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ENLIGHT RISE - RESEARCH AND INNOVATION AGENDA WITH AND FOR SOCIETY: LEVERAGING DIGITAL INNOVATION FOR A GREENER AND HEALTHIER EUROPE

WP No	Del. Rel. No	Del No	Title	Lead beneficiary
7	D7.2	D34	ENLIGHT Open Science Status Quo & Opportunities #2	UGOE

Nature	Dissemination Level	Related to Del. No (if applicable)
Report	Public	D7.1

Description (short)
This report describes the developments of Open Science (OS) in ENLIGHT between 2022 and 2024 and provides an update of the information collected and presented in D7.1 ENLIGHT Open Science Status Quo & Opportunities. It targets the question of whether and to what extent the previously determined OS status quo has changed. It highlights ongoing approaches, support and services and good practices, describes joint actions, introduces the joint OS principles and outlines activities related to the OS ambassadors and the OS award.

Version	Date	Authors	Institutions
0.1	22 April 2024	**Lead Authors:** Birgit Schmidt (UGOE), Merle Schatz (UGOE), Inga Sheehan (UGOE); **Contributors:** Liisi Lembinen, Naoufel Bahroun, Cillian Joy, Claire Bennett, Christer Lagvik, Inge van Nieuwerburgh	UGOE; all
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DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

Executive Summary

This report describes the developments of Open Science (OS) in ENLIGHT between 2022 and 2024 and provides an update of the information collected and presented in D7.1 *ENLIGHT Open Science Status Quo & Opportunities*. Several OS-related activities have been initiated and realized in the ENLIGHT network where Open Science serves as a powerful driver for transparency, accountability, reusability, increased collaboration, and plays a key role in the universities' higher education transformation agenda. This report targets the question of whether and to what extent the previously determined OS status quo (D7.1) has changed. It builds on information that was collected based on a slightly adapted survey and additional information collected from the ENLIGHT partner universities. The report highlights ongoing approaches, support and services and good practices. Moreover, it describes joint actions, introduces the joint OS principles and outlines activities related to the OS ambassadors and the OS award and more.

Abbreviations

ENLIGHT partner	Short Name	Country
University of Bordeaux	UBx	FR
Ghent University	UGent	BE
Comenius University Bratislava	CU	SK
University of the Basque Country	UPV/EHU	ES
University of Galway	NUIG	IE
University of Göttingen	UGOE	DE
University of Groningen	RUG	NL
University of Tartu	UT	EE
Uppsala University	UU	SE
Bern University	UB	CH

DMP – Data Management Plan
DRI – Digital Research Infrastructure
EOSC – European Open Science Cloud
IPR – intellectual property rights
OA – Open Access
OE – Open Education
OS – Open Science
PID – Persistent Identifier
RDM – Research Data Management
R&I – Research and Innovation

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Introduction

During the first few months of the ENLIGHT RISE project we mapped out the current approaches and activities of partner institutions in various activity areas (OA, RDM, OS education and skills, OE, societal participation and engagement). This effort resulted in the creation of an overview document referred to as the *ENLIGHT Open Science Matrix*, published in deliverable D7.1 (Schmidt et al., 2022). Our examination of the initial status quo at ENLIGHT partner universities involved gathering information on available infrastructures and support as a base layer to facilitate Open Science practices for researchers and communities, as well as policies and incentives related to Open Science. Between 2022 and 2024, the ENLIGHT network continued to make progress in various areas of Open Science (OS). This prompts the question whether and to what degree the previously established OS status quo may have evolved. To address this, a slightly modified survey was distributed to all partner universities on 6 February 2024, and responses were collected until 12 March 2024 (see questionnaire in the appendix). The main areas and focus of the second survey were to

- Update the information of the previous survey on Open Science (OS), Open Access (OA) and research data management (RDM) activities
- Identify achievements based on the ENLIGHT RISE activities
- Identify topics and priorities for continued collaboration on Open Science in ENLIGHT.

In addition to analyzing the survey, this report details the activities endorsed within the ENLIGHT network and the lessons learned from them. Concurrently, it is crucial to monitor Open Science activities in wider contexts (e.g. UNESCO, European Open Science Cloud (EOSC), Research Data Alliance (RDA)) and similar university alliances to gain insights into general user needs, explore possibilities to address them, and stay informed about overarching developments in the field. ENLIGHT is currently collaborating with the Arqus European University Alliance and has collaboratively developed an ongoing "Open Science ambassador Webinar Series" (for further details, refer to the chapter titled "OS Activities and Achievements").

Relationships to other work packages

There are various relationships between work package 7 ("Optimize Open Science practices and identify frontiers") and other work packages, in particular: work package 3 ("Roadmap towards shared digital research infrastructures and responsible DI/AI index"), work package 4 ("Promote early career development & improve researcher assessment", in particular the working group on Research(er) Assessment), work package 6 ("Co-create R&I actions with society"), and work package 8 ("Impact assessment and frontiers of the common R&I agenda").

Through the mapping exercise as described in this report, we touch on infrastructures and support that are relevant for the implementation of OS (e.g. repositories for publications and/or research data), include societal participation and engagement as one OS activity area and explore what actions are taken to provide OS training to researchers at early and other career stages.

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Results from the second survey on Open Science

Below, we present the findings from the second survey, aimed at providing insights into ENLIGHT's current and future OS activities. All ten partners within the network responded to the survey, with responses primarily provided by information professionals such as librarians, data managers, and IT specialists. To maintain anonymity, respondent names and other identifying details were omitted from the final dataset. It's important to note that the University of Bern joined the ENLIGHT university alliance in 2023 and therefore only participated in the 2024 edition of the survey; their input was not included in the comparison of Open Science (OS) developments over time.

The 2024 survey was structured into nine sections: general information, assessment of OS activity areas, infrastructure and support, skills and training, community activities, policy, recognition and rewards, future outlook, and research data management (RDM) and FAIR principles.

Data and code availability

Currently the collected data and code is available through a RStudio Cloud project. An anonymized version of the data together with the R Markdown notebook, etc. can be accessed via a Github repository and has been deposited in Zenodo under an open license (Schmidt, 2024). The datasets of all surveys are also openly available (Schmidt, Rettberg & Schatz, 2024).

Assessment of Open Science activity areas

All ENLIGHT partners re-assessed their levels of activity in a range of OS areas: OA, RDM, OS education and skills, open education, societal participation and engagement. In the survey, respondents had to choose an activity level (0 = No activity, 1 = Very low, 2 = Low, 3 = Average, 4 = High, 5 = Very high) based on indicative guidance on what constitutes a high level of activity (e.g. mentioned at policy level, support service provided; for details cf. Appendix survey questionnaire).
Figures 1 and 2 summarise the responses to the question on activities in five Open Science areas across the ENLIGHT network. As already observed in the first survey, most of the areas are targeted by all partners with the activity level varying substantially. While some areas such as OA, RDM and OS education & skills tend to have a higher and consistent rate of activity among the partners, other activity areas such as social participation and open education show a lower activity level (with exceptions).

Compared to the same figure in D7.1, activities in the areas of OA advanced for all partner universities except for one. Regarding RDM, the partners advanced in their activities or stayed “more or less on” the same level. For OS education & skills, Open education, and societal participation the activities have not increased or decreased. Two partners indicated reduced activity in the survey, but upon further questioning to specify, they then reported that there had not been changes.

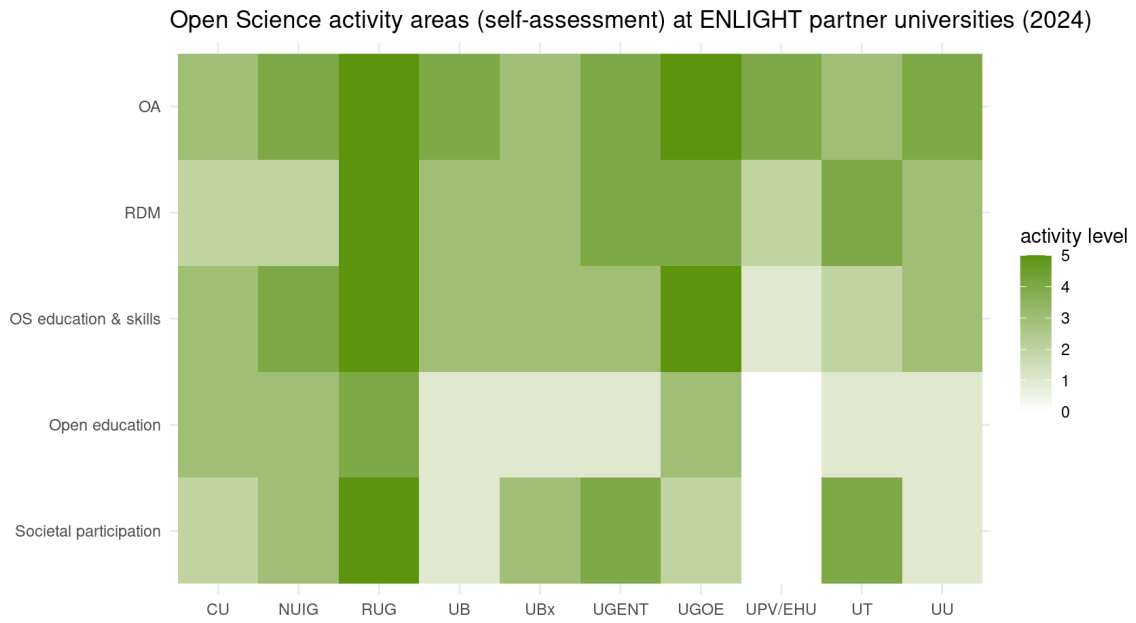

Figure 1. Open Science activity areas (self-assessment) at ENLIGHT partner universities (2024)

The survey highlighted that OA remains the strongest area of OS activity within the consortium (cf. Figure 2). Most respondents have an OA publication repository, also OA publications become more and more relevant within the scientific community. OS education and skills and RDM are fairly strong in most organizations. Social participation and especially open education are the areas that in comparison to the other areas need more development because they show comparatively low activity levels. This could be attributed to factors such as limited resources or limited infrastructure to support these areas within the broader framework of OS in the respective universities.

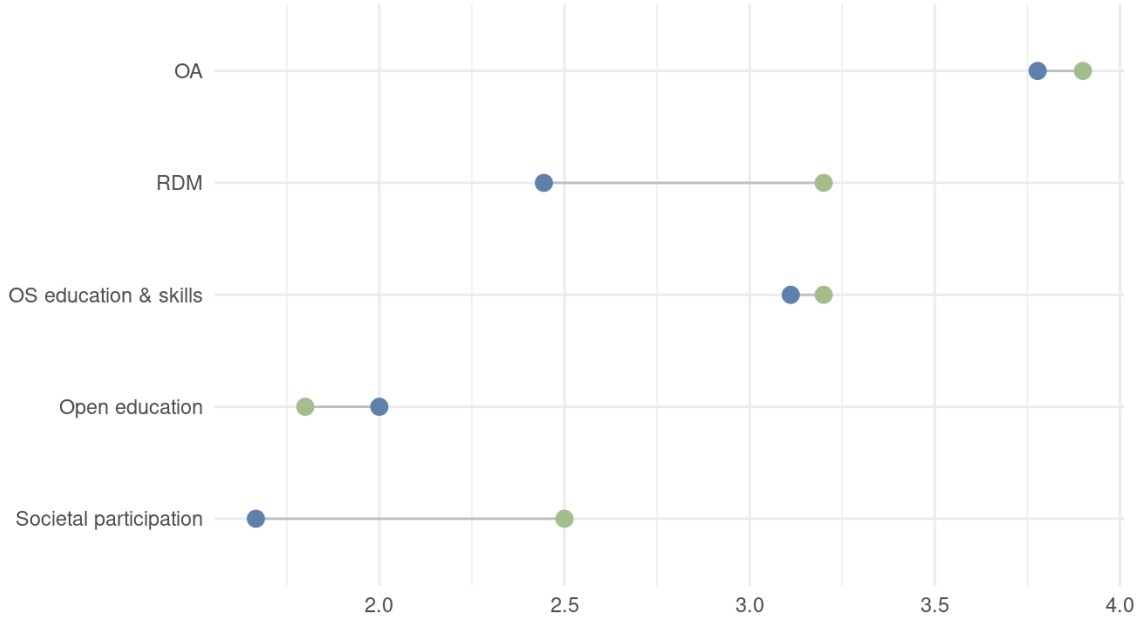

Figure 2. Comparison of Open Science activity areas at ENLIGHT partner universities (2024 vs. 2022, average across 9 universities)

Figure 2 compares the average activity levels for the five core OS activity areas as reported in 2024 (green) compared to 2022 (blue). The University of Bern was excluded in this comparison as they did not participate in the 2022 edition of the survey. For almost all OS areas some growth of the main values based on the nine considered ENLIGHT partner universities could be observed. The strongest growth of activity levels was observed for research data management and societal participation. Only small gains were achieved for OA and OS education and skills (starting from high levels of activity) while a small reduction of activity was reported for open education (starting from modest level).
The greatest diversity in terms of uptake and the largest room for improvements seems to be in open education and societal engagement.

When asked about noteworthy examples or actions within the Open Science activity areas mentioned above, partners highlighted the following responses:

- UB: Data stewards, publication services and repositories
- UU: ReproducibiliTea - Journal Club at The Department of Psychology
- NUIG: OA; National Action Plan for Open Research, publishing services, community building
- UGOE: OS meetups, Carpentries, OA publications, OS skills
- UBx: OS roadmap
- UPV/EHU: institutional repository ADDI
- RUG: OS Programme, OA, OS Community, ReproducibiliTea
- UGent: policy on scholarly publishing, encouragement of open review, evaluate OA initiatives, support for the UGent open access journals platform

The survey further inquired whether the Open Science (OS) activities benefited from collaboration with ENLIGHT partners. Partner responses suggested that the mentioned areas were primarily enhanced by collaborative initiatives, such as jointly organized OS webinars, or the OS Award as well as the appointment of OS ambassadors. All of which provided opportunities for mutual learning, knowledge sharing, hands-on experience with individual OS practices and the discovery of different OS tools and methodologies throughout the alliance that could be applicable to the own OS agenda. The joint activities facilitate the development of the OS network within the ENLIGHT alliance, as well as within one's own university, as effective communication and support within the university community are often required for various activities. For example, the joint OS webinar series requires thematic coordination and identification of OS areas of interest among the ENLIGHT partners involved. The jointly organized session "Bridging the Gap: Open Science in research management and administration (RMA)" at the EARMA conference in Odense (23-25 April 2024) seeks to extend collaborative work and invites participants to engage in three roundtable discussions focusing on key aspects of "Open Science integration in Research Management and Administration: Incentives and Rewards, Collaboration between OS Experts and Research Administration, and Training and Skilling."

Regarding teaching and training of Open Science, WP7 organized a workshop for all ENLIGHT RISE project partners on data management and data management plans which was held on 30 September 2022. UGOE offered a Data Carpentry Ecology workshop to PhD students in ENLIGHT (April 2023). Based on this UGOE developed a course on RDM and data skills for students that was opened to students from ENLIGHT partner universities (Winter term 2023/2024). In this course material from UGent presented at the RDM workshop in September 2022 was reused and UT contributed with a presentation to a session of the course. These collaborative training and teaching activities will be continued. Announcements of institutional, national and international OS events were shared during WP7 meetings, and experts from the WP7 network contributed to several events.

These activities promote the exchange of OS topics and the knowledge exchange regarding infrastructural possibilities and requirements. They help identify gaps and provide examples of activities that could be implemented locally.

Assessment of Infrastructures and Support

ENLIGHT partners deliver a wide range of infrastructure and support services related to Open Science; some of these are still under development or under discussion (cf. Figure 3).

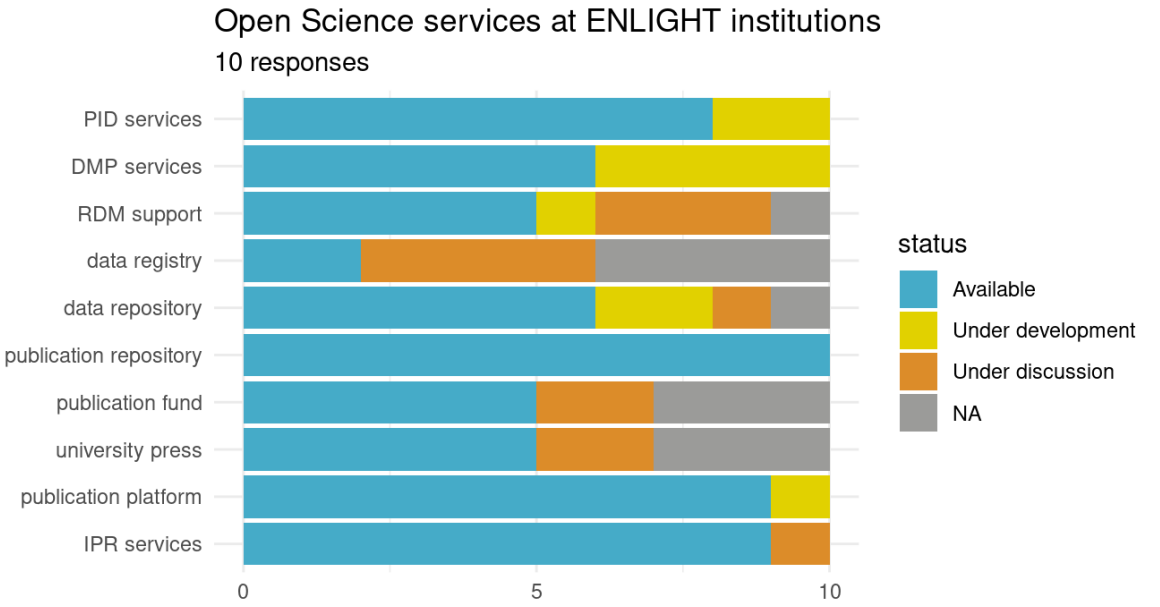

Figure 3. Open Science services as currently provided, under development or under discussion at ENLIGHT partner institutions.

In comparison to the first survey, a positive development can be seen for all services. All 10 partners offer an institutional repository to their researchers for making publications openly available. Publication platforms are available for 9 partners and under development for one, as well as advisory services on intellectual property rights (IPR) that are in place for 9, only for one it still is under discussion. The degree of providing persistent identifiers for research outputs is also very high (8 have the service in place, for two, it is under development). Services that are in good position are data management plans (DMPs) with six having it in place and for four being developed, and data repositories that also are in place for six, but only developed for two, for one still under discussion and one did not respond. The services of research data management (RDM) support, publication fund and university press are in place for half of the partners. For two of the partners, publication fund and university press are under discussion, three partners did not respond here. As for RDM, the service is under development for one partner and two are discussing it (one did not respond).

In comparison to the first survey, the services publication platform and IPR that were under discussion for three partners then, are also in place now and show the highest progress of implementation. The service of a data registry (i.e. a database collecting metadata about research data that might be stored at institutional or other data repositories) is the only one that still shows much less activity than the others. Possible reasons might be factors such as the lack of standardized protocols, limited resources, organizational barriers, concerns about data security, or a lack of incentives for implementation.

Assessment of Skills and Knowledge

The survey results from 2024 show that all ENLIGHT partner universities now offer some form of Open Science (OS) training (cf. Figure 4). This marks a notable improvement from the previous survey, when one partner institution had yet to provide any training, and two were still in the process of developing their training programs. The hierarchy of training offerings remains consistent with that of 2022, with doctoral schools and early career researchers continuing to be the primary targets (ten out of ten and eight out of ten institutions), followed by support staff (seven institutions) and researchers at all career stages (four institutions).
Additionally, OS training for students has been successfully integrated into the training at two ENLIGHT institutions, demonstrating a commitment to providing comprehensive education to various members of the scientific community.

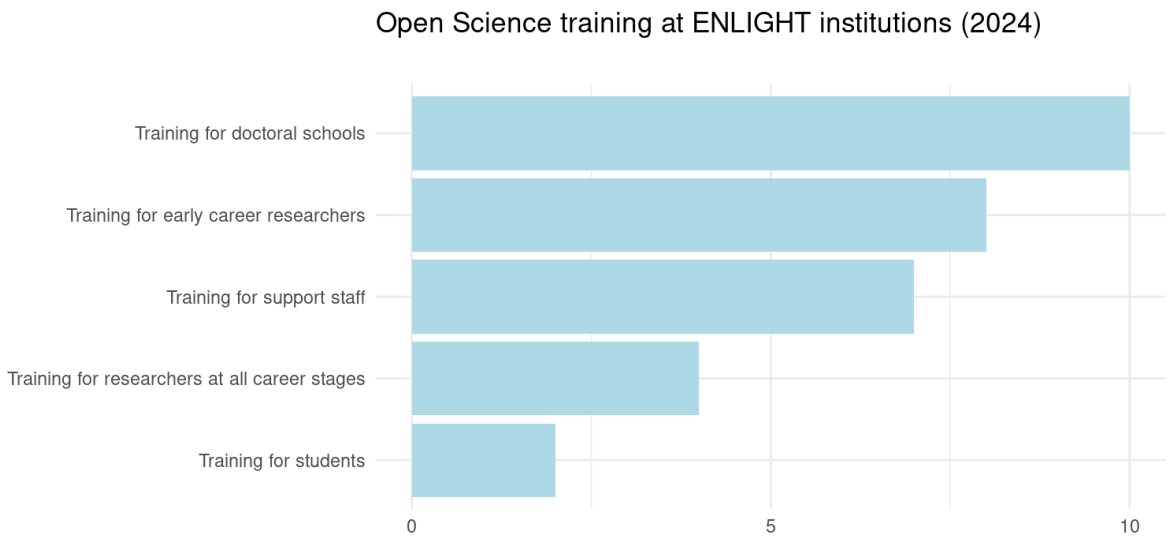

Figure 4. Open Science training by target groups at ENLIGHT institutions.

In terms of the training topics offered at ENLIGHT institutions, the range remains broad (cf. Figure 5). However, compared to 2022, there has been a slight change in the order of topics. While in 2022, only Research Data Management (RDM)/FAIR data/data sharing was covered by all participating institutions, scholarly communication/Open Access are now equally prioritized, with ten out of ten institutions offering training in these areas. The two leading topics are closely followed by research integrity (nine institutions), which has taken precedence over training on legal issues (seven institutions, compared to eight in 2022).

Furthermore, publication ethics (six institutions), data skills (six institutions), and the evaluation of research (responsible research assessment) (five institutions) continue to be prominently featured among the training topics, while research reproducibility, citizen science, and citizen engagement/societal participation are less frequently addressed. One institution mentions the General Data Protection Regulation (GDPR).

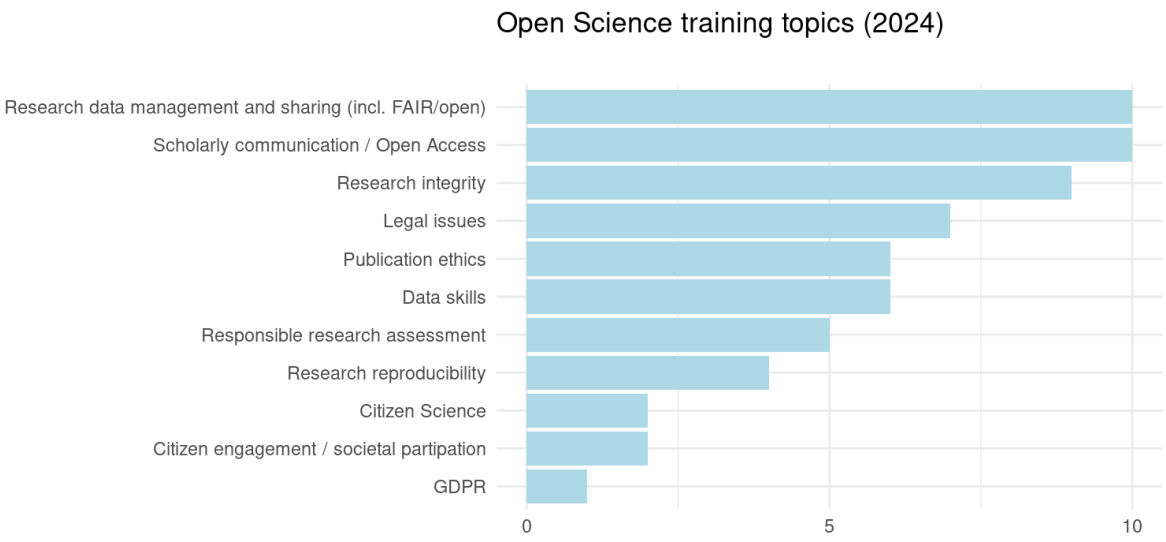

Figure 5. Open Science training topics as currently offered at ENLIGHT institutions.

Community

OS communities work on OS related topics and infrastructures, they provide platforms for researchers to openly share their findings, methodologies and tools, facilitating collaboration across disciplines. The ENLIGHT universities have established or are currently discussing various communities and groups: Four universities have a network of OS/OA ambassadors in place, one university is developing it and three are discussing it, whereas two did not respond (cf. Figure 6). The same level of availability can be seen for cross-discipline OS communities; with two partners developing it and two more are discussing it. Again, two did not respond. A disciplinary OS community is available at three universities and five are discussing it, with two not responding to this question. Among all OS communities and groups, the presence of data and software groups are not very prominent. Only one partner has it in place, another one is in the process of developing one, while four are discussing the possibility, and again another four partners did not respond to this question. OS ambassadors and cross-disciplinary communities might get engaged in various ways and formats. OS-related work can be better integrated into or combined with individual projects. Data and software groups play a crucial role in facilitating the creation, management, analysis and sharing of research data and software tools. However, these groups are primarily composed of data scientists, software developers, and data management experts.

The relatively limited presence of such groups in our survey results may indicate challenges in resource allocation. The relevance of these groups is increasing, as indicated by international discussions and initiatives (e.g. professionalisation of data stewards and research software engineers), and the fact that four universities are discussing them.

Compared to the 2024 survey, developments took place in the areas of OS/OA Ambassadors, Cross-Discipline OS Communities, Disciplinary OS Communities, Data and Software Groups. In the first survey, several ENLIGHT partners recognize various types of open scholarship communities within their institutions, including disciplinary groups like ReproducibiliTea, cross-disciplinary communities, and data/software-focused groups such as RLadies, Carpentries, and HackyHour. At that time of the survey, only the University of Groningen has established an institutional network of OS ambassadors to advocate and promote OS. Other partners expressed interest in supporting OS communities, although not the primary focus, some activities that have effectively promoted OS were mentioned, such as a knowledge café event and an annual Open Scholarship event. Often, informal groups of individuals within academic institutions who share an interest in open scholarship practices organised these events.

The emergence of discussions around these topics underscores their importance and relevance in contemporary ENLIGHT OS developments and indicates a growing recognition of their significance.

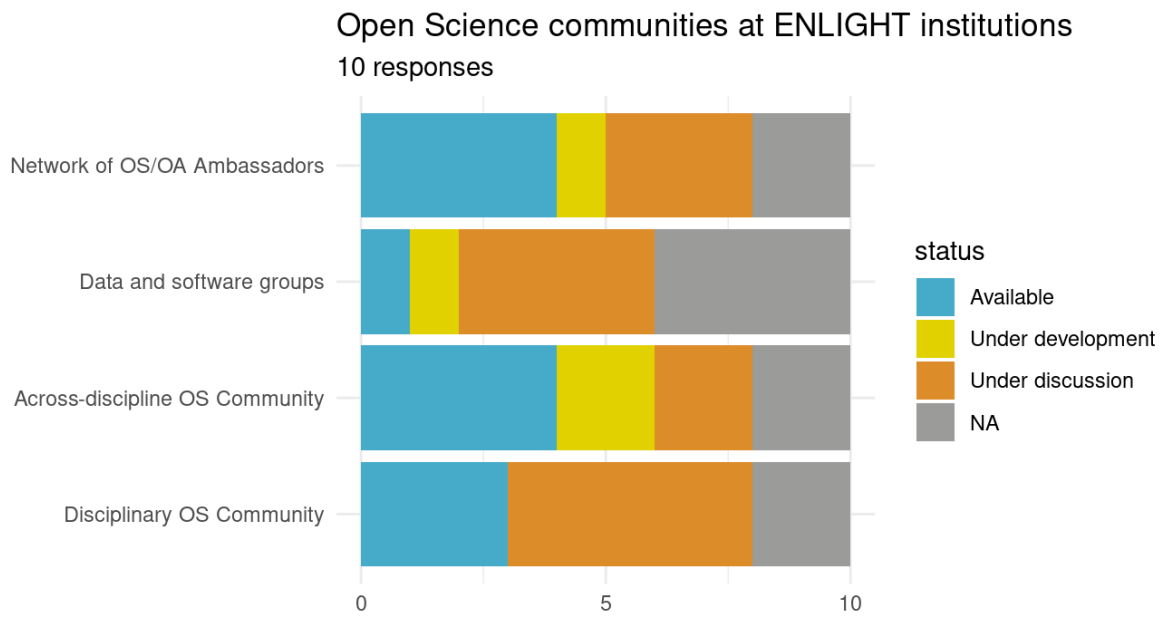

Figure 6. Open Science communities at ENLIGHT institutions

When examining the effectiveness of the ENLIGHT OS ambassador network and their engagement at the institutional level in more detail, the survey responses suggest varying degrees of success and involvement across the ENLIGHT network. Some ambassadors have demonstrated active engagement, participating in events and initiatives such as webinars and local activities, and have even been

recognised through achievements like winning the ENLIGHT Open Science award. However, challenges remain, such as difficulties in finding volunteers for certain tasks, such as evaluating proposals or other rather time-consuming activities While ambassadors do not receive financial compensation, their active involvement is of high value for the ENLIGHT network.

Overall, although some ambassadors have been active internally within their own universities, collaboration with ENLIGHT partners has been limited. Lack of time and resources have been cited as barriers to more active involvement, and some institutions have not fully utilized the opportunity presented by the ambassador network yet. Despite these challenges, there are indications of success, particularly in the form of active participation in webinars and involvement in university-level Open Science activities.

Policy

In D7.1 we summarized the OS policies which have been established by the partner universities at that time (Schmidt et al. 2022, 16). Between 2022 and 2024 the following changes took place:
University of Bordeaux (UBx): The establishment of the Open Science Council, in April 2024 tasked with shaping the Open Science strategy at the University of Bordeaux, in line with the university's Open Science roadmap, voted in 2022.
Ghent University (UGent): No new Open Science policies have been adopted. The policy on scholarly publishing, adopted June 2022 and effective as of January 2023, is now practically implemented. Related to Open Science is the new policy on authorship and the recognition of contributions in scholarly publishing.
Comenius University (CU): Currently, there have been no major developments in the publication of an institutional OS policy at Comenius University. Although the policy is open for comments, other institutional policies have been given priority in publication. On the other hand, our university has endorsed the ENLIGHT Open Science principles.
University of the Basque Country (UPV/EHU): As indicated in report D7.1 the University of the Basque Country has established an OA policy. At this time, a RDM policy is under development.
University of Galway (NUIG): The University of Galway Open Access to Research Outputs policy has been in place since 2015, approved by Academic Council. In 2018, the Research Data Management Policy was agreed and approved. It is also worth noting the recent 2023 update to the Intellectual Property Policy now exempts "Scholarly Works". The University is a partner in a nationally funded project to deliver national policy and legislative change in the rights retention area. The 'SCOIR: Secondary rights, Copyright, Open access, Institutional policies, and Rights retention project explores the potential of developing a secondary publishing right in Irish legislation and encourages adopting institutional rights retention policies.
University of Göttingen (UGOE): A reference to the FAIR data principles was included into the RDM policy and a revised OA policy is currently under discussion at the University´s Senate committees. Open Science is also mentioned in the University's research strategy (cf. Göttingen University: research strategy, full version of the document is not publicly available; only with a university log in).

University of Groningen (RUG): The first iteration of the Open Science Programme finished in 2023 and was evaluated to be successful. The second iteration of the Open Science Program has started in 2024 and will run until 2026. Signed the Barcelona Declaration and an advisory committee to facilitate its execution will be set up.
University of Tartu (UT): The University of Tartu has no OS or OA policy in place; however, similarly to other ENLIGHT partners, the university's rector endorsed the joint Open Science principles.
Uppsala University (UU): Uppsala University has no local OA policy in place but has endorsed the ENLIGHT Open Science principles. A future policy work will likely include open access as one aspect in more general principles for publishing and open scholarship. The recent appointment of an Open Science coordinator will likely advance this work.
Bern University (UB): Bern University was not included in the initial survey. Therefore, the following information outlines the developments in their OS policy over the past two years: The University of Bern signed the Berlin Declaration in 2007 and published its Open Access Policy in 2012. This policy is currently being updated to a comprehensive Open Science Policy that includes Open Access and Open Data; this revised policy is expected to be launched in 2025.

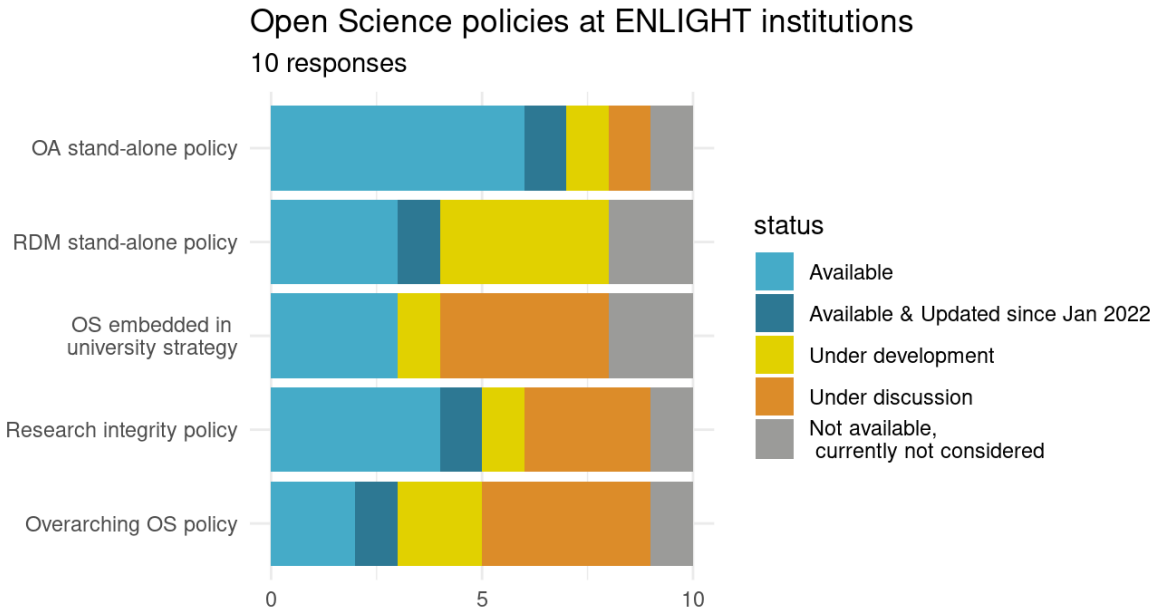

Figure 7. Open Science policies at ENLIGHT institutions by development status.

Open Science Policy Elements at ENLIGHT Institutions

More than half of the universities have following six OS policy elements in place (cf. Figure 8): Deposit of publication in an institutional repository; recommendation of use of open licenses; encouragement and support for OA book publishing; encouragement and support for RDM and data sharing;

responsible RDM in line with the FAIR principles; encouragement and support for OA journal publishing. Three universities have OS policy elements regarding a commitment to open infrastructures, Diamond OA and an obligation to create and maintain a DMP in place. The reform of research assessment is only represented for two universities. Compared to the first survey, additional elements such as ethical publishing, support to open infrastructures, Diamond OA, and reform of research assessment were included in the second survey and are in place at four universities, research assessment at two universities. These topics become more and more relevant with the development of OS within the different institutions.

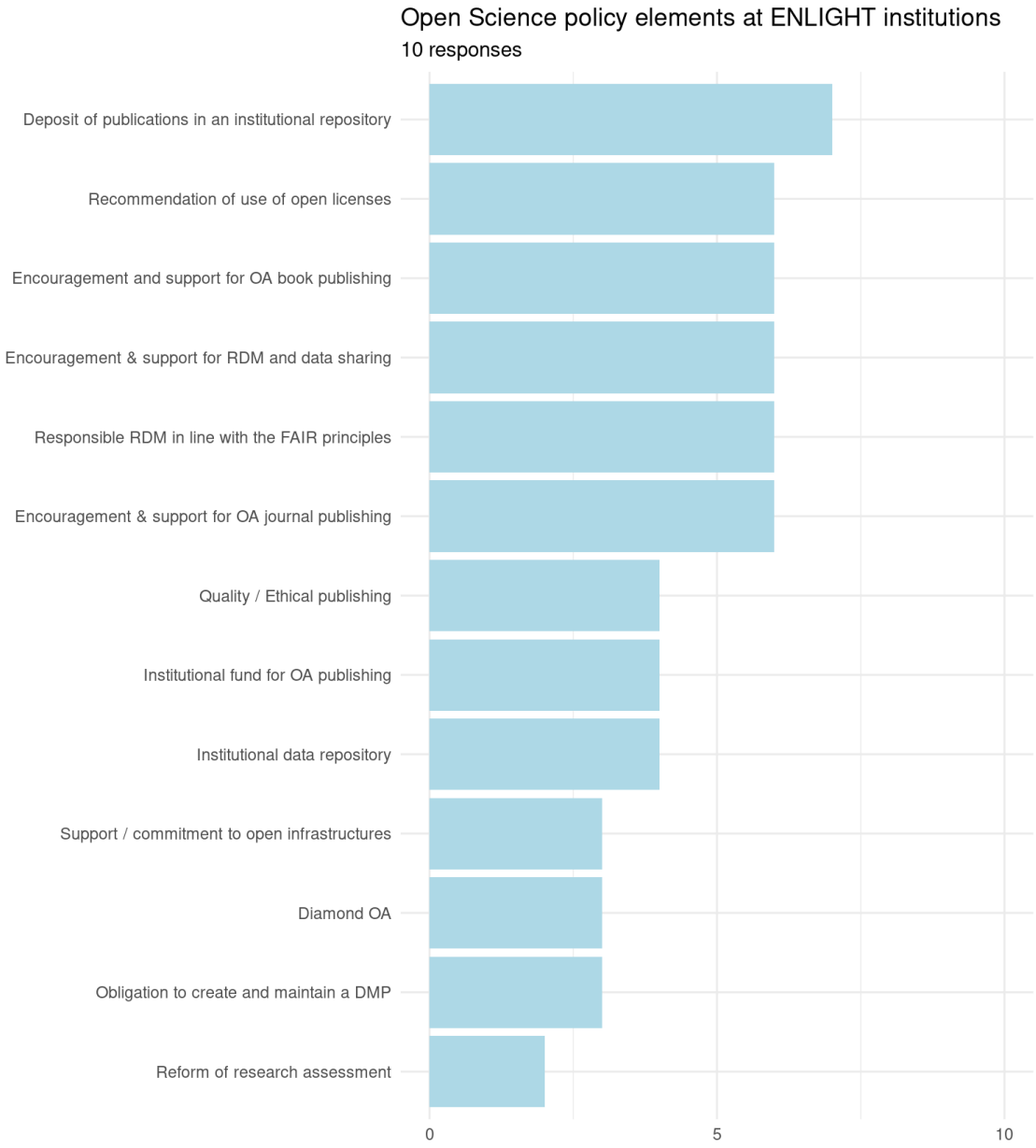

Figure 8. Open Science policy elements as currently in place at ENLIGHT institutions.

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Joint OS principles for the ENLIGHT alliance

On 23 November 2023, the 10 ENLIGHT Rectors endorsed joint Open Science principles at the ENLIGHT General Meeting in Uppsala. With the joint statement ENLIGHT aims to create a common basis for an Open Science culture. Main elements of the joint statement are the broad promotion of Open Science with training and sharing of good practices, the importance of the FAIR data principles, unrestricted Open Access to publications, the support of Open Education materials and Responsible Research Assessment.

The five ENLIGHT Open Science Principles

1. Promotion of Open Science

The ENLIGHT alliance recognizes that Open Science is a key component of their scholarly processes. Therefore, we

- Enhance the sharing of knowledge and good practices at the institutional level and
- Across the ENLIGHT alliance.
- Aim to support Open Science broadly, including via training and skills development.
- Support the development and realization of an Open Science agenda and policy.

2. FAIR and Open Data

The ENLIGHT alliance stresses the importance of the FAIR data principles (Findable, Accessible, Interoperable and Reusable) and will

- Support the implementation of FAIR, for example by developing or contributing to FAIR-
- enabling infrastructures, and/or by guiding researchers towards such existing infrastructures.
- Optimize access to research data and the use of such digital research data wherever possible
- ("as open as possible, as closed as necessary").
- Work towards using and contributing to a distributed and open infrastructure for research
- data, including integration with the European Open Science Cloud (EOSC).

3. Open Access

The ENLIGHT alliance underlines the value and benefits of unrestricted and immediate open access to scholarly publications and thus will

- Encourage and support researchers in providing free and unrestricted online access to all
- research publications, ideally immediately after publication.
- Promote bibliodiversity and increase awareness of various open access routes available as an alternative to author-pays models of open access.
- Support researchers in retaining their original rights to share and publish their works and other research outputs under an open license.

4. Open Education

The ENLIGHT alliance supports Open Education as a valuable part of a diverse and inclusive environment and will

- Encourage their research and teaching staff to create, share and use open educational
- materials and methodologies.
- Strive to support training and development opportunities for the research community that
- facilitate an understanding of open educational tools and methodologies.

5. Responsible Research Assessment

The ENLIGHT alliance promotes the inclusion of Open Science principles in research assessment and will

- Raise awareness for the different aspects of research assessment reform and commit to high
- quality standards in their own research assessment procedures.
- Align with the Declaration on Research Assessment (DORA) or the Agreement on Reforming
- Research Assessment (CoARA), wherever possible.
- Incentivize Open Science practices as means for enhancing the quality and impact of research.

When asked what kind of mechanism for monitoring OS are used we found that institutions utilize various tools and platforms like the Swiss OA Monitor, Open APC, and Dimensions. They also maintain university registries and repositories for tracking OA publications. Specific initiatives, such as Ireland's National Open Access Monitor, will enhance monitoring capabilities starting in Q4 2024. Targeted monitoring exists for particular cases, like OA publication funds, with compliance support and metadata provision following OpenAIRE guidelines. The Flemish Open Science Policy Plan (2019-2024) introduces annual KPI monitoring for aspects like Data Management Plans (DMPs), ORCID, open data, OA publications, and FAIR data principles. Additional support includes the Open Science Barometer and encouragement for OA book and journal publishing, as well as data management and sharing.

Responses regarding the communication of ENLIGHT OS principles in the participating institutions vary (cf. Figure 9). Some institutions have or plan to[1] publish the principles on their website of institutional policies, promote them through mailing lists/newsletters, and include them in guidance for researchers.

Examples include: University of Göttingen, Uppsala University as well as Comenius University Bratislava who published information about the principles and the joint endorsement on their ENLIGHT subpages, the University of Tartu who published a news item on the library's Open Science website.

Other partners have noted the policy when signed but have not actively communicated it yet viewing it as a valuable resource for future policy development. Communication via presentations is also planned by some institutions. However, a few institutions have only published the principles in university news and have no further plans for communication at present. For one partner the decision on the communication strategy is still pending.

[1] The question does not specify whether institutions have already implemented or will implement the communication of the ENLIGHT OS principles. It only asks about the communication plans regarding these principles in each institution.

To inform and further promote a news item post was made on the ENLIGHT website which partners could then use to communicate the info further. Unfortunately, after some time, the post was no longer visible because other news items were posted. The principles are published on the ENLIGHT Open Science website, as well as on Zenodo.

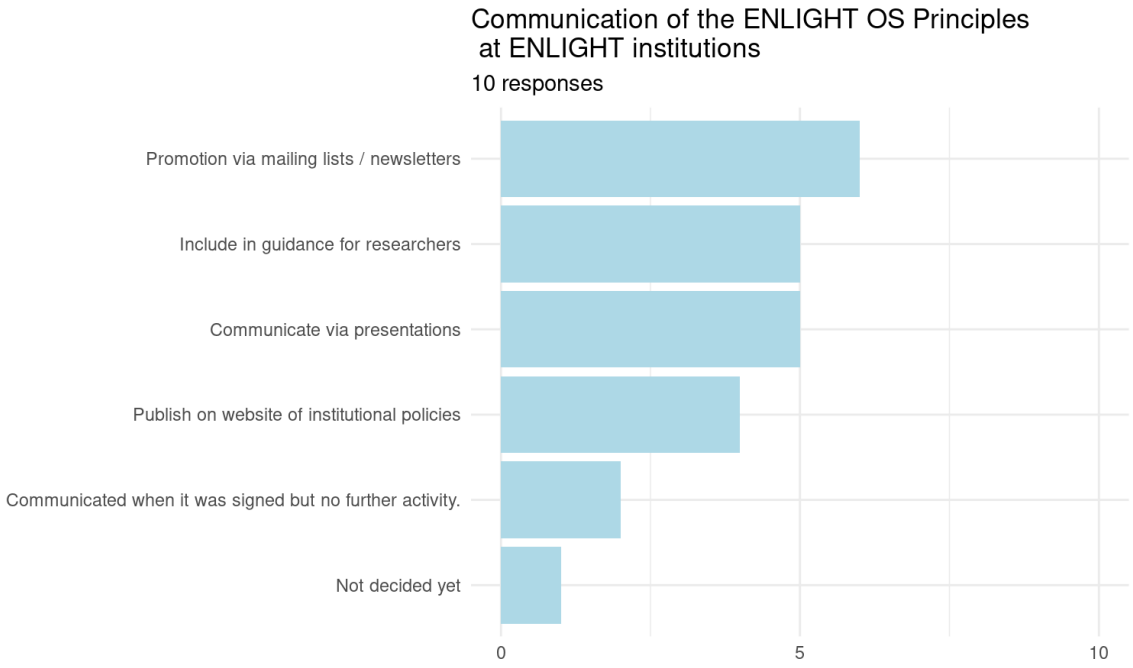

Figure 9. Communication of ENLIGHT Open Science principles

Recognition and Rewards

Questions regarding "recognition and rewards" have not been part of the first survey. The results of the 2024 survey show rather little activity (cf. Figure 10). OS as part of the staff review process is in a test phase at 4 universities, but most of them (6) do not consider it. Also, most of the partners (7) do not provide special funds or awards for OS activities, or include requests for information on OS engagement in hiring procedures. Special funds are established so far at two partner universities, one is discussing it. OS within hiring processes is in test phase for one partner, two discuss the implementation. OS as a criterion in research assessment is established for just one partner, in test for two and under discussion for two, 5 partners do not consider it currently.

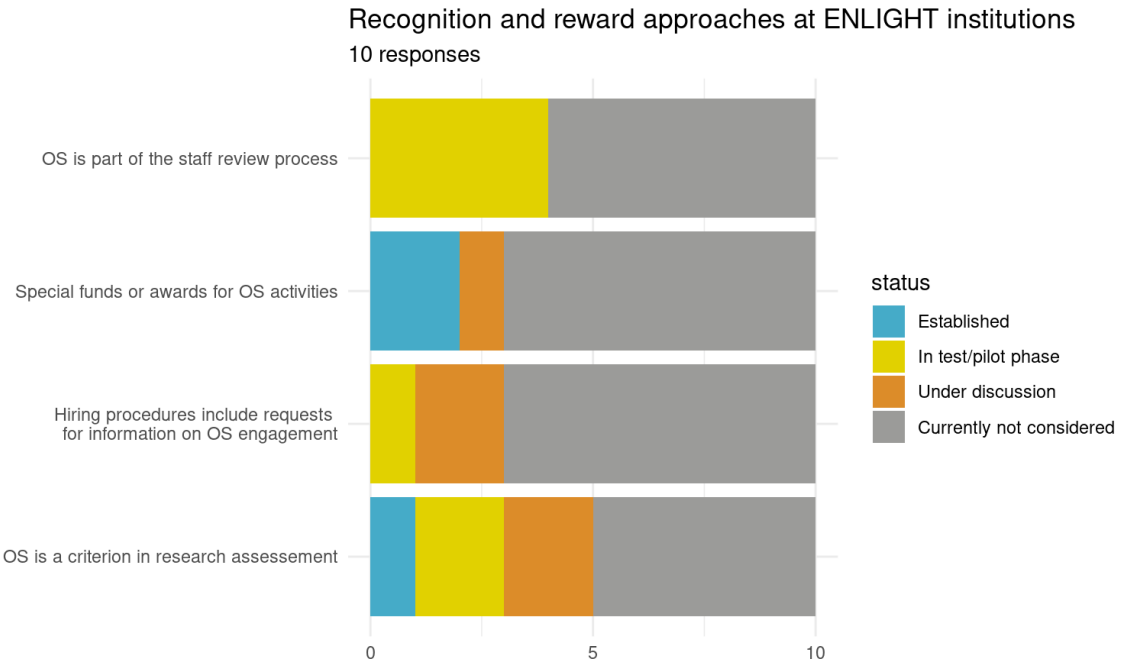

Figure 10. Recognition and reward approaches at ENLIGHT institutions

Coalition for Advancing Research Assessment

When asked if the institution is a member of the Coalition for Advancing Research Assessment (CoARA) (cf. Fig. 11), 6 universities confirmed (UGent, RUG, UPV/EHU), with three of them not active yet (CU, NUIG, UBx). UGOE and UU[2] consider joining, and UB is planning to join, while UT is not joining. Identifying the CoARA membership status was not part of the first survey.

[2] Since the completion of the survey and during the drafting of this report, there has been a change in the membership status of Uppsala University (UU). While initially indicating that they were planning on joining, UU has now officially signed the COARA-agreement.

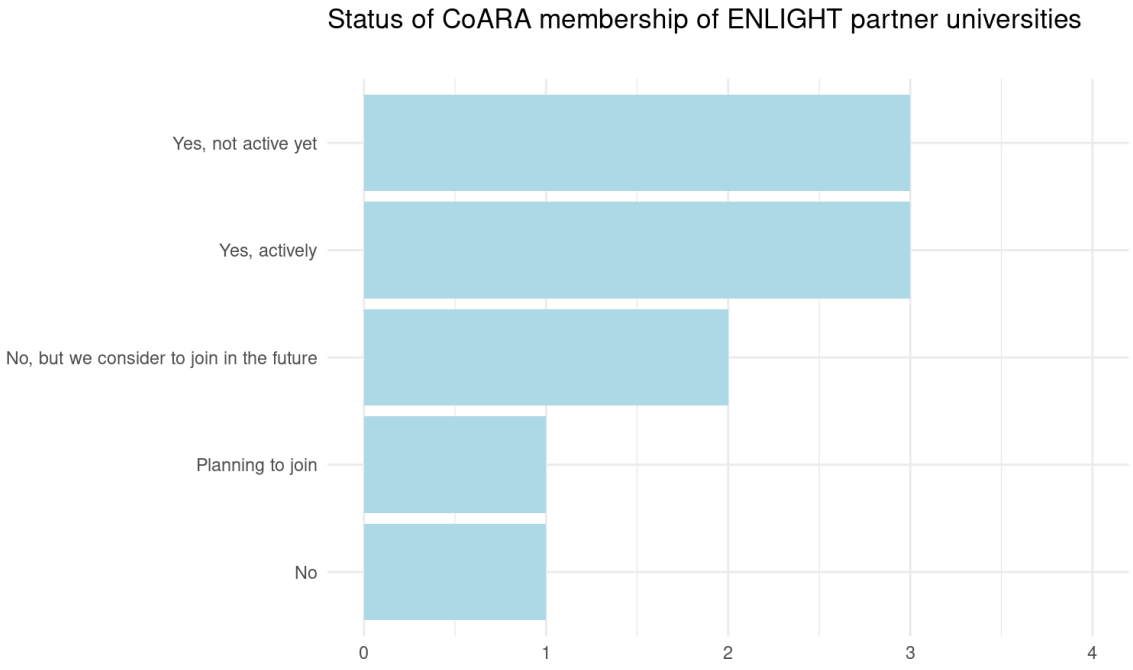

Figure 11. Status of CoARA membership of ENLIGHT partner universities

OS activities and achievements

The ENLIGHT partners are engaged in several OS activities that aim at fostering OS within the ENLIGHT network and beyond. During the period between 2022 and 2024, following activities were initiated or significantly expanded:

Ambassador network

The role of the ENLIGHT Open Science Ambassadors is to promote OS with the ENLIGHT alliance and their home universities. Currently the ENLIGHT Open Science ambassador network consists of 25 persons from the nine ENLIGHT partners and since April 2024 also the University of Bern (UB).
The Network comprises researchers from ENLIGHT universities who champion Open Science principles and practices. They serve as intermediaries between their university's researchers and the ENLIGHT consortium. Ambassadors play a crucial role in promoting Open Science by multiplying conversations, raising awareness, and fostering engagement within their disciplinary networks. They strive to expand awareness in their specific domains, exchange experiences, and connect with the ENLIGHT Open Science Network. Moreover, ambassadors actively participate in discussions, share perspectives, and convey domain-specific needs to the ENLIGHT Open Science Network and promote ENLIGHT Open Science practices at various gatherings, including meetings and conferences.

The ENLIGHT Open Science ambassadors were involved in the evaluation process of the ENLIGHT OS Award and actively participated with a presentation at the OS Award ceremony. Moreover, they are involved with contributions and discussions in the OS Webinar Series and are available as contact persons for OS questions in their respective institutions. Their commitment to networking and exchange depends on the discipline and personal OS interest. Overall, they reflect the growing importance of OS in their work and address a corresponding need in their research community. They connect OS with their specific discipline in the individual partner universities, and they also act as an OS bridge between the alliances. Accordingly, the joint OS ambassador Webinar Series of the ENLIGHT and Arqus alliances was also initiated.

Joint ENLIGHT Alliance and Arqus Alliance Open Science Webinar Series

The Open Science Webinar Series was established as a joint event of the ENLIGHT RISE and Arqus university alliances with the idea of addressing the needs, challenges, and expectations associated with implementing and advancing Open Science initiatives. The webinar topics have been derived from a survey conducted among the Open Science Ambassadors of both alliances, as well as from ongoing webinar discussions. The primary objective of the series was to identify and discuss obstacles and reservations regarding Open Science adoption, while also presenting best practices aimed at helping individuals overcome these challenges.

The First Webinar took place on 13 December 2023, where Pia Voigt (Co-lead of the work package “Open Science Agenda” in Arqus RI, Leipzig University) presented on Open Science practices and challenges and needs in a European university alliance. At the Second Webinar on 28 February 2024, Richèl Bilderbeek (Uppsala University) talked about some of the pros and cons of Open Science and the Uppsala community. A third webinar was held on 22 April 2024, with Pablo García-Sánchez (Professor of Computer Science at the University of Granada, Arqus Alliance) exploring the relationship between Open Science and Software licenses, clarifying distinctions between Free Software and Open Source. Two more Webinars are scheduled for June and September 2024, and more are planned.

The presentations and recordings of the webinars are made available on Zenodo in the ENLIGHT community ENLIGHT RISE project - Research and Innovation agenda with and for SociEty, and the ENLIGHT YouTube channel.

OS Award

The ENLIGHT Open Science Award was awarded for the first time in 2023, recognizing initiatives or projects within the ENLIGHT community that advanced Open Science within the ENLIGHT community. The award honoured individuals or groups affiliated with the nine ENLIGHT Universities who utilized Open Science to enhance research, teaching, or work accessibility, transparency, or reproducibility. A committee, consisting of OS Ambassadors, Early Career researchers and members of the ENLIGHT Open Science work package, evaluated the submissions and the winners were announced at the

ENLIGHT Open Science Webinar on 25 April 2023. One project, titled "AGAPE - Building an Open Science practicing community for early career researchers," and another project, "A global dataset of pandemic- and epidemic-prone disease outbreaks," were recognized. The awardees showcased their projects during the ceremony, and the winning projects were highlighted on the ENLIGHT website and in the ENLIGHT newsletter. For further insights into these projects and ideas, the recorded Award Ceremony was made available on the ENLIGHT Youtube channel, the presentations are also available in the ENLIGHT Zenodo community.

OS toolkit

Creating an OS toolkit aimed to provide essential information for researchers, students, and other individuals affiliated with ENLIGHT partner universities on Open Science, with a focus on Open Access (OA) and Research Data Management (RDM).

Information on OS terms and concepts is offered in the toolkit, along with guidance on available local services and online tools. The toolkit was built by ENLIGHT partners based on network materials, considering the needs of ENLIGHT universities. Additionally, it includes pointers to information and services provided by European research community initiatives. While not exhaustive, the toolkit encourages further inquiries from local Open Science experts. Primarily targeting researchers from ENLIGHT's partner universities, the toolkit brings together expertise and tools from these institutions. The toolkit is accessible via the ENLIGHT website and Zenodo (Lembinen et al. 2023).

When asked which of the Open Science activities were considered most successful in ENLIGHT (cf. Figure 12), eight partners considered the OS principles most successful, followed by networking and exchange of good practice (7) and the OS toolkit (5). The activities of OS Webinar, ambassadors, and OS award were considered less successful. Developing and implementing a policy or developing and delivering a toolkit is a different political and structural effort than OS activities that are more focused on networking. It is therefore possible that the publication of an overarching OS policy is seen as particularly successful, in particular, if the joint policy fills a gap at the institutional level (cf. section on policy, p 12f). The OS ambassadors were involved in our OS activities following direct demand and request. As the ambassadors' commitment is heavily dependent on their own resources and is also unpaid, it is a balancing act between our expectations of them on the one hand and their potential commitment on the other, which is voluntary. Nevertheless, their activities as well as the webinars and the OS award are also part of networking activities, that were rated positively.

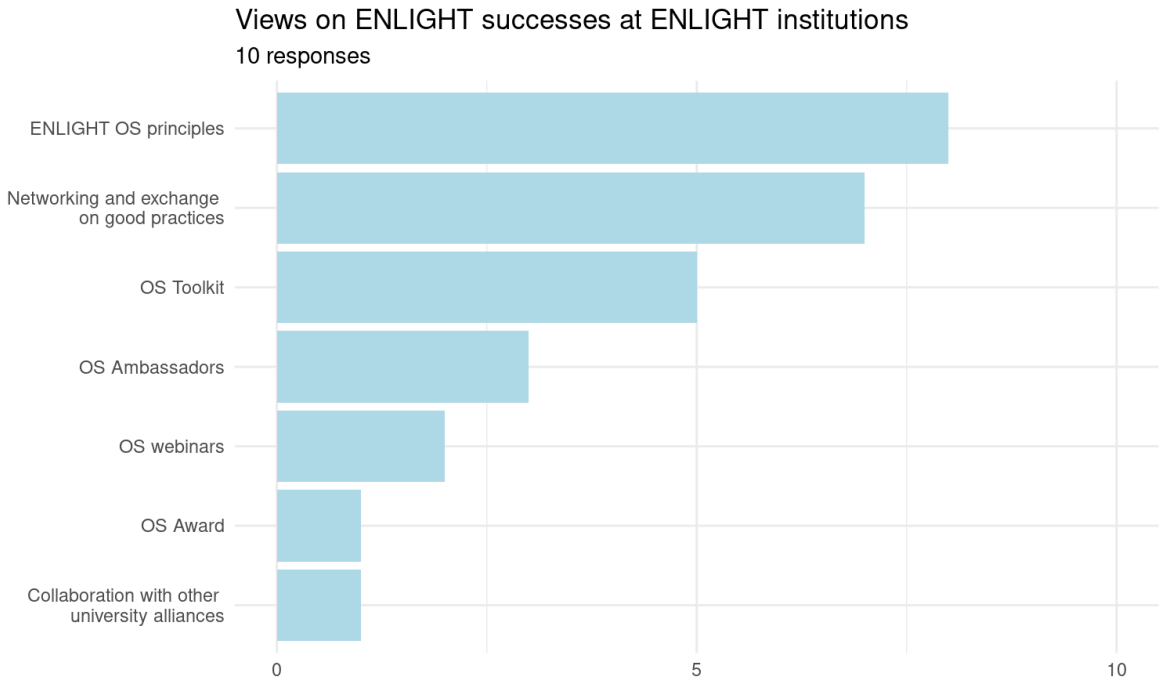

Figure 12. Views on the success of Open Science activity at ENLIGHT institutions

Based on the survey responses, the collaboration in ENLIGHT has led to several positive developments related to Open Science across partner institutions and represents a significant progress in the OS development between 2022 and 2024. For instance, partner institutions have expanded their Open Access training initiatives, particularly targeting doctoral students, with inspiration drawn from ENLIGHT webinars. Additionally, systematic improvements have been made to support data management planning (DMP). The development of the ENLIGHT OS toolkit has been seen as helpful in providing valuable information on Open Science and research data management to new academics and early career researchers. Moreover, the Open Science ambassadors have played a crucial role in strengthening local OS communities.

Partaking in ENLIGHT has furthermore led to an increased Open Science awareness and a greater consideration of the practical implementation of Open Science into research and for some, it has helped establish Open Science as an entity that the university needed to relate to in strategies, activities, etc.

The Open Science Principles have impacted partner institutions in several areas from assisting in committing to an Open Science culture to promoting Open Science policies in the institution as well as triggering discussions around the future evolution of OS like for example Open Educational Resources. Only one partner reports that progress or benefits related to Open Science are yet to be seen.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

OS activities to be continued in the Future

Networking and the exchange of good practices were identified as the top priority by all ten institutions when asked about activities they would like to continue or expand in ENLIGHT 2.0. (cf. Figure 13). This was closely followed by collecting and creating training materials, which was mentioned by nine institutions. Teaching OS together, creating guidance for researchers on how to avoid unethical publishing and promoting and updating the OS Toolkit are also widely mentioned by seven out of ten institutions. However, only three partners express intentions to expand or continue the initiatives associated with ENLIGHT OS Ambassador, somewhat confirming the feedback we can see in Figure 12 where the OS ambassador initiative was considered less successful an activity compared to some of the other ones. One factor contributing to these views, as mentioned before, might be that establishing, mobilizing contributions and maintaining the ambassador network requires more effort than some of the other activities.

One partner mentioned that it might be difficult to maintain certain activities if OS were no longer part of a work package in the future, indicating the importance of financial and or staff resources (as confirmed in Figure 14).

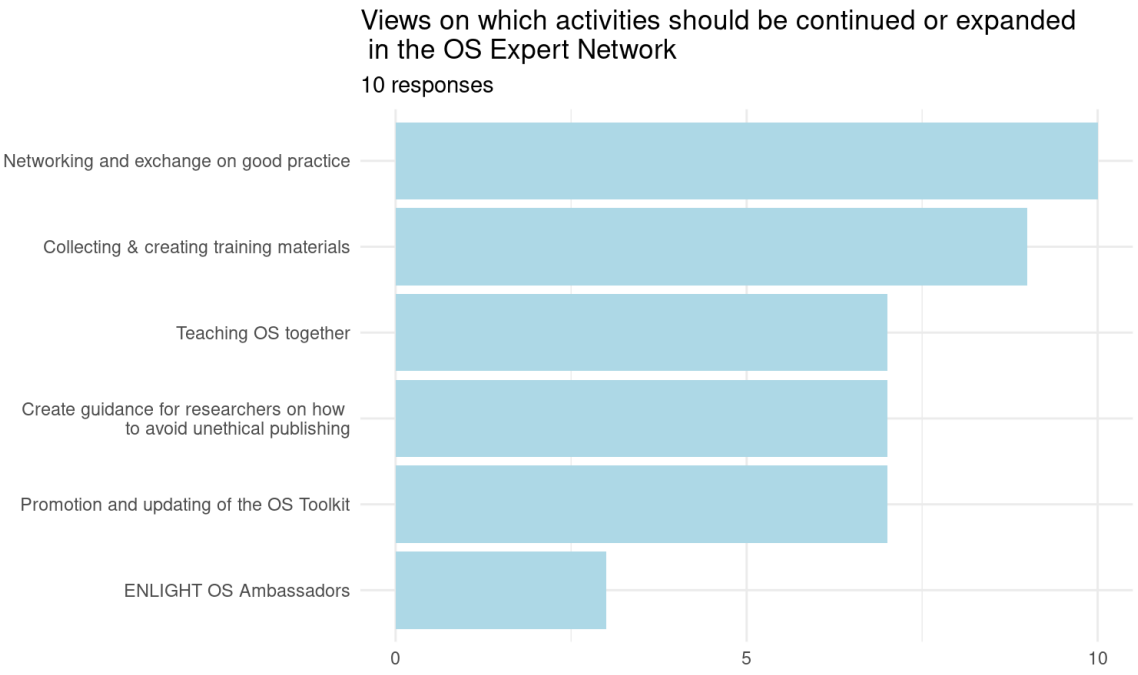

Figure 13. Views on which activities should be continued or expanded in the OS Expert Network

The following possible topics for future ENLIGHT Open Science training events were suggested in the survey:

- **Data Skills and Management**: Focus on basic data skills and management at undergraduate and postgraduate levels across disciplines.
- **Citizen Science and Stakeholder Engagement**: Emphasize the involvement of civil society and end users through citizen science in research processes.
- **Artificial Intelligence in Open Science**: Explore the role of AI in scholarly publishing, including its benefits and potential pitfalls.
- **Open Science Education and Events**: Develop open science e-learning content, organize events like summer schools, and share experiences in OS practices.
- **Research Assessment and Open Infrastructure**: Considerations for research assessment, including open access, bibliometrics, and ethical publishing, and the role of open infrastructures such as OpenAIRE.
- **Research Integrity and Ethics**: Research integrity, responsible publishing, and ethical practices, with a focus on open access publishing and combating predatory practices. Also, discussions on copyright concerns.

Need to contribute to the OS Expert Network

In terms of institutional needs for contributing to the implementation of OS activities, it was found that half of the partner institutions require additional financial and staff resources, as well as consent from institutional management to contribute hours (cf. Figure14). It was also noted by one partner that the integration of ENLIGHT activities into normal university activities would be the main factor in continuing their contribution to the OS Expert network. The university must increase its involvement in OS beyond just open access and research data management, as suggested by another partner.

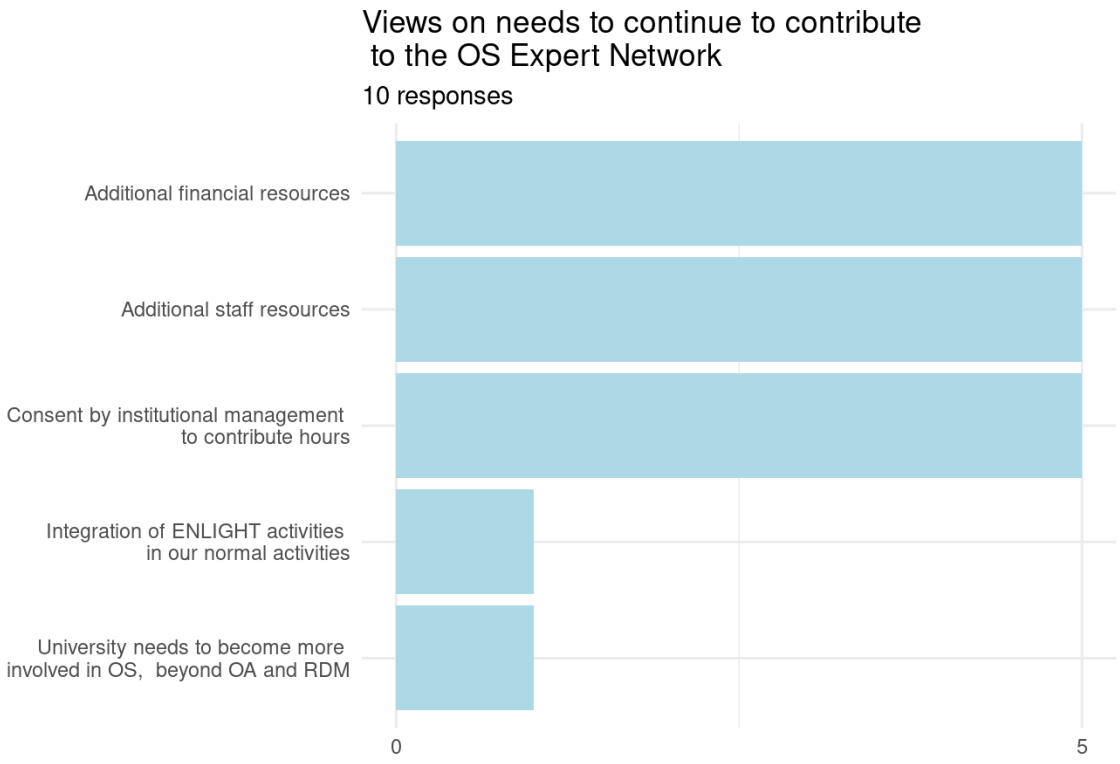

Figure 14. Views on needs to continue to contribute to the OS Expert Network

Research data management and FAIR Data

In this section, we further summarise information on research data management, which was also collected through the survey. We investigated in more detail the status of promoting data sharing (cf. Figure 15) and FAIR data (cf. Figure 16), RDM services (cf. Figure 17 and 18), RDM staff (cf. Figure 19), and actions to foster skills and capacities (cf. Figure 20).

Currently, four ENLIGHT partners encourage data sharing, three encourage open data and the "as open as possible, as closed as necessary" principle (cf. Figure 15).

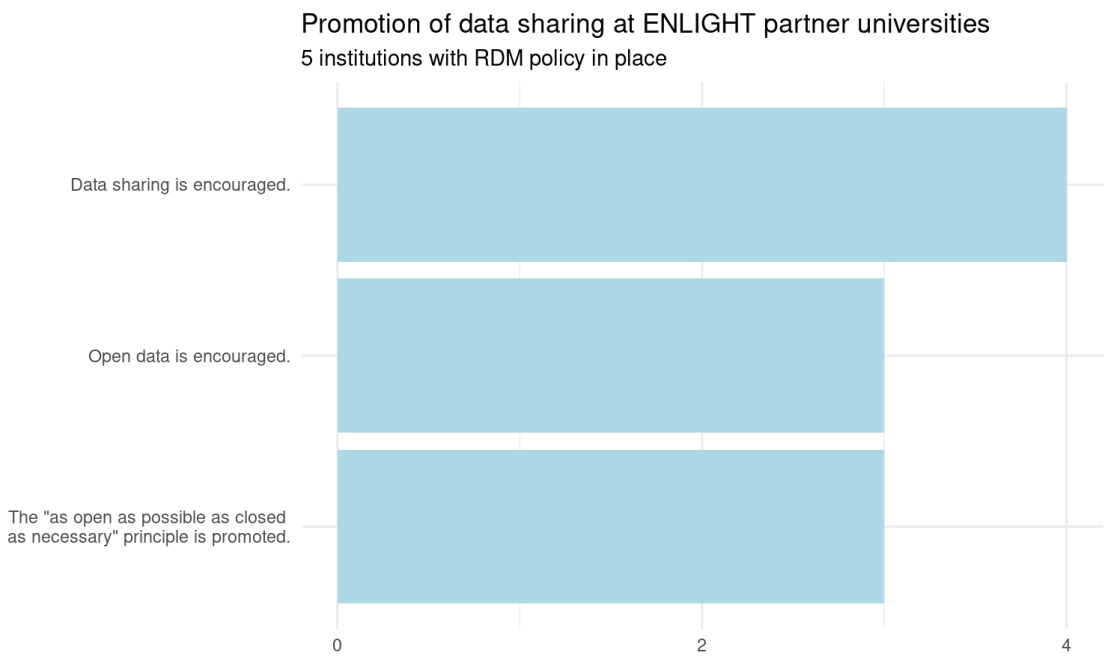

Figure 15. Promotion of data sharing at ENLIGHT partner universities

When asked whether the research data policy at their institution does or will include a statement on FAIR data (cf. Figure 16) only seven out of ten ENLIGHT partners provided feedback. While five partner institutions stated that making data FAIR is recommended, increasing the number by two compared to the same question from 2022, two indicated that FAIR will be included in a future revision of the policy while one answered that FAIR will be included in the policy that is still under development.

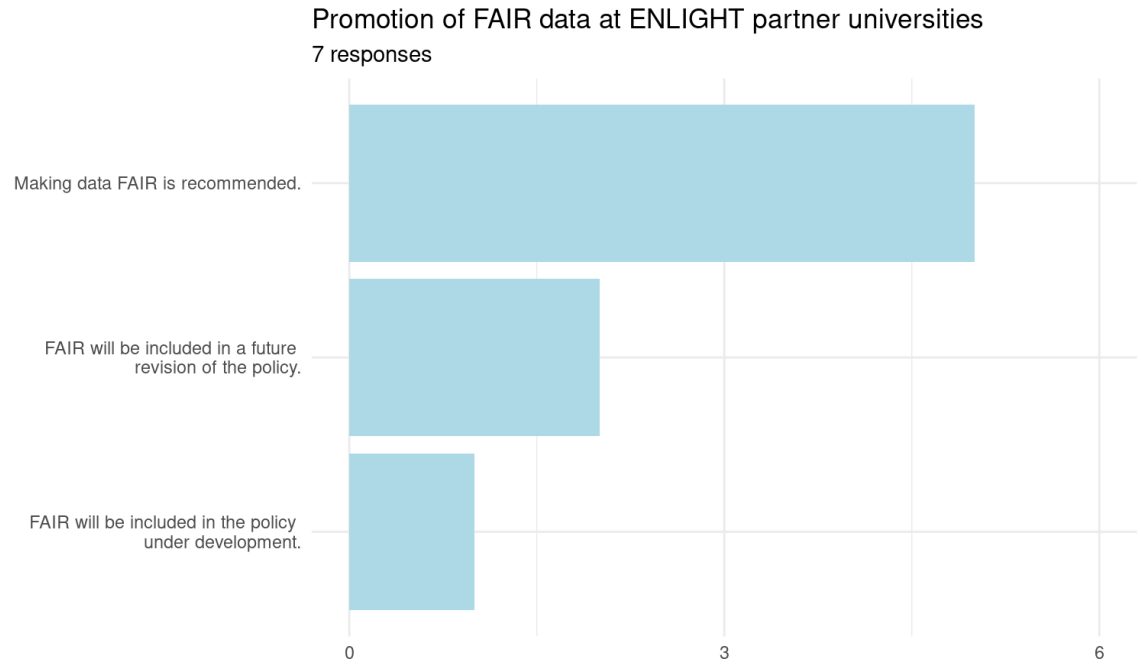

Figure 16. Promotion of FAIR data at ENLIGHT partner universities

When it comes to research data management services offered at ENLIGHT institutions it can be noted that several services are made available (cf. Figure 17), some of them even before a data management policy is released. Eight ENLIGHT institutions offer training (three with policy available) and consultancy on RDM (four with policy available). Six institutions offer services for online information resources (two with policy available), five have services for institutional data repository and DMP service platform in place (for both services two with policy in place), four institutions offer PID services (two with policy), and one mentioned under "Other" that it has services for electronic lab notebooks (also a policy in place).

The data suggests a correlation between the maturity of an institution's RDM policy and the availability of RDM services. Institutions with established or developing RDM policies are more likely to offer a wider range of RDM services, while the absence of an RDM policy often corresponds with services being less frequently offered.

For institutions with established policies, consultancy on RDM as well as training stand out. The same is true for institutions with policies under development, where the focus seems to be on consultancy and training, followed by core services such as online information resources, an institutional data repository, and a DMP platform.

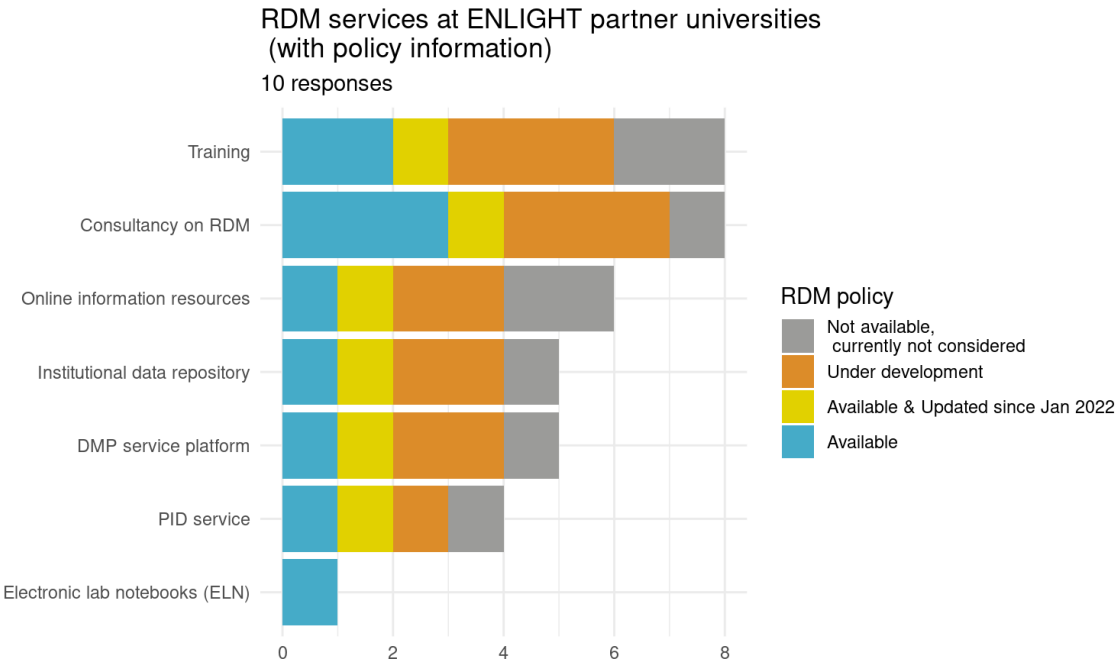

Figure 17. Research data management services at ENLIGHT partner universities (with policy information).

At the ENLIGHT partner institutions, employees in different roles contribute to research data support (cf. Figure 18). Seven institutions, out of which three have a research data policy in place, report that they employ data managers (like research data managers, data librarians, data curators) while five institutions (again three of them with a research data policy in place) employ infrastructure engineers and managers. Currently, data managers and infrastructure engineers and managers are the largest groups in charge of research data support. Four institutions (two of which have a data policy present) employ dedicated data stewards to ensure high data quality and integrity. One institution is just setting up a data repository, including hiring a data curator, but already has other employees (IT and librarian) in place for data management. Compared to the first survey, the number of institutions that have established the role of data stewards has doubled, from two to four ENLIGHT institutions (active or in development).

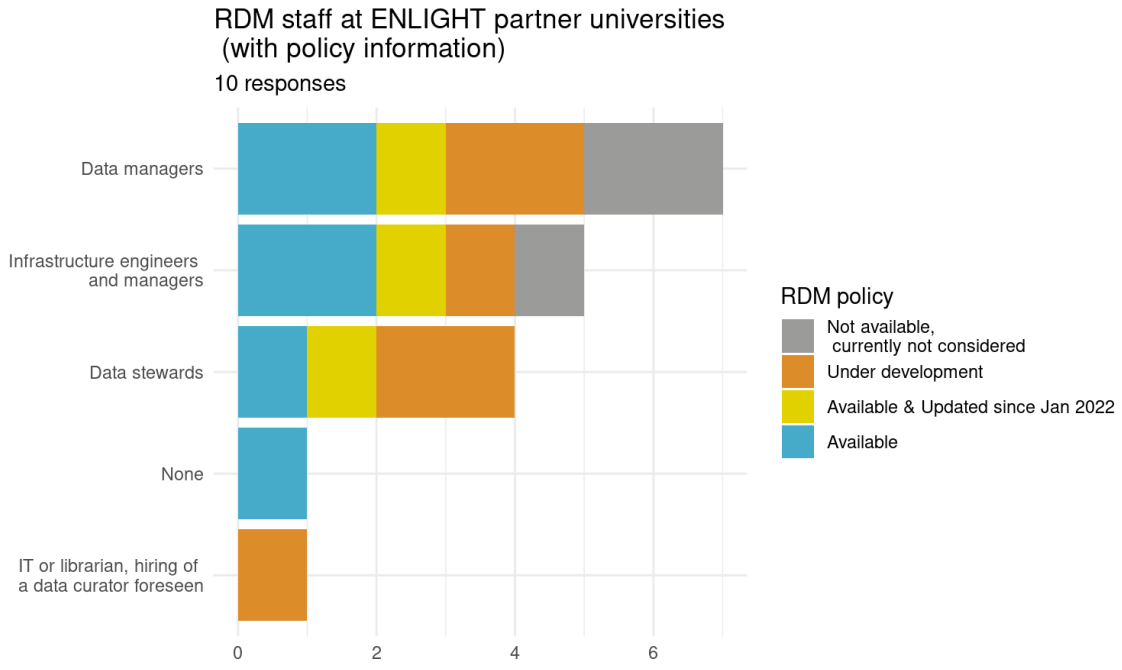

Figure 18. Research data management staff at ENLIGHT partner universities.

ENLIGHT institutions engage in a variety of actions to foster skills and capacities for RDM and making data FAIR (cf. Figure 19). These include conducting training sessions for researchers, a practice adopted by nine institutions (four out of which have a RDM policy in place, another four are developing one, one with no RDM policy available), as well as providing training for data managers and stewards, a measure implemented by five institutions (of which three have a RDM policy in place and two are in the process of developing one).

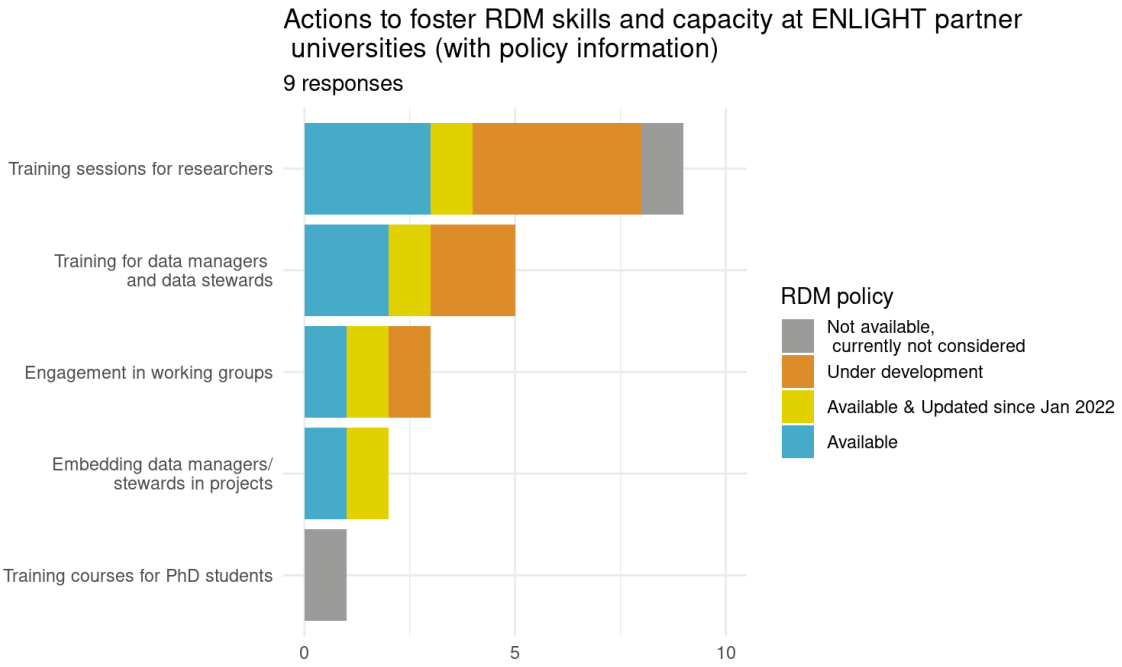

Figure 19. Actions to foster Research data management skills and capacity at ENLIGHT partner universities.

Institutions face several challenges in implementing the FAIR data principles. Key issues include inadequate infrastructure and limited funding to support these initiatives. Furthermore, a lack of awareness and skills among researchers regarding open data practices is reported. The absence of proper incentives, recognition, and rewards further hinders engagement and buy-in from the research community.

Developing comprehensive policies on research data and FAIR principles, along with ensuring data governance and management, remains a challenge. Additionally, monitoring progress is difficult due to the complexity and spectrum of FAIR principles, necessitating clear evaluation and recognition frameworks. Addressing these challenges requires coordinated efforts to build sustainable infrastructure, enhance researcher skills, and create supportive policies and incentives.

Discussion & Outlook

The second survey on OS and FAIR data across the ENLIGHT alliance has revealed positive developments in advancing Open Science practices. The proactive approach towards implementing OS within institutions based on the signed and published OS principles, the growing activities regarding OS research practices, but also collaborating with other university alliances and integrating OS activities across various work packages reflect the commitment to fostering a culture of openness and

collaboration within the alliance. The results of this second survey show that OS is becoming more and more part of research, teaching and learning. Especially the joint activities show the overall high interest in the topic, as do the projects, skills and knowledge already available across the alliance.

Although OS is becoming increasingly important as part of research and innovation, its implementation still depends very much on individual activities and institutional investment. Infrastructural support and human resources are needed to develop all fields related to OS. Other European university alliances are also working on OS, leading to the initiation of a joint OS ambassador webinar series and joint contributions to events. The aim is to work more closely together, learn from each other, and jointly use and reuse available resources.

We exchanged knowledge with colleagues from other WPs, such as WP3 (Roadmap towards shared digital research infrastructures and responsible DI/AI index), and discussed infrastructures and support needed for Open Science implementation (such as publication and research data repositories), societal participation and engagement as part of an OS activity area, and Open Science training to researchers at various career stages. Moreover, WP7 and WP4 (Promote early career development & improve researcher assessment) exchanged on the ongoing reform of research assessment, and what role Open Science can play in revised approaches for recognition and reward of researcher activities and achievements.

As for activities within ENLIGHT, the next steps for engaging ENLIGHT partners with Open Science (OS) could place more emphasis on topics such as incentives and rewards, collaboration between OS experts and research administration, and training and skill development. Our OS ambassadors have also expressed interest in topics such as open educational resources, open access, research assessment, data sharing, FAIR data, open data, science communication, public engagement, and citizen science. The field of Open Science is becoming increasingly relevant, and the range of topics is expanding. We look forward to all the upcoming Open Science developments in ENLIGHT.

An important output of the ENLIGHT RISE project is the establishment of ENLIGHT Expert Networks (EENs) which bring together experts from various fields and institutions within the ENLIGHT alliance. These networks will continue to contribute to ENLIGHT 2.0 through collaboration with the European Support Network (ESN) a research support group, that aims to support research outputs of ENLIGHT thematic networks (ETNs) and broader alliance research collaboration. While its primary focus may vary, the expertise within the network covers a wide range of disciplines and areas of interest. The WP7 partners currently discuss the development of an Open Science EEN, and in particular, which initiatives and efforts to promote and implement OS within ENLIGHT could be continued within this network.

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DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

Appendix: Survey questionnaire

Survey questionnaire on Open Science

Version: February 2024
Editors: Birgit Schmidt, Merle Schatz

ENLIGHT - Update on Open Science

Survey on achievements and update on Open Science practices across the ENLIGHT Network

This questionnaire is targeted at identified members across the ENLIGHT alliance who are actively implementing Open Science activities at your university (e.g library, research office, data services). One person per university should respond, we encourage you to draw on colleagues' support to answer certain questions.
The purpose of this survey is to

- Update the information of the previous survey on Open Science (OS),
- Open Access (OA) and research data management (RDM) activities
- Identify achievements based on the ENLIGHT RISE activities
- Identify topics and priorities for continued collaboration on Open Science in ENLIGHT.

This survey consists of 9 sections and is expected to take about 20 minutes of your time.

Deadline: 20 February 2024 (extended until 22 February 2024)

Personal information collected in this form will be treated confidentially and not shared further. After removing personal information, cleaning and documentation of the dataset it will be released under an open license.
Note that if you are logged in to Google when filling this survey, it is automatically saved and you can return to the survey later.

*Required

Your Name *

What is your function? *
Library Personnel

International Office
Research Support
Data Services
Other:

Please select your university *
UNIVERSITE DE BORDEAUX (UBx)
UNIVERSITEIT GENT (UGent)
UNIVERZITA KOMENSKEHO V BRATISLAVE (CU)
UNIVERSIDAD DEL PAIS VASCO/ EUSKAL HERRIKO UNIBERTSITATEA (UPV/EHU)
NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)
GEORG-AUGUST-UNIVERSITAT GOTTINGENSTIFTUNG OFFENTLICHEN RECHTS (UGOE)
RIJKSUNIVERSITEIT GRONINGEN (RUG)
TARTU ULIKOOL (UT)
UPPSALA UNIVERSITET (UU)
UNIVERSITAET BERN (UB)

Your assessment of Open Science activity areas

How would you assess the current level of engagement (from your perspective as an implementor) of the following Open Science elements in your institution?
Likert scale: 0 = No activity, 1 = Very low, 2 = Low, 3 = Average, 4 = High, 5 = Very high

- **Open Access to publications** (e.g mentioned at policy level, implemented by staff to a high degree, and support service available to support staff in OA publishing and the use of OA repositories = Very high) *
- **FAIR data and data sharing** (e.g. Mentioned at policy level, implemented by staff to a high degree, and support service available to support staff in making and sharing FAIR data = Very high) *
- **Open Science education and skills** (e.g. University units offer Open Science workshops for staff, there is a bottom-up Open Science Community present, and the university has a support service for staff that needs help in applying Open Science practices = Very high) *
- **Open Education** (e.g. Mentioned at policy level, Open Educational Resources (OER) are widely used in curricula, and support service available for staff implementing OER in their teaching = Very high) *
- **Societal Participation and Citizen Science** (e.g. Mentioned at policy level, implemented by staff to a high degree, and support service available to support staff in Societal Participation and Citizen Science = Very high) *

Are there any examples/actions in the above Open Science activity areas that you would like to highlight? (e.g. pockets of excellence/engagement if your overall assessment is low or moderate)
Free text

Did you strengthen any of these through collaboration with ENLIGHT partners, and how? Please be as specific as possible.
Free text

Your assessment of Infrastructures and Support

Which scholarly services do researchers have access to at your organisation?
Multiple choice chart with 3 levels

Levels:
Available
Under development
Under discussion

Publications repository
Data Repository
Institutional fund for OA publishing of articles and books
OA publishing platform (e.g. journals, books)
RDM /FAIR support and advice services
Data management plan (DMP) service
Persistent identifier services and integration (ORCID, DOIs, other)
Support services for legal issues (IPR, GDPR, Copyright)
Data Registries
University Press

Your assessment of Skills and Knowledge

What training on Open Science does your institution currently offer? *
Multiple choice

Training for support staff
Training for early career researchers
Training for researchers at all career stages
Training for doctoral schools
Training for students
Training is under development
No training offered
Other:

What topics are covered in your trainings? *
Multiple choice

Scholarly communication (Open Access, preprints, etc.)
Research data management and sharing (incl. FAIR)
Research integrity
Responsible research assessment (incl. impact metrics)
Citizen engagement, societal participation, Citizen Science
Legal issues (IPR, licensing, etc.)
Data skills (creating/collecting, processing, etc.)
Research reproducibility
Publication ethics (peer review, evaluation of publication outlets, etc.)
Other:

Community

Are there any Open Science community activities at your institution? *
Multiple choice chart with 3 levels

Levels:
Available
Under development
Under discussion

Disciplinary Open Science groups (e.g. Reproducibility)
Open Science Community (across disciplines)
Data and software groups (e.g. RLadies, Carpentries, HackyHour)
Network of ambassadors (e.g. Open Science, Open Access or Data Champions)

How would you assess the success of the ENLIGHT OS ambassador network? How did you involve the OS ambassadors at your institutional level?
Free text

Policy

What kind of Open Science policy/strategy/roadmap is in place at your university?
Multiple choice chart with 5 levels

Levels:
Available
Available and updated since January 2022
Under development
Under discussion
Not available, currently not considered

Open Access policy (stand-alone)
Data management policy (stand-alone)

Open Science policy (overarching)
Research integrity policy (with elements on OS embedded, e.g. data management)
University strategy (elements on OS embedded)

If the policy(ies) is(are) published, please provide link(s) here:
Free text

Please specify the elements of your institution's policy(ies) on Open Science: *
Multiple choice

Deposit of publications in an institutional repository
Institutional fund for OA publishing
Encouragement and support for OA book publishing
Encouragement and support for OA journal publishing (e.g. institutional journal hosting)
Recommendation of use of open licenses
Encouragement and support for data management and data sharing
Responsible management of research data in line with the FAIR principles
Institutional data repository
Obligation to create and maintain a data management plan
Reform of research assessment
Quality / Ethical publishing
Diamond OA
Support / commitment to open infrastructures
Other:

What kind of mechanism for monitoring OS do you have at your institution?
Free Text

How have you or will you (continue to) communicate the ENLIGHT OS principles in your institution? Multiple choice

Publish on website of institutional policies
Promotion via mailing lists / newsletters
Communicate via presentations
Include in guidance for researchers
Other:

Recognition and Rewards

Rewards and Recognition: What approaches have you already established or tested at your institution? *
Multiple choice possible

Open Science constitutes a criterion in research assessment
Hiring procedures include requests for information on Open Science engagement
Special funds or awards for OS activities
Open Science is part of the staff review process

Is your institution a member of the Coalition for Advancing Research Assessment (CoARA)?

Yes, actively
Yes, not active yet
Planning to join
No, but we consider to join in the future
No

Looking into the future (after the end of ENLIGHT RISE)

What Open Science activities do you consider most successful in ENLIGHT?
Multiple choice possible

Networking and exchange on good practices with Open Science and other experts
Joint development and implementation of the ENLIGHT OS Ambassadors,
Joint creation of the ENLIGHT Open Science Toolkit
Development and agreement on joint ENLIGHT Open Science principles
Other:

What progress or benefits related to Open Science have been created at your institutional level thanks to the collaboration in ENLIGHT?
Free text

What activities would you like to continue or expand in ENLIGHT 2.0?
Multiple choice possible

Networking and exchange on good practices with Open Science and other experts
Joint support and use of the ENLIGHT OS Ambassadors
Promotion and updating of the ENLIGHT Open Science Toolkit
Create guidance for researchers on how to avoid unethical publishing
Teaching Open Science together (incl. curriculum integration)
Collecting and creating training materials
Other:

Are there any specific topics that you would like to suggest for future ENLIGHT Open Science training events?
Free text

What do you need at your institutional level to contribute to the implementation of these activities?
Multiple choice possible

Consent by institutional management to contribute hours
Additional staff resources in the contributing unit(s)
Additional financial resources (e.g. travel costs)
Other:

Research Data Management and FAIR Data

In case your institution already has a research data policy: Does it include a statement on data sharing and/or open data?
Multiple choice possible

Data sharing is encouraged.
Open data is encouraged.
The "as open as possible as closed as necessary" principle is promoted.
Other:

Does or will your research data policy include a statement on FAIR data?
only one answer possible

Making data FAIR is mandatory.
Making data FAIR is recommended.
FAIR is not covered by the policy.
FAIR will be included in the policy under development.
FAIR will be included in a future revision of the policy.
Other:

Which research data services are offered at your institution?
Multiple choice possible

Consultancy on data management (e.g. funder requirements, DMPs)
Institutional data repository
DMP service platform (creation, hosting of DMPs)
PID service
Training (e.g. RDM, infrastructures, tools)
Online information resources

Other:

What data management staff roles are currently in place at your institution?
Multiple choice possible

Data managers (e.g. research data managers, data librarians, data curators)
Dedicated data stewards (implementation and liaison role, directly linked to or embedded in a department/project)
Infrastructure engineers and managers (e.g. data repository developer)
Other:

What actions are currently taken for fostering skills and capacities for RDM and making data FAIR?
Multiple choice possible

Training sessions for researchers
Training for data managers and data stewards
Embedding data managers/stewards in projects
Engagement in working groups (e.g. RDA)
Other:

What are currently your main challenges related to implementing FAIR?
Free Text

Do you have any other comments? Thank you for all your input!
Free text

– end of questionnaire –