

Dear Te Ara Paerangi Future Pathways Green Paper team,

We are writing as the Investment - Insights team at AgResearch. We are a small and relatively new team, charged with providing professional analytical services to support and enable research. Our services include planning, evaluating and estimating research impact, research analytics, and assessing our research culture through our codesigned science vitality framework.

All our initiatives involve motivating culture change, which we are steadily chipping away at, to slowly - but surely - build momentum. We recognise that Te Ara Paerangi offers an opportunity to create system-wide recognition and reward to accelerate positive changes. We offer our insights based on our experiences and expertise on Institutions (Q.9, 10, 13) and Research workforce (Q.14, 15).

We would like to emphasize the common theme that it is our people who are our RSI system, and the importance of designing a more flexible RSI system that can develop, recognise and reward knowledge, skills and attitudes to meet changing needs over time.

We are keen to be actively involved in shaping the future of NZ's RSI sector and welcome any opportunity to discuss or further develop any of the points outlined here.

Ngā mihi nui,

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Responses to questions:

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

Different ways of thinking. We recognise that all organisations are the collections of their people’s knowledge, skills and abilities. Adopting a traditional management hierarchy in organisation design risks creating new silos. We contend the benefits of new and innovative ways of organising work. For example, enabling self-organising teams where individuals collect around issues they can contribute to, accompanied with a strong emphasis on collaboration and accountability. Another example is building in wider team or outcome-related goals at the individual level, to recognise and reward working in an integrated and collaborative way. Whatever configuration of institutions is selected, the supporting structures and processes need to be appropriately aligned; for example there is evidence that developing and running interdisciplinary research teams with flexibility works best with smaller organisations¹.

Benefits to company model. Te Ara Paerangi notes some challenges of the company model, however, we emphasise that competition can be productive where different expertise brings contrasting perspectives and approaches side-by-side to find the best solution to a problem. We know that creative sectors benefit from a diversity of ideas and perspectives. We contend that unproductive competition between CRIs does not automatically flow out of the company model; rather it is the model combined with overlapping mandates, and the external incentives facing the CRIs most notably the signals given and actions by major funders. Private businesses demonstrate the ability to collaborate where there are mutual benefits to do so.

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

This answer is structured according to the ‘Systems Scenarios Tool’ developed for socio-technical systems redesign². This tool identifies 6 interconnected elements: People, Culture, Goals, Processes, People infrastructure, and Technology.

People. At the heart of our RSI system are our people and their knowledge, skills and attitudes. It is critical to carefully consider how the new RSI system will recognise, reward and support these same people to confidently embrace changing priorities and ways of working:

- Distinguish technical expertise-based roles from people management roles, to appoint strong people leaders who act respectfully and inspire others.
- Support development of skill depth and access to aligned learning opportunities.
- Harness the enthusiasm and fresh perspective of early career researchers.

¹ Available from: https://www.timeshighereducation.com/campus/how-successfully-develop-and-run-interdisciplinary-research-teams?utm_source=academic-website&utm_medium=link-embed&utm_campaign=news

² Available from: [Systems scenarios: a tool for facilitating the socio-technical design of work systems \(tandfonline.com\)](https://www.tandfonline.com/journals/11111111/issue-page/11111111)

At the organisation level, data-driven workforce planning reviewed alongside strategic priorities, is a critical way for an organisation to incrementally adapt to changing stakeholder needs. Keeping sight of medium- and longer- term research priorities, to identify resourcing gaps and opportunities.

Culture. Our Science Vitality focus groups (see AgResearch’s “Workforce” submission for more details), revealed that creating a shared purpose and goals across all of our people is critical to fostering an open, supportive and collaborative culture. Within and across CRIs we regularly hear of silos, and still the science and non-science divide exists. There needs to be wider recognition that it is the combination of everyone’s skills and expertise (science and non-science) that are necessary to create great science. We also hear of anti-managerialism of science, and how only scientists can be passionate about their work; work can be done to humanise this perceived divide and build empathy and understanding.

Goals. Adoption of a single RSI system competency framework, promotion criteria and career pathways, would remove barriers to the flow of people and knowledge across superficial organisation barriers. It’s important to not lose sight of non-researchers having specialist skills and expertise, and how their career progression requires equal consideration and support.

At the team level, it has been noted that contributing to research impact is a team sport. Recognise and reward behaviours contributing to wider goals.

At the organisation level, we are continuing to review our performance indicators to ensure they are meaningful and hold us accountable to our strategy. We actively consider a range of leading and lagging measures of quality as well as quantity. One key metric is our staff-codesigned Science Vitality index, which looks across 10 themes identified by our staff to focus our attention on assessing, celebrating and improving related activities and achievements.

People infrastructure. Challenges come with hierarchy. Knowledge flows are enabled by people moving between teams and organisations, nationally and internationally, research-side and stakeholder-side. A greater proportion of secondments would enable more fluidity, and these can be implemented in a way that maintains job security. We need to create places for people to rotate to.

Technology. Our systems and technology solutions need to enable and empower our staff, science and non-science, to work efficiently and effectively. At AgResearch our Technology & Digital Services team has been successfully piloting a new framework for “Solutions Lifecycle Development”.

13. How do we better support knowledge exchange and impact generation? What should be the role of research institutions in transferring knowledge?

Research institutions at the centre of knowledge exchange. We know from our team’s expertise in driving and demonstrating outcomes and impact, that contribution to impact is most likely to be maximised where enduring relationships have been developed. Strong relationships take time and effort to cultivate, and for many researchers they are not funded to put time into this.

Creating research that is relevant and readily able to be adopted relies on strong engagement and knowledge exchange, with reciprocal sharing of information. Stakeholder and partner involvement at the planning stages of the results-chain framework (programme logic) are critical to ensure openness over necessary resources and sufficient motivation across all parties for the desired

outcomes and impact to be achieved. Research with Māori partners often exemplifies this approach and could be used to accelerate progress in other research programmes and projects.

Toward the end of 2021, we devised an AgResearch Impact Management Framework (see Figure 1 below), which emphasizes stronger connectivity with stakeholders and partners throughout the results chain framework and project lifecycle.

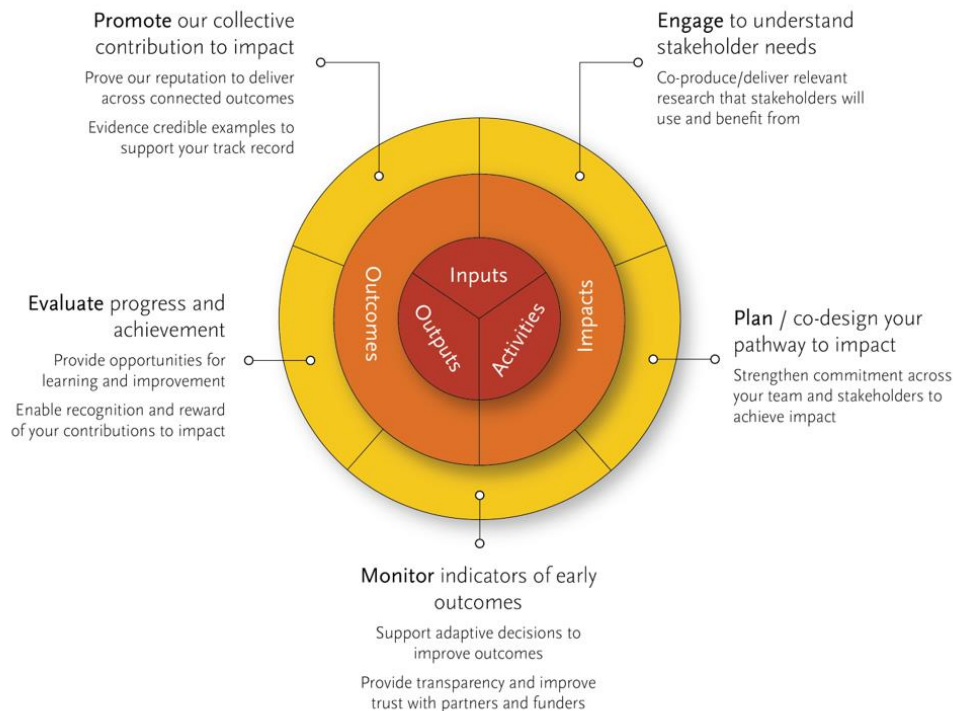


Figure 1. AgResearch’s Impact Management Framework.

System-level support for impact literacy: Across CRIs our people will be united that impact is important and often their main motivator for working at a research organisation (for researchers and non-researchers alike), however we lack a common language and understanding. Successfully achieving consistent adoption of good practice requires cultural change. We have training in place through iPEN, and we have a reinvigorated grassroots network of 14 impact champions across our 4 sites. However, we are lacking system-wide drivers and incentives to really recognise and reward people for engaging and adopting a consistent language and understanding. We have the tools, we have training, we have our network of impact champions, and we are working with the willing. We need MBIE to create a system that motivates our wider group of internal stakeholders to engage with this learning and embrace the more collaborative and open ways of working that come with it.

Impact as a team sport. We know that impact is a team sport, and recognition and reward systems should reflect this. Above and beyond scientists and researchers, there is a wider team of professionally skilled individuals who have essential roles in ensuring that research maximally contributes to its intended outcomes and impact. It is critical that the roles of professional non-researchers are not lost. Indeed, several of us identify as being research-led professionals.

Support for researchers to do knowledge exchange. Two levels of interventions are proposed for researchers. Firstly, programme/institution level funding for extension and stakeholder relationships. Secondly, career development opportunities and incentives recognising knowledge

exchange and impact generation, enabled at the systems level by requirements for narrative-style CVs as part of contestable funding processes (see also answer to Q.14).

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

Funder involvement in DORA: We have instigated AgResearch’s signing of the San Francisco Declaration on Research Assessment (DORA)³. We recommend that MBIE becomes a signatory funder, demonstrating commitment to embracing alternative ways of assessing the scientific value of research, and actively engages with their ideas, initiatives and case studies.

Let’s change what we value in research.



DORA provides a gateway to identifying relevant international good practice and we see this as a rich source of information for the redesign of NZ’s RSI sector. There are important implications here for how scientists are recruited and rewarded, linking into equality, diversity and inclusion. For example the use of narrative-style CVs such as UKRI’s R4RI, enabling recognition of the wider range of activities needed to be a successful researcher.

Single competency framework: An organisation’s competency framework lays out the behaviours that will be recognised and rewarded across the organisation, with a particular role, or series of roles over a career pathway, recognising a complementary selection. We contend that the introduction of a single competency framework across NZ’s RSI system will enable more mobility between roles at different organisations and flow of knowledge.

Roles that rotate between different RSI organisations and stakeholders will drive collaboration and flow of ideas.

Knowledge broker role: We have referred to the is a wider set of competencies that our researchers and their wider “impact teams” collectively need in order to contribute to outcomes and impact. By way of example, see adjacent Figure 2⁴.



Figure 2. Knowledge broker competencies.

³ Available from: [Home | DORA \(sfdora.org\)](https://www.sfdora.org/)

⁴ Available from: [Knowledge broker competencies across the institution – Julie Bayley](#)

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

Creating stability & international alignment: We are supportive of a base grant if it will simplify administrative requirements and offer more stability for enabling professional services functions to shift and hone their service offering over time, independent of winning specific research contracts. We are also supportive if this will bring our operational model more in line with accepted practice internationally, to remove barriers to applying for funding.

Enabling non-science expertise: Base grants can also enable more direct influence and funding of activities. For example, recognising the need for stable research management capability that does not sit within a science project. Our research organisations need to be able to attract and develop people with this specialist expertise.

Research organisations as knowledge brokers: The benefits to the base grant model may include skilled support staff taking an organisation- or system-wide approach to their work. For example, looking to current knowledge extension services that may be closely aligned to commercial interests as opposed to our wider group of stakeholders.