



TEC feedback on Research, Science and Innovation 'Te Ara Paerangi Future Pathways Green Paper 2021'

Introduction and Overview

The Tertiary Education Commission (TEC) is the Crown agency responsible for the implementation of government policy in relation to tertiary education, training, and careers services, including managing government's \$3.8 billion investment in this area. It is also responsible for the government's ownership interest in tertiary education organisations (TEOs), including capital management. Working closely with the Ministry of Education, the TEC's stewardship role looks beyond individual TEOs to the tertiary education sector's broader network of provision, including research-led teaching.

As the organisation responsible for management and implementation of the Performance-based Research Fund (PBRF), it also oversees the allocation of \$315 million annually in performance-based non-competitive research capacity and capability funding to participating TEOs. The TEC also manages the Centres of Research Excellence (CoREs) fund worth \$50 million a year, the Wānanga Research capability fund of \$6 million a year, and the Entrepreneurial Universities Fund of \$9 million (in 2021). Collectively, these funds (\$380 million) support the delivery of excellent research and research-led teaching across the TEO sector, and help ensure a robust, world-leading research environment.

We welcome the opportunity to respond to Te Ara Paerangi Future Pathways Green Paper. Whilst the paper states that changes to Vote: Tertiary Education funds and structural or design changes to TEOs are not being actively considered, it also makes clear that research undertaken within TEOs is within scope. As such, the TEC has an interest in ensuring any changes to New Zealand's competitive research funding systems are in alignment with the obligations and objectives relating to research in the Education and Training Act 2020 (ETA) and the Tertiary Education Strategy (TES), including **our commitment to honour Te Tiriti o Waitangi and support Māori-Crown relationships, and align with the principles and objectives of the PBRF. We expect TEOs to work with us on delivering the TES and honouring Te Tiriti, especially in relation to actively protecting taonga, such as mātauranga and kaupapa Māori.**

1. Key comments on proposed changes

TEC is supportive of reviewing Aotearoa New Zealand's research funding systems to ensure they support an excellent research and innovation ecosystem and aligns with the purpose of the ETA (4(d)), which is to establish and regulate an education system that honours Te Tiriti o Waitangi. We agree that elements of the present system are complex, and that connectivity between researchers, research organisations, and stakeholders –

including industry and communities, can always be improved. We also agree that research funding can much better serve and value Māori and Pacific research. These aims overlap with TEC's own objectives and current work programmes in many areas, and we would be keen to explore how we can work with MBIE to deliver them.

However, we would recommend more detailed exposition of the rationale for the proposed changes, their intended scale, and how they will address these issues. We have also identified some aspects of the proposal that may have unintended consequences. We have summarised our key suggestions below, which are expanded on under the paper section headings. These are based on our operational insight into the way research functions within the TEO sector and the way TEOs operate in general, and on our existing strong relationships with organisations within the sector.

Case for change

We think the case for change would benefit from further detail and clarity. We know that the tertiary education sector is concerned about the intended scale of changes suggested in the proposal. Providing the evidence for the identified issues in Aotearoa New Zealand's research and innovation ecosystem, unpacking the links between those issues and the current funding system, and explaining how the proposed solutions will address them will reassure the sector, particularly around the role of the National Research Priorities and how they are envisaged to interact with the wider funding system.

Some of the identified issues could, in the first instance, have solutions within government data-collection (such as the New Zealand Research Information System), rather than necessarily requiring structural changes to the funding system. For example, section 1.1 states that the government struggles to identify where and how much funding is invested; that it is difficult to assess ROI; and that there is a lack of data on investment in research conducted by or for the benefit of Māori.

Whilst changes to the funding system, including the creation of National Research Priorities, may not necessarily address these kinds of information gaps, they could be solved through improving data collection and reporting, including through improving information-sharing approaches across relevant government agencies. For example, the TEC holds data on outcomes of the research funds it manages, including the CoREs and PBRF, and we would welcome the opportunity to explore such information-sharing possibilities with MBIE.

What counts as research

We agree that 'research' should be understood to include all disciplines including arts and humanities, social sciences, and natural sciences as is noted in the introductory section. However, the majority of the paper appears to equate 'research' with 'science', for example by referring only to lab-based research, by suggesting National Research Priorities that all appear to have a science focus, and in the selection of images used to illustrate the paper.

The sector will welcome clarity as to whether these proposals are intended to apply to the research funding system, or just to science funding. We recommend that, if the former is intended, care be taken to ensure that any changes achieve the desired outcomes for, and do not negatively impact on, arts, humanities and practice-based research. These disciplines often use fundamentally different modes of project design and methodologies, and produce different outputs than the sciences, and have different funding needs.

Research funding proposals and academic freedom

We support efforts to ensure that publicly funded research produces outcomes that meet our national needs and delivers a good ROI. We would welcome greater clarity as to how the National Research Priorities would interact with the wider system, including the proposed base grant, as the current wording suggests that priority funding will to large extent replace open research funding. If that is the intent, we would have concerns about removing or restricting support for discovery research within the TEO sector. As we explain below, the Education and Training Act 2020 safeguards TEOs' academic freedom and abilities to determine their own research priorities. Beyond that, we consider a healthy national research culture is one in which primary, blue-sky, and experimental

research is funded, all research disciplines are supported, and researchers retain the ability to define their own research programmes.

Impacts across the TEO sector

Whilst we support the concept of bringing organisations with research functions together, there are important structural and mission differences between organisations which need to be taken into consideration. Within the TEO landscape, research is carried out not just within the universities, but also Te Pūkenga, the Wānanga, and private training establishments (PTEs), and these organisations have different legislative functions, organisational structures, and research foci. We note that the proposed base grant and co-location proposals do not appear to take into account the organisational differences between universities and Crown research institutes (CRIs).

We are also concerned that the proposal is not clear as to what funding is to be linked into this new approach. Any changes will require careful design and consultation to avoid unintended consequences (for examples, see section 5) and to ensure the system is equitable. We would be happy to work with MBIE to support this.

Education and Training Act alignment

The proposals appear to envisage an increased degree of central control over organisations' research priorities and ability to manage their research resources, including staff and infrastructure, and we would welcome greater clarity here as to MBIE's intent. Careful consideration will be needed to ensure that any changes align with the ETA, which grants tertiary education institutions the independence and freedom to make academic, operational, and management decisions across all aspects of their operations. These rights are highly valued by all TEOs. Particularly important for the universities is the guarantee in the ETA of a role as 'critic and conscience of society'.

Pacific research

We note that the proposal does not refer to Pacific research. Cabinet's recent decisions on changes to the PBRF (published July 2021) included changes to better value Pacific research and researchers as well as Māori research and researchers. We would encourage MBIE to consider how the changes to the research funding system might reflect this decision. We would be very happy to share our work to date in supporting Pacific research through the PBRF, and to explore how we might jointly ensure support for Pacific research.

Approach

We strongly support the consultative approach that MBIE is taking. The proposed changes have potential to create significant change and disruption across the tertiary sector, so it's essential that we provide support and guidance to ensure they understand the benefits of changes of this kind. As the agency working most closely with TEOs, we would be very happy to draw on our existing relationships to work more closely with MBIE as you consult on change.

2. Comments on Research Priorities proposals

The TEC agrees that Aotearoa New Zealand's public research funding should reflect National Research Priorities and needs. We note that the current system, which combines priority or challenge-led programmes such as the National Science Challenges and the CoREs with open funds such as Marsden and Endeavour, seeks to achieve a system which is responsive to National Research Priorities whilst retaining intellectual freedom – this is a critical feature of a mature research environment.

We note the Green Paper's claims that the existing system is overly fragmented, unnecessarily complex, and lacks transparency in terms of responsibilities and outcomes. Providing the evidence for these claims will clarify how a shift to a Priorities-led approach will address these issues and will enhance credibility with a sector that places a high value on evidence-led decision making. As noted in our general comments above, we would welcome the opportunity to identify how we might contribute to cross-governmental data-sharing to address some of the information gaps.

The TEC would also welcome greater clarity as to the nature of the proposed National Research Priorities and their relationship to the new funding approach proposed, as this is a matter of concern for the sector. It would be helpful to clarify, in the first instance, whether these proposals apply to the entire research funding system or just to science funding. We particularly recommend clarification as to whether the Priorities would function as cross-cutting ‘whole-of-system’ themes which inform all funding decisions (as section 1.1 suggests) or whether they are intended as research programmes, in effect replacing the National Science Challenges and sitting alongside existing funds such as Marsden and Endeavour (as section 1.2 suggests).

We would have some concerns if the intent is that the National Research Priorities would inform all research funding across the system. We note that TEOs are guaranteed different standards of academic freedom than, for example, the CRIs. The ETA grants TEOs the ‘freedom of the academic staff and students to engage in research’ (s. 267). In addition, TEOs have research-led teaching obligations under the ETA, which they must consider alongside National Research Priorities in determining their own research priorities. Any new funding system will require careful design to ensure that it accommodates the specific academic freedoms and legislative functions of TEOs.

More broadly, research has a critical role to play in discovering new issues, threats and opportunities, and it is important that the sector can retain broad and specialised capability across many areas so that we can meet national public and industry needs, especially if priorities change rapidly or adverse events occur.

It is vital that research organisations retain the ability to carry out experimental, pure and blue-skies research that may not necessarily fit within pre-defined priorities. At the international and national level, many of the gains for society have arisen from exploratory research for which the benefits were not immediately obvious, while unforeseen challenges such as Covid-19 can arise rapidly.

If National Research Priorities are adopted at the ‘whole-of-system’ level suggested, it will be important to develop priorities that are broad, thematic, and globally as well as nationally oriented, rather than concrete or solely challenge-led. It will also be important to ensure that Priorities are capable of supporting research across the full disciplinary spread, including arts, humanities and practice-based research.

In order to ensure an internationally respected research sector capable of producing world-leading research, it will be vital that the sector retains the ability to carry out research with international collaborators, which may not reflect our National Research Priorities.

3. Comments on proposals relating to Te Tiriti, Mātauranga Māori, and Māori aspirations

We strongly support efforts to ensure the research system better recognises and supports Mātauranga Māori and Kaupapa Māori research. Such work is vital to ensuring the government as a whole upholds its Te Tiriti obligations and advances Māori-Crown partnership, and aligns with the Tertiary Education Strategy priority eight, ‘Enhance the contribution of research and mātauranga Māori in addressing local and global challenges’.

We emphasise the importance of engaging with Māori research organisations, including the Wānanga and within Te Pūkenga, to ensure that any changes are the product of a genuine partnership approach and have legitimacy with those stakeholders. In particular, we support the proposal in section 1 that the development of any National Research Priorities (regardless of whether they apply across the system or are intended to replace the NSCs) must occur in partnership with Māori.

Following Cabinet instructions and in consultation with the sector, TEC is currently undertaking work to design and implement operational changes to the PBRF Quality Evaluation 2025 that will better recognise and value Māori research. We would welcome the opportunity to engage with MBIE to ensure any changes to the research funding system are in alignment with government decisions on PBRF, and to draw on our existing relationships with key stakeholders in the Māori research space to support your engagement.

In relation to section 2.3 Enabling and Protecting Mātauranga Māori, we note that there may be a conflict between New Zealand government requirements on open and transparent government, data and information management principles, and Open Access, on the one hand, and the protection of mātauranga Māori on the

other. For example, some funding contracts may require that data is treated in accordance with the Declaration on Open and Transparent Government, the New Zealand Data and Information Management Principles, and the New Zealand Government Open Access and Licensing (NZGOAL) framework. It is not clear yet how this conflicts with the protection of indigenous knowledge, but we are aware that there are existing concerns about data sovereignty within indigenous research communities internationally and within Aotearoa New Zealand. Work is underway on this internationally, with input from New Zealand academics. An agreement across government departments that resolves this possible conflict would be helpful in protecting mātauranga Māori.

4. Comments on funding proposals

As noted above, the TEC is generally supportive of a funding system which strikes a balance between incentivising research directed at national needs and issues, supporting discovery and primary research, and protecting TEOs academic freedom. However further context is required to understand how this would work in practice given the challenges we currently see with this proposal.

For example, the TEC would welcome more detail as to how a separate base grant for overheads and for core research would function in practice, including how the National Research Priorities are envisaged to interact with or inform the base grant. It is important that any shift from a full-cost competitive funding model should not result in a reduction of research funding for research organisations. We also note that any such change will impact on all TEOs that carry out research, including the Wānanga and Te Pūkenga, as well as the universities, and it will be important to understand the specific implications for smaller TEOs. Again, we would be very happy to facilitate engagement and consultation with these organisations to ensure the proposal reflects the diversity of the sector.

As noted above, we think it is important to keep in view the organisational differences between CRIs and TEOs, and to be clear that not all elements of the proposals will apply to all research organisation types. Unlike CRIs, TEOs do not rely on competitive research funding to 'keep the lights' on. This is because existing overheads such as buildings (for staff space), labs, equipment, IT systems etc are maintained by TEOs as part of their day-to-day running. While overheads funding contributes to the maintenance of such infrastructure, typically it is not the case that when the research project ends, the infrastructure is lost, because this infrastructure is also used for teaching and for research activity which is funded by other means. This is also true of staff costs.

The TEC would also welcome clarity as to how MBIE envisages that a base grant would interact with the PBRF. The PBRF is an unconditional performance-based fund which supports research capacity and capability; as such, it is used by participating TEOs for many of the purposes suggested in section 3.3.2 including staffing costs and infrastructure.

5. Comments on institutional proposals

The TEC supports the position of the paper that this work programme does not include considering structural or design changes to TEOs, but that it is looking for changes that increase collaboration and connection between the different types of research organisations. As noted above, it is important to keep in view that there is significant organisational variation across the sector, and that there are likely to be multiple barriers to greater collaboration beyond the existing funding systems. For example, unlike other research organisations, TEOs' research priorities, strategies and administration are governed in part by their teaching and learning functions. This means TEO research priorities will not always align with those of organisations that do not have core teaching functions.

The TEC does support exploring measures that would make increased use of the collective capability of CRIs, through a more stable funding environment and a more collaborative approach. We note for example that the CRIs are significant and effective partners in the TEO-hosted CoREs. We are generally supportive of opportunities that allow CRIs and universities (as well as other TEOs) to co-locate where this has clearly understood and shared benefits, such as staffing and operational efficiencies and/or sharing of equipment and space, opportunities for

large-scale shared capital and property investment across the system, and benefits for teaching and increased research supervision.

We would note that simply co-locating does not necessarily generate benefits. Achieving the sought benefits would require significant effort to be put into how various institutions can work together operationally and require extensive change management. We understand the differing structures of CRIs and TEOs can make designing new operating models difficult (for example, the differing tax status of CRIs and TEOs or the contractual obligations on CRI versus TEO staff). More analysis is needed to understand why CRIs and universities do not collaborate and co-locate more often under the current arrangements. There are likely to be lessons to be learnt from Lincoln University and AgResearch's attempt to establish a joint research and teaching facility, or from other existing co-location or resource-sharing operations, for example the Malaghan Institute of Medical Research and Victoria University of Wellington. Further analysis could also consider risks to this approach, including that the lack of industry connectedness becomes more entrenched given it is suggested that both CRIs and TEOs have difficulties in this area. There is an argument that CRIs should be located as close as possible to industry instead of on a university campus.

We agree that it would be beneficial for greater co-ordination to occur on large property and other investments across the research system, and that institutions are often likely to prioritise their own needs rather than arrangements that would benefit the wider New Zealand research infrastructure. However, we note that for some TEOs this may be appropriate given they have a range of objectives and strategic priorities beyond research (unlike CRIs). However, the paper appears to suggest that TEOs and research organisations should cede a level of control and decision-making over their infrastructure investment and capacity-building requirements to government. If this is not the intent, we recommend clarifying.

TEOs fund their own infrastructure in a myriad of ways – from operating revenues, borrowing, sale of assets and donations. Any change that provides incentives or additional government funding to support research infrastructure is likely to be well received. However, we would have concerns about any changes that impact on TEOs' autonomy and freedom to make their own capital and operational decisions as guaranteed under the ETA. Any move to a centrally organised infrastructure funding system (i.e., by reallocating current research funding) would represent a significant change to New Zealand's research culture and is likely to raise significant concerns in the sector.

6. Comments on Research Workforce proposals

The TEC agrees that the research sector in Aotearoa New Zealand faces similar issues to the international sector including equity, diversity and inclusion barriers, early career precarity, and challenges with the research education and training pipeline. We would support additional competitive funds that sought to address these issues, for example through increasing early career researcher funds and fellowships, and through ring-fencing funding for researchers from under-represented groups (e.g., Māori and Pacific researchers, researchers with disabilities, or those returning to the research workforce after career breaks). We note that Cabinet's decisions on changes to the PBRF include new funding weightings for Māori and Pacific researchers and research, as well as instructions to the TEC to work with the sector on changes to the 'extraordinary circumstances' criteria, and there may be value in a joined-up approach between MBIE and TEC.

However, as noted above, we would have concerns that a base grant, which funded research staff, and which attracted specific conditions, could undermine TEOs' institutional autonomy to make their own resourcing and organisational decisions under the ETA. If this is not the intent of the proposal, we recommend it is clarified. As above, we also note with regards to TEOs that such a base grant would appear to overlap with the purpose of PBRF funds to a large extent.

Conclusion

TEC supports the paper's overall aim to position New Zealand's research, science and innovation system for the future, harness its collective capability to meet emerging challenges and opportunities, and meet the government's Te Tiriti o Waitangi obligations. We would welcome further detail about aspects of the proposals, including how they might interact with the ETA. We would also like to discuss how we can provide support, including facilitating engagement with TEOs (particularly the Wānanga and Te Pūkenga), engaging with Māori and Pacific research stakeholders, sharing our operational knowledge, and sharing relevant data and information.

We invite MBIE officials to meet with TEC to explore ways of working together more closely where appropriate on research funding issues going forward.