



D1.1

RECOMMENDATIONS FOR INSTITUTIONAL PRACTICE

TOWARDS OPEN SCIENCE

Project Name	EmpoWering EDUC for Inclusive Development of the ERA
Project Acronym	EDUC-WIDE
Grant Agreement No.	101136533
Programme	HORIZON.4.1 - Widening participation and spreading excellence
Topic	HORIZON-WIDERA-2023-ACCESS-03-01 - European Excellence Initiative
Project Starting Date	1. March 2024
Project Duration	36 months
Deliverable No.	D1.1
File Name	EDUC-WIDE_D1.1
Work Package	WP1
Dissemination Level	Public
Contractual submission date	31 st August 2025
Actual Submission Date	29 th August 2025
Institution	Masaryk University (MUNI)
Key Words	Open Science, Open Access, FAIR data, Diamond OA, Rights Retention Strategy, Data Management, EOSC, Citizen Science, Science Diplomacy, Open Infrastructures, Open Source,
Abstract	This report presents a set of recommendations for institutional Open Science implementation across the EDUC Alliance. It builds upon the <i>Open Science Strategic Framework 2022–2026</i> (from EDUC-SHARE), and reflects the progress and practical experience gained in the EDUC-WIDE. Based on a comparative analysis of member universities, the report identifies both emerging good practices and persistent gaps in areas such as Open Access (including Diamond OA), FAIR data, Open Infrastructures, Citizen Science, research assessment reform, and integration with EOSC. The report offers targeted, actionable recommendations to support alliance-wide alignment with European Open Science priorities. It aims to strengthen institutional capacity, promote shared standards, and enhance the collective visibility and impact of EDUC within the European research and higher education landscape.



Co-funded by
the European Union

Funded by the European Union under Grant Agreement No. 101136533. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

History of Changes

Version	Publication Date	Change
0.1	15.05.2025	First draft
0.2	25.07.2025	Final Draft
0.3	20.08.2025	Commented by partners
1.0	28.08.2025	Final version

List of Contributors

Beneficiary	Name	Author/Contributor /Reviewer
MUNI	Marika Hrubá	Author
UNICA	Elisabetta Cagetti, Giovanna Frigimelica, Giorgio Giacinto	Contributors
UPÉCS	Tamás Horváth Dávid Lovász Balázs Arató	Contributors
USN	Herman Strøm	Contributor
PNU	Tetiana Korniienko Roman Dzumedzey	Contributors
UPN	Cecile Cassafieres Aurelie Gono	Contributors
UP	Boris Jacob	Contributor
UNIVREN	Julie Newton	Contributor
University of Jaume	Elvira Aleixandre Paloma Garrido	Contributors

List of Abbreviations

- **AIC** - Alliance International Cooperation
- **AP** - Action Plan
- **AOAP/ACAN principle** – “As Open as Possible, As Closed as Necessary”: A guiding principle in Open Science to balance openness with legal, ethical, or security concerns.
- **ARRA** – *Agreement on Reforming Research Assessment*: A set of principles developed by CoARA to promote fair, transparent, and diverse research assessment practices.
- **ARDOISE / AND** – French platforms for creating and managing Data Management Plans, developed to support researchers in complying with data policies.
- **cOAlition S** – An international consortium of research funders promoting full and immediate Open Access to scientific publications, known for Plan S.
- **CoARA** – *Coalition for Advancing Research Assessment*: A reform movement aiming to improve how research and researchers are evaluated.

- **CRAFT-OA** – *Creating a Robust Accessible Federated Technology for Open Access*: An EU-funded project supporting institutional publishing and open access infrastructures.
- **CS** - Citizen Science
- **DFG** – *German Research Foundation*. Guidelines from Germany's central research funding organization promoting good scientific practice.
- **DMP** – *Data management Planning*. The process of planning how data will be managed, stored, and shared during and after a research project.
- **DORA** – *San Francisco Declaration on Research Assessment*: A global initiative to improve the evaluation of scholarly research, especially beyond journal impact factors.
- **EDUC** – *European Digital UniverCity*: An alliance of European universities
- **EDUC-SHARE** – (European Digital UniverCity - Research and Innovation with and for Society) A terminated Horizon2020 project within the EDUC Alliance, GA No 101017526
- **EOSC** – *European Open Science Cloud*: The legal body that governs the EOSC initiative, representing the stakeholder community and guiding strategic decisions.
- **ES** - Education and skills
- **FAIR** – *Findable, Accessible, Interoperable, Reusable*: Principles for improving the management and sharing of scientific data.
- **FD** - FAIR Data
- **HRS4R** - Human Resources Strategy for Researchers: The European Commission recognises with the HR Excellence in Research Award the institutions which make progress in aligning their human resources policies to the 40 principles of the "European Charter for Researchers and Code of Conduct" (C&C) based on a customized action plan/HR Strategy for researchers.
- **IP** - Internal Processes
- **KIFÜ** – *Governmental Agency for IT Development* (Hungary): Oversees national digital infrastructure, including education and research services.
- **MUNI** – *Masaryk University*:
- **NFDI e.V.** – *National Research Data Infrastructure*: A German initiative to systematically organize research data management and access across disciplines.
- **OA** - Open Access. Free and unrestricted online access to scholarly research publications.
- **OI** - Open Infrastructure
- **OpenAIRE** – An EU-supported infrastructure that enables Open Science in Europe through research outputs, data linking, and policy support.
- **OpenAIRE AMKE** – The legal entity behind OpenAIRE, supporting a sustainable open scholarly communication infrastructure.
- **OPERAS** - A European research infrastructure dedicated to open scholarly communication, particularly in the social sciences and humanities. OPERAS supports the development of open access publishing, common standards, and innovative services to enhance the visibility, accessibility, and impact of research outputs across Europe
- **ORCID identifiers** – Unique digital identifiers assigned to researchers to distinguish their scholarly work and ensure proper attribution.
- **OS** - Open Science
- **OSEG** - Open Science Expert Group
- **OSou** - Open Source
- **PID** - A long-lasting reference to a resource (e.g. publication, dataset, person, software). Its main purpose is to ensure reliable identification, verification, and location of the resource, often through associated metadata

- **PNU** – *Vasyl Stefanyk Precarpathian National University*.
- **RRS** - Rights Retention Strategy: A policy enabling researchers to retain rights to their work, ensuring open access regardless of the publisher's terms.
- **RRI** – *Responsible Research and Innovation*. A framework that ensures research aligns with societal needs, involving public engagement, ethics, sustainability, and inclusion.
- **SD** - Science Diplomacy
- **UJI** – *University Jaume I*
- **UNICA** – *University of Cagliari*
- **UP** – *University of Potsdam*
- **UPECS** – *University of Pécs*
- **UPN** – *University Paris Nanterre*
- **UNIVREN** – *University of Rennes*
- **USN** – *University of South-Eastern Norway*

List of Figures

Figure 1 – Structure of EDUC Strategic Framework

Table of Contents

1. Introduction	8
2. Recommendations for institutional practice towards Open Science.....	8
2.1 Open Access and FAIR Data.....	9
OA1: Diamond Open Access.....	9
OA2: Right Retentions Strategy	10
OA3: Automatization of processes	10
FD1: Advanced DMP Support	11
FD2: Data evidence.....	12
FD3: EOSC integration.....	12
2.2 Citizen Science and science diplomacy goals	13
CS1: Citizen Science strategy	13
CS2: Registration system	14
SD1: Science diplomacy strategy.....	14
SD2: Cooperation with local authorities.....	14
2.3 Open infrastructure and Open Source goals	15
OI1: Open Access to research infrastructures (RI) strategy	15
OSou1: Open Source strategy	16
2.4 Cross-cutting goals.....	17
ES1: Human resources	17
ES2: Education and communication.....	18
IP1: Next generation metrics and research assessment	19
IP2: Responsible research and innovation (RRI) and reproducibility.....	20
IP3: Lead by example.....	21
AIC1: Open Science expert body	22
AIC2: OpenAIRE AMKE	22
AIC3: EOSC Association	23
AIC4: Declarations and manifestos	24
3. Best Practices and Universally Applicable Recommendations	26
4. Conclusion	28

1. Introduction

The implementation of Open Science across European higher education institutions is increasingly recognized as a fundamental driver of research transparency, collaboration, and societal impact. In this context, the EDUC Alliance—a European University alliance composed of diverse institutions across the continent—has committed to embedding Open Science principles throughout its collective academic, research, and governance practices. Building on the foundation established by the 2022 EDUC Open Science Strategic Framework, this deliverable provides a list of comprehensive recommendations and a practical roadmap for advancing Open Science within the alliance.

2. Recommendations for institutional practice towards Open Science

The recommendations provided in this document are grounded in the original thematic structure outlined in the Open Science strategy developed by the Horizon 2020 EDUC-SHARE project in 2022¹, which initiated the joint Open Science efforts within the EDUC Alliance.

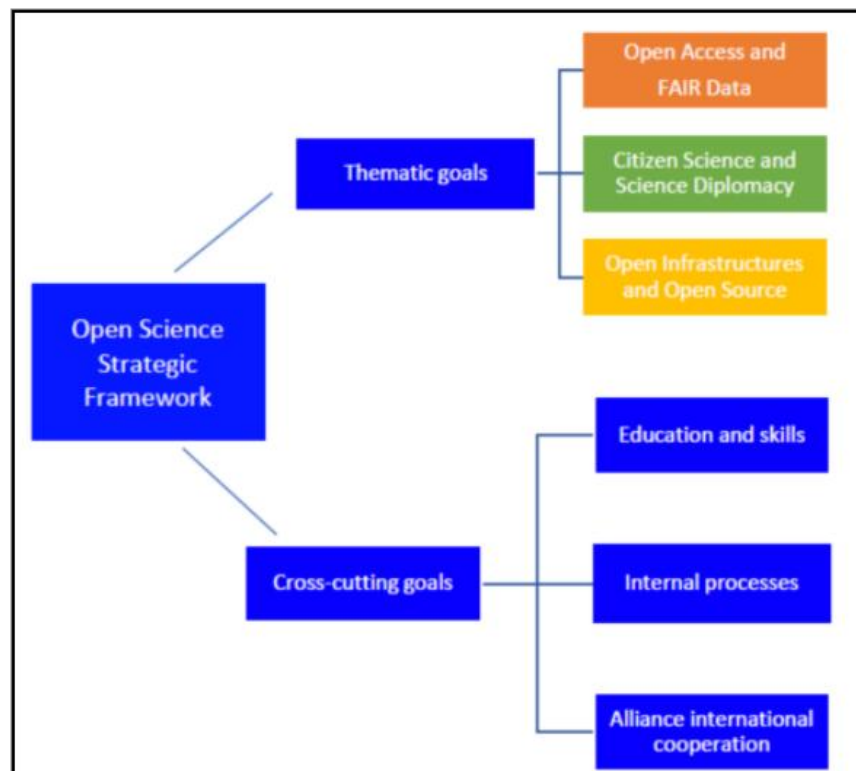


Figure 2 - Structure of EDUC Strategic Framework EDUC Alliance in the project H2020 EDUC-SHARE (2023)

¹ [D2.1 Common Open Science Strategy of EDUC](#)

2.1 Open Access and FAIR Data

OA1: Diamond Open Access

Context and Observations: Support for Diamond Open Access (OA) varies across EDUC universities. While no institution has a formal policy in place, several have developed notable initiatives. Masaryk University has identified 55 affiliated Diamond OA journals and is involved in the CRAFT-OA project. The University of Pécs offers strong editorial support, infrastructure, and a dedicated fund for journal development. At the University of Cagliari, Diamond OA content is published through UNICApress and made it available to EDUC partners. The University of Potsdam has supported OA since 2015 and is transitioning its university press to a Diamond OA model. The University of Rennes lists supported journals, is involved in a OA project of its University press and has recently formalized its strategy in its Chart for open science. The University Paris Nanterre is actively involved in OPERAS. The University Jaume I hosts ten scientific OA journals, with the library participating in advisory support. Although the University of South-Eastern Norway (USN) does not publish any Diamond OA journals, it provides financial support to one such journal involving USN researchers and contributes to national and international OA initiatives. Several other EDUC institutions currently report no structured support for Diamond OA. This diverse landscape underscores the absence of a coordinated approach, while highlighting opportunities for alliance-wide collaboration.

Strategic recommendations:

- Establish a living community of journal development experts across EDUC member institutions.
- Create a network framework for collaboration and ensure opportunities for regular meetings.
- Develop a shared understanding at the alliance (federation) level regarding:
- The definition of *genuine Diamond Open Access journals*:
 - a) Identification of databases and resources available to editors.
 - b) Feasibility of joining credible international initiatives (e.g. COPE Committee on Publication Ethics) for quality assurance.
- Initiate a structured discussion on the financial sustainability of the Diamond OA model.
Facilitate collaboration among editorial teams, especially those working in similar disciplines:
 - a) Enable exchange of good practices.
 - b) Encourage co-development to increase visibility of journals
- Design a draft pilot project that could later be scaled up across the alliance.

- In cooperation with RAEG, begin exploring:
 - a) How editorial work for Diamond OA journals can be recognized in performance evaluation systems of consortium universities.
 - b) Create an open database of scientific journals published by EDUC Alliance universities
- Integrate into the Open Up platform (e.g. EDUC Key Journals database)
 - a) Use a model similar to Core Facility databases

OA2: Right Retentions Strategy

Context and Observations: Implementation of Rights Retention Strategies remains limited within the EDUC Alliance. Most universities, including MUNI, UPECS, UNICA, are in early stages of internal analysis or have not adopted RRS. The situation at UNIVREN is similar to that of Jaume I University: it follows European and national policy without a dedicated RRS. Nevertheless, it has (like UPN, it seems) concluded agreements with publishers that cover the RRS. The University of Potsdam offers researchers support through its publishing office, and the University Jaume I aligns with national open science policy, though without a dedicated RRS. The only institution with formal implementation is the University of South-Eastern Norway, which adopted an institutional RRS in October 2023. No joint EDUC position exists yet, but the topic presents a clear opportunity for coordinated action, mindful of national legal differences.

Strategic Recommendations:

- Promote the appointment of a working group to analyse national legal frameworks and find contact points to promote a common strategy
- Promote Training and Awareness on RRS into Open Science training programs for researchers, PhD candidates, and administrative staff. Consider developing a multilingual EDUC-WIDE training module or online course to ensure consistent understanding and uptake across institutions.

OA3: Automatization of processes

Context and Observations: Masaryk University is conducting an internal review and uses the Open Journal Systems (OJS) platform, which supports automation of submission processes, editorial workflows, correspondence, and metadata generation. Institutions such as UPECS, UNIVREN, UNICA, USN, UPN, UJI, and PNU report no broader automatised systems in place. However, Paris Nanterre University (PNU) also uses OJS for all its journals, enabling not only workflow automation but also analysis and statistics on journal effectiveness. The exception in terms of developing a dedicated OA workflow system is the University of Potsdam, which is building a platform to improve publishing efficiency. No further automatised efforts have been identified across the Alliance, highlighting a common opportunity for joint technological development in support of Open Science.

Strategic recommendations:

- Define a list of possible automated OA processes to implement within partner universities, identifying common needs and scalable solutions.
- Organize technical workshops and peer-learning sessions to share best practices, tools, and lessons learned in OA automation. This will help bridge the digital gap among institutions and foster a culture of innovation in Open Science infrastructure.

FD1: Advanced DMP Support

Context and Observations: As part of the strategic development of FAIR Data practices, the EDUC Alliance recommends that institutions incorporate training frameworks, community engagement, and career development opportunities for Data Stewards. These roles are critical for ensuring effective research data management (RDM) and for the realisation of FAIR principles in practice. While some EDUC universities offer basic support for Data Management Plans (DMP), comprehensive institutional strategies remain largely undeveloped. MUNI, UPECS, and UJI have no formal frameworks, though libraries play a limited advisory or educational role. UPECS is an active participant in the work of the national network of experts. UNIVREN and UPN offer local support through Data Management Clusters (ARDOISE, ADN) that belong to the French national RDM ecosystem Recherche Data Gouv. UPN participated for 3 years to the Steering Committee of the French national Research Data Management ecosystem Recherche data gouv, and UNICA plans to introduce support by 2025. At USN and UNIVREN, FAIR data is a key component of the institutional Open Science policy framework. Both universities have an institutional data repository, as well as a set of institutional guidelines, and have a data management team that gives structured support to researchers. At PNU, the coherent institutional strategy is at its initial stage. Data management practices are implemented through the University Library, which has developed a university repository (<http://lib.pnu.edu.ua:8080/>). In the second stage, we launched international projects aimed at creating an open database of research results. Only the University of Potsdam provides structured, centralized support for research data and research software management, following a dedicated research-data-strategy. No coordinated EDUC-WIDE strategy or implementation of advanced DMP recommendations exists, highlighting a major opportunity for collective development in this area. Under current conditions, the limited human resources allocated to this service do not allow for a detailed understanding of discipline-specific data management practices. As a result, it would be beneficial if partners with expertise in specific disciplines could contribute their knowledge in a structured format, such as practical guides, e-learning modules, or online lectures. Such shared resources could strengthen data management support across the alliance and enhance collective capacity.

Strategic recommendations:

- Develop a Coordinated EDUC DMP Framework that aligns with FAIR principles and can be adapted to national and institutional contexts. This framework should include templates according to the funding programmes, best practices, and compliance guidelines to support researchers across all stages of the DMP development.

FD2: Data evidence

Context and Observations: So far, most EDUC Alliance institutions have only partial or emerging support. Neither formal tools, services, nor policies are currently in place across the universities, including MUNI, UPECS, UNIVREN, UNICA, UP, USN, UPN, and UJI. Moreover, no alternative or emerging approaches have yet been identified, although some partners are planning to introduce them in the near future. This situation signals a clear opportunity for the EDUC Alliance to develop a joint framework to strengthen research integrity and transparency through data evidence support.

Strategic recommendations:

- Organize Peer Learning Events Focused on Data Evidence, to showcase good practices from other institutions. These events can help build capacity, raise awareness, and inspire local experimentation with data evidence processes.

FD3: EOSC integration

Context and Observations: MUNI is in a leading position within the Alliance regarding EOSC integration at the institutional level. It hosts the EOSC-CZ initiative secretariat and is currently piloting the use of EOSC services at the institutional level before their deployment at the national level. Most EDUC universities have not initiated institutional-level EOSC integration. UPECS, UNIVREN, UNICA, USN, UJI, and PNU report no active engagement, though some national-level activities exist (e.g., in Hungary and Norway). The University of Potsdam is the only member actively involved, participating in national initiatives and promoting EOSC services internally.

Paris Nanterre University (UPN) stands out as an exception in terms of strategic engagement: it is a full member of EOSC, a member of EOSC-France, and is involved in both the Skills4EOSC final conference programme committee and the EOSC-France tripartite programme committee.

No joint strategy or alliance-wide position paper has been developed, indicating a shared opportunity for coordinated EOSC engagement across the EDUC Alliance.

Strategic recommendations:

- Open discussion on EOSC affiliation: institutions already engaged in EOSC activities will provide feedback on the advantages and benefits of participating in the Cloud.

2.2 Citizen Science and Science Diplomacy Goals

CS1: Citizen Science strategy

Context and Observations: Support for Citizen Science within the EDUC Alliance is still emerging, with few institutions offering structured frameworks. Masaryk University plans to incorporate Citizen Science into its strategy from 2025. The University of Pécs supports individual projects and promotes the topic through library services, but lacks a formal framework. The University of Potsdam leads with a dedicated guide and institutional guidelines. Currently, the University Jaume I (UJI) has a Unit of Scientific Dissemination and Citizen Science; the library collaborates with this unit in several annual activities, such as the SCIENCE GTS project, an event associated with the MSCA and Citizens initiative of the European Union funded under the Marie Skłodowska Curie actions. USN's Open Science policy includes recommendations on Citizen Science, with information resources, guidelines, and other support functions currently under development. At UNIVREN, citizen science, with its dedicated vice-president, is part of the Chart of open science and supported through the Tissage (<https://www.univ-rennes.fr/saps-tissage>) and IRIS-E (<https://iris-e.univ-rennes.fr/lambition-du-projet-iris-e>) programs. The TISSAGE project aims to bring together citizens, researchers, and decision-makers so they can meet, get to know one another, and understand each other — with the goal of building a shared society and acting collectively. The objective is to involve all stakeholders in every stage of the scientific production process, in order to implement truly participatory research. The project IRIS-E is developing a Participatory Science Hub to promote interactions between researchers and the non-academic world through events open to the general public but also through sharing based on co-construction and participatory science.

Other institutions, including UNICA, UPN, PNU, and UJI, report no formalized institutional support for Citizen Science. However, at PNU, relevant practices are emerging: two departments—the Science Park and the educational and project centre "Agents of Change"—accept applications from citizens to implement their ideas with the involvement of the university's scientific laboratories. Additionally, PNU has created an international space, the International Centre for Student Meetings, and has prepared a draft document on the introduction of the status of professor emeritus—an innovative step for Ukrainian universities within the context of scientific diplomacy.

No alliance-wide position on Citizen Science exists yet, though joint efforts are underway. Overall implementation remains minimal, highlighting the need for coordinated development.

Strategic recommendations:

- EDUC_WIDE in the next project period will also work on the development of a Registration System for Citizen Science that will streamline OS practice based on UPECS experience. Creating a cross-institutional network of Citizen Science coordinators and researchers will help to share experiences, co-develop resources, and promote visibility of ongoing initiatives. This network could also support training activities.

CS2: Registration system

Context and Observations: No EDUC Alliance member currently has a registration system in place to support Citizen Science activities. Masaryk University plans to explore this option under WP2 of the EDUC-WIDE project. All other institutions, including UPECS, UNIVREN, UNICA, UP, USN, UPN, PNU, and UJI, report no activity in this area. The topic remains at an early stage, presenting an opportunity for alliance-wide coordination and development of shared tools.

Strategic Recommendations:

- Benchmarking activity to explore existing models (e.g. national or EU-level platforms), user needs, and integration with institutional research infrastructures.

SD1: Science diplomacy strategy

Context and Observations: Science Diplomacy is an emerging aspect of Open Science, but remains largely underdeveloped within the EDUC Alliance. The University of Potsdam has integrated it into its Open Science Guidelines under "Transfer," led by Potsdam Transfer. Other institutions, including MUNI, UPECS, UNIVREN, UNICA, UPN, USN, and UJI, PNU, report no formal initiatives or recognition of Science Diplomacy. No EDUC-WIDE position has been developed, signalling a missed opportunity for a coordinated approach. All institutions report zero implementation, highlighting the potential for the alliance to lead in promoting Science Diplomacy as part of global collaboration.

Strategic recommendations:

- The topic of Science Diplomacy is strictly linked to the topic of science security. The European Union has recently intensified its focus on research security, integrating it into broader strategies. EDUC-WIDE partners need to compare and share common science diplomacy strategies.
- Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions.

SD2: Cooperation with local authorities

Context and Observations: All EDUC Alliance member universities maintain ongoing interactions with their respective local and regional authorities. While approaches and intensity of cooperation may vary depending on the local context, the commitment to fostering strong partnerships is shared across the Alliance. These relationships often support joint initiatives, knowledge exchange, and community engagement, laying a solid foundation for further collaborative opportunities within the EDUC framework.

An effort in involving local authorities has been carried out already in the WP7 Seed Projects initiatives, providing project proposals in cooperation with respective local ecosystems, which represents a recommended criterion for project evaluation.

Strategic recommendations:

- **Promote Local Ecosystem Engagement as a Strategic Priority:**
Encourage all EDUC Alliance members to continue and deepen cooperation with local and regional authorities, recognizing it as a key element of institutional impact and societal relevance.
- **Integrate Local Cooperation into Project Evaluation Criteria:**
Adopt the involvement of local stakeholders and ecosystems as a formal criterion for evaluating future joint projects, building on the successful approach used in WP7 Seed Projects.
- **Facilitate Knowledge Exchange and Best Practices:**
Create a platform within the Alliance to share models, experiences, and best practices in engaging local and regional authorities, fostering innovation and replicability across diverse contexts.
- **Develop a Coordinated Framework for Local Engagement:**
Support the development of a common strategy or guiding principles for collaboration with local ecosystems, aligning local partnerships with EDUC's broader mission and values.

2.3 Open infrastructure and Open Source goals

OI1: Open Access to research infrastructures (RI) strategy

Context and Observations: Support for Open Access (OA) to research infrastructures remains limited across most EDUC institutions. Masaryk University lacks formal support, and although the University of Pécs has mapped its infrastructures, OA has not yet been integrated into policy. The University of Cagliari (UNICA) adopted an Open Science Policy in July 2024, which includes a section on research infrastructures. [The Chart for open science](#) of UNIVREN promotes OA actions of research infrastructures, which are supported through the [ARDoISE](#) data management cluster. Collaborative work with two research infrastructures (Biogenouest and ScanMAT) includes, from the project design stage, an open science policy to ensure good data management that allows for sharing (sharing of source code, open corpora, etc.).

Other institutions—such as the University Jaume I, USN, and PNU—report no initiatives in this area.

The most structured approaches are found at the University of Potsdam and Paris Nanterre University (UPN). Both include “Open Infrastructure” as a priority in their Open Science strategies. UPN stands out with a dedicated annual budget

(~70,000 €/year), regular participation in SCOSS funding initiatives since their inception, and its role as a Supporting Member of OPERAS. UPN also maintains a dedicated webpage documenting its infrastructure-related activities and support mechanisms ([UPN OS Infrastructures Page](#)). Currently, no shared strategy exists within the EDUC Alliance, highlighting the need and opportunity for a coordinated framework to promote Open Access to research infrastructures. Ongoing activities within EDUC-SHARE and now EDUC-WIDE—particularly the First Access Call to Research Infrastructures (T7.3) and Knowledge Exchange Schemes (T7.4)—are fostering collaboration and knowledge sharing between RIs. These efforts can serve as a foundation for developing an EDUC-WIDE strategy to strengthen Open Access to research infrastructures as a common practice across the Alliance.

Strategic recommendations:

- **Develop an EDUC-WIDE Strategy for Open Access to Research Infrastructures.**
Build on existing practices (e.g. at UPN and Potsdam) and the activities in EDUC-WIDE (T7.3 and T7.4) to define a coordinated alliance-wide framework supporting equitable and open access to research infrastructures.
- **Promote Best Practice Sharing and Mutual Learning**
Leverage the experience of Paris Nanterre University—which provides dedicated infrastructure support, participates in SCOSS, and is a Supporting Member of OPERAS—to inspire and guide other members in building similar support mechanisms.
- **Encourage Integration of OA to Infrastructures in Institutional Policies**
Support universities in incorporating Open Access to research infrastructures into their institutional Open Science strategies, following the example of UNICA and UPN.
- **Support Resource Allocation and Visibility**
Recommend allocating dedicated funding or resources to infrastructure-related OA activities and encouraging transparent communication through institutional webpages and public reporting.
- **Expand and Sustain Ongoing EDUC-WIDE Activities**
Ensure continued synergies through Access Call to Research Infrastructures and Knowledge Exchange Schemes, and use their outcomes to establish long-term strategic planning within the Alliance.

OSou1: Open Source strategy

Context and Observations: Support for Open Source is limited across EDUC institutions. Most universities, including MUNI, UPECS, UNIVREN, UNICA, USN, UPN, and PNU, report no formal Open Source strategies or support mechanisms. The University of Potsdam stands out by including Open Research Software as a key area in its Open Science Guidelines, with support integrated into the OS-Helpdesk. University Jaume I has strong legal and ethical commitments to Open Source,

though full institutional integration has not yet been realized. No shared position or strategy on Open Source exists within the alliance, presenting an opportunity for EDUC to lead in coordinating actions, guidelines, or infrastructure development in this area. The University of Rennes follows the recommendations of the Open Science Charter regarding Open Source strategy and has organized a one-day conference on the topic. While the university library provides support in this area, no specific role or task has been formally assigned to it.

Strategic recommendations:

- **Develop an Open Source Strategy Across the Alliance**
Establish a shared vision and coordinated strategy for Open Source within EDUC, aligned with broader Open Science principles and best practices.
- **Identify and Promote Institutional Best Practices:**
Use the example of the University of Potsdam—which has integrated Open Research Software into its Open Science Guidelines—as a model for other institutions seeking to build support frameworks.
- **Encourage Institutional Integration of Legal and Ethical Standards:**
Support universities, such as University Jaume I, in translating existing legal and ethical commitments to Open Source into institutional-level implementation.
- **Create a Collaborative Platform for Open Source Support:**
Launch a cross-institutional working group or helpdesk to provide guidance, share resources, and coordinate efforts related to Open Source development, licensing, and sustainability.
- **Invest in Shared Infrastructure and Capacity Building:**
Explore opportunities for joint infrastructure development (e.g. repositories, code-sharing platforms) and provide training or resources to increase awareness and skills among researchers and staff.

2.4 Cross-cutting goals

ES1: Human resources

Context and Observations: Most EDUC-Alliance institutions have already developed support measures to promote the professional development of staff, researchers, and administrators in Open Science, although the scope and formalisation vary. For example, Masaryk University has established a network of Open Science specialists across the institution. The University of South-Eastern Norway provides information and resources on Open Science—including guidelines, tools, and best practices—to increase awareness and knowledge among researchers and students, and also offers training and competence development measures to strengthen their skills and understanding. Similarly, the University of Cagliari has adopted a comprehensive Open Science Policy. Despite these positive developments, there is still no shared framework at the alliance level to address human resource development systematically. This represents an opportunity for the

EDUC Alliance to build on existing practices, develop a coordinated strategy, and thereby strengthen institutional readiness, ensure consistent Open Science practices, and enhance the alliance's role in the European Open Science landscape.

Strategic recommendations:

- **Develop an Alliance-Wide Strategy for Open Science Skills Development:**
Create a coordinated framework to support the professional development of staff, researchers, and administrators in Open Science practices across all member institutions.
- **Integrate Training into Institutional Structures:**
Encourage each university to embed Open Science training—covering topics such as research data management, Citizen Science, and Open Access—into existing professional development programmes.
- **Establish a Shared Pool of Resources and Training Modules:**
Promote collaboration in designing and sharing e-learning materials, workshops, and guidelines to ensure consistency and efficiency across the alliance.
- **Support the Creation of Cross-Institutional Learning Communities:**
Facilitate knowledge exchange and peer-learning among Open Science support staff and researchers through webinars, mentoring, or thematic working groups.
- **Align EDUC Training Strategy with European Open Science Goals:**
Ensure that the capacity-building efforts within EDUC reflect and contribute to wider European initiatives and frameworks, strengthening the alliance's visibility and influence in the Open Science ecosystem.

ES2: Education and communication

Context and Observations: The first analysis shows that the implementation of Open Science education and communication across the EDUC Alliance is fragmented and informal. Masaryk University has yet to initiate formal processes. The University of Pécs and USN have several communication and training activities driven by library staff. Other institutions like UNIVREN, UPN, and PNU report no structured initiatives. UNICA, within the HRS4R Strategy, currently plans OS courses for early-stage researchers.

The University of Potsdam stands out for its strategic commitment to Open Science through HRS4R. University Jaume I also promotes Open Science education through workshops and a PhD course on Open Access. At USN, Open Access and FAIR data are key components in the PhD course *“Literature management and scholarly communication”*, which is open to students from all of USN's Ph.D. programs and to a limited number of students from partner universities in the EDUC Alliance. Open

Science education and communication also form a central part of USN's overall Open Science strategy.

In the second and third phases of analysis, most institutions showed limited progress in formalizing these activities, underlining the need for a collective effort within the EDUC Alliance to develop unified training and communication strategies for Open Science.

Strategic recommendations:

- Launch an EDUC Open Science Communication Campaign to raise awareness of Open Science principles, benefits, and opportunities. This could include social media toolkits, posters, short videos, and storytelling from researchers engaged in Open Science.
- Establish an EDUC Open Science Training offer with shared resources, webinars, and certification programs on Open Science topics.

IP1: Next generation metrics and research assessment

Context and Observations: Notably, Masaryk University, the University of Pécs, Precarpathian National University, UNICA, and the University of South-Eastern Norway joined COARA (Coalition for Advancing Research Assessment) in 2024, thereby confirming their intention to align with evolving European standards in research assessment and Open Science practices. This lack of structured professional development, combined with emerging engagement in COARA, highlights both the current gap and a clear opportunity for the EDUC Alliance to take collective action in building Open Science capacity.

Strategic recommendations:

- **Develop a Joint Strategy for Open Science Capacity-Building:**
Establish a coordinated EDUC-WIDE framework to support the professional development of staff, researchers, and administrators in key Open Science areas, including research data management, Citizen Science, and Open Access.
- **Leverage COARA Membership to align with European Best Practices:**
Use the recent COARA memberships of the University of Pécs and Precarpathian National University as a foundation to promote alignment with evolving European standards in research assessment and Open Science implementation.
- **Create and Share Training Resources Across the Alliance:**
Develop a shared repository of Open Science training materials—such as workshops, e-learning modules, and guidelines—that can be adapted and used across institutions.
- **Integrate Open Science into Institutional Development Programmes:**
Encourage all member universities to embed Open Science competencies into their existing professional development structures and HR policies.

- Foster a Cross-Institutional Learning Network:
Establish a collaborative platform for knowledge exchange among Open Science practitioners across the alliance to support peer learning, mentoring, and community building.

IP2: Responsible research and innovation (RRI) and reproducibility

Context and Observations: There is currently no formal, alliance-wide position within EDUC on Responsible Research and Innovation (RRI) or reproducibility. Most member institutions—including MUNI, UPECS, UR, UNICA, PNU, UJI, and UPN—report no institutional strategies or dedicated support in these areas. USN has implemented a framework for research ethics, including an integrity committee, institutional oversight, and training, aligned with national and international standards. The University of Potsdam follows the German Research Foundation’s Code of Good Scientific Practice and supports RRI through national initiatives and its Postgraduate Center for Research Integrity. While structured EDUC-level frameworks are lacking, existing national practices and institutional efforts offer a foundation for developing a coordinated alliance-wide approach to RRI and reproducibility in the future.

Strategic recommendations:

- Develop a Common EDUC Framework for RRI and Reproducibility:
Establish an alliance-wide position or guidelines that promote Responsible Research and Innovation (RRI) and research reproducibility as key components of Open Science and research integrity.
- Build on Existing National and Institutional Practices:
Use established frameworks—such as those in place at USN and the University of Potsdam—as models for developing shared standards and practices across the alliance.
- Encourage the Integration of Ethics and Integrity Structures:
Support member institutions in creating or strengthening internal ethics committees, integrity oversight, and guidance services for researchers.
- Promote Training and Awareness:
Develop joint training resources and workshops focused on ethical research conduct, reproducibility, and RRI principles, leveraging expertise from member universities already engaged in these areas.
- Foster Coordination and Knowledge Exchange:
Create a cross-institutional working group to share good practices, identify gaps, and support the gradual alignment of RRI and reproducibility policies within the alliance.

IP3: Lead by example

Context and Observations: Open Science (OS) implementation across the EDUC Alliance remains uneven, with most institutions lacking formal, comprehensive strategies. However, several members have taken initial steps toward integration. UPECS has begun incorporating Open Science guidelines into its internal project application system. It also operates a Gold Open Access funding scheme and has established a dedicated fund to support Diamond Open Access journals. UP published Open-Science-Guidelines as well as specific policies on research data and Open Access and provides dedicated support services for those areas. UNICA and UJI have set up OpenAIRE-compliant repositories, aligning with European interoperability standards. USN has implemented an institutional Open Science Policy covering the areas of scientific publishing, artistic research, dissemination, research data, evaluation of researchers and research, as well as research in collaboration with society. These individual efforts demonstrate growing institutional engagement, but the absence of a coordinated, alliance-wide approach highlights the need for shared strategy, resource alignment, and mutual support in advancing Open Science across EDUC.

Strategic recommendations:

- **Develop a Coordinated Open Science Strategy Across the Alliance:**
Establish a shared framework to align institutional efforts and promote consistent Open Science practices across all EDUC member universities. Good experiences have been made at UP with the road2openness-Framework.
- **Build on Existing Institutional Progress:**
Leverage the efforts of institutions like UPECS and UP (e.g. internal OS guidelines, Gold and Diamond OA funding) and the OpenAIRE-compliant repositories at UNICA and UJI as models for broader adoption.
- **Encourage Integration of OS Principles into Internal Funding and Evaluation Systems:**
Support the inclusion of Open Science criteria in project applications and funding decisions across all member institutions.
- **Promote Interoperable Infrastructure and Shared Standards**
Facilitate the development or adaptation of institutional repositories and tools that align with European standards such as OpenAIRE.
- **Foster Collaboration and Knowledge Exchange**
Create working groups or thematic networks to share tools, policies, and training materials, accelerating the institutionalisation of Open Science throughout the alliance.

AIC1: Open Science expert body

Context and Observations: The EDUC Alliance Open Science expert body has been successfully established by Masaryk University under WP1, providing a formal structure for collaboration and strategic development in Open Science.

To ensure long-term impact, it is recommended to maintain this group beyond the project's duration, strengthen its role as a joint negotiation platform, and explore integration into existing Open Science expert networks.

Strategic recommendations:

- **Define the Mandate and Scope of the Expert Body:**
Clearly outline the roles, responsibilities, and decision-making capacity of the expert body to ensure its long-term impact and relevance.
- **Integrate the Expert Body into EDUC Governance Structures:**
Ensure regular communication between the expert group and other governance levels of the alliance to support alignment with broader institutional goals.
Use the Expert Body to Drive Strategic Implementation:
Empower the group to lead the development of alliance-wide strategies, shared guidelines, and coordinated actions in key Open Science areas (e.g. RRI, OA, data management).
- **Facilitate Regular Meetings and Knowledge Exchange:**
Establish a schedule for ongoing collaboration, sharing of best practices, and monitoring progress on Open Science implementation across member institutions and across university networks.
- **Promote Visibility and Engagement:**
Communicate the role and activities of the expert body within and beyond the alliance to increase awareness, foster institutional support, and position EDUC as a visible Open Science actor at the European level.

AIC2: OpenAIRE AMKE

Context and Observations: The membership of EDUC-Alliance in OpenAIRE AMKE has not yet been resolved. However, Masaryk University holds institutional membership. Other members of the EDUC-Alliance currently do not have membership in OpenAIRE AMKE, including UPECS, UNIVREN, UNICA, UP, USN, PNU, and UJI. At UJI the repository complies with the standards and is collected by OpenAIRE (in the relevant collections).

Strategic recommendations:

- **Evaluate the Potential for Alliance-Level Membership in OpenAIRE AMKE:**
Assess the strategic and operational benefits of establishing EDUC-Alliance as a collective member of OpenAIRE AMKE to ensure coordinated representation and access to shared services.

- **Encourage Institutional Membership Where Relevant:**
Support individual member universities in exploring institutional membership, following the example of Masaryk University, to strengthen alignment with the European Open Science infrastructure.
- **Promote Compliance with OpenAIRE Standards:**
Encourage all member institutions to ensure their repositories meet OpenAIRE metadata and interoperability standards, building on the compliant repository practices already in place at UJI.
- **Foster Knowledge Exchange on Repository Integration**
Share technical expertise and practical guidance across the alliance to facilitate repository integration and visibility within the OpenAIRE network.

AIC3: EOSC Association

Context and Observations: The EDUC-Alliance's membership with EOSC is still unresolved, though MUNI holds institutional membership. University of Pécs has no membership, but at the national level, KIFÜ (the Governmental Agency for IT Development) is the sole member. The University of Rennes has no membership. The University of Cagliari has no membership. The University of Potsdam is not a member, but takes part in consortia of the German National Research Data Infrastructure (NFDI) - a EOSC mandated organisation and national structure. USN has no membership, but Norway is taking part on a national level in EOSC with members Sikt – Norwegian Agency for Shared Services in Education and Research and The Research Council of Norway. PNU does not have a membership. University Jaume also has no membership.

Strategic recommendations:

- **Explore the Feasibility of EDUC-Alliance-Level Membership in EOSC**
Assess the strategic value of a collective membership model that would represent the alliance as a whole within EOSC structures and initiatives.
- **Encourage Institutional Membership Where Possible**
Motivate individual member universities to pursue institutional EOSC membership, following the example of Masaryk University, to enhance direct engagement with the European Open Science infrastructure.
- **Leverage National-Level Memberships**
Where institutional membership is not feasible, promote active collaboration with national EOSC representatives or agencies (e.g. KIFÜ in Hungary, Sikt in Norway) to ensure institutional interests are reflected.
- **Raise Awareness and Share Information Across the Alliance**
Provide guidance and facilitate internal discussions on the benefits,

requirements, and pathways to EOSC membership, enabling informed decision-making across EDUC institutions.

- Position the EDUC Alliance as a Future Stakeholder in EOSC Governance
Work towards increased visibility and participation of the alliance in EOSC-related activities, consultations, and governance dialogues to influence future policy and infrastructure developments.

AIC4: Declarations and manifestos

Context and Observations: The adoption of Open Science declarations and manifestos within the EDUC Alliance remains inconsistent. Some member universities have signed key international documents, while others have yet to formalize their commitment to Open Science principles. All members of the EDUC Alliance are signatories of the Agreement on Reforming Research Assessment (CoARA). Masaryk University has not adopted an official declaration but has engaged with the Leiden Manifesto, viewing it as a useful tool for supporting locally relevant research and potentially advancing Diamond Open Access. The University of Pécs has issued its own position statement on Open Science, and a national-level position paper prepared by the Hungarian National Research Development and Innovation Office is expected to be adopted by the Rectorate.

The University of Potsdam is a signatory of the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003). The University of Cagliari signed the Messina Declaration in 2004, committing to the principles of the Berlin Declaration, joined COARA in 2024, and pursues the principles of “The European Charter for Researchers,” implementing the HRS4R strategy.

Paris Nanterre University (UPN) has actively participated in the French COARA working group at the national level, demonstrating its engagement in reforming research assessment and promoting Open Science practices in France.

The University Jaume I signed the Berlin Declaration in 2005 and has since established a strong institutional framework for Open Science, including an Open Knowledge Portal and internal policies such as its institutional declaration, action plan within the National Strategy for Open Science (2023–2027), and a Code of Good Practice in Research and Doctoral Studies.

USN supports Open Science through its institutional policy and adherence to national guidelines developed by the Norwegian government and Research Council Norway. USN joined the European Charter for Researchers (formerly Charter & Code) in 2019, has also signed DORA and is currently an active participant in the CoARA Norwegian National Chapter.

The University of Rennes is a signatory of the COARA agreement, and the principles of Open Science are also promoted through its [Open Science Charter](#). More importantly, many related initiatives are carried out as part of our HRS4R (Human Resources Strategy for Researchers) certification.

In contrast, universities Precarpathian National University, and others (including UJI in specific areas) have not yet adopted formal declarations or manifestos. Across the first, second, and third rounds of analysis, no significant updates have been recorded from MUNI, UPECS, UNIVREN, UNICA, UP, PNU, or UJI.

This overall situation reflects the need for a more coordinated approach within the EDUC Alliance to support formal commitments to Open Science at the institutional level.

Strategic recommendations:

- **Encourage All Member Institutions to Adopt Recognised Open Science Declarations**
Promote the adoption of international declarations such as the Berlin Declaration to demonstrate institutional commitment and align with European Open Science standards. Highlight that all EDUC Alliance members are already signatories of the Agreement on Reforming Research Assessment (CoARA).
- **Leverage Existing Institutional Practices as Models**
Use examples from member universities—such as Potsdam (Berlin Declaration), UPN (active role in the national COARA working group), and UJI (institutional declaration and national strategy alignment)—to guide and inspire other institutions.
- **Support Integration of Declarations into Institutional Action Plans**
Encourage universities to link signed declarations with concrete action plans, codes of practice, or strategic documents to ensure effective implementation.
- **Promote a Coordinated Alliance-Wide Approach**
Develop a joint EDUC Alliance statement or commitment to Open Science principles that complements individual institutional efforts and enhances the alliance's visibility in the European Open Science landscape.

3. Best Practices and Universally Applicable Recommendations

The following universally applicable recommendations for advancing Open Science in university alliances distil lessons learned from the implementation of Open Science across a multinational European university alliance. They are intended for broad applicability, offering guidance for other alliances and networks aiming to strengthen their Open Science practices, infrastructures, and governance.

1. Establish Coordinated Governance for Open Science

- **Create a dedicated expert group** or steering body for Open Science that brings together representatives from all member institutions.
- Define a clear **mandate, decision-making capacity, and integration into alliance governance** structures.
- Ensure regular meetings and transparent reporting to foster trust, alignment, and joint action.

2. Adopt and Align with Recognised Open Science Standards

- Encourage all members to sign **key international declarations** (e.g., Berlin Declaration) and align with reform initiatives such as the **Agreement on Reforming Research Assessment (CoARA)**.
- Link these commitments to **institutional action plans, policies, and codes of practice** to ensure real impact rather than symbolic adoption.

3. Develop Shared Strategies for Key Open Science Pillars

- **Open Access:** Promote Diamond OA models, sustainable funding schemes, and interoperable repositories that comply with European standards (e.g., OpenAIRE).
- **FAIR Data Management:** Create a shared framework for Data Management Plans, templates, and compliance guidelines adaptable to national contexts.
- **Open Infrastructure and Open Source:** Coordinate investment in shared infrastructures, support open source software, and establish alliance-wide platforms for code and data sharing.
- **Citizen Science and Science Diplomacy:** Build cross-institutional networks of coordinators, shared tools (e.g., activity registries), and joint visibility campaigns.

4. Build Capacity Across All Levels

- Develop an alliance-wide skills development strategy for researchers, technical staff, and administrators.
- Share training resources, online modules, and best-practice guides to reduce duplication and ensure quality.
- Integrate Open Science training into existing professional development programmes and doctoral curricula.

5. Leverage Peer Learning and Best-Practice Exchange

- Organise regular thematic workshops to showcase institutional innovations and encourage their replication.
- Maintain a shared repository of case studies, templates, and tools accessible to all alliance members.
- Promote a “lead by example” culture where successful initiatives in one institution are scaled across the network.

6. Enhance Communication and Visibility

- Develop joint communication campaigns to raise awareness of Open Science benefits among researchers, students, and the public.
- Use shared branding, storytelling, and multimedia resources to strengthen the alliance’s European and international profile.

7. Address Gaps Through Joint Action

- Prioritise areas with the greatest collective need (e.g., DMP support, data evidence frameworks, EOSC integration).
- When resources are limited, pool funding for shared services and infrastructures to ensure cost-efficiency and impact.

8. Monitor, Evaluate, and Adapt

- Establish common indicators and monitoring systems to track progress on Open Science goals across members.
- Use findings to adjust strategies, close gaps, and respond to evolving European policy frameworks.

4. Conclusion

This report reflects the transition from strategic intention to practical implementation of Open Science within the EDUC Alliance. As an update and natural continuation of the 2022 Open Science Strategic Framework, it provides a clearer picture of institutional diversity, emerging good practices, and shared challenges across the alliance.

The establishment of the EDUC Open Science Expert Group — first envisioned in EDUC-SHARE and now operational — marks a major step forward in fostering coordinated governance. Similarly, concrete developments such as the use of OJS platforms, Diamond OA funding, and universal participation in CoARA show increasing alignment with European Open Science policy frameworks.

However, the analysis also makes clear where the most work lies ahead. The alliance faces significant gaps in areas such as advanced Data Management Plan (DMP) support, structured approaches to data evidence, coordinated EOSC integration, institutional strategies for Citizen Science, and the development of Open Infrastructure and Open Source frameworks. Capacity-building for staff and researchers, unified communication and training strategies, and the integration of next-generation metrics and responsible research and innovation principles also remain underdeveloped across most institutions.

At present, the most pressing issues are the absence of coordinated alliance-wide strategies in key Open Science pillars, the uneven level of institutional readiness, and the lack of shared tools and infrastructures that would allow member universities to collectively meet European Open Science standards. Without addressing these gaps, the potential for EDUC to act as a visible, influential Open Science actor in Europe will remain underexploited.

The findings and recommendations presented here are intended to guide further institutional progress, address the identified priority gaps, and serve as a foundation for deeper collaboration, joint policy alignment, and strategic positioning of the EDUC Alliance within the broader European Open Science ecosystem.