Peer review handbook

Strategic Research Areas
2025

Contents

Introduction

In the government bill "Research and Innovation for the Future – Curiosity and Usefulness" (prop. 2024/25:60), the Swedish government has proposed the introduction of eight new strategic research areas, for which HEIs may apply competitively. The aim of these strategic research areas is to ensure Sweden remains internationally competitive through mobilized efforts and increased profiling of Swedish research. The starting point is that the strategic initiatives should concern research that, in the long term, has the potential to be of the highest international quality or that has already reached that level.

The Strategic Research Areas are:

- Health, life sciences, and artificial intelligence
- Quantum technologies
- Polar research
- Climate-related research
- Crisis preparedness and total defense
- Practice-oriented professional research on crime
- Excellence in school
- Research on advanced materials

The government intends to allocate a total of SEK 200 million in 2027 and SEK 400 million in 2028 to these areas, with an expectation for continuance beyond 2028.The funds will be distributed to HEIs as core funding to for research and doctoral-level education.

The increase in funds received by a HEI is coupled with a mission that the institution will develop research in the strategic research area that is of the highest international standard. The mission should be clearly profiled and able to be developed from work that is already in progress. It should be possible for the strategic research area to become one of the most important profiles of the HEI. Striving for scientific excellence should be the foundation for all proposed initiatives.

The Swedish Research Council will handle the call for proposals and the peer review of applications from the HEIs. The government will make decisions on the eight areas covered by this call, based on recommendations submitted by the Swedish Research Council in March 2026. 1-3 applications are expected to be recommended for funding in each strategic research area.

You can read the call text and all information to applicants here: Strategic research areas - Swedish Research Council

This handbook is designed to reflect the review process step by step. We want to make it easy for you as a panel member to find the information you need for the tasks to be carried out in each step.

Important starting points and principles

Peer review

The Swedish Research Council regards peer review as a guarantor that our support goes to research of the highest scientific quality in all scientific fields. The Board of the Swedish Research Council has formulated guidelines for peer review based on eight principles. Read the guidelines for peer review.

Conflict of interest

To avoid any conflict of interest situation, we have established strict guidelines. Read the Swedish Research Council's conflict of interest policy and guidelines for managing conflicts of interest.

If you have a conflict of interest, you must not take part in the handling or assessment of that application during any part of the process. You are obliged to notify any conflict of interest for all applications handled by your review panel.

Confidentiality and integrity

Handle the applications and the review of them in a confidential manner:

- Do not disseminate documents that you get access to.
- Delete documents that relate to the review work after completing the task.
- Do not speak to outsiders about what was discussed during the review.
- Do not use information in the application for personal gain.
- Let the Swedish Research Council personnel manage all communications with applicants.

AI in the assessment of applications

Generative AI tools (ChatGPT or similar) must not be used in the scientific assessment of the applications. There is however no prohibition against using digital AI tools for tasks such as improving the language in written statements on applications, as long as this does not entail factual contents or the applicant's personal data being disseminated.

Complaints and questions

If you as a review panel member receive any question about the assessment of an individual application, you must refer this to us. The Swedish Research Council personnel make sure that all complaints or requests for clarification are handled.

Preparations

Prisma

As a reviewer, you work in the web-based system Prisma. The first thing to do is to create an account in Prisma, if you do not already have one. Make sure all your account information and personal data are correct. You must also decide whether or not you want to receive remuneration for your review work. Follow the instructions in Prisma's user manual.

Reporting any conflict of interest

Once you have been notified that the applications are accessible in Prisma, you must report any conflict of interest. You should therefore check who the participating researchers are for all applications allocated to the review panel. Please contact the Swedish Research Council personnel if you have any questions about conflict of interest. If you discover later on in the process that you have a conflict of interest, this must be reported as soon as possible.

Technical preparations

The review panel meeting will be held via the digital platform Zoom. Download Zoom Desktop client to your computer before the meeting.

Overview of the review process

Individual Review period

The individual review process begins with a joint digital start-up meeting, attended by the chair, panel members, and supporting staff from the Swedish Research Council (November). The individual review period extends from mid-November until the first panel meeting, scheduled between late January and mid-February.

Panel Meeting 1 – Discussion of Applications

Following the individual review, the panel will convene for its first meeting to discuss and grade all applications. During this meeting, the panel will determine which applications will advance to the second panel meeting and the interview stage. The panel will also prepare interview questions for all applications.

Panel Meeting 2 – Interviews for Selected Applicants

The second panel meeting comprises two parts. In the first part, representatives of the selected applications will be interviewed. In the second part, the panel will make final recommendations on which applications to fund and propose a corresponding budget for each recommended application.

Individual review

Instructions for the review

During the review period, you shall:

- read and grade the applications,
- write assessments and preliminary statements,

Once the review process has ended, you will get access to all panel members' assessments in Prisma. Prepare for the review panel meeting discussion by reading the other panel members' assessments.

The assessment shall consist of a numerical grade and written comments. The comments should focus on strengths and weaknesses of the application. When you are the rapporteur, you shall write a *preliminary statement* and when you are a reviewer, you shall write an *assessment*. Your notes will be a support in the discussion during the review panel meeting, and after the meeting, when the rapporteur writes the final statement.

Deviations in the application

If you suspect that the content of an application does not follow good research practice, please inform the Swedish Research Council personnel as soon as possible. Continue with the review unless we notify otherwise. The Swedish Research Council is responsible for further investigation in cases of deviations in the application.

Irrelevant information

Base your assessment only on the contents of the application itself. Irrelevant information must not impact on the assessment. Disregard facts that you believe you know despite them not being included in the application.

Outline of the application

Applicant and participating HEIs

The applicant is a Swedish HEI that may receive core funding from the government in research and education at postgraduate level. The applying HEI has overall responsibility for the development of the initiative and the HEIs vice-chancellor is responsible for the application.

Two or more HEIs may submit a joint application, where one HEI is the applicant and the other HEIs are participants. To ensure that all participating institutions support the application and are aware of the scope of the activities and the commitments involved, letters of support from the participating HEIs has been included in the application.

A research leader at the applying HEI is the project leader for the application and should be central to the application and to the development of the strategic research area. At least 2 and up to 9 participating researchers has been asked to be included in the application. The participating researchers must be active at the applying HEI or at the participating HEIs and be research leaders who are central to the application and to the development of the strategic research area.

Research description

The research programme should explain how the proposed research has the potential to achieve the highest international scientific quality, as well as how it may advance or renew the current research frontier and the strategies to achieve this. Ethical considerations are also included, where the applicant can reflect on the ethical issues that may arise, describe them and how they can be handled.

Prerequisites for mobilised efforts and increased profiling

This section should explain the organisational structure as well as how existing and planned collaborations between research groups/HEIs/Other actors contribute to mobilised efforts and increased profiling. The HEI's commitment and strategic efforts to support the area should be described as well as the competence supply and need for infrastructure.

CVs and publication lists

To further support the proposal, the CVs from the project leader and the participating researchers from the applying and participating HEIs should be included as well as a publication list with the 50 publications and other research outputs that are most important for the strategic research area.

Budget

The applicant has been asked to describe the budget for the first five years (2027–2031) and to justify the costs. The budget should include the requested amount and the additional resources required to implement the research program, as well as any contributions from collaborating partners. The budget can include all types of project related costs.

Assessment criteria

You shall assess the application based on three criteria:

- Relevance to the strategic research area
- Scientific quality in an international comparison
- Conditions for mobilized efforts and increased profiling of the highest international quality

Please use the guiding questions for each criterion to support the assessment of the application.

Guiding questions and grading scales

Relevance to the strategic research area (1–3)

The proposed research should fall into the broad strategic research area as described in Appendix 1 (Description of the strategic research areas). The examples of relevant research in the text have been identified by the government as particularly important. However, all of these do not have to be addressed for the proposal to be deemed relevant and other research topics could also be relevant if they fall under the broader description of the area.

Guiding Question:

- To what extent is the application relevant to the strategic research area as described in the call?

Grading scale:
3 = Relevant
2 = Partly relevant
1 = Not relevant

Scientific quality in an international comparison (1–7)

This part concerns the scientific quality of the planned, and previous, research in relation to the research frontier and in an international comparison.

Guiding Questions:
Quality and Research Front
- How well does the research correspond to the highest international scientific quality? Has the environment/environments already reached this level, or does it show strong potential to do so?
- To what extent do the research questions and objectives create conditions for scientific breakthroughs or innovative results that can advance the research front?
- What scientific significance has the institution's/institutions' previous research had within the strategic area?

Feasibility
- How well-founded and realistic is the plan for carrying out the proposed research?
- To what extent are there—or are there plans for—national and international research collaborations that can strengthen the quality and feasibility of the research? This may include research groups, institutions, and/or other relevant actors.
- How well are research ethics addressed in the application? Are the considerations clearly presented and sufficient?

Grading scale:

7 = Outstanding. The scientific quality of the research is, or has the potential to be, exceptionally strong with negligible weaknesses.

6 = Excellent. The scientific quality of the research is, or has the potential to be, very strong with negligible weaknesses.
5 = Very good to excellent. The scientific quality of the research is, or has the potential to be, very strong with minor weaknesses.
4 = Very good. The scientific quality of the research is, or has the potential to be, strong with minor weaknesses.
3 = Good. The scientific quality of the research is, or has the potential to be, strong in certain areas, but there are also some weaknesses.
2 = Weak. The scientific quality of the research is, or has the potential to be, strong in certain areas but has at least one major weakness or several minor weaknesses.
1 = Poor. The scientific quality of the research is, or has the potential to be, strong to a limited extent, and there are several major weaknesses.

Conditions for mobilized efforts and increased profiling of the highest international quality (1–7)

This part concerns the environments prerequisites and plans for mobilised efforts and increased profiling in relation to the research landscape, both in Sweden and internationally.

Guiding questions:

Strategy and Collaboration

- To what extent are there strategies and conditions for mobilized efforts and increased profiling of the research so that Sweden can compete internationally and reach the highest scientific level?
- How well do the institution's/institutions' strategic priorities, commitment, and long-term work support the development of the research area?
- How well do planned or existing collaborations, between research groups/institutions/other actors, contribute to concentration and profiling within the area?

Competence Supply and Gender Equality

- To what extent are there strategies for competence supply and recruitment that ensure continuity and development of the research area in both the short and long term?
- How well are the people who have leading roles in the strategic research area described, their responsibilities and their importance for the development of the research environment?
- Are any deviations from a gender distribution of 40/60 for the leading people well justified in relation to the conditions and implementation of the research?

Resources and Infrastructure

- Are the financial conditions realistic and aligned with the environment's goals and ambitions?
- To what extent is there access to relevant equipment and research infrastructure, or a clear strategy to ensure this? In cases where research needs to be conducted in collaboration with external actors, are there established or planned structures and resources for this?

Grading Criteria
7 = Outstanding. Outstanding conditions with negligible weaknesses.
6 = Excellent. Excellent conditions with negligible weaknesses.
5 = Very good to excellent. Very good to excellent conditions with minor weaknesses.
4 = Very good. Very good conditions with minor weaknesses.
3 = Good. Good conditions but also some weaknesses.
2 = Weak. Some strengths in terms of conditions, but at least one major weakness or several minor weaknesses.
1 = Poor. Very few strengths in terms of conditions and several major weaknesses.

External reviewers

External review may be used if the joint competency of the review panel is not sufficient for a thorough review or in a conflict of interest situation. The chair determines the need for external reviewers, and the research council personnel will contact the suggested reviewers.

Review panel meeting 1

Preparation for the panel meeting

A few days before the panel's first meeting, the panel members will receive a compilation of the evaluations, including the individual comments from the panel members and, where applicable, assessments from external reviewers. Please prepare for the meeting by reading all the provided material carefully and by getting ready to present the applications for which you are the rapporteur.

Discussion of applications

The chair leads the discussion of the applications. As a rule, the rapporteur begins by presenting an application's strengths and weaknesses. Thereafter, the other reviewers can give their assessments. The individual scores serve as an initial input to the panel's discussion. During the meeting, the panel calibrates its assessments and use of the grading scale and agrees on common scores for each criterion for every application.

After each discussion, the panel should summarise the feedback to the applicant, and the rapporteur should take notes to support the formulation of the panel's final statement.

Conflict of interest during the review meeting

Persons who have a conflict of interest in relation to an application should not take part in the discussion of that particular application. They should leave the digital meeting while the application is discussed. If you discover any possible conflict of interest (your own or another's) during the meeting, you should bring this up with the chair and the Swedish Research Council personnel in private.

Prioritisation

Once all applications have been discussed, and the panel has agreed on a joint grading for each application, a prioritisation shall be carried out of the applications with the highest scientific quality. This prioritisation shall conclude with the review panel's proposal for applications to bring forward to the next meeting. It is up to the panel to decide how many applications to bring to the second panel meeting, up to a maximum of six.

Questions for the applicants

The panel will meet representatives from the prioritised applications during the second panel review meeting. The interview stage aims to deepen the understanding of the applications selected in the first stage. It provides an opportunity to clarify any ambiguities in the application, capture strategic considerations and future plans, assess feasibility, leadership, and collaboration skills.

It is beneficial if the review panel can formulate specific questions for each application to be asked during the interview. The final part of the meeting will therefore be dedicated to discussing potential questions. To support this process, the panel will have access to a set of standard questions that can serve as a starting point (See Appendix 2).

Review panel meeting 2

Interviews with applicants

The focus of the first part of the second meeting is the interviews with applicants. The applicants will join the meeting for 30 minutes per application to answer questions from the panel.

Each interview begins with the representatives of the application introducing themselves. After that, the chair or the rapporteur for the application will lead the questioning, and the other panel members may add their questions at the end of the interview.

Prioritisation

The second part of the meeting concerns the prioritisation of applications and recommendation for funding.

Based on the assessment in the previous meeting as well as the results of the interviews, the panel will decide which applications to be recommend for funding. The panel also has the opportunity to revise their initial scores based on the information obtained during the interview. If the panel has revised its assessment based on the interviews, this information should also be included in the final statement.

The panel can propose that one, two, or three applications are funded based on the evaluation of the applications. The panel is also to prepare a recommendation of the size of each grant, given the existing amount of funds allotted to the area. Note that it is possible for the panel to recommend a lower or higher amount of funds than has been applied for. T

Final statement

The rapporteur writes a final statement

The discussion at the review panel meeting forms the basis for the review panel's joint final statement. The final statement is the end product of the review process to which each application is submitted. It will be part of the Swedish Research Council's recommendation to the Swedish government and is also sent to the applicant after the review process is completed.

You are responsible for writing final statements on the applications for which you have been the rapporteur. The *final statements* shall reflect the review panel's joint assessment of the applications. You have one week in which to write final statements following the end of the second review panel meeting.

Recommendations on final statements:

- Focus on describing the main strengths and weaknesses of the application.
- Ensure the written justifications correspond to the grading – feel free to use the definitions in the grading scale in your written comments.
- Consider the guiding questions for the different assessment criteria.
- Write concisely, but not too briefly – the content is more important than the length of the text.
- Be constructive and factual in your comments.

The chair reviews all final statements

Once the final statements are completed, they are checked by the chair and by the Swedish Research Council personnel. The chair is responsible for ensuring the final statements on the applications discussed at the review panel meeting reflect the panel's discussions. In conjunction with the chair's review, you may be asked to supplement or adjust a final statement.

Appendix 1: Descriptions of the strategic research areas

Health, life sciences, and artificial intelligence

Scientific progress in life sciences is made possible through the development of new tools, techniques, and methods. With high-quality medical research and innovation, Sweden has favorable conditions to become a leader in making personalized prevention, diagnostics, and treatment accessible, contributing to a long-term sustainable healthcare system.

Artificial intelligence (AI) has the potential to revolutionize healthcare by improving quality and diagnostic capabilities across a wide range of medical fields. AI can assist in preventive healthcare by, for example, identifying risks, and it also offers opportunities for increased efficiency in various ways. Despite its potential, implementation in healthcare is not progressing quickly enough.

The government is establishing strategic research areas focusing on health, life sciences, and AI to mobilise leading Swedish research in the field and thereby harness the potential that AI can offer. Such knowledge generation is relevant both in Sweden and globally.

Quantum technologies

Technological breakthroughs and increasingly complex scientific questions are driving development forward. Quantum technology is rapidly advancing worldwide and is considered a key technology that will influence developments across many sectors of society. To harness the potential of quantum technology, strong basic research is needed as a foundation for technological leaps in various applications expected to emerge from this new technology.

In May 2024, the government tasked the Swedish Research Council with developing a proposal on how a national quantum strategy could be designed. Sweden has a strong research base, but at the same time, global competition in the field is increasing. Altogether, this means that further investments are required, along with increased coordination and a clear national strategy.

The initiative on strategic research areas in quantum technologies aims to further strengthen Sweden's capabilities and international position in the quantum field in both the short and long term, and to enhance the attractiveness of Swedish researchers and research environments as international collaboration partners.

Polar research

Sweden is highly prominent in polar research, and as a way to secure this position, the government is establishing strategic research areas in the field.

Polar research includes studies in or of the Arctic and/or Antarctic and is often multi- and interdisciplinary. The research may address global issues, societal challenges, and sustainable development, focusing on aspects such as climate, environment, security policy, and international law, with individual projects potentially having a local focus. The field of research spans a wide range of scientific disciplines, time periods, as well as geographic and societal structures, and involves many different research performers. Research in polar regions often depends on advanced research infrastructure, extensive logistical support, and large-scale international collaborations.

Climate-related research

The scientific consensus is robust in concluding that human activity is the cause of climate change and global warming. The UN's Intergovernmental Panel on Climate Change (IPCC) states that climate change is increasingly affecting nature and human living conditions around the world. A changing climate, with extreme weather events such as heatwaves, heavy rainfall, and droughts, is associated with more prolonged conflicts, rising food prices, uncertainty around food and water supply, income loss, and costly damage to buildings and infrastructure. Research and innovation are essential to counteract climate change, manage its consequences, and achieve a successful climate transition.

The investment in strategic areas within climate-related research aims to strengthen the knowledge base for effective measures and technological solutions for climate mitigation and adaptation — such as eliminating or minimizing greenhouse gas emissions and implementing the most effective possible climate adaptation strategies. For the actions informed by research to lead to real change, a comprehensive approach is required, one that also includes social science research — for example, on social acceptance, economic aspects of the climate change, and other societal impacts resulting from climate change.

Crisis preparedness and total defense

In an uncertain and rapidly changing global situation, Sweden's crisis preparedness and total defence are facing swift and extensive growth. New knowledge at the forefront of research is needed to contribute to Sweden's capacity for innovation and resilience. This may include everything from basic research to interdisciplinary studies with various knowledge focuses and within different fields that are important for Swedish crisis preparedness and total defence.

Practice-oriented professional research on crime

In light of the societal threat posed by organised crime, the need for knowledge-based practice in the law enforcement field has never been greater. Crime is highly complex and rapidly changing. It also has extensive international ramifications. New technology and digital platforms are being exploited for criminal purposes, while digital information is also a resource in law enforcement that must be used in the best possible way.

In order to meet the increasing complexity and pace of change in crime, excellent practice-oriented research is particularly important. Research needs to follow and drive developments towards better equipped law enforcement authorities, and better crime prevention work in society. There is a great need for practice-oriented and interdisciplinary research that also includes collaboration with other crucial public institutions.

Excellence in school

Imparting knowledge is the school's most important mission. For schools to impart knowledge as effectively as possible, and for students to be able to absorb it in the best possible way, practice-oriented research focusing on educational outcomes is needed. Such an initiative can strengthen Sweden as a nation of knowledge. Education should be grounded in science. Therefore, research that promotes student learning and high-quality teaching is essential. There is also a need for research on school organisation and leadership to prepare students for the future. To achieve the goal of a knowledge-based education system where all students are given the opportunity to reach their full potential, a strong commitment to excellent practice-oriented research is necessary.

Research on advanced materials

Advanced materials are crucial for Sweden's industrial competitiveness and the Swedish economy. To safeguard Sweden's competitiveness, research that contributes to the industry's transition and productivity is required. For the industry to transition to fossil-free operations, increased circularity, energy storage, and new innovative materials are needed.

In an international context, Sweden holds a strong position relative to its size in the field of materials research. Technical and natural science research on advanced materials contributes to the industry's transition and productivity, has a broad range of applications, and is applicable across various technologies. This may involve improved efficiency in the conversion of different fossil-free energy sources, batteries and semiconductors with increased efficiency, or lighter materials that combine reduced energy consumption with increased safety.

Appendix 2: Guide for interview questions

Practical handling

The interview stage aims to deepen the understanding of the applications selected in the first step. It provides an opportunity to:

- Clarify ambiguities in the application
- Capture strategic considerations and future plans
- Assess feasibility, leadership, and collaboration capacity

The review panel formulates specific questions for each application. The standard questions below may, if relevant, serve as a starting point and be adapted based on the content of the application and any uncertainties. It is recommended to identify 6–8 questions per interview. They can be used as a basis and followed up with more in-depth questions depending on the responses.

Standard questions that may be used as a starting point

Research content and scientific quality

- How does your research program contribute to advancing the research frontier in the field?
- Which parts of the program do you consider most innovative? And which are the most high-risk?
- How do you ensure that the research maintains a high international standard?
- How do collaborations contribute to quality and feasibility?

Organization and collaboration

- How is the research environment organized to promote collaboration between research groups, higher education institutions, and other actors?
- How are responsibilities and roles distributed among the participating actors?
- How is the leadership organized and what are the governance and decision-making structures in collaborations involving multiple institutions?
- What are the greatest risks to the implementation of the program, and how do you plan to manage them?

Strategic capacity and long-term perspective

- How have you built up expertise in the area so far?
- What strategies do you have for recruitment and skills provision in the short and long term?
- What measures are being taken to promote gender equality?
- How are you working to create a clear profile for the area at the HEI(s)?
- In what way does the initiative differ from or complement other national and international environments?

- How does the initiative contribute to strengthening Sweden’s position in the field?
- What is your vision for the research area over the next 10 years?

Infrastructure and resources

- What research infrastructure is critical for the implementation of the program?
- How do you ensure access to necessary infrastructure, both nationally and internationally, and are there contingency plans?
- Which resources or parts of the budget are most critical for implementation?

Concluding reflections

- What aspects would you like to supplement or clarify?