

Te Ara Paerangi – Future Pathways Programme submission: proposal to develop a government postdoctoral scheme

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This submission proposes that MBIE develop a postdoctoral program to place early career researchers (ECRs) into roles within central government. This initiative could be implemented quickly within existing institutions to address the following questions in the Green Paper:

- *Key Question 14: How should we include workforce considerations in the design of research Priorities?*
- *Key Question 16: How do we design new funding mechanisms that strongly focus on workforce outcomes?*

A government postdoctoral fellowship scheme would be a low investment, high impact, way to improve the research, science, and innovation (RSI) career pipeline. It would (i) retain talent in New Zealand, (ii) provide a career pathway into government and industry for ECRs, and (iii) strengthen collaboration at the science-policy interface.

Proposal. The fellowship program would consist of a 12-month placement within a Ministry or Crown Entity, administered by a multi-agency initiative like [Analytics and Research in Government](#) (ARG) program or the Royal Society Te Apārangi. Postdoctoral fellows would be matched within ministries and teams that aligned with their skill set and area of expertise. Fellows would spend 3-4 days per week working within a ministry team; 1-2 days would be devoted to ongoing research activities at a host research institution. The fellow would also receive funding and leave to attend an international conference.

Postdoctoral fellows could be incorporated into a Ministry or Crown Entity's work program in a similar manner to a fixed-term analyst. The fellow would propose, and maintain, an ongoing relationship with a host at a tertiary institution or Crown Research Institute. Research affiliation could be conducted remotely. This balance would be attractive to ECRs who wished to explore alternative career paths while remaining engaged with the research sector. It may also appeal to ECRs who plan to remain in academia in New Zealand but are interested in building a diverse skillset.

Benefits for New Zealand. A purpose-designed public sector postdoctoral fellowship program would produce the following outcomes:

1. Retain talent in NZ and put it to work within the central government. The skillset ECRs develop through academic research is transferable to work in the public sector. Postdoctoral fellows would bring highly valued skills, including data and analytical skills, and fresh

perspectives on policy work. A government postdoctoral scheme would build research and technical capacity in the public sector and address the “brain drain” that occurs when PhD graduates leave or remain away from Aotearoa due to a lack of opportunities¹.

2. Provide a career launchpad for ECRs. A government postdoctoral fellowship would allow ECRs to explore a spectrum of post-PhD pathways. Most ECRs will ultimately find permanent roles outside the RSI workforce^{2,3}; however, many PhD students are unaware of career pathways outside of research². Further, the perception that “leaving academia” is a one-way street prevents ECRs from seeking roles in government and industry. A government postdoctoral fellowship program would overcome these barriers. ECRs would gain valuable experience and connections in the public sector. Having a “foot in the door” would facilitate a long-term transition to government or industry. Ongoing research support would also provide fellows with a pathway to return to academia. Research time could be used to finish (and publish) existing projects, build connections to universities in Aotearoa for New Zealanders who went overseas for doctoral research, and apply for grant funding and/or positions if they wish to remain in the RSI sector.

3. Improve connectivity between the RSI system and the public sector. Embedding ECRs within central government would strengthen the science-policy interface by increasing the number of public sector workers who understand the research landscape and policy-literate academics. For ECRs who chose to return to the RSI sector, experience in the central government would provide the skills and perspective necessary to deliver on the national research priorities as well as enduring connections to the central government.

4. Improve equity and diversity. Increasing the number of post-PhD opportunities in Aotearoa is an urgent equality issue^{2,4}. The longstanding⁵, well-documented lack of postdoctoral positions in Aotearoa^{2,3} disproportionately affects women, Māori, and Pacifica who are more likely to be in early-career roles¹. Currently, PhD graduates who cannot leave, or remain away from, New Zealand face the “gloomy” employment prospects in Aotearoa’s RSI sector³. ECRs without the financial stability to weather years⁴ of precarious, internationally transient, employment are driven out of the RSI sector. International students, many of whom would like to remain in New Zealand², are forced to return to their home countries. This program, in isolation, will not solve current equity issues: mitigating the current structural barriers towards developing an RSI workforce that reflects the diversity of Aotearoa will require more funding for research-intensive postdoctoral and permanent positions. However, even 5-10 government postdoctoral fellowships would represent a significant increase in the opportunities available to ECRs in Aotearoa each year.

Feasibility. A government postdoctoral fellowship scheme would be straightforward and inexpensive to execute. Postdoctoral salaries in New Zealand are typically between \$70,000 and \$100,000 per year. The cost of the fellowship would be within the range of a typical Analyst or

Senior Analyst, even after factoring in some amount of time (1-2 days a week) spent on academic research and a small travel stipend to attend an international conference. There are international models, such as the highly successful [Australian Science Policy Fellowship Program](#), that Aotearoa could learn from. Finally, existing institutions are well-positioned to administer a postdoctoral scheme. As mentioned above, potential administrative bodies include the Royal Society Te Apārangi, a multi-agency initiative like Analytics and Research in Government, and the Office of the Prime Minister's Chief Science Advisor.

Conclusion. A government postdoctoral fellowship scheme would improve the research, science, and innovation career pipeline. However, the full benefits of the program extend beyond the RSI sector. A fellowship scheme that embedded ECRs within central government would strengthen connectivity at the science-policy interface and build research and technical capacity in the public sector. Crucially, the program could be implemented within existing institutions without a large budgetary outlay. This proposal is a “quick win” that supports the long-term aspirations of the Te Ara Paerangi – Future Pathways Programme.

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References.

- [1] Ministry of Education. (2011). *Postdoc: Do people with doctoral degrees get jobs in NZ post study?*
- [2] Nissen, S., Naepi, S., Powell, D., Baker, T., Bolton, A., and Stewart, L. (2020). *Early Career Researchers in Aotearoa: Safeguarding and strengthening opportunity after COVID-19.*
- [3] The Royal Society Te Apārangi. (2020). *The research workforce of Aotearoa New Zealand.*
- [4] Simpson, A. B., Jolliffe Simpson, A. D., Soar, M., Oldfield, L. D., Roy, R., & Salter, L. A. (2022). *The Elephant in the Room: Precarious Work in New Zealand Universities.*
- [5] Ministry of Research, Science and Technology. (2010). *Igniting Potential.*