

## MBIE Te Ara Paerangi Future Pathways Green Paper consultation: a response on behalf of Massey University Te Kunenga ki Pūrehuroa

### Introduction

Massey University Kunenga ki Pūrehuroa thanks the Ministry of Business, Innovation and Employment (MBIE) for the opportunity to provide feedback on the Te Ara Paerangi Future Pathways Green Paper. This submission reflects feedback from academic and professional staff at Massey who offered commentary to the University-wide submission process. In addition, individuals and groups across the University and entities hosted by the University may make independent submissions on and contributions to the discussion. We acknowledge too, that while there will be broad areas of alignment across those submissions, there will also be nuanced points of difference especially in regard to the discussion around research priorities and funding models. In this submission we address each of the six main sections in Te Ara Paerangi. We also offer suggestions on additional areas for consideration by MBIE in the ongoing review of the Research, Science and Innovation (RSI) system.

This submission by Massey University Kunenga ki Pūrehuroa will address all six areas identified in Te Ara Paerangi:

- Ngā whakaarotau rangahau – research priorities
- Te Tiriti, mātauranga Māori me ngā wawata o Te Māori – Te Tiriti, mātauranga Māori and supporting Māori aspirations
- Tuki putea – funding
- Ngā hinonga – institutions
- Te hunga mahi rangahau – research workforce
- Te hanganga rangahau – research infrastructure

### Background

Massey University Te Kunenga ki Pūrehuroa is a research-intensive, multi-campus university. Based in Aotearoa New Zealand and with extensive global reach, Massey University Te Kunenga ki Pūrehuroa has long been a distance, and now a blended and online education provider, prioritising access and equity alongside excellence to ensure that high-quality research and tertiary education is available to school-leavers and mature age, part-time and distance learners alike. We are strongly committed to realising our responsibilities and obligations under Te Tiriti o Waitangi, this country's founding document, and are committed to working towards being a Te Tiriti-led university.

Originally established in 1927 as an agricultural college to support this country's essential food and fibre exports and industries, Massey has never lost sight of its commitment to supporting Aotearoa New Zealand food, agriculture, land, and animal-based sectors. Over time, the University has also developed a suite of diverse research strengths to the point where many of

our subjects, in applied sciences, arts, design and social sciences, now feature among the very best in the world and we rank in the top 3% of research-intensive universities globally.

The COVID-19 pandemic has, over the past two years, undoubtedly challenged many orthodox assumptions underpinning our sector and challenged the resilience of our national research sector. It worth noting here too that researchers from Massey University Te Kunenga ki Pūrehuroa, along with other university-based researchers, have been and remain at the forefront of advising Government on how to manage the pandemic and how to ‘build back better’ in the post-COVID-19 environment.

Massey’s ability to deliver research that matters to our national reconstruction efforts and to the communities we serve, coupled with our capability to support learners wherever they choose to study, strongly supports the vision articulated above. Moreover, so deeply embedded is Massey’s identity, research and reach, it is a university that we believe is inseparable from and irreplaceable in Aotearoa New Zealand.

### **Te Ara Paerangi Future Pathways: General comments**

Massey University Te Kunenga ki Pūrehuroa welcomes the Government’s commitment to a wide-ranging review of the design of the public research landscape. We consider that it is a timely to review the RSI system in Aotearoa New Zealand, particularly in light of the learnings from the mobilization of the research sector in the country’s response to COVID-19. This experience has demonstrated that the sector has the capability and the will to come together in order to meet the needs of the country and to contribute effectively to international efforts.

This experience has, however, also revealed certain disparities and information silos that have unintentionally perpetuated and in some cases, exacerbated existing social and health inequities. We consider that we need to learn from this recent (and continuing) experience of the COVID-19 response to ensure that our national RSI system is strengthened, ‘future proofed’ and made sufficiently resilient for future challenges of this nature.

We understand, too, that changes to the Performance Based Research Fund (PBRF) are outside the scope of this current discussion paper process. Notwithstanding this, we suggest that the review of the national RSI system needs to take greater account of the role of the PBRF as a key mechanism for research funding for universities, and in guiding and shaping researcher behaviour and priorities. For instance, the Government’s decision to adopt a more ‘capacious’ definition of research excellence and place a stronger emphasis on research impact beyond academia are strongly aligned with the issues highlighted in Te Ara Paerangi and we suggest these links are made much more explicit in the next iteration of a future discussion paper.

We note that the current Te Ara Paerangi discussion paper does not address the importance of the location of Aotearoa New Zealand in the Pacific; nor does it address specifically the issues of equity and capability development for Pacific research and Pacific researchers. Recent

changes to the PBRF acknowledge the value of research undertaken by, with, and for Pacific peoples, and we encourage MBIE to consider how these same goals can be enhanced through the RSI system as a whole, toward building a research system and infrastructure that acknowledges and champions Pacific knowledge and one that meets Pacific research and Pacific end-user needs.

We acknowledge, too, the intention toward inclusivity in taking a broad definition of research for the purposes of the discussion paper, including research in the arts and humanities and social research, and the recognition of the importance of multidisciplinary approaches in setting national research priorities. We consider, however, that there is still some way to go in terms of the current discussion in recognising the integral value of the humanities, creative arts, and social sciences in driving innovation and transformative research across the entire RSI system and the value of transdisciplinary research approaches. Any review needs to embrace these disciplines too and, in specific terms, consider addressing the particular challenges facing these sectors, including issues of workforce precarity, access to research funding and the sustainability of key infrastructure assets such as social science databases.

Finally, Massey University Te Kunenga ki Pūrehuroa supports the call by the Council of New Zealand University Librarians (CONZUL) for a more systematic approach toward open access to publicly funded research, to enhance research impact and to support collaboration. This would need to be supported by accessible, sustainable repositories for research outputs, and underpinned by a strong commitment to Te Tiriti o Waitangi, particularly in relation to indigenous and Māori data sovereignty.

### **Te Ara Paerangi Future Pathways: Specific comments**

#### *1. Ngā whakaarotau rangahau – research priorities*

Massey University Te Kunenga ki Pūrehuroa supports the goal in Te Ara Paerangi for a research system that is connected, adaptable, and resilient. This will require a cohesive national structure which supports diversity within an overarching framework, within which the core purpose of each component organisation is clear. Any process to set national priorities should include input from end-users, diverse communities, NGOs, businesses and industry, so that the priorities reflect the needs and values of the broadest possible range of New Zealanders. We also recommend that this process should not be administered solely by researchers as an additional burden on top of their existing roles (as with the National Science Challenges model).

Massey University Te Kunenga ki Pūrehuroa endorses the recommendation by Universities New Zealand Te Pōkai Tara that a permanent, independent research council be established to lead a national research strategy, including setting national priorities. This council should be given a clear mandate to enhance the collective impact and cohesiveness of the system as a whole, including:

- giving greater effect to Te Tiriti o Waitangi and mātauranga Māori
- maintaining and enhancing research excellence and collaboration
- enhancing inclusivity with a capacious research definition and input from a wide range of researchers and practitioners, and from research users
- maximizing the international reach and reputation of Aotearoa New Zealand’s research while leveraging the unique nature of our society
- building a strong culture of evaluation and insight, connectivity and efficiency of resource use, and
- creating a diverse and sustainable workforce that ensures Aotearoa New Zealand has the skills and knowledge necessary to support its wellbeing and prosperity.

An independent research council would help ensure a cohesive, collective approach to addressing research priorities, and reduce the risk that any changes to one part of the system would create unintended consequences elsewhere. Research priorities would need to be sufficiently flexible to ensure the RSI system can respond to new issues and opportunities, and to be developed within a holistic framework that builds on what is already known.

We also recommend the systematic evaluation of research outcomes under the national strategy, to connect the results of research projects to their stated objectives and outcomes and to maintain oversight of research activity. Currently, there is no systematic way of collating and sharing the results of individual research projects or groups to ensure that, as a country, we are extracting the maximum value from research investment and can be confident that knowledge is available quickly to end-users. We note there is currently very little investment in the systematic collation, synthesis, translation and uptake mechanisms to ensure greater value and use of research findings. Similarly, there is little evaluation of research by funders, and no capture of research impacts that would showcase the value this research provides to end-users. For a small country, the time and cost it takes to map out what research is underway on key topics (as per the exercise undertaken by the Our Land and Water NSC) is disproportionately high and somewhat ‘ad hoc’, relying on surveying individual researchers with no coordinating mechanism, even within geographic regions. Addressing these issues will be necessary to ensure that the RSI system is truly adaptable, that results are available and accessible to end-users, that as a country we can evaluate impact, and that we might also address or help overcome particular dissonances and gaps between research, policy, and practice.

2. *Te Tiriti, mātauranga Māori me ngā wawata o Te Māori – Te Tiriti, mātauranga Māori and supporting Māori aspirations*

Massey University Te Kunenga ki Pūrehuroa supports a system that embodies the concept of partnership in Te Tiriti o Waitangi, which prioritizes mātauranga Māori and enables genuine power sharing in co-designing and prioritizing research opportunities. As also stated in the submission from the University’s College of Creative Arts Toi Rauwhāangi,

we recommend that the involvement of Māori researchers in the review of the research system be facilitated by appropriate resourcing, and by the provision of inclusive, culturally safe mechanisms to maximize involvement and outcomes that meet the needs of Māori. We note, too, that any review of the RSI system also needs to be aligned with other relevant Government and tertiary education strategies, for example the cross-agency Ka Hikitia Māori Education Strategy.

In enabling mātauranga Māori, we advocate for the adoption of an inclusive definition of ‘research’ and a broad understanding of what constitutes Māori knowledge. In particular, and as emphasized in the College of Creative Arts’ Toi Rauwhārangī submission, Māori research excellence often values the continuity and sustainability of knowledge over ownership or originality, and these values may conflict with a definition of research excellence that focuses on innovation and transformation. This is, we suggest, an important and critical point in the current national discussion around the future shape of our RSI system. In addition, as Māori (and Pacific) knowledges are often derived from service to communities, the considerable impact and excellence of Māori researchers is often not recognised, valued or prioritised through current research funding mechanisms.

We agree that regionally based Māori knowledge hubs offer one possible mechanism to ensure that regional diversity, mana, and regionally specific knowledge systems are represented and acknowledged. We are concerned, however, that it may be too early in the current review process to focus on a single option, and we recommend that MBIE continues to canvas the widest possible range of innovative options for supporting, appreciating, and mobilizing mātauranga Māori.

### 3. *Te tuki putea – funding*

Massey University Te Kunenga ki Pūrehuroa endorses the goal of a significant increase in national research and development expenditure. We also support a review of the current funding arrangements for public research organisations to allow for sustainability of those organisations and their research workforce, while retaining a level of competitive funding as a way to incentivise and reward excellence, noting our comments above in regard to Māori research priorities. We note that this will require a significant boost in funding to ensure each component can be supported in the long term.

We contend that the option of removing overheads in favour of a base funding allocation needs careful consideration if it is not to drive new inequities or create perverse and unintended incentives, such as unequal cost differentiations between research carried out in different organisations. Clear guidance would need to be given as to how a base funding system could be distributed and applied within organisations, to ensure transparency and fairness. Additionally, the way in which core functions are defined is important; for example, should these functions include workforce planning and development, research translation to end-users, or research support services? We suggest that further analysis

and discussion, based on international exemplars, is required in terms of consideration of a base funding model.

We suggest further that the funding environment for the RSI system needs to be considered holistically, with the aim of simplifying the system and reducing transaction and governance costs. It would be fair to say that, in recent years, there has been a proliferation of ad hoc or single purpose funding rounds aimed at addressing emerging issues or opportunities, with the result that the system has become increasingly complex and transaction costs for research organisations such as universities have increased. Moves to enhance the diversity of research organisations or to boost private sector involvement in research have led to an unintended increase in competition for finite public funding mechanisms (e.g. the MBIE Endeavour Fund), thus exacerbating the precarity of the research workforce as a whole. While this has increased the strain on research management systems and services that support the research itself, disappointingly, there is no recognition of these systems or support functions in the Te Ara Paerangi discussion document.

Finally, we support funding mechanisms that enhance the impact of research for end users, society, communities, and the environment and economy, within an integrated evaluation and investment framework that can maximise the value of research. We emphasise that impact should be defined broadly, rather than according to an overly narrow focus on product development or commercialisation. We also consider that any decision to fund additional investment in the commercialisation of the results of research needs to be based on evidence of value for investment and that ‘value’ is defined in broad terms that can provide demonstrable benefits to end-users.

#### 4. *Ngā hinonga – institutions*

We suggest that institutions have a critical role to play in shaping, supporting and advancing our national RSI system. Perhaps this is self-evident, but it is worth stating, nonetheless. In addition, we consider that the co-location or physical clustering and alignment of research organisations with cognate or complementary capabilities and strengths can provide multiple benefits for funders, researchers and end-users, including increased collaboration and a more efficient use of facilities. However, we note that co-location in and of itself does not necessarily drive or promise collaborative working or the reduction of silos. Collaborative research projects or shared access to data and infrastructure can be supported, independent of physical or geographical location. The impetus for collaboration comes from a shared purpose, and in response to funding and strategic incentives, alongside the removal of disincentives or barriers to collaborate. We also note that changes to the RSI system to support longer-term funding and create a more stable research workforce will also enhance collaboration by sustaining long-term relationships and encouraging researchers to invest time and energy in establishing cooperative ways of working. This could be enhanced with more collaborative future-

gazing scenario planning to establish agreed ideas on infrastructure development and research priorities. We note that there is currently no organisation charged with developing such long-term intergenerational ‘horizon scanning’ strategies, which is where the role and expertise of an independent research council might serve.

In addition, we note that there currently exist some excellent models of research collaboration, such as the New Zealand Food Safety Science and Research Centre (NZFSSRC), a distinctive partnership between industry, Government and research providers which engages with and co-ordinates research for a broad range of stakeholder groups. Hosted by Massey University Te Kunenga ki Pūrehuroa, the NZFSSRC presents a highly collaborative model which could well be something of a blueprint for progressing research in other key priority areas. One of the outstanding features of the research provided by the NZFSSRC is its applied nature and direct relevance to the food industry, which helps us to achieve the shared (the food industry, regulators, researchers) goal of ensuring the safety of all food in Aotearoa New Zealand.

Moreover, Te Ohu Rangahau Kai, a new joint food science research facility based at Massey University Te Kunenga ki Pūrehuroa, on the Manawatū (Palmerston North) campus, jointly supported, managed, and operated by the University and AgResearch is a highly successful example of how collaboration on a significant investment in infrastructure can be achieved for national benefit. Again, this is an example well worth further investigation as a model of what successful future infrastructure collaboration could look like.

##### 5. *Te hunga mahi rangahau - research workforce*

The growth and maintenance of a skilled research workforce is central to realising national research priorities, and Massey University Te Kunenga ki Pūrehuroa welcomes the focus in Te Ara Paerangi on better supporting the research workforce, including reducing existing inequalities and barriers to entering and sustaining research careers. This will require both short-term measures to support the current workforce, alongside a long-term strategy to build capability and career flexibility into the future.

One immediate issue is the risk of both experienced and early career researchers leaving Aotearoa New Zealand to work overseas as current COVID-19 related border controls are lifted. This could lead to a loss in overall national research capacity, particularly given the financial challenges for organisations seeking to compete globally for talent and to attract the very best international researchers to Aotearoa New Zealand.

In the longer term, the adoption of a more transparent and stable investment path in research will encourage more people to look to the sector as a viable and rewarding career path and increase their confidence in investing in the long journey of training and development. Investment in sustainable postdoctoral research positions, that are not tied to short-term project funding, would be one way of enabling more early career researchers

to enter the workforce. There is an argument that this offers a more rewarding investment than simply increasing the number of doctoral students entering the system, by allowing organisations to capitalise on the considerable investment in training new researchers. We believe, too, that a particular focus should be placed on supporting Māori and Pacific researchers into stable postdoctoral positions and that the current costs of establishing postdoctoral roles should be reduced by removing the need to cost them at the same rate as permanent research staff, without (it needs to be emphasized) creating further precarity or inequities.

At the same time, we note that wider mechanisms need to be explored to support the development and retention of knowledge and skills across the full spectrum of research, including creative arts and design, and the humanities and social sciences. These disciplines do not have a strong tradition of offering and sustaining postdoctoral positions. Expanding and systematizing targeted career development mechanisms such as the Science Whitinga Fellowship is one approach that could be explored. There is also a need to address the fact that Pacific research and researchers face similar challenges to Māori researchers in dealing with unrealistic expectations of cultural service placed on them, and traditional measures of research excellence can sometimes conflict with Pacific values and knowledge systems. We suggest that specific measures are needed to support and grow the Pacific research workforce in Aotearoa New Zealand.

In addition, while we fully acknowledge the fundamental importance of supporting postdoctoral and early career researchers, we also note the need to retain mid-career researchers who are highly skilled and active in both teaching and research. Mid-career researchers are often overlooked if they are not stellar or ‘rockstar’ performers and we suspect that this group are those most readily leaving research roles or changing careers because of the lack of support for them or perceived recognition of their work. While institutions have a role to play in providing this support, we suggest that nationally, this should also be an area of focused development to sustain and grow our talented research workforce.

Greater movement between different research organisations at different career stages would enhance career and capability development, as the Te Ara Paerangi discussion paper notes. In addition, encouraging and incentivizing greater ‘porosity’ between research organisations and the end-users of research would similarly enhance career and capability development, and build valuable connections between researchers and the capacity of the workforce. This would also have the benefit of developing stronger connections between research organisations and stakeholders, including business and industry, policymakers, community groups and the not-for-profit sector.

Any national approach to supporting the research workforce could be underpinned by a comprehensive survey of the current state of the entire research workforce (as opposed to focusing on discrete sub-sectors of the research workforce). This could help to identify



demographic trends, or precarity among certain groups of researchers with highly specific skills that need to be retained in this country. It could also provide data on what motivates researchers to enter or leave our research system. More active and timely monitoring of the workforce, its response to major system changes, and systematic evaluation of the needs and opportunities profile would be hugely advantageous in positioning Aotearoa New Zealand's research sector for success.

We encourage MBIE to consider how research professionals can be supported within the RSI system. It is worth noting that this workforce enables and supports the wider research community and has itself also faced increasing pressure within the current system. The submission to this discussion from KiwiNet notes the valuable role of the specialist commercialisation workforce in supporting innovation and entrepreneurship, and the Council of New Zealand University Librarians' submission highlights the shortage of skilled research data management professionals. In many universities and Crown Research Institutes, a small number of professional staff are under increasing pressure to support the expanding needs and expectations of researchers fully and comprehensively. This is a fundamental weakness across our system given that navigating the increasingly complex funding and administration arrangements often relies on the knowledge inherent in individuals, and not on system solutions. We recommend that the survey of the current research workforce should include an assessment of the ratio of research management support to researchers across the system, to ensure the maintenance of a realistic and sustainable level of support. In addition, we note that research management as a profession is not recognised or accredited in Aotearoa New Zealand in the way that it is elsewhere, in Australia, for example. Professional recognition and standing would perhaps assist the retention of key talent in the research support workforce.

Finally, any review of our national research workforce needs to consider how we might reduce the current challenges to employing overseas researchers to work in Aotearoa New Zealand, including cost barriers to offering international postdoctoral researchers positions in research organisations. International postdoctoral staff have much to offer our national research system, as they are often highly motivated to share their skills with upskilling local researchers and maintain strong international connections with their Aotearoa New Zealand colleagues when they return to their home countries.

#### 6. *Te hanganga rangahau – research infrastructure*

We recommend reducing the current governance burden associated with maintaining multiple individual structures that support various large-scale research infrastructure, by placing responsibility for its purchase, ownership, and maintenance under a single, umbrella organisation. This would also enhance the collaborative use of infrastructure within and between research organisations.

As noted in Section 5 above, this review provides a timely opportunity to rationalise and streamline research funding mechanisms in a way that reflects national priorities while at the same time increasing the overall efficiency and transparency of the system. The Aotearoa New Zealand RSI system has become increasingly complex, despite attempts to simplify it. Currently, every major research funding mechanism has a separate application process, involving multiple submission and reporting platforms, which creates unnecessary compliance costs. The integration of these various portals and processes into a single, integrated funding application portal would be a practical step in reducing compliance costs, simplifying the navigation of the system, and increasing the capacity for flexibility in responding to new opportunities.

Thank you again for the opportunity to contribute to this important and critical national discussion and we look forward to the next iteration of the discussion paper.

*Professor Giselle Byrnes*

*Provost*

*Massey University Te Kunenga ki Pūrehuroa*

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*Privacy - 9(2)(a)*, Palmerston North, New Zealand