

Recognising Open Research Data: Final Report of the recORD Project

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А.	Executive Summary 3
В.	Introduction
С.	Recommendations of the recORD Consortium4
	Intended Impact of ORD Recognition / Incentivisation4
	Quality Criteria & Their Parametrisation5
	Implementation6
D.	Key Discussion Points Around These Recommendations8
	ORD Recognition vs. Compliance8
	FAIR vs. ORD
	Institutional and Disciplinary Diversity8
	Special Contributions of the ORD-Landscape8
	Implementation at the SNSF9
	Balancing Qualitative and Quantitative Measures9
Ε.	Outreach
F.	Conclusion and Next Steps10



A. Executive Summary

The recORD consortium developed nine recommendations to improve the recognition of ORD contributions. These nine recommendations addressing principles, criteria and parametrisation, as well as implementation provide in our opinion a solid and widely supported starting point for the implementation of better ORD recognition. Furthermore, the project has identified already existing processes where these recommendations can be integrated; these processes cover all three relevant areas of ORD recognition, namely proposal assessment, career assessment, and institutional accreditation.

The recommendations of recORD should be implementable across a broad range of stakeholders: the diverse recORD consortium included large and small universities, large and small universities of applied sciences, partners from the ETH domain, the largest Swiss research funding organisation, namely the SNSF, and FORS, representing the perspective of researcher communities and research infrastructures.

The recommendations have also been developed with reference to existing frameworks for ORD recognition, particularly from other European countries and from Switzerland in mind.

Given the decision not to fund a follow-up project to recORD, the responsibility for further implementing the recommendations of recORD lies now with the institutions. However, it still needs to be defined how further coordination in this implementation will occur.

B. Introduction

The aim of the project *Recognise ORD* (recORD) funded by swissuniversities was to bring together 12 Swiss higher education institutions (HEIs), the Swiss National Science Foundation (SNSF) and FORS (Swiss Centre of Expertise in the Social Sciences) as a national research data infrastructure to agree on how Open Research Data (ORD) contributions should be better recognised (i) in the assessment of research proposals, (ii) the assessment of research performing institutions. Better recognition of ORD contributions is needed to promote transparency, reproducibility and efficiency of research; these tenets of Open Science are discussed at great length elsewhere (see for instance <u>OPUS</u>) and are part of the <u>Swiss ORD Strategy</u>.

The diverse consortium included big and small universities, big and small universities of applied sciences as well as partners from the ETH domain (ETH Zurich, University of Bern, University of Lausanne, University of Fribourg, University of Neuchâtel, University of Applied Sciences Berne, University of Applied Sciences Southern Switzerland, University of Lucerne, University of Zurich, University of Applied Sciences Western Switzerland and Zurich University of Applied Sciences while the University of Southern Switzerland participated as an unfunded associated partner). In addition, the SNSF and FORS added the perspective of research funders, researcher communities and research infrastructures to the discussion. Therefore, the recommendations of recORD should be implementable across a broad range of stakeholders.

The recORD consortium performed an analysis of best practices in ORD recognition based on (a) a literature review, (b) landscape analysis and (c) the discussions on the use of ORD in research assessment in CoARA



working groups as well as the Swiss national CoARA chapter. These analyses were then contrasted with an analysis of the current situation at all involved recORD partners regarding the incentivisation of ORD contributions. This comparison provided the input for the development of the here presented recommendations of the recORD consortium. The development of the recommendations occurred in series of local preparatory workshops in small groups of institutions and subsequently a series of national workshops involving all consortium members. The project was funded by swissuniversities and implemented between January 2024 and March 2025.

C. Recommendations of the recORD Consortium

Based on our analysis of existing frameworks and current practices within Swiss HEIs for the recognition of ORD contributions, the recORD consortium has derived a typology for such frameworks (Araujo, P., Bornatici, C., & Heers, M. (2024). *Recognising Open Research Data in Research Assessment: Overview of Practices and Challenges*. Zenodo). According to this typology, the ensemble of our recommendations can be characterised as a qualitative framework and is thus very much in line with other existing Swiss frameworks such as HI-FRAME (Gilland Lutz, K. & Falub, M. (2023). Professional hiring and Open Science: a catalogue of questions. <u>University of Zurich</u>). Potentially in the future, our framework could be extended with carefully selected quantitative elements elevating the recORD framework to a mixed qualitative – quantitative framework.

The recommendations within this framework are categorised into three categories: (1) the intended impact of ORD recognition, (2) quality criteria for ORD recognition and their parametrization, and (3) the implementation of ORD recognition.

Intended Impact of ORD Recognition / Incentivisation

- 1. Recognising / Incentivising ORD / FAIR contributions:
 - a. should **not** lead to an ORD **compliance exercise** for researchers (i.e. without positive effect on research practices or researcher communities, leading to data dumps etc.).
 - b. it should lead to more transparent, reproducible and efficient research practices; services to the research community should be rewarded.
- **2.** To make the distinction between compliance exercise and ORD contributions that foster better research practices, assessable quality criteria (quantitative and qualitative) for ORD contributions should be proposed.
- 3. New assessment criteria for ORD are to be used in addition to other criteria and do not invalidate other types of performance/contributions (additive logic, not multiplicative logic)



Quality Criteria & Their Parametrisation				
4. Does the researcher demonstrate methodological competency regarding ORD / FAIR data?				
Prospective	a.	 Data generation: data re-use (vs. data generation) sufficiently considered, using relevant data types / formats facilitating data integration and re-use (non-proprietary, machine readable etc.) Data handling / processing: copyright management, authorisation to re-use third-party data (via contracts, DTA, etc.), data citation / attribution, fulfilling legal requirements (IP protection, anonymisation, consent etc.), appropriately addressing risks (storage etc.) Data analysis: ensuring transparency of methods & reproducibility of results where 		
Retrospective	d.	appropriate Data publication: data appraisal performed (publish right data), data well structured & described (respecting community standards / meta-data schemes), data shared in a relevant place / repository (considering established community data sources), appropriate licensing for re-use Data re-use: qualitative or quantitative indicators demonstrating re-use (downloads, citations, new collaborations resulting from data publications etc.)		
5. Did the researcher provide a service to their community / relevant audiences in making their digital objects available?				
Aligned with Criteria of swisuniversites ORD Calls	a.	By analysing the usefulness of contributions : Does the researcher reflect on which research materials might be of use to the wider research community? Does the researcher reflect on whether her/his research materials can be made accessible in a way that is useful for the intended audiences and protect the integrity of the data subjects?		
riteria of sw ORD Calls	b. c.	relevant audiences By integrating with existing services and infrastructures for research materials / digital		
ed with C	d.	objects By advancing best practices for sharing digital objects / research materials in the respective communities / with relevant audiences (e.g. definition of reference description for digital objects / research materials)		
Aligne	e.	By engaging a community into best practices for sharing digital objects / research materials (e.g.by promoting existing standards)		



Implementation

- 6. A backward-looking narrative CV element on ORD achievements would cater to the different situations in different disciplines, institutions, career progression, financial means, infrastructure etc.
 - a. The backward-looking narrative CV element could be based on questions-inspired free text (see questions listed under recommendations 4 & 5).
 - b. In proposal assessment, this CV element could be assessed as part of the SNSF evaluation criterion «scientific qualifications of the researchers» (see Art 24 of SNSF funding regulations).
 - c. In career assessment, this CV element could be requested in job-specifications / descriptions and be assessed as part of the hiring or promotion processes.
- 7. The backward-looking narrative element should be complemented with **a forward-looking** *narrative element on ORD in the proposed work / career*
 - a. This forward-looking element could be based on questions around the methodological competency of the researcher (see questions listed under recommendations 4 & 5).
 - b. In proposal assessment, this proposal element could be assessed as part of the SNSF evaluation criterion «suitability of methods» (see Art 24 of SNSF funding regulations).
 - c. In career assessment, this proposal element could be requested in job-specifications / descriptions and assessed as part of the hiring or promotion processes.
- 8. Generally, **peers** from the same discipline **should assess the ORD quality criteria**; these peers (e.g. as members of evaluations and selections committees) should receive **training** on the ORD quality criteria and their use.
- A critical issue for implementation is ORD infrastructure and services. Therefore, HEIs need to contribute to a coordinated landscape of ORD infrastructures and services across all Swiss HEIs and contribute to the long-term sustainability of these infrastructures and services.

These recommendations seek to intimately link to existing research quality criteria and evaluation processes:

• In particular, we propose that making meaningful contributions to ORD should be an integral part of a good research methodology. Meaningful ORD contributions should thus be rewarded under criteria evaluating the methodology used or proposed by a researcher. For disciplines that have a



very clear notion and definition of research data, the parameters listed under recommendations 4 & 5 above can be used to assess the meaningfulness of ORD contributions. For disciplines that do not have a clear notion and definition of research data, the parameters listed under recommendation 5 can be used. These assessments will be generally made by peers from the same (sub-)discipline; therefore, the parameters will be put into the specific disciplinary context by these peers.

- The parameters under recommendation 5 have been integrated with quality criteria used by swissuniversities when promoting and incentivising ORD across Switzerland and Swiss institutions.
- Regarding implementation, we found it particularly important to link to established processes at the SNSF and career assessement processes at HEIs. Therefore, we have identified existing quality criteria into which the assessment of ORD-contributions could be integrated (see recommendations 6b, 6c, 7b & 7c).
- The Swiss Academies of Arts and Sciences would be well placed to help clarify the disciplinespecified application of these recommendations as they typically gather groups of researchers from the same (sub-)discipline. They could also well help establish a discipline-specific interpretation of ORD-terms.
- The HEI contributions to ORD infrastructures and services could be assessed in the context of
 institutional assessment / accreditation processes. More specifically, such HEI contributions
 should be linked to the quality standards anchored in the Swiss Higher Education Support and
 Coordination Law (<u>HFKG, LEHE, LPSU</u>) in Annex 1. Potentially, quality standard 3.3 would lend
 itself to explicitly integrate Open Science / Open Research Data / Open Educational Resources
 etc. into institutional accreditation processes. This in turn would lead to a better recognition of
 ORD contributions in accreditation processes and hence stimulate HEI boards to institutionally
 value and support ORD.
- In general, the implementation of the recORD recommendations should be accompanied by a continued monitoring and reflection on their usefulness; CoARA provides a good platform allowing for such reflections also with stakeholders from outside Switzerland.

All recORD recommendations (except 9) are equally applicable in the assessment of research proposals as well as in career assessment. In the context of institutional assessments, mainly recommendation 9 is directly relevant; however, recommendations 4 & 5 can also be translated to the institutional level (i.e. the institution supports researchers in developing methodological competency and values services to the wider research community) and hence applied in this context.

Other developments outside HEIs may also incentivise ORD-contributions:

- Data curators at academic publishers may in the future request more of publication's underlying data and more closely scrutinise research data quality.
- ORD recognition should be strengthened via partnerships with other actors (Innosuisse, academies, foundations, private partners etc.).
- EOSC is seeking to integrate and support ORD infrastructures and services; a Swiss National EOSC node could stimulate such infrastructures and services.



D. Key Discussion Points Around These Recommendations

ORD Recognition vs. Compliance

One of the central concerns discussed by the consortium was the risk that ORD recognition could devolve into a compliance exercise, where researchers focus solely on fulfilling requirements without engaging in meaningful data sharing practices. To prevent this, the need for clear, assessable quality criteria was discussed extensively. These criteria would allow evaluators to distinguish between ORD contributions that foster good practices and those that are primarily driven by compliance. Hence, recommendations 1-3 were strongly supported by all consortium members.

FAIR vs. ORD

The consortium also briefly discussed the terms "open" and "FAIR" re-iterating the understanding of the Swiss National ORD Strategy and Action Plan, which acknowledge that not all data can be openly accessible: some data remains protected for established reasons (e.g. vulnerability of research participants) and for some data access controls are warranted and necessary (e.g. prior agreement of the data producer). Whenever we speak of "ORD" we thus acknowledge well established limitations recognized by the "FAIR" principles. However, some participants saw a danger that the FAIR principles can lead to the sort of compliance exercise we try to avoid (see previous paragraph).

Institutional and Disciplinary Diversity

The consortium highlighted the need for ORD recognition frameworks that account for differences between institutions, disciplines, and career stages. The consortium emphasised that some fields are more advanced in their use of ORD practices, while others might face barriers due to the nature of their research or available infrastructure. To accommodate this diversity, the consortium members endorsed the idea of narrative elements that allow researchers to explain their ORD contributions in the relevant context (in their CV as well as in their research proposal). For disciplines that are less data driven and for which the definition of research data is less clear (philosophy, history, mathematics, literature-studies etc.) the notion of "service to the community" via digital objects was endorsed by the consortium members. This discussion also highlighted the fact that evaluation of ORD contributions should be performed by researchers and their peers themselves to assess ORD contributions in a discipline-specific context.

Special Contributions of the ORD-Landscape

Special contributions to the ORD-landscape (e.g. new infrastructure) were not seen as a relevant assessment criterion by all consortium members. Such contributions were rather seen as relevant in specific types of calls for proposals (e.g. NCCRs, ORD Calls). Consequently, a related recommendation was eliminated as no consensus could be reached.



Implementation at the SNSF

In the work of the consortium, the SNSF provided very detailed suggestions on the possible implementation of new evaluation processes and criteria for ORD contributions at the SNSF. The SNSF highlighted existing evaluation criteria that could accommodate ORD contributions. In particular, good ORD practices can be seen as part of good research practices (or «suitability of methods» in the SNSF funding regulations) as they for instance improve transparency, efficiency and reproducibility - among other aspects. Retrospectively, the use of such good practices in the past by a researcher can also be described under the established criterion «scientific qualifications of the researchers». The consortium suggested that a stepwise introduction of new assessments would be helpful for researchers as well as the SNSF: in an initial phase, the SNSF could focus on adapting existing briefing and training documents for SNSF evaluators and introduce the narrative ORD elements in applications forms and CVs. In a later phase, the SNSF could propose new evaluation criteria (which likely need to be approved by the federal council). In the initial phase, the assessment of ORD contributions during proposal assessment at the SNSF could be performed by ORD specialists; long-term, however, the assessment of ORD contributions should be performed by researchers and their peers themselves to assure a discipline-specific assessment of ORD contributions.

Balancing Qualitative and Quantitative Measures

Another key point of discussion was the balance between qualitative and quantitative measures in the evaluation of ORD contributions. While quantitative measures such as data re-use indicators are essential, qualitative assessments—such as narrative CV elements—were seen as more important for capturing the diverse ways in which researchers contribute to ORD. The integration of both qualitative and quantitative elements was considered crucial to ensure that ORD recognition does not unfairly disadvantage researchers working in fields where data re-use is less frequent or harder to measure. This position is also fully in line with COARA and DORA.

E. Outreach

After starting the project, it became quickly clear that the outreach activities should not be limited to an information event at the end of the recORD project; merely informing stakeholders outside the consortium about the results of the recORD project at a general information event did not cater to the need of stakeholder groups to be involved in the discussions around ORD recognition. Given this need to discuss the recORD recommendations with individual stakeholder groups, the consortium relatively quickly adapted its outreach strategy targeting smaller and more homogeneous groups during the execution of recORD. For example, we involved members of the SNSF research council into our workshop on proposal assessment and presented preliminary results to the SNSF research council at a Journée de Réflexion. We also discussed our preliminary recommendations with researchers and research managers at the Open Science Days at the EPFL. The Coordination Group of the Open Science Strategy Council was also given an opportunity to comment on the preliminary recORD recommendations. Individual institutions that were not involved in the recORD consortium were informed on our work to make them



aware of the ongoing discussions and to involve them in discussions regarding the implementation of the recommendations after the end of recORD project. Finally, the DelOS was informed of the results of the recORD project at its meeting in March 2025.

F. Conclusion and Next Steps

The nine recommendations of the recORD consortium regarding principles, criteria & parametrisation and implementation provide in our opinion a solid and widely supported starting point for the implementation of better ORD recognition. Furthermore, the project identifies very clearly already existing processes where these recommendations can be integrated; these processes cover all three relevant areas of ORD recognition, namely proposal assessment, career assessment, and institutional accreditation.

Given the decision not to fund a follow-up project to recORD, the responsibility for further implementing the recommendations of recORD lies now with the institutions. However, it is currently unclear how further coordination in this implementation will occur.