



*Advancing
Astronomy and
Geophysics*

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From the Executive Secretary

Efficiency & Effectiveness of Peer Review

The Royal Astronomical Society Response to the RCUK consultation

Consolidation of Research Grant Funding

Q1. How might such changes be implemented in a manner that would meet the needs of your organisation and the UK research base, whilst maintaining the characteristics of an efficient and effective peer review system?

Q2. What level and length of funding, relative to your current Research Council funding, would be required for your organisation to consider this option more attractive than the opportunities currently available in responsive-mode?

Q3. What steps might Research Councils and research organisations take to ensure that more use of larger or longer-term grants would not reduce innovation and dynamism within the research base, and the support of new people and ideas?

The RAS favours consolidation of separate research projects into a single submission, along the lines of the Rolling Grant system operated by PPARC for many years, and commended by the recent International Review of UK Research in Physics and Astronomy report. The consolidation should be at the level of an academic discipline, and not at departmental or institutional level. This does not preclude consolidated grants being multi-institutional.

Individual Principal Investigators should be identified with each project within a consolidated grant application and each project should be peer-reviewed in the same way as an individual responsive grant application. The initial allocation of resources should be made to individual projects although some flexibility in the use of resources should be permitted. It is particularly helpful for early-career scientists to be identified with grants awarded for their projects.

Consolidated grants should be awarded for five years with an optional review after three years when continuation of projects and/or funding for new projects is sought. A longer period between the reviews of grants is not supported as this is likely to lead to a reduction in the competitiveness of research funding and potentially impact research quality.

An advantage of this type of consolidated grant is that a research group has to think through its whole research strategy and decide which projects will be seeking support. It is more likely to pre-filter projects, thereby reducing the number of projects submitted, compared to

individual responsive grants, and this can lead to an increased success rate. Consolidated grants give an opportunity for a Research Council to get an overview of the whole research programme and to, where appropriate, visit the institution and allow the applicants to present and discuss their projects.

Small research groups should not be required to submit consolidated grants.

Institutional-level quotas

Q4. How might this change be implemented in a manner that would meet the needs of your organisation and the UK research base, whilst maintaining the characteristics of an efficient and effective peer review system?

Q5. What steps might Research Councils and research organisations take to ensure that institutional quotas do not result in a comparable or increased level of peer review cost due to the establishment and operation of selection processes within research organisations?

Q6. What steps might Research Councils and research organisations take to ensure that institutions would continue to submit proposals for collaborative, high risk and interdisciplinary research, and proposals from early-career researchers?

Institutional-level quotas are not supported. As noted above, consolidated grants can lead to a pre-filtering of applications anyway. It is far from clear that universities would be effective in selecting which submissions to support, with institutional pre-selection likely to use different criteria to a grants panel, and hence there is less chance of the best science being supported.

Controlling Resubmissions/Recycled proposals

Q7. How might the Research Councils best manage resubmissions from the research community? In particular, what steps could be taken by Research Councils to distinguish between a resubmitted proposal and a genuinely new proposal?

It is recognized that this is one of the most difficult areas as there has to be a careful balance between avoiding unsuccessful applications automatically being resubmitted and fairness to applicants.

With consolidated grants, it is appropriate that individual projects which are not supported cannot be resubmitted until the next review, unless the assessors specifically allow this. Projects that are entirely new, and could not be supported by the consolidated grant, and projects for new staff, should be allowed to be submitted as responsive grants.

For standard, responsive, grants, a simple time limit of one year – unless a shorter interval is suggested by the assessors, is probably acceptable and setting up an elaborate filtering system (and it will have to be sophisticated) to prevent ‘unwanted’ resubmissions may well be wasteful. Informative feedback is essential so applicants can make an informed judgement on whether to resubmit.

It is most important that any rules for resubmission are clear and applied consistently.

Greater Use of Outlines

Q8. How might this change be implemented in a manner that would meet the needs of your organisation and the UK research base, whilst maintaining the characteristics of an efficient and effective peer review system? For example, how might any potential impacts on increasing the time taken to fund new research or reduced effectiveness in identifying the highest quality research proposals be minimised?

Q9. What impact would the greater use of outline proposals have on the number of outline and full proposals submitted to the Research Councils, both within your organisation and across the UK research base?

Q10. What steps might Research Councils and research organisations take to ensure that the overall time saved on the preparation and peer review of full proposals would be greater than that incurred by an increase in the number of outline proposals?

Extending the use of outlines beyond directed programmes is not supported.

The effectiveness of outlines depends critically on there being sufficient information to make a reasonable assessment and it is then not clear that it would reduce significantly the time spent by applicants. If the outline is brief then there is a danger that a larger number will be submitted than occurs with full grant proposals, and this would increase the loading on the peer review system. Another disadvantage would be that at least some referees or panel members might see the same proposal twice, once as an outline and once as a full proposal. Although triage will take place at the outline stage, even if in the end only 25% will get funded, one would invite at least the upper 50% of outline proposals to compete. Finally, this could make the process potentially even longer than it is already, which is undesirable.

Assessing potential economic impact

Q11. Without compromising research quality, how could Research Councils develop the peer review process to ensure that potential economic impact is effectively reflected within proposal assessment?

Q12. How can Research Councils ensure that reviewers have the skills, experience and information necessary to assess effectively potential economic impact?

Peer review for scientific excellence and judgment of economic impact are two different activities, and these should be clearly separated. The lack of any foreseeable economic impact should not influence the funding of the most highly rated proposals. Applicants should always be encouraged to indicate where there might be economic impact and in such cases the peer review process should assess this.

General Questions

Q13. If the four options (i.e. consolidation; institutional quotas; controlling resubmissions; greater use of outlines) were to be implemented in the manner you have suggested, which would you recommend?

The RAS supports the consolidation of grants within subject disciplines, provided that each project, wherever possible, is identified with individual researchers. It does not support institutional quotas or the greater use of outlines.

Q14. The Project Board considered that selective disincentives (pp 61-62) for individuals, or indeed organisations, with particularly low success rates may offer a way to improve efficiency but considered that charging for proposals (pp 63-64) would not produce material savings. We would welcome your views on these conclusions and your input on the types of disincentives (including charging) that you thought

would be effective and how they could be best applied.

The RAS does not support the notion of charging for proposals. It would be reasonable for Research Councils to alert those organizations with very poor success rates to the time spent, and largely wasted, by applicants and reviewers.

Q15. Are there any options not mentioned in the report that you consider would enhance the efficiency and effectiveness of the Research Councils' peer review processes? If there are, please provide details.

There are no additional options to be added.

The RAS would, however, like to emphasize its continued commitment to the peer review process as an essential element in the allocation of grants. Despite the associated overheads, it provides the most effective way of ensuring the highest quality research is funded. There is, however, some concern that the interval between the application of a grant and the outcome has become too long.

The peer review should include the extensive use of specialist referees who are selected by assessors, with the final allocations made by a panel of assessors. This does not preclude the use of the strategic needs of a research council from being part of the allocation process.

It is essential that any process has clear guidelines, for applicants, referees and assessors and that these are applied fairly and consistently.



David Elliott

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