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Future Pathways Policy Team  
Ministry of Business, Innovation and Employment

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## **Te Ara Paerangi Future Pathways Green Paper Nelson Regional Development Agency Submission**

### **Introduction: NRDA**

NRDA is the regional development agency for the Nelson Tasman region, with a mission to unlock the economic potential of Nelson Tasman to enable our people and places to thrive. We do this by leading inclusive and regenerative economic development, supporting our businesses and people to grow, and by shaping and amplifying our profile to attract people, business, and investment to the region. The NRDA is a Council Controlled Organisation, owned by the Nelson City Council with funding contribution from Tasman District Council.

NRDA is also the convenor of the Project Kōkiri collaboration. Project Kōkiri was established in early 2020 when the Covid-19 pandemic first emerged. It is comprised of Nelson City Council, Tasman District Council, Iwi/hapū and other Māori entities, Nelson Tasman Chamber of Commerce, business representatives, the Regional Public Service Lead and the locally based central government departments. Project Kōkiri delivered and implemented the regional Covid-19 response action plan and is developing the Nelson Tasman Regeneration Plan 2021-2031 to provide a blueprint for regional development over the next ten years.

NRDA has been the Regional Business Partner for Nelson, Tasman and Marlborough since 2010 and during that time has facilitated the delivery of R&D funding & management capability funding in excess of \$8m to the region through Callaghan Innovation, and supported over 4,000 businesses. NRDA partners with Nelson Tasman Chamber of Commerce and Nelson Marlborough Institute of Technology to deliver the Mahitahi Colab, an Innovation hub for Nelson and Tasman.

Disclosure: Two members of the NRDA Board are also members of the Cawthron Board of Trustees. They are Meg Matthews, Chair of NRDA, and Sarah-Jane Weir, NRDA Board Member. Conflict of Interest protocols have been observed in the preparation of this submission.

### **How to better identify and deliver on whole of system research priorities**

#### **1. What principles could be used to determine the scope and focus of research priorities?**

NRDA is guided by the findings of the substantial community consultation that was undertaken for the Te Tau Ihu Intergenerational Strategy<sup>1</sup>. The Strategy clearly lays out the principles and priorities that our communities espouse, and these have formed the guiding principles for the Nelson Tasman Regeneration Plan 2021-2031 that is nearing completion<sup>2</sup>.

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<sup>1</sup> [www.tetauihu.nz](http://www.tetauihu.nz)

<sup>2</sup> [www.projectkokiri.nz](http://www.projectkokiri.nz)

NRDA considers that the Four Wellbeings should form the basis of determining scope and focus for research priorities. We support the inclusion of a principle that research priorities should enhance and/or preserve the environmental, social, cultural and/or economic wellbeing of communities in the present and for the future.

## **2. What principles should guide a national research priority-setting process and how can the process best give effect to Te Tiriti?**

NRDA supports a process that considers the wellbeing of our people, climate change, social impact and economic benefit and which specifically considers the commercialisation and deployment opportunities for the findings of proposed research. It should also incorporate Te Ao Māori throughout as well as give specific attention to the support and furtherance of Mātauranga Māori.

NRDA supports a process that includes regional representation. Nelson Tasman has a regional collaboration forum in Project Kōkiri, which brings together the regional development agency, Chamber of Commerce, both Unitary Authorities (Councils), iwi/hapū and other Māori entities, MSD, Nelson Marlborough Institute of Technology, Regional Skills Leadership Group, and businesses, and this group is shaping the Regeneration Plan as described above.

## **3. How should the strategy for each research priority be set and how do we operationalise them?**

NRDA supports a process whereby the diffusion, commercialisation and deployment of research findings are specifically featured in the strategy for each priority.

## **Te Tiriti & Mātauranga: how the research system can best honour Te Tiriti, give life to Māori research aspirations, and enable mātauranga Māori**

### **4. How would you like to be engaged throughout the Future Pathways programme?:**

NRDA would like to be engaged via the inclusion of a Project Kōkiri representative in regular decision-making and discussion processes.

### **5. What are your thoughts on how to enable and protect mātauranga Māori in the research system?**

We acknowledge our iwi partners of Te Tauihu including Te Ātiawa, Ngāti Koata, Ngāti Toa Rangatira, Ngāti Tama, Ngāti Rārua, Ngāti Kuia, Ngāti Apa ki te Rā Tō and Rangitāne. We believe that iwi/hapū and other Māori entities are best placed to respond to these questions.

### **6. What are your thoughts on regionally based Māori knowledge hubs?**

We acknowledge our iwi partners of Te Tauihu including Te Ātiawa, Ngāti Koata, Ngāti Toa Rangatira, Ngāti Tama, Ngāti Rārua, Ngāti Kuia, Ngāti Apa ki te Rā Tō and Rangitāne. We believe that that iwi/hapū and other Māori entities are best placed to respond to these questions.

## **Funding: how to reshape the funding system for the future and to give effect to research priorities**

### **7. How should we determine what constitutes a core function and how do we fund them?**

NRDA considers that the collection, curation and provision of access to data are core functions.

### **8. Do you think a base grant funding model will improve stability and resilience for organisations? How should we go about designing and implementing such a funding model?**

NRDA has no comments on base grant funding.

## **Institutions: how to increase connections, collaboration and adaptability within the system for future success**

NRDA considers that barriers to connection, collaboration and adaptability may exist in varying forms. Collaboration is not necessarily enabled through fewer, larger organisations, and in regional centres collaboration may be easier.

We support a system that ensures maximum value can be extracted from the use of public funds in order to deliver the widest possible benefit to New Zealand: a system that supports both government (CRIs and others) and independent science research institutes should be maintained.

Research on issues that affect everyone, such as climate change, environmental degradation, illness, and low productivity can deliver benefits to groups beyond the RSI community, government and major businesses and in return these wider communities can deliver value in terms of insights into problems that could benefit from funded research.

### **9. How do we design collaborative, adaptive and agile research institutions that will serve our current and future needs?**

NRDA supports the development of a framework where collaboration, adaptation and agility are not precluded by funding contracts or by institutional culture.

NRDA supports the development of new business models to allow research facilities to be built and/or operated in partnership with partners who are external to the CRI system. For example, the Cawthron Aquaculture Park has the assets and capabilities to host an aquatic PC3 facility for NZ, which would serve NZ's national biosecurity interests. The need for an aquatic PC3 facility has been identified and agreed upon by industry and government. The CRI system needs to allow flexibility for government to invest in partnership with non-Crown research entities, especially where this would provide a solution to a national problem and deliver significant national benefits.

### **10. How can institutions be designed to better support capability, skills and workforce development?**

NRDA has no further comments to make on institutional design.

### **11. How should we make decisions on large property and capital investments under a more coordinated approach?**

NRDA supports a decision-making framework that considers the greater good across the RSI system and beyond it into local government, regional development and communities.

### **12. How do we design Te Tiriti enabled institutions?**

We acknowledge our iwi partners of Te Taihū including Te Ātiawa, Ngāti Koata, Ngāti Toa Rangitira, Ngāti Tama, Ngāti Rārua, Ngāti Kuia, Ngāti Apa ki te Rā Tō and Rangitāne. We believe that that iwi/hapū and other Māori entities are best placed to respond to these questions.

### **13. How do we better support knowledge exchange and impact generation? What should be the role of research institutions in transferring knowledge into operational environments and technologies?**

NRDA considers that transference of knowledge into new technologies, and diffusion of the knowledge and technologies, is an essential component of the RSI system. As the Regional Business Partner for Te Taihū, we have strong insights based on many years' accumulation of knowledge and

experience in both the government and business aspects of RSI. Our observations and recommendations here are made in context of a national system that will benefit all of New Zealand.

We note that there is very little emphasis on Innovation in the consultation documentation and we assert that this is a substantial omission as Innovation is heavily linked into our research system.

Innovation has an important role throughout the RSI system, now more than ever before, due to the nature of science-led and technology projects being undertaken by NZ companies in their quest to remain globally competitive. And by default, this quest relies on (in many parts) and interweaves with our national RSI system. This Government review is a once in a generation opportunity to look at how Government can also consider and support Innovation as we look ahead to the next 30 to 50 years for the future direction of New Zealand.

In 2020, the Global Innovation Index ranked NZ as 26th out of 129 countries, but in 2010 NZ was ranked 9<sup>th</sup>, so over the past 10 years, NZ has gone backwards on this innovation index at a time when, with global challenges facing us, we can least afford it

Examining the Index in more detail, there are some notable areas where NZ's performance in this ranking is high, such as stability in the political & regulatory environment as well as our strong education system and high levels of research output. However where the rankings show weakness is in **knowledge transfer, commercialisation, and business sophistication**.

Recognising that Callaghan Innovation is New Zealand's innovation agency, we would stress that our national innovation ecosystem is composed of multiple actors that are critical to accelerating innovation in NZ. The ecosystem is centred on supporting innovative businesses but includes other Government agencies beyond Callaghan Innovation (MPI, MBIE et al) that directly support innovative or science-led companies, private investors and universities as well as the CRIs. Each of these agencies plays an important role in contributing to our research system overall and thus should be considered within the scope of this RSI system review.

New Zealand is experiencing rapid social and technological change with more companies becoming mission-led, focusing on environmental, sustainability and/or wellbeing issues, even compared to just a few years ago. NRDA's approach to the review of the RSI system is to ask: how can we develop an ecosystem to deliver impact over the next 30 to 50 years. We submit that Government should take a mission-based approach to Innovation and to the RSI system as a whole - the development of a shared national vision and agenda which tackles the toughest challenges facing NZ whilst not precluding the inclusion of blue sky research and science.

We consider that some regions may be able to specialise in specific mission-based RSI, particularly if Government also targets regions for infrastructure and facilities investment. This would have the dual benefit of enabling substantial specialist regional contribution to New Zealand's RSI achievements whilst at the same time supporting and enabling regional economic development and enhancing regional wellbeing. Nelson Tasman is extremely well-placed to deliver in the Blue Economy space, and we enlarge on that opportunity in the Infrastructure section below.

We assert that Innovation is a key tool to lift wellbeing. For New Zealand as a whole, to improve overall wellbeing, it is essential that the right foundations are in place for a national system to deliver impact. This requires better connections between the private, academic, research and Government sectors.

## **Workforce: how the RSI workforce is supported, developed and funded**

### **14. How should we include workforce considerations in the design of research Priorities?**

NRDA supports the development and retention of a skilled workforce in the RSI community. Building our workforce skills in science and technology has been identified as a key to unlocking productivity growth of our region<sup>3</sup>. We are in favour of collaboration between CRIs, Tertiary Institutions, NGOs, that iwi/hapū and other Māori entities, and private sector organisations (where appropriate) throughout the RSI system. NRDA also supports remote and flexible working where this is practical for the nature of a business or organisation. We consider that these approaches may provide additional options for accessing skills and talent, and for promoting the development of the RSI workforce in New Zealand.

NRDA supports utilising the skills and knowledge of wider parties in the design of research Priorities. Alongside the considerations previously voiced in earlier questions, NRDA supports an approach that includes workforce needs, development opportunities and practical approaches to securing and retaining skills and talent.

Workforce considerations in the design of research priorities should include recognition of existing and growing regional talent. In 2021, at 427, Nelson Tasman had the highest concentration of jobs in scientific research per capita of such employment in the Country.

### **15. What impact would a base grant have on the research workforce?**

NRDA considers that base grant funding would provide a degree of certainty about the business continuity of CRIs and other institutions.

### **16. How do we design new funding mechanisms that strongly focus on workforce outcomes?**

NRDA urges funding mechanisms to take a long-term focus to support workforce career investment and stability.

## **Infrastructure: how we invest in, govern and run national research infrastructure**

### **17. How do we support sustainable, efficient and enabling investment in research infrastructure?**

NRDA supports an investment approach that includes collaboration between CRIs, central and local government, tertiary institutions and private organisations to deliver maximum total benefit from investments made. NRDA considers that multi-disciplinary centres can result in mutually enhancing interactions between, for example, scientists, investors, businesses and educators.

NRDA supports the development of new business models to allow research facilities to be built and/or operated in partnership with partners who are external to the CRI system. For example, the Cawthron Aquaculture Park has the assets and capabilities to host an aquatic PC3 facility for NZ within Te Taihū, which would serve NZ's national biosecurity interests. The need for an aquatic PC3 facility has been identified and agreed upon by industry and government. The CRI system needs to allow flexibility for government to invest in partnership with non-Crown research entities, especially where this would provide a solution to a national problem and deliver significant national benefits.

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<sup>3</sup> Nelson Tasman Regional Economic Briefing. Benje Patterson March 2022, Unpublished.

### **Investing in Nelson Tasman as New Zealand's leading regional Science & Tech Hub:**

The NRDA is working with NZTE to promote Nelson-Tasman as a national Science and Tech hub to domestic and international investors and businesses. (NZTE are working with a targeted group of regions to grow and leverage a national 'spine' of hubs focusing on different competitive advantages,).

Nelson-Tasman has an existing competitive advantage as a regional science and technology hub:

- We have the highest number of scientists per capita of any New Zealand city.
- We have significant assets, expertise and world-leading capabilities in the Cawthron Institute and Plant and Food Research (Seafood Research Unit at Port Nelson and the Horticulture Research facilities at Riwaka).
- The Cawthron Aquaculture Park is home to a range of significant commercial and crown investments, such as SpatNZ and the New Zealand National Algae Research Centre.
- We are home to the New Zealand Artificial Intelligence Institute.
- Wakatū Incorporation and Nelson City Council have an MOU with the Klimatorium in Denmark and are working to develop a Southern Hemisphere sister Climatorium in Nelson.
- Our eight iwi and Wakatū Incorporation are investing heavily in Mātauranga Māori, and commercialisation pipelines for new product and ingredient opportunities that have been identified in their research.
- We have a strong cluster of marine, engineering and digital companies that are producing world leading innovation, such as SnapIT Technologies.
- Digital tech service companies are choosing to locate here, for example Shuttlerock, a global leader in digital tech with ten offices around the world, has its HQ in Nelson.

We have two significant developments coming on stream – the Science & Tech Precinct at Port Nelson, and the Wakatū Incorporation Ngā Hekenga Precinct in the CBD. Cawthron will be the anchor tenant in the Science & Tech precinct at the Port and will build new lab and office facilities there. Current discussions between Port Nelson, Cawthron, Wakatū, NRDA, and NZTE are focused on the synergies and aligned objectives of the two developments and to identify how we can work at a regional level to promote the exciting opportunities they represent for our region. Between them, they will house up to 2000 new knowledge workers. We have the footprint coming on stream to attract a range of new research, science and tech entities and businesses, which will grow our existing competitive advantage and generate a world-leading hub of expertise and capabilities.

We know that many of the assets owned within the CRI system are now aged and that new investment is required to ensure the CRI system is housed in fit-for-purpose facilities. We ask that this review of the CRI system considers regional locations for new investments. For example, NIWA has a small office in Port Nelson currently and there is a significant opportunity (and substantive reason) to enhance their presence and capabilities here. Our region has a competitive advantage in the Blue Economy (tested and validated by economic analysis and a comparative competitive advantage assessment undertaken in 2021<sup>4 5</sup>). We have Australasia's busiest fishing port and, with neighbouring Marlborough we have 70% of New Zealand's aquaculture. As a part of our work with NZTE we are actively building our profile around the Blue Economy. Meanwhile, NIWA's facilities at Evans Bay, Wellington, are housed in aging infrastructure, and occupy prime Wellington real estate that could generate sizeable

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<sup>4</sup> Top of South Island - Identifying competitive advantages using location quotient analysis, People and Places, August 2021

<sup>5</sup> Nelson Tasman Regional Economic Briefing, People and Places, February 2022

returns to the government if it were released to the market. Is it still necessary to centralise large numbers of CRI staff in Wellington? We would challenge this assumption.

There are other examples and opportunities where a sound business case could be made for increasing CRI investment in our region, especially in assets and capabilities relating to horticulture and Mātauranga Māori. New business models and innovative approaches to partnerships, pilots, and satellite labs and offices, could unlock significant potential for the CRI system to work with our regional industries, and drive new solutions to existing and emerging industry challenges.

### **Our Recommendation:**

We invite the government, as a part of this review of the CRI system, to consider investing in the development of new CRI offices and facilities in the Nelson Tasman region. This would:

- Strengthen existing synergies and accelerate new synergies between all participants in our regional science and tech ecosystem (industry, research, academia, government, community)
- Build off our existing competitive advantage to develop a world-class Hub of science and tech activities
- Enhance our ability to help grow New Zealand's global profile and reputation and attract international investment and talent
- Allow for enhanced partnership between the CRI system and our leading regional industries, so we can apply science and research solutions and improve regional productivity, value, and resilience - thus contributing to the lifting of our national economy.