



COVERSHEET

Minister	Hon Dr Ayesha Verrall	Portfolio	Research, Science and Innovation
Title of briefing	Te Ara Paerangi – Future Pathways	Date to be published	29 March 2023

List of documents that have been proactively released

Date	Title	Author
November 2022	Te Ara Paerangi – Future Pathways	Office of the Minister of Research, Science and Innovation
23 November 2022	Te Ara Paerangi – Future Pathways DEV-22-MIN-0277 Minute	Cabinet Office

Information redacted:

YES

Any information redacted in this document is redacted in accordance with MBIE's policy on Proactive Release and is labelled with the reason for redaction. This may include information that would be redacted if this information was requested under Official Information Act 1982. Where this is the case, the reasons for withholding information are listed below.

Reasons for redaction:

- Free and frank opinions
- Constitutional conventions

Related information:

This release covers the Te Ara Paerangi – Future Pathways Cabinet paper and associated minute. These documents refer to the release of the Te Ara Paerangi White Paper, which is not included in this release as it is available on MBIE's website through the following hyperlink:

<https://www.mbie.govt.nz/science-and-technology/science-and-innovation/agencies-policies-and-budget-initiatives/te-ara-paerangi-future-pathways/te-ara-paerangi-future-pathways-white-paper/>

In Confidence

Office of the Minister of Research, Science and Innovation

Cabinet Economic Development Committee

Te Ara Paerangi – Future Pathways

Proposal

- 1 This paper seeks Cabinet agreement to reform Aotearoa New Zealand’s ‘public’ Research, Science and Innovation (RSI) system, and release a White Paper that sets out the vision and direction for the Te Ara Paerangi – Future Pathways reform.

Relation to Government Priorities

- 2 By driving collaboration between research and industry, impact generation, technological diffusion throughout society and the diversification of our economy, the reforms will contribute to the Government’s Economic Plan, as reiterated by the Minister of Finance’s *Economic Strategy* letter to Ministerial colleagues [June 2022]. The plan focuses on building a high wage, low emissions economy that gives economic security in good times and bad. The reform of the RSI system will help address the major long-term challenges and opportunities our economy faces.
- 3 The Government’s Economic Plan identifies three main challenges and opportunities for Aotearoa New Zealand: tackling long-standing productivity issues that have impacted wellbeing for too long; tackling climate change; and ensuring economic security through resilience to shocks and emerging trends.
- 4 Specific elements of the reforms that impact these areas are:
 - 4.1 National Research Priorities will harness and direct the RSI system to address key national, social, environmental, economic and health challenges and improve alignment with existing policy in this space (e.g. Economic Strategy, Industry Transformation Plans, National Adaptation Plan, Emissions Reduction Plan);
 - 4.2 Appropriate and sustainable provision of public good science services (e.g. the provision of environmental monitoring data and capability). These services are critical to our ability to monitor and adapt to the effects of climate change, and to meet the Government's obligations with regards to resource management; and
 - 4.3 Improved knowledge mobilisation pathways and new ways to deliberately invest in focused innovation ecosystems to help deliver a high wage, low emissions economy, and develop new high-productivity businesses (e.g. aerospace).

Executive Summary

- 5 The RSI system plays a crucial role in building a productive, sustainable and inclusive economy that improves the wellbeing of everyone in Aotearoa New Zealand. A healthy and effective RSI system is key to unleashing the innovative potential required to meet our economic goals and to tackle the long-term challenges and opportunities our society faces.
- 6 However, the RSI system was designed nearly thirty years ago and is not set up to deliver benefit to Aotearoa New Zealand as well as it could. We have committed to increasing overall spending in R&D to 2 per cent of GDP by 2030 and the RSI system needs to be improved to absorb and deliver on increased investment. I propose Te Ara Paerangi as the pathway by which to achieve the significant additional government investment to realise this goal.
- 7 During consultation on *Te Ara Paerangi Future Pathways Green Paper 2021* (the Green Paper), I heard that the sector is ready for ambitious change to the RSI system. There was general consensus that the system is not as adaptable, resilient and connected as it needs to be to deliver for the future. In addition, there was strong feedback that the system fails to give sufficient expression to Te Tiriti o Waitangi.
- 8 I return to Cabinet with a White Paper that builds on what we heard from the sector through consultation on the Green Paper. The White Paper is an important milestone that sets a clear vision for Aotearoa New Zealand's future RSI system and direction for the years ahead.
- 9 Te Ara Paerangi – Future Pathways is a multi-year reform programme. The White Paper includes key policy directions to guide the reform. These will be developed into policy proposals and implemented in a phased way. Each will need to be funded via the annual Budget process. I seek approval to release the White Paper in December 2022 and intend to bring detailed policy proposals to Cabinet in 2023, beginning with a process to determine National Research Priorities.

Background

- 10 Research, science and innovation is critical to meeting the number of big challenges and opportunities facing Aotearoa, such as combating climate change, preparing for and responding to natural disasters, generating sustained improvements to our health and wellbeing, and improving our productivity and the prosperity of New Zealanders.
- 11 The major building blocks of Aotearoa New Zealand's research system were set up in the 1990s and have served us well. However, the world has changed considerably over the last 30 years. Now is the time to harness the impact of our research system for our future. Doing so will enable us to solve pressing challenges and ensure future generations thrive in industries that generate improved livelihoods and wellbeing.
- 12 There are problems with the RSI system that need to be addressed. It is small and fragmented, and scientists and researchers are locked in unproductive competition for institutional revenue rather than constructive contests of ideas. The system's design does

not allow its workforce the time and space needed to build meaningful relationships with the industries and communities they serve. In addition, we need to strengthen the connections between research and innovation across the RSI system.

- 13 On 24 May 2021, Cabinet noted the intention to develop a work programme to reform the RSI system so that it is adaptable for the future, able to change, and well connected internationally. Cabinet agreed to the development of a green paper discussion document setting out the range of options for possible reform [CAB-21-MIN-0180].
- 14 On 4 October 2021, Cabinet agreed to release a discussion document *Te Ara Paerangi Future Pathways Green Paper 2021* (the Green Paper) and invited the Minister of Research, Science and Innovation to report back to Cabinet by mid-2022 with the outcomes of consultation and any proposed policy changes [CAB-21-MIN-0397].
- 15 The attached White Paper has been developed in response to feedback the Ministry of Business, Innovation and Employment (MBIE) received during consultation from 28 October 2021 to 16 March 2022. A total of 903 submissions were received and over 1,000 people attended workshops to provide input. This White Paper communicates my proposed position and commitments on how Te Ara Paerangi – Future Pathways will best position our RSI system for the future.

Te Are Paerangi – Future Pathways

- 16 I propose to initiate Te Ara Paerangi, a multi-year reform programme, as the pathway by which to achieve the significant additional government investment needed to realise our goal of overall R&D expenditure of 2 per cent percent of GDP by 2030, support the Government's Economic Plan and improve wellbeing for all living in Aotearoa New Zealand. I intend for the White Paper to function as an enduring policy reference point for the reform programme.

The Case for Change

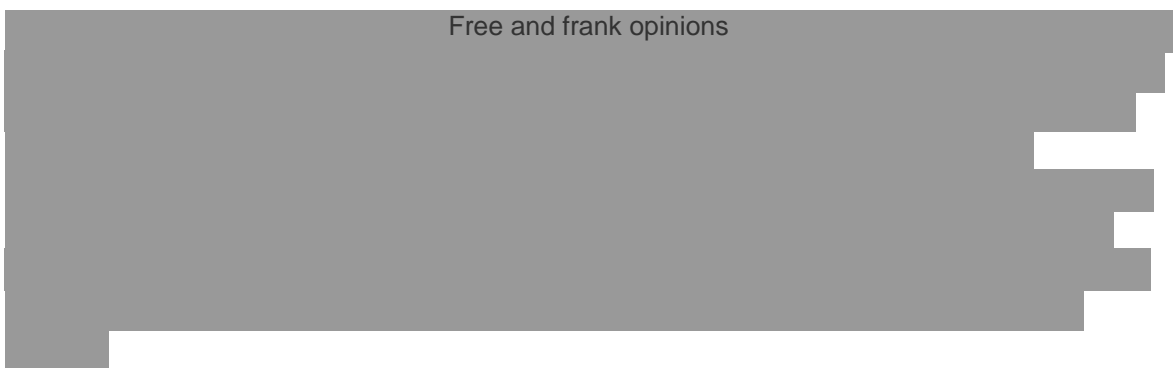
- 17 Our researchers and innovators have served New Zealand well over the past 30 years. Crown research institutes (CRIs), universities and other tertiary education organisations, independent research organisations, and other parts of the RSI system have contributed to New Zealand through breakthrough research, supporting critical sectors of the economy and society, enhancing understanding of the natural world, solving environmental challenges, and responding to multiple emergencies, including underpinning our world-leading response to COVID-19.
- 18 But the system does not always set up researchers and innovators for success. Too often their tremendous achievements occur despite the system in which they are operating, not because of it. In the face of tough economic conditions, social equity and inclusion challenges, and a climate emergency, it is essential that the RSI system is positioned to deliver for the future and uplift the wellbeing of all New Zealanders.

- 19 Recent reviews into the RSI system and MBIE’s consultation show that reform is necessary to position our RSI system to meet the challenges and opportunities of the future.

The current system cannot effectively adapt to our future needs

- 20 Research, science and innovation are critical to addressing key economic, social and environmental challenges. There are also key challenges for government where we cannot rely on the private sector to deliver public benefit, including environmental and social challenges (e.g. a low emissions economy).
- 21 Increased government funding is needed alongside business expenditure on R&D (BERD) to achieve our R&D investment target and prepare us for the future. However, the current RSI system is not adequately placed to absorb higher levels of public funding:
- 21.1 Public research organisations are too small with insufficient scope to adapt to emerging areas.
 - 21.2 Public research organisations are constrained by a narrow breadth of expertise and are reliant on current sectors and industries, making it difficult to develop new capabilities outside of their historic responsibilities.
 - 21.3 Public research organisations also struggle with poor integration and ongoing unproductive competition that obstruct otherwise net beneficial collaborations (including systematic capability and infrastructure sharing).
 - 21.4 The mechanisms for signalling direction to the RSI system are diffuse and confusing, resulting in multiple overlapping strategies that contribute to a cluttered landscape, and so do not provide the system with clear signals of research priorities or the best support to change and adapt.

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- 23 Increased funding alone will not make the RSI system resilient, adaptable and future-focused enough to support broader government objectives or enable it to contribute effectively to the Government’s Economic Plan. System-wide changes are necessary to create adaptability, incentivise knowledge exchange and collaboration, provide clear direction, and enable coordination between parts of the system.

The current system is not well positioned to support ongoing growth in BERD and technological innovation

24 Economic impact from R&D relies on the translation of research findings into meaningful innovations that can be turned into globally competitive products and services. R&D conducted by businesses is central to this process. Business R&D relies on the publicly funded science system for access to fundamental science, advanced technical skills and new technologies.

25 Technological change, including digitalisation, is one of the defining features of the global economy, and is widely recognised as a critical tool to increase societal wellbeing while remaining within environmental limits. This is why many OECD countries have explicit R&D targets, and most are seeking to increase their investment. Free and frank opinions

[Redacted]

26 Free and frank opinions

[Redacted]

27 Free and frank opinions

[Redacted]

28 We also need to support our RSI system, and our economy more broadly, to better connect internationally. This is important both for our ability to absorb and adapt overseas technologies, but also to connect research in New Zealand to the global economy. This awareness and connection with global technology trends and needs is vital to create the types of internationally competitive technology-based firms that will provide high-value jobs in the future.

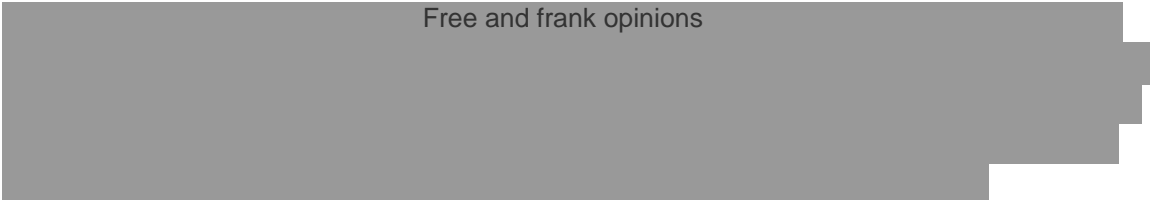
29 Reform of the RSI system is needed to support ongoing BERD growth, technological innovation and digitalisation. This requires transforming the system in ways that address factors in our control, for example by:

- 29.1 shifting to a more open system of knowledge exchange by reconsidering institutional design and landscape, funding and intellectual property settings in the RSI system that create misaligned incentives, to the detriment of research-industry connectivity. This also has the potential to make innovation cheaper;

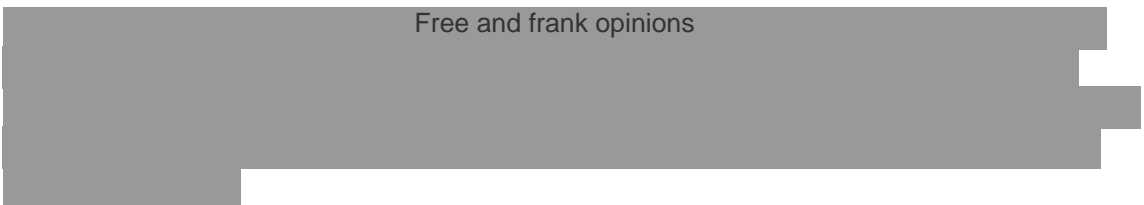
- 29.2 providing upstream supply of the knowledge required to adopt, adapt and create new technologies, spin-outs and skills to service continuing growth in BERD demand;
- 29.3 reorienting the sector towards new technology-intensive industries which can grow larger, high-value companies;
- 29.4 strengthening our connections to global initiatives so we can draw on global innovations; and
- 29.5 funding talent programmes that would allow for a greater focus on high quality research capability (which has a greater chance of generating spin outs and supporting BERD).

Increased Government investment in R&D is required to meet investment aspirations

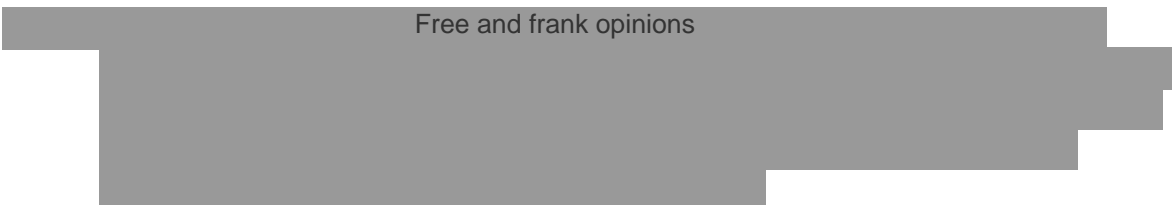
30 Free and frank opinions



31 Free and frank opinions



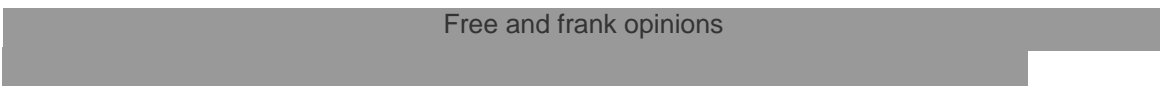
Free and frank opinions



32 Free and frank opinions



33 Free and frank opinions



Free and frank opinions

The current system can do better to reflect our social aspirations

- 34 The current RSI policy settings do not give sufficient expression to Te Tiriti o Waitangi and CRIs’ policy settings do not adequately align to Te Tiriti and Māori aspirations. Several reports from across the RSI sector and consultation have highlighted a lack of explicit Tiriti presence in RSI policy and legislation.
- 35 These reports have also sought that Te Tiriti be explicitly addressed in RSI policy and across the RSI sector. They recommended greater investment for mātauranga Māori and its protection, the development of the Māori STEM workforce pipeline, research led by Māori, and for research outcomes that address the aspirations of Māori communities and end users. We need to ensure the RSI system meets the obligations of Te Tiriti and supports Māori aspirations.
- 36 Our research workforce is also under pressure. It is not as mobile as it needs to be and career paths are unstable. Women, Māori, Pacific Peoples, ethnic communities, people with disabilities and members of LGBTQI+ communities suffer from inequitable career opportunities. Providing for a wider range of more flexible career pathways is vital to ensure that our homegrown talent is able and willing to stay in Aotearoa New Zealand, and that we can attract overseas talent.
- 37 In light of all these challenges, I consider it necessary to modernise our RSI system so that it is fit for the future. Te Ara Paerangi will enable the RSI system to support the Government’s broader wellbeing objectives and contribute to the Government’s Economic Plan to build a high wage, low emissions economy.

Positioning the RSI System for the Future

- 38 The attached White Paper is structured around a series of policy directions that will, taken together, give effect to our aspirations for a future research system.

Free and frank opinions

- 39 Free and frank opinions

Free and frank opinions

Free and frank opinions

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Free and frank opinions

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Te Ara Paerangi will also support researchers to engage meaningfully and productively with industry, and vice versa, further realising business potential. The National Research Priorities will drive engagement through a focus on delivering impact (policy direction 1.1). We will establish mechanisms, including funding mechanisms that underpin long-term cross-sector relationship building (policy direction 1.2) and support career pathways that bridge the RSI system and industry (policy direction 3.1).

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Free and frank opinions

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The reform programme will develop measures to assess the impact of reform and to evaluate how well it is tracking against delivering the intended outcomes. In relation to the Government's economic goals, I expect to see the following changes:

- 43.1 Improved multifactor productivity and product complexity measures.
- 43.2 Growth in commercialisation pathways and other indicators of impact in specific areas such as health technologies.
- 43.3 Continued growth in investment in new innovative businesses and growth of international markets for innovative technologies.
- 43.4 Lift in wellbeing indicators in priority areas, including in health, social, environmental, cultural and economic indicators.

Embedding Te Tiriti o Waitangi in our RSI System

- 44 The reforms seek to embed Te Tiriti o Waitangi in the design of the RSI system. This process and what it will look like in practice will be determined in collaboration with Māori. Enabling more opportunities for Māori-led research to flourish will help address enduring inequities and create successful and sustainable Māori enterprises and diversified asset bases. These outcomes will be delivered through research fellowships (policy direction 3.2) and funding mechanisms that directly support Māori researchers and Māori-led research (policy direction 2.1).
- 45 The impact will be seen in improved wealth and resilience of Māori communities, and measured by improved economic, social and wellbeing indicators for Māori people and communities.

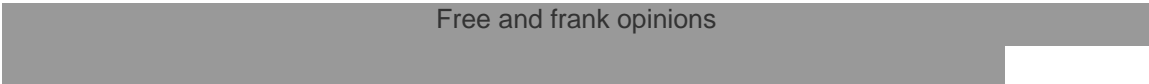
A world-class, diverse, and equitable research workforce

- 46 New Zealand's research workforce forms the basis of our RSI system. We depend on it to open new opportunities and deliver successful solutions to national challenges.
- 47 For Te Ara Paerangi to be successful, we need to build a system that attracts, retains and develops a world-class workforce. New interventions are needed to address systemic issues that are artificially reducing workforce productivity and our ability to secure the best talent in an increasingly competitive international market. These include career precarity, unproductive competition, and barriers to collaboration between academia and industry.
- 48 By putting in place the right systems, structures and culture, we will attract and develop a workforce that that possesses the skills and talent to meet future challenges and is representative of and embraces Aotearoa New Zealand's diversity. Better recognising wider research successes such as impact delivery and through broader definitions of excellence (policy direction 3.2 and 3.3) is critical to supporting a diverse and representative workforce.
- 49 Building capability and creating new opportunities is central to the Government's Economic Plan. Increased career mobility fostered by stronger partnerships between the RSI sector and industry will create rewarding, high-wage jobs (policy direction 3.1, through increased focus on applied training programs and diversifying career pathways).
- 50 Te Ara Paerangi is also committed to empowering women and Pacific Peoples in the research system, which will help to realise their aspirations and economic uplift (policy direction 3.3 through targeted funding, and policy direction 4.3 through considering potential changes to institutional settings and capability).
- 51 As a result of the reform programme, I expect to see greater representation of Māori, Pacific Peoples and women, and more globally talented people choosing to work and contribute their skills within Aotearoa New Zealand. I also expect to see excellent Pacific research and researchers leading to improved wealth, resilience and wellbeing indicators for Pacific communities in both New Zealand and the Pacific.

Ensuring our system delivers on the things that are important

- 52 Future-focused infrastructure and institutions underpin the Economic Plan and our other strategies to improve wellbeing. Public research organisations are a key element of this foundation. The reforms will ensure these organisations are able to adapt to meet new challenges and opportunities. We will consider providing long-term support and strategic direction for public good science services (policy directions 4.1) and RSI infrastructure (policy direction 4.2). A clearer and more transparent funding regime for science services, such as environmental monitoring, will ensure that we can direct resources to ensure critical Government needs are met. The impact of these reforms will be seen in improved environmental, social and economic outcomes from our land and resources.
- 53 This is a vision for improving the wellbeing of all New Zealanders through RSI. The nature and scale of change proposed by the reform objectives is necessary to position the RSI system to realise the Government’s Economic Plan and deliver measurable impact in the ways outlined above.

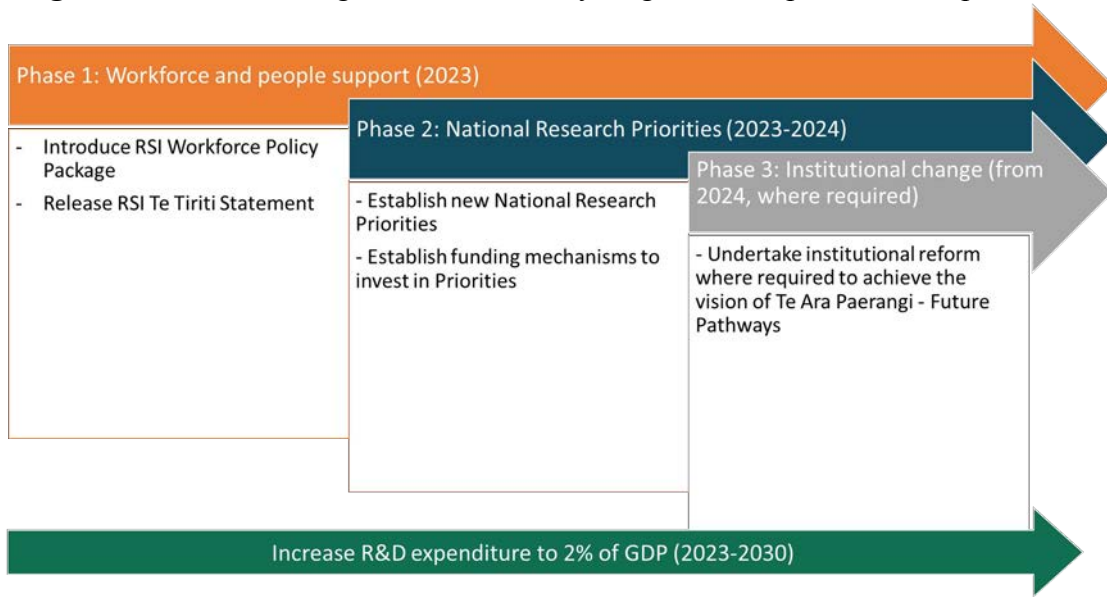
Changes to the RSI System

- 54  Free and frank opinions
- 55 I propose that Te Ara Paerangi take an ambitious system-level approach to reforming the RSI system and deliver broader funding, structural and functional changes to the system that will see ongoing implementation over the coming years. Changes to the funding structures of the RSI system are further illustrated in the White Paper.

The phases of reform

- 56 I propose three key milestones around which the broader reform programme will take place. These milestones will function as anchors for a wide range of reform activities and be associated with significant changes across the RSI system. I anticipate these phases of reform will overlap to some extent. They will be subject to further design work, and will proceed in partnership with Māori and in consultation with the sector and key stakeholders. The phases are expected to approximate the order shown in the following table:

Figure 1. Te Ara Paerangi – Future Pathways high-level implementation phases



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Constitutional conventions

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Alongside these phases we will also undertake infrastructure initiatives subject to future budget decisions, including ongoing investments required to put existing research infrastructure on a sustainable footing, new investment to fund a research infrastructure roadmap and support eResearch.

Phase 1: Immediate workforce and people support

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Constitutional conventions

59.1

Constitutional conventions

59.2

Constitutional conventions

59.3

Constitutional conventions

60 Constitutional conventions

61 As a first step towards embedding Te Tiriti o Waitangi throughout the RSI system, I propose releasing a Tiriti statement that outlines the Government’s obligations, expectations and aspirations for RSI with respect to Te Tiriti o Waitangi. A Tiriti statement will guide MBIE in its role as a steward, funder and administrator of RSI, and Crown-funded RSI activities or any government-owned research entities.

Phase 2: National Research Priorities

62 Constitutional conventions

63 Constitutional conventions

64 Constitutional conventions

65 Constitutional conventions

Phase 3: Changes to public research organisations

66 Constitutional conventions

67 Constitutional conventions

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Constitutional conventions

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Constitutional conventions

Implementation

Transition and wellbeing

71 The White Paper marks the beginning of a change programme consistent with the Government's intent to embed a wellbeing approach across the public sector. I am proposing reforms at a scale that will require appropriate transition planning and I am committed to supporting the RSI system in this transition. The scale of change I propose is fundamental and significant, and even with careful transition management will necessarily lead to a degree of uncertainty in the research sector.

72 For a change programme of this nature, we will need to act carefully to ensure that it does not have a significant impact on the wellbeing of those involved. As we move forward, I am committed to ensuring the wellbeing principles of He Ara Waiora inform not only what we do but how we go about implementing the change:

72.1 Kotahitanga: working in an aligned, coordinated way.

72.2 Tikanga: making decisions in accordance with the right values and processes, including in partnership with our Treaty partner.

72.3 Manaakitanga: enhancing the mana of others through a process of showing proper care and respect.

72.4 Whanaungatanga: fostering strong relationships through kinship and/or shared experience that provide a shared sense of wellbeing.

73 To undertake this reform, including the change programme and transition, Te Ara Paerangi – Future Pathways programme will need to be adequately resourced. I propose to seek funding for this through forthcoming Budget rounds.

Engagement and Consultation

74 The White Paper signals significant change for the RSI system. In order to achieve the White Paper vision, I will continue to consult with the sector as detailed policy proposals are developed, including with social sector agencies.

- 75 I am also committed to working with the sector and in partnership with Māori and in consultation with Pacific Peoples as the reforms are progressed.
- 76 I have asked officials to work closely with Māori and other key partners and stakeholders in designing a process to determine National Research Priorities, which I intend to bring to Cabinet in the second quarter of 2023. Building on the extensive feedback on the Green Paper, this approach will provide sufficient opportunity for stakeholders to inform the design of the process. I expect that the resulting process to determine Priorities will itself involve opportunities for significant engagement.
- 77 To support the transition, and in line with feedback from Green Paper submissions, the White Paper includes an implementation roadmap that provides indicative timings for key milestones along the Te Ara Paerangi change journey.
- 78 Change will be transparent and signalled well in advance, allowing sufficient time for the sector to prepare. I will ensure that transition periods are built in that will allow change to be worked through thoroughly, and any detailed policy proposals to deliver Te Ara Paerangi will be developed, consulted on and implemented closely in line with this roadmap.

Financial implications

- Free and frank opinions
- 79 Free and frank opinions
- 80 Free and frank opinions
- 81 Free and frank opinions

Cost of Reform

- 82 Constitutional conventions

Legislative Implications

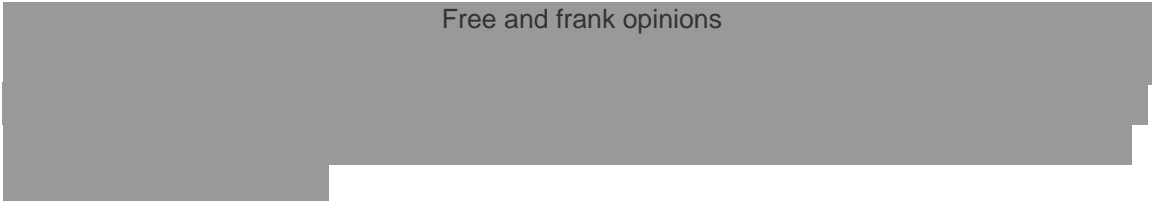
83 Legislative change is not required at this stage but may be needed as the reform progresses and specific policy proposals are developed. Further policy work is required to determine the nature of possible reform of public research organisations, and I will report back to Cabinet on matters that will require legislation.

Risks

84 Free and frank opinions



85 Free and frank opinions



Impact Analysis

Regulatory Impact Statement

86 A Regulatory Impact Analysis is not required.

Climate Implications of Policy Assessment

87 The Climate Implications of Policy Assessment (CIPA) team has been consulted and confirms that the CIPA requirements do not apply to this proposal as the threshold for significance is not met and any implications would be indirect and not quantifiable at this point. However, progressing this work may result in impacts on carbon emissions in the future. These impacts will be quantified and disclosed to Cabinet as appropriate as this work is advanced.

Population Implications

88 A reformed RSI system that is better able to meet health, social, economic and environmental challenges will advance the overall wellbeing of the population of Aotearoa New Zealand.

89 The reform seeks to improve outcomes for Māori in a number of ways:

89.1 The proposed objective ‘Embedding Te Tiriti’ will support Māori within the RSI system and enable the system to be more responsive to the needs and values of Māori across the country.

89.2 Officials are connected into the all-of-government Te Pae Tawhiti Wai262 work programme that is underway to ensure alignment across mātauranga Māori-related mahi. This objective will support Māori to protect and develop mātauranga Māori.

89.3 Specific policies throughout the reform process will be designed to benefit Māori, for example, the proposal to establish National Research Priorities will allow for Māori-led Priorities.

90 Statistics show that women, Māori and Pacific Peoples are disproportionately affected by career precarity and underrepresented in senior roles and leadership positions. The proposed objective ‘Valuing Our People’ seeks to improve equity, diversity and inclusion by removing barriers to entry or advancement in the RSI system for women, Māori, Pacific Peoples, ethnic communities, people with disabilities, and members of LGBTQI+ communities.

91 The reform also seeks to advance the wellbeing of Aotearoa New Zealand’s Pacific communities by increasing Pacific Peoples’ and Pacific realm countries’ access to and involvement in the RSI system.

Human Rights

92 There are no implications under the New Zealand Bill of Rights Act 1990 or the Human Rights Act 1993.

Consultation

93 The following government departments were consulted in the development of this paper and the White Paper: The Ministry of Education, the Treasury, Ministry for the Environment, Ministry for Primary Industries, Tertiary Education Commission, National Emergency Management Agency, Department of Prime Minister and Cabinet, Te Arawhiti, Department of Internal Affairs and the Ministry of Health.

94 The following agencies have been informed: The Ministry for Women, Ministry for Pacific Peoples, Ministry of Foreign Affairs and Trade, Ministry for Social Development, Ministry of Defence, the Earthquake Commission, Inland Revenue Department and Land Information New Zealand.

95 MBIE also consulted with an external Reference Group for Te Ara Paerangi on the White Paper. The Group consists of representatives from a range of peak bodies and professional organisations within the sector, including business, industry and Māori science and research leaders.

Communications

96 Subject to Cabinet’s agreement, I intend to announce the release of the White Paper at a media focused event in December 2022. The White Paper will then be made publicly available on the MBIE website.

- 97 Officials have prepared a communications strategy and package which includes identification of risks and mitigations for the release and following release of the White Paper. Key messages and Q&As have also been prepared to support a variety of scenarios. These documents are available from my office upon request.
- 98 Prior to the release of the White Paper, I also intend to speak with a number of key stakeholders (such as key sector leaders and media commentators) to communicate the vision of the reform and socialise key concepts of the White Paper. These conversations are to ensure the White Paper receives wide engagement from across the RSI sector following release and is well-received.

Proactive Release

- 99 I intend to release this paper in accordance with the guidance in Cabinet Office Circular CO (18) 4.

Recommendations

The Minister of Research, Science and Innovation recommends that the Committee:

Te Ara Paerangi – Future Pathways relation to Government Priorities

- 1 **note** that in November 2021 Cabinet committed to an Economic Plan and, as part of this, the Government reaffirmed its ambitious target to increase overall investment across government investment and business expenditure on R&D to 2 per cent of GDP by 2030, which will grow New Zealand’s RSI system [DEV-21-SUB-0222];

Background

- 2 **note** that in September 2021 Cabinet agreed to release the discussion document entitled *Te Ara Paerangi – Future Pathways Green Paper 2021* [DEV-21-MIN-0193] and invited the Minister of Research, Science and Innovation to report back by mid-2022 with the outcomes of consultation and any proposed policy changes;
- 3 **note** that the attached White Paper has incorporates the outcomes of the consultation process, setting out the high-level vision for New Zealand’s future ‘public’ RSI system alongside key policy directions to initiate reform and guide Te Ara Paerangi – Future Pathways work programme;

The case for change

- 4 **note** that the RSI system is smaller than it needs to be, with Aotearoa New Zealand only spending 1.4 per cent of its GDP on R&D compared to the OECD average of 2.5 per cent, and that both government investment and business expenditure on R&D (BERD) contribute to lower levels of investment;
- 5 **note** that despite reforms by previous governments, the RSI system in its current form is not well-placed to absorb the needed increase in funding to support the government’s wider social and economic goals because:

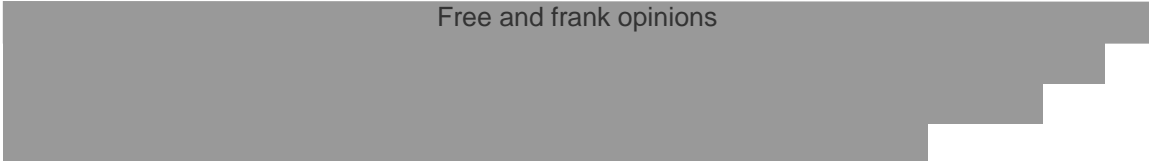
5.1 public research organisations are too small with insufficient scope to adapt to emerging areas;

5.2 public research organisations are reliant on current sectors and industries, which make it difficult for them to develop new capabilities outside of historic responsibilities;

5.3 public research organisations struggle with poor integration and ongoing unproductive competition that obstruct otherwise net beneficial collaborations; and

5.4 the system's mechanisms for signalling direction to the system are diffuse and confusing, resulting in multiple overlapping strategies that contribute to a cluttered governance environment.

6 **note** that technological change, including digitalisation, is one of the defining features of the global economy, and is widely recognised as a critical tool to increase societal wellbeing within environmental limits;

7  Free and frank opinions

8 **agree** to the case for change set out in the White Paper, which demonstrates that without reforming the RSI system, the increased investment needed in R&D is insufficient to unleash our innovative potential and support the government's wider social and economic goals, including its Economic Plan and the Industry Transformation Plans;

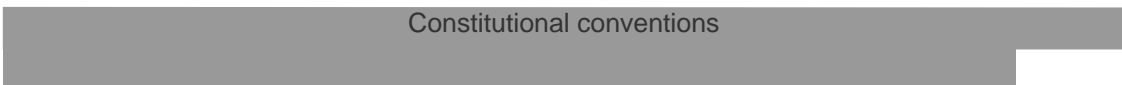
9 **note** that, while the lack of BERD is an issue for Aotearoa New Zealand, current policies designed to support BERD are having a notable impact; however, without reforming the RSI system these policies will unlikely be sufficient to support a sustained 10 per cent annual growth in BERD for the next eight years;

Overall vision and objectives for reform

10 **agree** to the overall vision presented in the White Paper for Te Ara Paerangi – Future Pathways reform of the RSI system: an RSI system that supports wellbeing for all current and future New Zealanders, a high-wage low emissions economy, and a thriving, protected environment through excellent and impactful research, science and innovation.

11 **agree** to progress the reform programme in line with the scope, objectives and key policy directions set out in the White Paper, subject to reporting back to Cabinet to approve policy proposals that require significant policy decisions, funding or legislation;

Te Ara Paerangi – Future Pathways reform programme

12  Constitutional conventions

13 Constitutional conventions

Changes to the RSI system

14 Constitutional conventions

15 Constitutional conventions

16 **note** that an area of focus for the reform will be on increasing the economic and social impact of research and that this will be a key element of further policy proposals;

Phase 1: Immediate workforce and people support

17 **note** that Phase 1 will deliver changes to start embedding Te Tiriti o Waitangi in the RSI system and alleviate workforce issues by way of an initial workforce package, covering:

17.1 Increasing the number of research fellowships to retain and develop talent;

17.2 Introducing training opportunities to enable our research workforce to be prepared for a broad range of possible careers in addition to academia, including technical, private sector, community-led and entrepreneurial occupations; and

17.3 Introducing international talent attraction programmes, and programmes to repatriate excellent New Zealand researchers from overseas;

18 Constitutional conventions

Phase 2: National Research Priorities

19 **agree in principle**, subject to detailed policy proposals being brought to Cabinet, to establish a process for determining National Research Priorities to align resources and focus collective activities on areas of most importance to New Zealand’s economic, social and environmental wellbeing;

20 Constitutional conventions

Phase 3: Changes to public research organisations

21 [Redacted] Free and frank opinions [Redacted]

22 [Redacted] Free and frank opinions [Redacted]

23 [Redacted] Free and frank opinions [Redacted]

24 [Redacted] Constitutional conventions [Redacted]

[Redacted] Free and frank opinions [Redacted]

25 [Redacted] Free and frank opinions [Redacted]

Cost of reform

26 [Redacted] Free and frank opinions [Redacted]

27 [Redacted] Constitutional conventions [Redacted]

28 [Redacted] Free and frank opinions [Redacted]

Transition and Wellbeing

29 **note** that the change programme and transitions need to be carefully managed and will be informed by the wellbeing principles of He Ara Waiora;

Engagement, consultation and implementation

30 **note** that officials will consult with the sector and Māori as policy proposals are developed and implemented;

31 **note** that further policy design will have regard to achieving alignment with the Government's Economic Plan and will consider links with the Government's Industry Transformation Plans;

Release of the White Paper

IN CONFIDENCE

- 32 **approve** the attached White Paper entitled ‘Te Ara Paerangi - Future Pathways White Paper’;
- 33 **note** the intention to release the White Paper in November 2022; and
- 34 **authorise** the Minister of Research, Science and Innovation to make minor or technical changes (e.g. editorial, design and formatting) to the White Paper prior to its public release.

Authorised for lodgement

Hon Dr Ayesha Verrall

Minister of Research, Science and Innovation