Photon and Neutron Open Science Cluster + EOSC

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Questions d'Etienne Augé

1. *Quelle méthode pour préciser les besoins de la communauté des utilisateurs en matière de partage des données ?*

2. *Comment définir des services pour satisfaire ces besoins ?*

3. *Ces questions ont été abordées depuis plusieurs années dans le cadre de plusieurs projets européens EOSC. Quelles perspectives pour une vision plus globale (dans le cadre d'OSCARS ?) et quelles évolutions à court et moyen terme ?*

4. *Quel accompagnement des utilisateurs pour développer/généraliser l'usage de ces services ? et comment faire évoluer ces services (amélioration continue)*

5. *Quelle organisation de la structure? Quel rôle actuel ou potentiel pour les institutions françaises ?*

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Questions d'Etienne Augé

1. *How can we define the user community's needs in terms of data sharing?*

2. *How can services be defined to meet these needs?*

3. *These questions have been addressed for several years within the framework of several European EOSC projects. What are the prospects for a more global vision (within the framework of OSCARS?) and what are the short- and medium-term developments?*

4. *How can users be supported to develop/generalize the use of these services? And how can these services be developed (continuous improvement)?*

5. *How should the structure be organized? What is the current or potential role for French institutions?*

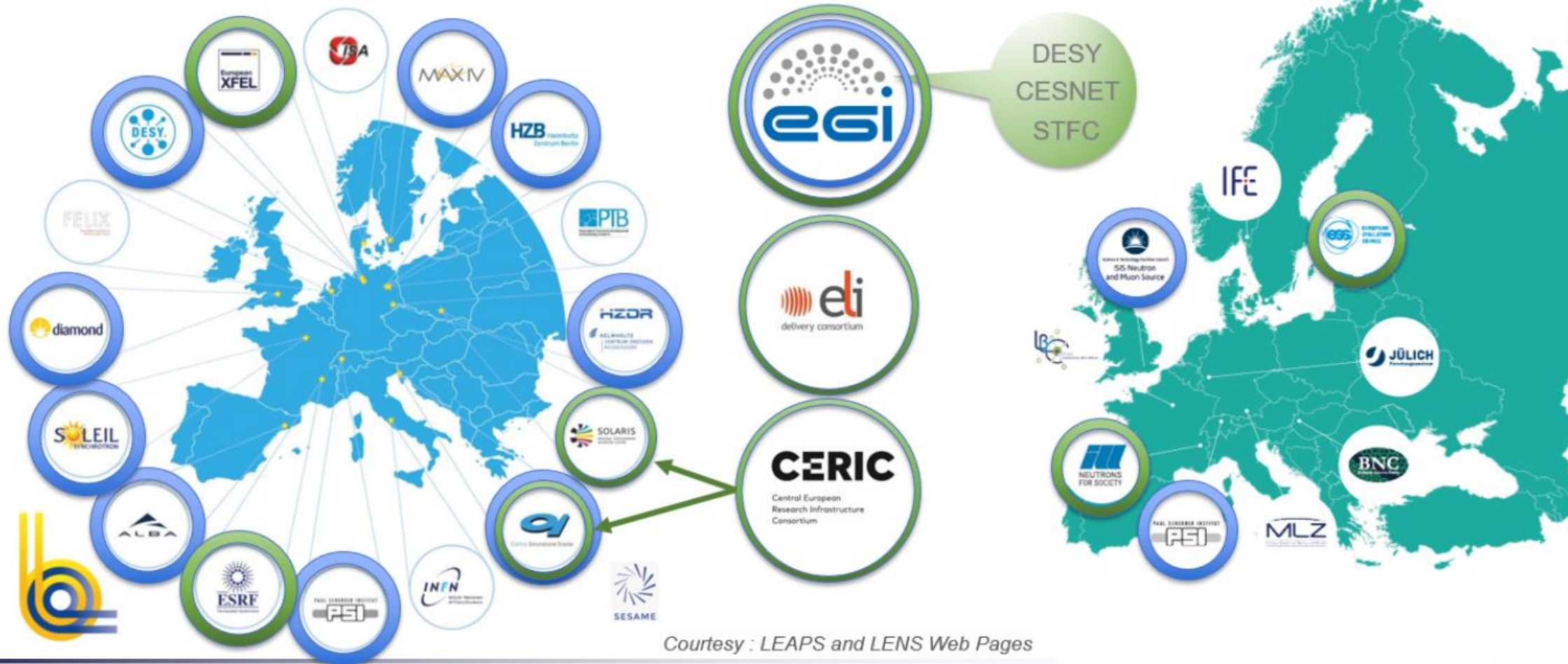*Translated with www.DeepL.com/Translator (free version)*

ExPaNDS and PaNOSC in the PaN EU RI landscape

Photon (LEAPS) · eosc · Neutron (LENS)

Courtesy : LEAPS and LENS Web Pages

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The EOSC Lustrum
5 years of EOSC developments

universität
wien
Universitätsbibliothek

19 October 2023
All about everything.

PaNOSC lustrum – 5 years of PaNOSC

PANOSC: the photon and neutron open science cloud

- Photon and Neutron FAIR Data Commons: PaN Data Portal - https://data.panosc.eu
- FAIR data policy and DMPs → 90% of PaN RIs (15)
- Standardised metadata (Nexus/HDF5) → ALL PaN Ris (18)
- Federated search API for data catalogues → 8 PaN RIs
- Open Data portal for FAIR data → 8 PaNs RIs
- Community AAI UmbrellaId → 90% PaN RIs (15)
- JupyterLab notebooks service → 90% PaN RIs, 100s users daily
- Nexus/HDF5 web visualization → ALL PaN RIs, 1000s worldwide
- Remote data analysis with VISA → 8 PaN RIs, 100s users monthly
- Simulation software (ViNYL) → 4 PaN RIs, 10s users monthly
- PaN-learning platform (pan-learning.org) → 100s users monthly

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PaNOSC lustrum – next 4 years of PaNOSC

PANOSC: the photon and neutron open science cloud

- **Photon and Neutron FAIR Data Commons**: OSCARS
- **FAIR data policy and DMPs** → 50% FAIR
- **Standardised metadata** (Nexus/HDF5) → OSCARS + PaN RIs
- **Federated search API for data catalogues** → OSCARS
- **Open Data portal for FAIR data** → OSCARS
- ~~Community AAI UmbrellaId~~ → replace with EOSC AAI
- **JupyterLab notebooks service** → PaNOSC service
- **Nexus/HDF5 web visualization** → PaNOSC service
- **Remote data analysis with VISA** → OSCARS
- **Simulation software (ViNYL)** → PaN RIs
- **PaN-learning platform (pan-learning.org)** → OSCARS
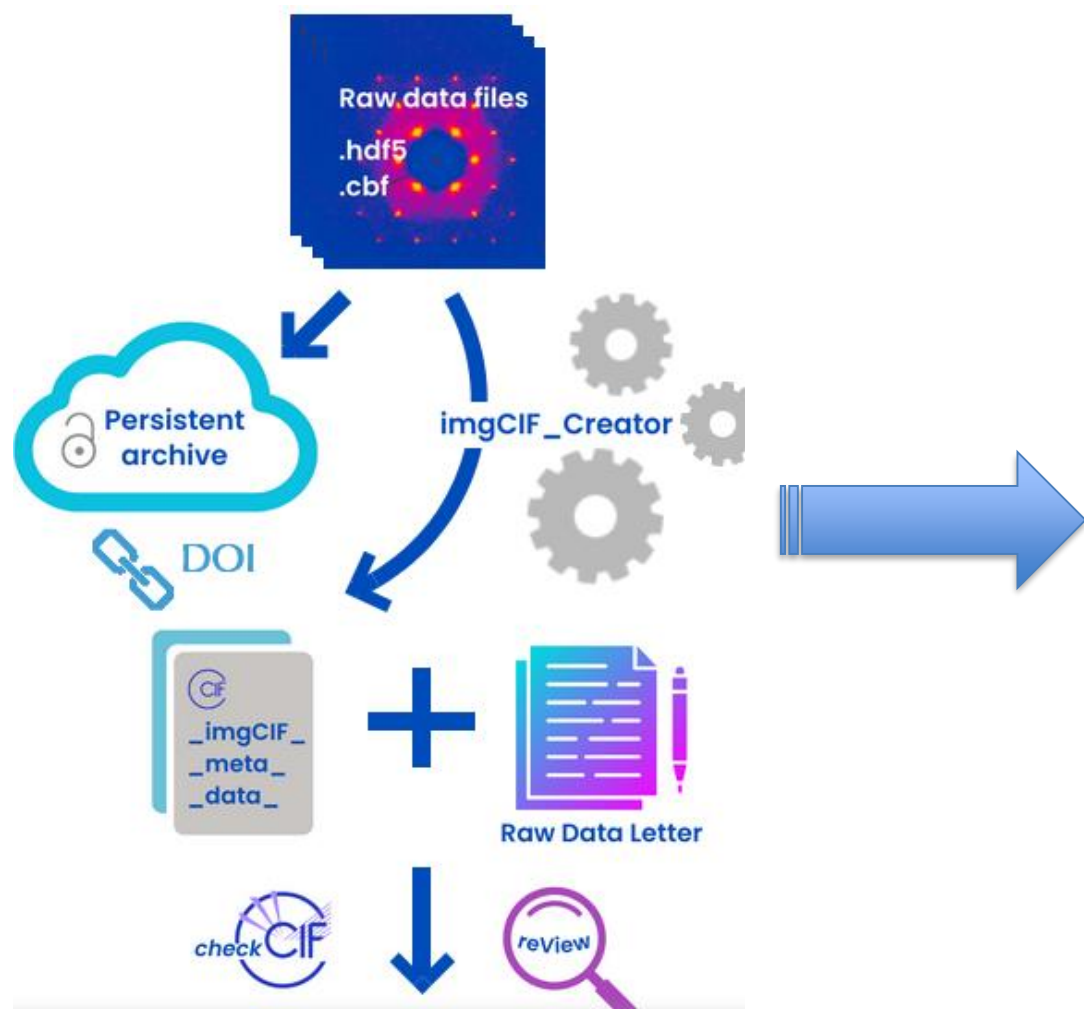
PaNOSC - OSCARS Open Calls

Answer to Q1 & Q2

- The **very positive response** to **OSCARS Open Calls** showed that **Open Science** is becoming a **grassroots movement** amongst photon and neutron scientists

- Examples of Categories :
  - **Data repositories**
    - Cultural heritage, paleontology, ...
  - **Metadata standardisation**
    - Sample metadata
  - **FAIR data tools**
    - Verification tool for publishers
  - **Databases** – essential for reference training data for AI and data processing

OSCARS Open Call project MC-Redd – working with IUCr Journals publisher
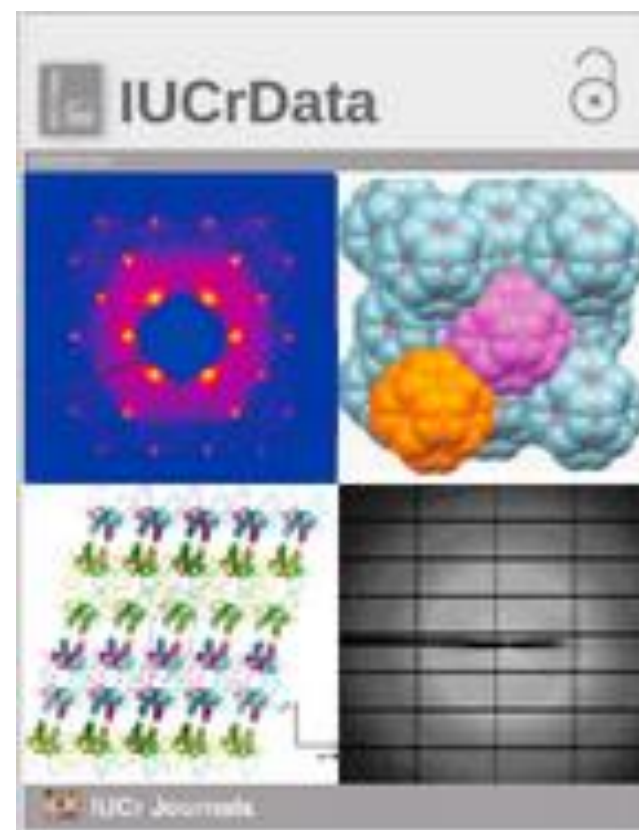
OSCARS Open Call projects AmbCat / SHARE / …

Domain specific data portals similar to https://paleo.esrf.fr or https://human-organ-atlas.esrf.fr

EOSC / PaNOSC needs an EOSC Knowledge Base

Answer to Q3

- Many EOSC projects have generated very useful outputs but which are difficult to find and exploit / get help with

- Examples where PaNOSC has questions:
  - **Ontologies**
    - How to build an ontology for our domain
  - **Data citation**
    - How to track data citations + reuse
  - **Data interoperability + reuse**
    - How to practically implement the other 50% of FAIR

- **Knowledge Base** – we need an EOSC Knowledge Base (AI can help) !

OSCARS Competence Centres

- **A CL**uster **O**pen science **C**ompetence **C**entre **(CLOCC)** is a **virtual hub** dedicated to fostering research excellence through **training** and **knowledge transfer.** The CLOCCs are **community-based initiatives** supported by a **collaborative network of people** in the context of the **Science Clusters** providing **expertise, best practices** and **services in** relation to **Open Science,** and the promotion of **cross-disciplinary collaboration.**

OSCARS Competence Centres

Acknowledgements - Jordi Bodera (ESRF) WP1 co-leader

- There will be **5 independent Competence Centres** (one per Science Cluster).

- OSCARS WP1 has **185 PMs for** Cluster Open Science Competence Centres.

- WP1 has the following objectives:
  - **Fostering Community-based Competence Centres (CCC).**
  - **Support formation and initial operation of the CCCs.**
  - **Promoting and strengthening intra-cluster collaboration to conceive collaboration across the five corresponding CCCs.**

EOSC Federation Handbook - Phase 1
Handbook Writers proposal for structure of Federation
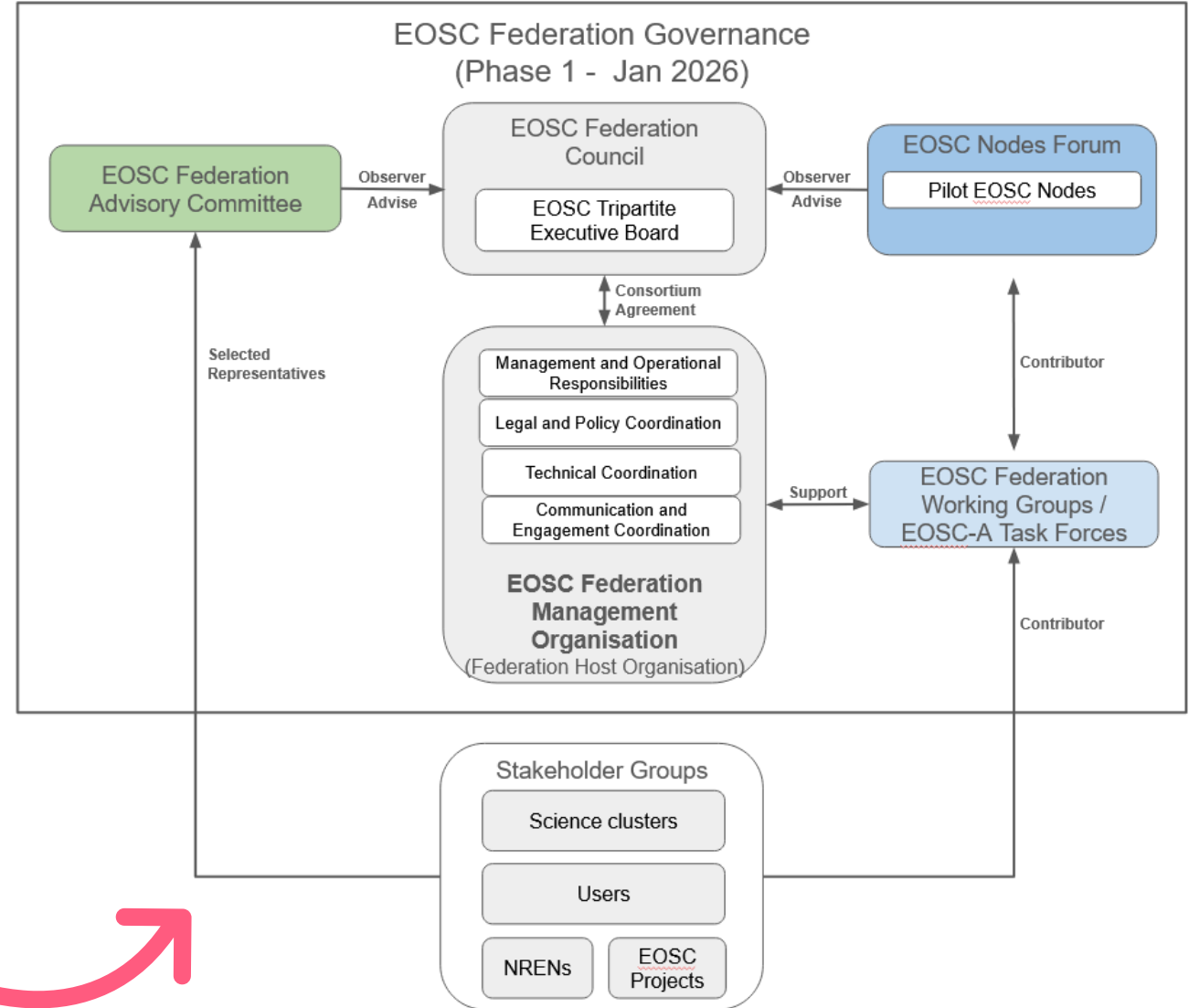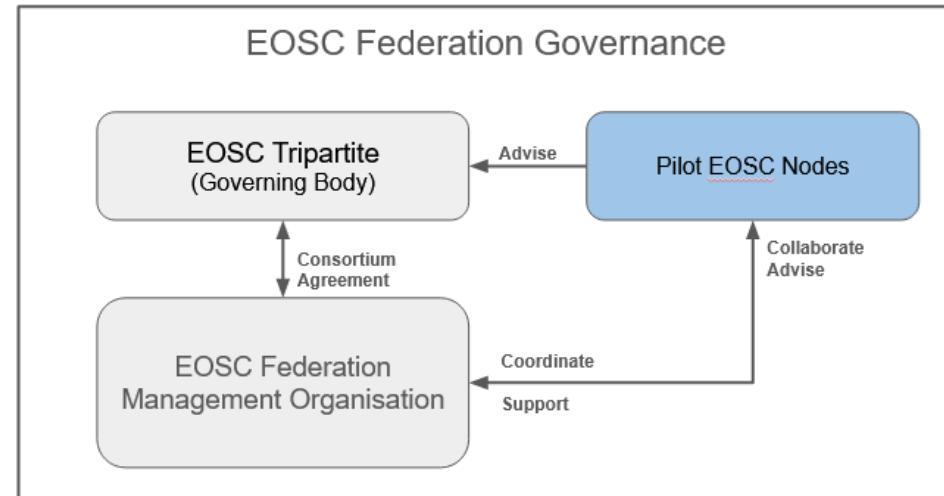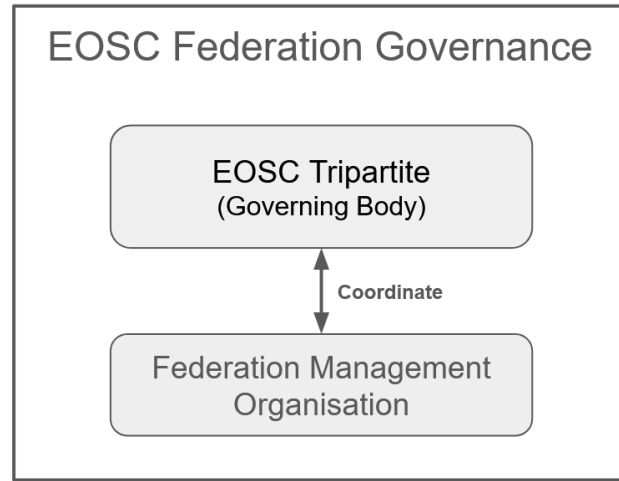
EOSC needs a federated Governance structure

Answers Q4 + Q5

- **Building** the **EOSC Federation** needs to evolve to be more inclusive to ensure **strong engagement** from **stakeholders**

- The **solution** is to develop the **governance** and **guidelines collectively** e.g. the writing of the **Handbook** needs to be continued as a collective process

- **PaNOSC** is committed to providing **data and services** to EOSC to build a an **EOSC Node to** help and support the grassroots movement driven by **scientists**

- Scientists will get help from EOSC to **build connections to new communities** to do **more and better science**

- We need to **combine grassroots efforts** with the **top down approach** (i.e. Tripartite + the EU Node)

We need to avoid this …