Flagship Initiative

Launch of the call 2023

Guide for applicants

This document describes the details of the application for the 2nd call for proposals within the framework of Innosuisse’s funding instrument “Flagship Initiative” on the basis of Articles 2 and 7 to 13 of the Innosuisse Funding Ordinance of 4 July 2022 (SR 420.231)\(^1\).

The call for pre-proposals will close on Tuesday, 31 January 2023 (12 o’clock / noon)

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Bern, 27.10.2022

\(^1\) Innosuisse funding ordinance (As of 1.1.2023)
# Table of contents

Glossary and acronyms ................................................................................................. 3

1  The funding instrument “Flagship Initiative” ......................................................... 4

2  Call Announcement .................................................................................................. 7
   2.1 Flagship topic of the call 2023 ........................................................................... 7
   2.2 Eligible structure and specifications .................................................................... 8
   2.3 Dates and deadlines in 2022 and 2023 ................................................................. 9

3  Finances ..................................................................................................................... 10
   3.1 General principles ............................................................................................... 10
   3.2 Eligible costs ........................................................................................................ 10
   3.3 Financing conditions ............................................................................................ 10

4  Submission and Evaluation of an application .......................................................... 11
   4.1 Formal conditions of the application ................................................................... 11
   4.2 Pre-proposal .......................................................................................................... 12
   4.3 Proposal ................................................................................................................ 12
   4.4 Evaluation criteria ............................................................................................... 13
   4.5 Communication to applicants .............................................................................. 13

5  Contract ..................................................................................................................... 14

6  Support ....................................................................................................................... 14
List of figures

Figure 1: Organisation of the Flagship Initiative ................................................................. 4
Figure 2: Example of a schematic view of interrelated and interdependent subprojects forming a flagship. .............................................................................................................. 5
Figure 3: Structure of a consortium executing a flagship. ....................................................... 5
Figure 4: Evaluation process pre-proposal ............................................................................... 11
Figure 5: Evaluation process proposal ..................................................................................... 12

Glossary and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consortium</td>
<td>A consortium consists of at least three research partners, of which at least one is a UAS, and at least two implementation partners. In justified exceptional cases, two research partners are also possible.</td>
</tr>
<tr>
<td>Flagship</td>
<td>Closely linked and interdependent subprojects conducted by a consortium, which consists of several research and implementation partners from different disciplines.</td>
</tr>
<tr>
<td>Flagship initiative</td>
<td>Within the Flagship Initiative, Innosuisse defines flagship topics, in which consortia can submit a proposal for the realization of a flagship.</td>
</tr>
<tr>
<td>Flagship representative</td>
<td>The flagship representative is the contact person for Innosuisse and signs the pre-proposal and proposal. The flagship representative is affiliated with the host institution.</td>
</tr>
<tr>
<td>Flagship topic</td>
<td>Innosuisse defines flagship topics for the Flagship Initiative. Within a flagship topic, consortia can submit a proposal for the realization of a flagship.</td>
</tr>
<tr>
<td>Funding Ordinance</td>
<td>Ordinance of the Swiss Innovation Promotion Agency on its Funding and Other Support Measures</td>
</tr>
<tr>
<td>HEI</td>
<td>Higher Education Institution: ETH/EPF, cantonal university, universities of applied science</td>
</tr>
<tr>
<td>Host institution</td>
<td>This is a higher education institution HEI or non-commercial research institution outside the university sector that acts as an applicant vis-à-vis Innosuisse and on behalf of the consortium. The host institution assumes responsibility vis-à-vis Innosuisse for processing the flagship. Among other things, the host institution is responsible for the coordination of a flagship. (Art. 13 Innosuisse Funding Ordinance (as of 1.1.2023) as well as Art. 13 of the Implementing Provisions for Innovation Projects (as of 1.1.2023))</td>
</tr>
<tr>
<td>Implementing Provisions</td>
<td>The Swiss Innovation Agency’s implementing provisions for funding innovation projects</td>
</tr>
<tr>
<td>MTR</td>
<td>Midterm Review</td>
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<tr>
<td>p-pr</td>
<td>Pre-proposal</td>
</tr>
<tr>
<td>pr</td>
<td>Proposal</td>
</tr>
<tr>
<td>RIPA</td>
<td>Federal Act on the Promotion of Research and Innovation</td>
</tr>
<tr>
<td>UAS</td>
<td>University of Applied Sciences</td>
</tr>
</tbody>
</table>
1 The funding instrument “Flagship Initiative”

The purpose of this funding instrument is to stimulate innovation in areas relevant to a large part of the economy or society and to promote transdisciplinary project collaborations. This funding instrument is complementary to the purely bottom-up oriented and well-established regular Innosuisse innovation projects. The Flagship Initiative strives for solutions to current or future challenges, which concern several actors and/or can only be solved by collaborative work.

The overall objective of the Flagship Initiative is to strengthen the competitiveness of the Swiss economy and/or contribute to the well-being of society by creating new value along the value chain, whereby digital transformation as well as the structural change of society and economy are important aspects.

This new funding instrument provides specific incentives, through given topics, to address issues that are of particular interest for the future well-being of the country and require new solutions and business models.

Within the framework of the Flagship Initiative, Innosuisse invites consortia to submit a proposal for the realization of a flagship (Figure 1). The proposal consists of closely linked and interdependent subprojects (Figure 2) and is submitted by a consortium of several research and implementation partners from different disciplines (Figure 3).

Figure 1: Organisation of the Flagship Initiative
**Figure 2**: Example of a schematic view of interrelated and interdependent subprojects forming a flagship.

![Flagship: interrelated and interdependent subprojects](image)

**Figure 3**: Structure of a consortium executing a flagship.

![Consortium](image)
Flagships have a systemic perspective, are transdisciplinary and look for solutions that can be applied in practice. A special attention is paid to systemic innovation. Consequently, flagships are less aimed at incremental improvement of an existing system (e.g. increasing the efficiency of a drive system, improving the properties of materials), but rather aim at improving a system in the long term (e.g. integrated mobility management, circular economy). It is not necessarily the results of an individual flagship subproject by itself that will lead to major changes of an existing system, but the combination of the interdependent subprojects will contribute to a system change. Hence, a specific focus is placed on transdisciplinary flagships in which partners from academia and industry across different disciplines, for example technological and socioeconomic, work together.

The systemic approach of a flagship is key. This means that the individual subprojects of a flagship may have an economic or societal benefit, but the sum of the individual innovations contributes to a system change. Consequently, unless the overall systemic result is more than the sum of the individual subprojects, the proposed flagship cannot be considered.

**Definition of systemic innovation**

Systemic innovation is a type of innovation where value can only be derived if it is synergistically integrated with other complementary innovations, going beyond the boundaries of a single organization. Systemic innovation requires multiple innovations to be coordinated. Consequently, the different contributory innovations and organizations are organized together into a whole system, where the overall success of the emergent innovation cannot be attributed to just one sub-innovation or participating organization.²

**Definition of transdisciplinarity**

Transdisciplinary research provides contributions to the solution of socially relevant problems. It is inevitably interdisciplinary and connects different scientific disciplines. In addition, it involves non-scientific actors in the problem area in its research in order to arrive at feasible recommendations for action.³

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² E.g. Teece, 1986; Chesbrough and Teece, 2002; Kano, 2000; Gopalakrishnan and Bierly, 2001; Taylor and Levitt, 2004; Maula et al, 2006; Andersen and Drejer, 2008; van den Ende et al, 2008; Alin et al, 2013; Mlecnik, 2013; Takey and Carvalho, 2016)
³ nachhaltigewissenschafter.de/2013/04/09/heisst-transdisziplinaritaet-15735108/
2 Call Announcement

2.1 Flagship topic of the call 2023

The Flagship Initiative aims to foster systemic innovation which helps to overcome major challenges for the economy and society. For its second call, Innosuisse has chosen one topic which promotes intelligent energy solutions, new materials and processes and helps reduce the impact of climate change and environmental pollution for the benefit of the economy and society.

The flagship topic of the call 2023 therefore is:

I. Disruptive solutions for the transition towards a net zero world

The proposals within this topic must concentrate on at least one of the following focus areas:

1. New materials and processes
2. Energy storage, generation and real-time management
3. Eco-design, circular economy and sustainable manufacturing
4. Energy efficiency and reduction of emissions

Switzerland has the potential to develop net zero solutions for this globally challenging transition. Resources will be scarcer, and it will become even more important to use sustainable sources and renewable energy. The challenge regarding supply of materials, use of raw materials and reuse of material will become ever more important as we move towards a zero-emissions society and economy. Technologies for new materials, material savings, recycling and upcycling will therefore be very critical for the future and addressing its challenges. Furthermore, with the different industry sectors research into new materials is important for retaining a leading position in innovation and increasing independence from critical global supply chains.

Swiss companies can be role models in developing new materials and processes as well as manufacturing sustainable products from design to end-of-life and creating an impact on emissions reductions. With their processes and value chains, they can also contribute to increasing sustainability and limiting global warming in accordance with the Paris Agreement on reducing greenhouse gas emissions. An interdisciplinary approach is needed as up and downstream processes have to be investigated. Developing sustainable, resilient and better controlled value chains is essential for future value creation.

Additionally, the energy transition is an ongoing challenge both in Switzerland and globally which needs to be addressed. Current global threats are reinforcing the need for a sustainable energy system, intelligent generation, real-time management and innovative storage solutions.

By developing a sustainable engineering strategy, taking into account scarcer resources, and using more renewable energy and next-generation power systems, the Swiss economy can become competitive and gain leadership in the international competition.
The flagship topic requires an interdisciplinary approach for developing new solutions for complex challenges. The solutions must have a decisive impact and become accepted by society and the economy. Legal and spatial framework conditions must not be neglected either. Climate change is a huge challenge for humanity, but also a big opportunity for Switzerland to demonstrate its innovative strength.

2.2 Eligible structure and specifications

Partners

The invitation to tender is addressed to consortia of research and implementation partners. The consortium consists of at least three research partners, of which at least one is a university of applied sciences, and at least two implementation partners. In justified exceptional cases, two research partners are also possible.

The Flagship should only include implementation partners who make a significant contribution to the implementation of the Flagship. Organisations with small and rather insignificant contributions should have another link to the Flagship, besides the official consortium.

Innosuisse does not prescribe how the consortium should organize itself, but one HEI or a non-commercial research institution outside the university sector has to act as host institution. The host institution represents the project partners with Innosuisse when submitting the application and throughout the process of the flagship. In addition, it defines a representative, who is the contact person for Innosuisse and who signs the flagship proposal.

New partners may join the consortium or partners may withdraw from the flagship as long as the originally formulated objectives are not affected negatively and the contractually stipulated conditions are fulfilled. Such changes must be approved by Innosuisse in advance. Modifications of objectives or contractual conditions are possible upon request and prior written approval by Innosuisse.

Duration

There are no conditions regarding the length of a flagship. However, we assume that a flagship will be longer compared to an average Innosuisse innovation project due to the systemic approach and transdisciplinarity.

Budget

The rules for the Innosuisse innovation projects apply.
Other specifications

- As a rule of thumb, a flagship should consist of three to eight sub-projects.
- The proposal must be submitted in English, German, French or Italian.
- Mandatory forms must be used and submitted in accordance with the information on the Innosuisse homepage.
- The submission process is divided into two phases: A pre-proposal phase and a proposal phase. A pre-proposal must have been submitted in order to be eligible to submit a proposal.

2.3 Dates and deadlines in 2022 and 2023

<table>
<thead>
<tr>
<th>Date</th>
<th>What</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2022</td>
<td>Launch of the call 2023</td>
<td>Innosuisse</td>
</tr>
<tr>
<td>November 2022</td>
<td>Submission of questions in written</td>
<td>Applicants</td>
</tr>
<tr>
<td>End of November 2022</td>
<td>Publication of answers on Innosuisse webpage</td>
<td>Innosuisse</td>
</tr>
<tr>
<td>1 January 2023</td>
<td>Application platform open for submission</td>
<td>Innosuisse</td>
</tr>
<tr>
<td>31 January 2023</td>
<td>Deadline for submitting pre-proposal (12 o’clock / noon)</td>
<td>Applicants</td>
</tr>
<tr>
<td>April 2023</td>
<td>Recommendation letters to applicants</td>
<td>Innosuisse</td>
</tr>
<tr>
<td>4 July 2023</td>
<td>Deadline for submitting proposal (12 o’clock / noon)</td>
<td>Applicants</td>
</tr>
<tr>
<td>September 2023</td>
<td>Decision letters to applicants</td>
<td>Innosuisse</td>
</tr>
<tr>
<td>October 2023</td>
<td>Contracts sent to applicants</td>
<td>Innosuisse</td>
</tr>
<tr>
<td></td>
<td>Start of funded flagships</td>
<td>Applicants</td>
</tr>
</tbody>
</table>
3 Finances

3.1 General principles

Innosuisse funds cover the wage costs of the research partners (incl. overhead and employer contribution) as well as material costs. Moreover, a certain amount of the funding budget can be allocated for the essential management and coordination of the overall flagship.

3.2 Eligible costs

Personnel costs

Personnel costs are eligible according to the Innosuisse funding ordinance\(^8\) (Art. 9, 10 and 12) and the implementing provisions for innovation projects\(^9\) (Art. 15 to 17). Innosuisse funds cover the effective wage costs of the research partner incl. overhead and employer contribution.

The personnel costs are calculated either using evidence of the gross salaries paid or the applicable notional hourly rates according to article 16 and 17 of the implementing provisions for innovation projects.

Material costs

Material costs are eligible according to the Innosuisse funding ordinance (Art. 9) and the implementing provisions for funding innovation projects (Art. 18). Only costs that are actually incurred and are absolutely necessary for the proper execution of the flagship are taken into account. All the planned material costs need to be included in the proposal.

Coordination costs

Certain coordination costs can be covered within this category which necessarily arise due to a coordination effort between the project partners, which is particularly high compared to ordinary national innovation projects, and which are not covered by personnel or material costs according to the implementing provisions for funding innovation projects (Art. 19).

3.3 Financing conditions

Innosuisse covers a certain amount of the direct costs of a flagship. The legal basis allows an Innosuisse contribution of 40 to 60%. The implementation partners contribute to the total costs of the flagship with own work and services, which must at least correspond to 40 to 60% of the overall project cost, as well as a financial contribution to the research partner. The financial (cash) contribution is at least 5% of the overall project costs according to the Innosuisse funding ordinance (Art. 11).

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\(^8\) Innosuisse funding ordinance (As of 1.1.2023)

\(^9\) Implementing provisions for innovation projects (As of 1.1.2023)
4 Submission and Evaluation of an application

The application process is competitive and will be a 2-step procedure (Figure 4 and 5): pre-proposal and proposal.

4.1 Formal conditions of the application

Innosuisse will conduct a formal check of all pre-proposals and proposals. The following formal criteria need to be fulfilled. Proposals that do not meet all formal criteria will be returned for revision or will result in non-consideration.

<table>
<thead>
<tr>
<th>Important formal conditions (non-exhaustive list)</th>
<th>Will be checked at p-pr / pr-stage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the application been received before the deadline set in the call?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Is the application an obviously insufficient application?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Has the application been signed by the flagship representative?</td>
<td>pr</td>
</tr>
<tr>
<td>Does the consortium consist of at least three (in justified cases two) research partners?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Has the consortium chosen a topic?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Is at least one of the research partners a university of applied sciences?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Does the consortium consist of at least two implementation partners?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Are the research partners eligible for funding?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Does a HEI or a non-commercial research institution outside the university sector act as the host institution?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Has the application been submitted in English, German, French or Italian?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Have all the mandatory application forms been used and submitted?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Have all questions of the form been answered?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Has the character limit been respected?</td>
<td>p-pr and pr</td>
</tr>
<tr>
<td>Have the financial conditions been met?</td>
<td>pr</td>
</tr>
</tbody>
</table>

*p-pr = pre-proposal; pr = proposal

4.2 Pre-proposal

The submission of a pre-proposal is mandatory to be eligible to submit a proposal. The pre-proposal contains in particular the following information:

- General information & Abstract
- Information on flagship partners
- Chart of the flagship’s structure
- Description of the flagship (objectives, rough project plan with milestones & deliverables, systemic innovation, etc.)
- The consortium (transdisciplinarity, collaboration with several stakeholder, etc.)
- Intended budget request without a detailed financial plan

The mandatory pre-proposal forms must be used (provided for download here).

Based on the evaluation, the Innosuisse secretariat will provide the applicant with a recommendation to submit or not submit a proposal.

Figure 4: Evaluation process pre-proposal
4.3 Proposal

The proposal contains in particular the following aspects:

- General information & Abstract
- Information on flagship partners
- The consortium (transdisciplinarity, collaborative work of several stakeholder, etc.)
- Detailed description of the flagship
  o Value creation of the flagship: business model, competitive situation, USP, market size, planned revenue and profitability development
  o Systemic Innovation/Novelty of the solutions: state of the art, innovative content, systemic view, wider interest in/applicability of research results, risk and ambition (e.g. technology readiness level)
  o Concrete implementation plan (feasibility/implementation of the results)
  o Detailed project plan including a schedule: subprojects & work packages, milestones, deliverables, quantitative and qualitative goals, risk analysis, possible date for the mid-term review (this must be defined in accordance with the work plan, first important milestones must be reached by then and the deliverables must be available)
  o Budget request with a detailed financial plan: salary costs, material costs, financial and in-kind contribution of implementation partners

The mandatory proposal forms must be used.

IMPORTANT: If the central objectives and research questions are different from the ones presented in the pre-proposal, the proposal will be rejected on formal grounds, since the submission of a pre-proposal is mandatory.

Figure 5: Evaluation process proposal

Submission proposal → Formal check → Evaluation by at least 2 independent experts → Review of proposals → Evaluation Meeting → Decision Letters and Contract
4.4 Evaluation criteria

- **Innovation degree**: Is the scientific and economic/societal approach new? Is it not only «incremental» but also «systemic» innovation, which means, does the scientific and economic/societal approach contribute to change a system in the long term?

- **Value creation and sustainability in Switzerland**: Does the implementation of the research results on the market have a positive influence on the competitive situation of the implementation partner(s)? Does successful implementation demonstrably reduce (social) costs and/or create economic benefit (e.g. reducing poverty, increasing the quality of life, improving the quality of education, reducing injustice, increasing biodiversity), which leads to a positive impact on the future well-being of the country?

- **Flagship set-up**
  - **Methodological quality**: What is the quality of the project structure? (e.g. are the goals and milestones realistic? Is the exchange between the project partners guaranteed and expected?)
  - **Competencies of the project partners**: Do the project partners have the necessary competences for the execution and the intended implementation on the market? Is the consortium well positioned across disciplines (transdisciplinarity)?
  - **Cost-Benefit Ratio of the Flagship**

4.5 Communication to applicants

The recommendations (pre-proposal) and decisions (proposal) of Innosuisse will be communicated to the consortium in writing.

<table>
<thead>
<tr>
<th>Outcome Pre-proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation</td>
</tr>
<tr>
<td>Innosuisse recommends, based on the evaluation of the pre-proposal, a submission of the proposal.</td>
</tr>
<tr>
<td>No recommendation</td>
</tr>
<tr>
<td>Innosuisse does not recommend, based on the evaluation of the pre-proposal, a submission of the proposal.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcome Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-consideration</td>
</tr>
<tr>
<td>The formal criteria (see also chapter 4.1) have not been fulfilled.</td>
</tr>
<tr>
<td>Rejection</td>
</tr>
<tr>
<td>The application has been assessed as less suitable, with regards to the evaluation criteria (see also chapter 4.4), for a flagship compared to the other applications.</td>
</tr>
<tr>
<td>Approval</td>
</tr>
<tr>
<td>The application for a flagship will be promoted and the contract will be sent to the applicants.</td>
</tr>
</tbody>
</table>

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10 Art. 8 Innosuisse Funding Ordinance (as of 01.01.2023)
5  Contract

The final contract will be sent to the successful applicants by the Innosuisse secretariat. A sample contract is published on the Innosuisse homepage.

Please note that in exceptional cases, preliminary work has to be fulfilled before signing the contract. In addition, requirements can be imposed which must be fulfilled during the flagship.

6  Support

To ensure that all applicants have the same level of information, we ask you to send all questions regarding the call, the funding instrument or other topics to Innosuisse by 11 November 2022 via e-mail (programme@innosuisse.ch). The answers to all questions will be published on the webpage of Innosuisse.