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EQUITY, DIVERSITY AND INCLUSION INTERNSHIP REPORT

December 2, 2019

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Office of the Prime Minister's Chief Science Advisor

Ministry for Business, Innovation and Employment

Contents

1

Project Overview

This project was a 3 month joint internship between the Office of the Prime Minister's Chief Science Advisor (OPMCSA) and Ministry of Business, Innovation and Employment (MBIE) delving into equity, diversity and inclusion (EDI) in the research, science and innovation (RSI)[1] sector in Aotearoa New Zealand. The aim of the project was to review international EDI accreditation initiatives in the context of Aotearoa New Zealand, survey existing local EDI practices, and scope suitable policy options to establish an accreditation initiative in Aotearoa New Zealand. This initiative has provisionally been named 'EDI Aotearoa'.

There are EDI accreditation charters around the world, such as Athena SWAN (UK), SAGE (Australia), SEA Change (USA) and Dimensions (Canada), which ask informed questions and set standards for participating organisations to achieve. However, there is no one-size-fits-all solution for Aotearoa New Zealand. For an EDI accreditation initiative to be effective in the Aotearoa New Zealand RSI community it must be focused not just on improving the representation of women but be tailored around honouring the principles of Te Tiriti o Waitangi, distinctly acknowledging the status of Māori as tangata whenua. There must also be a commitment to improving the representation of Pacific Peoples, LGBTQI+, gender diverse people and people with disabilities, among others.

In this report, first the background to EDI is introduced, showcasing the status of representation in Aotearoa New Zealand and describing the concept of accreditation initiatives. The following chapter details international EDI charters. Then, the outline and results of a survey carried out to understand the status of EDI practices in Aotearoa New

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[1]The RSI sector of Aotearoa New Zealand refers to tertiary education organisations (universities, Wānanga, institutes of technologies and polytechnics), crown research institutes (CRIs) and independent research organisaitons (IROs).

Zealand's RSI sector are presented. Finally, the report is summarised with key findings and recommendations relevant to EDI Aotearoa.

2

Background Research & Resources

There are many definitions of EDI, but they can be broadly defined as follows [1]:

- Diversity is the ways in which people differ, encompassing the different characteristics that make one individual or group different from another. Diversity can include race, ethnicity, gender, age, national origin, religion, disability, sexual orientation, socioeconomic status, education, marital status, language, and physical appearance as well as diversity of thought: ideas, perspectives, and values.

- Equity is the fair treatment, access, opportunity, and advancement for all people, while at the same time striving to identify and eliminate barriers that have prevented the full participation of some groups. This is a step further from equality, and means not necessarily giving everyone the same thing (see Figure 2.1).

- Inclusion is the act of creating environments in which any individual or group can be and feel welcomed, respected, supported, and valued to fully participate.

2.1 The Rationale for EDI

In a recent report, Grimson and Grimson [3] make a three-fold argument for the importance of gender equality and EDI in general. The first is a human rights case, one which is at the crux of most EDI related government policies. There is a legal, social and moral justice imperative when it comes to addressing matters such as the gender pay gap and racial inequities. The second case for EDI is the prevention of the loss of talent of underrepresented groups. For example, discrimination against women means that half the working population is discounted. EDI is needed in order to reduce shortages of people
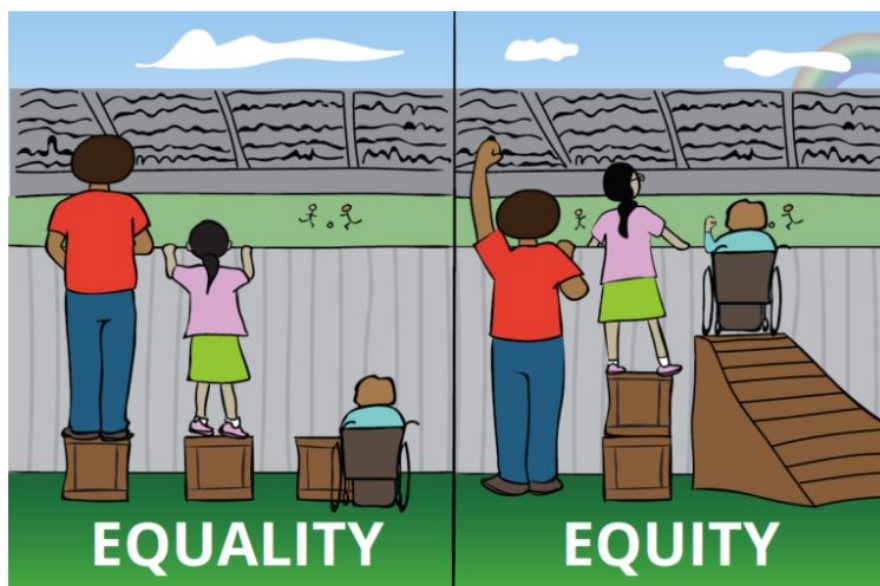
Figure 2.1: Equality is when everyone is given the same support. Equity is when everyone is given the support they need [2].

in the science, technology, engineering and medicine sectors which currently account for more than half of Aotearoa New Zealand's long term skill shortages [4].

In addition to justice and talent, research across the RSI sector has shown that diversity leads to better outcomes. This forms the bases of the third case for EDI. Racial diversity in university campuses has been found to enhance student experience, engagement and skills development [5]. Gender diversity has been linked with 'higher quality science' in terms of peer-reviewed citations. A study by Campbell et al. [6] reported that scientific peer-reviewed publications (such as articles, reviews, letters, etc) on an average received 34% higher citations when the authors were from a gender-heterogeneous group. Further, scientific papers authored by ethnically diverse teams have been found to have a greater impact on science due to higher impact factor[1] and more number of citations [7]. Mathematical modelling has conclusively demonstrated that diverse problem solvers can outperform high ability problem solvers [8]. Diversity in the business context means higher economic productivity and market value [1]. Unsurprisingly however, even in diverse teams detrimental impact is seen in the form of stereotyping and performance pressure when underrepresented groups are relegated to the bottom of power structures and treated as tokens [9]. While the research is still lacking in some areas, an overall

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[1]In 2012 the Declaration on Research Assessment (DORA) was developed to improve the ways in which the outputs of scientific research are evaluated and reduce emphasis on journal impact factor as a metric for scientific excellence. `https://sfdora.org/read/`

picture can be gleaned. Good EDI practices lead to innovation, higher calibre research and better economic payback [10].

Perhaps the biggest motivation for EDI in the context of Aotearoa New Zealand is the commitment to honouring Te Tiriti o Waitangi[1] and uphold its principles. While the Māori economy is growing at a rate faster than Aotearoa New Zealand's economy as a whole, the median net worth of Māori is a staggering 79% lower than Pākehā [11]. Parity in tertiary education would see a 100,000 person rise in degree-educated Māori and Pasifika over the next 20 years [12]. Education equity has been estimated to lead to a $2.6 billion rise in the income for Māori households [13]. For revitalisation efforts for Māori language, culture and mātauranga to be successful more research and engagement is needed with Māori and by Māori, using Kaupapa Māori[2] methods [14]. Community engagement for, by, and with Pacific Peoples must be facilitated through talanoa[3].

Additionally, technological advances in robotics and artificial intelligence means that the nature of work is changing. The biggest changes and potential job losses are forecasted in sectors which traditionally employ high numbers of Māori, Pacific Peoples and women [15]. There is a need to transition underrepresented groups into high-skill jobs to sustain economic growth and ensure Aotearoa New Zealand is at the cutting-edge of science and technology. A recent report has found that gender equality would lead to a $881 million boost, equivalent to 0.33% GDP [16].

2.2 Representation in Aotearoa New Zealand

On the surface Aotearoa New Zealand's RSI sector appears to be doing well on the gender parity front. As of 2017, the number of female staff at tertiary education organisations such as universities, wānanga and polytechnics exceed the number of male staff, as seen in Figure 2.2. This is an evaluation of total staff which consists of academic, research and other staff.[4] CRIs are not far behind with women representing 39% of the total research staff. In a global context Aotearoa New Zealand is ahead of the curve with women representing 42.9% of researchers in Tertiary Education Commission's Performance-Based

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[1]https://archives.govt.nz/discover-our-stories/the-treaty-of-waitangi

[2]A philosophical doctrine, incorporating the knowledge, skills, attitudes and values of Māori society.

[3]A process of inclusive, participatory and transparent dialogue used across the Pacific.

[4]'Academic staff' includes deans, heads of department, professors, associate professors, senior lecturers, principal lecturers, lecturers, senior tutors, tutors, tutorial assistants, teaching staff and other academic staff. 'Research staff' includes research-only staff, research fellows, post-doctoral research fellows and other research support staff. 'Other staff' includes executives, advisors, technicians, librarians, administrators and general services staff.

Research Fund (PBRF) 2018 Quality Evaluation [17] as compared to the 36.3% average for women researchers in the OECD 2017 [18].

Figure 2.2: Percentage of female and male staff (including academic, research and other staff) at tertiary education organisations in 2017. Data accessed from [19].

Digging deeper into the data however reveals a different story. The PBRF 2018 quality evaluation [17] reported that "the dominance of men in STEM (Science, Technology, Engineering, and Mathematics) subjects still persists". While women researchers are well represented (>50%) in subjects related to social sciences, humanities, arts, and health sciences, they are still largely underrepresented (<30%) in engineering, technology, mathematics, and physics. In academic roles at universities gender parity can be found in positions up to senior lectureship, however there is a significant lack of women in senior roles and leadership positions, as shown in Figure 2.3. Evaluating the trend since 2002 [19], gender parity for professors and deans is projected to be achieved by 2035 at the earliest [20]. Gender inequities can be seen in research grade and academic rank [21], academic promotions [22], and the terms of employment at institutions (full-time versus part-time) [19]. In Aotearoa New Zealand science remains sexist [23], with the 'old boys club' still dominating in prestigious scientific accolades [24].

The disproportionately low representation of Māori and Pacific peoples in Aotearoa New Zealand's RSI sector is sobering. According to the 2013 census Māori make up 15% of Aotearoa New Zealand's population. In 2017 Māori represented 11% of bachelor en-

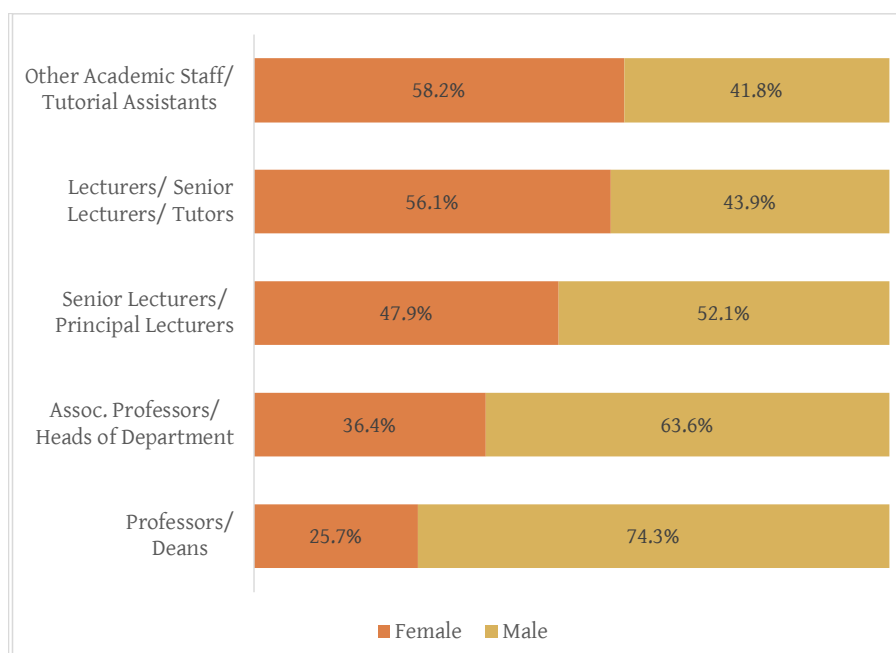**Figure 2.3:** Percentage of academic female and male staff at universities in 2017. Data accessed from [19].
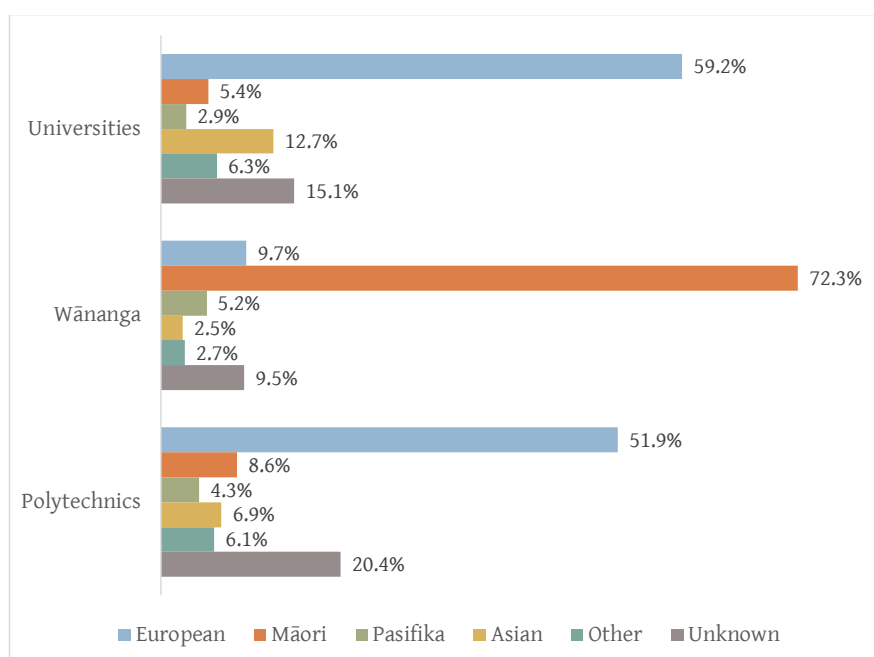

Figure 2.4: Percentage of ethnic groups of staff (including academic, research and other staff) at TEOs in 2017. Data accessed from [19].

rolments and 7% of doctoral enrolments. Figure 2.4 shows the percentage of Māori (and other ethnic groups) in tertiary education organisations in the same year. The representa-

tion dwindles even further when considering Māori academic staff at universities, shown in Figure 2.5. Recently, McAllister et al. [25] reported that between 2012 and 2017 the percentage of Māori academics in the total academic workforce at Aotearoa New Zealand universities remained unchanged at ~5%. In a companion piece to [25], Naepi [26] reported that the number remained unchanged for Pasifika also at ~1.7%. The numbers are particularly low when it comes to senior permanent positions [27] and academic staff employed outside of Māori departments [28]. This was despite all eight universities having committed to making a change through equity and diversity statements. Māori comprise 3% of total research staff at CRIs. Of the total researcher profiles in the PBRF 2018 quality evaluation report [17] 4.8% identified as Māori.
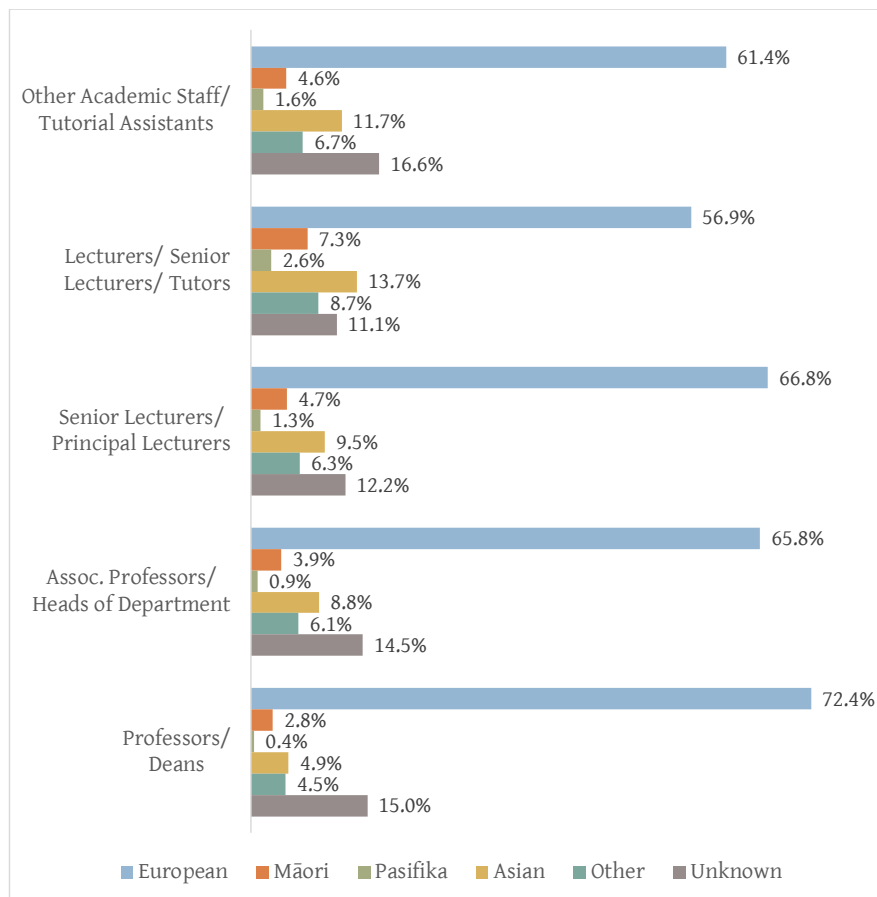

Figure 2.5: Percentage of ethnic groups of academic staff at universities in 2017. Data accessed from [19].

There are major gaps in the data particularly with respect to intersectionality, LGBTQI+ status, non-binary gender options, access and disabilities, work status, career stage, and nature of employment. When it comes to harassment (sexual or otherwise)

and bullying, there is virtually no data reported by the academies or the RSI sector as a whole.

2.3 Why Accreditation Initiatives?

In the last two decades, initiatives that evaluate and verify EDI practices at organisations have emerged as a robust mechanism to improve EDI in the RSI sector. These accreditation initiatives address underrepresentation by setting clear EDI standards through charters, asking participating members informed questions, assessing applications through expert panels, and providing feedback on pathways to improve practices.

A key advantage of EDI accreditation initiatives is their ability to provide an evidence based approach using quantitative data to evaluate institutions' and departments' commitment and sustainability towards improving EDI. The best example is that of the Athena SWAN charter, operating since 2005, which has had one internal (2011 [29]) and two independent (2014 [30] and 2019 [31]) reviews. The latest independent review in 2019 found that 70% of UK higher education institutions engaged with Athena SWAN, over 75% of whom found that the charter has a positive impact on equality and diversity issues in the process delivering cultural change. The participation of organisations in EDI accreditation initiatives is positively related to government support and conditionality for research funding [32]. The 2014 review found that Athena SWAN has had a positive impact on women's career progressions, leadership skills, visibility and self-confidence. It has been found that such initiatives promote open communications and sharing of EDI knowledge within and across organisations. Another crucial strength of EDI initiatives is the support that is provided to participating institutions in the form of workshops, institutional visits, regional network meetings, webinars and online resources, and consultations.

The major drawback for such initiatives is the workload involved with making compelling applications [31]. Often the burden of this workload falls on women and underrepresented groups, ironically reinforcing inequities [33]. Inequities are further perpetuated at the cross-institutional level where institutions which are smaller or have limited resources are not able to do as well as the larger or more affluent ones [34]. These accreditation initiatives also have a general lack of focus on diversity groups other than women, students, harassment and bullying, and intersectionality including class or migration.

Despite these limitations, EDI accreditation frameworks are able to legitimise EDI work, encourage and galvanise institutions, provide impetus for action, and foster cohesion

within the national and international research communities [31, 33, 34]. Moreover, while other EDI schemes do exist, none have been as visible and cogent as these accreditation charters in measuring efficacy of good EDI practices within RSI communities.

3

International EDI Based Accreditation Initiatives in Higher Education and Research

3.1 UK

3.1.1 Athena Swan

Initiated: 2005

Purpose: Gender equality in science, technology, engineering, maths and medicine (STEMM), and since 2015 in arts, humanities, social sciences, business and law (AHSSBL).

Managed By: Equality Challenge Unit (ECU) which has now merged with Advance HE, a charitable organisation.

Funded By: A cost recovery model, charging participants membership fees.

Participants: UK higher education institutions (HEI) and publically-funded STEMM focused research institutes. Currently there are 164 members, with 815 awards between them.

About: Athena SWAN, UK is a gender equality charter owned and managed by Advance HE. It was established in 2005 to advance the careers of women in STEMM higher education and research. Since 2015 the Athena SWAN charter has been expanded to incorporate women (and men where appropriate) in academic roles in STEMM and AHSSBLE, professional and support staff, trans staff, and students. Subscription to the charter is charged through the ECU depending on the HEI's total income.

Principle of Operation: At the core of Athena SWAN lie ten key principles based around gender equality. Membership and awards are granted to institutions on the basis of their commitment to these principles. The charter confers three levels of awards (Gold, Silver and Bronze), and encourages its members to progress through the awards i.e. from Bronze, to Silver and Gold. Applications for these awards can be made by member institutions and/or departments within member institutions. Each award is valid for four years.

To make an application institutions and departments assemble a self-assessment team (SAT) to gather qualitative evidence and data. These SATs measure progress, identify areas for improvements and formulate future action plans. Submitted applications are assessed by a panel of higher education specialists. These include academics, profession staff, equality and diversity practitioners, HR staff, members of relevant societies and professional bodies and industry representatives. Panel evaluations are made on the basis of the equality and diversity policies, practices, action plans and culture demonstrated in an application.

Links to Research Funding: In 2011 it was announced that UK National Institute for Health Research would only award certain research grants to medical schools with an Athena SWAN Silver award or higher.

List of Resources:

1. `https://www.ecu.ac.uk/equality-charters/athena-swan/`

2. `https://www.ecu.ac.uk/subscribe-to-ecu/frequently-asked-questions/`

3. `https://www.ecu.ac.uk/equality-charters/athena-swan/about-athena-swan/`

4. `https://www.ecu.ac.uk/equality-charters/charter-marks-explained/`

5. Independent review report of Athena SWAN by Loughborough University (2013)-

   `https://www.ecu.ac.uk/wp-content/uploads/external/evaluating-the-effectiveness-and-impact-of-the-athena-swan-charter.pdf`

6. Book chapter "An Examination of the Athena SWAN Initiatives in the UK: Critical Reflection" (2018)-

   `https://link.springer.com/content/pdf/10.1007%2F978-3-030-04852-5.pdf`

3.1.2   Project Juno

Initiated: 2007

Purpose: Gender equality in physics.

Managed By: Institute of Physics (IOP), a charitable organisation.

Funded By: A cost recovery model, charging participants membership fees.

Participants: HEI physics departments, schools, institutes and organisations around the UK. Currently there are 56 award holders.

About: Similar to Athena SWAN, Project Juno is a gender equality initiative which rewards good practice in addressing gender equality issues in Physics. Subscription to the charter is charged through the ECU depending on the HEI's total income.

Principle of Operation: Project Juno is based on six core principles. It confers four levels of awards: Supporter, Practitioner, Champion, and Juno Excellence Programme and Award. These awards are valid for 3-4 years. Applications are made based on self-assessment. The application evaluation panel consists of five members with at least two academic physicists, one non-academic physicist, one man and one woman. Project Juno and Athena SWAN are reciprocal i.e. one can be converted into another provided that the institution is a Juno Supporter and has at least Athena SWAN Bronze.

Links to Research Funding: N/A.

List of Resources:

1. `http://www.iop.org/policy/diversity/initiatives/juno/index.html`

2. `http://www.iop.org/policy/diversity/initiatives/juno/principles/page_42621.html`

3. Independent review report (2013)-

   `http://www.iop.org/policy/diversity/initiatives/juno/juno-evaluation/file_62013.pdf`

4. Article on women in Physics in Ireland (2015)-

   `https://aip.scitation.org/doi/pdf/10.1063/1.4937691`

3.1.3   Race Equality Charter

Initiated: 2016

Purpose: To improve representation, progression and success of minority ethnic staff and students at HEIs.

Managed By: Initiated by ECU, and now managed by Advance HE.

Funded By: A cost recovery model, charging participants membership fees.

Participants: HEIs in the UK. Currently there are 56 member and 12 award holders.

About: Similar to Athena SWAN's gender equality initiative, this charter aims to improve and award racial equality initiative at HEIs.

Principle of Operation: The Race Quality Charter consists of five guiding principles which cover professional and support staff, academic staff, student diversity and progression, and diversity in curriculum. Membership and awards are granted on the basis of commitment to these principles. The charter confers two awards (Bronze and Silver). Self-assessment and evaluation panels work in a manner similar to the Athena SWAN charter.

Links to Research Funding: N/A.

List of Resources:

1. `https://www.ecu.ac.uk/equality-charters/race-equality-charter/about-race-equality-charter/`

2. Article "White academia: will the Race Equality Charter make a difference" (2016)-

   `http://eprints.lse.ac.uk/70616/1/blogs.lse.ac.uk-White%20academia%20will%20the%20Race%20Equality%20Charter%20make%20a%20difference.pdf`

3. Article "Investigating higher education institutions and their views on the race equality charter"(2018)-

   `https://research.birmingham.ac.uk/portal/files/54893487/REC_report_Sep18_fp.pdf`

3.2 Ireland

3.2.1 Athena SWAN in Ireland

Initiated: 2015

Purpose: Gender equality in STEMM and AHSSBL.

Managed By: Advance HE. The charter was sanctioned by Higher Education Authority (HEA), a higher education policy-advisory body for the Irish government.

Funded By: A cost recovery model, charging participants membership fees.

Participants: Irish HEIs. Currently there are 9 institutional and 12 departmental award holders.

About: Same as Athena SWAN, UK.

Principle of Operation: Same as Athena SWAN, UK. The charter was piloted from 2014 to 2017, and renewed in 2018 for additional three years. Supported by the HEA-Advance HE Grant Agreement for free access to support and resources.

Links to Research Funding: It has been announced that Athena SWAN accreditation will be a requirement for funding from Science Foundation Ireland, Irish Research Council and Health Research Board. In order to be eligible for funding HEIs must have Athena SWAN Bronze by the end of 2019 and Athena SWAN Silver by 2023.

Other Comments: The funding link has been facing some backlash.

List of Resources:

1. `https://www.ecu.ac.uk/equality-charters/athena-swan/athena-swan-ireland/`

2. `https://www.ecu.ac.uk/wp-content/uploads/2019/04/Support-Provision-for-Irish-HEIs.pdf`

3. `http://sfi.ie/research-news/news/irish-funding-bodies-to-require-athena-swan-gender-equality-accreditation-for-higher-education-institutions/`

4. Article "Athena SWAN funding link under scrutiny in discrimination row" (2017)- `https://www.timeshighereducation.com/news/athena-swan-funding-link-under-scrutiny-discrimination-row`

3.3 USA

3.3.1 Organizational Change for Gender Equity in STEM Academic Professions (ADVANCE)

Initiated: 2001

Purpose: Gender equity in STEM.

Managed By: National Science Foundation (NSF), a government science funding agency.

Funded By: NSF grant.

Participants: USA institutes of higher education (IHE) and non-academic organisations.

About: ADVANCE was founded as a result of a workshop conducted by the NSF in 1997 which looked into gender equity in NSF funding programmes. It provides monetary grants to promote systemic change and gender equity in the academic profession and workplaces. Since 2001, this initiative has provided ~$300M in funding to more than 179 IHEs. Having evolved over the years, ADVANCE expects proposals to be made with an intersectional approach to equity, diversity and inclusion initiatives, recognising the overlap of gender with ethnicity, race, religion, class, and other social identities.

Principle of Operation: A total of four awards are conferred as part of ADVANCE. The Institutional Transformation award is for the development and application of innovative systemic change strategies by an IHE. The monetary value awarded can be up to $3M for five years. The Adaptation award is for the adaptation and implementation of institutional change strategies developed by an IHE or non-academic organisation. The monetary value awarded can be up to $1M for three years, with an additional $100K for collaborative projects. The Partnership award supports two or more IHEs or non-academic organisation to evolve and scale-up systemic change strategies so that they can be used at a regional or national level. The monetary value awarded can be up to $1M for three years, with an additional $250K for partnering with the NSF INCLUDES National Network. Finally, the Catalyst award is for an HEI to design and implement self-assessment initiatives to identify institutional inequities, and build a five-year strategic equity plan. The monetary value awarded can be up to $300K for two years.

These awards are evaluated and awarded by the members for the ADVANCE Implementation Committee (AIC).

Links to Research Funding: Research funding is provided, as discussed above.

Other Comments: One of ADVANCE's key strengths has been in enhancing equitable institutional structures. Men have been found to be involved with the implementation of equity strategies, but perhaps not as deeply as women. Funding likely aids in the participation of majority groups. However, much like the other initiatives it is difficult to track sustainable change at institutions beyond the duration of awards.

List of Resources:

1. `https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5383`

2. `https://www.nsf.gov/pubs/2019/nsf19552/nsf19552.pdf`

3. Article "Athena SWAN and ADVANCE: effectiveness and lessons learned" (2018)-
   `https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)`
   `33213-6/fulltext`

3.3.2   STEM Equity Achievement (SEA) Change

Initiated: 2018

Purpose: Equity and diversity in STEM.

Managed By: American Association for the Advancement of Science (AAAS), a non-profit scientific association.

Funded By: Corporate sponsorship and AAAS grants. The charter currently has ~$200K. The aim is to eventually operate a cost recovery model by charging participants membership fees.

Participants: Institutes for higher educations (IHE). In the first phase 3 institutions got the Bronze award. The second on-going phase consists of 6-9 IHE.

About: This initiative was founded to provide equity and diversity metrics for higher education and academic careers. The focus of this charter is not just gender; it aims remove structural barriers based on race, ethnicity, disability, gender identity, sexual orientation, age, and class, as well.

Principle of Operation: SEA Change is an adaptation of Athena SWAN, licensed through a one-off lump sum payment to Advance HE. SEA Change has thirteen core principles. Currently in the pilot phase, it operates and maintains standards in a way similar to Athena SWAN. Phase one began with the Bronze award. The plan for the future phases is to award Silver and Gold awards, expand to departmental awards, and include fields other than STEM.

Links to Research Funding: N/A.

List of Resources:

1. `https://seachange.aaas.org/`

2. `https://static1.squarespace.com/static/59f203df2278e72409c89f0b/t/5ca67c29e5e5f01ac91baeed/1554414633597/SEA_Change_Summary_april2019.pdf`

3. `https://www.aaas.org/news/sea-change-program-aims-transform-diversity-efforts-stem`

4. Article "UK gender-equality scheme spreads across the world" (2017)-

   `https://www.nature.com/news/uk-gender-equality-scheme-spreads-across-the-world-1.22599`

3.4   Australia

3.4.1   Science in Australia Gender Equity (SAGE) [Athena SWAN Australia]

Initiated: 2015

Purpose: Gender equity in STEMM.

Managed By: Australian Academy of Science and the Australian Academy of Technology and Engineering, and also in part by Inspire HE (Athena SWAN).

Funded By: A partial cost recovery model, charging participants membership fees which are subsidised by the government.

Participants: Higher education and public research institutions. Currently there are 45 members and 15 award holders.

About: The three main functions of this program are 1) piloting AS in Australia, 2) raising awareness about gender equity and diversity issues in STEMM, and 3) supporting and promoting initiatives which remove systemic barriers in the way of women, trans and gender diverse people.

Principle of Operation: SAGE is a variant of the Athena SWAN charter, licensed by paying periodic installments to Inspire HE. SAGE has adopted the ten key principles of AS UK. It expects members to commit to these principles. There is an annual subscription fee for members which depends on the size of the institute. In the on-going pilot scheme SAGE only confers the Institutional Bronze Award. Since 2015 there have been three cohorts of SAGE institutional members. Award winners from the first cohort were announced at the end of 2018. Similar to other AS initiatives, to make an institutional award application a self-assessment team is assembled to collate evidence and formulate a strategic plan future plan of action. Evaluation of these applications is done by a panel chosen from a pool of expert advisors nominated by member institutions. This peer review process has some key differences from the AS, UK review process.

Links to Research Funding: N/A.

List of Resources:

1. `https://www.sciencegenderequity.org.au/`

2. `https://www.sciencegenderequity.org.au/wp-content/uploads/2018/05/`
   `UK-AUS-Peer-review-differences.pdf`

3. Article "Australia's strategy to achieve gender equality in STEM" (2019)-

   `https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)`
   `32109-3/fulltext`

3.4.2 Pleiades Awards

Initiated: 2014

Purpose: Gender equity in astronomy in Australia and New Zealand.

Managed By: Astronomical Society of Australia (ASA).

Funded By: No financial costs incurred.

Participants: Institutions and departments employing ASA members. At the institutional level there are 12 Bronze award holders and 2 Silver award holders. The Department of Physics, University of Auckland, which currently holds a Silver award, is the only New Zealand department with this award.

About: This charter aims to encourage organisations to adopt practices addressing unconscious bias, promoting career progression, and ensuring participation of women at all levels of professional life.

Principle of Operation: It is inspired by Athena SWAN and operates as such. It also address sexual harassment and bullying.

Links to Research Funding: N/A.

List of Resources:

1. `https://asawomeninastronomy.org/the-pleiades-awards/`

2. `https://www.physics.auckland.ac.nz/en/about/news-and-events/news/news-2017/03/pleiades-award-.html`

3.5   Canada

3.5.1   Dimensions

Initiated: 2019.

Purpose: Equity, diversity and inclusion in research.

Managed By: Natural Science and Engineering Research Council (NSERC) in collaboration with Social Sciences and Humanities Research Council and Canadian Institutes of Health Research.

Funded By: Government funding of \$5M over the next 5 years. A capacity building grant, worth \$200K for two years, has been also announced for smaller institutions. The total allocated budget for this fund is \$10M.

Participants: Post-secondary institutions.

About: Dimensions was part of the 2018 Canadian budget to improve equity, diversity and inclusion in the research community at post-secondary institutions in all research fields. This initiative specifically aims to be inclusive of all underrepresented groups. A draft released earlier this year declared that the guiding principle of the charter is to engage in meaningful, respectful and continuous dialogue and collaboration with the Canadian indigenous (First Nations, Métis and Inuit Peoples) peoples at all stages. A two-year long development process and consultation with stakeholders has now been completed. A report is due to be released soon.

Principle of Operation: It is envisaged that Dimensions will operate in a way similar to Athena SWAN. The charter draft includes nine key principles.

Links to Research Funding: N/A.

List of Resources:

1. `http://nserc-crsng.gc.ca/_doc/AthenaSwan/AthenaSWANDraftCharter_e.pdf`

2. `http://www.nserc-crsng.gc.ca/NSERC-CRSNG/EDI-EDI/Athena-SWAN_eng.asp`

3. Article "Canadian government unveils draft Athena SWAN charter" (2019)-
   `https://www.universityaffairs.ca/news/news-article/canadian-government-unveils-draft-athena-swan-charter/`

4. `http://www.nserc-crsng.gc.ca/NSERC-CRSNG/EDI-EDI/Dimensions_Dimensions_eng.asp`

4

Survey of EDI Practices in Aotearoa New Zealand

4.1   Outline

As part of EDI Aotearoa, a stocktaking survey was carried out for the EDI schemes and areas of good practice that already exist within a sample of Aotearoa New Zealand's RSI community. The main aim of the survey was to provide an evidence base to inform future policy decisions. This survey was sent to universities, CRIs, and IROs. One response per participating organisation was collected, reflecting the EDI status at an institutional level. The survey had 22 questions in total, which are detailed below:

1. *What type of organisation are you? Options: Tertiary Education Organisation, Crown Research Institute, and independent Research Organisation.*

2. *How many people are there in your organisation both staff (including professional staff) and students (if applicable)? Options: <100, 100-1000, 1000-10000, and >10000.*

3. *Does your organisation have a formal Equity, Diversity & Inclusion (EDI) policy and/or programme in place? *If you are a Tertiary Education Organisation (TEO) please also indicate if there are additional EDI policies and/or programmes at a departmental level. Options: Yes, No, and Unknown.*

4. *Does your organisation employ staff with designated Equity, Diversity & Inclusion responsibilities? Options: Yes, No, and Unknown.*

5. *Is there a code of conduct or policy against harassment and bullying for all members of your organisation? Options: Yes, No, and Unknown.*

6. *How is good Equity, Diversity & Inclusion practice identified across your organisation?*

7. *How is good Equity, Diversity & Inclusion practice shared across your organisation?*

8. *In what ways does your organisation recognise and encourage Equity, Diversity & Inclusion practice? Multiple choice options: Recognised in criteria e.g. for recruitment and promotion, Internal awards, Communications e.g. internal newsletters/mail-outs, and Other (please specify).*

9. *Does your organisation collect any of the following information on students and/or staff in relation to Equity, Diversity & Inclusion? Multiple choice options: Gender identity, Ethnicity, Sexual Orientation, Iwi affliation (if applicable), and disability.*

10. *If you collect gender data does this include non-binary gender options (i.e. not only male and female)? Multiple choice options: non-binary/gender diverse, and transgender/non-cisgender.*

11. *Does your organisation have the ability to link the following data about research staff (including postdoctoral fellows where applicable)? Multiple choice options: Contract type, Contract function, Recruitment, Promotions, Salary, and Role.*

12. *Is any of the information noted in questions 9, 10 and 11 made publicly available? Options: Yes, No, and Unknown.*

13. *Does your organisation offer implicit bias training to staff who participate in recruitment and/or promotion processes? Options: Yes, No, and Unknown.*

14. *Has your organisation carried out a pay equity audit or review in the past three years? Options: Yes, No, and Unknown.*

15. *Does your organisation hold any of the following standards? Multiple choice options: NZS 8200:2015 Rainbow Inclusive workplaces, Rainbow Tick, Member of Diversity Works NZ, and Other (please specify).*

16. *Please briefly describe any specific strategies and frameworks adopted by your organisation that promote Equity, Diversity & Inclusion for students from the following groups: Women, Māori, Pacific Peoples.*

17. *Please briefly describe any specific strategies and frameworks adopted by your organisation that promote Equity, Diversity & Inclusion for staff from the following groups: Women, Māori, Pacific Peoples.*

18. *How does your organisation acknowledge and honour Te Tiriti o Waitangi in their Equity, Diversity & Inclusion activities?*

19. *Does your organisation offer any specific training around the Te Tiriti o Waitangi? Options: Yes, No, and Unknown.*

20. *What do you think are the main obstacles, if any, to adopting Equity, Diversity & Inclusion practices in your organisation?*

21. *Please describe any other Equity, Diversity & Inclusion activities at your organisation that you think we should be aware of.*

22. *Please add any particular comments you have regarding any of the answers above.*

4.2 Results

Participants In total 16 organisations participated in the survey.[1] This included 5 TEOs[2], 5 CRIs, and 6 IROs, shown in Figure 4.1. The number of people (both staff and students) in each organisation varied: 4 organisations had less than 100 people, 6 had 100-1,000 people, 1 had 1,000-10,000 people, and 5 had more than 10,000 people.

EDI Roles & Programmes The survey indicated that 9 out of the 16 the organisations (i.e. more than 50%) employ staff with designated EDI responsibilities, as shown in Figure 4.2.

It was reported that 8 out of the 16 organisations (50%) that have formal EDI policies and/or programmes at the institutional level. Additionally, 2 out of the 5 TEOs (40%) also have EDI policies and/or programmes at the departmental level.

A number of specific EDI strategies and frameworks for staff were reported by 10 organisations. Examples of programmes/policies focused on female staff included the Women in Leadership programme, Academic Women Promotions programme, paye equity activities, flexible working hours policy, and augmented parental leave and family sick

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[1]Not all survey questions got responses from all 16 participants since answering the questions was optional.

[2]Wānanga were not included in this survey as it was not deemed appropriate to ask these organisations about their Māori engagement.
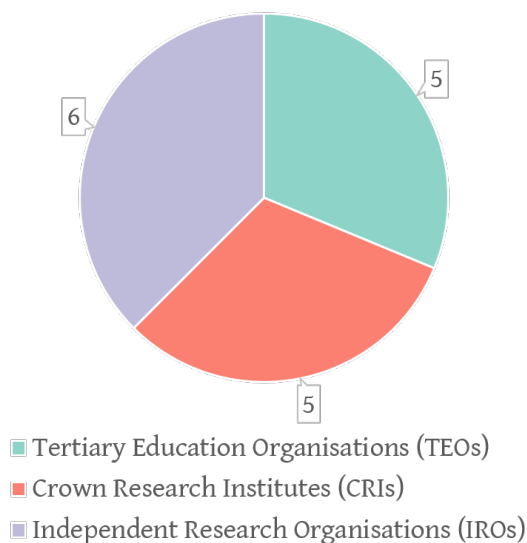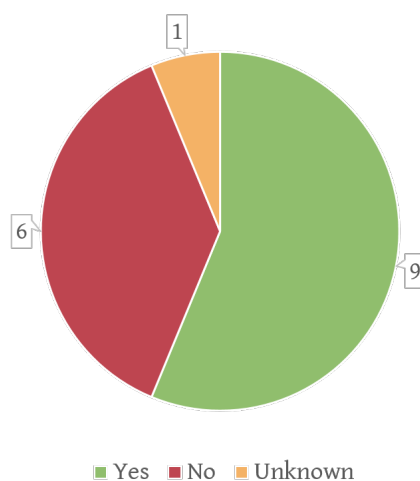
Figure 4.1: Participants of the survey.

Figure 4.2: Organisations that employ staff with designated EDI responsibilities.

leave policies. Examples of programmes/policies focused on Māori staff included a number of Māori strategies and partnerships, expert advisory panels and roles, Māori Early Career Academic Staff programme, Kia Ngaringari scheme, Mai i te Iho ki te pai framework, and Toihuarewa framework. Examples of programmes/policies focused on Pacific staff included the Pasifika Staff Network, Workforce Development & Internship Programme, and Pasifika Staff Success Plan.

Specific EDI strategies and frameworks for students were also detailed by 11 organisations. Examples of programmes focused on female students included the Association

of Women in Science, Graduate Women's Group, and the Women in Engineering society. Examples of programmes/policies focused on Māori students included the Tuakana programme, South Pacific Students in Engineering society, Māori Students' Association, Mai i te Iho ki te pai framework, and a number of Māori scholarships, placements, studentships, and internships. Examples of programmes/policies focused on Pacific students included the Tuakana programme, South Pacific Students in Engineering society, Pasifika Student Success Plan, and a number of Pacific Peoples' scholarships, placements, studentships, and internships.

Some examples of other good EDI practices listed by organisations were refugee support networks, monitoring of harassment complaints, participation in Diversity Works NZ stocktake, range of disability services, school outreach programmes, and alternative pathways to higher education schemes.

Commitment to Te Tiriti o Waitangi   In a total of 12 responses, organisations detailed their commitment to honouring Te Tiriti o Waitangi through various policies and programmes. These included treaty-led training and workshops, Te Reo language training, Māori engagement strategy, partnerships and advisors, Matauranga Māori research funds, professional development opportunities around treaty responsibilities, and public events conducted with mihi whakatau, powhiri, and karakia. Specific training around Te Tiriti o Waitangi is provided by 13 out of the 16 organisations.

Identification, Dissemination & Recognition of Good EDI Practices   From a total of 14 responses it was found that organisations identify good EDI practices through data monitoring, internal and external reports, committees and advisory groups, surveys and interviews, and rewards and recognition. In these 14 responses 3 organisations declared that they currently have minimal or no formal modes for identifying good EDI practices.

From a total of 14 responses it was found that organisations share good EDI practices through courses, workshops and training, internal and external communications, and committees and advisory groups. In these 14 responses 4 organisations declared that they currently have minimal or no formal modes for sharing good EDI practices.

As shown in Figure 4.3, a majority of organisations reported giving recognition for good EDI practice through criteria for recruitment and promotions. Some also indicated recognition through internal awards and communication media. Other modes of recognition reported included events, support teams, work plans, flexible working hours, extended leaves, and participation in equity schemes and standards.
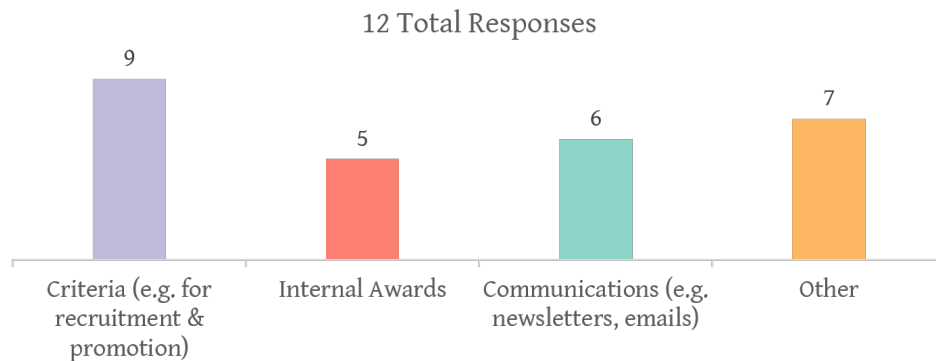
Figure 4.3: Modes for recognising good EDI practices at organisations.

Subscription to EDI Standards A number of organisations subscribe to various EDI standards; 5 organisations are a part of Diversity Works NZ[1], 2 have been certified by the Rainbow Tick, 1 has been certified by NZS 8200:2015 Rainbow Inclusive Places, and 1 is part of Equity Practitioners in Higher Education Australasia. Some organisations also reported considering or being in the process of subscribing to EDI standards.

Data Collection & Reporting Figure 4.4 shows the types of demographic data that is collected for staff and students[2]. Over 80% of the organisations collect data on gender identity and ethnicity. More than 60% also collect data on iwi affiliations and disability status. Only 1 organisation reported collecting data on sexual orientation.

Delving deeper into the gender identity data, 7 out of 16 organisations reported having non-binary/gender diverse options when collecting data. However, only 1 out of 15 organisations reported having transgender/non-cisgender options.

Figure 4.5 shows the types of demographic data that is collected for staff based on employment type and function. These percentages are lower than the ones shown in Figure 4.4 which indicates that while organisations might collect data this might not necessarily be disaggregated.

One organisation reported that they are starting to collect data on refugee and migrant status. Another noted that they only collect data on the basis of self-declared categories.

Out of the 16 participating organisations 7 indicated that some/all of the data they collect is made publically available through annual reports. However, it is largely unclear from where and to what extent this data can be sourced.

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[1]An organisation reported previously having been a part of Diversity Works NZ but deciding to withdraw after the Russel McVeagh (a commercial law firm with close ties to Diversity Works NZ) harassment and bullying controversies emerged.

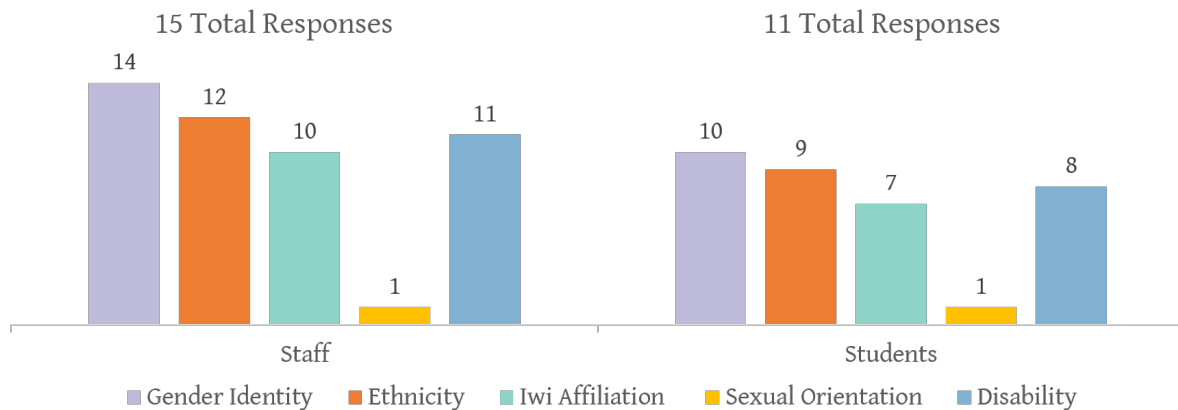[2]Not all organisations (such as IROs and some CRIs) have students.

Figure 4.4: Types of data collected by organisations for staff (out of 15 responses) and students (out of 11 responses).

Figure 4.5: Types of data collected by organisations for staff by contract, recruitment, promotion, salary and role. Contract type refers to fixed-term, open ended, permanent, zero hour contracts, etc. Contract function refers to research-only, research and teaching, teaching-only roles, etc. Recruitment refers to applications, long and shortlisted candidates, offer and acceptance rates, etc. Promotions refers to applications, success rates, etc. And roles refers to designations such as professor, senior scientist, etc.

Code of Conduct, Bias Training & Pay Equity To address bullying and harassment 15 out of the 16 organisations reportedly have codes of conduct for all members. However, it is still unclear how many of these organisations record, track and monitor bullying and harassment complaints.

For recruitment processes 7 out of the 16 organisations declared that they provide implicit bias training to staff involved in hiring panels.

Pay audits or reviews were carried out by 8 out of the 16 organisations within the last three years.

Obstacles to EDI   The following is a list of main obstacles to EDI that were reported by organisations:

- Cultural inertia at organisations due to lack of incentives.

- Lack of resources, time, and capacity.

- Small size of organisations (by CRIs and IROs).

- Prevalent unconscious bias.

- Lack of awareness of EDI issues.

- Societal norms leading to a 'leaking pipeline'.

- The changing nature of work which is becoming more contractual and harder to track.

5

Summary

The following are the key findings and recommendations from this report relevant for EDI Aotearoa:

- EDI accreditation initiatives (such as Athena SWAN) provide effective frameworks to address underrepresention of people in research and higher education.

- Participation of organisations in EDI accreditation initiatives improves when they are government supported and have links to research funding.

- From the survey it appears that Aotearoa New Zealand's RSI sector is on track for Athena SWAN Bronze level EDI certification.

- For an EDI accreditation initiative to be successful in Aotearoa New Zealand, the first principle of the charter must outline the commitment to honouring Te Tiriti o Waitangi, distinctly acknowledging the status of Māori as tangata whenua. There is also a need to decolonise the culture of organisations.

- A framework similar to USA's SEA Change model might be one option for an EDI accreditation initiative developed for Aotearoa New Zealand. Such a framework can be developed within a viable time frame, ensuring access to international resources without incurring high costs. Another option is to develop a framework similar to Australia's Pleiades Awards which was developed in-house, incurs no costs, and also maintains the international standards set by Athena SWAN.

- To ensure participation and efficacy, the initiative should be supported by the government and not charge organisations membership fees.

- There is a clear need to distinguish between organisations with different sizes and functions by separating the application process.

- The burden of work related to obtaining accreditation for organisations must be lifted off underrepresented groups by recognising the issue in accreditation criteria.

- It is also apparent that the importance of EDI measures should be conveyed to the RSI sector with a clear vision and goals.

- Resources and reports generated from the EDI initiative should be logged in open-source platforms so that they can be accessed with ease and transparency.

- Eventually, provisions need to be made to build and support the EDI capacity and resources of organisations. The recently announced EDI Capacity Building Grant [35] can be used to finance such endeavours.

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