Generalised feedback on CRCRM applications

Due to the number of applications submitted to the CRCRM scheme, UKRI is unable to provide specific feedback for each application. However, feedback has been collated from the Interdisciplinary Assessment College panels involved in the assessment of applications and summarised below. The points outlined below will not all be relevant to individual applications but should provide support for developing full stage applications or submitting outline applications to any future rounds.

A summary of key features of both strong and weaker applications has been provided, as well as recommendations for preparing future applications. The outline and full stage feedback from round 1 has been combined and additional feedback from round 2 outline panels has been added. Some feedback is specific to either the outline or full stage as indicated.

Key features of strong applications

Interdisciplinarity & Research team specific points

Interdisciplinarity was deeply embedded and built into the project framework. The impact of the proposed project and that it was only achievable through interdisciplinary working was clear, in the following ways:

1. There were clear examples of co-creation between disciplines and partners.
2. The reciprocal benefits of the application to all disciplines involved were made very clear.
3. Where AI was involved, areas where AI would be advanced were articulated well
4. The management and integration of the interdisciplinary teams was clearly outlined in the application with the contribution of each member clearly described. The applications clearly demonstrated how teams will work together, demonstrating effective dialogue and integration of disciplines was evident throughout the application.
5. Applicants articulated the challenges of interdisciplinary working and how they would address these.
6. Applicants had a compelling team to deliver the project and evidence of the team working together was provided. They described not just what the interdisciplinary team looked like, but what the contribution of each member was, how the team would integrate research across the project and what the reciprocal benefits to each discipline were. The research team had clear contributions/expertise.
7. Interdisciplinarity training for PDRAs/ ECRs was considered and planned for.
8. Applicants took care to write for all audiences using easy, understandable language that could be understood outside the fields.

General points

In general, strong applications demonstrated the following:

1. The highest scoring applications had a clear vision, and generation of ideas. The research was exciting and genuinely disruptive with the potential to have real world impact or advance multiple

areas. They generated a level of excitement and enthusiasm about the novel ways that were being proposed to address important issues.

2. Applications were specific and focused; the problem was articulated to a high standard and had clear evidence of novelty, timeliness, and impact.
3. Applications articulated the challenge without dwelling on technical detail (outline stage only).
4. Applications were very clear on the research methodology to be used and how it was innovative. The approach was well explained and also clearly demonstrated how the approach will help to achieve the project's vision.
5. Applications were often ambitious but displayed a realistic understanding of what could be achieved in 24 months and made it clear how the 2 year project fitted in with a longer term vision.
6. Applications had some element of risk assessment and management (outline stage only).
7. Risks were clearly identified and had good mitigation plans in place (full stage)
8. The Project Lead (PL) responses were well articulated, and any questions were answered fully (full stage only). Remember that the assessors have provided the feedback and requests for further clarity in good faith to help you present your case at its best. Avoid restating sections of your application or referring back to relevant sections without further elaboration to address the question.
9. Resources were well justified (full stage only)
10. Applicants showed clear evidence of how project partners would engage with the project.

Key features of weaker applications

Interdisciplinarity & Research team specific points

The interdisciplinary aspects of the application were vague and quoted the assessment criteria without showing how or what they had done to address the scheme objectives, including the following points:

1. There was a lack of evidence of how the project had been co-designed. The application did not explain how the proposal was co-created by the disciplines involved, or the importance of co-creation/co-design in addressing the research challenge. There was often an absence of different disciplinary perspectives.
2. The reciprocal benefits were not obvious or not sufficiently explained.
3. There was a lack of evidence of how the interdisciplinarity would be managed and delivered and were missing details of how the challenges of conducting interdisciplinary research would be addressed.

Interdisciplinarity was poorly articulated, resulting in applications being considered multidisciplinary where integration of disciplines was not evident i.e. disciplines were siloed. Some applications assumed that if Project Lead and Co-Lead were from different disciplines that this would make it interdisciplinary, as evident in the following ways:

1. In some applications the disciplines could easily be decoupled and different aspects of the planned work could be done in isolation from the other disciplines involved

2. There was a lack of a strategy on how to manage new collaborations across different disciplines. Where there was no clear management plan, disciplines seemed “bolted-on” rather than integrated. The application did not explain how the workstreams interacted with each other.
3. A tool was transplanted/bolted on from one discipline to another. The tool itself was not being developed as part of the application or applied to a new disciplinary area.
4. This was a particular issue in many applications using AI.
5. AI was often included, but there was no methodology included for the AI element and the reciprocal benefits to AI were not clear. Whilst AI was badged as adding to the interdisciplinarity and the applicants spent time justifying this, but without details on the methodology, and no clear reciprocal benefits, it was apparent that the AI was being used as a tool for the main project/beneficiary.
6. The individual research council responsive mode schemes will support multidisciplinary proposals under the Cross-Council Remit Agreement and will support AI technologies applied to the research challenges within their discipline areas.
7. Some projects were over ambitious in terms of the number of disciplines to “boost” interdisciplinarity, but failed to connect them.
8. Applications used complicated, discipline-specific technical language and jargon and could therefore be difficult to understand by a panel with broader cross-disciplinary expertise. The assumption was made that assessors would be able to understand it.
9. Some of the STEM projects would have benefitted from including Social Sciences.

General points

Common reasons why applications were considered weaker are summarised in the following points:

1. Some applications did not take into account the full call guidance and read as though they were prepared prior to the call being launched (round 1 outline applications).
2. Applications may have had a strong vision, but how this vision would be achieved was not well-demonstrated within the approach with some ideas not fully worked through.
3. Applications were labelled as transformative without demonstrating their transformative nature. The outcomes and how they would be achieved were not clearly articulated.
4. The impact was not explained well and there was a failure to articulate vision.
5. It appeared background research was not sufficiently studied for some disciplines involved in the proposal. Some applications were considered to be missing expertise in the team and therefore there was a risk of overlap with pre-existing work from teams with insufficient background knowledge or experience of previous research in the field.
6. Outline applications did not adequately find the balance of the short form application and providing enough detail, particularly of methods, to evidence that the approach and methods had been thoroughly thought through. There was a lack of clarity around whether methods were being developed or applied and therefore the novelty was not clear (outline stage only).
7. Projects were over ambitious in terms of timeframe without suitable mitigations in place.

8. Technologies were being applied without the related social considerations and some proposals lacked the full consideration of the ethical issues or not included as expected. This was highlighted in particular for work involving minors and/or neurodiverse groups. Outline applications should still reflect on the ethical issues for delivering the project at a high level which would then be expanded on in the full stage application.
9. Little or no evidence of thought was given to the team management with PDRAs sometimes siloed.
10. The allocation of Project Leads and Project Co-Leads time was not sufficient to deliver projects.
11. Applications indicated that stakeholders would be required but their role was not clearly outlined which suggested limited engagement.
12. Some projects involved a high number of project partners without evidence that the management of these partnerships would be feasible to deliver.
13. Project Lead responses did not fully address the concerns or questions raised by the assessors and instead repeated what was already in the application (full stage only).

Recommendations for developing full stage applications and future CRCRM outline applications

Interdisciplinarity & Research team specific points

Read the scheme guidance fully (at least twice!), including the webinar recordings and video guidance to interdisciplinarity and reflect on whether your research idea is truly interdisciplinary and therefore fits the aims of the CRCRM scheme. You should:

- craft the application such that it places greatest emphasis on those aspects that are innovative, timely and important, i.e. the project is an opportunity to create a breakthrough on a topic that has impact
- consider whether this is an appropriate scheme to suit your funding application, or whether existing research council responsive mode schemes or UKRI strategic opportunities would be more appropriate (opportunities are advised on the Funding Finder section of the UKRI website)

Begin in good time so that there is sufficient understanding of how disciplines can be brought together, how challenges in interdisciplinary working would be addressed and how disciplines could benefit from the proposed research and interdisciplinarity. Demonstrate how using an interdisciplinary approach will answer questions and will lead to where the research can be advanced that is different to a non-interdisciplinary approach. Think carefully about interdisciplinary research in terms of integration, co-creation and the reciprocal benefits to all disciplines involved, ensure that these are clearly articulated**,** including long term and strong management plans that outline how interdisciplinarity will be delivered. You should consider the following points:

1. Ensure that proposals are co-designed from the outset and articulate this process clearly in the proposal. How does leadership and governance of the project ensure transformative interdisciplinary working?

2. Ensure there is reciprocity across disciplines and that it is clearly articulated in the application. The proposed reciprocal benefits need to be convincing and make sense from the research.
3. Show that the disciplines are fully integrated across the application, not just the inclusion of different disciplines. Demonstrate a good interweaving of disciplines, outlining who will be involved in which work packages.
4. Identify and articulate a way of working that allows the challenges of interdisciplinary working to be overcome. Simply saying the team will have regular meetings is not sufficient.
5. Ensure that one work package, or one disciplinary area, does not dominate the detail of the proposal.
6. Show how clear communication will be maintained across disciplines. Detail precisely how collaborators and disciplines will talk to each other in a way that overcomes differences in disciplinary language.
7. Ensure that the work and the expertise is clearly mapped back to the team proposing the application.
8. Allow sufficient time to work with colleagues to ensure all co-applicants are fully involved in the creation of the application and be sure to include all relevant parties, with clear justifications for their involvement. Ensure you have the appropriate discussions with project partners in particular around rights to intellectual property arising from the research and the contributions to the project.
9. If all of the applicants are in the same department, they should clearly articulate how the work is truly interdisciplinary.
10. Do not overcomplicate the project by unnecessarily involving disciplines from more research council remits. As long as the application covers the remits of at least 2 research councils it is eligible for this scheme. Adding more research council disciplines does not automatically lead to a higher score.

Where projects involve developing a tool that would be relevant for another field, these proposals should clearly demonstrate the interdisciplinarity requirements of the call and how that tool is being developed as part of the research and not just applied. This was particularly relevant to applications involving Artificial Intelligence (AI), and you should consider:

- including sufficient detail to explain how that part of the application is novel/being developed and what reciprocal benefits there will be to that discipline as well as how, why and by whom it is being done
- how data will be collected and managed, and if it is the correct data upon which to apply AI
- what AI methods are going to be used and clearly articulate this
- clearly articulating if AI is part of the interdisciplinarity of the project or if it is only a tool to help deliver the project.

General points

Applicants need to look at the guidance materials from UKRI, and consider the following points:

1. Applicants need to be aware of assessment criteria and how it will be assessed. Look at assessment criteria and use them as questions for your proposal and make it easy for the assessor to see the aspects that will be assessed. Ensure each point under each of the criteria is addressed.

2. Convey a clear and compelling vision for the project; what makes it important, innovative and exciting. Ensure the vision and approach clearly align.
3. Explain why the research matters; how it will make a difference in the world or who it will benefit – or how it will advance knowledge. The work proposed should be high quality, novel and timely. This needs to be clearly articulated and reasoned.
4. Make sure prior research is well researched and understood.
5. Clearly distinguish the outputs, outcomes, and impact.
6. Keep the proposal grounded and focused but be careful not to make it too technical. Explain terminology in your application where appropriate as linguistic differences in terminologies may exist across disciplines and assessors from the breadth of disciplines in your application will be assigned to assess it, as well as more generalised members of the panel who will read it.
7. Provide clear methodologies to demonstrate how the vision will be realised and that the approach has been well considered.
8. Avoid generalised statements about the innovation of the project and use the space to show the detail of project delivery. Ensure any sustainability claims are evidenced with data.
9. Consider if the research is feasible for a 24-month project and set out how it fits within a longer-term vision if necessary.
10. Cost the project realistically.

Consider equality, diversity and inclusion (EDI) and Responsible Research & Innovation (RRI) from the outset, including:

- when research uses human participants, you should ensure that the sample size is appropriate and articulate this clearly, for example, differences in sample sizes required for research projects can exist across disciplines
- the social context of your research

Think carefully about appropriate collaborators, considering both academic and external project partners to deliver the research. Do bring in the expertise from outside your own institution, if necessary. Consider the following points:

1. Balance the participation of leads, co-leads and research associates, considering FTEs; include details of support and time allowed for PDRA career development.
2. Ensure any partners that are necessary to project delivery are shown to be fully engaged in the project. Show how the teams are coordinated to deliver the project.
3. Name and specify the role of external stakeholders and routes to engagement of policy makers and their role in co-design if relevant. If the project is dependent on access to resources to deliver the project via project partners you should clarify how this access will be ensured.
4. If there is a knowledge gap, explain how this is going to be filled – leave nothing to be assumed.
5. Outline clearly how research organisations (ROs) will provide additional support.

Project lead responses should be clear with all questions answered fully (full stage only). You should consider the following points:

1. There's no need to repeat panel member comments but do be clear which point you are responding to.
2. Keep a neutral tone – however strongly you feel about a comment; the assessors will have made the comment based on the information presented to them as well as their own knowledge or experience.
3. Focus on answering all questions and/or addressing any issues – it may be that the assessors have mis-interpreted your project, and this is your opportunity to provide the missing information that would help them, or to explain it in a clearer way.
4. Be specific in your comments to make the assessors role as straight forward as possible.
5. Provide further information in response to questions, avoiding rewriting your application or just referring back to the relevant section in your application without elaborating further to address the question or concern – the assessors will already have read this and will have given a lot of consideration to the questions they asked you.

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