eosc | Federation

Applying GORC to the PaNOSC Node

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RESEARCH DATA ALLIANCE FRANCE

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Ateliers et webinaire
12 au 28 novembre

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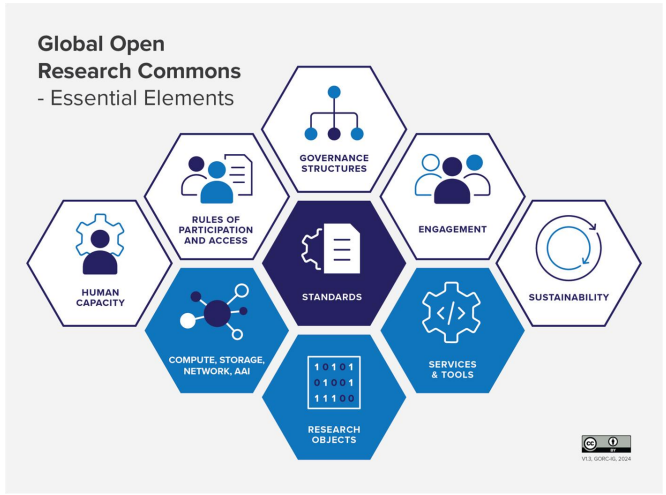
Lundi 17 novembre

panosc

Photon **a**nd **N**eutron **O**pen **S**cience **C**luster

PaNOSC Node

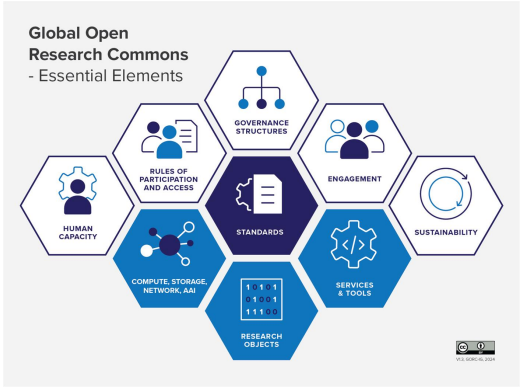
https://eosc.panosc.eu/



PaNOSC - adoption of GORC in 3 steps

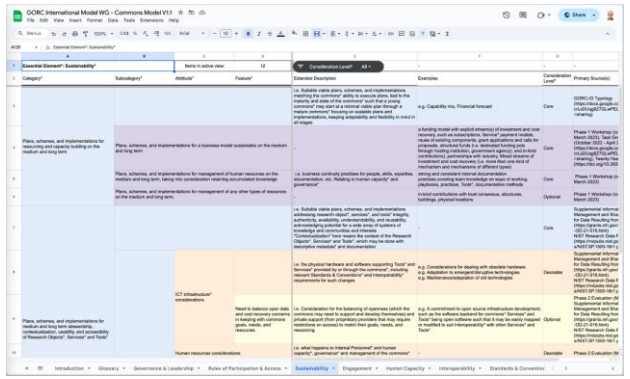
Step 1:

→ Attracted by the GORC diagram we applied the GORC diagram to the PaNOSC Node



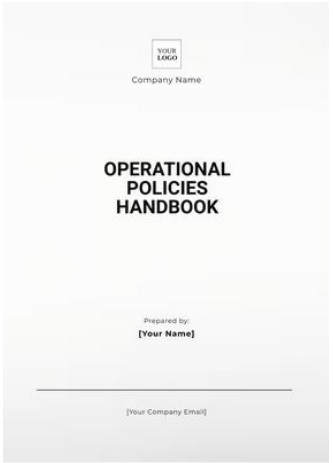
Step 2:

→Digging deeper into the GORC model we have started to apply the GORC spreadsheet tool to PaNOSC

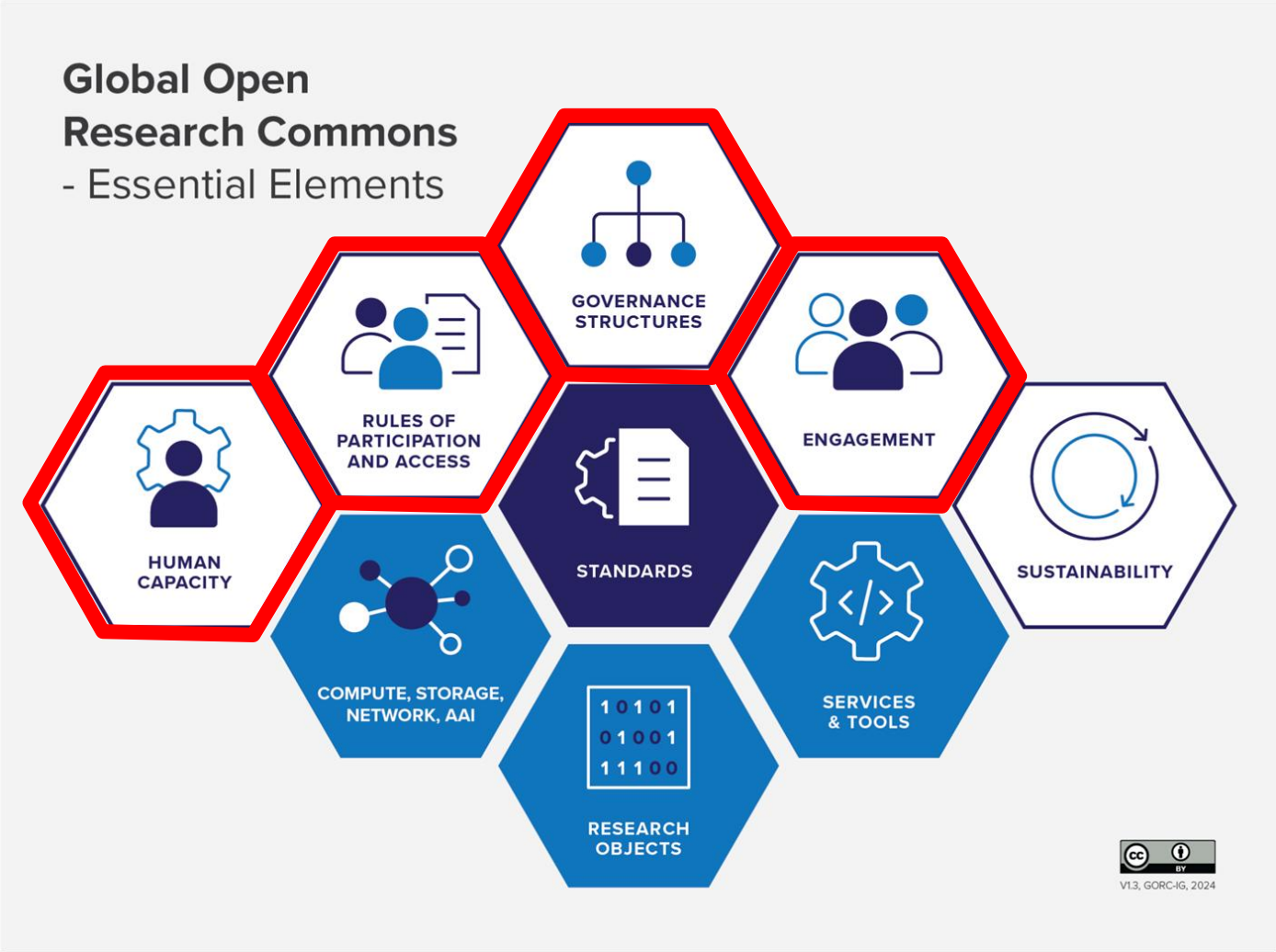


Step 3:

→ Plan to use the GORC spreadsheet to develop the PaNOSC Operation Handbook (WIP)



Governance structures



GOVERNANCE STRUCTURES

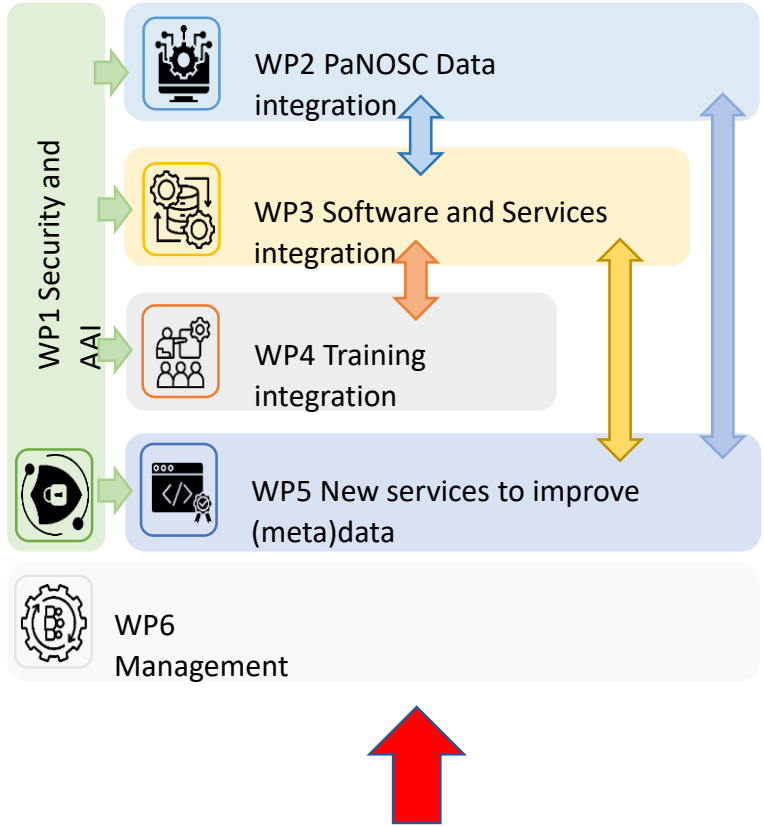
- **ESRF** host organisation
- 10 partners (**HZDR, ESS, ILL, DESY, ALBA, ELETTRA, MAXIV, EUXFEL, PSI, SOLEIL**)

PaNOSC Node Governance, Human Capacity

- Project charter converted to **Project Plan** (followed up in weekly meetings):

- Definition of PaNOSC **Node roles**
  - **Coordinator** (Andy Götz - ESRF)
  - **Operation Manager** (Oliver Knodel - HZDR)
  - **Technical Coordinator** (Erwan Le-Gall - ILL)
  - **Security Officer** (Jean-Francois Perrin - ESRF)
  - **Scientific Officer** (Zdenek Matej - MAX IV)
  - **Communications Officer** (Nicoletta Carboni - CERIC)
  - **Legal Officer** (Renata Gibson - ESRF)

- **Engagement**
  - **Letter of Intent signed by** each institute with ESRF (host)
  - **All partners to participate in work packages**

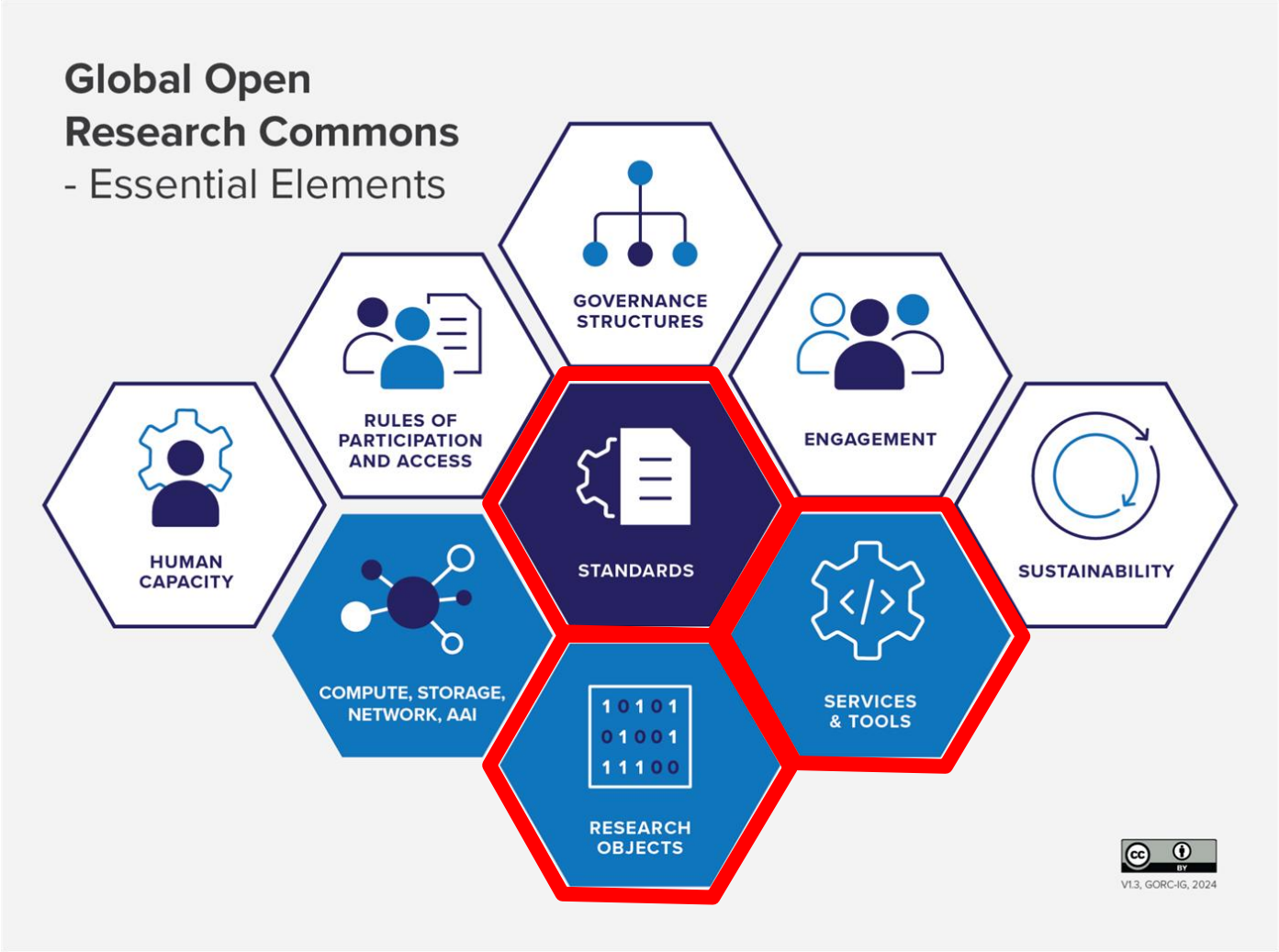


Project Management missing from GORC?

Next steps :

- ESRF will sign the **EOSC Federation MoU** on behalf of the PaNOSC Node
- Partners to agree on **Governance** structure and **Operations** manual
- **PaNOSC MoU** to be signed by all PaNOSC Node partners

Research Objects, Services & Tools



PaNOSC Node main Resource = FAIR data

Data catalogues

- Datasets of all PaN facilities catalogues are indexed by the EOSC Resource Hub (via DataCite)
- Associate the data catalogues to the PaNOSC Node (via OAI_PMH protocol)

Next steps :

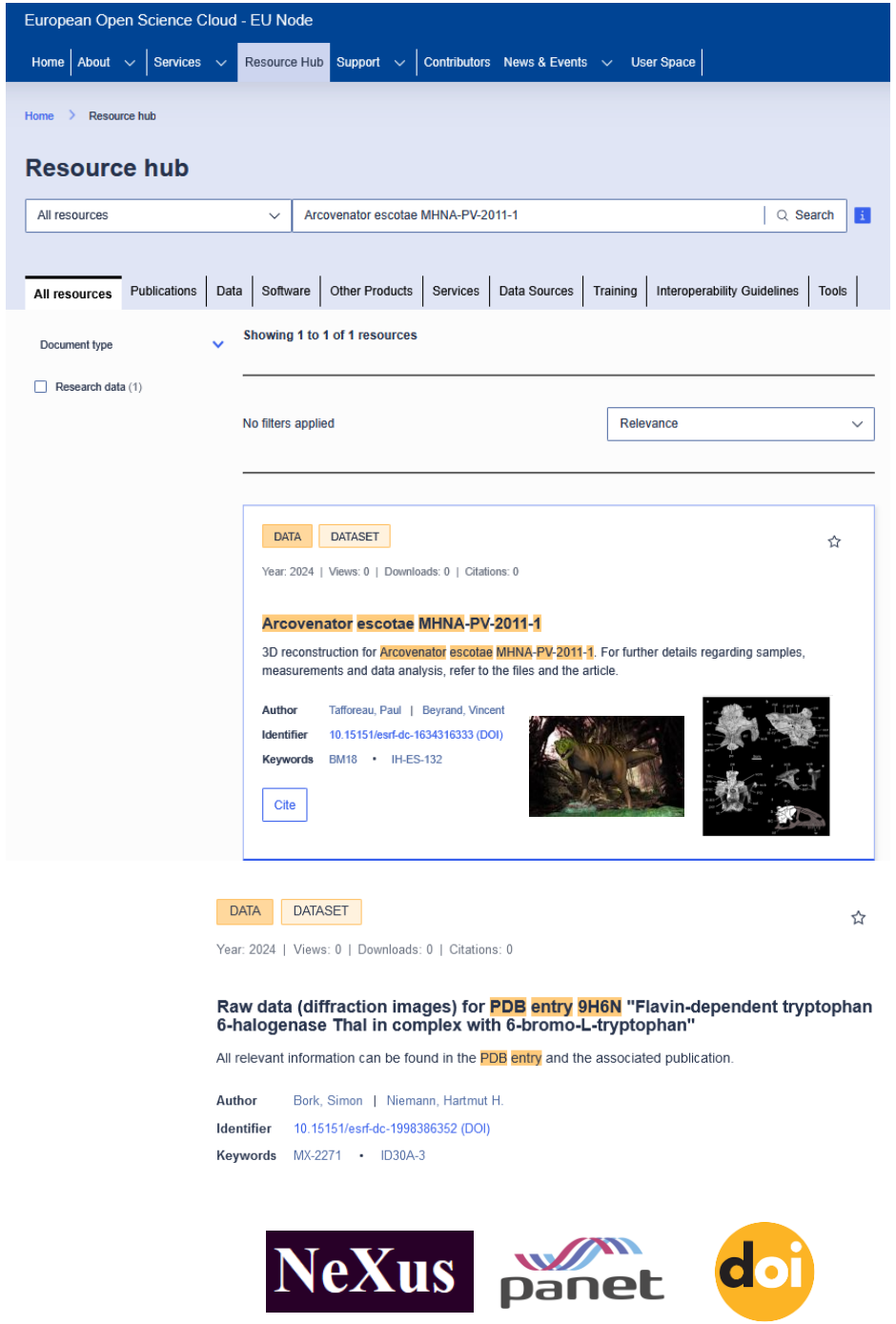
- Link datasets to other community catalogues

Paleobiology Database (PBDB)

ESRF data repository

RCSB PDB PROTEIN DATA BANK

ESRF data repository



NeXus panet doi

PaNOSC Node Resource

- AI-enabled search engine PaN-Finder OSCARS project.
- Federated PaN dataset database

Next steps :

- Integration of EOSC AAI
- Open to other community databases
- PaN-Finder - TRL8 —> TRL9

EUROPEAN SPALLATION SOURCE

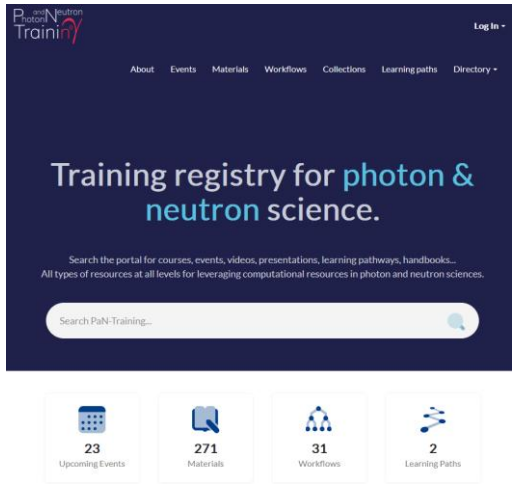
PaNOSC Node Resource

PaNOSC Training catalogue:

- Common PaN training resources
- Based on TeSS platform from Elixir

Next steps

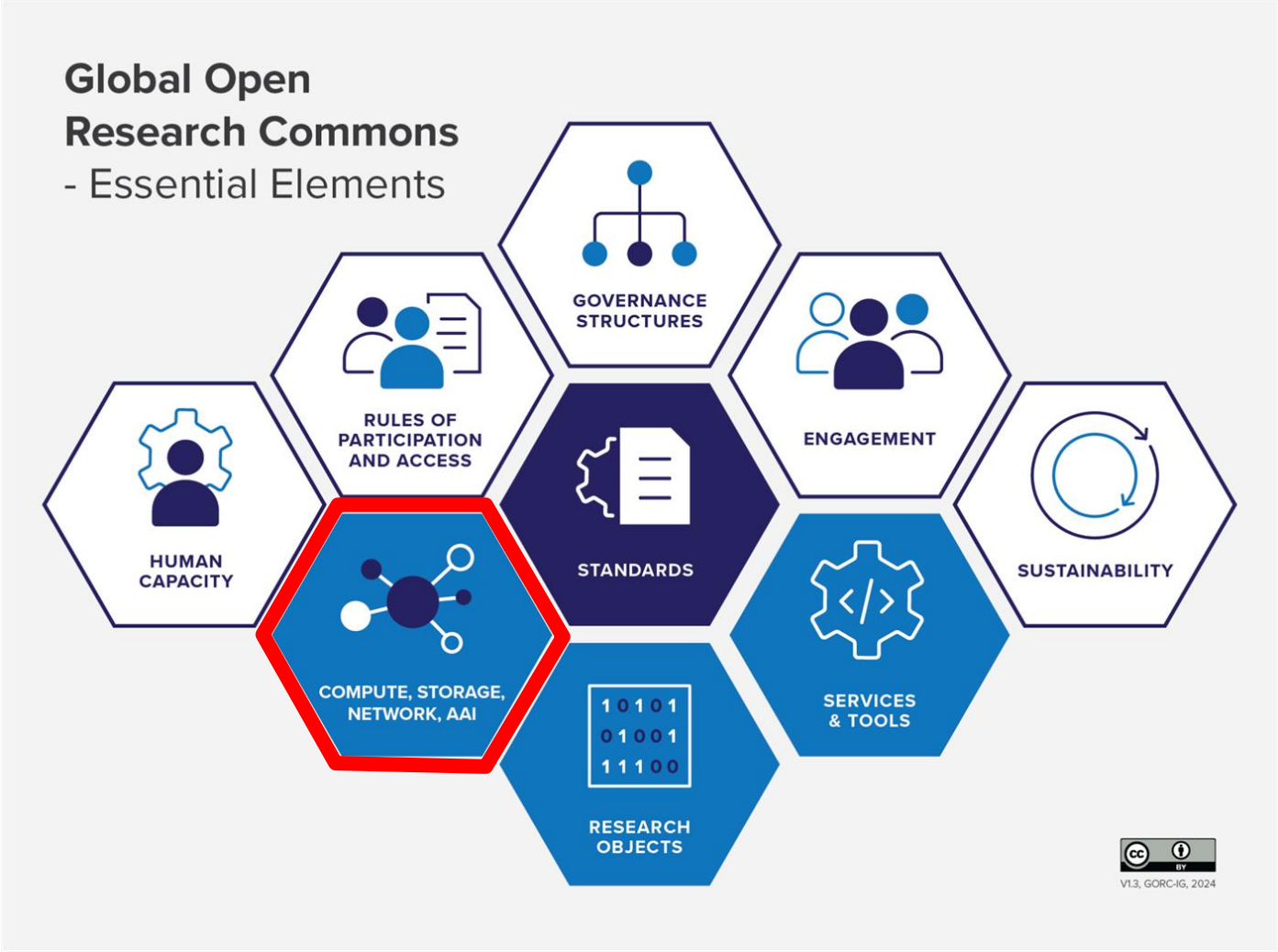
- Federation with other TeSS catalogues



https://pan-training.eu/ ,
https://tesshub.hzdr.de

HELMHOLTZ ZENTRUM DRESDEN ROSSENDORF

Compute, Storage, Network, AAI



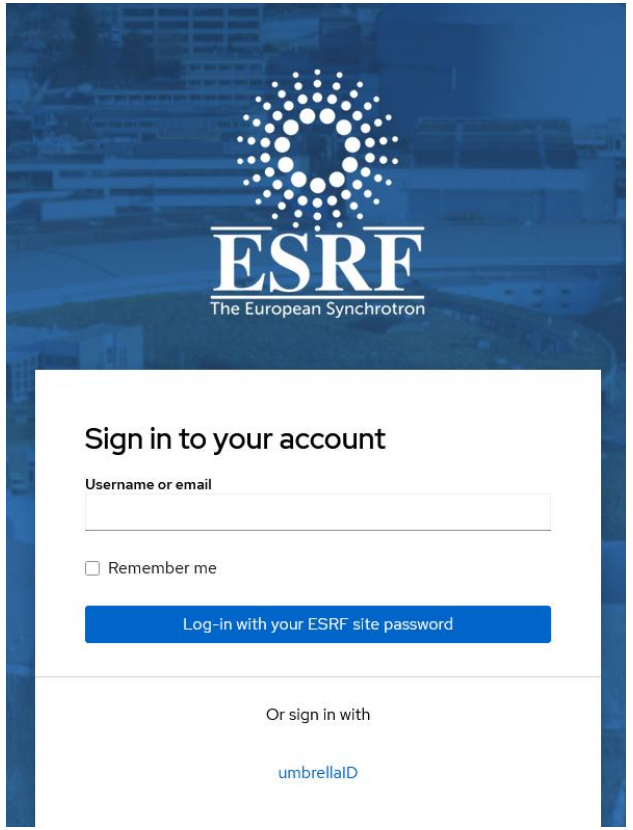
PaNOSC Node capability - AAI

PaNOSC AAI service

- Provides user with an SSO experience with EOSC AAI
- User Group management
- Collaboration with GEANT (AAI provider for EOSC EU Node)
- UmbrellaID integrated successfully in summer 2025 with EOSC AAI (acceptanc environment)

Next steps

- Move the Community User ID to the *Subject Identifier* provided by the EOSC AAI
- Move to MyAccessId



EOSC AAI Architecture 2025
https://zenodo.org/records/15388270

ESRF The European Synchrotron

tech lead

PaNOSC Node capability – Computing

PaNOSC VISA - Virtual Research Environment:

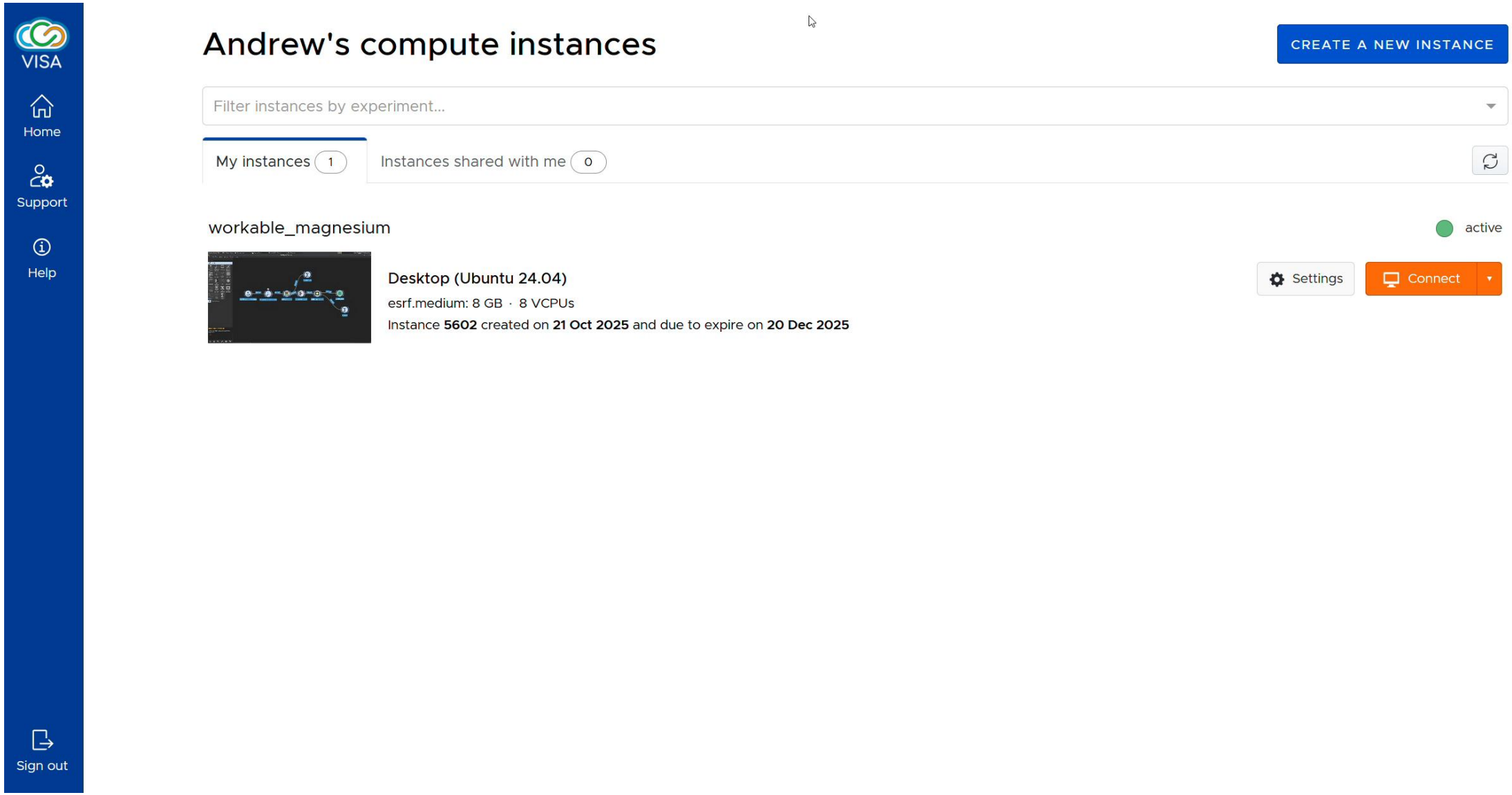
- Developed at ILL, runs on OpenStack (same as EU Node)
- Provides VM for remote data analysis with access to **(huge) experimental data**
- Provides VM with desktop and pre-installed software.
- Partners have signed an MoU to collaborate.
- Help desk provided by each facility like for most community services

https://visa.esrf.fr

Next steps :

- Integration of EOSC AAI
- Define a common access policy for EOSC Users.
- Interest in the Integration of the federation credits system

PaNOSC Node capability – Computing



PaNOSC VISA - Virtual Research Environment:

SPALLATION SOURCE

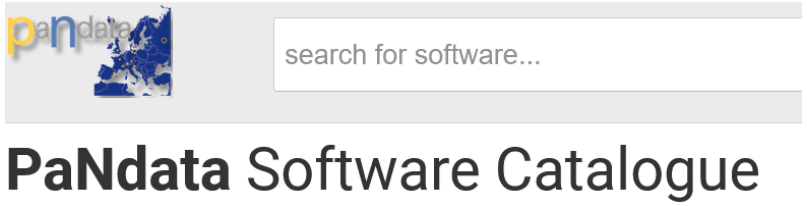
PaNOSC Node Resource - Software

PaNOSC CVMFS service:

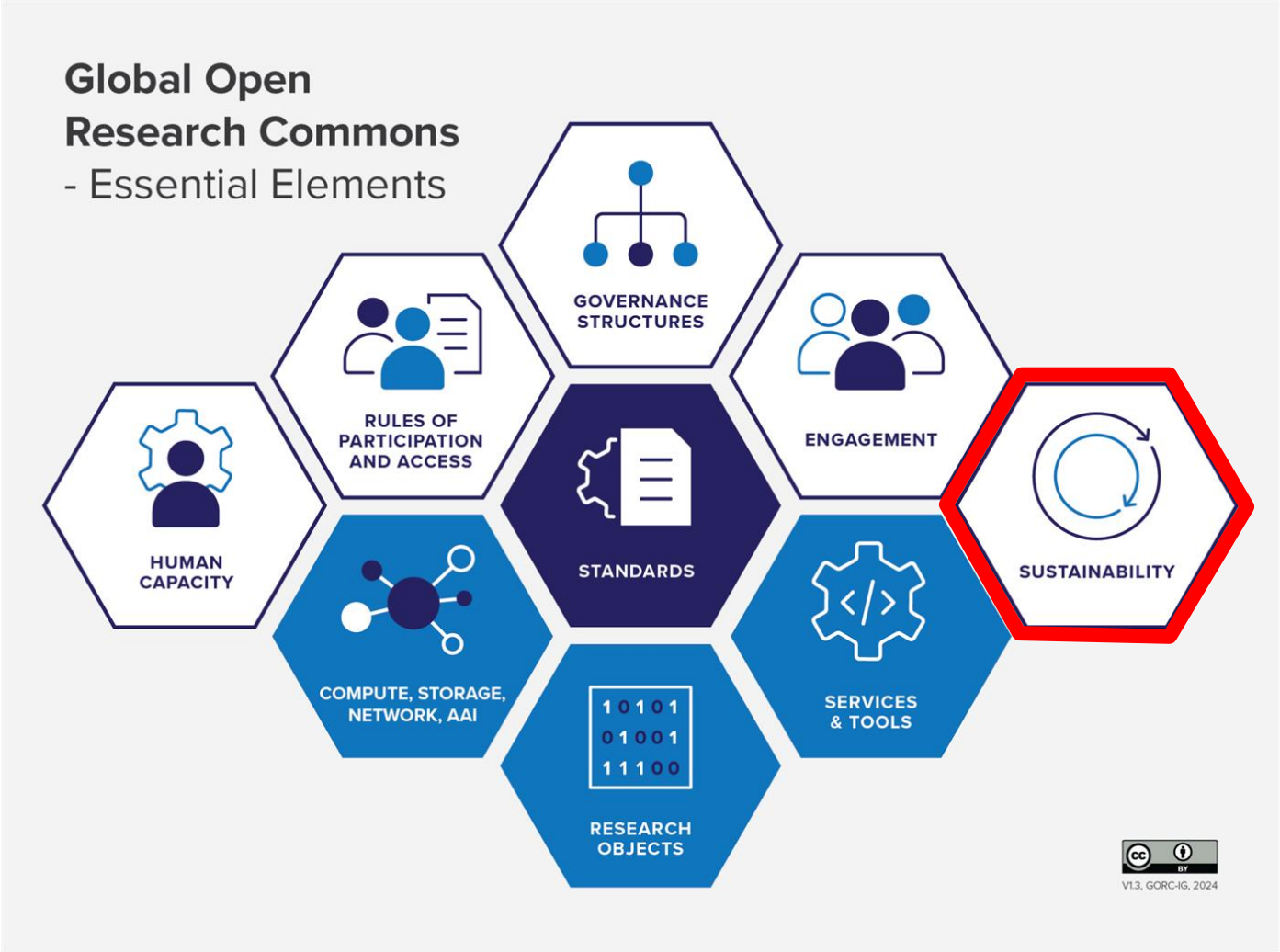
- PaNOSC **packages software** for CVMFS (CERN Virtual Machine File System) as containers or modules
- ~100 software packages already
- Shared with other PaN facilities

Vision:

- Share software packages with other EOSC Federation nodes
- Provide CVMFS as a transversal service in the Federation
- Integrate in SW catalogue
- Establish a trust framework.



Sustainability



PaNOSC Node Sustainability

Vision:

- Work together to provide data and services which provide added value to users + researchers
- **Make FAIR data a permanent resource** managed at and by the PaNOSC partners

Sustainability:

- **PaNOSC services integrated in the operation of the PaNOSC facilities**

PaN umbrella organisations:

- LEAPS - https://www.lens-initiative.eu/
- LENS - https://lens-initiative.org/
- All PaNOSC Partners are members of these organisations working together

Funding:

1. PaN facilities have received **~22 million euros** from INFRA-EOSC projects (PaNOSC, ExPANDS, OSCARS, FIDELIS)
2. EU projects + federation can help develop the PaNOSC Node further

LEAPS

LENS LEAGUE OF ADVANCED EUROPEAN NEUTRON SOURCES

Conclusion

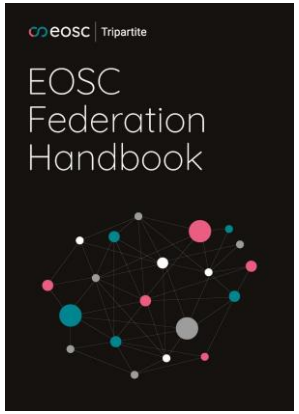
Impact of applying GORC to the PaNOSC Node:

1. **Helps improve the structuring of the PaNOSC Node**
2. **Adopting a common standard makes it interoperable**
3. **Helps providers and funders to sustain the PaNOSC Node**

GORC brings **a common approach** into the **EOSC Federation** for creating, documenting and federating **EOSC Nodes**

→**Proposal: GORC** to be **adopted by all EOSC Nodes** and added to the EOSC Federation Handbook as a recommendation for Nodes

→**Todo: provide training** on how to apply GORC



EOSC Nodes need a step-by-step guide on how to adopt GORC