



SWISS NATIONAL SCIENCE FOUNDATION



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
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Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
Commission for Technology and Innovation CTI
Innovation Promotion Agency

Terms of Reference for the program Bridge

Introduction & Background

The Swiss National Science Foundation (SNSF) and the Commission for Technology and Innovation (CTI) have examined the complementarity of their respective support to Swiss science and innovation and have decided to develop a new common funding scheme, Bridge, to exploit more effectively the economic and social potential of scientific research. Based on the inputs of stakeholders, the original concept for Bridge was further developed to establish the details of the governance and the building blocks of Bridge.

Bridge is currently part of the Education, Research and Innovation (ERI) dispatch for the period 2017-2020 that will be transmitted to parliament by the Federal Council in February 2016. The definitive decision concerning the launching of Bridge, and the final amount of funding, will be taken by the Swiss parliament in the fall of 2016.

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1. Goals of the program

The goal of Bridge is to foster knowledge transfer in the critical precompetitive phase when a vision of potential applications of a scientific result exists, but further efforts are needed to bring the corresponding product, technology or service to a marketable form. Consequently, Bridge strives to promote the transfer of scientific knowledge into innovation. Contacts between research and implementation partners will be encouraged to start early in the projects. Cooperation between Universities, the Swiss Federal Institutes of Technology, research institutes, and Universities of Applied Sciences (UAS) will be facilitated.

To achieve these goals, Bridge foresees two different funding schemes:

- **Proof of Concept projects (PoC)** will support the further development of scientific results to evaluate market or societal potential, by young researchers wishing to develop an application for their research results.
- **Precompetitive projects (Precomp)** will support interactions between basic and applied research to realize the innovation potential of scientific results. Submitted projects must be centered on technological innovation but should also demonstrate the societal and economic impacts of the technical innovation to be developed.

“PoC” and “Precomp” are temporary names; the definitive names of the two funding schemes are determined during the preparation of the call documents.

2. Organization

2.1. Budget

Depending on the parliamentary decision, the 2016-2020 budget for Bridge will be CHF 60-80 Mio:

- CHF 30-40 Mio will be assigned to the SNSF and CHF 30-40 Mio to the CTI.
- Both budgets are earmarked and separate from budgets for existing instruments.

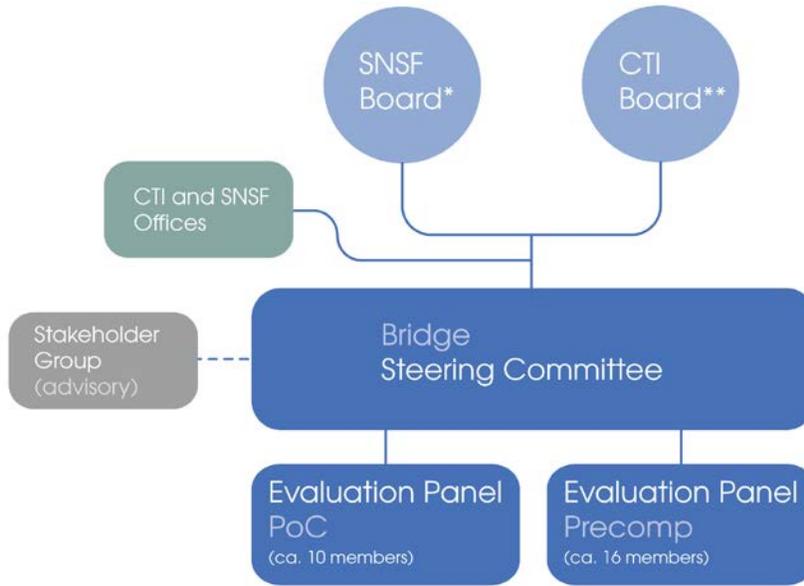
2.2. Calendar

Pending parliamentary decisions concerning the ERI dispatch, the following calendar has been set up for the launch of Bridge. The objective is that the first call for projects will be open in October 2016 and the first projects start at the beginning of 2017.

| | |
|------------------------|---|
| ▼ Jan 2016 | ▪ Decision on the governance and the Terms of Reference for Bridge ▪ Appointment of the Steering Committee members |
| ▼ Feb 2016 | Transmission of the ERI dispatch to Parliament |
| ▼ Sept/Oct 2016 | ▪ Final parliamentary decision on ERI dispatch ▪ Ratification of the call for projects documents ▪ Appointment of the members of the Evaluation Panels ▪ Implementation of technical and organizational structures ▪ First call for proposals |

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- ▼ **Jan 2017** Deadline for the submission of proposals
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- ▼ **Mar 2017** Start of the first projects

3. Governance structures



* SNSF Presiding Board of the National Research Council
 ** CTI Presidium

3.1. Roles of the SNSF Presiding Board and CTI Presidium

The SNSF Presiding Board of the National Research Council (hereafter SNSF Presiding Board) and the CTI Presidium have the overall responsibility for Bridge and will assume the following tasks:

- Decide on the governance structures and competences
- Decide on the Terms of Reference
- Appoint the members of the Steering Committee
- Regularly follow the progress of the program and validate the yearly reports submitted by the Steering Committee

Both CTI Presidium and SNSF Presiding Board can request reviews of the governance structure after one year. They can agree on modification of the governance based on the conclusions of this yearly review.

3.2. Steering Committee (SteCo)

The SteCo will be a key factor in the development of a common culture for Bridge. It will be composed of 7 members: 2 representatives of the SNSF, 2 representatives of the CTI, and 3

external members. SNSF and CTI representatives will rotate every two years as chair of the SteCo. Each Evaluation Panel will be chaired by one of the representatives of the SNSF or the CTI who are members of the SteCo. This structure will ensure that the same “Bridge culture” is present in the different decisional bodies.

The SteCo will have the following competences:

- Prepare, launch and monitor Bridge
- Decide on the regulations specific for Bridge
- Appoint the members of the Evaluation Panels
- Allocate yearly budgets to each funding scheme
- On the basis of the recommendations of the Evaluation Panels, decide on the funding of projects according to available budgets
- On the basis of the recommendations of the Evaluation Panels, decide on the interruption of Precomp projects or the extension of PoC projects
- Decide on events or activities related to Bridge
- Communicate on Bridge in coordination with the SNSF Presiding Board and the CTI Presidium or the offices
- Report yearly and inform the SNSF Presiding Board and the CTI Presidium

The SteCo may propose changes of the structure of the EPs prescribed in these Terms of Reference. Eventual changes must be decided by both SNSF Presiding Board and the CTI Presidium.

Furthermore, the SteCo ensures a comparison with other similar existing Swiss funding initiatives in order to avoid redundancies and to eventually coordinate synergies.

3.3. Evaluation Panels (EPs)

The evaluation and monitoring of the PoC and Precomp projects are undertaken by two separate EPs since the two types of projects require different evaluation competences. Each panel will however include experts in a large range of research and innovation areas and types.

3.3.1. EP PoC

- Structure: The EP PoC will be composed of a group of approximately 10 members. Further competences can be called in depending on the expertise needed to evaluate the proposals submitted in that particular call.
- Fields of expertise: The EP PoC will be composed of members with complementing experience in applied research in the relevant fields, and in industrial or societal implementation of scientific results.
- Competences: EP PoC members will evaluate submitted proposals, interview candidates, rank projects according to their value, and prepare recommendations for the SteCo. They will monitor project progress and, if suitable, recommend an extension of a maximum of 6 months.

3.3.2. EP Precomp

- Structure: The EP Precomp will consist of approximately 16 members with representatives from the SNSF, the CTI and external persons (international members, representatives from industry).

- Fields of expertise: The EP Precomp will be composed of members with complementing experience in basic and applied research in the relevant fields, and in industrial or societal implementation of scientific results.
- Competences: EP Precomp members will evaluate submitted proposals, interview candidates, rank projects according to their value and prepare recommendations for the SteCo. They will monitor project progress and, if necessary, recommend interruption of projects failing to meet pre-determined milestones.

3.4. Stakeholder (or Advisory) Group

The SteCo will regularly consult stakeholders on the development of the program Bridge.

4. Scope and framework of the projects

4.1. Proof of Concept projects (PoC)

PoC projects can cover any type of innovation or research field.

4.1.1. Eligibility

The PoC scheme is designed to support researchers on their way to entrepreneurship or their efforts to implement and apply their research results with an economic or social partner. The submitted projects must be based on the applicant's own scientific results or on findings for which the applicant has made a substantial contribution. The underlying science must have been peer-reviewed (e.g. bachelor or master or doctoral thesis) or documented by publications or another record of achievement (e.g. patent application). Researchers who fulfill the following requirements are eligible to submit PoC project proposals:

- Bachelor or master's degree with a proven personal research experience at a University, ETH, or UAS, within 4 years after the last degree
- Doctoral students at a Swiss University, ETH or UAS within 6 months prior to graduation
- Postdoctoral researchers within 4 years after graduation (extension is possible if justified)

4.1.2. Information to be provided in support of the request

- A 5 pages project description and a CV of the applicant (including potential applications or future steps towards commercialization)
- A reference letter from the present advisor detailing the applicant's experience
- A commitment letter from the future hosting institution detailing the support to be provided to the project, with the CV of the hosting lab's head

4.1.3. Duration and budget

- Duration: 12 months, with a possible extension of up to 6 additional months if recommended by the EP and validated by the SteCo
- Maximum budget: CHF 150'000 per year including investigator's salary and research expenses
- Free participation to CTI Entrepreneurship courses (level and form to be determined by the EP)

4.2. Precompetitive projects (Precomp)

Precomp projects must be centered on technological innovation but should also demonstrate the societal and economic impacts to be developed. Clinical trials are excluded.

4.2.1. Eligibility

The Precomp scheme targets researchers such as faculty members or teaching and research staff employed at Universities, ETHs, UAS or any research institution recognized by the SNSF or the CTI.

4.2.2. Information to be provided in support of the request

- A 21 page project proposal including descriptions of:
 - the current state of the research and innovation, and planned research activities in the innovation area
 - the innovation potential of the technology, with an indication of potential applications and the corresponding societal and/or economic impact
 - other (financial) support available to the project
- A project plan with goals and outcomes detailing clear milestones and deliverables
- A project organization stating the responsibilities of the various partner groups and project collaborators (including complementarity and expected synergies between the collaboration groups)

4.2.3. Duration and budget

- Duration: up to 4 years
- Maximum budget: CHF 1 Mio for 4 years for a single group or CHF 3 Mio for 4 years for small consortia (max. 3 groups). Typically, budgets may include salaries for scientific or non-scientific personnel and research expenses. Within the Bridge funding scheme, the principal investigator's salary cannot be covered.¹ Large equipment may be funded under the condition that the hosting institution provides a financial contribution (50:50). Preclinical studies are eligible as part of a project up to an amount of CHF 100k.
- Access to CTI specialty advisors and coaches paid by the CTI budget if validated by the SteCo and by the CTI Start-up domain
- Market research or IP strategy by independent advisors cannot be funded.

5. Submission procedures and project selection

5.1. Proof of Concept projects (PoC)

5.1.1. Evaluation procedure

There will be 4 calls per year for PoC projects, with the evaluation and decision-making procedure to be completed within 3 months. All submitted projects that fulfill the formal

¹ Successful Bridge applicants at an UAS may obtain funding of their salary directly from CTI in the form of a separate application. CTI will prepare specific regulations to account for that.

requirements will be evaluated by the EP PoC. Promising applicants will be interviewed before the funding decision is taken.

5.1.2. *Evaluation criteria*

- Innovative potential: Projects should provide a credible vision for a new product or service which offers a significant competitive advantage to Swiss economy or has an important societal impact.
- Author's competence: Investigators should demonstrate an appropriate level of innovation-based competence, entrepreneurial and management competence, and a willingness to cooperate with implementation partners or plans to found a start-up.

5.2. **Precompetitive projects (Precomp)**

5.2.1. *Evaluation procedure*

There will be 2 calls per year for Precomp projects, the evaluation and decision-making process to be completed within 6 months. To plan the evaluation procedure, the SteCo may ask for Letters of Intent (LOI). All submitted projects that fulfill the formal requirements are evaluated by the EP Precomp. Apart from EP members, projects may be evaluated by external and/or international evaluators. Promising applicants will be interviewed before funding decision is taken. The final evaluation and the ranking of the projects take place during the EP Precomp panel meetings.

5.2.2. *Selection and evaluation criteria*

- Science: The project's scientific objectives must be of high quality and realistic, providing a clear added value in respect to the current state of the art. The proposed methods must be sound and relevant to the objectives. The evidence should be related to the intended innovation rather than to a continued basic research.
- Innovation: The applicants must demonstrate a credible vision of the potential technological, economical or societal impacts and benefits of the innovation and its possible implementation.
- Competence and entrepreneurial intention of applicants: The applicants should demonstrate an appropriate level of scientific and innovation-based competence and a willingness, and intention, to collaborate with implementation partners or plans to found a start-up. If applicable, the complementarity between partner groups as well as project collaborators and their potential for cooperation should be demonstrated.

6. **Project monitoring and reporting**

The project progress will be monitored in a goal-oriented, non-bureaucratic way. Only projects making progress will continue to receive funds.

6.1. **Proof of Concept projects (PoC)**

- Individual projects will be closely accompanied by a member of the EP PoC.
- After 9 months a project review will take place to evaluate its progress. An extension for 6 months will be recommended if justified and in case of a positive review.

6.2. Precompetitive projects (Precomp)

- Project progress will be evaluated during a site visit organized during the third semester.
- Projects will be terminated by the SteCo if milestones are not reached and convincing alternative plans are not presented.

7. Project support and involvement of implementation partners

The following measures will be implemented:

- In consultation with CTI Start-up, entrepreneurship courses will be offered to project applicants if suitable.
- CTI Start-up will serve as an entry point for obtaining services of coaches or specialty advisors.
- Access to patent search support by the Federal Institute of Intellectual Property (IPI) will be funded by the CTI.
- *Bridge events* will be organized every year to bring together implementation partners, project investigators, investors, and Bridge committees and panels.

In addition to CTI Start-up support, the SteCo will consider concepts similar to I-Corps. CTI Start-up will be consulted in order to avoid redundancies.

8. Program monitoring

A concept for the continuing evaluation of Bridge will be developed by the offices of CTI and SNSF in collaboration with the SteCo. This includes an evaluation of the governance structures, procedures and principles one year after the start of the program (first half of 2018). The concept requires approval by the SNSF Presiding Board and the CTI Presidium.