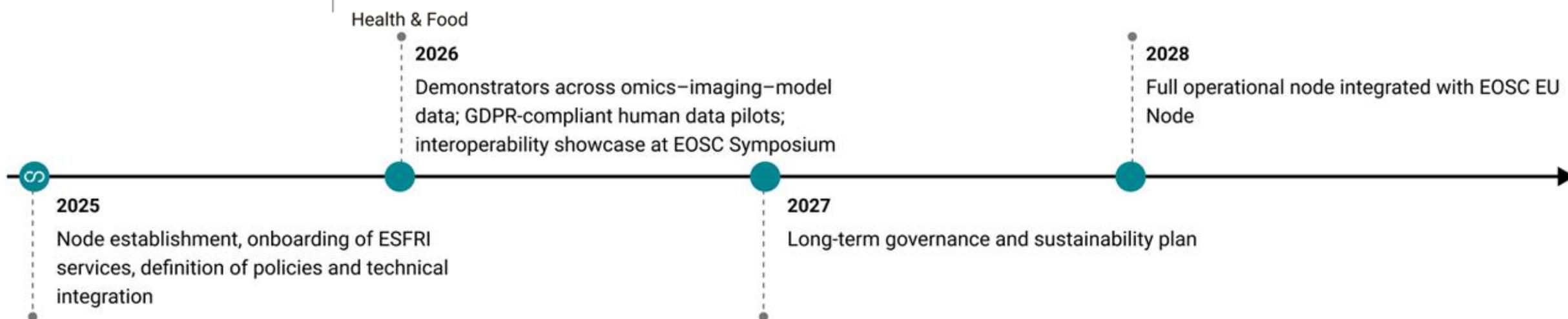


## Key objective:

To integrate **Europe's biobanks and biomolecular resources** into the EOSC Federation.

- provide GDPR-compliant, FAIR access to biosamples, genomic, imaging, and clinical data across ~500 biobanks in 25 countries.
- be the biomedical/sensitive health data EOSC Node, enabling FAIR and secure federated access to data, and cross-border research in alignment with EHDS2.

## eOSC Node | Life Sciences Connect



### Planned:

- Federated AAI** (Life Science AAI, ELIXIR AAI, integration with EOSC AAI)
- Onboarded service catalogues** (ELIXIR, Euro-BioImaging, EMBL, Instruct ERIC)
- Application workflow management** (Galaxy, Jupyter, workflow registries)
- Service monitoring** (harmonised across infrastructures)
- Service and research product accounting**
- Order management
- Helpdesk
- Management system (policies aligned with EOSC and ESFRIs)



## Fragalysis Cloud: From Project Output to Sustainable LS Integration

### The Challenge

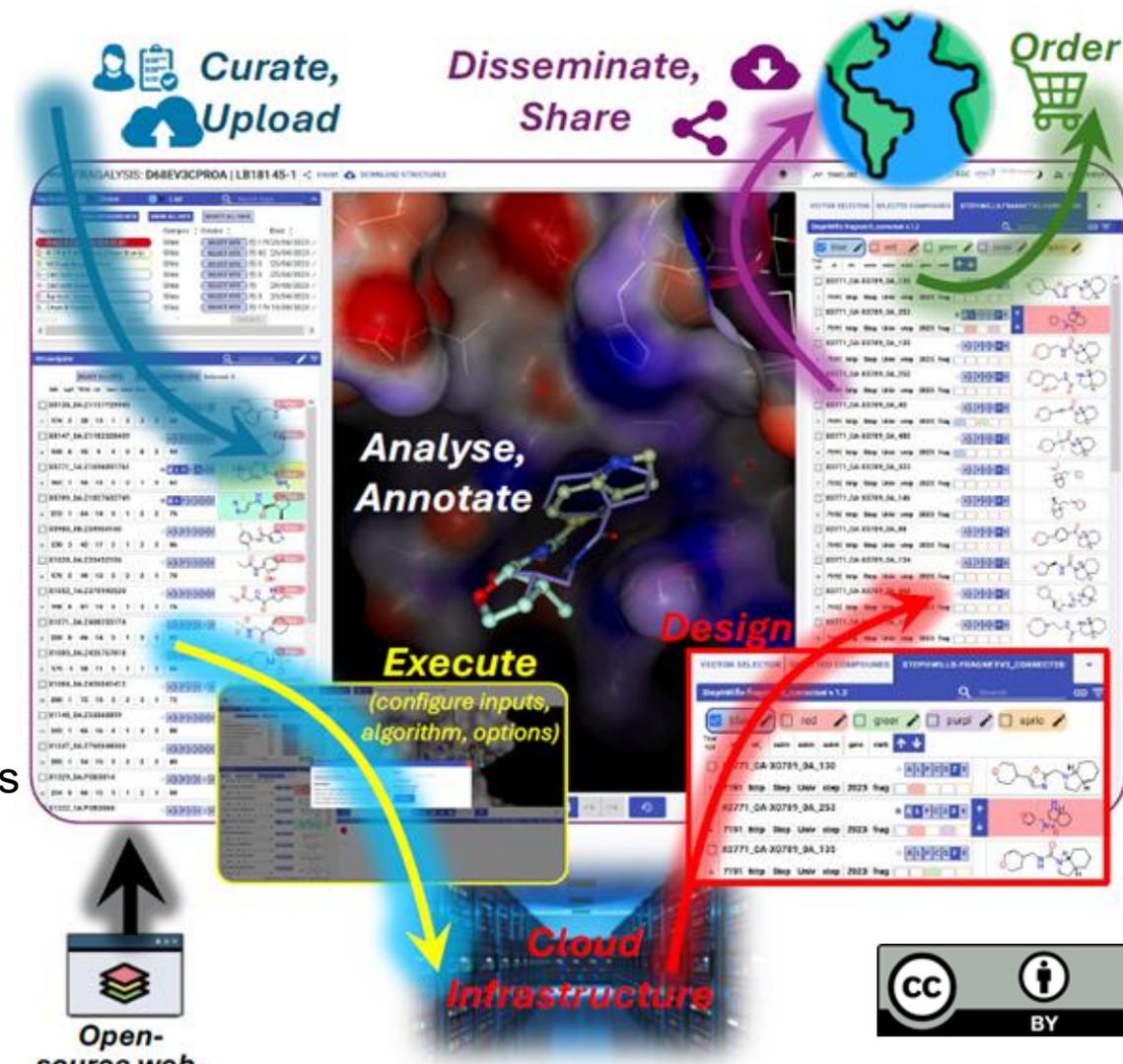
- Fragmented SBDD data
- Separate repositories (PDB, ChEMBL)
- Complex crystallographic formats

### The OSCARS Contribution

- FAIR-compliant structural drug discovery platform
- API-based sharing
- Jupyter-based analysis environment

### The Sustainability Logic

- Integrated into ELIXIR ecosystem & EOSC-compliant services
- Connected to PDBe (LS Node)
- Standardised deposition workflows
- Supports AI-ready datasets
- Community adoption (OpenBind consortium)





OSCARS

Thank you

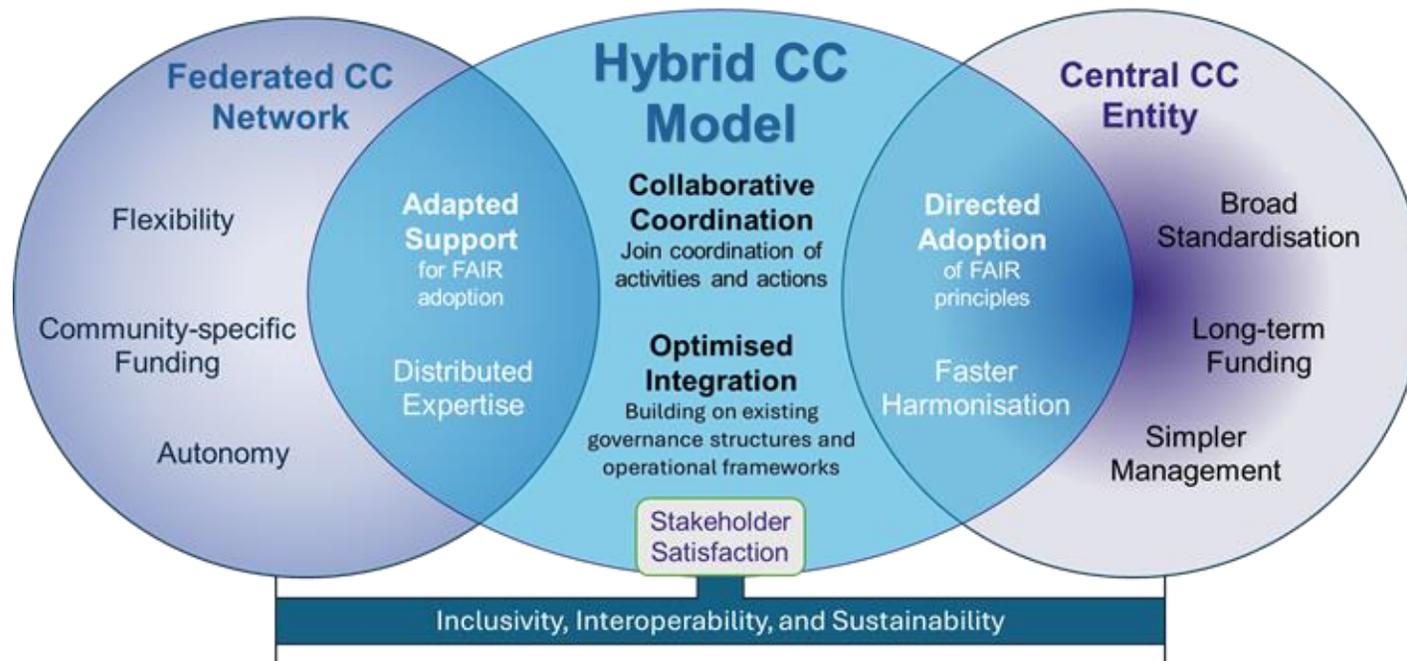
# CCs and OSCARS projects fostering LS-RI Services uses

## Hub-and-Spoke Model for CCs: Turning Projects into Service Uptake

- **Integrate** OSCARS outputs into existing RI service portfolios
- **Deliver** training & hands-on support / assistance
- **Promote adoption** by domain communities
- Facilitate **cross-RI service composition**
- Amplifies OSCARS project results at European level



### Competence Centre (CC) Model for LS-RIs



CCs are Key enablers to:

- Increase **visibility** of LS-RI services & nodes
- Increase **service uptake and reuse**
- Foster **cross-RI collaboration and composability**
- Raise **awareness and FAIR literacy**
- Enable **secondary use of data & AI-ready workflows**

Through **Competence Centres** and **LS Nodes**, OSCARS projects are not just funded activities — they become building blocks of a sustainable, interoperable, and AI-ready European Life Science ecosystem within EOSC



<https://oscars-project.eu/projects>