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Session B - Embedding Training and Engagement into the EOSC Federation

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EOSC Winter School 2026, Track 3 Competencies and Training
28 January 2026, Nice

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Introduction

Short Presentations Agenda

- **Oliver Knodel** (PaNOSC, mTeSS-X),
- **Gilles Mathieu** (French CC),
- **Emma Lazzeri** (Italian Node)

Introduction

Session B World Café - Organisation and Questions

- **Each table will discuss both themes** during separate time slots.
- **Discussion themes**
  - *Competence Centres and the EOSC Federation*
  - *Training Catalogue and Resource Discovery*
- **Facilitation**
  - Each table will have **one facilitator** responsible for:
    - Ensuring the rules are understood and followed
    - Keeping time
    - Supporting an inclusive and focused discussion
- **Rapporteur**
  - Each table will nominate **one rapporteur** who will:
    - Take notes during the discussion
    - Present the table's key points to the plenary at the end of the session
- **Shared slide deck**
  - A shared slide deck is provided to support discussion and note-taking and includes:
    - **One slide** with the theme and guiding questions (used for note-taking)
    - **One slide** to summarise the discussion in bullet points
- **Timing per theme**
  - **15 minutes** to discuss the theme, using the three guiding questions and taking notes on the *Questions* slide
  - **5 minutes** to wrap up and complete the *Summary* slide
- **Plenary reporting**
  At the end of the World Café, **10 minutes** are allocated for rapporteurs to report back to the plenary, using the summary slides.

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Track 3: Competencies and Training

Questions for the World Café - Competence centres

- What are the roles in CCs? What would a ranking list look like, which role/s are absolutely essential, which ones are “nice to have”?
- What should be the main role of Competence Centres in the EOSC Federation/relation with the EOSC Nodes?
- What are the main barriers to the uptake of Competence Centres in EOSC? What concrete actions and collaborations are needed to overcome these barriers and deliver real benefits in skills and training?

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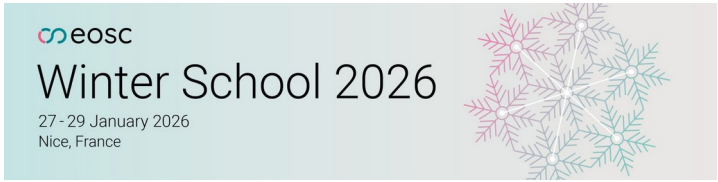

Track 3: Competencies and Training

Competence centres - Notes table 1

- CC role: providing material and training, giving feedback to services, technical infrastructures, CC are bridges to researchers, institutional data stewards often expands into broader research support, not limited to data management, seen as a linking point
- Need for communicators, science communication officers can build the bridges between communities and roles (researchers, support, governance)
- Data stewards can speak the language of researchers and also have technical skills that researchers do not and cannot obtain
- CCs act as a hub to direct questions to the right people who can answer them
- Importance of domain specific CC that can still work domain agnostic topic
- Different level of support
  - First level: institutional (research support staff, data curators,..) they reach everyone
  - Second level: national/domain create content, methodology
- Missing competences: ability facilitate, coordinate, inform the local community (institutional, national, ...)

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Track 3: Competencies and Training

Competence centres - Notes table 1

- CC as hub that coordinates the resources that can be easily reused locally (institutional level)
- Roles: content creator, content curator,
- CC and the EOSC nodes: the CC is linked to the community of reference of the node
- EOSC Node and CC: The CC can be integrated in the EOSC Node, The node can bring the technical solution (eg: catalogue of training resources) and the CC brings the skills (soft part)
- CC needs to have a recognised role within the EOSC Node so that the CC as a whole is recognised, not only one person
- CC can help in identifying the needs of researchers and users
- need to recognise the role of skills&competence manager in the list of EOSC node roles in the handbook
- Each node is build on pillars (functions):
  - IT infrastructure (provide the structure of the node)
  - Services (community)
  - CC (makes sure users can use the node resources)

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Track 3: Competencies and Training

Competence centres - Notes table 2

- Roles in CC ?
  - Trainers
  - Skilled personnel/experts (Data stewards, data curators…)
  - Training resource providers
  - Authority / link to governance
  - Event organisers / community managers
  - operational coordinator
  - Quality assurance of materials
- Role of CC in the federation & link to nodes ?
  - CC should be a mandatory core service
  - CC is actually a federating capability
- Barriers & concrete actions ?
  - Putting the training/competence centre subject at the heart of the Federation
  - Common methodology & quality assurance for training resources

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Track 3: Competencies and Training

Competence centres - Notes table 3

Role of CC:

- Federating different communities
- Different roles
- Voluntary role from different stakeholders (e.g. in training)
- Inclusive approach

The case of France: national CC (Research Data Gouv) supported by the Ministry (a political mandate)

Activities: user stories, thematic activities, train the trainers

15 volunteers

Topics: Data, AI, ...

Question: What is the purpose of the CC? For data, for OS, for EOSC... for what?

Example for PT: Train the trainers programme (publications, data management in general...)

Who decides what are the competencies to be covered by the Centre?

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Track 3: Competencies and Training

Competence centres - Notes table 3

North Macedonia: Formal recognition of a CC for Open Science (University based).

Barriers: Funding, Resources

Relation with the Nodes:

More facilitated in case it is the same organisation (CC+Node) - North Macedonia

Sustainability: the Nodes need to train people/users, so a CC could be integrated in the Node - France

Is a national approach needed?

Training users and suppliers - Onboarding services

3 main takeaways:

1) **Sustainability from start**
2) **Understand the reasons to build competences (CC need to think what they offer and why they are offering)**
3) **National context / approach matters and is needed**

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Track 3: Competencies and Training

Competence centres - Summary table 3

- **Sustainability from start**
- **Understand the reasons to build competences (CC need to think what they offer and why they are offering)**
- **National context / approach matters and is needed**

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Track 3: Competencies and Training

Questions for the World Café - Training catalogues

- Which training and skills-based services/resources are most needed, and how can the Federation better support their development and delivery?
- Is training findable at the moment/do we need to agree on one training platform? What would be the best way to catalogue existing training to make sure it is accessible? Or does it need people to point to relevant training in any case? Is that one role for the CCs?
- What are the main barriers to the uptake of skills related services in EOSC? What concrete actions and collaborations are needed to overcome these barriers and deliver real benefits in skills and training?

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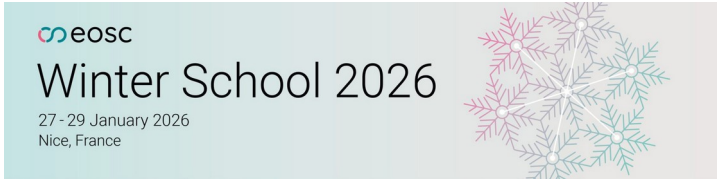

Track 3: Competencies and Training

Training catalogues - Notes table 1

- Need to differentiate the catalogues (node catalogue is not the training catalogue)
- Training catalogue needs to have different metadata to allow resources to be findable. It could then be listed in the service catalogue of the node as a service
- Also important to create links
- Importance of curation
- Content needs to match the needs of researchers: legal, management, communication (also to policymakers, governance of research organisations)
- Different versions of the same content (social media posts, infographics, short read, deeper content....)
- Platforms: we need many platforms and then a single catalogue with metadata. This needs a common agreement of a minimum set of metadata

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Track 3: Competencies and Training

Training catalogues - Notes table 2

- Most needed services/resources
  - Technical questions about the platforms/services
  - Basic knowledge about FAIR & CARE principles & data management in general
  - Global methodologies (Training the trainers, FAIRbyDesign…)
- Training findability
  - material might be centralised, but skills are not
  - deal with training material the same way we deal with data
  - FAIRbyDesign !!
  - Minimal metadata
- Barriers & ideas
  - Rating system in catalogues
  - Flexibility of the system depending on your target community
  - Need to be where the people are - local

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Track 3: Competencies and Training

Training catalogues - Notes table 3

How to make resources findable? No solution materialised. We cannot find the resources…

We should have catalogues of training

Do we need an entry point?

We need to have locally trained people.

Metadata format

Curation

Barriers (to skills related services): Deliver training ? reducing fragmentation

Key takeaways:

A central point to access resources but not one catalogue

The Handbook needs to provide guidance on sharing training resources

This will help reduce duplication - start with what is there

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Track 3: Competencies and Training

Training catalogues - Summary table 3

- **A central point to access resources but not one catalogue**
- **The Handbook needs to provide guidance on sharing training resources**
- **This will help reduce duplication - start with what is there**

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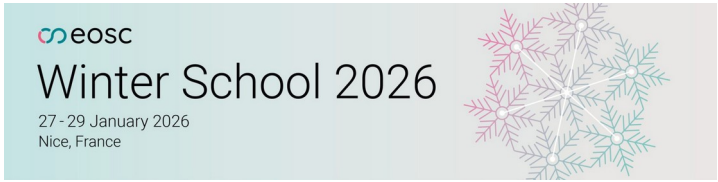

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Physical Sciences & Engineering

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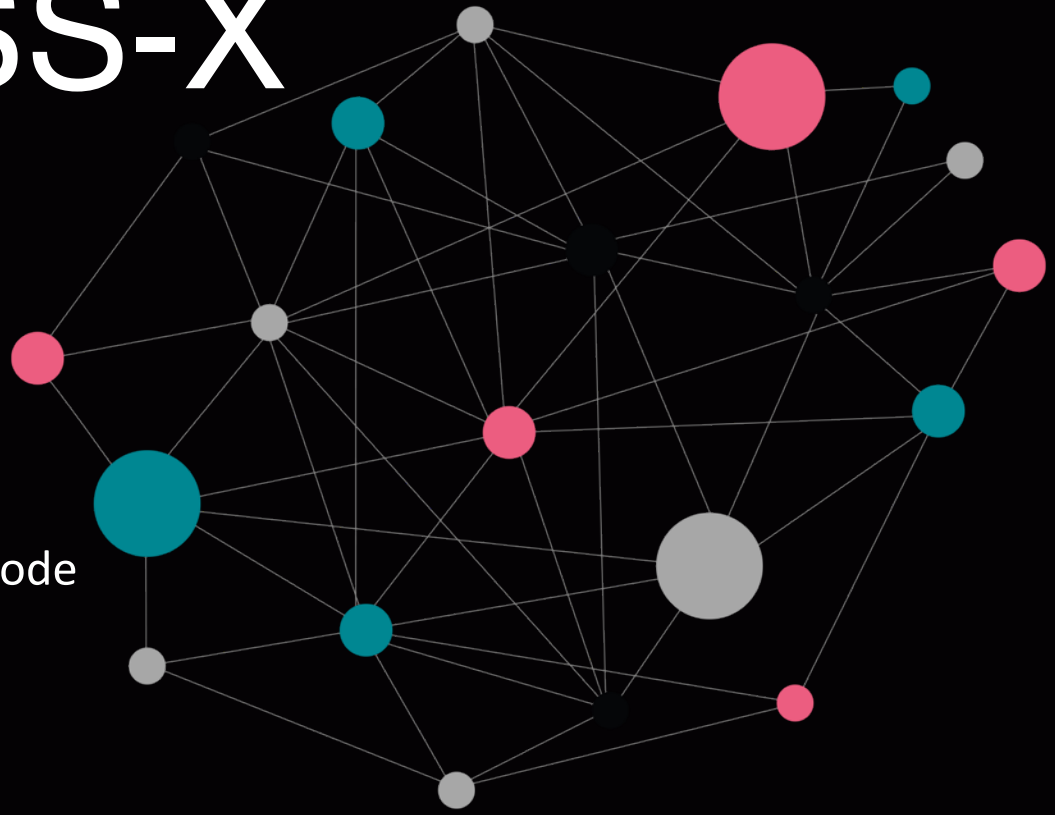
PaNOSC and mTeSS-X

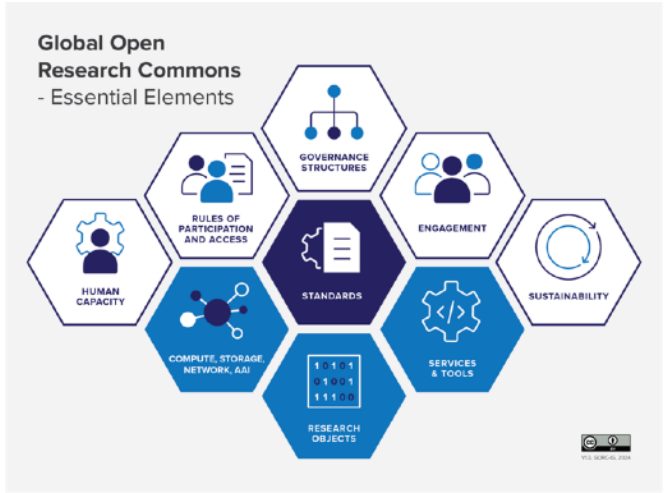


Oliver Knodel (o.knodel@hzdr.de), Operation Manager PaNOSC Node
Helmholtz-Zentrum Dresden-Rossendorf (HZDR)

EOSC Winter School, Nice, January 2026

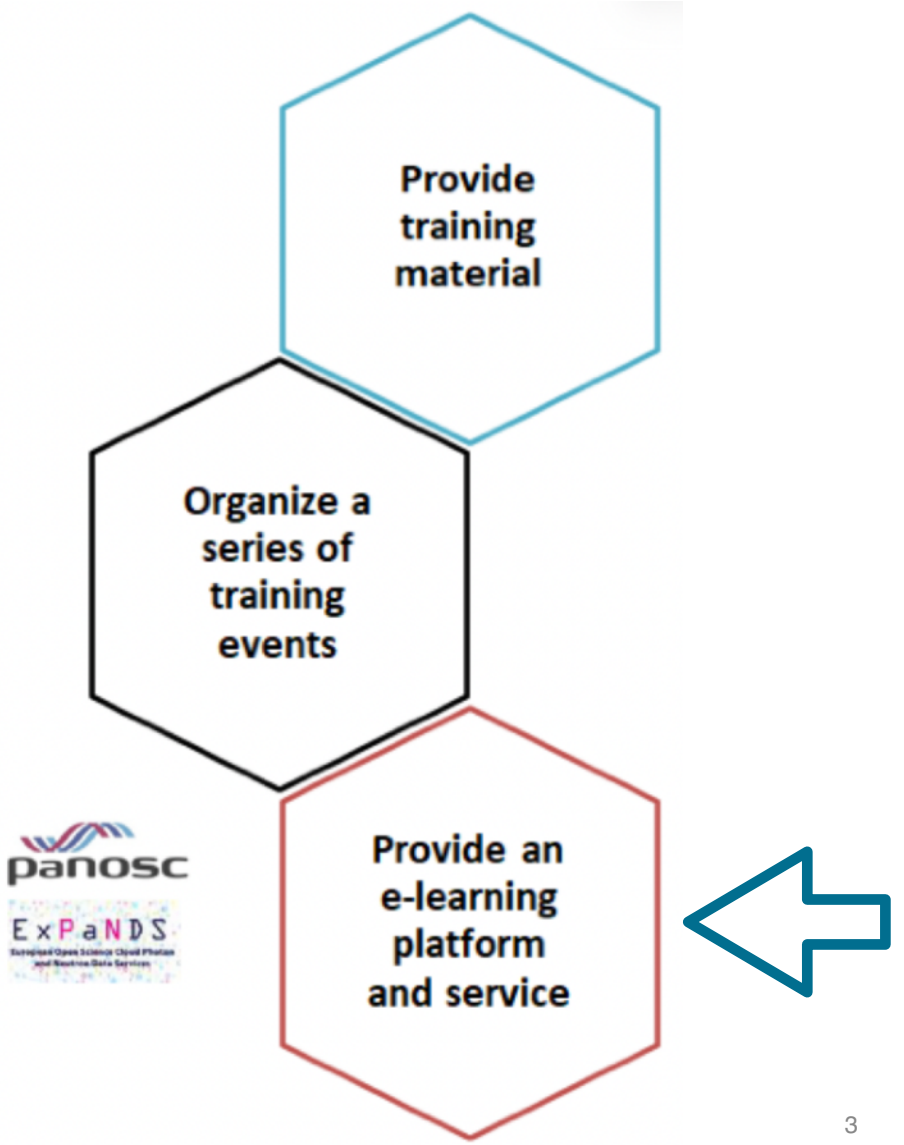
The PaNOSC Collaboration started in 2015

(with the EU project PaNOSC and ExPaNDS)

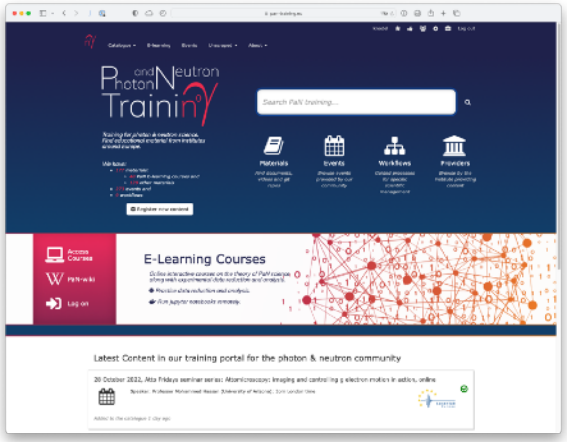


Challenge: The Training Work Package in PaNOSC

- The **training resources** of the PaNOSC facilities are **distributed** across different systems.
  - List on websites,
  - Materials on GitHub,
  - Presentations on Zenodo,
  - Videos somewhere, …
- A **uniform entry point or portal** for all PaN scientists was required.
- Also the **metadata** relating to e-Learning courses that are not openly accessible should also be made **open and visible**.
- Facilities must **curate the material and metadata** of to provide selected high quality content.



The Initial Infrastructure of PaN-Training



ExPaNDS

panosc

pan-training.eu → e-learning.pan-training.eu

Central place to access all ExPaNDS / PaNOSC training **materials** and our **e-leraning platform**, define training **workflows** to guide the scientist through the materials, **harvest events** and other e-learning platform courses from external providers or PaN RIs:

- Website,
- GitHub,
- Video (youtube),
- Training datasets, (from Zenodo)
- Workshop minutes,
- …

elixir TeSS

The central e-learning platform for blended learning courses with PaN content and additional features:

- Jupyter notebook integration,
- Simulations (neutrons, ViNYL),
- Virtual lab and
- Wiki.

moodle

MediaWiki

jupyter

Third party materials …

Third party catalogue …

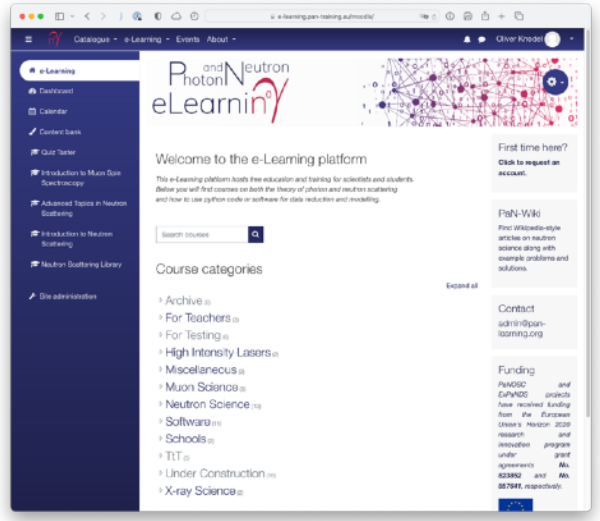
Third party events …

Laserlab Europe

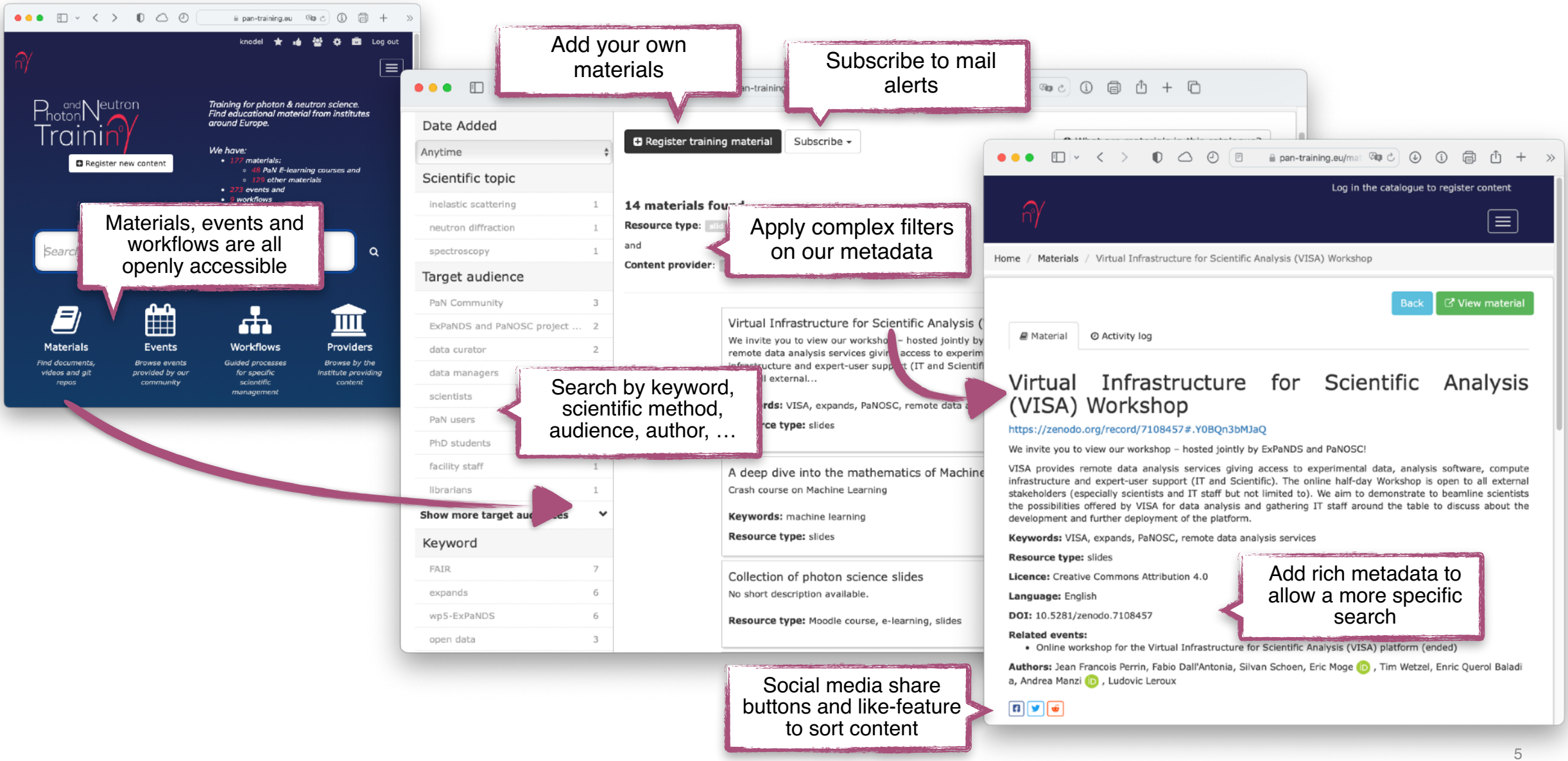
LEAPS

LENS

DAPHNE 4NFDI



Materials, Metadata and the Possibility to Search



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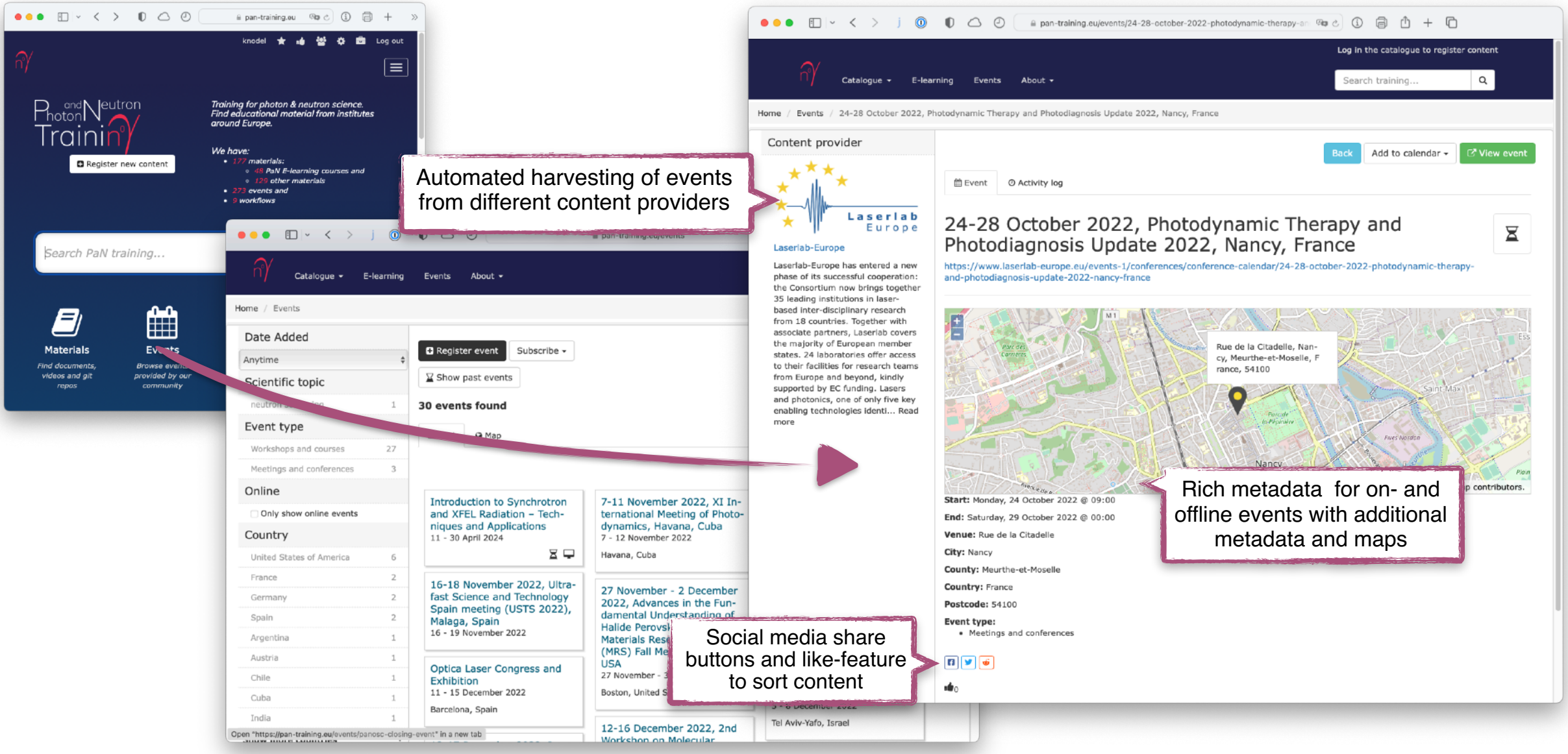
A Place for PaN-related Events



OSCARS
Open Science Clusters' Action for Research & Society

Funded Project

From Islands to Ecosystems: The mTeSS-X Vision for Modular, FAIR Training Registries

Presenter: Oliver Knodel, Helmholtz-Zentrum Dresden-Rossendorf, 0000-0001-8174-7795

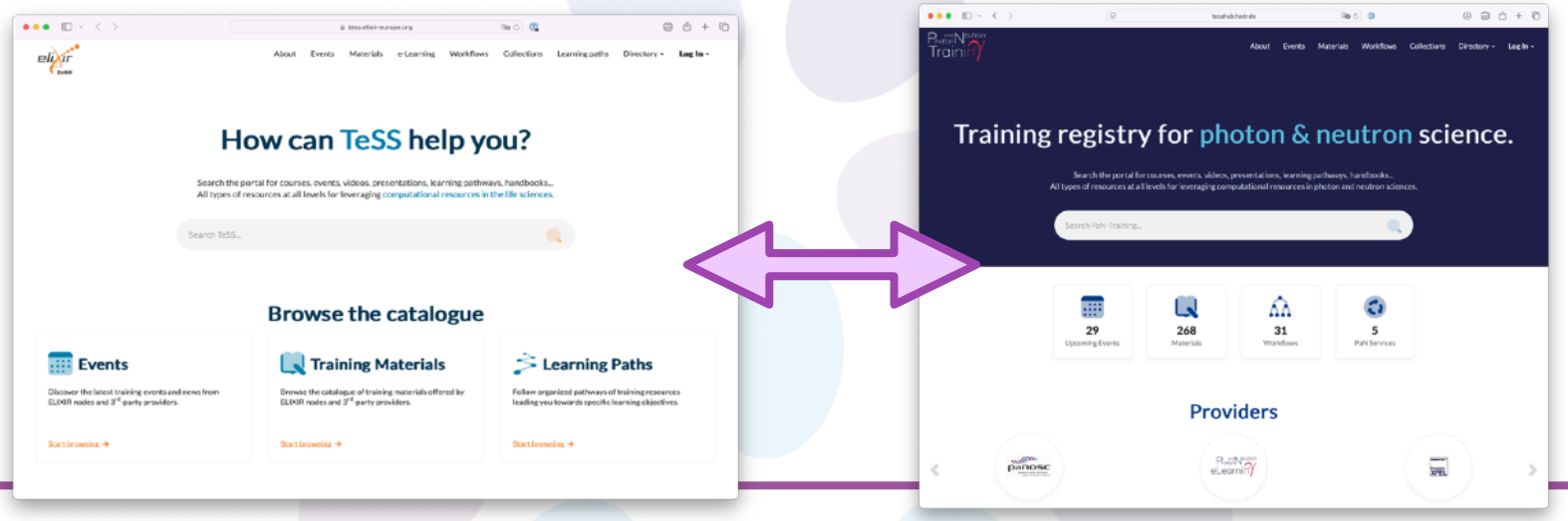
Implemented by

The University of Manchester
HELMHOLTZ ZENTRUM DRESDEN ROSSENDORF
CERN
UNIVERSITY OF LIMERICK OLLSCOIL LUIMNIGH
UNIVERSITY OF TARTU

Funded by the European Union

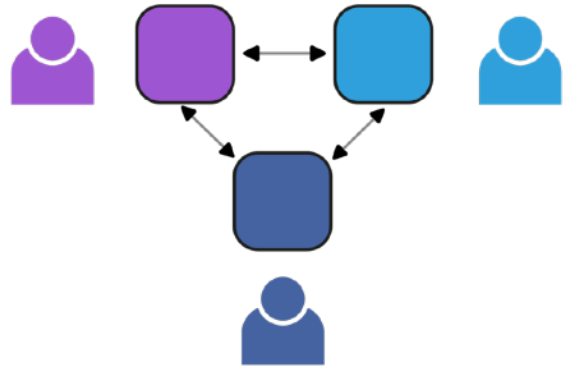
The Challenge – Islands of Registries for Training Events and Materials

- RIs and EOSC projects have **limited training catalogue capability** beyond sparse, **outdated lists on web pages**.
- **Fragmentation** of resources prevents the reuse of training materials and limits dissemination.
- Over the last year the **Training eSupport System TeSS** has become a service/codebase for training catalogues in several communities.
- In order to create a basis for the **mTeSS-X** project, PaN-Training and ELIXIR's TeSS had to be realigned to a configurable basis which allows exchange of content:



Our Solution for Reducing Fragmentation of Training Catalogues: mTeSS-X

- **TeSS-X: Exchange between catalogues:**
  The TeSS catalogues are separate instances and **automatically exchange nominated content** through a dedicated interface for metadata harvesting.



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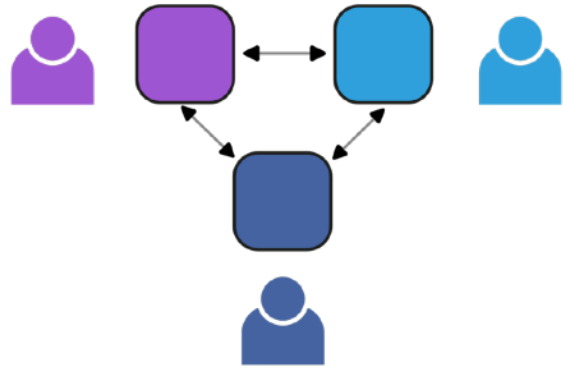
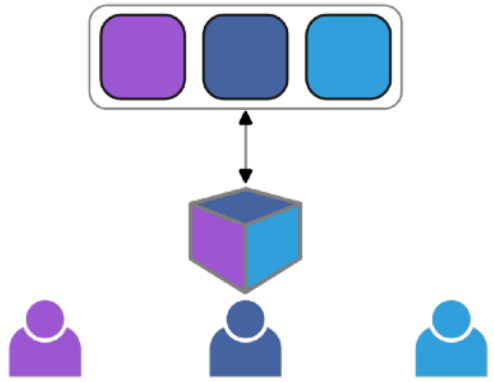
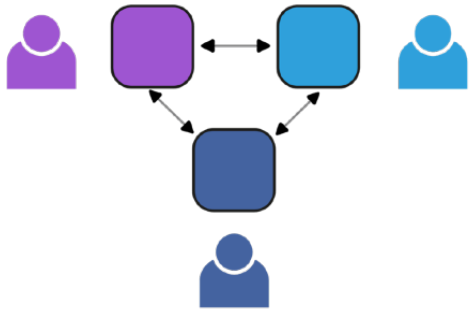


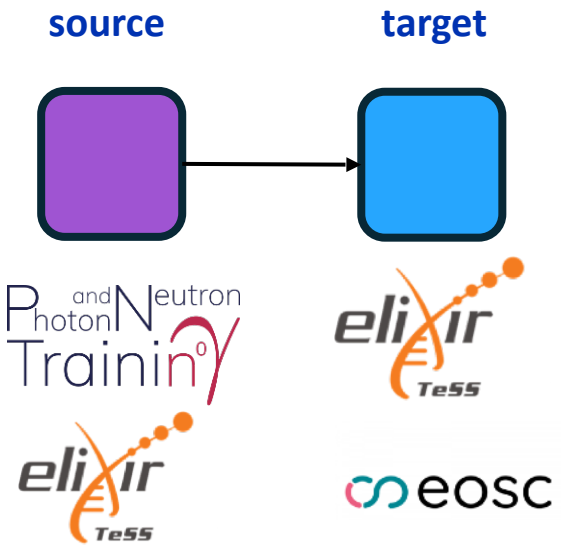
- **mTeSS: Multi-space catalogue:**
  The catalogues are pooled into a shared TeSS instance with independent look, content, identity, shared catalogue management and **community-specific selections** of training material are called “**views**” or “**spaces**”.



TeSS-X: Exchange Between Catalogues

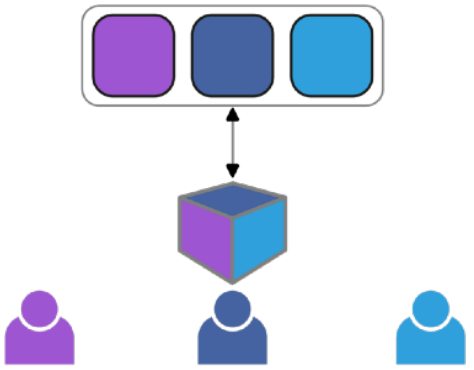
- Objective: Cross-instance sharing of materials and events
- Exchange protocol: **OAI-PMH**
  - Established standard used by a large number of catalogues for harvesting
  - Enables harvesting not only from other TeSS catalogues, but also from portals such as **B2Find or the EOSC Catalogue**
  - Provision on source catalogue by (admin or user) configurable **sets**
- Based on a standardised metadata schema from **schemas.science**
  - With a unique identifier for each material: **TeSS-Instance + itemID**
  - Comprehensible and transparent origin of the materials across instance borders
  - Possibility to exclude items from sharing
- Harvesting or import from source into target catalogue by (admin or user) configurable background tasks

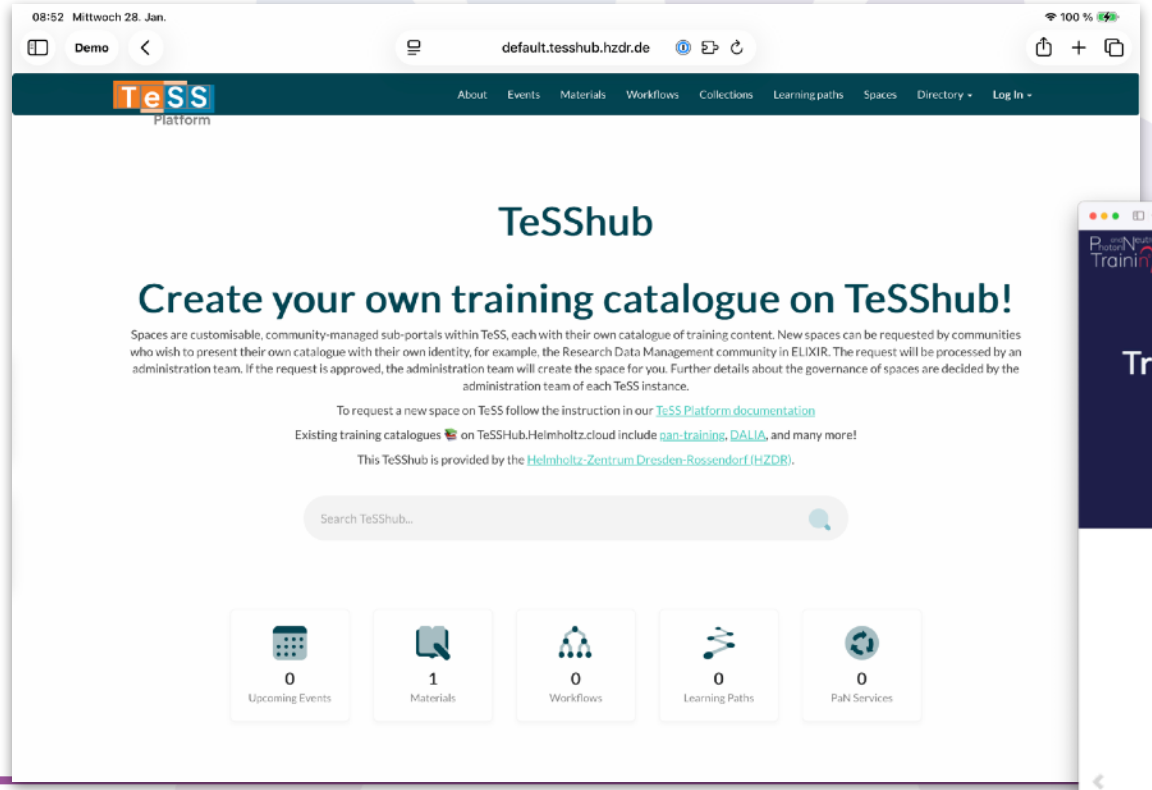


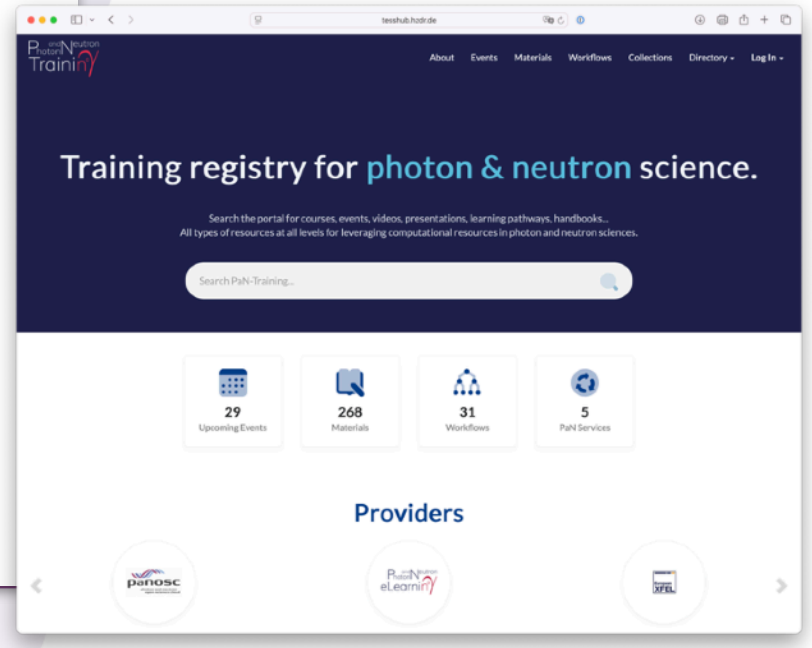


mTeSS: Multi-space catalogue: TeSSHub

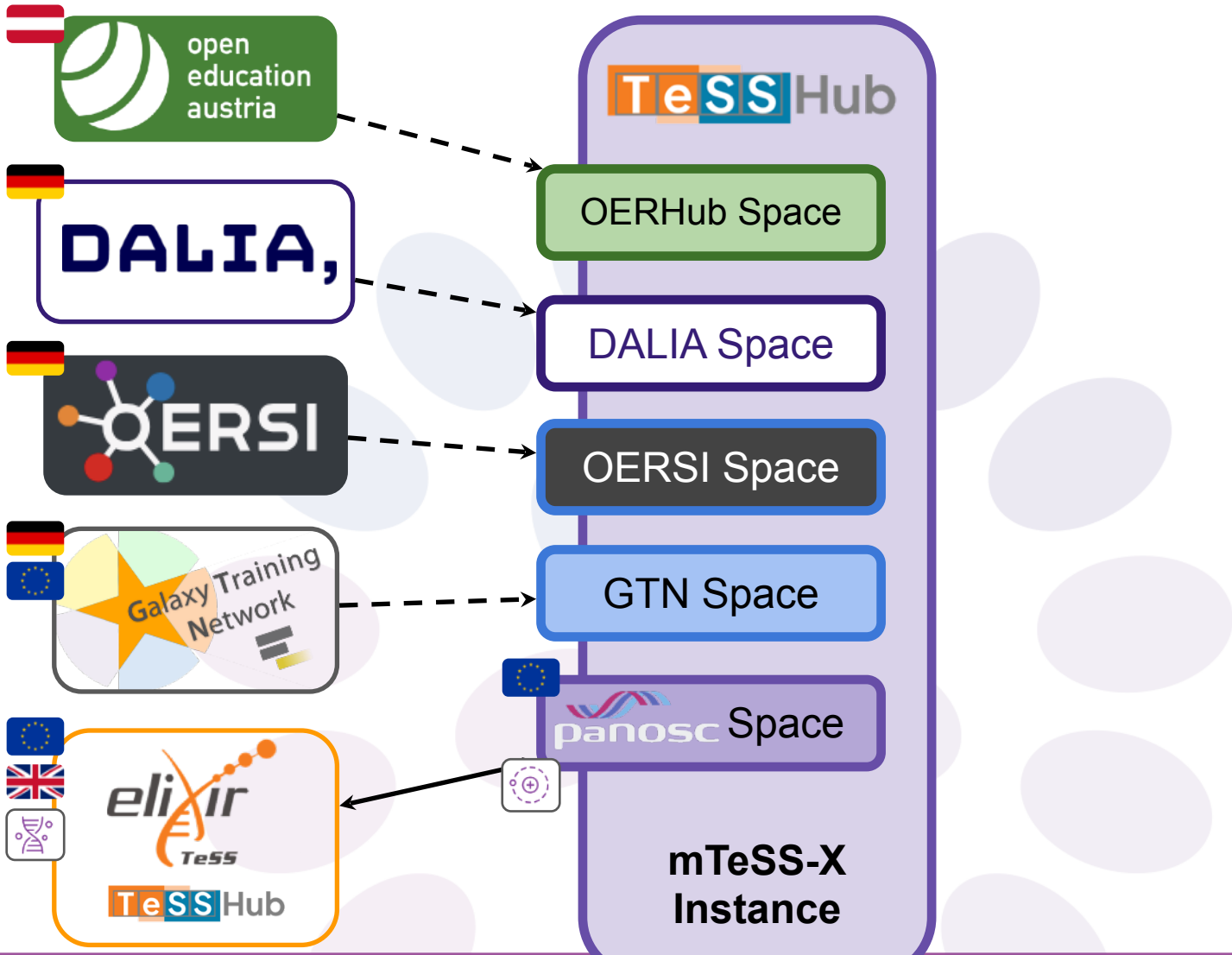
- One **TeSSHub** instance based on **mTeSS** (**https://tesshub.helmholtz.cloud**) hosts multiple TeSS registries with individual:
  - Design,
  - Logo,
  - Content,
  - Providers,
  - Users,
  - …







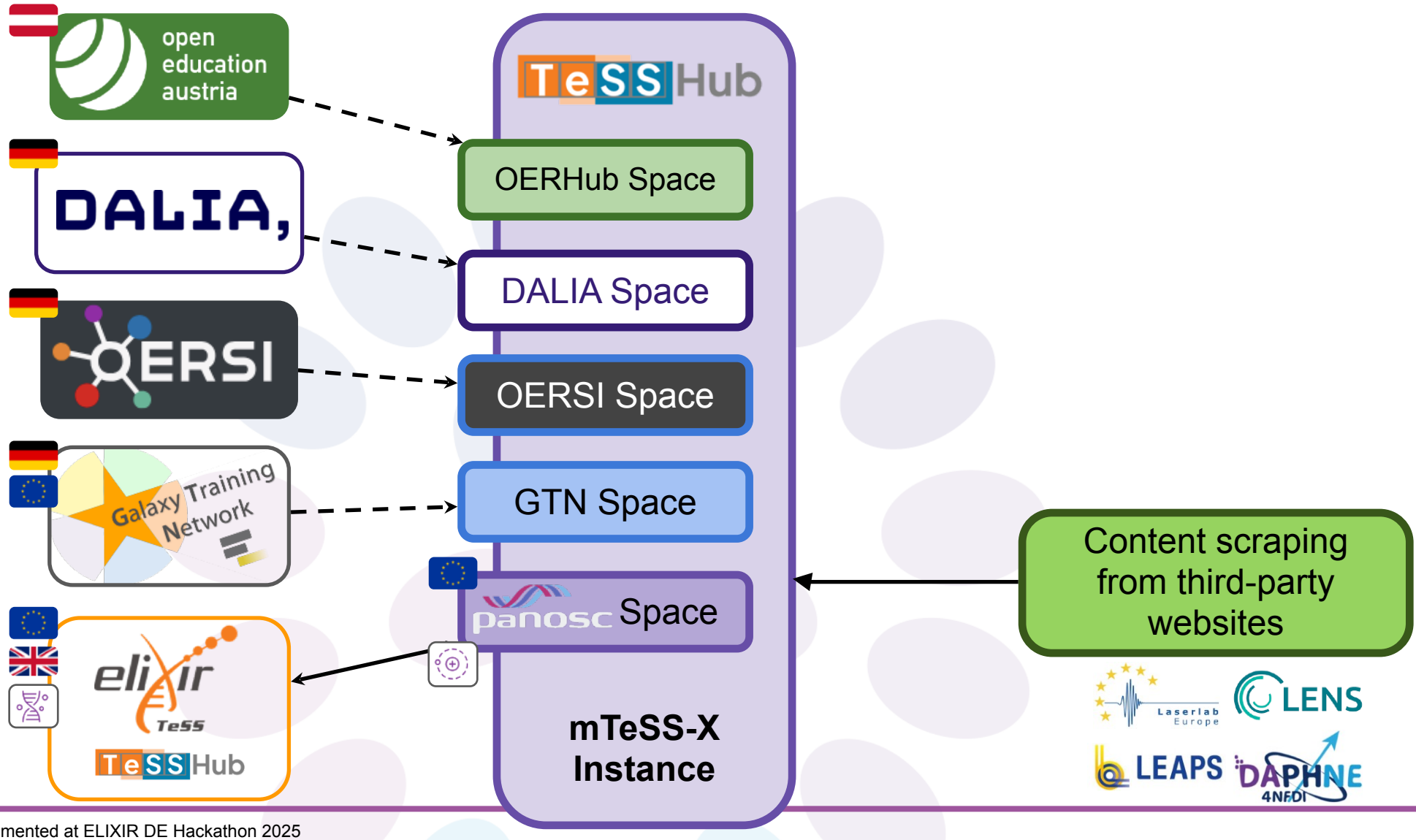
TeSSHub Infrastructure of Distributed Training Registries



Dashed black lines were implemented at ELIXIR DE Hackathon 2025

TeSSHub Infrastructure of Distributed Training Registries

OSCARS



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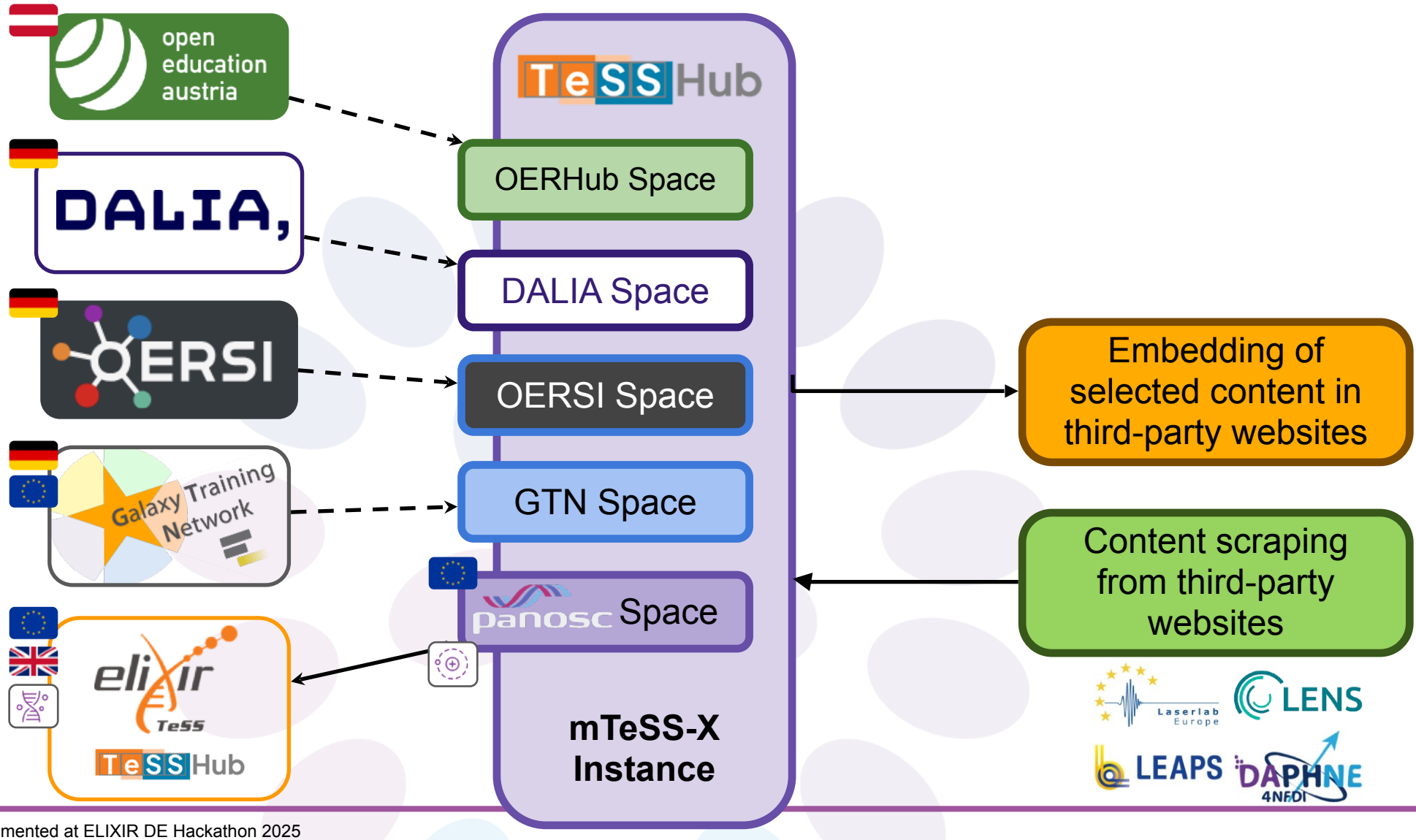

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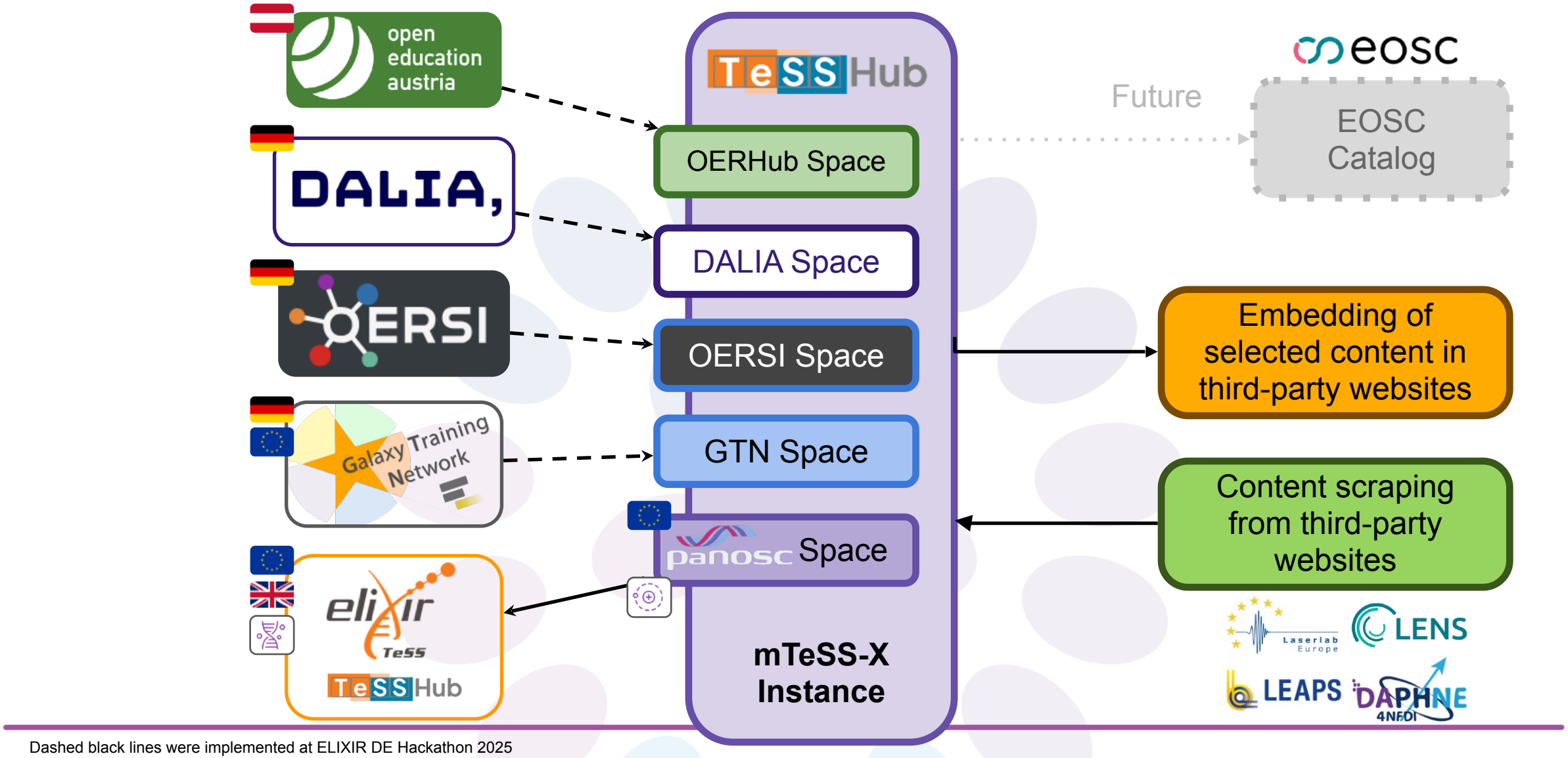

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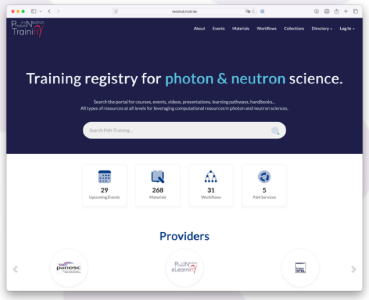
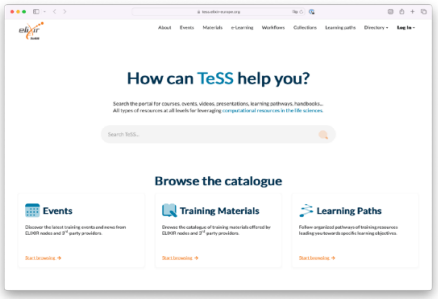
The Outcome for our Communities and Beyond

- **mTeSS-X** will significantly enhance the findability, accessibility, and reuse of high-quality training resources by the federation of interoperable training catalogues.
- The project will improve the sustainability of training portals by **reducing operational duplication** and enabling resource-sharing across portals.
- It will be possible to **integrate further science clusters, communities and RIs into common catalogues** of training materials with different community-specific views.
- Training consumers will have the availability of a much higher amount of **FAIR training resources across scientific disciplines**.





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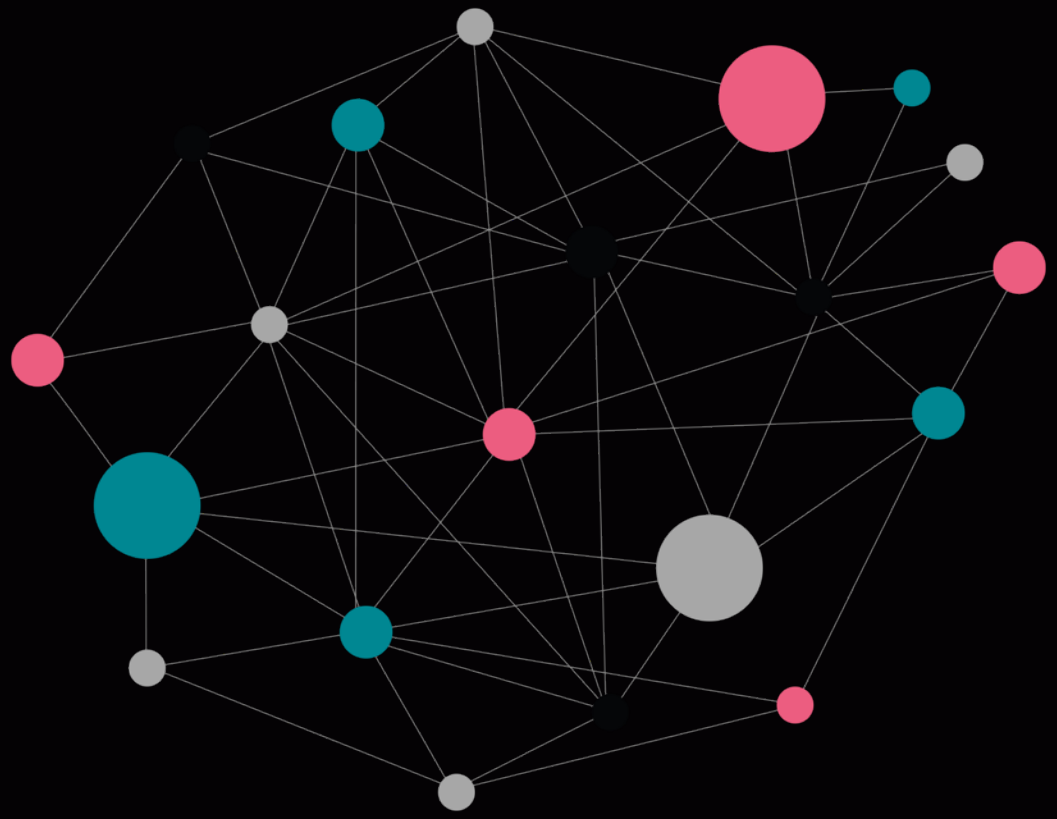
Next Steps:

EOSC Working Group „Training and Competencies“



Objectives:

- Aligning interest groups and projects
- Collection of content providers and resources
- Outreach and community engagement
- Definition of Metadata for training events and materials
- Integration of materials and events in distributed training catalogues

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The Italian Competence Centre in the EOSC Federation

Emma Lazzeri (Consiglio Nazionale delle Ricerche, Italian Competence Centre)

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EOSC Winter School 2026, Track 3 Competencies and Training

28 January 2026, Nice, France.

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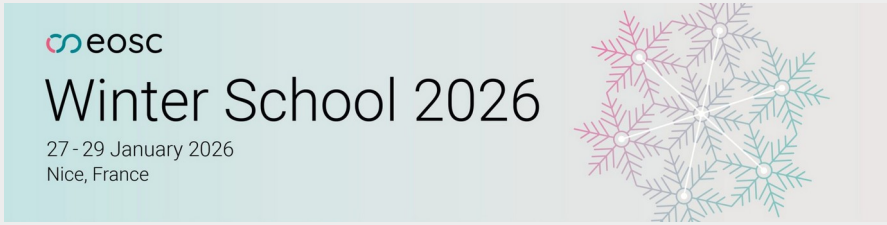

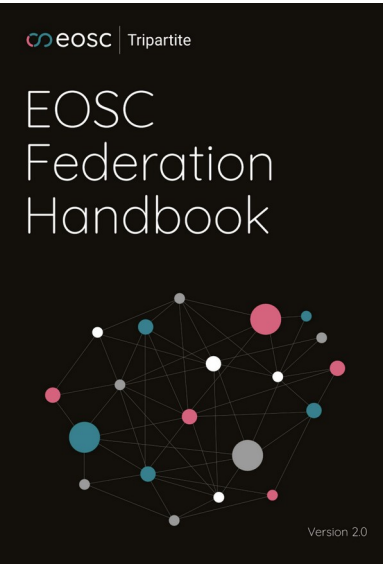

5.4. Research Competence Centres

Scientific communities are key to the EOSC Federation. They have the expertise necessary to carry out research in their domain as well as process, manage and analyse research data. The competences held within communities are therefore essential for the progress of science and are especially relevant for scientists who are beginning their career or are new to the domain and want to reuse data. EOSC Nodes are encouraged to create Research Competence Centres to gather competences necessary to use their services and data and make them available to users of the EOSC Federation. Established Research Competence Centres are encouraged to join the Competence Centre Network created in the Skills4EOSC[66] project. As the Federation develops, common understandings of Competence Centres and their relationships to Nodes will be defined, taking into consideration other existing centres (national, thematic, institutional) developed outside of the EOSC.

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Italian Competence Centre

Milestones and features

- Established in 2018 within ICDI initiative
- Network of experts
- Led Skills4EOSC project (2022-2025)
- Hosts the Italian Community of Data Stewards
- 20+ Organisations involved, 180+ experts

Competences

- Policy and strategic guidance
- Legal and ethical
- Research data management, FAIR principles, data management plan
- Open Access
- Domain and sector specific

Services offered

- Training courses
- Periodic community engagement events (OpenScienceCafé)
- Guides, guidelines and good practices
- Support and advice
- Catalogue management and editing

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Competence Centre Network

Skills4EOSC Competence Centre Network (CCNet)

- Skills4EOSC aims at building a **Network of Competence Centres** for Open Science, FAIR and EOSC in Europe (CCNet).
- The Skills4EOSC CCNet will be based on a lightweight mechanism to align and coordinate the **Network Node**.
- The **Nodes** are the Skills4EOSC **Competence Centres** (CCs).

Challenges and Opportunities

Challenge:

Sustainability: in kind contributions linked to ICDI MoU, projects

Opportunities:

- **Meets the national community needs** in terms of training, information, best practice sharing data stewardship strategies within research organisations
- Strictly linked to the **EOSC Node | Italy**
- Contribution to the **EOSC Academy**

Italian Competence Centre and EOSC Node | Italy

- The Italian CC is already present in the EOSC Node | Italy Catalogue of resources
- We are now in the process of integrating the Competence Centre into the EOSC Node
- Italian CC experience is leading the efforts within research institutions to develop Open Science, FAIR, Data Stewardship Skills

Use Case: Consiglio Nazionale delle Ricerche

- May 2025: CNR established the **Institutional Data Steward Community (DS@CNR)**
- **Builds on** Italian CC Data Steward community experience, CNR Research Infrastructures competences and available services: **50 Data Stewards involved**.
- February 2026: **kickoff of DS@CNR Action Plan** (competence mapping, training, FAIR RDM practices, community expansion and consolidation)

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Thank you

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