

STRIM-2018

Call for proposals within the Strategic Innovation Programme for the Swedish Mining and Metal Producing Industry (STRIM)

The Strategic Innovation Programme for the Swedish Mining and Metal Producing Industry (STRIM) is part of Vinnova, the Swedish Energy Agency and the Swedish Research Council Formas joint program for strategic innovation areas. The aim with the programmes within strategic innovation areas is to stimulate international competitiveness and sustainable solutions for global societal challenges.

STRIM aims to strengthen the sector's competitiveness and to increase the sector's innovative capacity throughout the value chain: exploration, resource characterization, mining, mineral processing, metallurgy, recycling and reclamation, as well as environmental performance. Critical metals, automation and process control, social license to operate, safety, gender and diversity in mining are examples of other important areas. STRIM should contribute to sustainable development within the sector.

For more information about the programme, see www.sipstrim.se and the STRIM agenda.¹

SIP | STRIM

¹ STRIM-agendan http://www.sipstrim.se/wp-content/uploads/2014/06/STRIM-agenda_20161.pdf

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1 Summary of the call

You can apply for funding for shorter pre-studies, full-scale innovation projects or pilot projects that addresses challenges defined by the STRIM agenda.

Planned budget for the call is 25 MSEK.

Maximum funding for a pre-study is 500 000 SEK and for full-scale innovation projects 10 MSEK. For full-scale and pilot projects 50 percent of the eligible project costs must be covered by project partners, and for pre-studies 25 percent.

Pre-studies, maximum duration of six months, which aim to develop, verify and validate the development and commercial potential for possible future full-scale projects.

The project consortium can consist of only one partner, but the pre-study proposal must be able to demonstrate industrial relevance in the form of a letter of intent from at least one relevant company

Full-scale innovation projects, maximum of 36 months, which aim to implement ideas that contributes to the realization of STRIM's overall objectives. The full-scale innovation projects within STRIM must have a technology readiness level (TRL) between 4 and 7 (see appendix for a description of TRL) and focus on innovation, industrial engagement and benefits. The project consortium must consist of at least two partners from industry and one from academia.

Pilot projects, maximum of 18 months, which aim to demonstrate, test or implement new technologies, methods, processes or procedures. The pilot projects within STRIM must have a TRL between 5 and 7 and focus on innovation, industrial engagement and benefits.

The project consortium must consist of at least two partners from industry and one from academia.

Only legal entities can be granted funding.

The applications will be evaluated by international reviewers so we strongly recommend that proposals are written in English.

Important dates

The following dates apply for **this call for proposals**. Please note that the dates and times given are tentative. For the latest information, please visit www.vinnova.se.

Call for proposals opens	May 17, 2018
Call for proposals closes	November 7, 2018 at 14:00
Date of decision	February 26, 2019

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Earliest date for project start March 1, 2019

Latest date for project start June 1, 2019

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2 STRIM's aims and objectives

STRIM aims to strengthen the sector's competitiveness and contribute to a sustainable development within the mining and metal producing industry in following ways:

- world-leading and efficient research, development, innovation and education;
- a sustainable and secure raw materials supply that utilizes the country's geological potential in a sustainable way;
- a well-developed ability to act on the international market within profitable niches, with increased added value from the products;
- the promotion of a set of rules and regulations compatible with an expanding industry that does not negatively impact international competitiveness while also achieving resource efficiency;
- implement modern digital technology for controlling processes throughout the value chain;
- strengthen Sweden's mining regions to make them innovative and attractive places for investments and living. Collaboration with small and medium-sized enterprises (SMEs) can play an important role in this
- improve the mining sector's image by accepting social and environmental responsibility and offering attractive workplaces in which men and women work together to develop sustainable production processes.

Projects within the framework of STRIM should contribute to sustainable growth, renewal and strengthening of Swedish competitiveness in the sector.

STRIM and Vinnova work for gender equality, which is why we encourage applicants consider gender equality in, for example;

- Selection of project manager
- Composition of project group
- Division of work, power and influence in the project
- Involvement of target groups
- How women and men in an equal way benefits from the funding
- How the project results can contribute to equality

Read more on how to integrate equality and gender aspects in your project².

² <https://www.vinnova.se/m/jamstalld-innovation/>

3 Who may apply?

This call for proposals is aimed at consortia where companies, universities, research institutes and other relevant stakeholders contributing to STRIM's objectives can be included.

Pre-studies can be applied for by a single partner as long as the applicant can demonstrate industrial relevance in the form of a letter of intent from at least one relevant company. Consortia applying for full-scale innovation projects or pilot projects must consist of at least two partners from industry and one from academia.

Project consortia covering the entire innovation chain from idea to end-user/market are considered positive as well as consortia with actors traditionally working in industries other than mining and metal extraction, so that more groundbreaking innovations can be created through new approaches.

4 What do we fund?

4.1 Project forms for this call for proposals

We welcome the following type of project proposals:

1) *Pre-studies*, with a maximum duration of six months that aim to develop, verify and validate the development and commercial potential for possible full-scale future projects. The project consortium can consist of only one partner, but the pilot study must be able to demonstrate industrial relevance in the form of a letter of intent from at least one company. Project partners must cover at least 25 percent of the eligible project costs

2) *Full-scale innovation projects*, maximum of 36 months, which aim to implement ideas that contributes to the realization of STRIM's overall objectives. The full-scale innovation projects within STRIM must have a technology readiness level (TRL) between 4 and 7 (see appendix for a description of the TRL) and focus on innovation, industrial engagement and benefits. It is desirable for the project to demonstrate an increase of TRL within the project's term.

The project consortium must consist of at least two partners from industry and one from academia and project partners must cover at least 50 percent of the eligible project costs.

3) *Pilot projects*, maximum of 18 months, should aim to demonstrate, test or implement new technologies, methods, processes or procedures. The pilot projects within STRIM must have a TRL between 5 and 7 and focus on innovation, industrial engagement and benefits. The projects should be able to demonstrate an increase of TRL within the project's term.

The project consortium must consist of at least two partners from industry and one from academia and project partners must cover at least 50 percent of the eligible project costs.

4.2 Eligible costs and state aid rules

Grants given by Vinnova to businesses and other organizations that conduct commercial activities are restricted by the rules governing state aid³. The rules include, for example, which costs are eligible and how much can be covered by grants. Each project partner is responsible for ensuring that the funding received does not exceed the support level allowed according to the rules for state aid. In this call for proposal funding can be granted for industrial research, experimental developments and feasibility studies⁴.

5 Budget for the call

The planned budget of this call for proposals is 25 MSEK.

Pre-studies can be funded with a maximum of 500 000 SEK, and full-scale projects with max 10 MSEK. For full-scale innovation projects and pilot projects the project partners must cover at least 50 percent of the projects eligible costs, and for pre-studies 25 percent.

6 Formal requirements

For a proposal to be eligible for assessment according to the criteria stated in Section 7, the following requirements must be met:

- ✓ The project partners must be legal entities.
- ✓ The project may not have started prior to the application's submission.
- ✓ Pre-studies must include a letter of interest from at least one industrial partner.
- ✓ For full-scale projects and pilot projects, the consortium must consist of at least two companies and one research partner.

³ State aid: <https://www.vinnova.se/sok-finansiering/regler-for-finansiering/statligt-stod/>. General conditions and guide to eligible costs: <https://www.vinnova.se/sok-finansiering/regler-for-finansiering/allmanna-villkor/>

⁴ Table

of https://vinatet.vinnova.se/globalassets/dokument/guide/tabell_stodnivaer_statligt_stod.pdf?ntstam=1516700654609

- ✓ For full-scale projects and pilot projects, at least 50 percent of the project’s eligible costs must be covered by project partners.
- ✓ For pre-studies, at least 25 percent of the project’s eligible costs must be covered by project partners.
- ✓ Applications must include everything requested in Section 9, and templates should be used when provided.
- ✓ The project proposals should address at least one of the areas in the STRIM agenda⁵

7 Assessment of proposals

7.1 Assessment criteria

	Assessment criteria, pre-studies (Sub-criteria in italics are support and not assessed individually)	Assessment criteria, full-scale projects/pilot projects (Sub-criteria in italics are support and not assessed individually)
1	<p>Potential</p> <ul style="list-style-type: none"> • <i>The application’s scientific quality and how it contributes to SIP STRIM’s objectives</i> • <i>Extent of innovation</i> • <i>Potential impact of the project, e.g. follow-up projects with TRLs between 4 and 7 and its innovation potential</i> • <i>The results’ contribution to and promotion of competitiveness and renewal in the Swedish mining and minerals sector</i> • <i>Industrial relevance</i> • <i>How well the project can contribute to a gender equal societal development.</i> 	<p>Potential</p> <ul style="list-style-type: none"> • <i>The application’s scientific quality</i> • <i>How the project contributes to SIP STRIM’s objectives</i> • <i>Extent of innovation</i> • <i>TRL of 4-7 (full-scale) and 5-7 (pilot)</i> • <i>Potential impact of the project, e.g. innovation potential and its promotion of competitiveness and renewal in the Swedish mining and minerals sector</i> • <i>How the project contributes to sustainable development</i> • <i>Industrial relevance, commercialization potential, business benefits</i> • <i>The project’s deliverables– what will the project deliver (method, prototype, patent, etc.)?</i> • <i>The possibility of leverage (to EU programmes, etc.)</i> • <i>How well the project can contribute to a gender equal societal development.</i>

⁵ STRIM agenda http://www.sipstrim.se/wp-content/uploads/2014/06/STRIM-agenda_20161.pdf

2	<p>Implementation</p> <ul style="list-style-type: none"> • <i>The quality of the organizational structure, methods and implementation</i> • <i>The soundness of the work plan and budget</i> • <i>Resource allocation (staff, equipment, etc.)</i> • <i>The implementation and application of results in industrial processes</i> • <i>How well gender aspects have been integrated in the project plan</i> 	<p>Implementation</p> <ul style="list-style-type: none"> • <i>The quality of the organizational structure, methods and implementation</i> • <i>The soundness of the work plan and budget</i> • <i>Resource allocation (staff, equipment, etc.)</i> • <i>The implementation and application of results in industrial processes</i> • <i>How well gender aspects have been integrated in the project plan</i>
3	<p>Stakeholders</p> <ul style="list-style-type: none"> • <i>The expertise and relevant experience of the individual project members</i> • <i>The expertise within the consortium as a whole (incl. complementarity, the balance between industry, academia, research institutes, small and medium-sized enterprises, etc.)</i> • <i>Supplementary and interdisciplinary expertise within the project</i> • <i>how well the team (key persons) is composed regarding gender distribution, as well as the distribution of power and influence between women and men</i> 	<p>Stakeholders</p> <ul style="list-style-type: none"> • <i>The expertise and relevant experience of the individual project members</i> • <i>The expertise within the consortium as a whole (incl. complementarity, the balance between industry, academia, research institutes, small and medium-sized enterprises, etc.)</i> • <i>Supplementary and interdisciplinary expertise within the project</i> • <i>how well the team (key persons) is composed regarding gender distribution, as well as the distribution of power and influence between women and men</i>

7.2 Assessment process

The assessment process is designed to identify the best proposals with regards to scientific quality, innovation potential, positive impact on the competitiveness of the Swedish mining and minerals sector and industrial collaboration and added value. The assessments of the applications are performed by a group of evaluators comprised of both Swedish and international independent experts. Pre-studies, full-scale innovation projects and pilot projects are ranked separately.

The following is a schematic representation of the evaluation and decision-making process:

1. Proposal submitted via the eServices portal
2. Proposals that meet the formal requirements will be assessed by external national and international independent experts based on the specified assessment criteria (see Section 7.1). This will result in a recommendation concerning financing and a ranking of the proposals.
3. Vinnova decides which projects will receive financing based on the recommended projects' contribution to the balance in STRIM's project portfolio.

4. Applicants are notified of the decisions and STRIM's management is informed of the results.

8 Terms and Conditions

8.1 About our decisions

Grants are given based on Vinnova's Regulation on State Aid for Research and Development and Innovation SFS 2015:208.

For this call funding is granted within the categories "industrial research", "experimental development" and "prefeasibility study"⁶.

Our decision to grant or decline an application cannot be appealed

8.2 Conditions for granted funding

Vinnova's general terms and conditions for grants, as applicable on the date of decision, apply to this call for proposals.⁷ The terms and conditions contain rules for reporting, project agreements, follow-up, auditing, conditions for payment and more as concern Vinnova.

As the call for proposals is made within the framework of the STRIM strategic innovation programme, special terms and conditions governing reporting, follow-up and communication with SIP STRIM's project office also apply:

- The project should be represented by at least one project partner at conferences and other activities arranged within the STRIM programme.
- For information about the project and for each publication of project results, it must be stated that the work has been carried out within the Strategic Innovation Program STRIM, a joint program from Vinnova, the Swedish Energy Agency and the Swedish Research Council Formas.
- When the project submits its final report to Vinnova a summary of the project results should be sent to the programme office via e-mail. The summary can be shared and published freely and, should therefore not contain any confidential or otherwise sensitive information. See www.sipstrim.se for template.

Additional special terms and conditions may be added for specific projects.

⁶ Table of funding levels <https://www.vinnova.se/globalassets/dokument/tabell-stodnivaer-statligt-stod.pdf>

⁷ Terms and conditions: <https://www.vinnova.se/sok-finansiering/regler-for-finansiering/allmannavillkor/>

If you do not comply with our terms of service, you may be liable for repayment. This also applies if you have been granted a contribution incorrectly or with an excessive amount.

9 How to apply

Applications are to be submitted electronically via the application service (eServices portal) which can be accessed through our website. The application consists of an electronic form to be filled in, as well as several annexes to be attached (use template where this is applicable⁸):

- Project summary according to template, one page in Swedish or English
- Project description according to template, recommended language is English as the proposal will be assessed by international evaluators
- CV for key persons in the project team (at least one person/project partner). The CV should also include name, age, gender, title/position and the level of activity in the project should be specified. Each CV should be no more than three A4 pages in length (12-point font).
- Verified commitments from participating industry partners according to template (full-scale and pilot)
- Letter of intent from at least one company (pre-studies)
- If the proposal is a continuation of a project previously granted funding within STRIM a summary of the content and results should be attached to the proposal (max. 2 pages). It should be clear in the proposal what was done in previous project and how the proposal will continue this work.

PLEASE NOTE: The project summary should also be e-mailed to the programme office Jenny.Greberg@sipstrim.se. The project summary can be shared and published freely and, should therefore not contain any confidential or otherwise sensitive information

After the deadline, no changes can be made to the proposal unless asked for by us.

10 Confidentiality

Applications related to this call for proposals become public documents. As a rule, in accordance with the principle of public access to official records, the public has the right to access these documents. This also applies to applications that are

⁸ Templates for the call is found here <https://www.vinnova.se/e/strategiska-innovationsprogrammet-gruv-och-metall/strim-hosten-2017/>

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rejected or withdrawn. Vinnova's decisions and the reasons for its decisions are also public information.

However, Vinnova is required to keep confidential all information about an individual's business and operating circumstances, inventions and research results if it can be assumed that the individual will suffer financial loss if the information is made public.

Documents sent to STRIM are not covered by our privacy policy

Appendix 1 – TRL

STRIM uses the following TRL

TRL 1 – basic principles observed

TRL 2 – technology *concept formulated*

TRL 3 – experimental *proof of concept*

TRL 4 – technology *validated in lab*

TRL 5 – technology *validated* in relevant environment (industrially relevant environment in the case of key enabling technologies)

TRL 6 – technology *demonstrated* in relevant environment (industrially relevant environment in the case of key enabling technologies)

TRL 7 – system *prototype demonstration in operational environment*

TRL 8 – system *complete and qualified*

TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)

