

**Summary of reviewer feedback in the
Academy's September 2020 call: natural
sciences and engineering research appli-
cations**



ACADEMY OF FINLAND

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1. Overview

Majority of the applications submitted in the September 2020 call to the Research Council for Natural Sciences and Engineering were reviewed in international review panels. This time 33 review panels were organised to evaluate the applications in the fields of natural sciences and engineering. In the following is presented these panels' feedback for the benefit of the applicants.

2. Scientific quality

Most of the review panels identified excellent or outstanding applications (i.e. overall grade 5 or 6), which were competitive in an international comparison. However, the quality of the applications varied significantly within the panels and among the fields of research.

To improve the quality of the applications, many panels highlighted the importance of **including sufficient scientific details in the application**. This is particularly important for receiving a high grade in scientific quality and innovativeness (item 1.1) and in implementation of research plan (item 1.2) in the review form. **A clear description of the novelty and innovativeness of the proposed research** was a prerequisite for receiving a high grade in the review item 1.1. Notably, **the description of the implementation of the work was often insufficiently detailed**, and this was reflected in the grade.

Related to the description of the novelty, the applicants should clearly state **what is the relation of their application to their other** (e.g., EU funded) **projects**.

In some cases the panel expected more references to state-of-the-art. Only general state-of-the-art was given and what the other research groups are currently doing was missing. It should be clearly stated what is the novelty of the proposed research with regard to the state-of-the-art.

There were quite many applications which were overambitious in scope. These applications would have benefited if there had been more focused and concrete implementation plan that would show what is achievable.

Some applicants did only modelling work. Pure modelling is fine, but without any validation plans the scientific quality and impact are hard to evaluate.

3. Competence, collaboration, and mobility

Several panels were impressed by the many highly networked and internationally-oriented applicants. However, there were also panels which were surprised that the applicants were not internationally very connected –

research personnel consisted mostly of Finnish students and researchers with limited international experience and with a reduced mobility plan.

The panelists often raised the concern regarding **non-specific description of research team and/or collaborators and their roles in the proposed research work**, and pointed out that simply providing a list of collaborators is not sufficient.

The planned mobility and collaborations should always be described clearly and in sufficient details. They should support the research plan and contribute to the scientific objectives. The mobility plan should be tightly connected to the schedule of the project.


Many panels commented that invitation letters / letters of commitment from collaborators were often missing or were found to be quite generic. The letters would give credibility and show genuine interest in the collaboration.

In some cases engagements with stakeholders could also be discussed more in depth.

When assessing the Postdoctoral Researchers, it would be helpful to see who their thesis supervisor was, to help judge their level of independence and work after gaining PhD.

4. Other feedback

- The applicants should **prepare the research plan, CV, publication list and other appendices according to the Academy's guidelines** so as to facilitate systematic panel review.
- The applicants should place emphasis on **describing clearly and properly the state-of-the-art, risk assessment, management and organisational aspects, research methods, research hypotheses and objectives in the application**. A Gantt chart would be helpful.
- The applicants should note that researcher training is part of the scientific review and as such, it is **important to include researcher training aspects into the application**.
- **Responsible science issues were described very generically** / superficially in many applications and seemed like little effort was made to elaborate any details on the subject. There was no information how the responsible science will be put into practise.
- **The sustainable development section was rather weak** in some of the applications, as the applicants did not really consider **how their science is connected to the societal component**.
- In some cases, it was difficult to assess who is to be hired for the project, who is already working in the research group, and what is the



appropriate level of staff resources. Hence, it was sometimes hard to assess the feasibility of the project.

- **The funding applied for** (the project costs) **and requested personnel should be carefully justified.**
- The applicants should **include only published and accepted papers** – not submitted ones – **in the publication list.**
- In case of some applications the list of most relevant publications included papers where the applicant(s) was/were not author(s); also, many ignored the relevance with regard to the proposed research and simply included their best publications to the list.
- The applicants are encouraged to **add figures and tables in their application where appropriate.**
- In some cases, **the lack of coordination between applications from the same research group was surprising** – on occasion there were several applications on similar or overlapping topics.
- Some panels emphasized the importance of consortium applications, if the scope of the application requires multidisciplinary expertise.
- The applicants are encouraged to **discuss the application with colleagues before submission.** Receiving some mentoring in preparation of application is particularly important for younger applicants with limited experience in applying for research funding.
- Some applications were clearly hastily and poorly prepared and would have benefited from **proof-reading.**