

# Advancing Open Science through institutional action

Insights from the European Organization for Nuclear Research (CERN)

Antonia Winkler, Merten Dahlkemper, Anne Gentil-Beccot, Pia Kretschmar, Micha Moskovic, Kamran Naim

## Abstract

*As scientific practice evolves toward increasingly data-intensive and collaborative modes of research, the informational and infrastructural needs of research communities are changing. Open science has become a central strategy for supporting this transformation, fostering greater interconnectedness and transparency within and across disciplines. Academic libraries and information centers, as long-established institutional centers for information management, play a growing role in advancing open science by providing services, infrastructure, and guidance. This paper outlines how open science principles have been embedded in institutional structures at the European Organization for Nuclear Research (CERN), with a specific focus on the role of the Scientific Information Service (SIS) within these institutional transformations. It will highlight how open science implementation on the institutional level allows libraries and information centers to expand their mandates beyond open access publishing to become central coordinators for open data, open source software, and open source hardware practices, thereby addressing the dynamically evolving information requirements of their research communities.*

*Da sich die wissenschaftliche Praxis zunehmend in Richtung datenintensiver und kollaborativer Forschungsmethoden entwickelt, ändern sich auch die Bedürfnisse der Forschenden in Bezug auf Zugang zu Informationen und digitaler Infrastruktur. Offene Wissenschaft (Open Science) ist zu einer zentralen Strategie geworden, um diesen Wandel zu unterstützen und eine größere Vernetzung und Transparenz innerhalb und zwischen den Disziplinen zu fördern. Akademische Bibliotheken und Informationszentren spielen als etablierte institutionelle Zentren für Informationsmanagement eine immer wichtigere Rolle bei der Förderung von Open Science durch die Bereitstellung von Dienstleistungen, Infrastruktur und Beratung. Dieser Beitrag beschreibt, wie Open Science Prinzipien in die institutionellen Strukturen der Europäischen Organisation für Kernforschung (CERN) integriert wurden, wobei ein besonderer Schwerpunkt auf der Rolle des Dienstes für Wissenschaftliche Informationen (Scientific Information Service, SIS) innerhalb dieser institutionellen Veränderungen liegt. Es wird aufgezeigt, wie die Umsetzung von Open Science auf institutioneller Ebene es Bibliotheken und Informationszentren ermöglicht, ihre Aufgaben über das Open-Access-Publizieren hinaus zu erweitern und zu zentralen Koordinatoren für Open Data, Open-Source-Software und Open-Source-Hardware zu werden, um so den sich dynamisch entwickelnden Informationsanforderungen ihrer Forschungsgemeinschaften gerecht zu werden.*

## Open Science - A new mandate for institutional practice?

▶ The European Organization for Nuclear Research (CERN) is one of the world's leading centers for fundamental research in particle physics. Established in 1954 as a science diplomacy initiative, CERN was conceived as a model of scientific collaboration in a deeply divided post World War 2 Europe<sup>1</sup>. Since its foundation, the laboratory has experienced continuous growth and now provides facilities for more than 17,000 scientists and researchers from over 110 countries<sup>2</sup>. Its flagship experimental facility, the Large Hadron Collider (LHC), hosts particle physics research collaborations of unprecedented complexity and scale.

CERN operates and maintains a sophisticated network of particle accelerators, computing facilities, and technical

infrastructure that enable high-energy physics experiments. The scientific collaborations conducting experiments at CERN are independent international consortia of researchers and institutions from across the globe. Whereas CERN provides the technical infrastructure to conduct particle physics experiments, these collaborations design, build, and operate detectors, collect and analyze data, and publish scientific results.

Beyond providing technical infrastructure for particle physics research, CERN is deeply committed to meeting the information needs of its global research community. Notably, it was within CERN's IT Department that Tim Berners-Lee created the World Wide Web in 1990 to improve information exchange among research collaborations<sup>3</sup>.

Since its founding, CERN's mission to foster information exchange within the CERN collaborations has been

1 Hermann, Armin / Krige, John / Mersits, Ulrike / Pestre, Dominique: History of CERN (Vol. 1). North-Holland Physics Pub., Amsterdam / New York 1987

2 CERN: CERN Annual report 2024, 2025 <https://doi.org/10.17181/AnnualReport2024>

3 Berners-Lee, Tim: Weaving the Web: The Original Design and Ultimate Destiny of the World Wide Web, 1st ed, HarperCollins, New York 1999

guided by principles of openness and transparency. Its founding Convention, signed in 1953, explicitly states that "...the results of [CERN's] experimental and theoretical work shall be published or otherwise made generally available"<sup>4</sup>. Accordingly, CERN's information management practices have long prioritized accessibility and openness. This is exemplified by a flourishing open-access preprint and publication culture that has characterized CERN's research environment even before the birth of the web<sup>5</sup>.

More recently, grassroots initiatives across the laboratory and its research collaborations have led to the development of extensive open data resources, made publicly available through the CERN Open Data Portal<sup>6</sup>. In line with its longstanding commitment to open-source development, CERN additionally continues to release large amounts of software and hardware under open source licenses<sup>7</sup>. In 2022, the organization published a comprehensive Open Science Policy<sup>8</sup>, integrating these grassroots efforts into a unified strategic vision. Since then, dedicated organizational structures have been established to translate this policy into practice. This article reflects on the process of building this institutional framework for open science.

Open Science has become an increasingly prominent topic in both supranational and national research policy discussions<sup>9</sup>. However, literature on Open Science points to a growing disconnect between research communities and policy frameworks, as uncertainties remain about how to implement Open Science principles in practice, often as a result of insufficient infrastructure support and a lack of community guidance<sup>10</sup>. This dynamic underscores the crucial role of scientific institutions - and particularly that of libraries and information centers - in bridging the gap between policy and practice. Drawing on CERN's experience in developing institutional mechanisms to support Open Science, this contribution aims to inspire broader discussions on how Open Science can become an integral part of institutional mandates. With a particular focus on the role of the CERN Scientific Information Service, and the newly established Open Science

Office within it, it will reflect on the role of information centers within such a transformation.

### A governance structure for open science - the case of CERN

While many grassroots initiatives within CERN and its research collaborations have long focused on the open dissemination of a wide range of research outputs, the publication of the CERN Open Science Policy in 2022 marked a pivotal moment by establishing a formal, institution-wide commitment to Open Science. The policy defines a broad spectrum of engagement areas, including open access to publications; open data; open source software; open hardware; research integrity, reuse, and reproducibility; infrastructure provision for Open Science; research assessment and evaluation; education, training, and outreach; and citizen science.<sup>11</sup> Together, these areas articulate a holistic understanding of Open Science that extends well beyond publication access alone.

These engagement areas differ substantially in their maturity and degree of institutional integration at CERN. Open access to publications, for example, has reached a high level of adoption, with 96 percent of CERN-authored, peer-reviewed articles published between 2022 and 2024 being immediately open. Collective Gold Open Access mechanisms such as SCOAP<sup>3</sup> (the Sponsoring Consortium for Open Access Publishing in Particle Physics), centrally coordinated by CERN's Scientific Information Service, play a key role in enabling this transition across the particle physics community.<sup>12</sup> Other domains remain less mature: while members of CERN's research collaborations have developed grassroots approaches to research integrity and reproducibility, these practices require broader institutional coordination and support to achieve comparable levels of uptake and sustainability.

To provide coherence across this heterogeneous Open Science landscape and to assess progress holistically across domains, CERN established a dedicated, multi-layer governance structure alongside the policy. Strategic ownership of Open Science is held at organizational level by the Chief Information Officer (CIO), ensuring

4 CERN Council: Convention for the establishment of a European organization for nuclear research. CERN 1953 <https://cds.cern.ch/record/330625>

5 Gentil-Beccot, Anne: (2010). Chapter 10. The driving and evolving Role of Grey Literature in High-Energy Physics, in Farace, Dominic / Schöpfel, Joachim (Eds.): Grey Literature in Library and Information Studies. K. G. Saur, Berlin / New York 2010 <https://doi.org/10.1515/9783598441493.2.155>

6 See <https://opendata.cern.ch/>. Last accessed 10.12.25.

7 See [https://bi.sis.cern.org/superset/dashboard/9/?native\\_filters\\_key=\\_N3UYtlg6\\_DcemKqiOk8-HuDla9ZMRr\\_tpnBVqJPdMCj1xFniSeqoJz3nq5agjYM](https://bi.sis.cern.org/superset/dashboard/9/?native_filters_key=_N3UYtlg6_DcemKqiOk8-HuDla9ZMRr_tpnBVqJPdMCj1xFniSeqoJz3nq5agjYM). Last accessed 10.12.25.

8 CERN: CERN Open Science Policy, 2022 <https://cds.cern.ch/record/2835057/files/CERN-OPEN-2022-013.pdf>

9 Moradi, Shima / Abdi, S.: Open science-related policies in Europe. Science and Public Policy, 50(3) (2023) p. 521–530. <https://doi.org/10.1093/scipol/scac082>

10 Lilja, Erika: Threat of policy alienation: Exploring the implementation of Open Science policy in research practice. Science and Public Policy, 47(6) (2020), 803–817. <https://doi.org/10.1093/scipol/scaa044>

11 CERN: CERN Open Science Policy, 2022 <https://cds.cern.ch/record/2835057/files/CERN-OPEN-2022-013.pdf>

12 CERN: CERN Open Science Report: 2023/2024, 2025 <https://doi.org/10.17181/CERN.6E05.02J1>

alignment with CERN's broader digital priorities, including data stewardship, software sustainability, and emerging digital technologies. Within this framework, strategic oversight is exercised by the Open Science Steering Board (OSSB), which is responsible for policy coherence, priority setting across Open Science domains, and institutional monitoring, including the approval of CERN's periodic Open Science Report. This governance model explicitly separates institutional strategy and oversight from operational delivery, while providing clear accountability at senior management level.

The work of the OSSB is supported by the Open Science Practitioners Forum (OSPF), which brings together expert groups and practitioners engaged in Open Science practices across the organization. The Forum includes thematic working groups such as the Open Data Working Group, which coordinates the release of open data by different CERN experiments and supports the implementation of Open Data policies across CERN's experimental programme. Another example is the CoARA Implementation Group, which works to align CERN's research assessment practices with the principles promoted by the Coalition for Advancing Research Assessment (CoARA). Through regular meetings, the OSPF provides a communication and coordination platform for Open Science experts and practitioners, helping to identify synergies, surface implementation challenges, and foster collaboration between different Open Science domains. It is open to participation from all CERN communities and ensures that practitioner perspectives inform institutional governance.

Operational coordination within this governance framework is provided by specialized offices embedded in CERN's support services. The CERN Open Source Program Office (OSPO), established in September 2023, serves as a central hub of expertise on open source software and hardware<sup>13</sup>. It brings together representatives from across CERN and functions as the primary contact point for open source matters involving CERN teams, users, and external collaborators. In 2024, the OSPO released a comprehensive set of recommendations for the CERN community, including licensing guidance and best-practice examples<sup>14</sup>, and supports CERN teams seeking to release software or hardware under open source licenses.

The CERN Open Science Office, located within the Scientific Information Service, plays a central coordinating role across all Open Science domains. It supports the activities of both the OSSB and the OSPF, coordinates Open Science

implementation and monitoring, and communicates institutional progress through the CERN Open Science Report. Its placement within the Scientific Information Service is significant: building on CERN's long-standing mission to support the information needs of the particle physics community, the Open Science Office extends traditional library and information services beyond publications to facilitate access to data, software, and hardware produced by CERN staff and its user communities. In this way, CERN's Open Science governance model combines CIO-owned strategic leadership, distributed operational delivery, and practitioner engagement to support Open Science at scale while preserving the collaborative culture of its research ecosystem.

### Challenges: Infrastructure development and community engagement

A joint governance structure for Open Science offers several advantages. It enables practitioner communities to exchange experiences, develop synergetic approaches, and translate their insights into institutional policy. However, establishing effective governance also requires careful consideration of several challenges. In the context of this article, we highlight two key areas on which the development of a functional governance mechanism depends: infrastructure integration and community engagement. These challenges remain central areas of focus at CERN, as the implementation of institutional open science structures advances.

### Aligning OS Infrastructure Development and Governance

Infrastructure development constitutes a cross-cutting issue for all Open Science domains covered by the policy (see Figure 1). Governance structures for Open Science that work in close collaboration with infrastructure providers are essential for identifying the needs of Open Science communities and embedding those requirements into infrastructure development efforts. In this context, meaningful dialogue between Open Science communities and infrastructure providers is crucial to ensure that infrastructures are developed in ways that genuinely support the practices of specific research communities.

At CERN, collaboration between infrastructure providers and Open Science communities has led to the creation of several dedicated Open Science infrastructures. Examples include the CERN Open Data Portal<sup>15</sup>, which facilitates the publication of educational and research data from CERN

<sup>13</sup> CERN: Mandate for the CERN Open Source Program Office (OSPO), 2023 <https://cds.cern.ch/record/2879995>

<sup>14</sup> See <https://ospo.docs.cern.ch/>. Last accessed 10.12.25.

<sup>15</sup> See <https://opendata.cern.ch/>. Last accessed 10.12.25.

experiments, and REANA<sup>16</sup>, a platform designed to enable the reuse and reproducibility of particle physics analysis workflows.

At the institutional level, collaboration with infrastructure providers has also resulted in the integration of Open Science features into established high-energy physics infrastructures. For instance, data citation functionalities have been incorporated into INSPIRE, with plans to extend these capabilities and cover a broader range of data and software resources<sup>17</sup>.

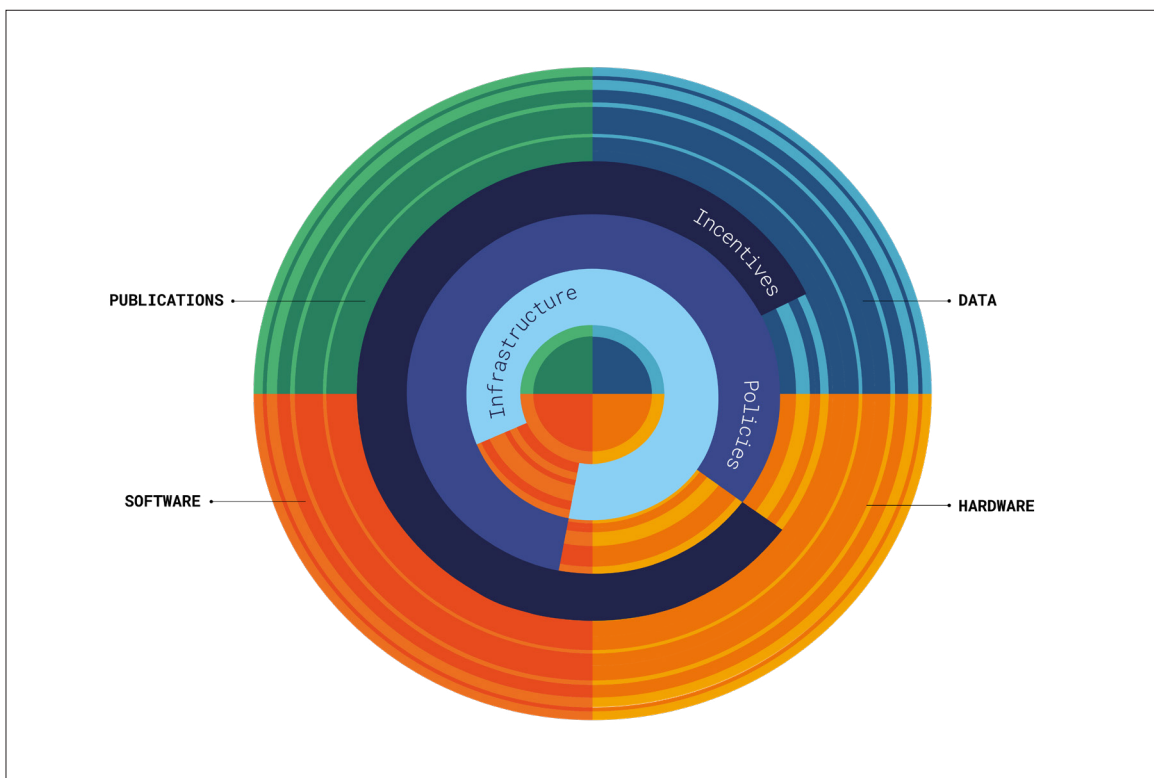
In the context of open source development, institutional collaboration within the Open Source Program Office (OSPO) has led to the creation of a prototype CERN Open Source Software Catalogue, designed to aggregate information on software developed at CERN. Similarly, in the area of open hardware, collaboration has contributed to the evolution of the Open Hardware Repository, transforming it from a development platform into a user-friendly catalogue of hardware designs<sup>18</sup>.

These infrastructure building activities illustrate the growing demand for institutional resources that enhance the discoverability of research outputs beyond publications, particularly in the fields of open source software

and hardware. Information centers and libraries play a vital role in the development of such Open Science infrastructures. Positioned at the intersection of research practice and infrastructure development, they are tasked with facilitating and coordinating the creation of information infrastructures that effectively meet the needs of their research communities.

### Community engagement

The implementation of CERN's Open Science Policy is predicated on a fundamental recognition that achieving institutional open science requires both stable governance structures and robust community frameworks to engage relevant stakeholders. This dual approach, articulated explicitly in the Open Science Implementation Plan, acknowledges that top-down policy mandates alone cannot foster the cultural transformation necessary for open science practices to take root. Rather, meaningful change emerges from active participation by practitioners across the research lifecycle. Community engagement is therefore not supplementary to open science implementation but constitutionally necessary; it provides the mechanisms through which policy translates into practice,



**Figure 1: Open Science approach at CERN; Policies, incentives and infrastructures constitute central overarching challenges that impact the meaningful open release of all research outputs. Credit: CERN**

<sup>16</sup> See <https://reanahub.io/>. Last accessed 10.12.25.

<sup>17</sup> See <https://openscience.cern/index.php/node/455>. Last accessed 10.12.25

<sup>18</sup> See <https://ohwr.org/>. Last accessed 10.12.25.

infrastructure responds to actual user needs, and a culture of openness becomes self-sustaining rather than compliance-driven. Evidence from a survey on research data management practices support this claim (see Figure 2)<sup>19</sup>. While institutional policy is an important driver for the adoption of open science, both intrinsic motivation of researchers and a strong community are vital for engagement with open science practices.

The Open Science Practitioners Forum (OSPF) represents an accessible entry point for community engagement across all activities laid out in the Open Science Policy. The OSPF is continually defining its role and operational model. Its evolution reflects a deliberate tension between structure and accessibility: while some organizational framework is necessary to ensure continuity and institutional connection, the OSPF is consciously moving away from functioning as a formal reporting body toward becoming a genuine forum where open science matters are discussed informally among peers. The vision is for an inclusive space where any community member interested in open science — whether focused on open access publishing, open data practices, research integrity, or any other policy element — can participate in dialogue, share experiences, troubleshoot implementation challenges, and contribute to shaping institutional approaches. This ongoing process of definition itself illustrates a core principle of community engagement: structures must emerge from and remain responsive to community needs rather than being imposed as fixed frameworks.

The Open Source Program Office (OSPO) provides a successful case study of how targeted community engagement can advance specific open science practices. Established with representatives from ten departments across CERN, the OSPO has effectively built a practitioner community around open source software and hardware through multiple engagement mechanisms such as annual community events<sup>20</sup> or an active OSPO forum. Critically, the OSPO functions not as a centralized decision-making authority but as a consultation point and facilitator, helping practitioners navigate licensing decisions, contribute to external open source projects, and connect with peer communities both within CERN and at other institutions. This model has proven particularly effective for open source practices, which require both technical guidance and community consensus-building around questions of governance, contribution policies, and sustainability.

Beyond these formal structures, community engagement at CERN also manifests through hybrid models that combine practitioner-driven communities with professional coordination. An example for successful long-standing and cross-organizational community engagement is the active outreach community. This community could stand as a model for the Open Science community: volunteers from across CERN dedicate significant time to conducting public tours and engaging in outreach activities such as hands-on workshops<sup>21</sup>, participating in training to develop their science communication skills<sup>22</sup> and collectively building institutional capacity for public engagement. Crucially, while this community operates through voluntary participation and shared commitment, it is supported by a central coordination point, which includes a dedicated guides community manager who facilitates training, coordinates activities, and ensures quality and consistency. This hybrid model demonstrates that sustainable communities of practice require both grassroots enthusiasm and professional facilitation: the volunteers bring diverse expertise, authentic passion, and distributed effort, while the community manager provides structure, removes logistical barriers, and maintains institutional connections. The parallel to open science implementation is direct: the appointment of an open science community engagement manager creates similar conditions for cultivating practitioner communities around open science activities, suggesting that investing in professional community coordination roles may be as critical to successful open science adoption as investing in technical infrastructure or policy development.

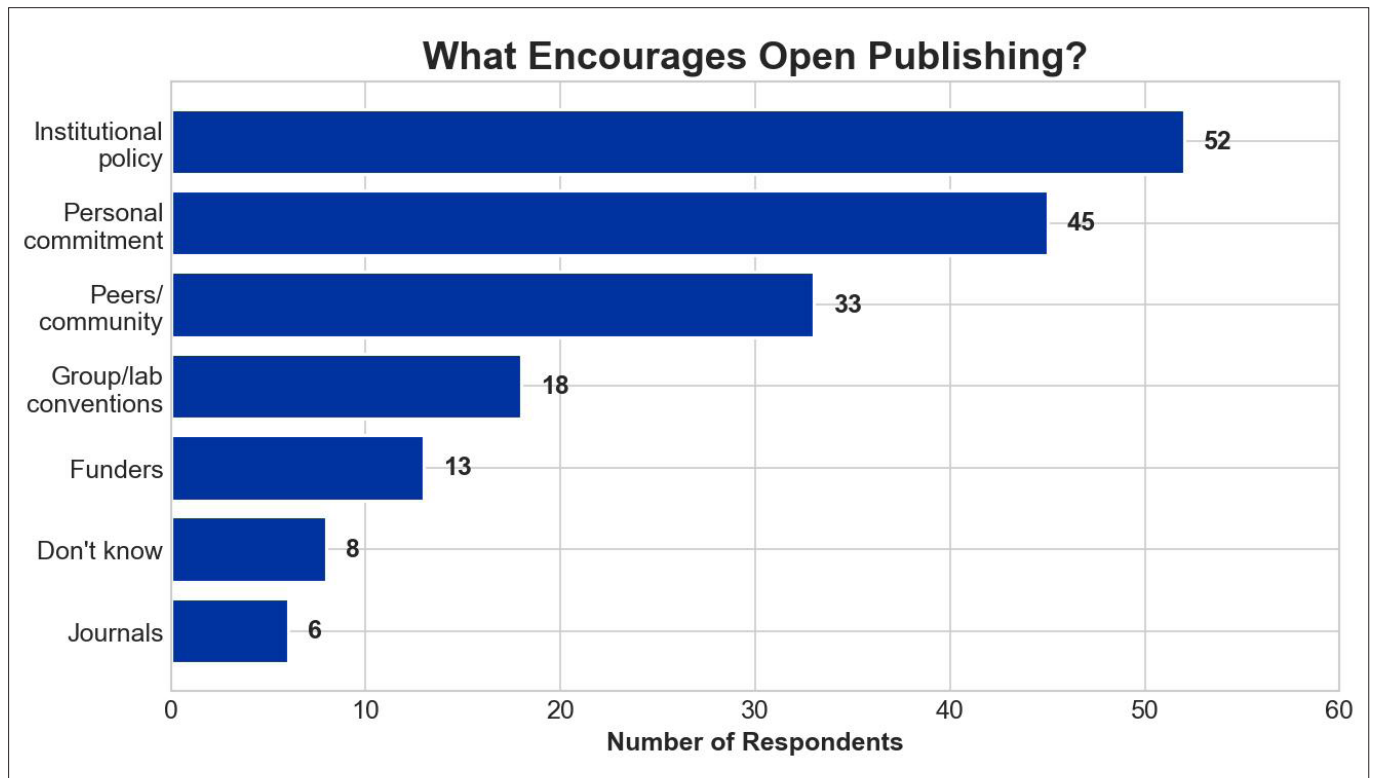
These various initiatives are now converging into a more comprehensive approach: a CERN-wide community engagement strategy currently under development. This strategy faces the considerable challenge of CERN's organizational complexity: multiple departments, diverse research communities, varying disciplinary cultures, and numerous small-scale community efforts that have emerged organically across the laboratory. While these localized communities demonstrate genuine practitioner engagement with open science, their fragmentation limits opportunities for cross-pollination, makes it difficult for newcomers to find entry points, and risks duplicating effort. The emerging strategy seeks to honor the diversity and autonomy of existing communities while creating connective tissue: shared platforms, regular forums for inter-community dialogue, and coordination mechanisms that enable communities to learn from one another without imposing artificial uniformity.

19 Jambé, Carmen / Krebs, Christine / Subotic, Daniela / Sarman, Igor / Perrig, Sebastian / Pasquier, Guillaume / Schmid, Fabian et al. "Quantitative Assessment of Research Data Management Practices - 2025". Zenodo 2026. <https://doi.org/10.5281/zenodo.18416932>.

20 See <https://indico.cern.ch/event/1546072/timetable/?view=standard>. Last accessed 10.12.25.

21 Woitke, Julia: Hands on, minds on, goggles on!, in CERN Courier 63(6) (2023) p. 41-42 <https://cerncourier.com/a/hands-on-minds-on-goggles-on/>

22 van Vulpen, Ivo.: Time for an Upgrade, in CERN Courier 63(6) (2023) p. 53 <https://cerncourier.com/a/time-for-an-upgrade/>



*Figure 2: Question results from a survey on research data management practices. 96 respondents answered to this question, multiple answers were possible. The answers show that while institutional policy is the strongest incentive for engaging in open science practices, intrinsic motivation and a community which shares these values are almost equally important. Credit: CERN*

### Conclusion: Open Science at CERN and new roles for libraries and information centers

Over the past decades, Open Science has emerged as a central area of action across research institutions, disciplines, and geographic contexts<sup>23</sup>. Within this landscape, libraries and information centers have increasingly been tasked with facilitating Open Science practices by providing practical implementation guidance to research communities and ensuring access to the necessary infrastructures and resources. Libraries, information centers, and Open Science offices within research institutions thus play a crucial role as enablers of Open Science. Positioned at the intersection of policy and research practice, they are uniquely equipped to adapt Open Science principles to the specific needs of their research communities and to identify the infrastructural requirements needed to support these practices effectively.

This contribution has outlined CERN's experience in establishing an institutional governance structure for Open Science, coordinated by the CERN Open Science Office (OS Office) within the Scientific Information Service (SIS). This governance framework emerged as a response to CERN's diverse Open Science initiatives, which had previously developed as largely grassroots, bottom-up efforts. The

new structure was designed to connect practitioner-led initiatives with institutional policymaking and to inform the development of Open Science infrastructures. The OS Office's role in coordinating diverse community engagement efforts illustrates how academic libraries can evolve from service providers into central coordinators for open science implementation. By facilitating connections between the OSPF, training initiatives, and emergent communities of practice, the OS Office ensures that community feedback systematically informs infrastructure decisions, policy refinements, and service priorities.

CERN's distinctive position as a centralized infrastructure supporting European particle physics has strongly influenced its approach to implementing Open Science. As a central hub for coordinating fundamental research in particle physics, CERN is well positioned to coordinate emerging Open Science practices. While other disciplines and institutions may operate within less centralized structures, libraries and information centers across these contexts continue to serve as key contact points for researchers. They are therefore well positioned to aggregate Open Science requirements from diverse practitioner communities and to translate policy objectives into actionable, community-specific practices.

<sup>23</sup> Vicente-Saez, Ruben / Martinez-Fuentes, Clara: Open Science now: A systematic literature review for an integrated definition, in Journal of Business Research, 88 (2018) p. 428–436. <https://doi.org/10.1016/j.jbusres.2017.12.043>

From CERN's experience in developing a governance framework to support Open Science, five central conclusions can be drawn that may inform the creation of similar support structures within other institutional and disciplinary contexts:

1. Open Science activities are deeply interconnected. A centralized approach to collaboration and governance can foster cross-fertilization between these activities, ensuring that progress in one area supports and strengthens others.
2. Action in support of Open Science must occur at multiple levels. In some cases, collective, cross-institutional, or disciplinary strategies are required. In other cases, Open Science activities are best pursued within individual institutions, research groups, or communities. Helping researchers navigate where and how Open Science efforts are taking place will therefore become a substantial and complex task for information centers and libraries. These institutions will play a pivotal role in providing clarity and coordination among initiatives that operate across different organizational levels.
3. The development of Open Science infrastructures and the establishment of effective governance structures must advance hand in hand. Infrastructures must be tailored to their user communities, and integrating infrastructure development into governance agendas is essential for enabling open research practices that are sensitive to disciplinary and community-specific contexts. While much of CERN's infrastructure development takes place in-house, the aggregation, adaptation, and adoption of external infrastructures — whether developed for disciplinary, national, or institutional purposes — remains crucial in settings where in-house development is not feasible or desirable. Information specialists, particularly those with expertise in metadata curation, will play an essential role in adapting research infrastructures to Open Science requirements.
4. To date, libraries have primarily focused on Open Access and only more recently on enabling the meaningful release of Open Data, with some engagement in Open Education and Citizen Science<sup>24</sup>. Experiences from CERN suggest that the holistic practice of Open Science requires increased attention towards Open Source. The establishment of Open Source Program Offices (OSPOs) across academic institutions reflects this emerging focus. Sustained and targeted efforts (including from libraries to share their experiences around appropriate access, discovery, reuse, and citation practices) will be required to fully realize the potential of Open Source within the broader Open Science ecosystem.

5. Libraries are not passive responders to open science mandates but active architects of the community frameworks necessary for institutional transformation. For libraries at other institutions, CERN's approach demonstrates that successful open science implementation cannot be achieved through governance structures alone. It requires deliberate, sustained investment in community engagement mechanisms that foster dialogue, support skill development, enable peer-to-peer learning, and ultimately cultivate a self-sustaining culture where open practices become the default rather than the exception. ■

**Ansprechpartner:**

Merten Dahlkemper

Open Science Community Engagement Manager

CERN Scientific Information Service

E-mail: [merten.dahlkemper@cern.ch](mailto:merten.dahlkemper@cern.ch)

<https://scientific-info.cern>

<https://www.linkedin.com/in/merten-dahlkemper/>

<https://orcid.org/0000-0002-4453-056X>

<https://creativecommons.org/licenses/by/4.0/>

<sup>24</sup> Liu, Li / Liu, Wenyun: The engagement of academic libraries in open science: A systematic review, in *The Journal of Academic Librarianship*, 49(3) (2023) p. 102711. <https://doi.org/10.1016/j.jacalib.2023.102711>



### Antonia Winkler

is a doctoral candidate at the Scientific Information Service of the European Organization for Nuclear Research (CERN) and Humboldt University Berlin. She is based at CERN, where she studies open science activities in the areas of open data, open source software and open hardware, focusing in particular on institutional support structures for open science, including infrastructures and policies. Prior to commencing her doctoral research, Antonia completed a Bachelor's degree in Physics and a Master's degree in Science Technology Society (STS) at the University of Vienna.



### Micha Moskovic

is a member of the Open Science Office at CERN. He is in charge of INSPIRE, the main information platform for High-Energy Physics research and pioneering Open Science infrastructure, run by an international collaboration of several major research and library institutions involved in High-Energy Physics. He is also a member of the CERN Open Source Program Office (OSPO), where he focuses in particular on Open Science aspects of open source and monitoring. Before joining CERN in 2016, Micha was a researcher in theoretical physics. He holds a Ph.D. in that field from the Université Libre de Bruxelles.



### Merten Dahlkemper

is the Community Engagement Manager for Open Science at CERN, with a background in Physics Education and Science Communication. He earned his Master's degree in Physics and completed an internship at the University Library of Göttingen, Germany, in 2020. He then moved to CERN to pursue a PhD in Physics Education, strengthening his communication expertise. After completing his PhD, he joined CERN's Open Science Team in February 2025 to combine his passions for Open Science and Communication. He is currently working on the development of CERN's Community Engagement strategy for Open Science



### Kamran Naim

is Head of Open Science at CERN where he leads a diverse portfolio of activities which include the development of open science policies and their implementation and governance, while also managing the operations of flagship programs. He also serves as a Director of the European Open Science Cloud Association (EOSC-A), a multi-national pan-European effort to establish dedicated scientific infrastructures to support the accelerated publishing, discovery, (re-)use, and application of open science tools and services. Prior to his time at CERN, he worked to pioneer equitable open-access models for academic publishing, co-developing the Subscribe to Open Model, now adopted by dozens of publishers worldwide. Throughout his career he has championed efforts to address global inequities in scientific information in partnership organizations including USAID, the US National Academies, and the World Bank, and continues to volunteer his time towards efforts to promote education and global health. He holds a PhD from Stanford University and a Masters in Science & Technology from The George Washington University.



### Anne Gentil-Beccot

leads the CERN Open Science Operations Section, which oversees the implementation of CERN's Open Science Policy and governance framework across the Organization. The section provides support to the CERN community through the CERN Open Science office and ensures the operation of key initiatives such as SCOAP<sup>3</sup>, Inspire and ORE. Anne began her career at CERN as a Librarian, bringing expertise grounded in a Master's degree in Information Science in France.



### Pia Kretschmar

is a member of the Open Science Operations Section at CERN. In her role as Junior Open Access Manager she supports scientists in the publication process and management. She is also involved with the operation of the SCOAP<sup>3</sup> initiative.