HORIZON-INFRA-EOSC-2023-01-01 : Build on the science cluster approach to ensure the uptake of EOSC by research infrastructures and research communities (Annex 3)

- **Coordinator**: **ESCAPE** EOSC cluster (CNRS)
- **Budget** : 25 M€ (including 500 k€ per beneficiary, 18 M€ for open calls - projects between 100-250 k€)
- **Beneficiaries**: partners from ESFRI Cluster projects; 2 per cluster. ESRF+DESY for PaN Cluster
- **Open Calls**: all can participate via the open calls
- **Expected outcome/benefits**:
  1. **Consolidate the results of each science cluster on behalf and together with the community**. In the case of **PaNOSC+ExPaNDS** this implies consolidating the projects' outcomes (see table of adoption in next slide)
  2. **Implement the PaN Data Commons with data from all LEAPS and LENS partners**
  3. **Provide guidelines + solutions for implementing FAIR principles for PaN data**
  4. **Act as a data provider in the EOSC and scientific domains**

LEAPS League of European Accelerator-based Photon Sources

PAN DATA COMMONS - CONCEPT

1. **Vision –** create a common space for PaNOSC and ExPaNDS facilities where petabytes of PaNFAIR data, analysis software, notebooks, workflows, and training material can be Found, Accessed (downloaded and/or executed), Re-Used + Improved i.e. FAIR.

2. **Remote access –** the PaN data commons will be accessible remotely while being executed locally (close to the data) or via the EOSC (data needs to be moved).

3. **Remote users** – the PaN data commons will enable and encourage remote users and experiments (urgently required in the post-COVID-19 phase and climate change).
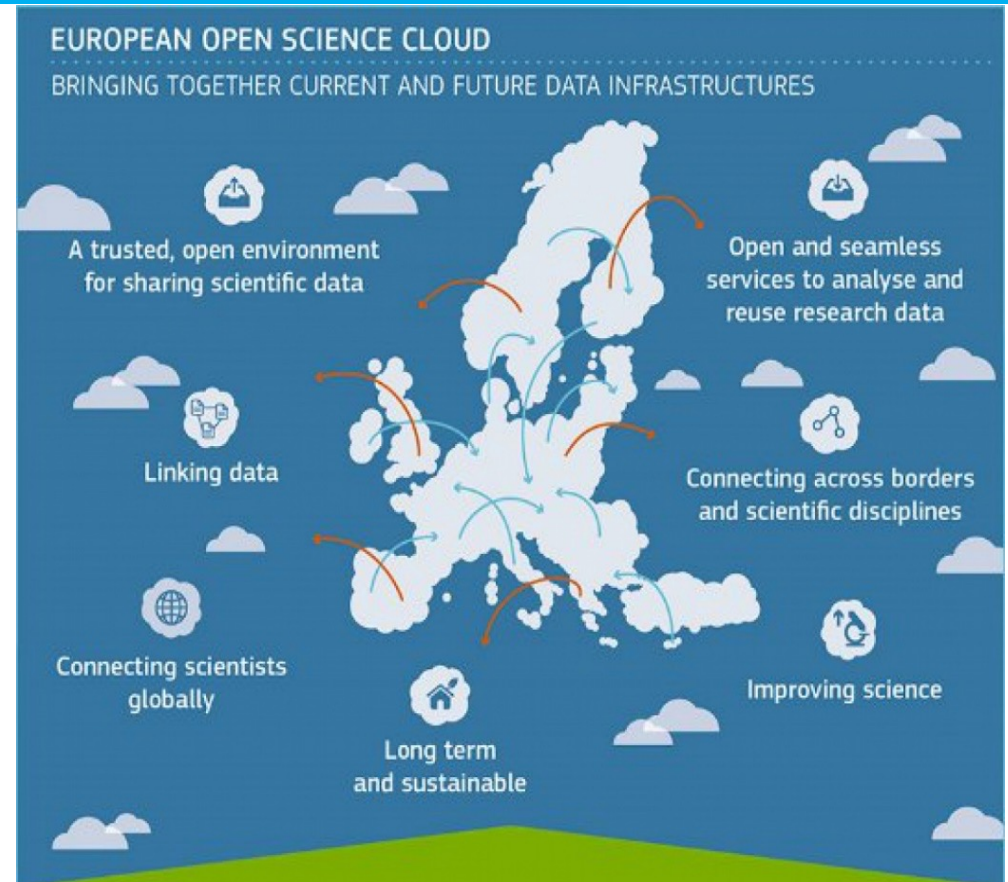
The vision

➢ Bridging todays fragmented and ad-hoc solutions; towards a **federation of data infrastructures**

➢ **FAIR data and services** for data storage, management, analysis and re-use **across borders and disciplines**

➢ Added value for **data-driven science**, reproducible science, interdisciplinary research, digital innovation (EU DSM)

EUROPEAN OPEN SCIENCE CLOUD
BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES

A trusted, open environment for sharing scientific data

Open and seamless services to analyse and reuse research data

Linking data

Connecting across borders and scientific disciplines

Connecting scientists globally

Long term and sustainable

Improving science

Service dimension of the EOSC

The EOSC will provide two million EU researchers with:

- ✓ A catalogue of European research data funded with public money;

- ✓ A catalogue of services to re-use these data;

- ✓ Tools to make their own data open and FAIR;

- ✓ Advanced tools to merge and analyse the data in a secure environment;

- ✓ A simple access gateway to these services (EOSC Portal).

Not a cloud from Brussels, but a research data commons driven by the stakeholders

Your opinion on implementing the EOSC

The survey is closed; you can view here the results as they stand

EOSC declaration 2017

Vienna Declaration 2018

Coalition of Doers

EOSC SUMMIT
12 June 2017 – Brussels
Charlemagne building   Sicco Mansholt Room

European Open Science Cloud
New Research & Innovation Opportunities

EOSC

http://ec.europa.eu/research/openscience/eosc
#EOSC

We've never walked alone in the preparation phase ...

INFRA-2023-EOSC-01-01

1. **PaN community will participate under the name of LEAPS+LENS as PaNCluster**

2. **Proposed Partners for PaN community :**
   > *ESRF (PaNOSC) + DESY (ExPaNDS)*

3. **Funding for PaN cluster:**
   > *1 MEuros for consolidation*
   > *3 MEuros for open calls*

4. **Timeline :**
   1. *23-24 November → proposal writing*
   2. *6 December → Call opens*
   3. *9 March → Call closes*

The European Synchrotron | **ESRF**

1. **What activities do we want to consolidate e.g. (funding 1 MEuros == 2 engineers + 2 managers x 4 years)**

    1. *Open Data Search Portal i.e. PaN Data Commons + PaN Data Lake*
        - **1 full stack developer**
        - **1 data manager**

    2. *Standardised metadata (Nexus+PaNet)*
        - **1 data manager (shared with above)**

    3. *Project management*
        - **1 PaN Open Call manager**

    4. *PaN-training*

The European Synchrotron | **ESRF**

1. **What activities do we want to for open calls e.g. (funding 150 – 250 kEuros == 12 -18 months ~)**

    1. *VISA remote data analysis platform*

    2. *Connecting RI data repository to PaN Data Commons*

    3. *AI/ML algorithms training on Open Data*

    4. *FAIR data sharing and evaluation*

    5. *Your ideas …*

The European Synchrotron | ESRF

PaN Search API with Federated Search Portal

https://data.panosc.eu

Find data on: *covid, alzheimers, protein xyz, dinosaurs, batteries, …*

Götz, Fuhrmann, IRCI BRNO

18/10/2022

What outcomes from PaNOSC + ExPaNDS should be consolidated as part of EOSC?

1. **Open Data + Open Science Policies**
2. **Data Management Plans tools**
3. **Federated Search API + portal**
4. **Nexus/HDF metadata standard + tools**
5. **Data catalogues (ICAT + SciCat)**
6. **VISA remote analysis platform**
7. **E-learning + training platforms**
8. **Umbrellald AAI**

LEAPS facilities uptake of PaNOSC+EXPaNDS outcomes - 2021

	Yes, already adopted (Y)
	Not Planning to be adopted (N)
	In progress of being adopted (WIP)
	Planned to be adopted (P)
	Under evaluation (U)

FACILITY	FAIR data policy	DMPs	DOIs	Nexus HDF5	Search API	Open Data Portal	AAI	Jupyter Lab	VISA	VINYL/OASYS/McStas	Pan-learning/training
ALBA	P	P	WIP	WIP	WIP	WIP	P	Y	WIP	N	U
DESY	WIP	WIP	WIP	Y	WIP	P	WIP	Y	U	Y	WIP
CERIC-ERIC	Y	WIP	Y	WIP	Y	Y	Y	Y	Y	Y	Y
ELETTRA	Y	WIP	Y	Y	Y	Y	Y	Y	Y	Y	Y
ESRF	WIP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ELI-ERIC	WIP	Y	P	Y	Y	Y	WIP	Y	Y	Y	Y
ESS	WIP	Y	Y	Y	Y	Y	Y	WIP	WIP	Y	Y
EuXFEL	WIP	WIP	Y	WIP	Y	Y	WIP	Y	WIP	Y	Y
FELIX	Y	P	WIP	U	U	WIP	U	U	N	N	U
HZB	Y	P	WIP	Y	P	Y	P	U	U	U	U
HZDR	WIP	WIP	Y	N	N	WIP	WIP	WIP	P	N	Y
ILL	Y	WIP	Y	Y	WIP	Y	Y	Y	Y	Y	WIP
MAX-IV	WIP	U	Y	Y	Y	Y	Y	Y	U	U	U
PSI	WIP	WIP	Y	WIP	Y	Y	WIP	WIP	N	N	N
PTB	Y	WIP	Y	WIP	N	Y	N	N	N	N	N
SOLEIL	Y	WIP	WIP	Y	WIP	WIP	Y	WIP	WIP	U	Y
SESAME	WIP	U	P	Y	P	WIP	P	P	N	Y	N

panosc
photon and neutron
open science cloud

ExPaNDS
European Open Science Cloud Photon
and Neutron Data Services