

# EOSC Symposium

## Science Projects Introduction

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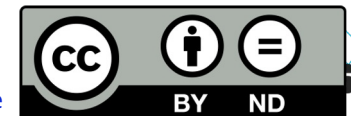
EOSC Symposium, session: Enabling Resource Composability in the EOSC Platform

Prague, November 16, 2022

The EOSC Future project is co-funded by the  
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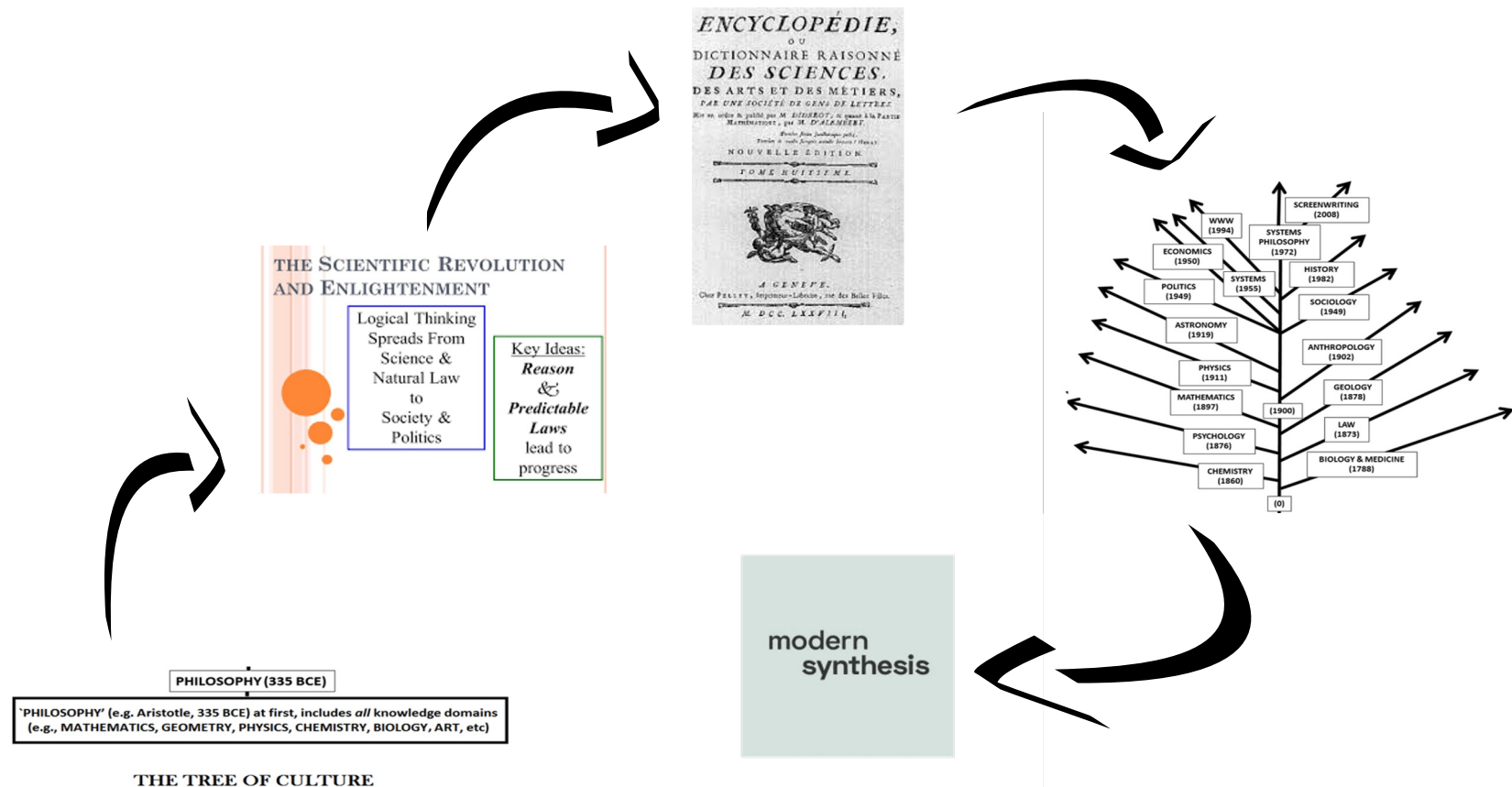


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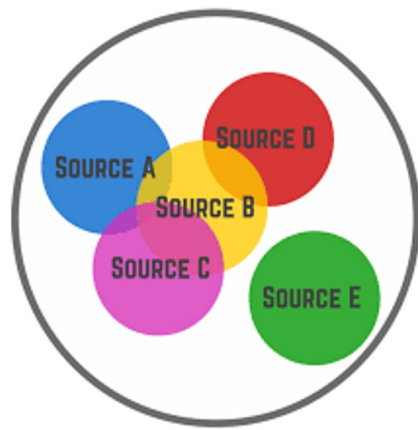
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# Evolution of scientific thinking and knowledge making



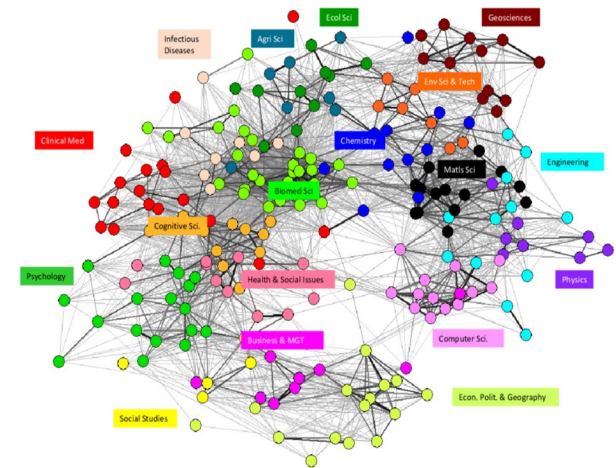
- How this process advances and how EOSC can support it?

# How does synthesis among scientific disciplines (domains) happen?



- Simple (commonalities)

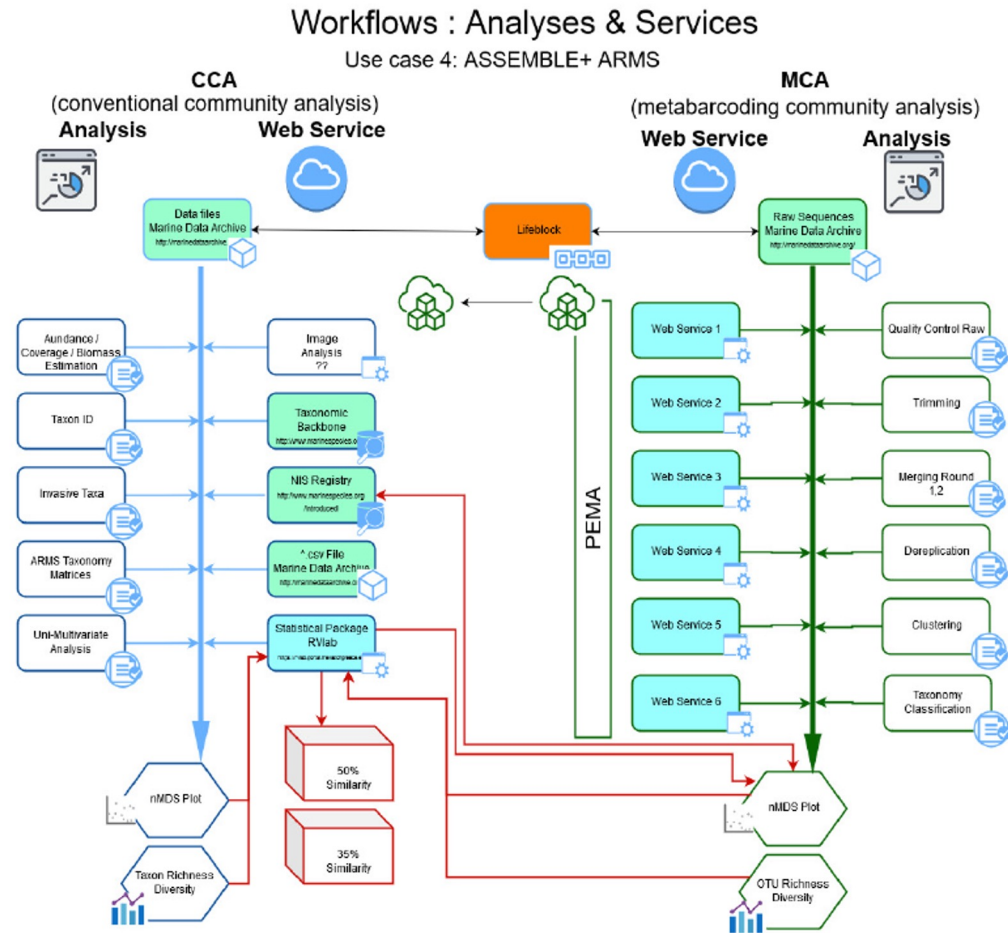
- Additive (building on existing knowledge)



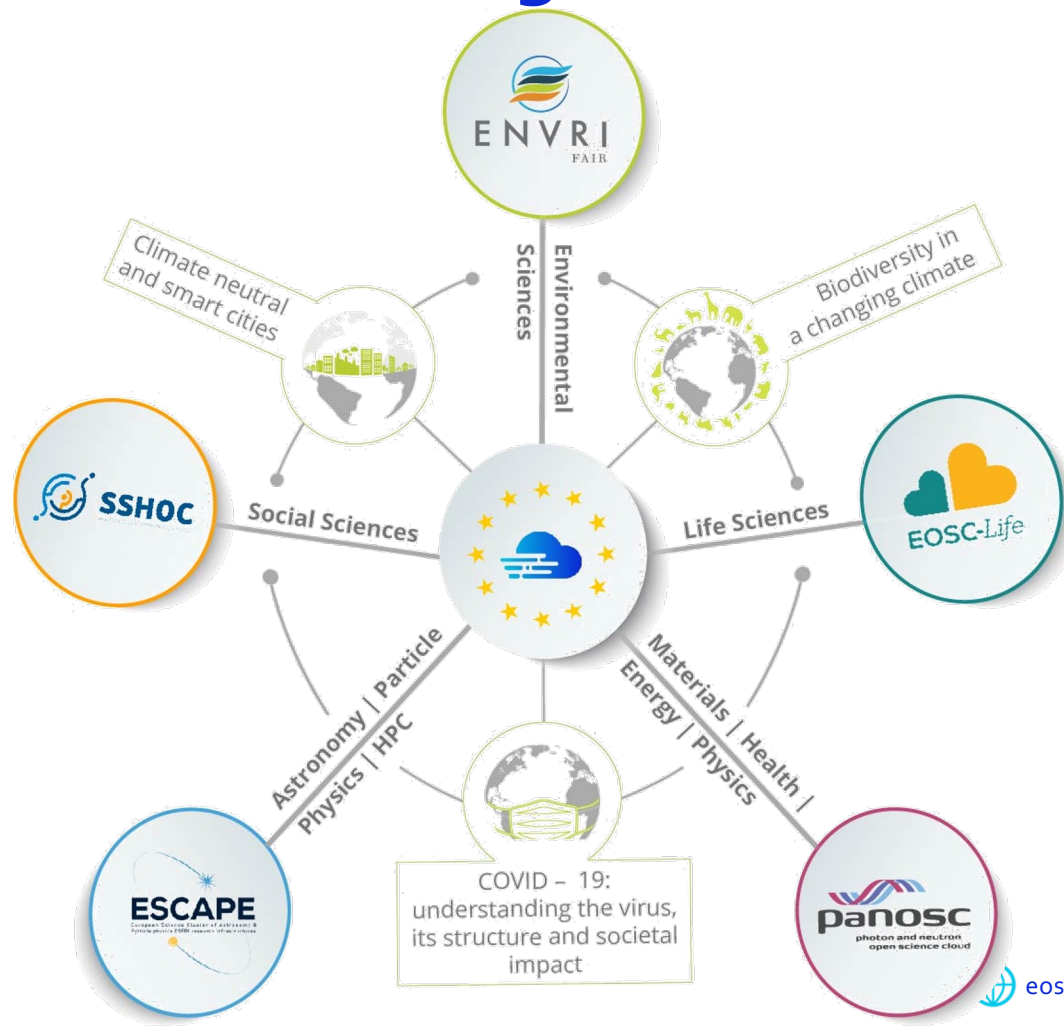
- Multidimensional (network)

# How can synthesis among scientific disciplines (domains) happen?

- Multidisciplinary / cross-domain (pattern/process comparison)
- Depend on FAIR-compliant processes: from data to results interpretation



# EOSC Science Projects: creating the cross-domain interfaces (trading zones)



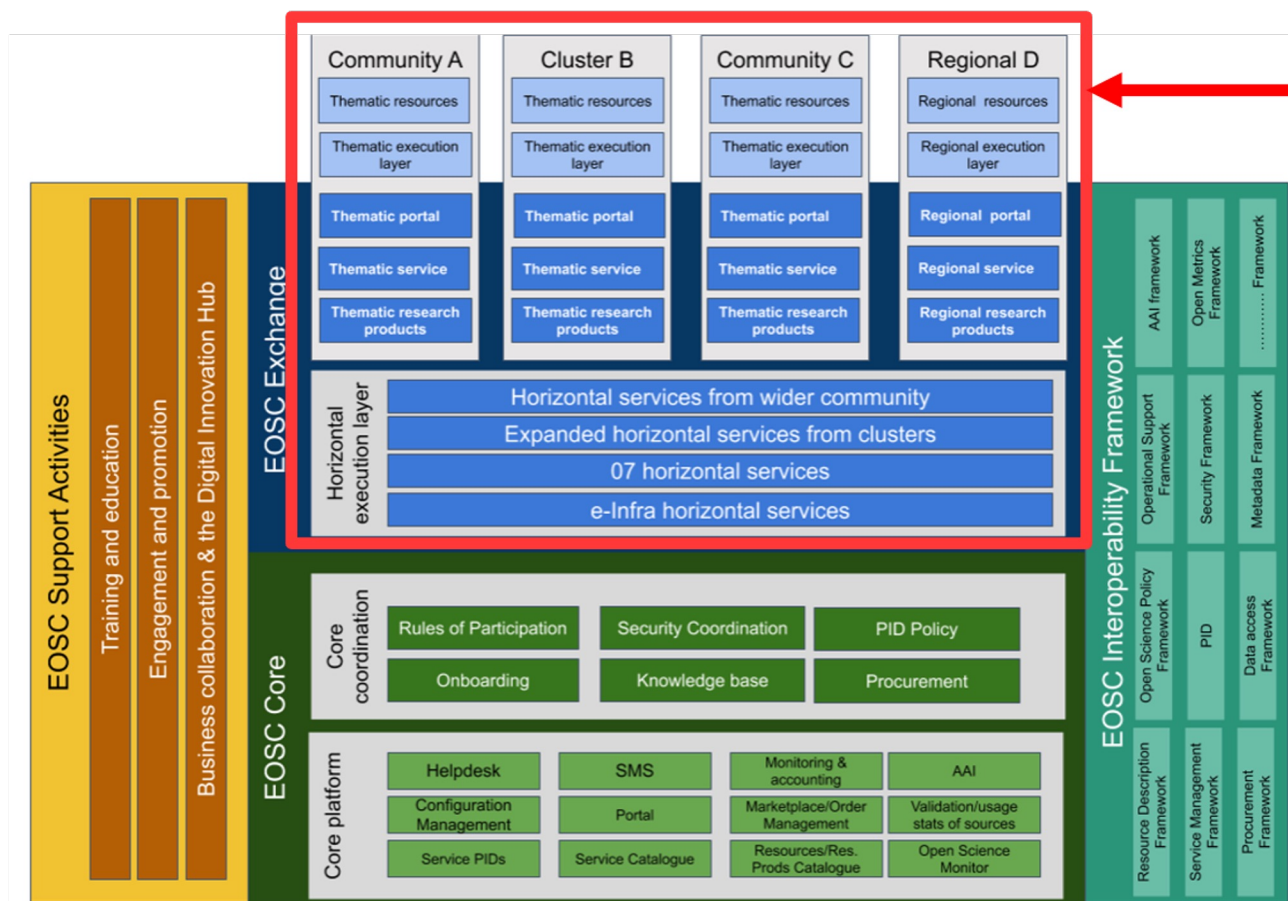
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# EOSC Exchange



**Onboarding  
of external  
resources  
and  
providers**



# EOSC Portal Marketplace

<https://marketplace.eosc-portal.eu>



## Currently onboarded:

- **237** Providers
- **365** Resources
- **52** Communities and Infrastructures
- **17** defined target groups

## Access to the OpenAIRE Research Graph

- **1.9million** publications
- **1.2million** datasets
- **170k** software entries

## Originally services, now far more

Data sources, catalogues, data products, training material, software, EOSC interoperability guidelines

# Exchange and Core – Complementary capabilities

- **EOSC Core**

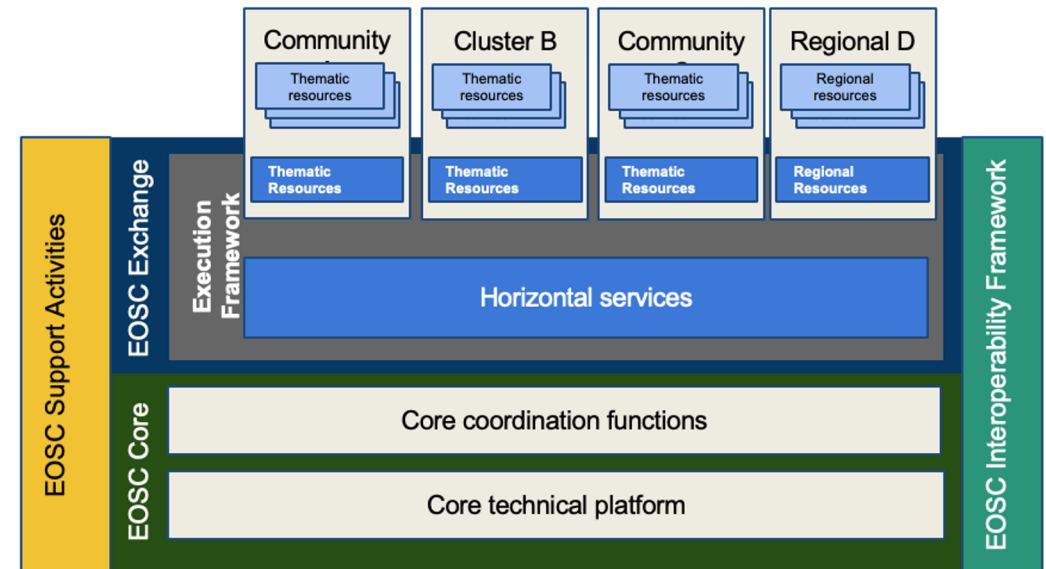
AAI, Helpdesk, Monitoring, Accounting, Security coordination,...

- **EOSC Exchange**

Horizontal services, Thematic resources, SME services, ...

**Service Composability** - making use of EOSC services/resources together to solve a problem

e.g. running a **workflow** on a resource from **onboarded repository** on a **EGI Fedcloud VM**, storing on **EUDAT B2SAFE** and publishing on **OpenAIRE Zenodo**. Services discovered and ordered on the **EOSC Marketplace**, accessed over **EOSC AAI** with help provided via the **EOSC Helpdesk**



**Horizontal Services** – subset of the **EOSC Exchange** which are *generic service or resource bringing significant value to multiple research infrastructures.*



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## Horizontal Resources – EGI-ACE



Readily available resources  
(via researcher easily joining [vo.access.egi.eu](https://vo.access.egi.eu) VO )

- 4 cores/8 GB RAM/100 GB storage **VMs** for 6 months, renewable for other 6 months in the EGI Cloud Compute service
- **EGI Notebooks** service for running Jupyter notebooks with a default quota of 2 CPU 4GB RAM and 20GB of home storage
- **Cloud orchestration** via Infrastructure Manager
- **Registration of hostnames** in the Dynamic DNS
- Registration of software in **VM Ops AppDB**
- 100 GB of storage in **EGI DataHub**

Services accessible over EOSC AAI



# Horizontal Resources – EUDAT-DICE



## Readily available resources

No prior approval required:

- 20GBs per user to the **sync and share B2DROP** service via B2ACCESS (EOSC AAI) -> additional space can be granted but it would require some days for the configuration
- **Store and publish service B2SHARE** via **B2ACCESS** (EOSC AAI) with the limit to 20GB per each dataset uploaded

Readily provisioned (an email requesting access all that's needed):

- **50TB of storage on B2SAFE** or online storage with no replication across sites and no customised data management policies with standard access (SSH/GridFtp/webdav)
- **PID registration services B2HANDLE**

Accessible over EOSC AAI



# Horizontal Resources – OpenAIRE-Nexus



## Readily available resources

- [Zenodo.org](https://zenodo.org) enabling **publishing of workflows**
- [ARGOS](https://argos.euroscisearch.org/) machine-readable **data management plans**
- [episciences.org](https://episciences.org/) that offers "overlay journal editorial tooling" for researchers to create and operate an Open Access journal
- [Amnesia.openaire.eu](https://amnesia.openaire.eu/) **pseudo-anonymization** and publishing of **sensitive data**
- **OpenAIRE Research Graph** supporting data aggregation/access:
- [OpenCitation](https://opencitation.org/) APIs for **article citation data**
- [ScholXplorer](https://scholixplorer.org/) for article-data , article-software citation data
- [OpenAPC](https://openapc.org/) for Article Processing Charges data linked to DOI articles
- [UsageCounts](https://usagecounts.org/) providing **usage data** (downloads and views) for publications, data, software, etc.

Many services don't require registration. Others being integrated with EOSC AAI



# EOSC-Future Showcase Integration Stories (SIs)

*Demonstrating to Scientists and Researchers how to use EOSC*

The  
beginning...

Explain the  
issue to be  
resolved

## **EOSC and the EOSC Portal**

Discovery of  
relevant (thematic)  
data

Discovery/provision  
of needed  
services/resources

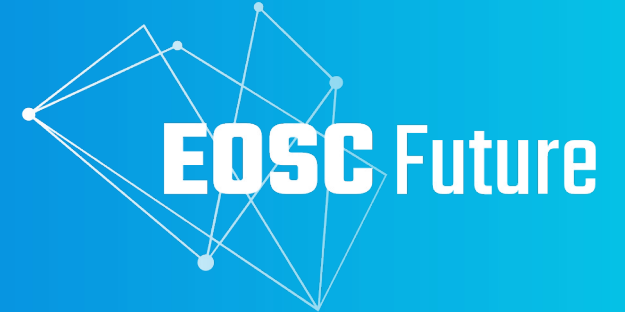
Execution of  
workflow. Visualize  
the results

Publish the results onto  
the Research Graph

The  
end...

Summary of  
how EOSC  
helped

Supplementary demonstrable  
functionality: Helpdesk/Ordering



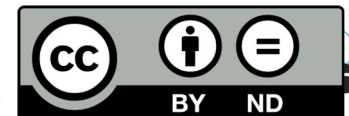
*Thank you for your attention*

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