

Discussion Rounds for OpenAIRE NOADs on National Open Science Skills Building

Showcasing the variety of Open Science training approaches in Europe

The OpenAIRE AMKE Training and Support Standing Committee organized three online meetings for OpenAIRE NOADs on National Open Science (OS) Skills Building.

Over the course of these sessions, ten OpenAIRE NOADs discussed different pathways to train local stakeholders in open science and presented various training activities implemented in their countries by formal and informal networks, institutions and projects, highlighting local use cases and sharing lessons learned. Each session had three parts: presentations by OpenAIRE NOADs, breakout rooms where NOADs discussed what was possible in their countries, what could be adopted, and what challenges they faced, and a brief wrap-up.

The first session, held on 25 January 2024, featured presentations by [Mojca Kotar](#) (Slovenia), [Silvia Sofianos](#) (Slovakia), and [Judit Fazekas-Paragh](#) (Hungary). During the second session, held on 29 February 2024, Susanne Blumesberger (Austria), [André Dazy](#) (France), [Gina Pavone](#) (Italy), and [Pedro Principe](#) (Portugal) shared their experience. The final session was held on 28 March 2024 and it featured presentations by [Niamh Brennan](#) (Ireland), Nagumo Shuji (Japan), and [Loek Brinkman](#) (The Netherlands).

Key takeaways

The Discussion Rounds showcased the strength of the [OpenAIRE NOADs network](#) and its role in coordinating training programmes for research and e-infrastructures, towards aligning and enhancing training activities across various national and institutional initiatives.

The presentations and discussions also highlighted a diversified policy landscape across countries and the importance of national-level strategies supported by dedicated funding for OS skills building. While it is still possible to achieve significant results even if there are no policies in place, primarily through bottom-up initiatives and community engagement, national policies and dedicated funding streamline training efforts and ensure their sustainability.

Cross-institutional networks and communities together with the emergent competence centres are a major driving force in skills building on the national level.

European projects (e.g. [PATTERN](#), [Skills4EOSC](#)) provide a significant impetus for OS skills building through focused and coordinated actions, funding and reusable outputs.

The presentations revealed a variety of training approaches and formats, highlighting the train-the-trainer method as particularly effective. Despite tendencies toward alignment, fragmentation still exists within training ecosystems. There is a clear need for defining core competencies for various stakeholders on the European level and creating national open, adaptable and scalable courses adjusted to various career levels and aligned with competencies defined at the European level.

Discussions following the presentations highlighted a growing demand for a unified European approach to doctoral programmes on open and responsible science that would be supported and co-created with university associations and alliances, as well as the need to develop clear strategies for data stewards training programmes and improve the integration of EOSC into training initiatives.



OpenAIRE Austria

The presentation by [Susanne Blumesberger, Vienna University Library](#), focused on RDM and OS support, highlighting support services at universities and various initiatives, networks, projects, and institutional research data repositories.

Many universities in Austria have RDM **policies**:



These universities provide different levels of RDM support. Most have contact points for RDM and OS, offering services such as consultations, or infrastructure such as repositories, support in drafting data management plans and advice on RDM. They also support national and international projects, networks and initiatives.

Cross-institutional **networks and initiatives** actively support the building of skills and infrastructure for OS. [Citizen Science Network Austria](#) is a notable example of such networks and initiatives. It operates the [Österreich forscht platform](#), where cross-disciplinary and cross-institutional citizen science projects are presented. It also works with repository managers and different universities. The [Austrian EOSC Mandated Organisation](#) and [EOSC Support Office Austria](#) are focused on the implementation of the European Open Science Cloud (EOSC) in Austria, whereas the [Open Science Austria Platform](#), launched by the [Austrian University Conference](#), provides an overview of activities in the field of OS and enables exchange and networking. Finally, the [Network of Austrian Repository Managers \(RepManNet\)](#) brings together repository managers from institutions throughout Austria who would like to exchange experiences and challenges (e.g. providing technical advice, as well as advice on OA and accessibility).

National and international projects have also been instrumental in enhancing OS skills. The project [FAIR Data Austria \(2022\)](#) was aimed at strengthening knowledge transfer between universities, industry and society and supporting the sustainable implementation of the EOSC. The [SharedRDM project \(2023-2026\)](#) offers selected tools and infrastructures for RDM as shared services for selected Austrian universities and research institutions.

Institutional research data repositories in Austria show great diversity in terms of technologies and services. There is a network of [Phaidra \(Permanent Hosting, Archiving and Indexing of Digital Resources and Assets\)](#) repositories based on the software Fedora, but other solutions are also present.

At the University of Vienna, the [PHAIDRA-Services department](#) is jointly operated by the University Library and the Central IT Service. PHAIDRA-Services include storage for digital data archiving, support to researchers in RDM throughout the research lifecycle, training courses and workshops on data management with PHAIDRA-Services and a practical introduction to the PHAIDRA repository every semester at the University of Vienna, as well as individual consultations on data management projects with PHAIDRA-Services. The library maintains a [dedicated website covering various aspects of RDM](#) (policies, training materials, information about repositories, etc.).

The presentation by [André Dazy, Couperin](#), focused on Couperin's activities in promoting open science and coordinating training.

Couperin, a non-profit organization, is a key actor in the network of information specialists in higher education and research in France. Couperin's members include universities, research institutions, hospitals and others (279 in total), and it has four main activity areas: managing negotiations with academic publishers and service providers, promotion of OS, conducting annual surveys on e-resources and APC expenditures and tracking metrics to facilitate negotiations with publishers. It relies on a significant number of volunteers (more than 200), supported by eight permanent staff members. Couperin operates in a favourable environment because a national OS policy was [adopted in 2018](#) and [revised in 2022](#).

Since 2009, Couperin has been the OpenAIRE National Open Access Desk (NOAD) for France, focusing on various tasks such as making sure that EC-funded publications and data are harvested by OpenAIRE, establishing repositories compliant with OpenAIRE guidelines, disseminating information, liaising with national ministries, funders, Couperin's members, etc. Couperin has also been coordinating training activities such as training at the national school for librarians, involvement in the National Open Science group Europe International at the Ministry level, organizing presentations on OpenAIRE (e.g. at the National Research Centre, for agronomy researchers, or [this national event](#) attended by 400 participants etc.) and writing notes about OS (e.g. on Rights Retention Strategy).

Couperin occasionally has **calls for [projects providing funding for training resources](#)**. The development of resources such as games, MOOCs, decision-making web interfaces and videos have been funded so far.

The consortium has a dedicated Open Science working group with 30 experts divided into four sub-groups focusing on legal issues, OA publishing negotiations, interoperability, and data. The working group has a [dedicated website](#) where training resources like webinars, practical sheets, interviews, videos, and games are shared.

In her presentation, [Judit Fazekas-Paragh, University of Debrecen](#), highlighted the efforts of the [Hungarian Open Repositories Working Group \(HUNOR\)](#) in building OS skills through various training programmes and meetups. Established in 2008, HUNOR includes higher education institutions and the [Hungarian Academy of Sciences](#) and is coordinated by the [OpenAIRE NOAD](#). Its main objectives are to develop and practice Open Access (OA) in Hungary, effectively disseminate Hungarian research, and establish a robust network of repositories. Notably, 44 Hungarian repositories are currently listed in [OpenDOAR](#).

HUNOR has been proactive in organizing various **skills-building activities**. In 2019, an OpenAIRE Train-the-Trainer Bootcamp was held at the University of Debrecen and four ninety-minute training sessions were conducted by HUNOR member organizations. During 2020 and 2021, a series of research data management (RDM) meetups took place, including 30 online and 20 in-person sessions and reaching more than 700 participants. In 2022, train-the-trainer activities focused on Open Access, RDM, licensing, and establishing data repositories. Since 2023, the train-the-trainer approach has been used in promoting OpenAIRE Services ([Argos](#), [Amnesia](#), [OpenAPC](#), [Zenodo](#) and [OpenPlato](#)). Through hands-on sessions it is demonstrated how these services can support research workflows.

Recent training focused on the efforts of the [Coalition for Advancing Research Assessment \(CoARA\)](#) to reform research assessment practices. The aim of this training was to support HUNOR members who have already signed the CoARA agreement, and to raise awareness among those who are not familiar with this initiative yet.

HUNOR has played an important role in **community building**. Its members are now able to support institutional RDM projects, assist with research data curation, and manage research data repositories. Furthermore, HUNOR fosters community building by creating forums for stakeholders – including researchers, IT specialists, librarians, funders, and policymakers, establishing connections between research and professional communities.

In her presentation, [Niamh Brennan, Trinity College Library Dublin](#), outlined Ireland's evolving OS skills development landscape.

In recent years, Ireland's approach to open research has evolved significantly – from straightforward actions where the OpenAIRE NOAD was reaching out to specific groups to a more complex and dynamic landscape.

The [National Open Research Forum \(NORF\)](#), established in 2017, plays a central role in the implementation of the [National Action Plan for Open Research 2022-2030](#) and promotion and support to open research practices as outlined in the National Framework on the Transition to an Open Research Environment (2019). As an OpenAIRE member, it drives numerous initiatives, including a number of projects funded by the government under the auspices of the NORF. In 2022, NORF awarded funding to six collaborative projects to implement priority actions in Ireland's National Action Plan for Open Research 2022-2030:

- [National Open Access Monitor](#)
- [Open Repository Assessment and Alignment](#)
- [Open Access Transition Programme](#)
- [Open Research Training Programme](#)
- [National Data Stewardship Network](#)
- [Shared Data Storage Service Pilot](#)

NORF has also announced 13 new collaborative projects to advance open research.

Intensive training is conducted in all ongoing projects, both on the national and institutional levels.

The National Open Access Monitor, currently at the pilot stage, builds upon the [OpenAIRE Graph](#) to create a tool to track and analyze progress in OA on the national level.

Another significant project is [publishOA.ie](#), which aims to conduct a feasibility study to investigate the creation of a national Diamond OA publishing platform, support bibliodiversity and train small publishers on how to operate in an OA environment. This is very important for small and impoverished university presses and Irish language publishers.

The [SCOIR project](#) deals with copyright, secondary publishing rights, institutional policies and rights retention. It includes a large training component, and open educational resources on these topics are being created.

The OpenAIRE NOAD is involved in supporting institutional repositories. The first tranche of NORF-funded projects included a strategic roadmap for advancing Ireland's open repository landscape, which also involves a training component.

The [TROPIC project](#) is developing a national curriculum for OS training to upskill researchers in the fundamentals of open research practices.

Structured training programmes are a key part of this effort, including the Open Librarianship core module in Dublin Business School's [Master of Science in Information and Library Management programme](#), which aims to educate and inspire the next generation of librarians. Among other topics, this module features OpenAIRE infrastructure.

The self-paced course [Research Integrity and Impact in an Open Scholarship Era \(RIO\)](#), hosted on the [National Forum for the Enhancement of Teaching and Learning Networks](#) is designed in line with the FAIR principles: it can be downloaded and adapted and is designed for reuse.

OpenAIRE services are being promoted among Irish research-performing organizations. An example of successful collaboration with OpenAIRE involving the Irish OpenAIRE NOAD is the implementation of the [OpenAIRE Connect Gateway for EUT+](#), the European University of Technology Alliance, which includes eight universities across Europe. This example was followed by the Technological University Network (TU-NET), which also established a [customized OpenAIRE Connect Gateway](#).

The Irish OpenAIRE NOAD works closely with a number of networks, such as the [National Research Integrity Forum](#), the [Irish Open Access Publisher Group](#) and the [Library Publishing Group](#), as well as with various institutions asking for support.

Another significant network is [EDEN, the European Distance and E-Learning Network](#), which advances digital education and pursues UNESCO recommendations on open education and open science. This network includes leaders such as Dermot Linnet from the TROPIC project, who frequently collaborate with others on these initiatives.

Networks extend beyond Ireland, and the Irish OpenAIRE NOAD was invited to contribute to UNESCO's International Day for Universal Access to Information and she is also actively involved in [CoARA's Working Group on Open Infrastructures for Responsible Research Assessment](#).

Developing a national OpenAIRE network is a current focus, with a demand demonstrated from multiple angles.

The presentation by [Gina Pavone](#), [Institute of Information Science and Technologies "Alessandro Faedo" \(CNR-ISTI\)](#), focused on the various initiatives, networks and projects shaping the landscape of OS training in Italy.

The starting point in the development of training is the awareness that Open Science cannot be practised without adequate skills and competencies. In order to develop skills, it is necessary to have clear definitions of the required skills, to establish new professional profiles (i.e. dedicated career paths for OS), to enhance current staff's skills towards ensuring a smooth transition to new practices and methodologies, to design continuous learning paths making sure that skills evolve alongside scientific innovation and to provide adequate support by engaging all stakeholders across the research workflow.

The pivotal role in coordinating capacity building activities in Italy is played by the [Italian Computing and Data Infrastructure \(ICDI\)](#), as a collaborative initiative, formed by the major Italian digital and research infrastructures. Cooperation is formalized by a Memorandum of Understanding signed by 29 organizations. [The Ministry of University and Research \(MUR\)](#) is involved as an observer.

Since 2018, ICDI has been the host of the [Competence Centre](#) for OS, FAIR and EOSC – a network of experts, initiatives and research infrastructures supporting the Italian national OS community. The Competence Centre aims to serve as a single national reference point for training and support, empowerment (by integrating OS into daily practices through skill acquisition and awareness of its benefits), professionalization, best practices, and tools and services for OS. The activities of the ICDI Competence Centre include:

- Training, which is usually tailored to different career levels (esp. PhD students) and research communities. However, many training requests come from research support staff. Trainees particularly appreciate hands-on sessions when practical tools are presented (e.g. Zenodo, DMP tools, Zotero, etc.). Other training activities include short seminars without clear teaching purposes, courses commissioned by research institutions or private entities (offered for a fee) and courses organized by the competence centre (fee of charge)
- Support for drafting and revision of data management plans by the DMP support group. Requests for support usually come from Italian Horizon Europe project coordinators. Institutions can also commission training and writing support for a fee.
- Advocacy activities through the [Open Science Café](#) – a series of one-hour webinars with invited experts providing insights on OS topics and encouraging discussion. Since April 2021, 26 webinars have been organized.
- The coordination of the website [open-science.it](#), which serves as a hub for information exchange and debate. It features various content formats including articles, news, events, and offers a resource catalogue, a calendar of events and FAQs. It is in Italian, but some materials are also provided in English.

The Competence Centre also serves as a broker of services.

Another initiative launched within the Competence Centre is the [Italian Network of Data Stewards](#). It meets every two months online and organizes two in-person events a year.

The Italian OpenAIRE NOAD **collaborates with the [Italian Reproducibility Network](#)**, which is a member of a larger European network. They share many common goals and interests.

The Horizon Europe project [Skills4EOSC](#) supports many training activities because one of the main objectives of the project is to establish a Coordination Network of Competence Centers for OS, FAIR principles, and the European Open Science Cloud (EOSC) in Europe.

Although the activities of the ICDI Competence Centre are in some cases supported by ongoing projects, it still relies on volunteer work. The involvement of institutions is mainly tied to funded projects which poses a sustainability challenge. Other challenges include recognition and incentives for participation in OS activities, dissemination and networking, mapping expertise to identify experts and ensuring effective planning of activities and projects.

The presentation by Nagumo Shuji, Public Relations and Promotion Working Group, [Tokyo Gakugei University](#), focused on JPCOAR's activities related to infrastructure development and training.

Japan's commitment to promoting OS is reflected in the adoption of an Immediate OA Policy by the Japanese government in February 2024, which was encouraged by the G7 Hiroshima Leaders' Communiqué and G7 Science and Technology Ministers' Communiqué (May 2023). The policy requires that articles and their underlying research data from publicly funded research be made immediately open access in institutional repositories or otherwise. This requirement applies to new research proposals beginning with 2025.

Since 2005, Japan has seen significant growth in the number (more than 800) of institutional repositories or otherwise. Many institutional repositories are powered by the [JAIR Cloud](#), an institutional repository system jointly operated by the National Institute of Informatics and [Japan Consortium for Open Access Repository \(JPCOAR\)](#). As this infrastructure growth has not been reflected in staff growth, Japanese institutions face difficulties such as job rotation (librarians often rotate jobs every few years, due to which there is a constant need for retraining) and insufficient staff at small universities, where one-person libraries and the lack full-time repository staff are a reality, making knowledge transfer and human resource development challenging. Accordingly, skills building by the community is very important.


A major role in skills building and community building in Japan is played by the JPCOAR. It was established in July 2016 and it now includes 748 member organizations, primarily universities and research institutions. JPCOAR aims to promote a repository-based knowledge dissemination system, strengthen the repository community, and contribute to the broader goals of OA and OS. It includes several [working groups](#):

- Community Group, handling public relations, promotion, and event management.
- Contents Group focusing on research data and content management.
- System Group, which manages the JAIR Cloud system and related technical developments.

It also includes task forces that address specific issues such as JAIR Cloud transition and cooperation, as well as OA.

JPCOAR's skill-building and community-building initiatives include the following activities:

- The development of learning materials, such as training tools and resources on RDM, available as videos and slides, e.g. [RDM Training Tool](#), [RDM for Researchers](#), or [RDM Service: Design and Practice](#).
- Regular [webinars](#) on OS and institutional repository management, with recordings available on YouTube.
- [JPCOAR Web Magazine](#) providing information on OS to the community.



JPCOAR maintains two mailing lists to facilitate communication and support: a community mailing list for general information sharing, and the JAIRO Cloud Community Mailing List for technical support and assistance with JAIRO Cloud issues.

In response to the limitations of online activities, JPCOAR plans to enhance its engagement through in-person workshops across various regions in Japan. These face-to-face interactions are expected to be more effective in skill-building and community-building efforts.

JPCOAR remains dedicated to advancing OS by providing robust support systems, comprehensive training materials, and fostering community engagement. These efforts are crucial for strengthening the dissemination of knowledge and the repository community in Japan.



OpenAIRE The Netherlands

The presentation by [Loek Brinkman](#), [DANS](#), highlights OS skills and expertise building initiatives in the Netherlands, focusing on the network of digital competence centres, training for research data professionals, OS communities and projects.

The framework for the development of OS in the Netherlands is provided by the [National Programme Open Science](#), which has resulted in a rolling agenda – a living document that describes the underlying objectives for each of the strategic goals that will be achieved. It is divided in four action lines – societal engagement and participation (citizen science), inclusive and transparent scientific processes, open scholarly communication and FAIR and open research outputs, and has five pillars: open infrastructure, support and training, community engagement, recognition and rewards and policies and regulations. In 2023, [OpenScience NL](#) published their work program, which aims to promote and accelerate the transition to OS through dedicated funding, empowering communities and by supporting capacity building and infrastructure.

Furthermore, in the Netherlands, **all universities and research institutes have digital competence centres** to support local needs within the constraints of local infrastructure, budgets, and policies. These centres provide researchers with support in various aspects of OS, e.g. making research data FAIR-compliant. Initially, national funding was available to support the establishment of local digital competence centres. Now, local universities have assumed the financial responsibilities for maintaining them.

Additionally, **three national thematic competence centres have been established** for social sciences and humanities, life and health sciences, and natural and engineering sciences. These centres serve as bridges between local competence centres and offer funding opportunities for research support staff and researchers within their respective domains. In the coming years, additional funding will be available for focus areas, including research software and interoperability.

In the Netherlands, research data professionals have **networks** that enable them to share experience, e.g. the National Coordination Point Research Management ([LCRDM](#)) and the Data Steward Interest Group ([DSIG](#)).

Training is available for research support staff, e.g. programmes like [Essentials 4 Data Support \(RDNL\)](#). The National Programme Open Science will seek to increase the capacity for this type of training by funding the development of a certified training programme for data professionals, a baseline curriculum, and additional courses in the following years.

A vibrant **bottom-up network of Open Science Communities** is also active in the Netherlands. These local communities, which mostly comprise researchers but are also open to research support staff, seek to make OS practices visible and accessible, facilitating peer-to-peer knowledge exchange, with over 2000 members active in local communities at all university cities. The importance of the Dutch network of Open Science Communities is recognized by Open Science NL and funding is provided to enable their professionalization. The Dutch Open Science Communities have been a source of inspiration for others to start similar communities in other countries. Today, Open Science Communities are active in more than 20 countries, who together form the [International Network of Open Science Communities \(INOSC\)](#).

The Dutch OpenAIRE NOAD is involved in the European [PATTERN project](#) with 16 partners from all over Europe, including OpenAIRE, which plays a central role in it. The project will develop training on eight topics related to OS. The Dutch team will be responsible for developing course materials for FAIR data management.



OpenAIRE Portugal

The presentation by Pedro Principe, University of Minho, highlighted the most important actions and initiatives in OS training in Portugal.

While there is no formal national OS roadmap in place in Portugal, and the initiatives are not so much structured in the top-down direction, bottom-up initiatives show a significant level of maturity. Although there is no major support in terms of coordination from the ministry level, funding is provided by relevant national bodies. The Academic Libraries Working Group of the Portuguese Association of Librarian, Archivists, and Documentalists, along with the Foundation for Science and Technology (FCT), which has an office dedicated to scholarly communication, are actively involved in providing training materials aligned with the updates of the [National Open Access \(OA\) Policy](#).

The main activities are led by well-established nationally funded **networks**, which have a key role in improving national strategies and professional training in OS:

- [RCAAP \(Open Access repositories network\)](#), supporting OS practices through training on repositories;
- [PUB IN \(Open Access journals service\)](#), supporting OA journals and editors in implementing best OS practices. It is managed by a national body, but the University of Minho receives some funding for infrastructure maintenance and support.
- [RDM Forum](#), seeking to enhance training in RDM. Although the University of Minho receives some funding from the FCT-FCCN to coordinate the activities of three working groups (on policies, repositories and training) and organize an annual national event, this initiative is predominantly community-driven. Hopefully, the RDM Forum will be the basis for a national project.

The Community of Practice for Open Science and RRI Trainers was established in 2020, comprising participants from FOSTER, FIT4RRI, and OpenAIRE bootcamps. The community consists of professionals such as librarians, research managers, researchers, teachers, and science communicators, engaging in regular activities to enhance skills and knowledge in Open Science and RRI. This is a mature community with regular activities every two months, involving senior professionals who are very active in their institutions.

FCT-FCCN also supports **training infrastructure**: the MOOC national platform [NAU.EDU.PT](#), which facilitates the dissemination of knowledge and training materials, allowing higher education institutions to reach a broader audience and increase international visibility. The University of Minho offers an Essentials RDM MOOC, which has already had three editions with over 6,000 registrations and nearly 2,000 certificates issued.

While the initiatives have generally been successful, there have also been some setbacks, such as the failure to implement a major national project for which funding was approved in 2017/2018 due to administrative obstacles.

However, there are still promising plans in the pipeline, including an annual national bootcamp organized by the University of Minho as OpenAIRE NOAD, the national OS programme to improve RDM services and OS training, and the establishment of related competence centres.



OpenAIRE Slovakia

The presentation by [Silvia Sofianos, Slovak Centre of Scientific and Technical Information](#), showcases the landscape of OS skills building in Slovakia.

The legal foundation for the implementation of OS principles in Slovakia is provided by the national [Open Science Strategy 2021-2028](#) and its Action Plans. The [Action plan for 2024](#) is implementing Open Science principles to the Slovak research area in accordance with long term priorities of the [National strategy for research, development and innovation 2030](#). Three institutional OS policies have been adopted so far by Slovak universities.

Although there are efforts to establish training on OS at universities, the Slovak Centre of Scientific and Technical Information in Bratislava is currently the only organization providing skills development in OS. **Train-the-trainer courses on OS in the Slovak language** are offered since 2018 to various target groups (research organizations, universities, libraries, and policy makers). The training offer includes the accredited course Open Science in Practice (consisting of four modules covering OS basics, OS infrastructure, building OS culture and open research data), and a non-accredited course on electronic research information resources.

The Centre's previous training experience suggests that participants prefer taking separate modules and face-to-face sessions, as well as that group activities, quizzes and examples from practice enhance learning. At the same time, courses exceeding 18 hours (three days) have a higher participant dropout. Trainers face difficulties with online interactions and group activities, handling larger groups, rapid obsolescence of training materials and inability to translate the necessary materials into Slovak. It has also been observed that most participants come from the Bratislava region. Major challenges include the low English proficiency and diverse knowledge levels among participants. It is also difficult to motivate participants to continue training. Training is currently provided only in Slovak and it would be difficult to include students who do not speak this language.



OpenAIRE Slovenia

In her presentation, [Mojca Kotar, University of Ljubljana](#), focused on the major developments in OS in Slovenia achieved thanks to a comprehensive legal and infrastructural framework, robust support systems, and targeted skills-building initiatives.

Slovenia has a strong **legal foundation for Open Science**, ensured by the following national legal documents:

- [Resolution on the Slovenian Scientific Research and Innovation Strategy 2030](#) (OS is addressed in Chapter 6.2);
- [Action Plan for Open Science](#), focusing on the implementation of Chapter 6.2 of the Resolution on the Slovenian Scientific Research and Innovation Strategy 2030;
- [Scientific Research and Innovation Activities Act](#) (OS is addressed in Articles 40-42);
- [Public Information Access Act](#) (Article 6: research data from publicly funded research need to be openly available and reused);
- [Decree on the Implementation of Scientific Research Work In Accordance with the Principles of Open Science](#)
- Rules on Conditions for Providing Library Services as a Public Service.

Open Science is also embedded in institutional regulations, e.g. the University of Ljubljana addresses OS in the following documents:

- [The Statutes of the University of Ljubljana](#), Article 6 and 133;
- [Strategy of the University of Ljubljana 2022-2027](#), Item 7.2, performance indicator RP2-K6;
- Rules on stable financing of research activity at the University of Ljubljana (Article 23)
- [Rules and Regulations for Doctoral Studies at the University of Ljubljana](#): PhD students need to submit a data management plan in line with the FAIR principles already with the PhD topic proposal, and the DMP is to be included in the PhD thesis.

These regulations are binding for a wide range of stakeholders, including teachers, researchers and PhD students, librarians, and data stewards.

To support OS initiatives, Slovenia has established a robust **infrastructure**, which includes the [National OS portal](#) with a network of institutional repositories, a joint repository for research institutes, various databases, a supercomputing unit, and support for persistent identifiers.

The support for OS **skills building** at the University of Ljubljana includes in-person presentations at faculties targeting researchers and librarians, online events on various open science topics for different stakeholders, the Doctoral School of the University of Ljubljana (a dedicated series of online events on RDM), and a book with comprehensive instructions for librarians working in the [Repository of the University of Ljubljana](#), which is also useful for other institutions using the same repository software. Individual support is also provided.

To support the implementation of OS principles in Slovenia, a **national three-year project** (until 2026) funded through the EU Recovery and Resilience Plan has been launched. The [project titled SPOZNAJ](#) is co-funded by the [Slovenian Ministry of Higher Education, Science, and Innovation](#) and the European Union's [NextGenerationEU fund](#). The project is coordinated by the [Central Technical Library of the University of Ljubljana](#) and involves 20 public research performing organizations.

A number of project activities are aimed at building Open Science skills, e.g. training on Open Science practices and research sharing according to FAIR (Findable, Accessible, Interoperable, and Reusable) principles for all stakeholders, training for data stewards and data librarians, including defining profiles of supporting experts and creating a catalogue of competencies, developing training programmes and manuals for data professionals, implementing data administrator training, and establishing a group of support experts/coordinators. It is also planned to develop a manual that would help align research activities with OS principles, especially in RDM.

Five hybrid events organized in 2023 at the University of Ljubljana were recorded and made available to all stakeholders. In 2024, the project team plans to visit 23 faculties of the University of Ljubljana and organize two short in-person events for each faculty – one focusing on OA publishing and the other on RDM including DMPs, involving the faculty staff as trainers.