

*'Towards a collaborative pan-CRI approach to attract and retain
Māori in the science sector'*



June 2024

Background

The Ministry of Business, Innovation and Employment (MBIE) committed, via the Equity, Diversity, and Inclusion (EDI) Capability Fund¹, to support research organisations to identify and break down barriers to attracting, retaining, and growing an equitable, diverse and inclusive workforce.

This project, entitled '*Mā Te Ara Pūtaiao ka taea, enabling science pathways for Māori*' aimed to better understand how to attract and retain more Māori in the science system, focusing on Crown Research Institutes (CRIs). Two complementary projects also received funding in 2021, one focused on New Zealand Universities and the other on the Independent Research Association of New Zealand (IRANZ). Together, the three EDI projects were expected to provide: (1) an integrated and collaborative approach towards developing and implementing EDI best practices for members of each of the three sector groupings; and (2) partnering with Māori to strengthen and grow Māori participation in the RSI workforce.

Project introduction

Mā Te Ara Pūtaiao ka taea (led by NIWA on behalf of Science New Zealand) provided the first opportunity for seven CRIs to come together to discuss and take stock of their experiences and current practices to attract, retain, and grow Māori within their organisation, focusing on the experiences and needs of Māori researchers/scientists.

A variety of approaches and methodologies were deployed to deliver this project including literature reviews, semi-structured interviews with past/present Māori CRI staff and numerous workshops with experts from a range of fields (both within CRIs and external) and sectors (e.g., education).

The anticipated deliverables included a high-level framework for: (a) establishing a pan-CRI graduate and mentoring programme; and (b) implementing a pan-CRI EDI step-change across graduate and retention programmes.

The new information/data generated in this project supported pan-CRI deliberations about potential actions that could be implemented to improve the status quo – with the view to identifying activities where CRIs could/should collaborate and/or influence the shifts required across the RSI system and CRI sector to attract, retain, and grow Māori participation in the workforce.

Māori representation in the CRI workforce

Prior to Mā Te Ara Pūtaiao ka taea, very few studies have explored the representation and experience of Māori in the CRI sector. This is partly due to limitations and inconsistencies in the EDI data being gathered. This project supported CRIs to take stock of their Māori workforce datasets and share information about their current recruitment and retention practices.

In 2022 there were 148 staff who identified as Māori in the CRI workforce (about 5% of staff). As an indication, CRIs would collectively require an additional 540 Māori staff members to reach parity with the proportion of Māori in the general population. Māori representation across role categories

¹ <https://www.mbie.govt.nz/science-and-technology/science-and-innovation/funding-information-and-opportunities/investment-funds/equity-diversity-and-inclusion-capability-fund/>

varied across CRIs, with scientists ranging between 0-7%, technicians between 3-8%, and “other” between 4-13% of each organisation’s workforce (see appendix for data table).

We do not have a clear understanding about how these CRI numbers may have changed over time (e.g., are they declining or improving?) as one line of evidence to inform what’s working/not working well. However, it is likely that they have not significantly changed over a ten-year period (McAllister et al. 2022a). In addition to improving ethnicity data gathering and reporting, other datasets are needed to help CRIs better understand whether more equitable, diverse and inclusive improvements are being made in: a) sector/organisational strategy; b) research and operational decision-making (including dissemination of funding); c) management (including organisational structures, policies and processes); and d) the design and delivery of research of benefit to Māori.

Māori experiences in the CRI workforce

Connections with other Māori across the RSI system provide a vital support network, fostering a sense of community and resilience. These connections have been significant in the experience of early career Māori researchers who have had Māori mentors, supervisors, and/or been a part of a Māori team. For emerging Māori researchers these connections also serve as a foundational source of support.

Internships are acknowledged as a key point in the career development of individuals and their reflections upon these experiences were generally very positive. Another highlight for emerging and experienced Māori researchers alike, centred around the opportunities to deliver meaningful research, and that this provided a sense of purpose, motivation, and value through connections to people, place, and histories. Supportive financial arrangements (e.g., scholarships, salary, and part-time work), active mentorship, being part of a Māori team, and flexibility of research topics were key to the positive experiences expressed by many interviewees. In regard to attracting and recruiting Māori research talent, research participants suggested that CRI’s need to more actively strengthen relationships with rangatahi and students coming through secondary/tertiary education; increase the visibility of opportunities (e.g., internships, scholarships, vacancies); and promote CRIs as a potential career pathway for rangatahi/students to consider.

Participants also identified areas where improvements are needed including: commitment to Te Tiriti, increasing the cultural competency of the CRI workforce, prioritisation of long-term relationships with Māori (including investment), Māori representation across all leadership tiers, and clarity of roles and responsibilities, and organisational recognition of contributions/success. Māori working within CRI’s should not be expected to lift the cultural awareness/competency of the sector. This creates unsafe spaces for Māori staff and presents both internal and external relationship risks. Māori inequity and additional work burdens are clearly systemic matters that require action for the RSI sector to be able to attract and retain Māori scientists and specialist support roles.

On-going engagement with the Māori CRI workforce is required to get a more in-depth understanding of Māori experiences across disciplines and CRIs to inform ‘step-wise change’ across the sector.

Current CRI Māori EDI practices

While each CRI has a unique purpose, all have statements of corporate intent that demonstrate their aspirations to support the delivery of positive outcomes for Māori via various Māori-focused strategies, programmes and/or research themes. Varying levels of internal funds are prioritised/allocated to the implementation of these, and they are operationalised by a variety of roles, generally fulfilled by Māori, where that capacity is available.

All CRIs are developing/have developed their Kia Toipoto Action Plans that express commitments to attracting and retaining Māori, closing ethnic pay gaps, and increasing ethnic diversity across all leadership levels.

Discussions facilitated during the project demonstrated that all CRIs have some sort of Māori-focused science outreach, recruitment, retention, and/or mentoring initiatives underway to encourage/attract emerging/future Māori researchers and that across the sector, CRIs are partnering with a wide range of schools, STEM programmes, tertiary institutions and iwi/hapū to co-develop and deliver initiatives that are of longer term benefit the RSI system.

While there have been many positive outcomes achieved to date this project identified that there are opportunities to collaborate across CRIs to more efficiently and effectively deliver outreach, recruitment, retention, and/or mentoring programmes for the benefit of the sector and RSI system.

Areas identified for CRI investment included; actively engaging with rangatahi (e.g., via the Pūhoro STEM Academy) to help spark an interest in science as a career pathway, increasing the visibility of CRIs for rangatahi, emphasising mātauranga and making science relatable (e.g., how it can be practically applied for the benefit of Māori communities) and accessible, tailored, fit-for-purpose opportunities to grow and support Māori in the RSI system.

Towards a Pan-CRI Māori EDI 'Step-Change'

A programme logic map (see appendices) was developed in this project which presents the issues and opportunities, inputs and resources, activities and outputs, as well as short- mid-, and long-term goals. As appropriate steering groups, pan-CRI committees, EDI initiatives, information/data gathering and accountability measures are activated, the programme logic map can be adapted for on-going use beyond the life of this project.

A pan-CRI intervention pathway framework (see appendices) representing the key phases of a researcher's journey through the education and RSI system and six intervention pathways that will help to attract, retain, and grow the Māori CRI workforce was also developed as part of this project, recognises the ongoing influence of whakapapa throughout an individual's pathway and the importance of Te Tiriti as a driver of on-going changes to the education and RSI systems. Mā Te Ara Pūtaiao ka taea identified. These are proposed to direct more intentional and coordinated action(s) by CRIs to support Māori researchers, whilst recognising that these will need to be customised/tailored for each phase of an individual's pathway.

Pan-CRI Māori EDI Guidelines are needed to influence strategic approaches that are aligned/implemented across CRIs to, as a sector, influence positive changes that attract, retain and grow the Māori CRI workforce. Draft guidelines were developed by the pan-CRI P&C General Managers group and while aspirational in nature, they clearly articulate the commitment from CRIs

to support a diverse and sustainable Māori workforce through leadership, recruitment and hiring, training and education, and research practices. CRIs will also co-develop an evaluation workstream to track improvements overtime.

A pan-CRI EDI committee led by P&C General Managers alongside TAP General Managers and/or delegates and a representative from Science NZ will be established. The committee will meet twice yearly to oversee implementation progress of agreed Māori-led EDI initiatives and communicate learnings and opportunities to all CRIs to influence sector-wide improvements.

Project recommendations

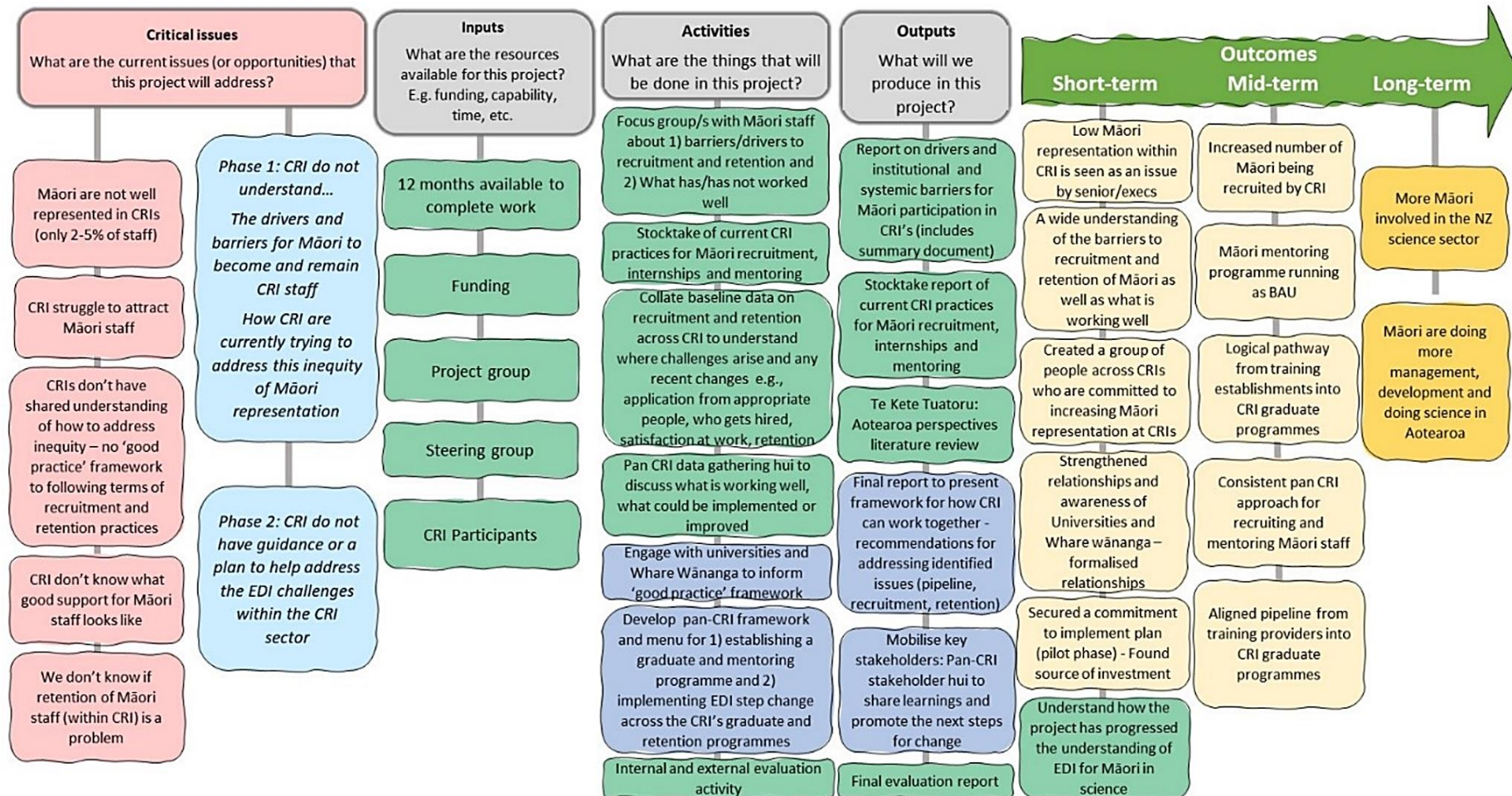
1. The Board of Science New Zealand:
 - a) Agree to the establishment of a 'pan-CRI EDI group' to oversee implementation progress of agreed Māori-led EDI initiatives and communicate learnings and opportunities to all CRIs to influence sector-wide improvements.
 - b) Agree to commit to supporting and resourcing (where required) the work programme of the Pan-CRI EDI group in the implementation of its role and purpose.
2. The Pan-CRI EDI group:
 - a) Note that the group be led by P&C General Managers alongside TAP General Managers and/or delegates and a representative from Science New Zealand.
 - b) Agree to prioritise, coordinate and progress key initiatives (short-to-medium term) in the 'Preliminary intervention pathways action plan' (see appendices) to continue the momentum created by this project.
 - c) Agree to continue to strengthen partnerships with key stakeholders including Te Kanapu, Universities New Zealand, IRANZ and others to collaborate on key joint initiatives that lifts Māori participation across the RSI system.
3. The Ministry of Business Innovation and Employment (MBIE):
 - a) Continue to engage with Te Ara Pūtaiao (TAP) around the broader scale issues and opportunities to advance the EDI kaupapa (including getting better alignment between MBIE investment and Māori needs across the CRI's).
 - b) Support and facilitate a joined-up view across the broader spectrum² of key stakeholders to help enhance and better promote the objectives of the EDI kaupapa to achieve wider Māori participation and leadership across the RSI system.
 - c) Recognise that the competitive research funding environment, improving career pathways for researchers, and Māori expectations of Te Tiriti remain as core issues for CRI's. Noting that this report acknowledges the discontinuation of Te Ara Paerangi.

² including the CRI's, Universities, independent (and Māori) research organisations, whare wānanga and the private sector

Number of employees who identify as Māori by CRI and as a percentage of each organisation’s workforce, including as scientists and technicians. “Other” includes Māori who are working in other science management and support roles. The information was sourced from the ethnicity data contained in the CRI workforce demographics composite report for year ending 30 June 2022 except for GNS. No data was available for ESR (Source: Fleur Evans GM P&C, AgResearch). *Source: GNS Science 2023 Annual Report Part 2 – Performance and Financials).

CRI	Total workforce	Total workforce		Scientists		Technicians		“Other”	
		No. Māori	% Māori	No. Māori	% Māori	No. Māori	% Māori	No. Māori	% Māori
GNS*	507	29	5%	0	0%	0	0%	0	0%
Scion	334	24	7%	6	4%	6	8%	12	13%
Manaaki Whenua	398	25	6%	14	7%	2	3%	9	7%
AgResearch	688	17	3%	1	1%	5	3%	11	4%
NIWA	771	42	6%	10	4%	11	5%	21	8%
Plant and Food	958	38	4%	7	2%	12	4%	19	6%

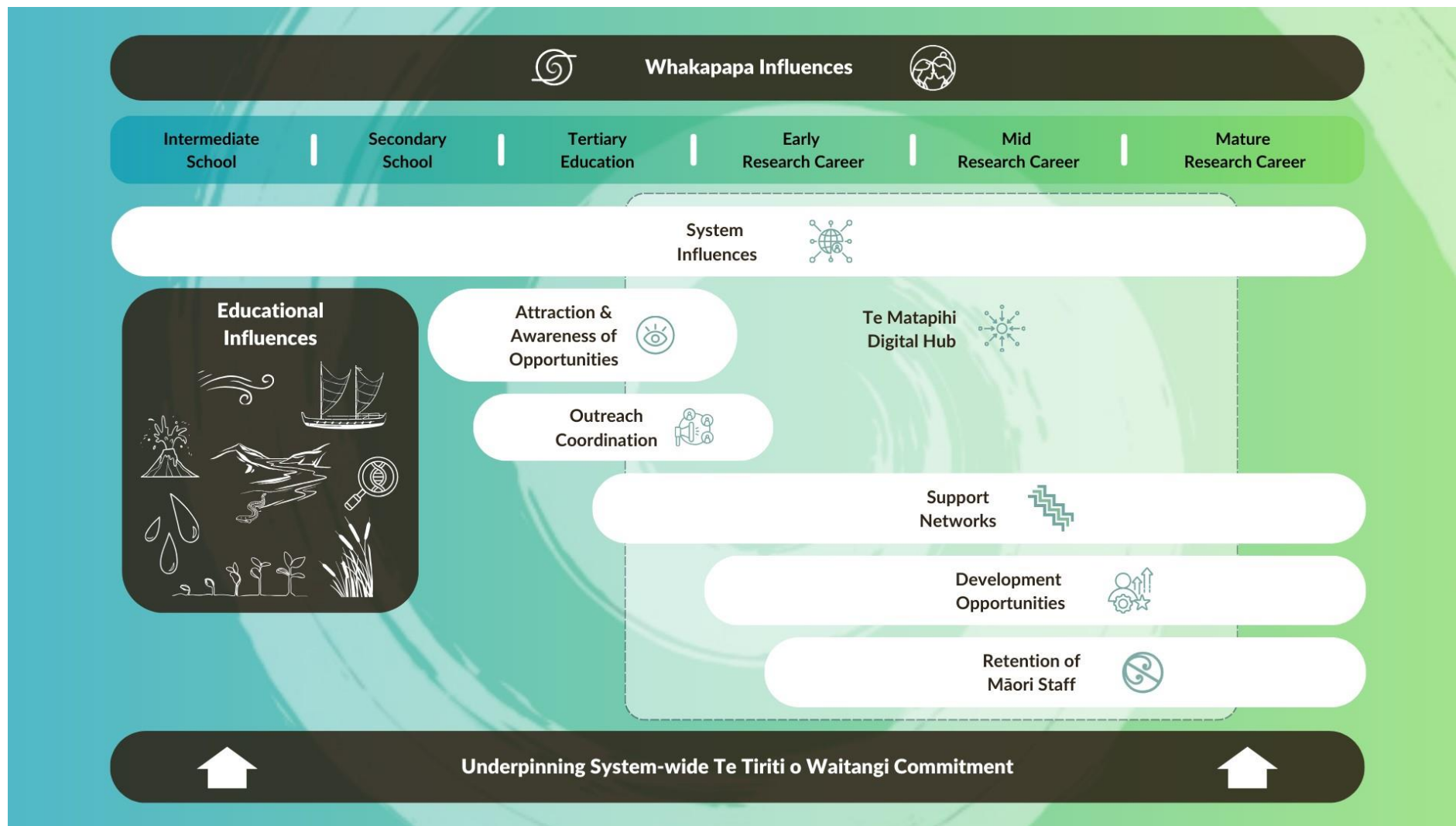
Programme logic map. (From left to right): Summarises the critical issues and opportunities, inputs and resources, activities and outputs, as well as short-, mid-, and long-term goals. As appropriate steering groups, pan-CRI committees, EDI initiatives, information/data gathering and accountability measures are activated, the programme logic map can be adapted for on-going use beyond the life of this project.



Assumptions: CRIs are interested in addressing the low number of staff who are Māori and are interested in doing it with a pan-CRI approach

- Māori staff are willing to take part in this research
- CRIs know their Māori recruitment and retention information
- Universities and whare wānanga are willing to share their data re: Māori graduates

Intervention pathways. This framework represents the key phases of a researcher's journey through the education and RSI system. It recognises the influence throughout an individual's pathway (represented in black boxes). Seven interventions (white boxes) are proposed to direct more intentional and coordinated action(s) by CRIs to support Māori researchers.



Preliminary intervention pathways action plan. This list was created by participants of a pan-CRI wānanga held on 29 November 2023. It is not meant to be an exhaustive list and was produced to inform future discussions and decision-making.

Intervention pathway	Short term	Medium term	Longer term
Systems Influence	<ul style="list-style-type: none"> > Inform National Research Priorities (e.g., Missions). > Influence MBIE prioritisation of a national strategy/action plan to attract, retain, and grow Māori in RSI system, including support networks for Māori. > Communicate Mā Te Ara Pūtaiao ka taea findings to align messaging and actions across the CRI sector (including TAP, SNZ and CRI management teams) to influence organisational and systems change 	<ul style="list-style-type: none"> > Influence and support delivery of system, sector, and education-driven outreach strategies targeting Māori. 	<ul style="list-style-type: none"> > Embed Te Tiriti across the RSI system as the key enabler for Māori success. > Embed Te Tiriti leadership across all system, sector and institutional levels. > Influence and support mātauranga as a recognised career pathway and curriculum.
Outreach Coordination	<ul style="list-style-type: none"> > Map/quantify existing investments in/foci for Māori outreach activities across all CRIs. > Identify the collective audience(s) for both pan-CRI and targeted CRI outreach. > Identify existing coordination role(s) for pan-CRI and targeted CRI outreach. 	<ul style="list-style-type: none"> > Coordinate delivery of pan-CRI approaches to outreach with schools, universities, hapū/iwi, etc., > Explore opportunities for CRI's to collaborate with Pūhoro STEM, Kanapu, Te Pūtea Whakatupu, etc., 	
Retention of Māori staff	<ul style="list-style-type: none"> > Complete a stocktake of existing/future informal/formal mentoring arrangements for kairangahau. Estimate resourcing allocated/required (approach TBC by each CRI) 	<ul style="list-style-type: none"> > Activate and resource a pan-CRI mentoring network. > Build capability, experiences and networks of Māori through iwi partnerships, e.g., secondments, internships. 	<ul style="list-style-type: none"> > Value cultural competency across the RSI system and measure progress (anchored by Te Tiriti).
Awareness & Attraction	<ul style="list-style-type: none"> > Obtain pan-CRI buy in to developing unique selling proposition(s) to increase Māori awareness and attraction to CRIs. 	<ul style="list-style-type: none"> > Develop/activate unique selling proposition(s) to increase Māori awareness and attraction to CRIs. 	
Te Matapihi	<ul style="list-style-type: none"> > Define the scope of 'Te Matapihi', a pan-CRI central hub. > Explore the lessons learnt from similar recruitment hubs, including the pros and cons of different arrangements to increase access/visibility of career pathway opportunities for Māori across CRIs. Ground truth with most recent interns, graduates, emerging researchers. 	<ul style="list-style-type: none"> > Obtain commitment and resourcing for 'Te Matapihi', a pan-CRI central hub. Get pan-CRI agreements in place to operate and mitigate potential risks, including protection of Māori data. 	

Intervention pathway	Short term	Medium term	Longer term
Support Networks	<ul style="list-style-type: none"> > Explore opportunities for early career and mid-career kairangahau engagement with, and voices within, TAP. > Complete a stocktake of existing/active internal and pan-CRI support networks for emerging Māori researchers. > Map/quantify existing investments in/foci for Māori-focused collaborations with education and other support networks (e.g., supervisors, mentors, internships, scholarships, STEM activities). 	<ul style="list-style-type: none"> > Pan-Cri coordination and resourcing of support network for emerging Māori researchers. 	
Other	<ul style="list-style-type: none"> > Identify mechanisms to better coordinate and share information between TAP and kairangahau across all CRIs (e.g., dedicated person/role and resourcing?). > Establish and resource a pan-CRI working group to establish the vision, direct/motivate and report on progress towards agreed EDI goals (which includes 'safe spaces' for Māori in CRIs). 	<ul style="list-style-type: none"> > Design and mobilise surveys of Māori staff to assess progress and success of interventions. 	

