

Te Ara Paerangi - Future Pathways Green Paper

Submission from Professor Frank Scrimgeour

to the Ministry of Business, Innovation and Employment

by email to FuturePathways@mbie.govt.nz

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1. This is the individual submission of Frank Scrimgeour. I am an active university based researcher who has undertaken externally funded research in New Zealand for more than three decades. The majority of this research has been associated with the economics of natural resources and the environment.
2. I have also published articles including empirical analysis of research and development and expenditures, their impact and the performance of research institutions.
3. I have benefited from collaboration with researchers in other disciplines and other institutions.
4. I have participated in peer review of research projects, programmes and institutions in New Zealand and overseas.
5. This is a limited submission not trying to address all issues under consideration. I note my experience is limited and others have more to contribute on some topics.
6. I would emphasize the importance of this consultation. Adequate and appropriate research is essential to enable NZ is to achieve a high wage economy, with a society with access to high quality public and private amenities,
7. I note that this Green Paper is not the only example of institutional reform at present in NZ. Hence, my view is that as well as learning from the submissions, it is also instructive to look at learning from the *Health and Disability System Review: Final Report* and subsequent steps in implementation and from the establishment of Te Pūkenga and the associated successes and disappointments.

Ngā Whakaarotau Rangahau Research Priorities

8. It is critical that research priority setting processes appropriately recognise that there are both national priorities and institutional priorities. Better outcomes are achieved when there are fewer National Priorities that are well specified rather than long lists of

priorities. Peak bodies in research such as Universities New Zealand, CRI collectives or a proposed NZ research Council are not currently well positioned to achieve research priorities that will be sustained through time.

9. Priority setting will always be contentious and there will always be tension between political aspirations, organisational aspirations, researcher aspirations and beneficiary aspirations. Politics is a core part of national priority setting and researchers and scientists are not well served unless this is recognised. Researchers and scientists assist the decision process when they provide accurate information as to possibilities and trade-offs.
10. The political process and its support is enhanced when decision-making is well informed and it is structured to facilitate limited decision-making on important issues which results in medium to long term commitments by successive Governments.
11. Further, it is important to recognise the current system is not just CRI, Universities and the Government. There are very important contributions by other parties such as non-Government research organisations (e.g. Cawthron Institute and DairyNZ), Hospitals, Iwi based research teams, corporate research teams (e.g. Fonterra). This suggest in evaluating any proposed change it is essential that the indirect effects on other parties be adequately considered.
12. I note that recommendation 11 of the 2018 Australian inquiry into Government Funding Arrangements for non-NHMRC Research was for “closer examination of models, strategies and incentives, including those used internationally, to increase industry collaboration with universities and other publicly funded research institutions.” Despite past effort there is opportunity for NZ to do more and be more creative in this space.

Te Tiriti, Mātauranga Māori Me Ngā Wawata O Te Māori Te Tiriti, Mātauranga Māori, and Supporting Māori Aspirations

13. The priorities expressed in the Green Paper are consistent with our existing context. Base funding associated with capability development for every research institution in the country (in partnership with Iwi entities) is essential if this capability is to grow. Without the investment the market creates unproductive competition between institutions for a small number of people

14. Research by its very nature international but it also occurs in local contexts and must address local as well as universal or global problems.
15. International means by design researchers engage with international collaborators and research leaders. CRI and Universities are reluctant to invest adequately in international relationships because of concerns about cost and carbon footprints. Hence, any new system should proactively provide resource and design so that global engagement is effective.
16. Local, includes regional and it is appropriate that there is significant research capability in all regions of the country. This suggests if we have fewer larger organisations that they have explicit mechanisms to engage and participate in an appropriate set of locations This suggest appropriate consideration of the relationship between CRI, and other institutions such as health institutions and regional tertiary education precincts such as those in Tauranga, emergent in Whangarei and in other parts of the country.

Te Tuku Pūtea Funding

17. The case can be made from separating overhead funding from project /programme funding. However, it is no panacea. Several questions have to be raised. Who is eligible for the overhead funding? Is it determined based on research outputs, focus or something else? It would not be appropriate to disadvantage the non-CRI research organisations by excluding them but it should not be expanded so it encourages the proliferation of additional research entities¹.
18. It is important that CRI and Universities do not dissipate overheads. The calculation of overheads should be based on the number of A and B ranked researchers in a research unit and the number of PhD students in a research unit.
19. With regard to operational grants, it is important that each funded activity include appropriate funding of social science and business & economics research capability. It could well be that the biological, environmental and physical sciences are the largest share of grants but adequate investment in these spaces is essential to maximise the social and economic return on the investment in research.

¹ Disadvantaging non-CRI in this way would be seen as shafting. It would undermine collaboration. It would also undermine private sector commitments to increasing research funding.

20. Overhead funding or operational funding should be available to include the funding of research team organisational leadership to complement research/science leadership.
21. All receivers of funds should be required to lodge research outputs by author in a National Research Database which is accessible to all. Further, all data and software code associated with analyses should be submitted to the National Science Database. This should be open to all NZ researchers affiliated with MBIE but not to the wider public.

Ngā Hinonga Institutions

22. Despite the good features of the current system, it is characterised by inefficient administrative processes within CRI, Universities, and Government Ministries etc. Further, some smaller allocations are excessively scrutinised and some other expenditures are under scrutinised. There is excessive internal governance within the sector adding cost, confusion and delay.
23. The increased share of research output by Universities has not led to significant improvement in research quality, nor has it led to greater development of research capability.
24. Universities have struggled to make good allocation decisions despite significant freedom.
25. Future institutions will operate in a world with open science, digitisation and other technological changes. This suggests there will more use of IT and relatively less laboratory research and other complementary changes.
26. The Government at this time could radically reshape organisations or it can create some flexibility to encourage adaptation or do both.
27. A powerful lever would be to require each research group wishing to receive funding from Government by MBIE or similar to be registered with MBIE and their detail listed on a public register, similar to the NZ Charities Register. Normally a research group should have a minimum of 10 FTE of PhD qualified staff. Normally no organisation (University, CRI or other) should have more than 10 research groups.
28. If this approach was taken, accurate and current capability and performance information would be available on the one website 24/7 365 days of the year. This would enhance knowledge flows and accountability.

29. The Green Paper is unclear if future CRI would be able to own companies or other business entities.
30. The Green Paper expresses pessimism about the CRI being companies. The argument for change to a different form would not necessarily hold for a Government funded infrastructure company or other provider of services to CRIs and universities. Further, reformers should be aware of competition policy and its impact on suppliers and the prices they charge customers.
31. If a NZ Research Council is to be established it is important that its purpose is clarified and it is structured in a way that it facilitates the goals of this review and does not undermine them. Conversations this submitter has been party to have been characterised by a lack of clarity for regarding the Council and its role. There has also been evidence of mixed motives and explicit aspirations for lobbying behind a veil.
32. It would be helpful if the Government worked with professional bodies to improve the quality of institutional reporting. Current practice fails to provide sufficient information in a common format to evaluate the performance of an institution. Further, the information is not sufficient and consistent enough to undertake robust system wide analysis without excessive effort.

Te Hunga Mahi Rangahau Workforce

33. Now is a good opportunity to grow the research capability of the nation by strong funded pathways between Universities and CRI/other research institutions.
34. The limited funding available in NZ at present means an unnecessarily high percentage of NZ graduates head overseas and NZ PhD programmes and research organisation are unduly reliant on new staff from offshore.
35. With each registered research group it would be possible to make an annual grant to fund a specified number of masters/PhD students.
36. As noted above the move towards open science, digitisation and other technological changes suggests the optimal workforce of the future will be different from the past. There is opportunity to enhance the existing workforce with improvements to their digital competencies. Waikato University is active in this space with CRI staff and other researchers and presumably other universities as well. This process could be sped up at a modest cost.

37. An updated Performance-Based Research Fund (PBRF) system has the potential to make a valuable contribution. CRI staff do not participate in the PBRF unless affiliated with a University. University staff currently participate in the PBRF and it provides an imperfect but valuable measure of the research capability in different areas.
38. The PBRF process should now be simplified. Every 3 years researchers should have to update a statement about the research competence and activities. The National Database should include all the publications information for all researchers.
39. This means at any time, in any year, analysts (and journalists) can measure the quantity and quality of research outputs of individuals, groups and institutions.
40. There is a case for the involvement of CRI in research dissemination. However, it is not appropriate to duplicate what is already happening with dissemination by other organisations. It is noted that Universities have made a significant investment in developing teaching capability and it is preferable that to the extent greater investment in these activities occurs it should be constructed between CRI/other providers and Universities with Universities being the host organisations

Te Hanganga Rangahau Research Infrastructure

41. I respectfully suggest in large measure capital investments take care of themselves in public organisations with sound depreciations policies. Organisations have capital budgets that can fund new developments out of depreciation, surpluses and debt finance.
42. Fundraising for major new capital projects is not the biggest problem in the sector and it is an area that the public sector can engage better with private sector.

Conclusion

43. I am happy to provide response to any questions MBIE may put to me.