



## Alliance Quantum grants

# Instructions for external reviewers

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### How NSERC uses external reviews

Your report will inform the members of the Alliance Quantum Evaluation Committee, a committee of peer reviewers that makes the final recommendation on the merit of applications to NSERC. The committee relies on high-quality reports by external reviewers, which help provide a deeper overall assessment of applications. During deliberations, committee members present and discuss the external reviewer reports that were received for grant applications.

Under Canada's privacy laws, your review of an application is considered personal information belonging to the applicant. At the end of the merit assessment of an application, NSERC shares your review with the applicant, while keeping your name and any identifying information confidential.

### Conflict of interest and confidentiality

You must be in compliance with the [Conflict of Interest and Confidentiality Agreement for Review Committee Members, External Reviewers, and Observers](#), or decline to participate in the review process. If you cannot act as an external reviewer for any reason, contact NSERC as soon as possible.

### Collection of self-identification data

NSERC asks all applicants, co-applicants, committee members and external reviewers to complete a self-identification questionnaire as part of the agency's commitment to equity, diversity and inclusion, as described in the [Tri-agency EDI Action Plan](#). Note that the questionnaire was revised in 2021 to include more questions and response options; additional diversity dimensions could be added in the future.

The self-identification questionnaire is mandatory, but you will have the option to select “I prefer not to answer” for each category. Your completion of this questionnaire will help NSERC better understand the diversity of its reviewers.

If you have any questions, please consult the [frequently asked questions about the self-identification questionnaire](#). Comments or suggestions about this data collection may be sent to [nseequity-equitesng@nserc-crsng.gc.ca](mailto:nseequity-equitesng@nserc-crsng.gc.ca).

## How to review a grant application

Evaluate the application and **provide comments on each of the merit evaluation criteria**. Provide a balanced review of the strengths and weaknesses of the application, with comments that are **fair** (i.e., impartial, respectful and appropriate) and **informative** (i.e., clear, detailed, constructive and well justified).

**Base your review solely on the merit evaluation criteria and on the content of the application**, without consulting web sites (other than NSERC’s) or seeking opinions from other individuals. However, you may refer to related published work to make a point.

**Provide an unbiased review.** As an external reviewer, you are expected to consistently guard against the possibility of unconscious bias influencing your decision-making process, whether these biases are based on schools of thought, the perceived value of fundamental versus applied research, areas of research or research approaches (including emerging ones), size or reputation of an institution, age, gender, and/or other personal factors associated with the applicant and/or co-applicants. NSERC cautions you, as an external reviewer, against any judgment of an application based on such factors. To assist you in recognizing both conscious and unconscious bias, all reviewers are asked to complete the 30-minute [Bias in Peer Review](#) online learning module.

**Important note: You must store all confidential review documentation securely to prevent unauthorized access, and securely destroy it once it is no longer required.**

## About Alliance Quantum grants

Alliance Quantum grants aim to reinforce, coordinate and scale up Canada's domestic research capabilities in quantum science and technology, through partnerships between university researchers and organizations from the private, public or not-for-profit sectors.

Similar to Alliance grants, Alliance Quantum grants support research projects led by strong, complementary, collaborative teams that will generate new knowledge and accelerate the application of research results to create benefits for Canada.

Research supported by Alliance Quantum grants will:

- generate new knowledge and/or technology to address complex challenges
- create economic, social and/or environmental benefits
- contribute to Canada’s long-term competitiveness
- support public policy
- train new researchers in areas that are important to Canada and to the partner organizations
- draw on diverse perspectives and skill sets to accelerate the translation and application of research results

Alliance Quantum grants will be delivered through various calls for proposals. For more information, consult:

- the [Alliance Quantum grants description](#) and the specific call for proposals to which the application you are reviewing has been submitted (the call for proposals is identified in the Type of grant applied for field of the first page of the application)
- the [Alliance Quantum grants merit indicators](#)
- the [Instructions for completing an Alliance Quantum grant application – form 101](#)
- the [Alliance grants: Role of partner organizations](#) web page

## Merit evaluation criteria

In making its funding decision on the application, NSERC gives equal weight to each of the four merit evaluation criteria detailed below. In your review of the application, comment in detail on how well it meets each sub-criterion, considering the review questions listed under each. Justify your assessment by referring to the information provided in the application. Please note that applicants' proposals will vary in length; the allowed length of an Alliance proposal is determined by NSERC and is proportional to the amount of funding requested.

### 1. RELEVANCE AND OUTCOMES

#### 1.1 Significance of the intended outcomes and of the economic, social and/or environmental benefits for Canada

- How well does the research address the knowledge gaps to develop new and innovative policies, standards, products, services, processes or technologies in Canada? What is the extent of these knowledge gaps (partner-specific, local, regional, national, or international)?
- To what extent (not identified, minimal, high, etc.) will the anticipated outcomes have an impact (economic, societal, environmental) for Canadians?

#### 1.2 Originality of the research to address the topic and the potential for generating new scientific knowledge

- Does the application propose original research and will new scientific knowledge be generated? This may be assessed through a literature review, awareness of the state-of-the-art, position within the state-of-the-art, proposed advancement in the field, promising new direction for an existing challenge, development of new concepts and methods, etc.

#### 1.3 Extent to which the strategy to apply the research results is likely to achieve the intended outcomes

- Are there plans for technology transfer, policy development and/or knowledge translation, and, if so, how strong are these plans?
- Is there a plan to involve the partner organization(s) in the exploitation of the anticipated results in order to achieve the intended outcomes, and, if so, how strong is this plan?
- Is the strategy to apply the research results well aligned with the core activities or mandate of the partner organization(s)?
- Is the strategy to apply the research results well aligned with the capacity of the partner organization(s) to exploit the research results?

## **2. PARTNERSHIP**

### **2.1 Appropriateness of the partnership to achieve the intended outcomes; leveraging of different types of partner organizations and the integration of their unique perspectives and knowledge in the project, as appropriate**

- Are the project's objectives and anticipated outcomes well aligned with the activities and mandate of the partner organization(s)?
- Are all partner organizations relevant to achieving the project's outcomes?
- Is there a partner organization missing or lacking in order to achieve the stated outcomes?
- Taking into account the types of partner organizations involved, are their mandates and activities complementary (e.g., value-chain relationship, multiple sectors)?
- Does the partner organizations' combined involvement add value to the project? Is the whole partnership greater than the sum of its parts?

### **2.2 Clarity of each partner organization's role in the collaboration with respect to defining the challenge, co-designing and implementing the research, and using the results to achieve the desired outcomes**

- Is each partner organization's role and contribution to the research activities clear throughout the project's stages (co-design, progress monitoring and oversight, co-supervision, planning and supporting of field work, provision of services, etc.)?
- What is the importance of each partner organization's role to the project's success?
- Is the plan for the translation of the anticipated results into outcomes clear? What is the partner organization(s)' capacity to achieve the desired outcomes?

### **2.3 Appropriateness of the level of cash and in-kind contributions from each partner organization**

- Will each partner organization make a contribution (cash and/or in-kind) to the project? Consider the in-kind contributions as part of the proposal evaluation.
- To what extent do the contributions of each partner organization support the achievement of the project's objectives and/or impacts?
- Are the contributions made commensurate with the anticipated benefits for the partner organization(s)?

## **3. QUALITY OF THE PROPOSAL**

### **3.1 Clarity of the objectives and deliverables; appropriateness of the scope and size of planned activities to achieve the expected outcomes; justification for the planned expenditures**

- Are the objectives and deliverables of the project clear? Are the scope, timetable, milestones, methodology and experimental design appropriate to achieve the objectives and expected outcomes?
- Is the project scientifically and technically feasible?

- Are the planned expenditures (including any requested equipment) well justified, and how relevant are they to the project?

### **3.2 Appropriateness of the identified indicators and methods for monitoring progress during the project and for assessing outcomes afterwards**

- Are there indicators and methods to monitor activities, outputs and outcomes? How relevant are they?
- Are the partner organization(s) involved in monitoring progress and assessing outcomes?
- Are there any knowledge- and/or technology-transfer activities in the project? How appropriate are the proposed indicators and methods to monitor such activities?

### **3.3 Appropriateness of academic researchers' expertise, and that found within the partner organizations, both for carrying out the planned research activities and in mentoring trainees**

- How well aligned is the team members' combined educational and/or professional background and expertise with the project?
- Are the team members' recent research contributions (articles, patents, conferences, consulting, etc.) relevant to the project?
- Have the team members shown that they are familiar with and/or have experience with relevant scientific literature and techniques?
- Are there planned collaborations?
- Do the applicants have experience in working with the user sector?
- Does the Principal Investigator have a track record of managing projects of a similar type and size?
- What is the applicants' and co-applicants' record in supervising trainees? Will such record enable them to mentor the number and level of trainees proposed?

**Note:** Applicants are invited to explain and give start and end dates in their CVs of any significant delays in the past six years, such as parental leave, bereavement, illness or extraordinary administrative duties, of the applicant or of their students or research personnel. Be sensitive to the impact of these circumstances on the researcher's productivity and contributions to training.

## **4. TRAINING**

### **4.1 Opportunities for enriched training experiences for research trainees (undergraduates, graduates, postdoctoral fellows) to develop relevant research skills as well as professional skills such as leadership, communication, collaboration and entrepreneurship**

- Are the number and academic level of the trainees appropriate to meet the project's objectives?
- Are there opportunities for the trainees to develop research and technical skills?
- Does the application detail the nature and the extent of trainees' interactions with partner organization(s) (e.g., internships)? Do these interactions provide opportunities for enriched training above and beyond what the trainees receive through their academic experiences?

- Are there any other opportunities for enriched training experiences in the academic environment (e.g., conferences, international collaborations, mentorship, multidisciplinary research environment, etc.)?
- Are there any specific opportunities for professional skills development?

## **NSERC policies**

### **Allegations of policy breaches**

If your review leads to concern about possible policy breaches, report any allegation to NSERC program staff. Allegations of policy breaches must be treated separately from the peer review process, as described in the [Tri-Agency Framework: Responsible Conduct of Research](#). Your external review report should address only the application and merit evaluation criteria and should not mention any breach concerns.

### **Collection and use of personal information**

The information you provide is collected in accordance with the laws governing NSERC. This information is stored in a series of NSERC data banks, as described in [Info Source](#). Details about the use and disclosure of this information are described in [Use and Disclosure of Personal Information Provided to NSERC](#). The information is used in accordance with Canada's privacy and access to information laws.

### **Other policies and guidelines that may be relevant to your review**

- [Guidelines on assessment of contributions to research, training and mentoring](#)
- [Guidelines for the Preparation and Review of Applications in Interdisciplinary Research](#)
- [The Conflict of Interest and Confidentiality Policy of the Federal Research Funding Organizations](#)