

1st Call for Proposals for Platform Projects in the context of BioMedical Informatics Platform (BMIP)



Content

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|--|----------|
| 1. The LOOP Zurich – overview | 1 |
| 2. Summary of the 1st call for proposals for Platform Projects supporting the LOOP Zurich BioMedical Informatics Platform (BMIP) | 2 |
| 3. Principles and requirements for The LOOP Zurich Platform Projects | 3 |
| 4. Time, financial scope, and project management | 4 |
| 5. Criteria for the evaluation of grant proposals | 4 |
| 6. Instructions for applications | 5 |
| 7. Evaluation and decision bodies | 7 |
| 8. Contact for questions and submissions | 7 |

1. The LOOP Zurich – overview

The LOOP Zurich is a translational research center focusing on precision medicine. It builds on the complementary expertise of the ETH Zurich, the University of Zurich, and the four university hospitals in Zurich – University Hospital Zurich, Balgrist University Hospital, University Children’s Hospital Zurich, University Hospital of Psychiatry Zurich – in basic biomedical research, bioinformatics, biomedical engineering, and clinical research. The goal is to improve the fundamental understanding of diseases in order to develop tailored treatment strategies and therapies.

The LOOP Zurich pursues a data-driven medicine approach. By combining the tremendous amount of clinical information collected in clinical data warehouses of Zurich’s four university hospitals, The LOOP Zurich BioMedical Informatics Platform (BMIP) will be established. It will enable researchers to achieve novel insights into etiology and progression of diseases, fostering the development of highly specific diagnostic and therapeutic approaches for the benefit of patients.

Rendering The LOOP Zurich BMIP into a state-of-the-art of informatics platform for research purposes and warranting its optimal usability requires

- i) extending BMIP’s scope by incorporation of novel and supplemental data types, and/or
- ii) developing advanced tools for data analysis based e.g. on artificial intelligence.

The purpose of Platform Projects (as elaborated below) is to support such activities.

2. Summary of the 1st call for proposals for Platform Projects supporting the LOOP Zurich BioMedical Informatics Platform (BMIP)

The LOOP Zurich Platform Projects grant for the BMIP supports groups of ideally around 2 to 4 researchers and their teams, which must represent at least two institutions. These consortia should bring together complementary skills, knowledge, and resources to address a project supporting the further development of the BMIP to the benefit of the Zurich research community. The overall funding for The LOOP Zurich Platform Projects is a maximum of 1 Mio CHF per project) to be spent over a period of 3 years.

The projects are intended to

- i) advance and support the development and implementation of a sustainable infrastructure that enables the incorporation of novel and supplemental types of health-related data such as -omics data, imaging data, and/or quasi-real time data (high-frequency recordings) into The LOOP Zurich BMIP and/or
- ii) develop new analysis techniques capable of dealing with large amounts of relevant medical data of different types. These techniques should lead to novel insights into a medical problem and/or predict possible outcomes and/or treatment responses with the potential to guide and improve clinical decision making.

The projects must be designed in such a way that success crucially depends on the synergistic contributions of all investigators and their teams.

There is a two-stage submission procedure. Firstly, applicants are asked to hand in a project sketch/outline, which will be evaluated internally for compatibility with the technical specifications of the BMIP.

Applicants with outline proposals that are considered compatible with the technicalities of the BMIP will then be invited to submit a full application.

Timelines (1st Call):

- Call-start: **February 28, 2023**
- Submission deadline for project sketch/outline proposal: **April 30, 2023**
- Invitation to submit full proposal: **May 15, 2023**
- Submission deadline for the full proposals: **July 15, 2023**
- Communication of decision to applicants: **August 31, 2023**
- Earliest project start: **October 01, 2023**

3. Principles and requirements for The LOOP Zurich Platform Projects

The Call for The LOOP Zurich Platform Projects proposals is **open to applications from all disciplines of data-driven health- and biomedical research**. Applications must fulfill the following requirements:

- The overarching aim of Platform Projects is to **render data from different sources interoperable and reusable** for high-end data-driven research. Data might include structured and unstructured medical data from clinical routine and clinical research and other sources (e.g., medical imaging, molecular profiling). Data **must** follow the FAIR-standards (findable, accessible, interoperable, reusable) according to the Swiss Personalized Health Network (SPHN).
- Platform Projects are **consortia research projects** involving partners from basic biomedical and clinical science, data science and engineering, thereby enabling data-driven, stratified, or personalized health research on a given broad topic or focused on specific data types suited for this purpose.
- **Sharing of data used or generated in the course of the project is mandatory (conditio sine qua non)**.
- An efficient **project/data management concept** will be considered of high importance by the evaluation board.
- Platform Project consortia must have a **sustainability and quality concept** to serve the Zurich research and healthcare community in the long term.

The 1st call for The LOOP Zurich Platform Projects is focused on biomedical informatics, and in particular on solutions that extend the usability of The LOOP Zurich BMIP.

- **Scientific competences:**

While the call addresses primarily the Zurich biomedical informatics community, projects should include at least one clinical researcher to highlight the clinical relevance of the proposal. Collaboration with external partners is possible provided skills not accessible within the Zurich research community are required.

- **Eligibility**

Principal investigators (PIs) and Co-PIs are employed by one of the following partner institutions: ETH Zurich, University of Zurich, University Hospital Zurich, Balgrist University Hospital, University Children's Hospital Zurich, and the University Hospital of Psychiatry Zurich.

PIs and Co-PIs must have guaranteed employment for the duration of the grant period and guaranteed access to the home institution's infrastructure as well as data and services necessary to conduct the approved research.

Research groups from at least two of the partner institutions shall be involved in a project.

- **Gender Equality**

The LOOP Zurich is in line with the efforts of its partner institutions in the field of gender equality and diversity. Prospective The LOOP Zurich Research Consortia should apply and implement the corresponding gender equality action plans of their home institutions.

4. Time, financial scope, and project management

- The total duration of a The LOOP Zurich Platform Project is 3 years with a total maximum funding of 1 Mio CHF.
- Direct project costs, which include personnel salaries (PhD students, postdocs, technical personnel), consumables and travel will be provided by the grant scheme. Costs for salaries of PIs and Co-PIs will NOT be provided. Major equipment and/or infrastructure may be covered but requires approval by The LOOP Zurich's directorate of costs per item exceeding CHF 20.000,00. Fees for services and the use of infrastructure necessary for data/sample collection/management and analyses can be charged.
- Project funding will start on October 1st, 2023 (earliest). Project may be delayed by up to a maximum of 6 months upon approval by The LOOP Zurich directorate (April 1st, 2024).
- Progress of The LOOP Zurich Platform Projects will be regularly monitored. This includes the submission of annual intermediate reports (scientific and financial reports at months 12 and 24). At the end of the project a final report (scientific and financial) must be delivered.
- The necessary ethical and legal approvals by the responsible commissions are a prerequisite for the final allocation of funding. The LOOP Zurich adheres to the respective regulations of the partner institutions (e.g., Institutional governance processes and data strategies).
- The LOOP Zurich BMIP is committed to adhere to SPHN standards. Accordingly, the Platform Projects must adhere to SPHN standards as well.

5. Criteria for the evaluation of grant proposals

The LOOP Zurich Platform Project proposals will be prioritized following these criteria, which must be fulfilled:

- a) **Alignment with the BMIP:** Projects must ensure full compatibility with accepted data standards for the BMIP.
- b) **Scientific/technical quality**
- c) **Medical relevance**
- d) **Innovation and international competitiveness**
- e) **Project organization/data management plan**
- f) **Feasibility:** The project is feasible within the 3-year period of the project duration.
- g) **Added value to The LOOP Zurich BMIP:** The proposal addresses a problem that enhances the value of the BMIP and which is of general interest for Zurich's biomedical research community.
- h) **Sustainability:** The outcome of the projects should have a long-lasting impact on The LOOP Zurich BMIP (scope, usability).
- i) **Contributions by PIs:** Proposals document (in-kind) contributions by the individual PIs and their teams.

6. Instructions for applications

○ Templates

The proposal must adhere to the official templates. These can be found on the homepage of The LOOP Zurich (<https://www.theloopzurich.ch/en/project-submissions.html>)

○ Submission of proposals

a) Sketches/Outline Proposals

Outline proposals may comprise **a maximum of 6 pages** (excl. title page, references, and appendices), are written in English and structured as follows:

- i) Research project title, information on the project management and the main institutions and faculties involved (title page)
- ii) Executive summary of the Platform Project (0.5 page)
- iii) Background information (0.5 page).
- iv) Common development/implementation plan for 3 years describing the overall objectives, the role and coherence of the individual subprojects (max. 3 pages).
- v) Significance of the project: Expected added value to BMIP platform (0.5 page)
- vi) Use of / link to BMI platform infrastructure (0.5 page)
- vii) Organization: People involved, tasks and responsibilities, organization chart (1 page)
- viii) References

Appendices:

A1. Budget sketch (including budget positions for IT-services and personnel such as data management, study conduct, sample, and data collection/acquisition).

Budget should include in-kind contributions by applicants.

A2. Biosketch and list of 5 publications relevant for project of PIs, sub-project leaders, potential outside collaborators)

➡ **Submission deadline of outline proposal/project sketch: *April 30, 2023***

Decision: The decision on outline proposals/project sketches will be communicated to the applicants by **May 15, 2023**

b) Full Proposals

Proposals may comprise **a maximum of 15 pages** (excl. title page, references, and appendices), are written in English and structured as follows:

I. General Information

Project title, principal applicant(s) with affiliation(s), co-applicant(s) with affiliation(s), project duration (default: 36 months), anticipated start date, amount requested (title page)

II. Description of work

- i) Executive summary (1 page)
- ii) Background information (max. 1 page)
- iii) Previous work of applicant team in the field (max. 2 pages)
- iv) Detailed research/development plan listing the main objectives, the organization of project in individual subprojects with detailed description of individual work packages (WPs). This includes the formulation of WP specific objectives, deliverables, and milestones, as well as the description of the tasks/responsibilities of the personnel hired for the project. The proposal should also include mitigation measures to cope with potential issues. (max. 8 pages)
- v) Significance of the project: Expected added value to The LOOP Zurich BMIP and to the ZH biomedical research community. (0.5 page)
- vi) Alignment with the The LOOP Zurich BMIP infrastructure (0.5 page)
- vii) Organization: Organizational chart, tasks and responsibilities of individual applicants, gender aspects, interaction with implementation team of The LOOP Zurich BMIP (1 page)
- viii) International competition/partnership (0.5 page)
- ix) References

Appendices:

A.1 Appendix 1: Detailed budget including budget positions for IT-services and personnel (e.g., data management, study conduct, sample, and data collection/acquisition).

The budget should include in-kind contributions by PI and Co-PIs and their teams (according to the template)

A.2 Biosketches and publication lists of the persons involved (PIs, sub-project leaders, potential outside collaborators) (2 pages per person, 1 page biosketch + 1 page with 5 most important publications of the last 10 years related to project and a URL to a complete publication list (ORCID, Scholar, Scopus, ZORA, etc.))

A.3 Support letter(s) by external collaborators: If external collaborations are essential for the project, the application must include a letter by the external project partner stating her/his commitment for the project.

A.4 Data Management Plan

➡ Submission deadline of full proposal: July 15, 2023

Decision: The decision on full proposals will be communicated to applicants by **August 31, 2023**

7. Evaluation and decision bodies

- **Outline proposals** – check for platform compatibility only:
The LOOP directorate, the chairs of the BMIP Executive Board, and members of external IT Consulting Company (The Hyve)
- **Full Proposals** – (aspects considered: see Section 5):
International evaluation panel (2 SAB members & 3 ad hoc members) & topic specific external reviewers (target: 3 per proposal)
- **Final funding decision** by The LOOP Zurich's Steering Committee

8. Contact for questions and submissions

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