

Innosuisse and Swiss National Science Foundation

Evaluation of BRIDGE

Summary

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In collaboration with:



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Wien

Summary

Selected facts and findings from the evaluation of the BRIDGE pilot phase

The three tables below provide an initial summary overview of selected facts and findings from the evaluation of the pilot phase of BRIDGE 2017-2020. Table 1 focuses on BRIDGE as a programme. The other tables focus on outputs and outcomes from the Proof of Concept (PoC, table 2) and Discovery (table 3) funding lines.

Impact level	Selected facts and findings about BRIDGE as a programme
Resources (see section 3.1.3)	<ul style="list-style-type: none"> – Total budget for 2017–2020 pilot phase: CHF 70 million. – Around two thirds of the entire BRIDGE budget was invested in Discovery projects (CHF 46.5 million), 28% in Proof of Concept projects (CHF 19.4 million).
Positioning (see section 3.2)	<ul style="list-style-type: none"> – BRIDGE is clearly positioned on the research and innovation chain. – BRIDGE addresses a gap between SNSF and Innosuisse funding.
Implementation (see section 3.3)	BRIDGE is a strategically important instrument for strengthening cooperation between the SNSF and Innosuisse and thus for reinforcing the link between research and implementation.

Table 1: Selected facts and findings from the evaluation of BRIDGE – BRIDGE as a programme.

Impact level	Selected facts and findings about BRIDGE Proof of Concept (PoC)
Output Proof of Concept (see section 3.4)	<ul style="list-style-type: none"> – 16 project calls – 612 project proposals – 121 projects funded (average success rate of 20%) – Average research grant: CHF 153,000, average project duration: 16 months – Most frequently funded innovation field: Medtech – 60% of the projects funded are based at ETHZ or EPFL, 22% at universities, 12% at universities of applied sciences and 6% at other research institutions – Almost 60% of the researchers who received funding are PostDocs, 26% are PhD candidates, 13% are at Master's level and 4% are at Bachelor level. – Share of women among funded researchers: 25%
Outcomes Proof of Concept (see section 3.6)	<ul style="list-style-type: none"> – 80 start-ups founded (on the back of projects from the 2017–2020 pilot phase) – 92% of the funded researchers surveyed said that PoC opened up new career perspectives for them, primarily in the start-up they founded. – Over 80% of the funded researchers surveyed succeeded in developing a business idea – Over 80% of the funded researchers surveyed succeeded in developing a prototype product, a process or a service – 75% of the funded researchers surveyed received further funding for their PoC project while the project was in progress – Over 90% of the funded researchers surveyed plan to continue their project. Just under 50% intend to submit an application to Innosuisse for this purpose, around 10% intend to apply to the SNSF. – Just under half of applicants who did <i>not</i> receive funding and who took part in the survey abandoned their projects after failing to obtain funding. The other half continued their project by securing an alternative source of funding and/or setting up a start-up company.

Table 2: Selected facts and findings from the evaluation of BRIDGE – BRIDGE Proof of Concept (PoC)

Impact level	Selected facts and findings about BRIDGE Discovery
Output Discovery (see section 3.5)	<ul style="list-style-type: none"> – 4 project calls – 435 project proposals from 909 applicants – 39 projects and 88 researchers funded (average success rate of 9%) – Average research grant: CHF 1,146,000; average project duration: 43 months – Most frequently funded innovation field: Medtech – 35% of the funded researchers are based at ETHZ or EPFL, 30% at universities, 20% at universities of applied sciences and 15% at other research institutions – Share of women among funded researchers: 16%
Outcomes Discovery (see section 3.7)	<ul style="list-style-type: none"> – 50% of the funded researchers surveyed said that Discovery opened up new career perspectives for them, primarily by strengthening their own position in their institution. – 90% of the funded researchers surveyed are working on their Discovery project with researchers from other universities or research institutions. – A third of the funded researchers surveyed are working with one or more implementation partners – As only a few Discovery projects were completed within the pilot phase, the effects in terms of implementation are less clear than with Proof of Concept projects. – Over 90% of the funded researchers surveyed had been able to use their project to improve their research institution's strategic positioning, exploit synergies for cooperation and establish cooperation with other research institutions. – 67% of the funded researchers surveyed had been able to link basic and applied research in their projects. – A third of the funded researchers surveyed received further funding for their Discovery project while the project was in progress – Just under 80% of the funded researchers surveyed plan to continue their project, approx. 30% intend to submit an application for this purpose to Innosuisse and just under 10% intend to apply to the SNSF. – 36% of applicants who did <i>not</i> receive funding and who took part in the survey abandoned their projects after failing to obtain funding. The others continued their project using, for example, funding from their higher education institution or other funding.

Table 3: Selected facts and findings from the evaluation of BRIDGE – BRIDGE Discovery

Aims and scope of the evaluation

The subject of this evaluation is the BRIDGE programme during its pilot phase from 2017 to 2020. Innosuisse and the Swiss National Science Foundation (SNSF) each provide 50% of BRIDGE's funding and the programme comprises two funding lines: Proof of Concept (PoC) and Discovery.

- **BRIDGE Proof of Concept (PoC)** is intended for younger researchers who want to use their research findings to develop an application (e.g. for entrepreneurial purposes) or want to implement it with a partner.
- **Discovery** is intended for experienced researchers who want to identify, explore and harness the innovation potential of their early-stage research findings.

The **focus of this evaluation** is an analysis of the existing and potential effects of BRIDGE on its target groups and the governance and positioning of the programme. The evaluation also provides findings on the development and positioning of BRIDGE going forward and on ways in which BRIDGE can be run more effectively by the relevant bodies.

It is not yet possible to provide an in-depth analysis of BRIDGE Discovery, since only a very small number of the Discovery projects started during the 2017–2020 pilot phase had been completed when the evaluation was carried out. A more comprehensive impact analysis by the SNSF and Innosuisse is planned for the ERI Dispatch 2025–2028.

Project design

The evaluation is based on an **impact model** for the Proof of Concept and Discovery funding lines. A mixture of qualitative and quantitative methods was employed to address the areas to be evaluated.

- **Document analyses** and qualitative interviews with **representatives of BRIDGE bodies, Innosuisse and the SNSF as well as representatives of similar international programmes** were conducted for the purpose of analysing BRIDGE’s positioning, governance and outputs.
- An online survey of all **researchers who had submitted applications to BRIDGE Proof of Concept or Discovery between 2017 and 2020** was conducted for the purpose of recording outcomes. The evaluation considers the views of researchers who did not receive funding, as well as those of researchers who did. Supplementary qualitative interviews with **representatives of universities and research institutions** were also conducted. Qualitative interviews with **diversity experts** provided an outward perspective.
- Spot analyses were conducted at impact level. These comprised a **media analysis**, interviews with **implementation partners** and interviews with **start-up company founders with a BRIDGE PoC project**.

The evaluation was supported by an advisory group comprising members from the SNSF and Innosuisse and from the BRIDGE bodies (see Annex A-1).

Key findings from the evaluation

As a programme, BRIDGE is clearly positioned

The evaluation shows that as a programme, BRIDGE is clearly positioned on the research and innovation chain and addresses an existing gap between basic research and science-based innovation in a pre-competitive phase. The PoC funding line is clearly positioned. The Innosuisse representatives interviewed for the evaluation felt that Discovery bears similarities to Innosuisse’s “innovation project without implementation partner” scheme. However, this does not seem to be a problem, at least from the target groups’ perspective, since the researchers that were surveyed were clear on the distinctions between the two schemes.

Strong demand, particularly for Discovery projects

The total budget for the pilot phase was CHF 70 million, of which CHF 46.5 million was allocated to Discovery projects and CHF 19.4 million to PoC projects. The remaining funds were used to cover overhead costs, events, etc. The average success rate for PoC proposals was 20%, compared with 9% for Discovery proposals. According to the Discovery evaluation panel, a lack of resources had made it necessary to reject otherwise entirely suitable projects during the pilot phase.

Crucial relevance of strategic cooperation between SNSF and Innosuisse – with room for improvement at operational level

At the strategic level, the evaluation attests to the BRIDGE programme's crucial relevance to cooperation between the SNSF and Innosuisse and to the work they do together in Switzerland's research and innovation promotion landscape. The central argument here is the link between research and the implementation of research findings in innovations for the marketplace and society.

BRIDGE has been implemented efficiently and in a way that is appropriate for the programme's goals. At the same time, there is room for improvement at the operational level. In terms of external perceptions, for example, the SNSF is more visible than Innosuisse. The representatives of BRIDGE bodies who were interviewed also felt that the evaluation panels' expertise in applied research and innovation as well as in social sciences and humanities should be strengthened to take greater account of implementation and social innovation issues.

Universities of applied sciences are under-represented in PoC and Discovery

Researchers from universities of applied sciences submitted PoC and Discovery proposals less often during the pilot phase, and their proposals were less successful than those from traditional universities and research institutions. This is attributable to the different gearing of incentive structures and to the lack of basic funding at universities of applied sciences, but also to the way BRIDGE is perceived by researchers there.

Around a quarter of applicants are women.

A quarter of PoC applicants are women. Furthermore, a quarter of PoC projects that receive funding are submitted by women. This figure is low given that PoC is open to all disciplines. 16% of Discovery applicants are women. The share of women who submitted projects that received funding is somewhat higher, at 22%. This share is comparatively high given that Discovery was only open to technical innovations during the pilot phase.

Proof of Concept is perceived as a technology-centred scheme

The evaluation shows that PoC is perceived as being heavily technology-centred despite being open to all disciplines. One cause of this is presumably the www.bridge.ch¹ website, since its presentation, images and example projects convey this image.

Proof of Concept: successful bridge-building between research and implementation in many projects

The evaluation shows that the PoC projects funded were in line with the aims of the PoC programme and that the projects created considerable added value, comprising not only individual career perspectives for the researchers, but also economic added value and benefits to society. A large proportion of the funded researchers succeeded in developing a business idea and a prototype product, or a process or service. The 121 completed or ongoing PoC projects from the 2017–2020 pilot phase spawned around 80 start-up companies.

Discovery: successful bridge-building between basic and applied research in many projects – real-world implementation in the future

¹ This statement applies to the website as it was in November 2021. It has been updated in the meantime.

The effects of Discovery projects in terms of implementation are still unclear. This is connected to the fact that Discovery projects have a long duration and very few of the projects started during the 2017–2020 pilot phase had been completed when the evaluation took place. Many of the Discovery projects that were funded succeeded in creating career perspectives (for young researchers, for example), promoting cooperation between different universities and linking basic research to applied research. However, most projects from the pilot phase will not take tangible steps towards implementing the results of their research until some point in the future.

Evaluation team's recommendations

The evaluation team has used its findings to draw up recommendations. These were discussed and developed at a validation workshop with the advisory group and other representatives of the SNSF and Innosuisse (see Annex A-2). Table 4 provides a summary of recommendations.

No.	Impact level	Recommendation
1	Positioning	Resolve Discovery's positioning internally: The evaluation team recommends that the SNSF and Innosuisse work together to resolve the issue of Discovery's positioning vis-à-vis other schemes (e.g. "innovation projects without implementation partner"). Beyond this, the evaluation team does not feel that the evaluation reveals any short-term need for action on positioning.
2	Resources	Step up monitoring of implementation in Discovery projects: The evaluation team recommends monitoring the ongoing development (particularly implementation) of the Discovery projects that have already been funded before increasing the resources available for Discovery.
3	Resources	Continue 50-50 funding by SNSF and Innosuisse: To maintain and further strengthen the role of the SNSF and Innosuisse as awarding organisations on an equal footing, the evaluation team recommends that the SNSF and Innosuisse continue to contribute equally to BRIDGE's funding.
4	Structure and governance	Continue work between SNSF and Innosuisse on the joint research and innovation funding landscape: The evaluation team recommends that the SNSF and Innosuisse continue the strategic partnership started with BRIDGE.
5	Structure and governance	Ensure equal external visibility for the two awarding organisations: The evaluation team recommends a joint comparison of existing processes with best practices in both awarding organisations and drawing on relevant experience, such as Innosuisse's experience of project monitoring and support.
6	Structure and governance	Institutionalise dialogue meetings between SNSF and Innosuisse at strategic level: The evaluation team recommends the introduction of regular dialogue meetings between the SNSF and Innosuisse at strategy level to review and further develop the research and innovation funding portfolio.
7	Structure and governance	Establish regular dialogue between steering committee and Discovery evaluation panel: The evaluation team recommends introducing a regular forum for dialogue between the steering committee and the Discovery evaluation panel so that panel members' experiences can be incorporated into new calls.
8	Structure and governance	Review evaluation panels' expertise and extend it to proposals from non-technical disciplines: With the extension of Discovery to non-technical disciplines, and to strengthen social innovation projects in PoC, the evaluation team recommends reviewing and, if appropriate, expanding the evaluation panels in terms of their range of disciplines and expertise for assessing and supporting non-technical projects. Implementation-related expertise should also be strengthened.

No.	Impact level	Recommendation
9	Presentation and target group outreach	Explicitly highlight broad understanding of innovation: The evaluation team recommends that BRIDGE explicitly highlight its broad understanding of innovation on its website ² and showcase success stories and the researchers it has funded.
10	Presentation and target group outreach	Address the humanities and social sciences: The evaluation team recommends addressing the humanities and social sciences more deliberately during BRIDGE events at higher education institutions.
11	Presentation and target group outreach	Develop own PoC scheme for Bachelor graduates: To tap into the potential of Bachelor graduates, the evaluation team recommends developing a PoC scheme specifically for and only open to this target group.
12	Impact of PoC and Discovery	Monitor the impact of Discovery: The evaluation team recommends stepping up monitoring of the implementation aspects of Discovery projects for the purpose of a) possibly developing coaching services to assist with implementation of existing projects and b) possibly tightening up the evaluation criteria for implementation in future calls. The evaluation team does not feel that the evaluation of the impact of PoC reveals any short-term need for action.

Table 4: Evaluation team's recommendations, see section 4.3.1 for the detailed recommendations.

The evaluation team also proposes impact analysis indicators for the ERI Dispatch 2025–2028 and for project monitoring.

² This statement applies to the website as it was in November 2021. It has been updated in the meantime.