Nurse Review of Research Councils: Call for Evidence
Response Form

Please state whether you are responding as an individual, or on behalf of an organisation:

On behalf of an organisation

Please write here your name/ the name of your organisation and contact details. This would help us to contact you if we have further questions.

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Summary of Major Points

1. The UK has much to celebrate in terms of the effectiveness and efficiency of its research base, the intellectual and other impacts of its research, the strength of its international research collaborations, the world standing of its universities, and the benefits of its dual funding system.\(^1\) There is also good research evidence that the UK is much better in fostering knowledge exchange and higher education-business-community interaction than was perhaps thought to be the case several years ago.\(^2\)

2. The Research Councils play a vital role in facilitating, encouraging and supporting science and research, advanced education and training; knowledge exchange; public engagement with research; and fostering excellent research and impact (as evidenced by the large proportion of REF impact case studies founded on RCUK funded work\(^3\)). The Research Councils have made and continue to make a significant contribution to the UK’s international standing in research and to realising the benefits of research to the UK.

3. We see no case for major changes in the objectives, governance or operations of the Research Councils. There are, as always, opportunities for ongoing improvement, and in this context the review led by Professor Sir Paul Nurse provides further input to that process following on from the Triennial Review and the actions taken by the Research Councils and at RCUK Executive level in response to that Review (and in light of Our plan for growth: science and innovation, December 2014).

4. Research Councils should be lead players in the competitive allocation of centre, programme, project and postgraduate funding, the major portion of which should be investigator-led, ‘bottom-up’ if you will, with national and international peer reviewers identifying excellence (‘excellence’ rightly being ‘at the heart’ of science and innovation strategy). Research Councils should also play a lead role in infrastructure planning and investment.

5. Science, which is one of the UK’s clear competitive advantages, will be severely harmed if its funding becomes a “geopolitical football” and regional considerations are allowed to outweigh excellence. There should be no side-lining or working around the Research Councils – they should be government’s primary agency on the competitive side of the dual funding model for delivering research excellence, knowledge exchange and outcomes of societal benefit.

6. Reallocating funding into ‘strategic’ large-scale initiatives at the expense of maintaining a breadth of excellence from which new ideas can flow, will be to the long-term detriment of the research base, and its ability to foster innovation.

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\(^2\) See e.g. https://www.hefce.ac.uk/media/hefce/content/What,we,do/Knowledge,exchange,and,skills/HEIF/HEIF11-15-FullReport.pdf; http://dera.ioe.ac.uk/19858/1/2014_keheifimpact.pdf

\(^3\) See database of REF case studies by funder http://impact.ref.ac.uk/CaseStudies/Search1.aspx.
Please provide evidence and views in relation to the following themes:

1. Strategic decision-making

**How should the Research Councils take account of wider national interests including regional balance and the local and national economic impact of applied research?**

The Research Councils address the national interest by funding the best research wherever it is done. By generating competition based solely on excellence, they have helped create (with HEFCE based funding also driven by excellence) the incredibly effective and efficient UK research base that we currently have⁴, from which there are huge benefits to society and the economy. Regional development is, and should be, addressed by other government agencies and interventions. Funding research in ways that seek to address ‘regional balance’ but which lack national and international credibility and which is of lower quality will ultimately be a bad investment for the UK.

The UK is a relatively small country with a number of excellent national facilities. When investing in new national facilities, consideration of how these should be established must include relevant research excellence, peer review and potential regional synergies as well as geographic location, and the processes should be transparent and clearly communicated. When facilities are established, ongoing resources also need to be clearly identified. We would be concerned if it were assumed that these would come from the current Research Council portfolio, without proper tensioning against priorities.

We do not accept that premise that ‘applied research’ delivers local and national economic impact with the implication that others forms of research do not. The current approach of Research Councils to funding excellence and supporting impact activities and public engagement with research is helping to produce research with delivers intellectual, social, economic and cultural benefits, locally, national and internationally.

Universities, as key players in Local Enterprise Partnerships (LEPs), are well placed to look for ways to leverage investments in research and innovation from all sources. Locally, for example, the Vision set out in the Oxfordshire Strategic Economic Plan is that “By 2030 Oxfordshire will be a vibrant, sustainable, inclusive world leading economy, driven by innovation, enterprise and research excellence.”⁵ World-class research in e.g. science, medicine, engineering and materials, supported competitively by the EPSRC, MRC and STFC, amongst others, has to date laid the basis for City Deal/LGF co public-private investment in a new business incubator at the University’s science park, the Bioescalator near the main teaching hospitals, and in new research and technology centres such as the new Centre for Applied Superconductivity. Science and innovation links and innovation-led business growth are also at the heart of major transport, housing and ICT initiatives in the region.

The Research Councils are, from our perspective, acutely aware of government priorities. Equally importantly, they are also aware of and committed to addressing scientific and societal challenges, more broadly, which run well beyond the term of any one Parliament and are not tied to any government of a particular political hue.

It is vital that the Research Councils have a high degree of independence and focus not only on the short-term but also the medium and long-term. The ability to support the generation of transformative ideas depends on this independence.

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⁴ As evidenced in “International Comparative Performance of the UK Research Base, 2013”
The value of Research Councils’ autonomy was well argued in the Haldane Report (1918). The Government’s December 2010 ‘Statement on the Haldane Principle’ ended by observing ‘Overall, excellence is and must remain the driver of funding decisions, and it is only by funding excellent research that the maximum benefits will be secured for the nation’ (emphasis added) – this is and should remain a fundamental principle for the Research Councils. And indeed for government investment in research and innovation as a whole.

Is the balance between investigator-led and strategically-focused funding appropriate, and do the right mechanisms exist for making strategic choices?

We support the Research Councils work to identify and fund strategic priorities and note that these are a key way of supporting interdisciplinary research (see section 2), but it is critical that a strong remit of Research Councils should be directed towards investigator-led research.

Allowing Principal Investigators (PIs) the space to identify the most important questions is highly strategic. It is incredibly agile and allows new areas to be explored and the value of that exploration to be quickly assessed. It builds international networks where the best minds tackle challenges in a mix of competition and collaboration, and gives the UK access to the best ideas, talent and research facilities in the world. It also acknowledges that it is not possible to predict where the next transformative discoveries will occur or what social and historical insights will be most valuable as the world political landscape changes.

Investment in post-graduate researchers should also be celebrated as a strategic investment by the Research Councils, on the UK’s behalf and it is vital that this is maintained in order to secure support for future (unknown) strategic areas.

Providing training, and support to early career researchers for investigator-led projects, across a range of disciplines ensures a healthy research base with the breadth to exploit new findings and respond to new challenges.

Strength and breadth is one of the features of the UK research system that has contributed to its world-leading nature.

Research Council programmes such as Impact Acceleration Accounts, which provide focussed funding for knowledge exchange, but allow universities the ability to be agile in response to local and regional needs, as well as research strengths, are a very strategic way to maximise the value of research investments. (We would hope that AHRC would follow the other Research Councils in developing this funding stream).

Within the academic community, there is great concern when the allocation of funding appears to take place outside the norms of Research Council open competition, peer review, and excellence. One view raised internally expressed bluntly what was a common theme:

“Given that there are areas where strategic investment is justified we are generally concerned at the way it is determined where the money goes. There is often a complete lack of transparency -- no clear mechanism for making decisions and no discernible community review of them. Recent examples include ... the plethora of institutes that are receiving massive capital funding apparently on the whim of a small number of unaccountable individuals (with no consultation even with the Research Councils who are stuck with administering them) and with no indication of where the resources to run them will come from”.

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6 Appendix A, The Allocation of Science and Research Funding 2011/12 to 2014/15
There are real and pressing worries about the ability of the UK to maintain its effective and efficient research base if ministerial (and frankly electoral) interests are able to override the established Research Council processes of competitive peer review. Crucial decisions about national investment require serious scrutiny by all stakeholders including researchers, as well as a clear process for decision-making.

2. Collaborations and partnerships

**How can the RCs catalyse collaboration between institutions?**

Research Councils already support cross-institutional research whenever it adds value, and therefore it is not clear what the benefits would be from more detailed Research Council involvement in directing individuals or institutions. As one of our departments stated:

“Most of [research in this area] these days already involves collaboration between institutions -- often internationally as well as nationally -- and we do not think there is any need for Research Councils to deliberately try to catalyse collaboration. It will happen naturally if the science needs it – if the science doesn’t need it then it shouldn’t be forced as this won’t gain anything”.

Critically, the way in which Research Councils announce grants and report annual league tables by only indicating the administering institution does not illustrate the huge amount of collaboration. Statistics about the number of investigators and participating institutions on awards would provide useful evidence of how collaborative the research base really is.

Major funding calls are likely to attract multi-institution responses because the researchers themselves want to work together and the scale of the funding is sufficient to put together activities across institutions at scale. This can even be made an explicit requirement of the call. Crucially, enough time should be given between announcing strategic funding streams and application deadlines to allow effective collaborations to be developed. The recent AHRC ‘Open World Research Initiative’ call is an excellent example of this, with over a year between the initial announcement and the final full application submission.

**How should the work of the research councils integrate most effectively with the work of agencies funding innovation, such as Innovate UK, and with the work funded by Departmental research and development budgets?**

Work with, and funded by, other government departments and public bodies including Innovate UK, is both different and complementary to Research Council funding. It is also important to note that Research Councils themselves are one of the most important funders of innovation (e.g. through Impact Acceleration Accounts, MRC’s translational research etc.), alongside HEFCE’s Higher Education Innovation Fund (HEIF).

We observe the Research Councils are already working well with Innovate UK and other government departments. Stakeholders participate in the Research Councils’ policymaking and advisory panels. Joint programmes develop as opportunities arise. Funding innovation works well, particularly the flexible and agile streams provided from Research Councils and HEFCE, and we would note that constant attempts to alter or influence the innovation landscape can increase complexity and barriers for our industry and user partners. Integration with innovation funding should be via specific Research Council boards whose remit is to fund innovation related work (e.g. MRC Developmental Pathway Funding Scheme board) as this allows discipline specific solutions.
It is important for knowledge-led innovation that we exploit effectively the outcomes from the research base, and therefore it is vital that Innovate UK work more closely with HEIs as key drivers of innovation in the UK. We do not believe that extra Research Council effort is required in this area. Efforts by Innovate UK to ensure that they have programmes tailored for the AHRC and ESRC communities would be welcomed, recognising that ‘one size doesn’t fit all’ in terms of effective exploitation of creativity or availability of co-investment from ‘user’ partners.

**Should the funding of Research Councils be directed almost exclusively to the university sector, with organisations such as the Meteorological Office, the Health and Safety Laboratories and the National Physical Laboratory out of scope?**

Yes. We believe that Research Council funding is best directed by a focus on the university (and research related) sector as is the current position. Other organisations are excellent partners in research endeavours but have access to their own funding streams, and do not fulfil the same research and research training functions of universities.

If Research Council funding was to be opened up, then the total allocation to the Research Councils would have to be increased and all funding decisions should be based on the same standards of international excellence and peer review.

**Do they adequately support interdisciplinary research?**

Inter and multi-disciplinary (IDR/MDR) research should be considered in the context of the questions addressed, and not for its own sake.

We believe that the cross-Research Council Grand Challenges are one of the best mechanisms for supporting IDR/MDR research in context and welcome funding calls that encourage this.

We are engaged with the Research Councils in their attempts to identify and tackle some of the inherent conservatism in peer review which might not always rate some IDR/MDR proposals so highly. We welcome these efforts and would support a joint RCUK and sector review to better understand the specific issues and barriers, and to develop process changes to address these. We believe the Research Councils are receptive to addressing these challenges and we would support work to also examine different international processes that are deemed particularly successful in addressing this difficult problem.

We suspect that the solutions will come down to a strong commitment to, and processes designed to promote, flexibility. Flexible schemes, flexible peer review – a mind-set which accepts proposals that go against the norm but are not therefore judged as ‘out of scope’ or too unusual or risky to fund. Unusual approaches and designs (e.g. two PIs from different disciplines) should be accepted and embraced. We note that the Research Councils’ Rural Economy and Land Use programme was very successful at supporting IDR/MDR, and that space was given on the application specifically to request explanations of the proposed interdisciplinary collaborations which spelt out both the intellectual case and the mechanisms. This assisted the peer review panels to be less risk-averse.

Further work to develop panels with IDR/MDR expertise and experience would also be valuable.

**The effectiveness of ... the links between Research Council-funded activities and other academic, industrial, European and global R&D activities**

We commend the Research Councils for their influence in the Global Research Council,
Humanities European Research Area, and Science Europe and for their efforts to decrease the barriers to co-funding international research through concordats with other national research councils. There are still big challenges to address in this area however, particularly with North America and Australia, and we would support further focus on this by the Research Councils.

3. Balance of funding portfolio

Are the divisions of scientific subject areas between the research councils appropriate?

What are the gaps or holes in the funded portfolios of the research councils?

As per our submission to the Triennial Review, we are opposed to any change in the number of Research Councils or to the disciplinary and enabling focus of each of the Research Councils. The current disposition of Councils recognises, respects and facilitates the different approaches to research across disparate areas. We believe that increasing collaboration between the Research Councils will help them to ensure complementarity, to learn from each other’s experiences, to harmonise policies where appropriate, and to work effectively on joint initiatives such as cross-Council Challenges and international networks.

It is critical for UK research that the Research Councils should accommodate small overlaps to avoid the critical failings that gaps would engender. For the most part, it is felt that the divisions of remit between Research Councils is appropriate, recognising that these must fall somewhere, and that what matters is having robust rules for dealing with work at the interfaces. Sufficient resources to enable Research Councils to be generous in their remits is the single most important way in which the UK could both avoid gaps and improve support for interdisciplinary research. Overlaps can be used as occasional focal points for strategic investment, as intersections are likely to prove fertile ground for important advances. This would facilitate cross-Council working and exploit this creative zone.

The Research Councils may be able to do more to explain to researchers how they consult and handle cross-referrals of applications if the remit is not clear as some researchers worry that their work may fall between gaps/cracks.

On the question of gaps or holes in the funded portfolios of the Research Councils, this is tricky. The question itself implies there is a master map of what could be funded. If there were such a map or list, and there are no funded projects in say Area X, is that because the ideas proposed were not rated highly enough? Or because other organisations are funding X? Or because there is no researcher interest in X? Or because X is not feasible in the UK? Etc. Etc. And then what action could one take, if any? Should e.g. a Research Council fund a study in X even though the peer reviewers regard it poorly? (We would say no). One needs to also be wary that people will take advantage of the question to simply advocate for new/more funding in an area of particular interest to them, and that research is a constantly changing landscape which would need to be mapped at regular intervals.

Is the balance of funding between different Research Councils optimal?

We feel that a review of the balance of funding between research councils probably is desirable. For example, AHRC and ESRC historically represent around 10% of the RCUK funding portfolio, however this is an area where research ambitions, reach and cost have increased, particularly as
big data elements now inform costs as with ‘science’ subjects. As a comparator, the European Research Council has allocated 17% of its budget to social sciences and humanities. These are also areas where matched funding is often harder to access due to the absence of large industry investors. Having said that, each discipline grouping would not doubt fiercely advocate for the same or more likely greater funding. On what basis would changes be made? For example, can one judge excellence of outcomes between the disciplines?

We would take this opportunity to strongly reiterate our support for the dual support system. We consider that the dual funding model, and within this the activities of the Research Councils, have served (and do serve) the UK well. Block grants (from Higher Education Funding Councils) support a research infrastructure and capacity that competitive Council funding then engages to deliver research of international calibre. It should be noted that countries without block funding usually have multiple sources of overlapping competitive funding (e.g. DoE, DoD, DARPA and NSF in the USA), and that this is not the case in the UK with the exception of medical research where the medical charities, MRC, NIHR and others all make a significant contribution.

Within each Research Council is the balance of funding well-judged between support of individual investigators, support of teams and support of equipment and infrastructure?

Whilst the balance of funding is broadly right, the issue of equipment and infrastructure support is critical, especially given the Research Councils requirements for institutional contributions which are unsustainable in the long term (as was implicitly recognised in recent special EPSRC managed equipment rounds in which it was funded at 100%). Areas such as humanities and social sciences, where equipment demands have traditionally been low, will see increasing pressure. Different academic communities have different needs, and this is something that should be left to each Research Council to determine, providing proper consultation and review of needs, including proper consideration of the landscape (e.g. other investors in infrastructure with whom there should be joint working).

4. Effective ways of working

The Research Councils consult closely with stakeholders, and especially with the research community, industry and research users, and have increasingly built strategic partnerships with key organisations to help design, deliver, evaluate and further develop their objectives, strategies, funding programs, and procedures.

We value highly the number of channels which Research Councils operate to take on board input from stakeholders: on-line forums, sandpits, advisory boards, town meetings, visits to universities and strategic relationships etc. We recognise that individual Research Councils are constantly assessing and looking to refine and improve peer review, and this should be credited.

However, there is still room for better engagement by the RCUK Executive Group with stakeholders to develop a shared vision for the delivery of excellent research in an efficient and effective manner. We would value a mechanism that allowed RCUK Executive Group to receive advice from external stakeholders including industry and academic leaders.

We believe that research council policy is stronger and better informed if the research community is adequately consulted on major policy initiatives. We were uncomfortable with the haste with which the Open Access policy was introduced and the lack of meaningful
consultation. We would encourage the RCUK Executive Group to be more consultative and to resist any pressures to frame RCUK-wide policies that do not take into account the ways world-leading research is undertaken across different disciplines and the different forms of excellence and impact each delivers.

We believe that staff exchanges between the Research Councils and universities, especially at Director and Associate Director level would further help mutual understanding. We also believe it is vital that the Research Councils are able to attract the best academic staff to future CEO and Director positions. We would welcome discussions with the sector about how to improve the attractiveness of these roles by reviewing salary, length of appointment, and scope of role (e.g. including the flexibility to maintain research as many PVCs within universities do).

Strengthening the role of Council for each Research Council may also help to attract the best senior academics to engage with their work.

5. Any other comments?