

# New data & evidence on the organisation of science – discussant comments

Treasury Guest Lecture Series

13th December 2022

by Gary Dunnet, Statistics New Zealand

# Outline

1. MBIE: Research, Science & Innovation Workplace Surveys
2. Outline of our Integrated Data Infrastructure (IDI)
3. What further data would be needed for a 'picture' of the NZ Science System?

# Research, Science & Innovation Workforce Survey of Organisations

Figure 1: Employee numbers based on gender by headcount

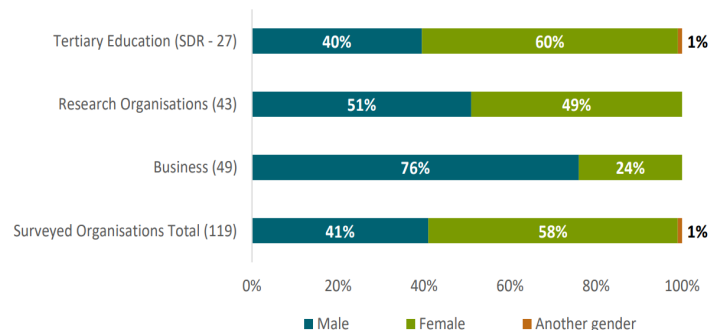


Figure 3: Employee numbers based on ethnicity by headcount

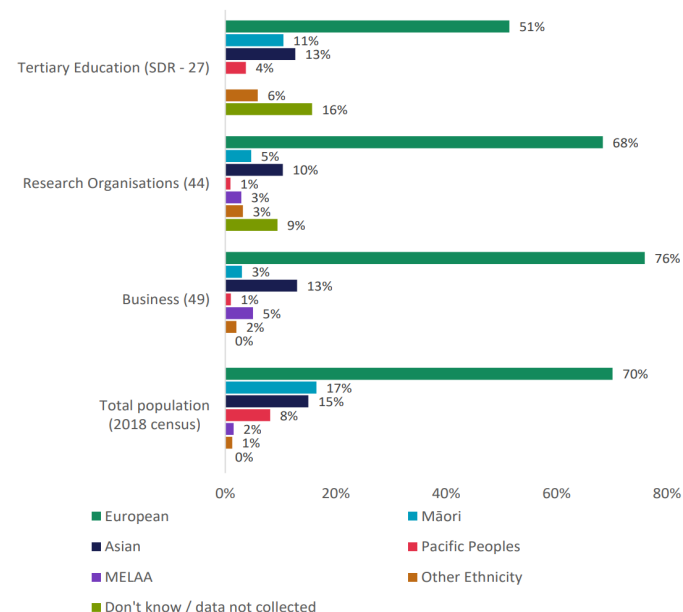


Figure 5: Types of support for staff professional development by organisation type

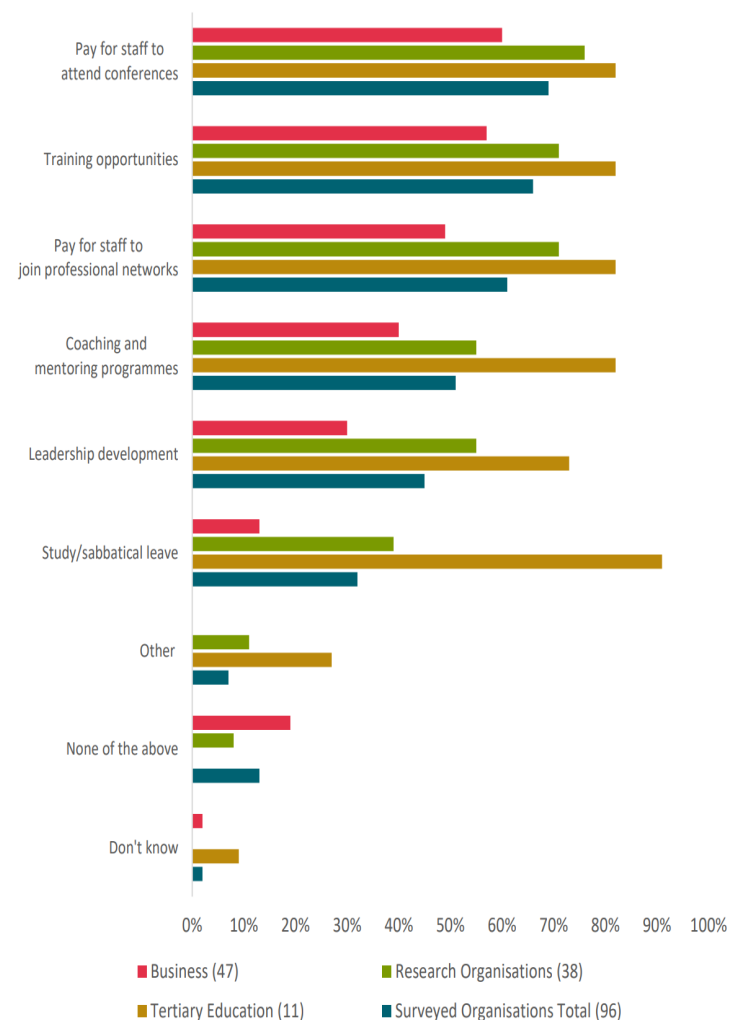
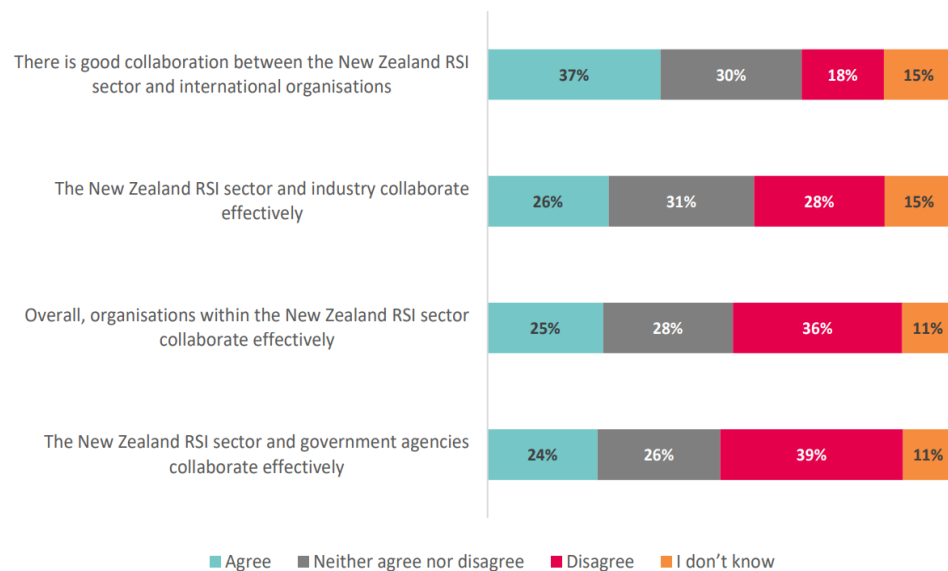


Table 5: Key interest groups by role type at ROs, including comparison to population share

Role type	RSI Workforce	n	Female		Māori		Pacific Peoples			
			%	Variation	n	%	Variation	n	%	Variation
Senior Leadership/Management	219	71	32%	-19%	15	7%	-10%	3	1%	-7%
Research staff	2,227	957	43%	-7%	69	3%	-14%	18	1%	-7%
Technical staff	1,307	707	54%	3%	54	4%	-13%	13	1%	-7%
Support staff	813	515	63%	13%	53	7%	-10%	12	1%	-7%
Commercialisation staff	356	107	30%	-5%	6	2%	-14%	3	1%	-7%
Other	47	17	36%	-10%	0	0%	-17%	0	0%	-8%
Don't know / data not collected	130	85	65%	14%	0	0%	-17%	0	0%	-8%
<b>Total</b>	<b>5,099</b>	<b>2,459</b>			<b>197</b>			<b>49</b>		

# Research, Science & Innovation Workforce Survey of Individuals

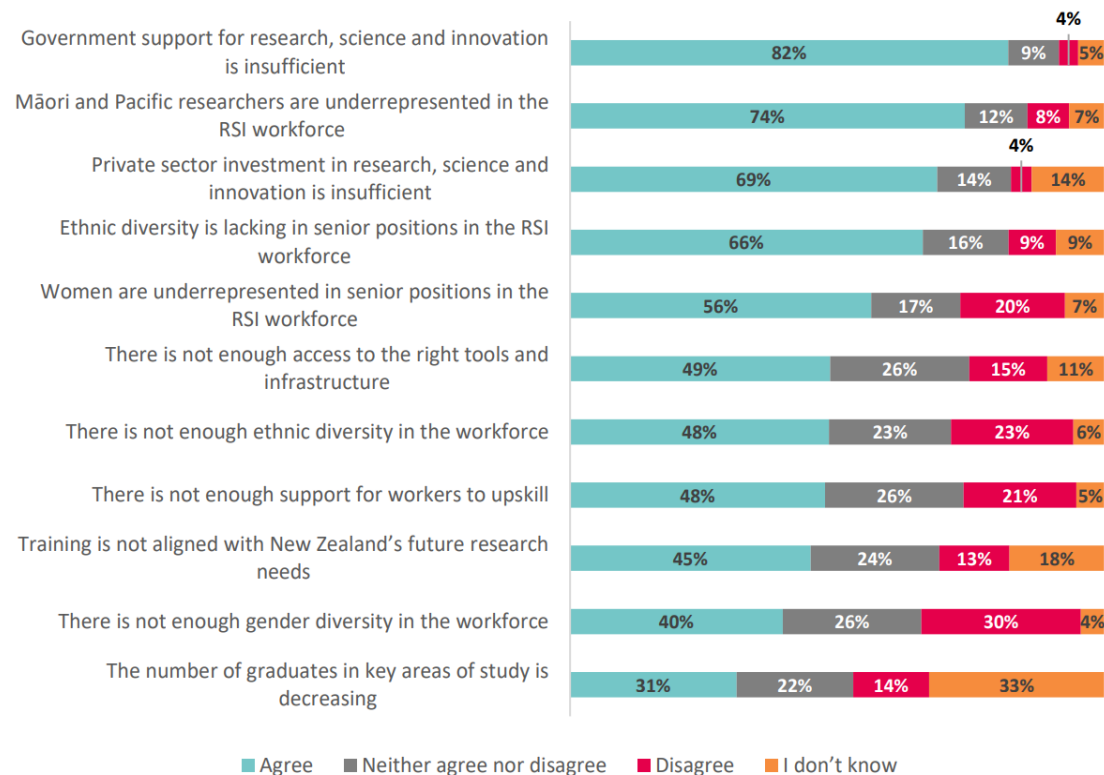


**Figure 10: How strongly do you agree or disagree with the following statements about collaboration in the RSI sector?**

## How could the RSI workforce be strengthened?

Respondents were asked for their ideas on the best ways to strengthen the RSI sector, specifically the workforce. Responses gave a diverse range of ideas for strengthening the RSI workforce in Aotearoa New Zealand. These suggestions are broadly captured under the following headings:

1. Funding (n=263)
2. Career development (n=162)
3. Diversity and Inclusion (n=162)
4. RSI sector (n=100)
5. RSI education (n=90)
6. Salaries (n=81)
7. Training and professional development (n=87)
8. Pastoral care and support (n=74)



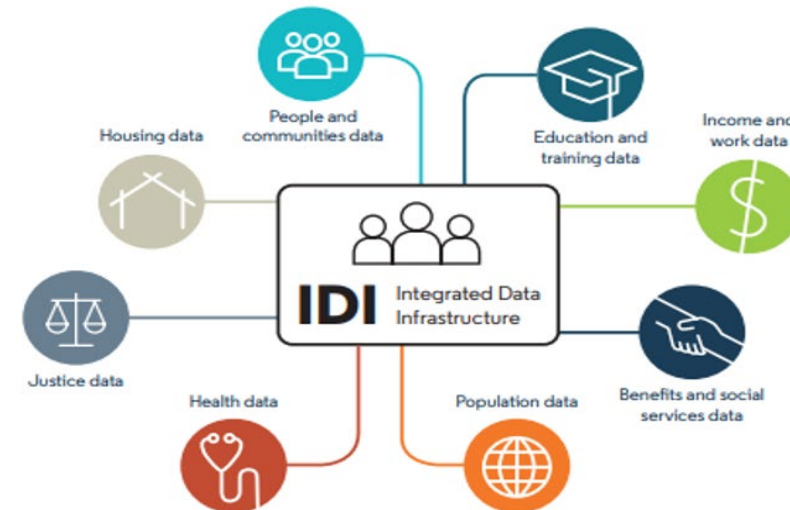
**Figure 14: To what extent do you agree or disagree that the following areas are challenges facing the RSI sector?**

# IDI – Longitudinal Business Database (LBD)

Contains:

- Agriculture data
- Business financials data
- Business practices data
- Employment data
- Innovation data
- International trade and tourism data

Stats NZ's Integrated Data Infrastructure (IDI) is a large research database containing de-identified microdata about people and households.



The IDI contains person-centred microdata from a range of government agencies, Stats NZ surveys including the 2013 Census, and non-government organisations. For more information about data in the IDI, see

[www.stats.govt.nz/integrated-data/integrated-data-infrastructure](http://www.stats.govt.nz/integrated-data/integrated-data-infrastructure)

The Longitudinal Business Database (LBD) complements the IDI with microdata about businesses. For more information about data in the LBD, see

[www.stats.govt.nz/integrated-data/longitudinal-business-database](http://www.stats.govt.nz/integrated-data/longitudinal-business-database)

# IDI – Nga Tikanga Paihere

## Our 'Why':

- Consider the impact on communities
- Clarity our expectations of data users and how they work with communities
- Ensure researchers' intentions align with community values and aspirations
- Encourage a holistic view
- Nurture relationships with communities



Mā ngā tikanga e arahina - Be guided by good principles





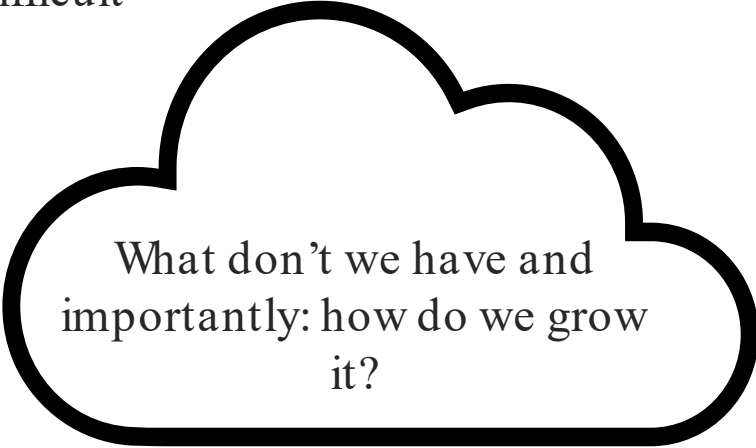
# What further data would be needed for a 'picture' of the NZ Science System?

## We have:

- ANZSRC (Research Classfn)
- R&D Survey
- Business Operations Survey
- Govt Assistance Program
- BERD?
- LBD
  
- ORCID iD
- RSI Domain Plan
- National Statement of Science Investment

## Some measurement challenges:

- Previous analysis: Funding, career development .....
- Inherent biases in data.
- Evolving 'industry'
- Measuring Flows / Spill-over effects / Value-chains inherently difficult



What don't we have and importantly: how do we grow it?

# Questions / Discussion