

A submission by the Advisory Committee of the New Zealand ORCID Consortium to the Te Ara Paerangi | Future Pathways green paper.

11 March 2022

This submission is primarily addressed to how ORCID in New Zealand can assist in addressing the challenges raised in the Te Ara Paerangi paper, particularly **Te Hanganga Rangahau Research Infrastructure** and Te Hunga Mahi Rangahau Research Workforce.

ORCID (Open Researcher and Contributor ID) is the leading registry for researchers, scholars, and those engaged in any type of research activity. By being public and open, the ORCID registry enables unambiguous attribution of authorship, contribution, and participation in research endeavour. While use of the ORCID registry is free for individuals, access for organisations requires a paid membership.

Since 2016, the Ministry of Business, Innovation and Employment has supported the costs for a national consortium approach to ORCID membership. Through being part of an ORCID Consortium, members are entitled to a significant reduction in license fee, and the Consortium is required to provide first-line support, taking the role of Lead Agency. For the New Zealand ORCID Consortium, the Royal Society Te Apārangi fulfils this role. By ensuring licensing and support costs are fully covered, the New Zealand ORCID Consortium has now grown to encompass 52 members as at the beginning of 2022. This is impressive by international standards where rates of membership have been much lower.

The NZ ORCID Consortium provides an **exemplar for effective cross-sector collaboration bringing important digital infrastructure to New Zealand research.**

Government has a critical role in providing long term support for underpinning national infrastructure for NZ. The NZ ORCID Advisory Committee encourages MBIE to include long term funding for the consortium membership and resourcing to fully realise the benefits for NZ Science system.

The Advisory Committee encourages MBIE to **consider the NZ ORCID Consortium model in extension of other digital research infrastructure in New Zealand**, particularly in the release of the New Zealand Research Information System services and other research-related persistent identifiers such as the Research Activity Identifier (RAiD) system.

The members of the NZ ORCID Consortium Advisory Committee who endorse this submission are:

Marie Bradley (Committee Chair)	AgResearch
Richard Waldin	Scion
Anne Scott	University of Canterbury
Nick Shortt	Medical Research Institute of NZ
Giselle Byrnes	Massey University
Lesley Brook	Otago Polytechnic
Esther Viljoen	Health Research Council
Katharina Ruckstuhl	University of Otago
Marina Dzhelali	Capital & Coast District Health Board

Should further discussion or clarification of the points raised be useful, we of the Advisory Committee are happy to talk to MBIE.

Nature of the Consortium

The New Zealand ORCID Consortium is among the larger of ORCID's global consortia and is unusual in spanning an entire nation's publicly supported research workforce, that is, members include: all universities and many other Tertiary Education Organisations; all Crown Research Institutes; all major New Zealand research funders; District Health Boards; independent research organisations; as well as the beginnings of in roads to the GLAM (Galleries, Libraries, Archives and Museums) sector with the Consortium's newest member being Auckland War Memorial Museum. Of note, it is the MBIE-supported national approach that allows many of these organisations to participate in ORCID; prior to the formation of the consortium, only three New Zealand research organisations were members.

While ORCID membership is extensive, there is still some room to grow in some sectors, and different levels of ORCID-engagement exists amongst current members.

New Zealand's ORCID successes to date

Core to the notion of ORCID succeeding in New Zealand are two metrics; first, how many New Zealand researchers have ORCID records, and second, the activity of New Zealand's ORCID members in adding and using those records.

As of 1 January 2022, there were more than 27,000 distinct ORCID records created by the New Zealand research community, that is, ~90% of New Zealand's 30,700 public (TEO and Government) researchers can be expected to have an ORCID record.

Regarding organisational participation in ORCID, the successful development, launch and high uptake of the NZ ORCID Hub has enabled New Zealand organisations to interact with their researchers' ORCID records in a way that would not have been practical or possible without the Hub. In addition, there are currently 30 Consortium members who have onboarded with the Hub, and this software has been used to assert employment, education, membership, and service affiliations, as well as writing publications and funding.

Additionally, the NZ ORCID Hub is based on open-source software and has been adapted for use by another ORCID consortium who have in turn contributed improvements back to the NZ ORCID Hub. In addition to the Hub, several organisations are using their own, or third-party, integrations to interact with ORCID, e.g., the Prime Minister's Science Prize Portal which can call on an ORCID record to create a NZRIS-compliant profile for an individual, and MBIE's assertion of success at Smart Ideas to ORCID via IMS, and many Consortium members are linking through to their Research Management Systems.

New Zealand also benefits from the election of the Advisory Committee's Dr Katharina Ruckstuhl, University of Otago, to ORCID's International Board. Dr Ruckstuhl's active participation and leadership connects New Zealand to the broader Global Research Identifier ecosystem and is already leading to significant changes in how organisations elsewhere regard and respond to Indigenous data, including concerns around Indigenous data sovereignty and protection.

Benefits of New Zealand's ORCID membership

The value proposition of ORCID is that this piece of national infrastructure holds the potential to deliver significant benefit for both New Zealand researchers and the New Zealand research system. For example, for researchers, ORCID enables the unambiguous and verified claims of affiliation, prestige, awards, and funding, publications, and the use of research resources. By having rich information in their ORCID records, a researcher's employer can simplify and automate reporting. By connecting with the researchers that they support, funders can also simplify application processes, recognise success, and encourage the further discovery of research while facilitating attribution of their support. Through increased visibility and discoverability, it is expected that ORCID will encourage higher levels of collaboration.

Te Ara Pāerangi seeks to identify the key national research priorities; as a small nation with competing challenges, we need to agree on where to focus our expertise, investment and resourcing. As a national tool and critical piece of research infrastructure, ORCID can help to identify and map these areas of intensity and expertise and demonstrate where and how New Zealand researchers are world leading.

Further, as a national tool, ORCID has the potential to address issues of fragmentation and competition, as noted in Te Ara Pāerangi.

The existence of ORCID makes addressing critical questions possible, e.g., many evaluation projects hinge on efficient identification and deduplication, while the assertion of research resource use can both improve the visibility of resource use as well as the existence of that research infrastructure in a way that is currently not practical. ORCID makes research visible and visibly connected, and for researchers and institutions alike, identity authentication and the ability to access robust and accurate attribution data is critical in an increasingly digitally-enabled world. Moreover, our engagement with this infrastructure is vital if New Zealand researchers and research institutions wish to lift and sustain our performance in international research rankings, not just at an individual level, but on a national basis.

While some of this promise has been reached, there remains ongoing work to realise all the benefits to New Zealand that active participation in ORCID can deliver.

Key barriers discouraging organisation resourcing to actively engage with ORCID include uncertainty in the community about the long-term prospects for MBIE's support of the license, and to a lesser extent delays in NZRIS to demonstrate the value of a maintaining and presenting a rich ORCID record. Questions remain among some researcher communities about the status and probity of researcher data, especially those concerned with Indigenous data sovereignty issues; this is, however, an area in which New Zealand can show leadership and build trust and relies, in large part, in clear communication about the purpose of ORCID and the agency of researchers in having access to their records.

The NZ ORCID Consortium as a Model for Cross-System Collaboration

The success of the NZ ORCID Consortium provides a useful model for developing and embedding new digital infrastructure. In doing so, the Consortium has developed and demonstrated effective processes and systems; and has enabled sharing of best practice. Key elements that we believe contributed to this success include:

- Government funding for development and ongoing support for the infrastructure with an explicit KPI to be accessible to both large and small players
- A central agency (in this case, the Royal Society Te Apārangi) with clear accountabilities and regular reporting back to MBIE. For the NZ ORCID Consortium, this agency provides ongoing resource that supports its users to fully embed and adopt the infrastructure, processes and systems.
- Community-developed infrastructure with regular reporting and feedback from user communities (in this case NZ ORCID Hub)
- An Advisory Committee with representatives with range of skills from technical through to senior management. The focus of the Committee has changed over time from supporting implementation to becoming more strategic, longer-term focus as the infrastructure has become embedded. The ongoing commitment by individual members of the Committee has been useful for maintaining momentum.

The Advisory Committee encourages MBIE to consider the NZ ORCID Consortium model in extension of other digital research infrastructure in New Zealand, particularly in the release of the New Zealand Research Information System services and other research-related persistent identifiers such as the Research Activity Identifier (RAiD) system.

Appendix – The Advisory Committee’s (2018) vision for ORCID in Aotearoa
 Published in 2018, the Advisory Committee’s vision for ORCID by 2020 has been largely achieved although broader connections with digital infrastructure will be needed to fully deliver all the benefits promised.

ORCID IN AOTEAROA NEW ZEALAND BY 2020

Where we are now

More than 10,000 ORCID iDs are registered with a NZ email address

The first phases of the ORCID Hub are operational, allowing consortium members to make authoritative employment, education and funding assertions

Almost 50 organisations have signed up to the NZ ORCID consortium - the most diverse in the world

Several major NZ funding organisations are integrating ORCID iDs into their workflows

NGĀ MATAWHĀNUI Our Vision

- 1

NZ researchers and scientists are recognised for their contributions to our research, science and innovation system.

TAHI
- 2

By 2020, NZ institutions populate and use data from ORCID records, improving data quality and reuse, and reducing reporting burden.

RUA
- 3

Use of ORCID helps improve the performance of NZ’s research system for the benefit of all New Zealanders and the world.

TORU

ACHIEVING OUR VISION WILL BRING MANY **BENEFITS** AND REQUIRES **ACTION**

RESEARCHERS AND CONTRIBUTORS	RESEARCH ORGANISATIONS	FUNDING ORGANISATIONS
<p>Benefits</p> <ul style="list-style-type: none"> Clear attribution for all their works, funding and reviews through a global system led by the research community. Able to populate other systems (e.g. electronic CVs) with data from their ORCID record. Able to spend more time researching and contributing rather than filling in forms. Can maintain a lifelong unique ID, 'portable' around the globe, no matter the discipline. <p>Actions</p> <ul style="list-style-type: none"> Sign up to get an ORCID ID. Give permission to institutions to read and write data to/from your ORCID record. 	<p>Benefits</p> <ul style="list-style-type: none"> Able to read their staff's ORCID records and see grants/awards received, research activities/outputs, and staff affiliations. Able to synchronise ORCID records with their research information systems and repositories. Able to assert organisational affiliations to their staff's ORCID records. <p>Actions</p> <ul style="list-style-type: none"> Seek permission to push employment and output data to staff ORCID records. For tertiary education organisations, seek permission to push education data to records. Collect ORCID iDs for internal funding processes. Integrate systems with ORCID to transfer data automatically. Use ORCID iDs to identify researchers in records submitted to NRIS*. <p style="font-size: 0.8em;">* National Research Information System</p>	<p>Benefits</p> <ul style="list-style-type: none"> Able to recognise those researchers receiving funds. Able to recognise the contribution of grant reviewers. Able to track the activities and outputs of funded researchers with confidence. <p>Actions</p> <ul style="list-style-type: none"> Accept ORCID iDs in funding processes. Post funding information to ORCID records. Reuse information from ORCID to pre-populate application forms and reporting wherever possible. Use ORCID iDs to identify researchers in records submitted to NRIS.

INTEROPERABILITY - ENTER ONCE, REUSE OFTEN

Each data entry should be asserted by an **authoritative source** to maximise **trust** in the data in ORCID records.

- Employment** information by employers
- Education** information by education institutes
- Publishing** information by publishers
- Other output** information by repositories
- Funding** information by funders

The NZ ORCID Hub is a tool to help organisations read from and write information to ORCID records:

- Phase I:** automatic employment and education affiliations written for Tuakiri members (June 2017)
- Phase II:** affiliations written for all consortium members (Sept 2017)
- Phase III:** funding written for all consortium members (Feb 2018)
- Future phases** will deliver the ability to write works, automate Hub connections and more, as requested by the community and as resources permit

New Zealand ORCID Advisory Committee - July 2018

Black arrows = information reuse
Blue arrows = information asserted using NZ ORCID Hub or system integration