

**ETH BOARD****ETH zürich****EPFL**

ETH Domain ORD Programme
Measure 2 – Coordination of Access to Research Data Management (RDM) Services & Infrastructures

Guidelines for Project Proposals

“Improve the Interoperability of Electronic Lab Notebooks in the ETH Domain”

May 22nd, 2023

Electronic lab notebooks (ELNs) are computer programs for note-taking in scientific laboratories. Increasingly, ELNs are replacing traditional paper notebooks. ELNs offer a number of advantages over paper notebooks, such as better ability to keep track of changes, user rights management, sharing, built-in functionality for search and backup as well as removing issues with handwriting. Nowadays, ELNs are often combined with digital tools for data and inventory management, thereby supporting the adoption of FAIR data principles because all relevant information supporting a particular research finding are digitally linked.

The widespread adoption of ELNs in academic and industrial research has led to a huge “zoo” of available ELN software solutions. This situation is reflected in the ETH Domain, where a number of different ELN solutions are currently used by different institutions and research groups. Moreover, there are currently no standardized protocols for exchanging data between ELNs, creating a large hurdle for data transfer or migration from one system to another. With this call, the ETH ORD Program aims to address this issue by funding one or more projects that aim to improve the interoperability between ELN systems in the ETH Domain.

Expected Project Goals & Outcomes

Projects are expected to implement solutions that support the exchange of data and metadata between different ELNs and thereby enable or facilitate concrete research use cases in the ETH Domain. Proposals must describe convincingly how the proposed solution will improve the transfer of data and metadata from one ELN system to another as well as the use cases that would benefit from this solution. The expected beneficiaries of the use cases must be located in multiple ETH Domain institutions. This call focuses on ELN interoperability features; development of other ELN features is outside the scope of this call and will not be supported. If more than one project is selected, a requirement for funding will be that funded projects engage with each other to explore compatibility of the developed solutions.

It is expected that up to 3 projects could be funded within this scheme.

How to apply

Proposals must be submitted by e-mail using the provided [template](#).

Proposals should be submitted to research@sl.ethz.ch latest by 31.08.2023 at 17:00 (Swiss local time).

Eligibility

Applicants¹ must be employed by an ETH Domain institution (ETHZ, EPFL, PSI, Empa, Eawag, WSL) for the duration of the project. External partners are allowed but will not receive funding and are not considered as applicants. At least one co-applicant must be a service provider in the ETH Domain that can assure the sustainability and continuity of the solution developed in the project.

Verify your institution's guidelines, as they may define additional eligibility requirements.

Applicants must have the authority to engage financial resources or must be explicitly given the authority to engage resource for the project by their home institution. Proposals must have the full support and cooperation of the participating institutions.

There are no restrictions on consortiums. They can be composed of applicants from one or multiple institutions, with no restrictions on the number of applicants from the same institution. Each group must designate a "corresponding applicant" to represent all other co-applicants.

Budget and Duration

Individual projects must not exceed an overall budget of CHF 200'000. This is the total cost of the project (including in-kind and in-cash institutional contributions), not the amount of funding the applicants will receive (see the funding section below). Project duration is limited to one year.

Funding

Proposals receive 50% co-funding from the ETH Board (matching funds principle). The remaining budget must be provided by in-cash or in-kind resources from within the institutions of the applicants. Verify your institution's guidelines for detailed guidance regarding budgeting requirements, funding and regulations for in-kind or in-cash contributions.

Budget Guidelines and Eligible Costs

Budgets must include all project costs, including those expected to be covered by in-kind or in-cash institutional contributions. In the case of a proposal submitted by multiple applicants, the budget must detail which part is allocated to which applicant. Transferring allocated funds between applicants, after approval of the application, is possible if approved by the EG-SI and SC. Grantees must request permission for such a transfer by writing to the ETH Zurich Grants Office.

Funding is limited to costs that are specific to developing or improving an interface between ELN systems. Adjacent costs including for ELN features or extensions that are not relevant to

¹ The term "principal investigator" (PI) is avoided since the scheme is not intended to support research (investigation).

interoperability, should not be included in the budget. The project cost estimation should be as accurate as possible.

Costs already covered through a third party are not eligible for funding and do not qualify as in-kind or in-cash contributions.

Verify your institution's guidelines for detailed guidance regarding budgeting requirements, funding and regulations for in-kind or in-cash contributions and additional documentation requested.

Where to find institution-specific information for ETH ORD Scheme conditions	
	https://ethrat.ch/de/eth-bereich/open-research-data/
Institutions	Link to document
ETH Zurich	Link to institutional guidelines for EPFL / ETH Zurich
EPFL	Link to institutional guidelines for EPFL / ETH Zurich
PSI	Please contact Alun Ashton: alun.ashton@psi.ch
Empa	https://www.empa.ch/group/s909/wiki/-/wiki/Main/Open+Research+Data+%28ORD%29
WSL	https://intra.wsl.ch/de/direktion/calls-der-direktion/open-research-data-practices
Eawag	Please contact Gabriele Mayer: gabriele.mayer@eawag.ch

Application instructions

- The proposal must be submitted by the corresponding applicant.
- The proposal is to be written using the template provided [here](#) and must be submitted together with all additional documents as a single PDF-document via e-mail to the ETH Zurich Office of Research at research@sl.ethz.ch.
- The proposal must not exceed 5 pages (A4, Arial, 11 points, 1.5 line-spacing, 2 cm margins) excluding bibliography, budget section and the justification for resources. Please address all the points below.

Basic information

Please fill in the table in the template, providing for information on:

1. the corresponding applicant and his/her institution and unit,
2. the co-applicants
3. application details

1. Background of the project and motivation

Describe the current situation in the ETH Domain with respect to the Electronic Lab Notebook (ELN) systems targeted in the proposal. Please address in particular the following points:

- Which ELN systems are targeted in the proposal and why?
- What is the current state regarding these ELNs? What are the gaps / shortcomings in terms of interoperability between these ELNs?
- Which disciplines / fields will benefit from the outcomes of the proposed project?
- Are there any related initiatives / projects that are relevant for the proposed project?

2. Project plan

Describe your work plan, focussing on how the proposed solution will improve the interoperability of different ELN systems. Which specific gap(s) will the project address and why?

- Which methods and tools will be employed to achieve the desired outcome?
- How will the developed solutions be deployed and maintained (e.g. as part of the ELN software, as third-party extension or as a separate software)?
- Which challenges and risks can be identified and how will they be addressed?
- Please also define the team members and their respective roles in the project.

3. Impact

Please address these specific points:

- Which use cases in the ETH Domain will benefit from the proposed solution? Please be as specific as possible and consider supportive materials, such as letters of support.
- Why is interoperability between ELNs pursued as a solution in the use cases, instead of the use of a single ELN?
- How can the solution be sustained after the end of the project? How sustainable is the proposed solution inside the ETH Domain? Provide specifics in terms of budget and commitments.

- How big is the community that could benefit from your solution (within the ETH domain and external)? What will be the impact of the proposed solution for the community?

4. Work Packages and milestones

Include a detailed Gantt chart or table, outlining the timeline of your project, including key activities, milestones and deliverables.

5. Bibliography

List all bibliographic references for the preceding sections

6. Budget table

The overall project budget **must not exceed CHF 200'000** for the **total duration** of the project. To facilitate the assessment of resources by the experts, use of the budget table provided in the [template](#) is mandatory. All eligible costs requested must be included in the budget for each cost category and for all applicants to fulfill the objectives for the duration of the project. And also indicate, if applicable, which resources are contributed in-kind by each applicant in the last row of the table.

7. Justification of resources

Please provide here information on the requested budget and explain how the co-financing (50% of the total budget) will be secured (see above).

Evaluation

Each application will be evaluated by three members of the Expert Group Services and Infrastructure (EG-SI) of the ETH ORD Program. To mitigate conflicts of interest, EG-SI members will abstain from evaluation of proposals that directly impact services and infrastructures that they are involved in or manage. If required, independent external experts may also be consulted. Evaluation will focus on the impact of the proposed solution (see point 3 above), the feasibility of the project and the sustainability of the project deliverables. The evaluation reports, together with a recommendation for funding, will be submitted to the Steering Committee of the ETH ORD Program, who will take the final decision.

Decision

The final decision about each proposal will be announced no later than 3 months after the submission deadline. Grantees will have to start their project within **6 months** after the decision is communicated.

Reporting

The corresponding grantee will have to comply with the following reporting duties:

- 1. a final content report, within one month after the project's end;**
- 2. a final financial report, also within one month after the project's end.**

The corresponding grantee will have to explain in the content report the key results achieved by the project as well as any changes or deviations from the initial project plan and their reasons.

The financial report will have to summarize the information included in an accompanying detailed report issued by the Financial Services of each grantee(s) and provide a summary of all spending made during the project duration, including from the contribution of the ETH Board and from the institutions' co-funding.