

A photograph of two mining workers in safety gear (hard hats, safety glasses, and high-visibility orange vests) walking on a mining site. The worker on the right is holding a clipboard. The background shows a large pile of rocks and a blurred mining vehicle.

# SWEDISH MINING INNOVATION

Open Call 2021  
Part 1. rev 1.

Med stöd från

**VINNOVA**  
Sveriges innovationsmyndighet

 **Energimyndigheten**

**FORMAS** 

Strategiska  
innovations-  
program



# Strategic Innovation Programs



**BiInnovation >**



**Drive Sweden >**



**Grafen >**



**STRIM - gruv och  
metallutvinning >**



**InfraSweden2030 >**



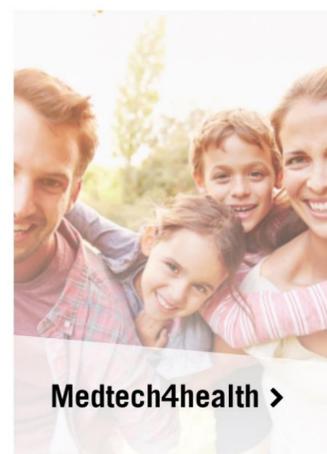
**Innovair >**



**Internet of things  
Sverige >**



**Lättvikt >**



**Medtech4health >**



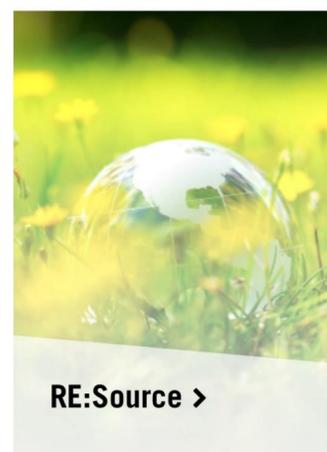
**Metalliska  
material >**



**Processindustriell  
IT och automation >**



**Produktion2030 >**



**RE:Source >**



**Smartare  
elektroniksystem >**



**SWElife >**



**Smart Built  
Environment >**



**Viable Cities >**



# Open Call 2021

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# Resource Efficiency and Sustainable Production in the Mining and Metal-producing Industry

## Part 1

- Key dates & budget
- Themes and topics
- Project types
- Evaluation process
- Recommendations
- More information & contacts
- Other calls of interest

## Part 2

- Application documents
- Project description template
- Project summary template
- Budget calculation
- Recommendations
- More information & contacts

# Key dates

Call Open 18 May, 2021

**Call Close 11 November, 2020 14:00**

Decision 22 February, 2022

Project start 1 March 2022 – 31 March 2022

**Total funding allocated: 45 MSEK**

# Swedish Mining Innovation's Objectives

SMI aims to strengthen Sweden's mining and metal producing industry's competitiveness and sustainability by contributing to the development of a world leading industry which contributes to an economically, environmentally and socially sustainable society.

# Thematic areas

- Exploration
- Resource characterisation
- Mining
- Mineral processing
- Recycling and metallurgy
- Reclamation and environmental performance
- Attractive workplaces
- Gender and diversity
- Social benefit and acceptance

Automation  
and  
digitalisation

Production  
efficiency

Reduced  
climate  
impact and  
electrification

Mineral  
resources,  
resource  
efficiency and  
circularity

Reduced  
environmental  
impact

Socially  
sustainable  
mining and  
competence  
supply

# Topics

**All topics in Strategic Roadmap are suitable for the call**

***Focus areas for this call:***

- Technologies, methods and processes for sustainable exploration, mining and metals production
- Circularity, turning waste into products & resources: Methods – business models – legal & policy framework
- Energy efficiency, reducing CO<sub>2</sub> emissions, climate neutral/fossil free operations
- Waste management incl. safe tailings dam construction and management
- lower environmental impact
- lower emissions to air and water; water treatment and recycle



**STRATEGIC RESEARCH AND INNOVATION ROADMAP  
FOR THE SWEDISH MINING, MINERAL AND METAL PRODUCING INDUSTRY**

# Open Call Project TRL Levels



**Pre-study**

Up to 500 000 SEK funding, 25% cofinancing  
 1 Partner + letter of support from relevant actor  
 Maximum 6 months

**Full-scale innovation projects**

Up to 15 MSEK funding, 50% cofinancing  
 2 companies\* + 1 research  
 Maximum 3 years

**Pilot & demo projects**

Up to 15 MSEK funding, 50% cofinancing  
 2 companies\* + 1 research  
 Maximum 3 years

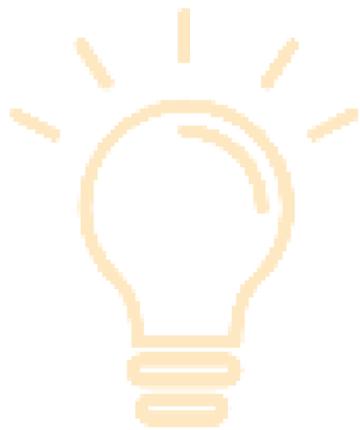
\*2 companies or other non-research actors such as NGOs, Public sector etc.

Foreign organizations are welcome and count towards partner requirements but cannot receive funding. They may contribute in kind or cash to the cofinancing requirement. Explain the value to Sweden.

# Prestudies

Pre-studies aim to supporting the decision-making process by objectively and scientifically evaluating a potential innovation's strengths and weaknesses, opportunities and risks and to identify the resources required to develop the innovation further. The pre-study should conclude the whether or not the development of the innovation should continue.

Maximum funding:	500 000 kr
Maximum funding level:	75%
Maximum duration:	6 months
Partner Requirement:	1 organization or more
Special requirement:	letter of support from relevant non-research actor
TRL:	3 – 7



# Full-scale Innovation projects

The projects aim to develop and implement ideas that contribute to the realization of Swedish Mining Innovation's overall objectives. The focus of the project is to increase the TRL by acquiring new knowledge and skills to develop new or greatly improved product, process or service. This can include, for example, the construction of prototypes in a laboratory environment or in an environment with simulated interfaces to existing systems and to pilot operations, or development of components in complex systems that require validation.

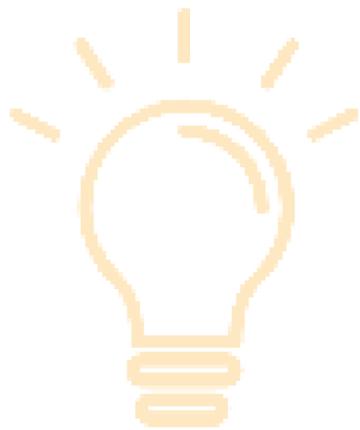
Maximum funding:	15 000 000 kr
Maximum funding level:	50%
Maximum duration:	3 years
Partner Requirement:	1 research actor + 2 companies or other non-research actor
Special requirement:	letter of commitment from non-research actors
TRL	3 – 7



# Pilot & Demo projects

Pilot & Demo projects can include prototype design, demonstration, pilot work, testing and validation of new or improved products, processes or services in environments such as corresponds to realistic operating conditions, where the primary purpose is to make additional technical improvements to products, processes or services that are not yet fixed. This may include development of a commercially usable prototype or a pilot project that is necessarily the final commercial product and which is too expensive to produce to be used only for demonstration and evaluation.

Maximum funding:	15 000 000 kr
Maximum funding level:	50%
Maximum duration:	3 years
Partner Requirement:	1 research actor + 2 companies or other non-research actor
Special requirement:	letter of commitment from non-research actors
TRL:	5 - 7



# Evaluation Process

1. Vinnova checks that the **prerequisites are met**
2. Proposals are evaluated **an international panel of independent experts**
  - full-scale innovation and Pilot and Demo project leaders may be interviewed via web-meeting
  - applications that meet the quality criteria for funding are ranked
3. Vinnova in consultation with SMI's board makes final decision as to which projects will be funded. In the event of equally ranked projects, those in the focus area of the call will be prioritized.

## Ranking Categories:

- Prestudies
- Full-scale innovation, Pilot & Demo < 5 MSEK funding
- Full-scale innovation, Pilot & Demo 5 – 15 MSEK funding

# Evaluation criteria

- **Potential**

Subcriteria are support and not assessed individually:

- *The application's scientific quality*
- *Industrial and societal relevance*
- *The projects potential impact with particular attention to the focus of the call*
- *Extent of innovation*
- *TRL of 3-7 (pre-study); 3-7 full-scale innovation projects; and 5-7 pilot & demo projects*
- *How the project contributes to sustainable development*
- *Commercialization potential including global markets (Full-scale innovation projects, and Pilot and Demo projects)*
- *How well the project can contribute to a gender equal societal development*
- *The possibility for implementation of results and/or continuation to e.g. EU projects (Full-scale innovation projects and Pilot & Demo projects)*

# Evaluation criteria

- **Implementation**

Subcriteria are support and not assessed individually:

- *The quality of the organizational structure, methods and implementation of work*
- *Suitability of project deliverables with respect to the project's goals*
- *The soundness of the work plan and budget*
- *Resource allocation (staff, equipment, etc.)*
- *How well gender equality aspects have been integrated in the project plan*
- *Relevance of communication plan or other dissemination activities*

# Evaluation criteria

- **Stakeholders**

Subcriteria are support and not assessed individually:

- *The expertise and relevant experience of the individual project members*
- *The expertise within the consortium as a whole (incl. complementarity, the balance between industry, academia, research institutes, small and medium-sized enterprises, NGOs etc.)*
- *Supplementary and interdisciplinary expertise within the project*
- *How well the team (key persons) is composed regarding gender distribution, as well as the distribution of power and influence between women and men*
- *How well the partners represent the value chain*
- *Potential to access global markets*

# Gender equality – an important issue for the industry and society

- **Don't leave this to the last minute!** Start thinking about this when starting the project plan rather than trying to "deal with it" as afterthought.

Some ideas to consider:

- What benefits could gender balance give your project?
- How are your partners working with gender diversity? Is there something your or their organizations can contribute and incorporate in the project? What is the industry perspective?
- Incorporate an externally facilitated workshop/strategy into your project plan?
- How will you follow-up during the project?
- Understand your local conditions – you may have an unbalanced team, is it possible to diversify during the project? How can you insure that both men and women are involved in the development of the solution? Is it possible to make an inclusive reference group or steering group or other input to the project?
- What environment will the solution be applied? How can your project contribute to more attractive and inclusive work environment, including work culture, safety where gender can play a role?

# Recommendations

- Read the **call text & supporting documents carefully**
- Determine the fit in SMI's aims – **Strategic Innovation Roadmap**
- Get your **partners early**
- **Register the project application early** in Vinnova's portal & look through fields to fill in (including budget)
- Write the project description in **English**
- Ensure **prerequisites** and **mandatory** attachments are complete
- Don't hesitate to **contact SMI or Vinnova** with questions

# More information

Videos, webinars, roadmaps, information and news  
[www.swedishmininginnovation.se](http://www.swedishmininginnovation.se)

Call text, templates & login to portal and other information  
<https://www.vinnova.se/en/calls-for-proposals/the-strategic-innovation-programme-for-mining-and-metal-recovery--strim/resource-efficiency-and-sustainable-2021-01819/>

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## Other calls of interest?

**SIP Metalliska Material closes 30 September:** <https://www.vinnova.se/en/calls-for-proposals/the-strategic-innovation-programme-for-metallic-material/metallic-materials-non-thematic-call-2021/>

**Cooperation with Brazil in Mining closes 3 November:**

<https://www.vinnova.se/e/brasilien-sverige-innovationsforum-/internationellt-innovationssamarbete-2021-01091/>



# Mining innovation for a sustainable future